

# Technical Catalogue



# The Company

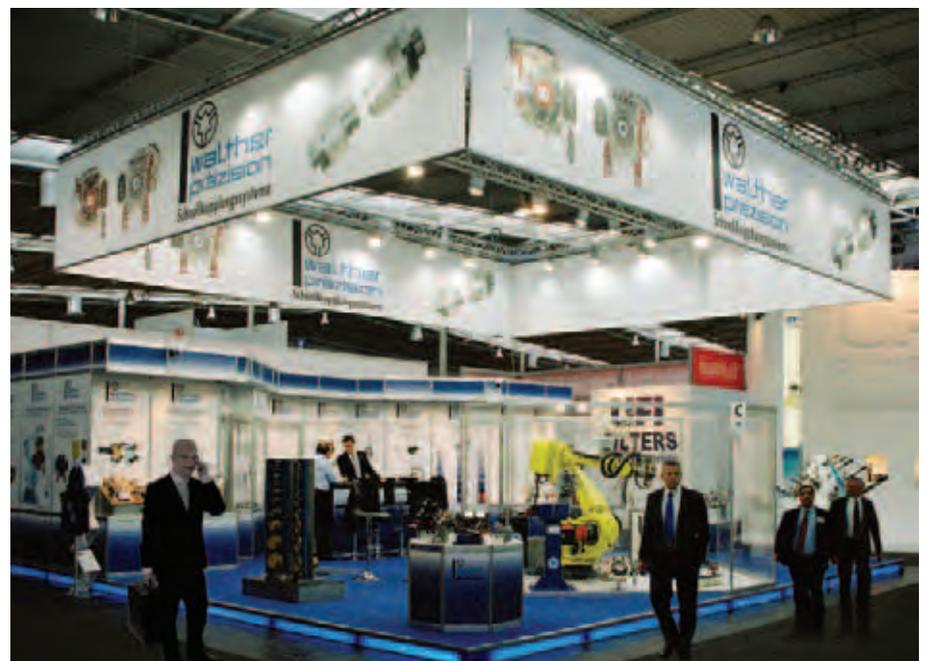


Carl Kurt Walther GmbH & Co. KG was founded in 1931 as a mechanical engineering company in Wuppertal. Since 1951 WALTHER-PRÄZISION has developed and manufactured mono and multi-couplings that are used wherever fluids, vapours, gases, electrical and optical signals as well as electric power need to be safely transferred. Our engineers develop solutions for almost every industry that meet highest demands, prove their value in extreme ambient conditions and help to protect the environment.

As a result of these diverse requirements we now offer the largest programme of mono and multi-couplings worldwide with more than 400,000 variants. Our standard programme, which we would like to present to you on the following pages, provides solutions for almost every application. Flexibility and customer orientation are our top priorities, a fact we demonstrate every day on our production sites in Haan.



Our quick coupling systems for automation offer pioneering technology, safety, and flexibility and allow efficient use of tools and components. Today robots automatically change tools; loading stations in chemical plants handle dangerous substances safely and compliant with stringent HSE regulations; hydraulic systems operate leak free and medical appliances, for example in diagnostics, dialysis, or in operating theatres function reliably – all thanks to the coupling systems by WALTHER-PRÄZISION.



# Quick coupling systems

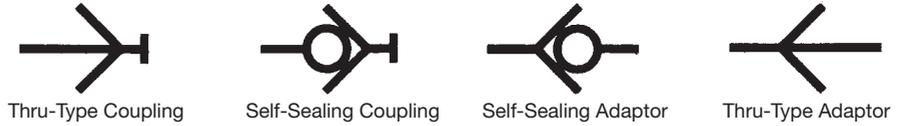
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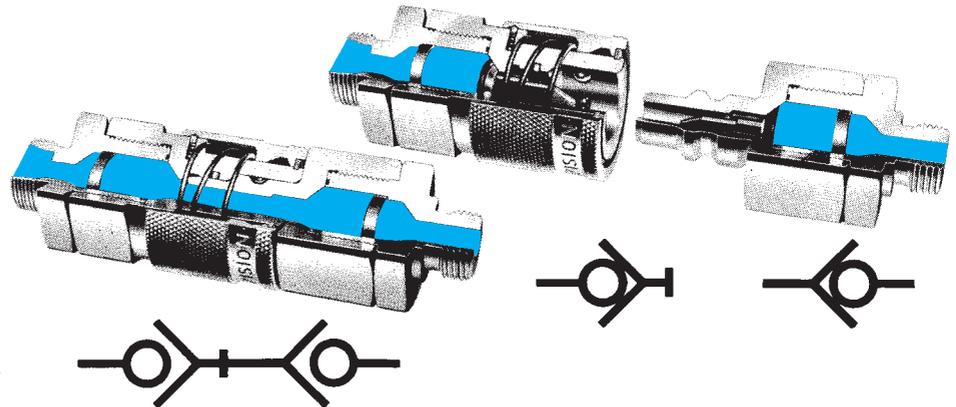
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## 2 Mono-Couplings, Design

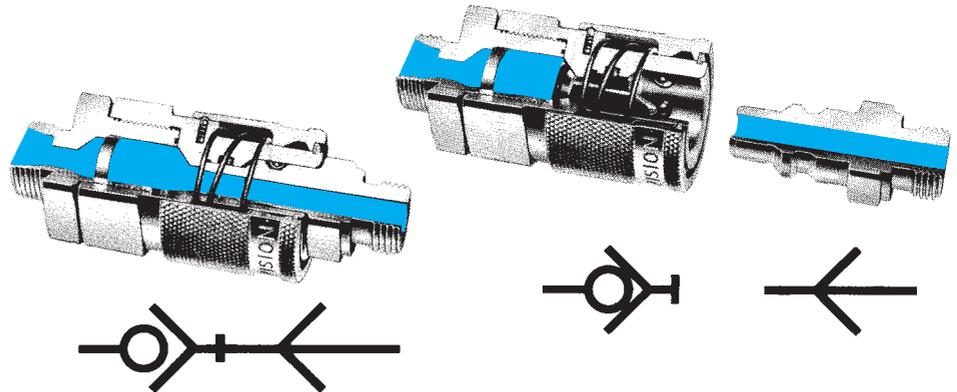
The system of WALTHER Quick Release Self-Sealing Couplings is made up from four basic units.



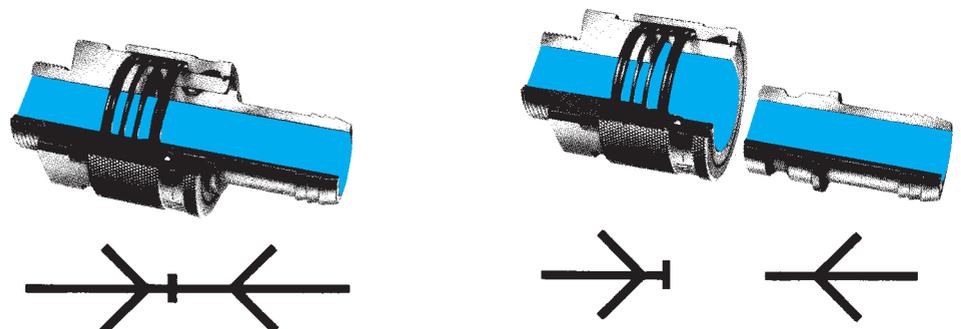
Self-Sealing Coupling and Self-Sealing Adaptor = sealing on both sides.  
Upon disconnection the valves of Self-Sealing Coupling and Self-Sealing Adaptor close simultaneously.



Self-Sealing Coupling and Thru-Type Adaptor = sealing on one side.  
Upon disconnection the coupling valve closes.  
The combination of thru type coupling and self sealing adaptor is usually not available, however it can be realized for the types LP-006, -007, -012 and -019 as thru type coupling with valve opening tappet.



Thru-Type coupling and Thru-Type Adaptor = full flow.  
Upon disconnection both sides are open.



According to the nature of the application either the Self-Sealing Coupling or the Self-Sealing Adaptor can be fitted to the supply line.

By insertion of the adaptor into the coupling the connection is made similar to a plug contact.

As the valves are locked in the open position when coupled, the direction of flow is of no consequence.

### Protection rights:

Many patents, registered designs and applications for patents in Germany and abroad prove the technical lead of WALTHER-Mono-Couplings, Multi-Couplings and Docking-Systems.

## Part number principle

with annex for optional additional features per example of low pressure self-sealing coupling in stainless steel with additional features

Technical information

<b>Series or Type</b>		LP (oder LV, SP, 06, 07)		KL, UF, MD (oder SG), HP etc.																
<b>Nominal bore / Nominal size</b>																				
<b>Kind of product or component</b> see type sheets																				
0 = self-sealing coupling		6 = dust plug																		
1 = thru-type adaptor		7 = thru-type coupling with valve plunger																		
2 = self-sealing adaptor		8 = thru-type adaptor with valve plunger																		
4 = thru-type coupling		9 = airguns and other untypical variations																		
5 = dust cap																				
<b>Series + nominal bore = type</b>		<b>End connection type</b> see part number																		
		WR021 = end connection G 1/2 A to DIN ISO 228 = 1/2" BSPP male (XX001 to XX999) = special connections) difined XX connection numbers of one type, cannot be used for other nominal bores / nominal sizes or series																		
		regarding content variable area		regarding content and number of digits variable annex																
<b>LP</b>	<b>- 006</b>	<b>- 0</b>	<b>- WR021</b>	<b>- 01</b>	<b>- 2 - GL - OV - SI</b>															
<b>Material and finish</b>			<b>for optional additional features</b>																	
see numbering key in the head of the type sheets see corrosion resistance table on page 6 + 7			see special technical explanations on page 5. Partly several additional features can be used at the same time, some additional features exclude others. Regarding this see explanations in the head of the individual type pages.																	
For special materials or special seal types a 4 figure identification is taken by using letter combinations from AAAA to ZZZZ			<table border="1"> <tr> <td colspan="3"><b>Seal type</b></td> </tr> <tr> <td>NBR</td> <td>=</td> <td>1</td> </tr> <tr> <td>FKM</td> <td>=</td> <td>2</td> </tr> <tr> <td>EPDM</td> <td>=</td> <td>4</td> </tr> <tr> <td colspan="3">See table of characteristic features and compatibility on page 6 + 7</td> </tr> </table>			<b>Seal type</b>			NBR	=	1	FKM	=	2	EPDM	=	4	See table of characteristic features and compatibility on page 6 + 7		
<b>Seal type</b>																				
NBR	=	1																		
FKM	=	2																		
EPDM	=	4																		
See table of characteristic features and compatibility on page 6 + 7																				

### Special Designs

Over the years WALTHER-PRÄZISION as specialist for quick coupling systems has been confronted with many tasks which could be solved with customized designs only.

This lead to many special types besides the standardized product programme.

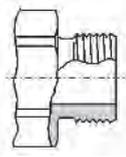
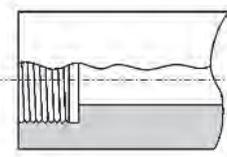
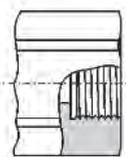
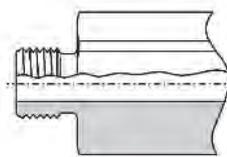
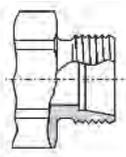
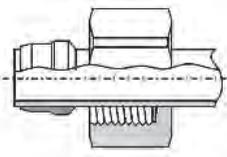
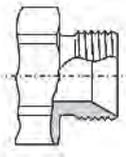
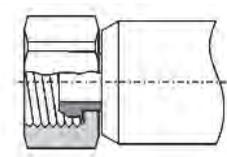
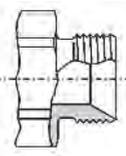
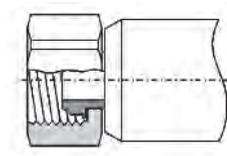
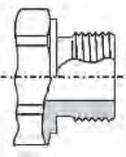
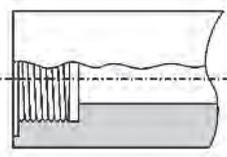
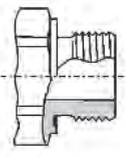
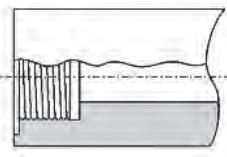
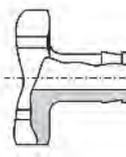
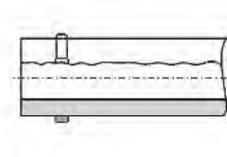
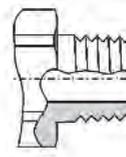
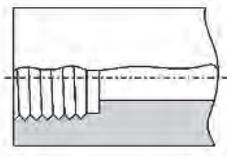
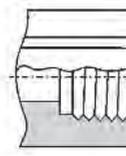
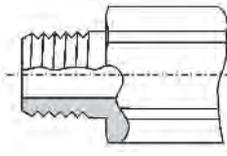
Wherever special features of the quick coupling lead to deviations from the standard designs these are exactly defined by letter/number combinations within the

variable part number annex. A "Z" in this place means the connectability with the standard is maintained. When the letter "Y" is used, there is no possibility to connect with the standard designs. However, these special designs are not listed in this catalogue.

Example for the arrangement of the letter/number combination in the variable part number annex for special designs: **LP-006-0-WR021-01-2-Z14...**

# 4 Standard End Connections applicable to all Standard Series

**Please note:** In case of standardised end connections, please take the max. allowable working pressure of the end connection into account when determining the working pressures.

	Part no. code	end connection Walther	customer's side
British standard pipe parallel (BSPP) male thread to DIN ISO 228	-WR0.. -		
British standard pipe parallel (BSPP) female thread to DIN ISO 228	-WR5.. -		
Metric male thread with 24° sealing cone acc. to DIN 2353, also available as extended bulkhead connection for olive and swivel nut acc. to DIN EN ISO 8434-1 (not part of delivery)	<b>light duty series</b> -L....- <b>heavy duty series</b> -S....-		
Metric male thread with 60° sealing cone to DIN 7631, for sealing cone to DIN 3863 and swivel nut to DIN 3870 also elongated for panel mounting	-D....-		
BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	-VR0.. -		
British standard pipe parallel (BSPP) male thread to DIN ISO 228, with small sealing edge to DIN 3852-2 profile "B"	-WB0.. -		
British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring (not part of delivery)	-WE... -		
Hose connections	-SL0.. -		
conical pipe male thread NPT to US standard	-NP0.. -		
conical pipe female thread NPT to US standard	-NP5.. -		

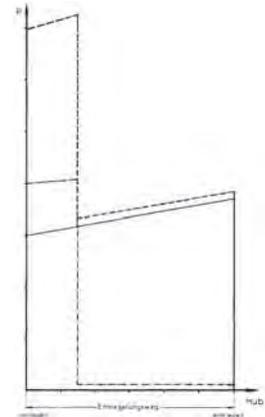
<b>venting valves "VE"</b>	It is recommended to use self sealing couplings and self sealing adaptors with venting valves for long air lines. Thus the return shock on disconnection is considerably reduced and the air escapes from the hose slowly.
<b>Strengthened springs "VF"</b>	It is necessary to equip self sealing couplings and self sealing adaptors with stronger valve springs if vacuum occurs in the disconnected position.
<b>Ring grips "GG"</b>	In some applications, e. g. in difficult locations, high operating temperature etc., additional ring grips can simplify the handling of the couplings.
<b>Ring valves "RV"</b>	When self sealing couplings and self sealing adaptors are employed under strong pulsating pressure, their durability and abrasion resistance can be improved considerably when equipping them with ring valves. These valves can not be connected with standard valves.
<b>"GW" version</b>	Version for industrial gas applications. The observance of the DVGW-regulations requires particularly careful measures and special markings. Therefore, please state your request for a DVGW-certified version in your order. DVGW is the German Association for gas and water applications.

**Radial safety lock**

**Spring characteristics**

- locking spring
- - - - - safety spring
- ..... locking + safety spring

The graph shows the locking forces P, dependent on the release movement of the sleeve for conventional couplings and couplings with additional radial safety lock. The dashdotted line shows that great locking forces are only effective with locked couplings. As soon as the locking sleeve leaves the locking positions and the additional locking device is not active any more, only the friction forces between locking and locking sleeve inside wall are effective. Couplings with radial safety lock are foolproof and easy to handle.



**Locking aid "VH"**

For easier operation the locking sleeve can be primed in retracted position. When mating both halves the locking sleeve is released and springs into locking position to the front. Thus it must not be held or hindered otherwise during this action.

**Axial safety locking device "SI"**

All couplings can be supplied with an additional axial positive safety device. Disconnection can only be effected when both locking components – locking sleeve and locking ring – are pulled back against spring force and turned against each other by 90°. Both final positions – locked and unlocked – are fixed by springloaded cams.

The operator can check the correct locking position, by trying to pull back the locking sleeve. This is not possible in the secured position.



# 6 Seals, Materials

Extract from our tables of seals and materials.

Other indications on request.

The following standard seal types are available:

## NBR

main properties:

Resistant to oil and petrol

good ageing characteristics, high abrasion resistance.

## FKM

main properties:

Outstanding heat resistance performance, excellent resistance to oils, chemicals, solvents, active oxygen and weather

## EPDM Ethylene Propylene

main properties:

High mechanical strength, excellent resistance to high and low temperatures and to active oxygen and weather

good resistance to chemical media

For very aggressive media special constructions with PTFE seals are available.

All specifications for general information only. They apply to 1. pure substances, 2. unless otherwise indicated at room temperature, 3. for salt, acids etc. for hydrous solution of moderate concentration.

The zinc plated surfaces usually used by us are free from hexavalent chrome (Cr VI).

Table of resistance					Table of seals			
fully resistant +					Quality to			
partly resistant ○					DIN / ISO 1629			
non-resistant: -								
steel zinc plated	brass passivated	ss AISI 316 ti or similar	Polyamide 11/12	Polyacetal POM	NBR	FKM	EPDM	
+	+	+	+	+			●	Acetate (Ethyl Acetate & Amyl Acetate)
	-	+	-	+			●	Acetic acid 10 %
+	+	+	+	+			●	Acetone
○	○	+	+		●	●	●	Acetylene (Ethyne)
+	+	+	+	-	●	●		Aero Engine Fuel BP, ESSO, Avgas 100/130
+	+	+	+	-	●	●		Aero Engine Oil BP: AIRO-120, ESSO: AVIATION-120 Shell: AIRO-120, DERD 2487 DERD 2497, DTD 585
-		+	+				●	Aero hydraulic fluid SKYDROL
+	+	+	+	+	●	●		Air, compressed
+	○	+	○	○	●	●		Air, hot up to 120°C
+		+	-	-	●			Air, hot up to 200°C
+	+	+	+	+			●	Alcohol
	-	+		+	●	●	●	Alum
-	○	+	+	○			●	Alkali
○	-	+	+	-			●	Ammonia, liquid
-	-	+	+	○	●		●	Ammonium Sulphate Solution

● = compatible

Table of resistance					Table of seals			
fully resistant +					Quality to			
partly resistant ○					DIN / ISO 1629			
non-resistant: -								
steel zinc plated	brass passivated	ss AISI 316 ti or similar	Polyamide 11/12	Polyacetal POM	NBR	FKM	EPDM	
+	+	+	+	+		●		Amyl Alcohol
+		+	-	-			●	Aniline
+	+	+	+	+		●		Benzole
+	+	+				●	●	Borax
+	+	+	+	+	●	●		Butane
+	+				●	●		Butene
+	○	+	+	+	●	●		Butyl Alcohol
	+	+	+	+		●	●	Carbon Dioxide
	+	+	+		●			Carbon Dioxide, dry
	+	+	+	+		●	●	Carbon Dioxide, liquid
+		+				●		Carbonic Bisulphide
	+	-	+	+	●	●	●	Chloride of Barium
-	-	○	-	-		●		Chromic Acid
		+			●	●	●	Citric Acid
+	+					●		Creosote
+	-	+	-	-		●		Cresol
+	+					●		Cresol, Cresylic Acid
		○	-		●	●	●	Cupric Chloride
+	+	○	+		●	●		Cyclohexane
+	-	+			●	●	●	Diethylene glycol
○	+	+	+	+	●	●		Emulsion (Water/Oil)
+	+	+	+	+		●		Ether
+	+	+	+	+	●		●	Ethyl Alcohol
+	+	+	+	+	●	●		Ethylene
+	+	+		-	●		●	Formalin
-	○	+	-	-			●	Formic Acid
+	+	+	+	+	●	●		Frigen / Freon F 11-12
+	+				●	●		Gasoline, Refined
○	+	+	-	○		●		Gas, Blast Furnace
	+	+	+	+		●		Gas, Coal
-	+	+	-	-		●		Gas, Coke Oven,
+	+	+	+	+	●	●		Gas, Lighting
+	+	+	+	○		●		Gas Naphtalene content
+	+	+		+	●	●		Gas, Natural
+	+	+	+	+	●			Gas, Town
+		+	+		●	●		Gear Oil
	+	+	+	+	●	●	●	Glucose
+	+	+	+	+	●	●	●	Glycerine
○	-	○	+	+	●	●	●	Glycol
+	+	+	+	+	●	●	●	Helium
+		+	+	+	●	●		Hexane
+		+	+	+		●		Hydrocarbone
+	+	+	+	○	●	●		Hydrogen
	+	+			●	●	●	Hydrogen Gas 20 °C
	-	+	+	-		●		Hydrogen Sulphide, Humid
	+	+		○	●	●		Hydrogene Sulphide, dry

● = compatible

Table of resistance					Table of seals			Quality to DIN / ISO 1629	
fully resistant	partly resistant	non-resistant:	+	○	-	NBR	FKM		EPDM
steel zinc plated	brass passivated	ss AISI 316 ti or similar	Polyamide 11/12	Polyacetal POM					● = compatible
-	-	+	+	-		●			Hydrogen Peroxide 30 %
+	+	-	○	+		●	●		Isopropyl Alcohol
+	+	+	-	-		●			Kerosene, JP 1
+	+	+	+	+				●	Ketone, Methyl Ethyl
+	+	+	○	○		●			Latex, liquid up to 130°C
		+	+	+		●	●		Lubricating Oil
-	+	+	+	+				●	Lye Caustic
-	-	+	-	○					Lye, Hypochlorous Acid
-	MS 60	+	○	○		●			Lye, Pickling
+		+	+	+		●	●	●	Magnesium Carbonate
+	○	+	+	+		●	●	●	Magnesium Hydroxide
	-	+	+	+		●	●	●	Magnesium Sulphate
+	-	+	+	+		●	●	●	Mercury
+	+	+	+	+		●	●		Methane
+	+	+	+	+		●		●	Methanol
+	+	+	○	+		●		●	Methyl Alcohol
+	+	+	+	+				●	Methyl Ethyl Kentone
+		+					●		Methyl Benzene
	-	+	+	+		●	●	●	Milk
+		+		+		●	●		Naphta
+	+	+	+	+		●			Naphtalene
+		+				●			Naphtenic Acid
+		+				●		●	Nitrate of Ammonium
-	+	+	-	-		●			Nitric Acid, up to 35 %
+	+	+	+	+		●	●	●	Nitrogen
+	+	+	-	+				●	Nitro-Solution (no synstehtiv resin thinners)
+		+	+	○		●			Oil, Coal Tr.
+	+	+	+	+		●	●		Oil, Crude
+	+	+	+	+		●	●		Oil, Diesel
+	○	+	-	-		●			Oil, Diesel up to 120°C
+	○	+	○	-		●	●		Oil, Fuel up to 120°C
○		+	-	-		DF 150 R			Oil, up to 200°C / up to 300°C special type
+	+	+	○	+		●			Oil, Fuel 5 x 5
○	○	+	-	○		●			Oil, Hydraulic Chlorinated
+	+	+	○	○		●	●		Oil, Hydraulic up to 120°C
+	+	+	+	+		●	●		Oil Linseed
○	+	+	+	+		●	●		Oil, Mineral
○	○	+	+	○		●			Oil, Transformer
+	-	+	○	+		●	●	●	Oleic Acid
○	-	-	○	-		●	●		Oxalic Acid
○	+	+	+	○				●	Oxygen, Fat free
+	○	+	+	+		●			Paraffin
+	○	+	+	+		●			Paraffin, (Wax)
+						●			Pentachlorphenole

Table of resistance					Table of seals			Quality to DIN / ISO 1629	
fully resistant	partly resistant	non-resistant:	+	○	-	NBR	FKM		EPDM
steel zinc plated	brass passivated	ss AISI 316 ti or similar	Polyamide 11/12	Polyacetal POM					● = compatible
	+	+	+	+		●			Petrol Ether
+	+	+	+	+		●	●		Petrol
○	+	+							Phenol Solution
		+	-	-		●	●		Phosphoric Acid 10 %
+	-	+	+	○		●	●		Potassium Cyanide
+	-	+	-	○		●	●		Potassium Dichromate
+		+				●	●	●	Potassium Sulphate
+		+	+	○				●	Potassium Hydroxide
+	+	+	+	+		●	●	●	Propane
+	-	+				●			Prussic Acid
	+	○	+	○		●			Salt Solution
	-	○		+		●	●	●	Sea Water
-	-	+	+	○		●	●	●	Soap Solution
	-	+	+			●	●		Soda Solution
		+	+	+				●	Sodium Acetate
		+	+	+		●	●	●	Sodium Bicarbonate
+		+	+	+		●	●	●	Sodium Carbonate
		-	+	+		●	●	●	Sodium Chloride
+		+		○		●		●	Sodium Cyanide
+	○	+				●	●		Sodium Sulphide
-	-	+	-	-				●	Steam up to 170°C
-		+	-	-		PTFE			Steam, up to 250°C
+	○	+	+			●	●	●	Sulphide of Barium
	+	-				●			Sulphur Dioxide, Gas
	+	+	-	+		●			Sulphuret of Carbon
+	+	+	○	○		●			Synthetic Resin Thinners, (no nitrosolution)
+	○	+	○	○		●			Tar
+		+				●			Tetrachloride of Titanium
○	+	+	+	+		●			Toluol, dry
+	○	+	○	-		●			Trichlorethylene
+	+	+	+	○		●	●		Turbine Fuel BP: ATK 2494, ESSO: MIL-F-56/16, Shell: ATF 650
+	+	+	+	○		●	●		Turbine Oil, ESSO: 35
○	○	+	+	○		●	●		Turb-oil 1 S (MILL 7808)
+	+	+	+	+		●	●		Vacuum (Strengthened Valve Springs)
+		+	+	+		●	●	●	Vegetable Oils
		+	+	+				●	Water Distilled
		+				●	●		Water Deionized
		+				●	●		Water Demineralised
○	+	+	○	○		●	●	●	Water, up to 80°C
○	○	+	○	-		●	●		Water, over 80°C
-	-	+	+	-		●	●		Water, Cooling
+	+	+	+	+		●			Xylene

## **QA-system-certification to DIN / EN / ISO 9001 by TÜV-Rheinland**

**Bundesanstalt für Materialforschung und -prüfung BAM, Berlin;**  
Approval or type UF-019 for acetylene lines up to 24 bar gauge pressure.

**Bundesbahnzentralamt, Minden;**  
Walther quick connect self-sealing coupling, low pressure series, for air pressure-, water- and cleaning lines.

**Bundesmarine/Blohm & Voss AG, Hamburg;**  
Shock test report of the Bundesmarine/Blohm & Voss AG, Hamburg, of WALTHER quick connect self-sealing couplings, series MD, under high accelerations and shocks.

**Centrale Dienst der Arbeidsinspectie, S-Gravenhage;**  
WALTHER quick connect self-sealing coupling or air-, oxygen-, acetylene- and propane lines etc.

**Daimler-Benz Aerospace;**  
Approval according to quality requirements of the Federal Association of German Aerospace Industry e. V. (BDLI) to **QSF-C** on the basis of ISO 9001.

**DVGW-Forschungsstelle, Karlsruhe;**  
Expertise for WALTHER quick connect self-sealing couplings, type LP-006, LP-007, LP-012, LP-019, SP-006, MD-006, MD-007, MD-012 and MD-019, for use in engineered gas applications of industry.

**Fachausschuß Chemie bei der Zentralstelle für Unfallverhütung des Hauptverbandes der gewerblichen Berufsgenossenschaften, Köln;**  
WALTHER quick connect self-sealing couplings for high pressure liquid jets.

**Insitut für Baustoffkunde und Stahlbetonbau der Technischen Universität Braunschweig;**  
Application of Walther quick connect self-sealing couplings, series MD and

HP, in hydraulic circuits of test machines with high pressure alternations.

**RWTÜV Anlagentechnik GmbH, Essen;**  
WALTHER quick connect self-sealing couplings, type 07-003 and SH-004, in TÜV design approved as test connections in nuclear power stations.

**Schweizerische Unfallversicherungsanstalt SUVA;**  
Approval of Walpresta series LS (different nominal bores) as safety coupling in the air pressure sector.

**Schweizerischer Verein für Schweißtechnik, Basel;**  
WALTHER quick connect self-sealing couplings, low pressure series – non – interchangeable type, as plug connection for oxygen- and burner gas lines in the welding sector.

**Schweizerischer Verein des Gas- und Wasserfaches, SVGW, Zürich;**  
Recommendation of WALTHER couplings type LP-019, LP-032 and LP-050 as solid and appropriate connection between blowing burner and gas line for natural gas, city gas, propane/air and liquified petroleum gas up to 5 bar working pressure.

**Siemens AG, Zentralabteilung Reaktortechnik, Erlangen;**  
Walther quick connect self-sealing couplings, medium pressure series, for radioactive contaminated liquid waste and demineralized water circuits, also with particle contamination and high temperature.

**Siemens AG, Unternehmensbereich KWU, Erlangen;**  
Confirmation for production of quick connect self-sealing couplings, multi-couplings and dockings systems for nuclear facilities on the basis of the QSP4a and KTA 1401.

**Verkehrsanlagen e.V. STUVA, Düsseldorf;**

Walther quick connect self-sealing couplings used in propane gas lines in underground installations (tunnel constructions).

**Verband für Flüssiggas e.V., Frankfurt;**  
WALTHER quick connect self-sealing couplings used in liquified petroleum gas lines.

Material certificates according to EN 10204-2.1 to 3.1 and factory certificates for quantities, parts, material certification, pressure test, leakage test up to 10<sup>-9</sup> mbar x l/sec., function test, guarantee, possible against sharing of expenses.

Documented production according to specification of nuclear engineering, for military use, for medical applications, for offshore technique etc...

Special test to be agreed upon

**CE-Sign**  
No special EU-manufacturer declaration is necessary for hydraulic products for the groups hose and pipe connections etc., other hydraulic fittings as well as pneumatic products for the groups screwed connections and lines.

**Guide line for pressure devices (DGRL)**  
The self sealing couplings which are listed in this catalogue are not subject to the guide line for pressure devices and therefore a CE-marking shall not be carried out.

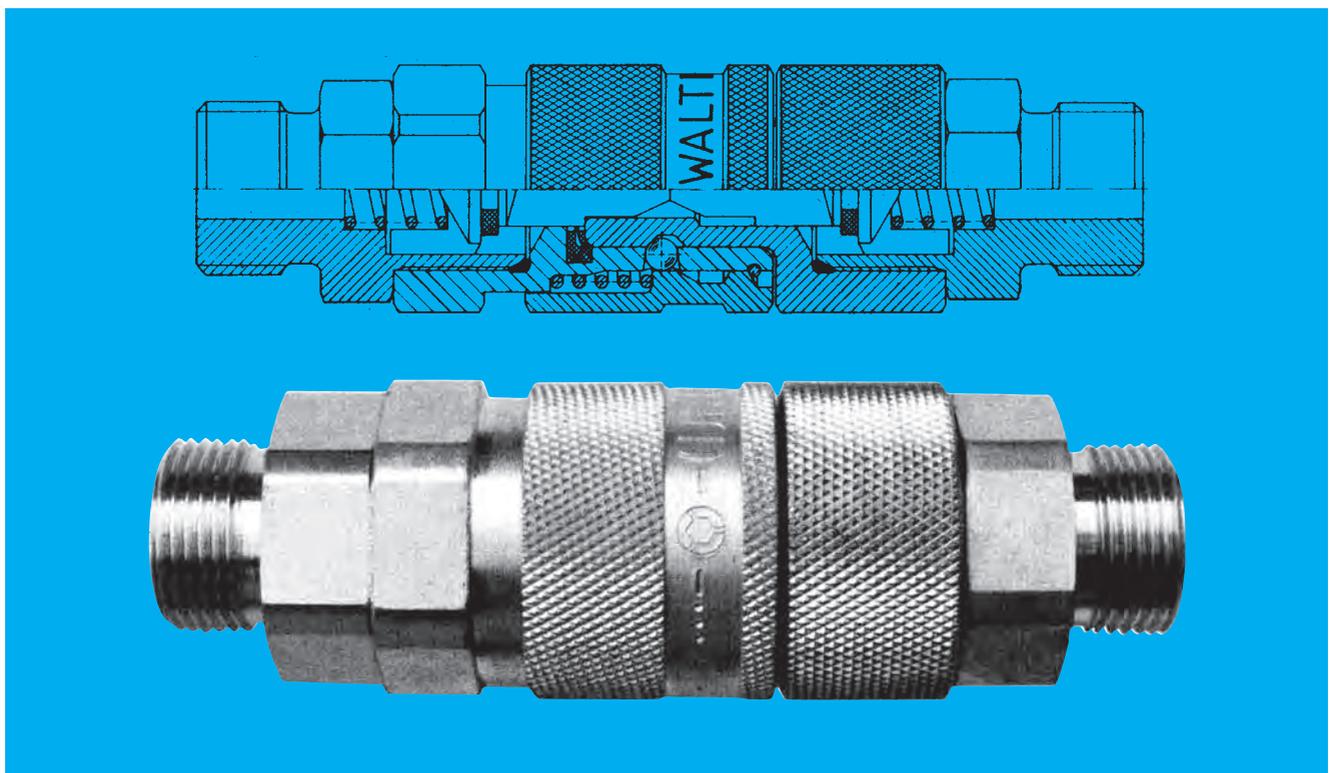
Special test and approval conditions must be stated when placing an order.

Nom. bore	Type	Max. static working pressure [bar/psi]			C <sub>v</sub> value		Cross section [mm <sup>2</sup> ]	Page
		steel	brass*	st. st.	both sides self sealing	one side self sealing		
2.5	06-003	–	100	–	–	0.165	5	11
3	LP-003	–	200	–	–	0.21	8	12
3	07-003	–	200	200	0.14	–	7.1	13
4	LP-004	60	20	20	0.3	0.36	13	14
4	LV-004	–	20	20	0.3	–	13	15
6	LP-006	60	40	40	0.73	1.13	30	16 – 17
6	SP-006	100	60	60	0.77	1.1	30	18 – 19
7	LP-007	50	40	40	1.17	1.5	40	20 – 21
9	SP-009	100	40	40	2.1	2.41	64	22 – 23
12	LP-012	50	30	30	3.28	4.34	120	24 – 25
19	LP-019	50	30	30	8.4	11.6	300	26 – 27
32	LP-032	30	30	30	23.8	29.4	800	28 – 29
50	LP-050	30	20	20	59	68	2000	30 – 31
Performance diagrams								32 – 33
Multiway connectors								34

\* based on experience, valid up to 100 °C

**Please note:** In case of standardised end connections, please take the max. allowable working pressure of the end connection into account when determining the working pressures.

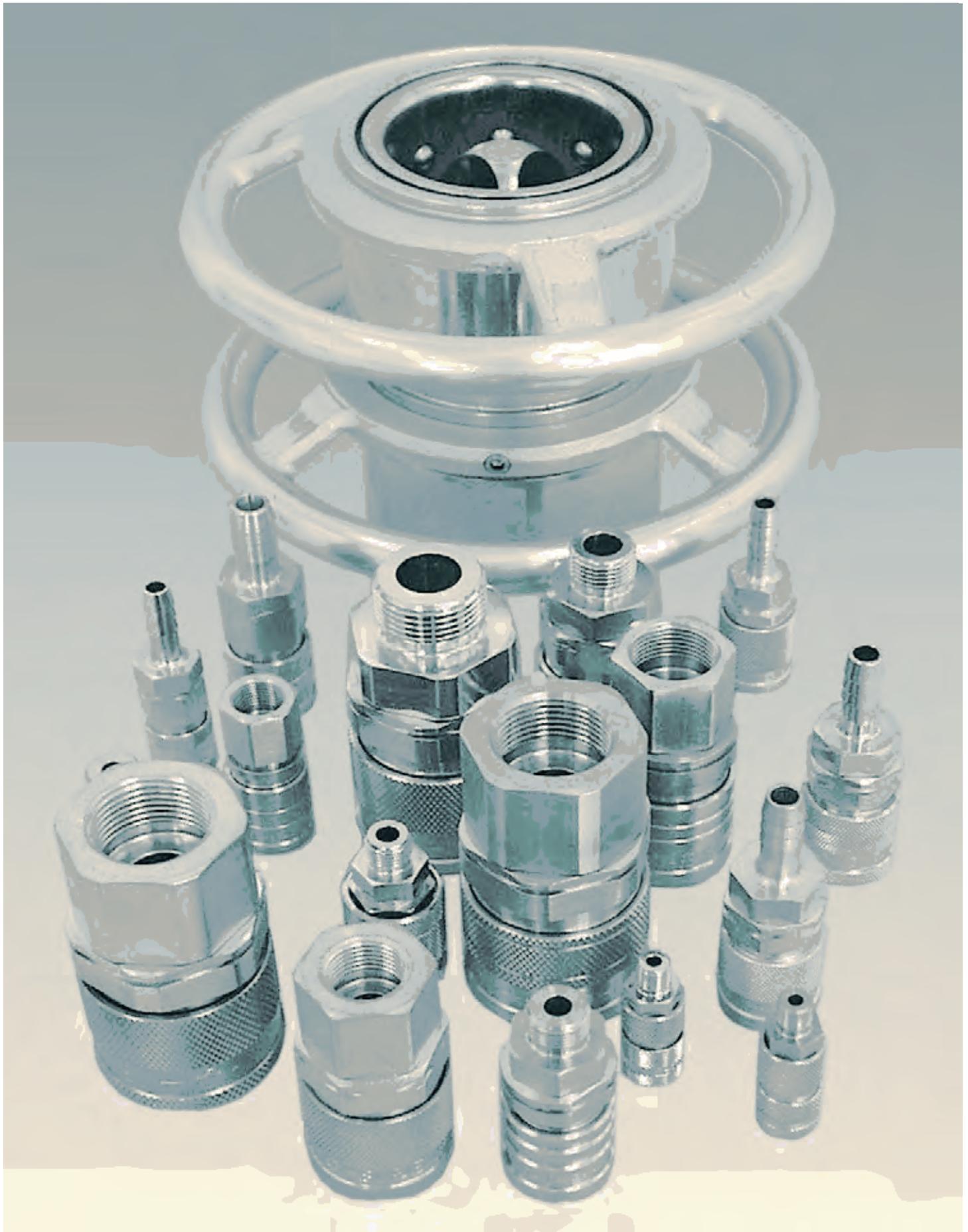
The types LV-004, LP-006, SP-006, LP-007, SP-009, LP-012 and LP-019 in stainless steel (1.4404, 1.4571 or equal) are delivered as standard without knurling but in a smooth version (-GL/-GX) with finger grooves. Actual design differs from drawing.



## 10 Low pressure Series LP

The **series LP** offers couplings with one side or both sides self sealing and valves in nominal bore 2.5 to 50 mm. This series is supplied in different materials and surface coatings.

With the exception of types LP-032 and LP-050 the LP series is also suitable for vacuum applications (in connected condition).



**characteristic features:**  
 - automatic lock (one hand operation)  
 - mini coupling

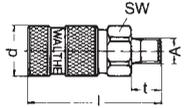
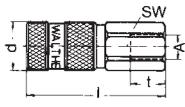
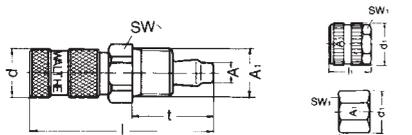
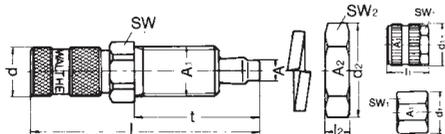
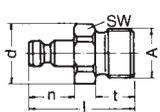
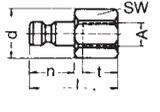
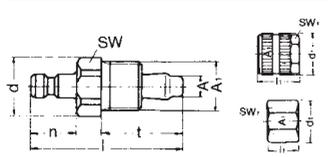
**materials:**  
**standard:**  
 23 = brass, nickel plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

**optional features:**  
 OV = without valve  
 (no one hand operation)

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short    ◐ Medium    ○ Long

	Part No.	Conne- tion A	brass nickel plated	A <sub>1</sub>	SW	SW <sub>1</sub>	l	l <sub>1</sub>	d	d <sub>1</sub>	t	n	weight [g]	
				A <sub>2</sub>		SW <sub>2</sub>		l <sub>2</sub>		d <sub>2</sub>				
Self sealing couplings	 male thread <b>06-003-0-XX001-23-</b> <b>06-003-0-XX010-23-</b>	M 5	●		9		26,5		10		6		8	
		M 10	●		11		30,5		10		10		12	
	 female thread <b>06-003-0-XX015-23-</b>	M 5	●			9		28		10		7		11
		4 mm	●			9		39,5		10		19		10
	 re-usable hose connection with swivel nut for plastic pipes <b>06-003-0-SW003-23-</b> <b>06-003-0-SW004-23-</b>	OD 5 ID 3 mm	●	M 7 x 0,5 —	9	7 —	32,5 —	9 —	10	8 —	12			11
		OD 6 ID 4 mm	●	M 10 x 1 —	11	13 —	36,5 —	13,5 —	10	14,3 —	16			21
 re-usable hose connection with swivel nut for plastic pipes and with counter nut for bulkhead mounting, max. thickness 4 mm <b>06-003-0-XX017-23-</b> <b>06-003-0-XX006-23-</b>	OD 5 ID 3 mm	○	M 7 x 0,5 M 7 x 0,5	9	7 11	45,5	9 3	10	8 12	25			24	
	OD 6 ID 4 mm	●	M 10 x 1 M 10 x 1	11	13 17	45,5	13,5 5	10	14,3 18,9	25			25	
Thru type adaptors	 male thread <b>06-003-1-XX001-23</b> <b>06-003-1-WR010-23</b>	M 5	●		9		19		9,9		6	9	4	
		BSPP 1/8"	◐		11		21		12		8	9	6	
	 female thread <b>06-003-1-XX015-23</b>	M 5	◐			9		18		9,9		7	9	5
		4 mm	●					29,5		6		19	9	3
	 re-usable hose connection with swivel nut for plastic pipes <b>06-003-1-SW003-23</b> <b>06-003-1-SW004-23</b>	OD 5 ID 3 mm	●	M 7 x 0,5 —	8	7 —	25	9 —	8,9	8 —	12	9		5
OD 6 ID 4 mm		◐	M 10 x 1 —	11	13 —	29	13,5 —	12	14,3 —	16	9		17	

**characteristic features:**  
- automatic lock (one hand operation)

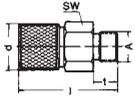
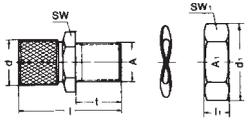
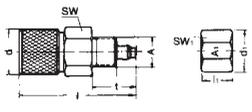
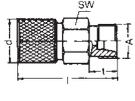
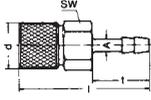
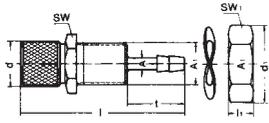
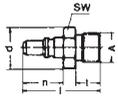
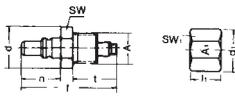
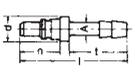
**optional features:**  
OV = without valve

**materials:**  
**standard:**  
23 = brass, nickel plated

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Connection A/A <sub>1</sub>	brass nickel-plated	pipe od	n.b.	SF/SF <sub>1</sub>	l	l <sub>1</sub>	d	d <sub>1</sub>	t	n	Weight [g]	
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	LP-003-0-WR010-23-.	BSPP 1/8"	●			14	32,5	15		8		32	
	 male thread to DIN ISO 228 for bulkhead mounting (max. thickness 2 mm), complete with counternut	LP-003-0-XX016-23-.	BSPP 1/4"	○			17/22	34	6	15	23,9	15		46
	 re-usable hose connection with swivel nut for plastic pipes	LP-003-0-SW004-23-.	OD 6 ID 4 mm M 10 x 1	○			14/13	40,5	13,5	15	14,3	16		50
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L)	LP-003-0-L0612-23-.	M 12 x 1,5	○	6	4	14	34,5		15		10		38
	 hose connection	LP-003-0-SL004-23-.	4 mm	●			14	44,5		15		19		36
	 male thread with 4 mm hose connection for bulkhead mounting (max. thickness 2 mm) complete with counternut	LP-003-0-XX004-23-.	4 mm M 14 x 1,5	●			17/19	54,5	6	15	25,4	19		50
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	LP-003-1-WR010-23	BSPP 1/8"	●			12	25	13,8		8	13	9	
	 re-usable hose connection with swivel nut for plastic pipes	LP-003-1-SW004-23	OD 6 ID 4 mm M 10 x 1	○			12/13	33	13,5	13,2	14,3	16	13	17
	 hose connection	LP-003-1-SL004-23	4 mm	●				35		8		19	13	4

**characteristic features:**  
- automatic lock (one hand operation)

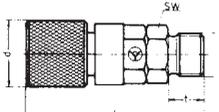
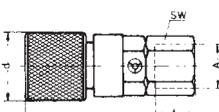
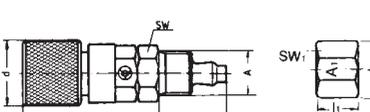
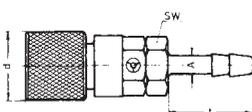
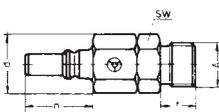
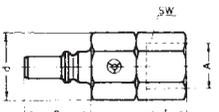
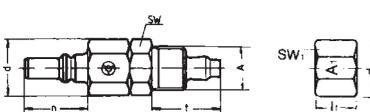
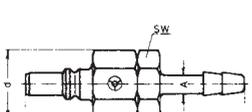
**materials:**  
**standard:**  
23 = brass, nickel plated

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

**special materials:**  
1 = stainless steel 1.4404/1.4571 or similar

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Connection A/ A <sub>1</sub>	brass nickel plated	AISI 316 ti/1.4571	pipe od	n.b.	d	d <sub>1</sub>	SW SW <sub>1</sub>	l	l <sub>1</sub>	t	n	Weight [g]
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	07-003-0-WR010-...-	BSPP 1/8"	●	○		15		12 —	39,8		8		32
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	07-003-0-WR510-...-	BSPP 1/8"	○	○		15		12 —	37,8		9		30
	 re-usable hose connection with swivel nut for plastic pipes	07-003-0-SW004-...-	OD 6 ID 4 mm M 10 x 1	○	○		15	14,3	12 13	47,8	13,5	16		41
	 hose connection	07-003-0-SL004-...-	4 mm	○	○		15		12 —	51,8		19		32
Self sealing adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	07-003-2-WR010-...-	BSPP 1/8"	●	○		13,2		12 —	38		8	15	18
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	07-003-2-WR510-...-	BSPP 1/8"	○	○		13,2		12 —	36		9	15	15
	 re-usable hose connection with swivel nut for plastic pipes	07-003-2-SW004-...-	OD 6 ID 4 mm M 10 x 1	○	○		13,2	14,3	12 13	46	13,5	16	15	27
	 hose connection	07-003-2-SL004-...-	4 mm	○	○		13,2		12 —	50		19	15	17

**optional features:**  
OV = without valve

see also type LV-004 in extended version and with non squirt feature (in stainless steel or alternatively brass passivated)

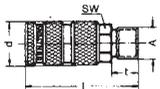
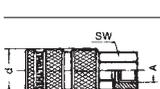
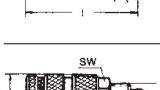
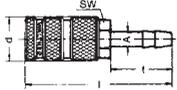
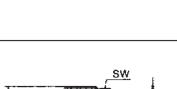
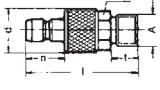
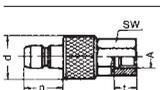
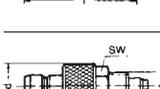
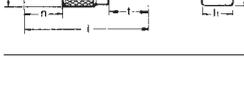
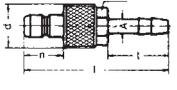
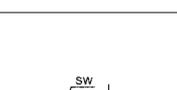
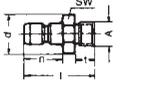
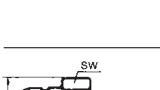
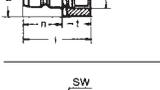
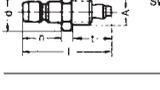
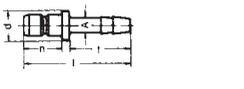
**materials:**  
**standard:**  
11 = steel, zinc plated  
21 = brass, passivated  
23 = brass, nickel plated

**special materials:**  
31 = aluminium anodized silver  
13 = steel, chem. nickel plated  
24 = brass, chem. nickel plated

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Connection A/ A <sub>1</sub>	steel zinc-plated	brass passivated	brass nickel-plated	pipe od	n.b.	d	d <sub>1</sub>	SF SF <sub>1</sub>	l l <sub>1</sub>	t	n	Weight [g]	
<b>Self sealing couplings</b>	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LP-004-0-WR010-...</b>	BSPP 1/8"	●	●	●			18		14 —	45,5 —	8		50	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LP-004-0-WR013-...</b>	BSPP 1/4"	●	●	○			18		14 —	46,5 —	11		55	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>LP-004-0-WR510-...</b>	BSPP 1/8"	●	●	●			18		14 —	45,5 —	9		55	
	 re-usable hose connection with swivel nut for plastic pipes <b>LP-004-0-SW004-...</b>	OD 6 ID 4 mm M 10 x 1			●	○			18	14,3	14 13	51,5 13,5	16		60
 hose connection <b>LP-004-0-SL004-...</b>	4 mm		○	○				18		12 —	50 —	19	15	47	
	 hose connection <b>LP-004-0-SL006-...</b>	6 mm	●	●	●			18		14 —	60,5 —	25		50	
<b>Self sealing adaptors</b>	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LP-004-2-WR010-...</b>	BSPP 1/8"	●	●	●			18		14 —	45 —	8	16	36	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LP-004-2-WR013-...</b>	BSPP 1/4"	●	●	○			18		14 —	46 —	11	16	41	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>LP-004-2-WR510-...</b>	BSPP 1/8"	●	●	●			18		14 —	45 —	9	16	41	
	 re-usable hose connection with swivel nut for plastic pipes <b>LP-004-2-SW004-...</b>	OD 6 ID 4 mm			●	○			18	14,3	14 13	51 13,5	16	16	45
 hose connection <b>LP-004-2-SL004-...</b>	4 mm		○	○	○			18		14 —	53 —	18	16	33	
	 hose connection <b>LP-004-2-SL006-...</b>	6 mm	●	●	●			18		14 —	60 —	25	16	36	
<b>Thru type adaptors</b>	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LP-004-1-WR010-..</b>	BSPP 1/8"	●	●	●			16,2		14 —	29 —	8	16	15	
	 metric ISO fine-pitch thread, male to DIN 13 with pitch 1,0 mm <b>LP-004-1-WR013-..</b>	BSPP 1/4"	○	○	○			16,2		14 —	32 —	11	16	20	
	 metric ISO fine-pitch thread, male to DIN 13 with pitch 1,0 mm <b>LP-004-1-4M010-..</b>	M 10 x 1		○	○			14,8		13 —	28 —	8	16	17	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>LP-004-1-WR510-..</b>	BSPP 1/8"	○	○	○			16,2		14 —	29 —	9	16	18	
	 re-usable hose connection with swivel nut for plastic pipes <b>LP-004-1-SW004-..</b>	OD 6 ID 4 mm			○	○			13,2	14,3	12 13	37 13,5	16	16	22
	 hose connection <b>LP-004-1-SL004-..</b>	4 mm			○	○			12		37 —	—	18	16	9
hose connection <b>LP-004-1-SL006-..</b>	6 mm	●	○	○			12		44 —	—	25	16	11		

**characteristic features:**

- extended version
- non squirt feature
- stainless steel version 1.4404/1.4571 or similar in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**materials:**

- standard:**  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

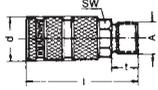
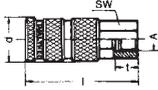
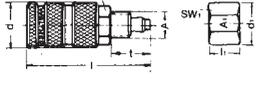
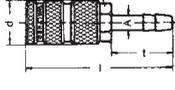
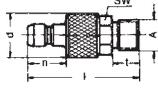
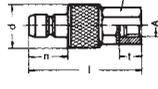
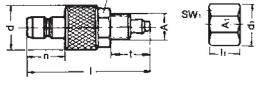
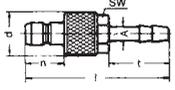
- 1 = NBR
- 2 = FKM
- 4 = EPDM

**optional features:**

OV = without valve

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Connection A/ A <sub>1</sub>	brass passivated	AISI 316 ti/1.4571	pipe od	n.b.	d	d <sub>1</sub>	AF AF <sub>1</sub>	l	l <sub>1</sub>	t	n	Weight [g]
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LV-004-0-WR010-...-</b> <b>LV-004-0-WR013-...-</b>	BSPP 1/8"	●	○			18		14 —	50,5		8		55
		BSPP 1/4"	●	○			18		14 —	51,5		11		60
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>LV-004-0-WR510-...-</b>	BSPP 1/8"	●	○			18		14 —	50,5		9		60
		 re-usable hose connection with swivel nut for plastic pipes <b>LV-004-0-SW004-...-</b>	OD 6 ID 4 mm	●	○			18	14,3	14 13	56,5	13,5	16	
	 hose connection <b>LV-004-0-SL004-...-</b> <b>LV-004-0-SL006-...-</b>	4 mm	●	○			18		14 —	58,5		18		55
		6 mm	●	○			18		14 —	65,5		25		55
Self sealing adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>LV-004-2-WR010-...-</b> <b>LV-004-2-WR013-...-</b>	BSPP 1/8"	●	○			18		14 —	50		8	21	38
		BSPP 1/4"	●	○			18		14 —	51		11	21	43
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>LV-004-2-WR510-...-</b>	BSPP 1/8"	●	○			18		14 —	50		9	21	42
		 re-usable hose connection with swivel nut for plastic pipes <b>LV-004-2-SW004-...-</b>	OD 6 ID 4 mm M 10 x 1	●	○			18	14,3	14 13	56	13,5	16	21
	 hose connection <b>LV-004-2-SL004-...-</b> <b>LV-004-2-SL006-...-</b>	4 mm	●	○			18		14 —	58		18	21	35
		6 mm	●	○			18		14 —	65		25	21	38

**characteristic features:**  
 - non squirt feature  
 - can be coupled with type KL-006 (plastic version)  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 29 mm)  
 VH = with locking aid

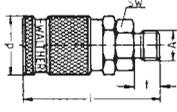
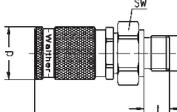
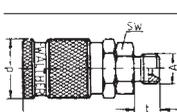
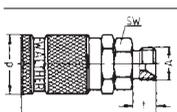
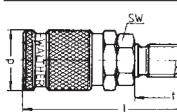
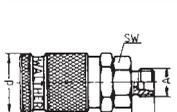
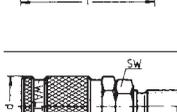
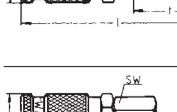
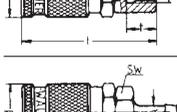
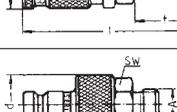
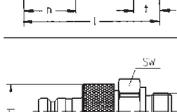
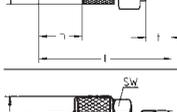
**materials:**  
**standard:**  
 11 = steel, zinc plated  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 31 = aluminium anodized silver

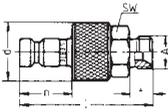
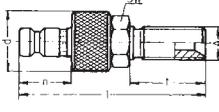
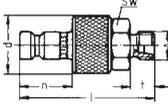
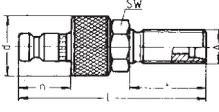
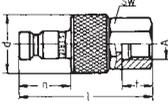
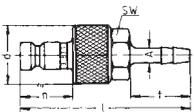
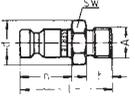
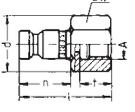
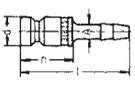
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]		
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-006-0-WR013-... LP-006-0-WR017-... LP-006-0-WR021-...	BSPP 1/4" BSPP 3/8" BSPP 1/2"	● ● ●	● ● ●	● ● ●	○ ○ ○			25 25 25	19 19 22	58 59 62	11 12 15		110 120 140		
		 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-006-0-WE017-...	BSPP 3/8"	●						25	27	64	12		160	
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-006-0-VR013-... LP-006-0-VR017-...	BSPP 1/4" BSPP 3/8"	○ ○			○ ○			6 6	25 25	19 19	58 59	11 12		110 120
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-006-0-D0614-...	M 14 x 1,5	●			○			6	25	19	57	10		110	
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	LP-006-0-DV008-...	M 14 x 1,5	○			○			6	25	19	79	32		130	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-006-0-L0612-... LP-006-0-L0814-... LP-006-0-L1016-... LP-006-0-L1218-... LP-006-0-S0816-... LP-006-0-S1018-... LP-006-0-S1220-...	M 12 x 1,5 M 14 x 1,5 M 16 x 1,5 M 18 x 1,5 M 16 x 1,5 M 18 x 1,5 M 20 x 1,5	● ● ● ○ ○ ● ●			○ ○ ○ ○ ○ ○ ○	L L L L S S S	6 8 10 12 8 10 12	4 6 8 10 4 6 8	25 25 25 25 25 25 25	19 19 19 19 19 19 22	57 57 58 58 59 59 59	10 10 11 11 12 12 12		110 110 110 110 120 120 130	
		 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S), extended thread, max. bulkhead thickness 10 mm</p>	LP-006-0-LV008-... LP-006-0-XX211-...	M 14 x 1,5 M 16 x 1,5	● ○			○ ○	L L	8 10	6 8	25 25	19 19	79 79	32 32		130 140
		 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-006-0-WR513-... LP-006-0-WR517-...	BSPP 1/4" BSPP 3/8"	● ●	● ●	● ●	○ ○			25 25	19 22	57 58	13 14		120 120	
			 <p>hose connection</p>	LP-006-0-SL006-... LP-006-0-SL009-... LP-006-0-SL011-... LP-006-0-SL013-...	6 mm 9 mm 11 mm 13 mm	● ● ● ●	● ● ● ●	● ● ● ●	○ ○ ○ ○			25 25 25 25	19 19 19 19	72 77 77 77	25 30 30 30		110 110 120 130
		Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-006-2-WR013-... LP-006-2-WR017-... LP-006-2-WR021-...	BSPP 1/4" BSPP 3/8" BSPP 1/2"	● ● ●	● ● ●	● ● ●	○ ○ ○			25 25 25	19 19 22	56 57 60	11 12 15	20 20 20	85 90 110
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>				LP-006-2-WE017-...	BSPP 3/8"	●						25	27	62	12	20	130
 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-006-2-VR013-... LP-006-2-VR017-...			BSPP 1/4" BSPP 3/8"	○ ○			○ ○			6 6	25 25	19 19	56 57	11 12	20 20	85 90

Availability: ● Short ● Medium ○ Long

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AlSi 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 metric male thread with 60° sealing cone to DIN 7631	LP-006-2-D0614-... M 14 x 1,5	●			○			6	25	19	55	10	20	85	
	 metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm	LP-006-2-DV008-... M 14 x 1,5	○			○			6	25	19	77	32	20	100	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	LP-006-2-L0612-... M 12 x 1,5	●			○	L	6	4	25	19	55	10	20	80	
		LP-006-2-L0814-... M 14 x 1,5	●			○	L	8	6	25	19	55	10	20	85	
		LP-006-2-L1016-... M 16 x 1,5	●			○	L	10	8	25	19	56	11	20	85	
		LP-006-2-L1218-... M 18 x 1,5	○			○	L	12	10	25	19	56	11	20	85	
		LP-006-2-S0816-... M 16 x 1,5	○			○	S	8	4	25	19	57	12	20	90	
		LP-006-2-S1018-... M 18 x 1,5	●			○	S	10	6	25	19	57	12	20	90	
	LP-006-2-S1220-... M 20 x 1,5	●			○	S	12	8	25	22	57	12	20	100		
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S), extended thread, max. bulkhead thickness 10 mm	LP-006-2-LV008-... M 14 x 1,5	●			○	L	8	6	25	19	77	32	20	100	
LP-006-2-XX211-... M 16 x 1,5		○			○	L	10	8	25	19	77	32	20	110		
 British standard pipe parallel (BSPP) female thread to DIN ISO 228	LP-006-2-WR513-... BSPP 1/4"	●	●	●	○				25	19	55	13	20	90		
	LP-006-2-WR517-... BSPP 3/8"	●	●	●	○				25	22	56	14	20	95		
 hose connection	LP-006-2-SL006-... 6 mm	●	●	●	○				25	19	70	25	20	80		
	LP-006-2-SL009-... 9 mm	●	●	●	○				25	19	75	30	20	85		
	LP-006-2-SL011-... 11 mm	●	●	●	○				25	19	75	30	20	90		
	LP-006-2-SL013-... 13 mm	●	●	●	○				25	19	75	30	20	100		
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	LP-006-1-WR010-... BSPP 1/8"	●	○	○	○				15,5	14	35	8	20	22	
		LP-006-1-WR013-... BSPP 1/4"	●	●	●	○				15,5	14	39	11	20	25	
		LP-006-1-WR017-... BSPP 3/8"	●	●	○	○				21	19	40,5	12	20	39	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	LP-006-1-WR510-... BSPP 1/8"	○	○	○	○					16,5	15	31	9	20	20
		LP-006-1-WR513-... BSPP 1/4"	●	●	●	○				18,9	17	36	13	20	28	
		LP-006-1-WR517-... BSPP 3/8"	●	●	●	○				24	22	38	14	20	44	
	 hose connection	LP-006-1-SL006-... 6 mm	●	●	●	○					12		46		20	16
		LP-006-1-SL009-... 9 mm	●	●	●	○					12		51		20	20
		LP-006-1-SL011-... 11 mm	●	●	●	○					16		53		20	31
LP-006-1-SL013-... 13 mm		●	●	●	○					16		53		20	41	

**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead  
 knurling (-GL/-GX)

**optional features:**  
 OV = without valve

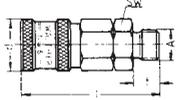
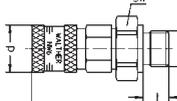
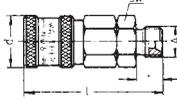
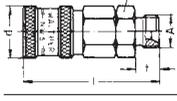
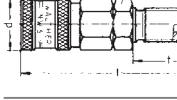
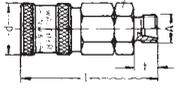
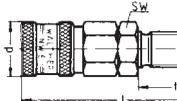
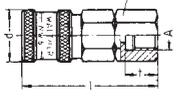
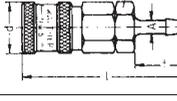
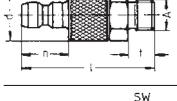
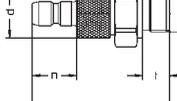
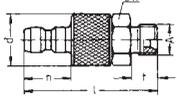
**materials:**  
**standard:**  
 11 = steel, zinc plated  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 31 = aluminium anodized silver  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated

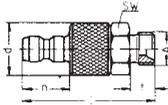
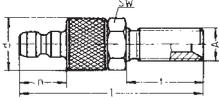
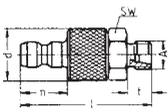
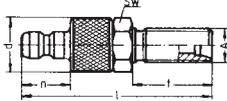
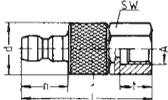
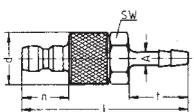
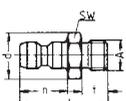
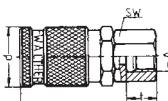
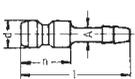
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the  
 technical data on  
 pages 2 - 7, 32 - 33 and the  
 max. working pressures  
 on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	SP-006-0-WR013-...-.	BSPP 1/4"	●	●	●				22	19	58	11		90	
		SP-006-0-WR017-...-.	BSPP 3/8"	●	●	●	○				22	19	59	12		95
		SP-006-0-WR021-...-.	BSPP 1/2"	●	●	●	○				22	22	62	15		120
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	SP-006-0-WE017-...-.	BSPP 3/8"	●							22	27	64	12		130
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	SP-006-0-VR013-...-.	BSPP 1/4"	○					6	22	19	58	11		90
	SP-006-0-VR017-...-.		BSPP 3/8"	○					6	22	19	59	12		95	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	SP-006-0-D0614-...-.	M 14 x 1,5	○					6	22	19	57	10		85	
		 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	SP-006-0-DV008-...-.	M 14 x 1,5	○					6	22	19	79	32		105
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>		SP-006-0-L0612-...-.	M 12 x 1,5	●			○	L	6	4	22	19	57	10	85
			SP-006-0-L0814-...-.	M 14 x 1,5	●			○	L	8	6	22	19	57	10	85
SP-006-0-L1016-...-.			M 16 x 1,5	●			○	L	10	8	22	19	58	11	90	
SP-006-0-L1218-...-.			M 18 x 1,5	○			○	L	12	10	22	19	58	11	90	
SP-006-0-S0816-...-.			M 16 x 1,5	○			○	S	8	4	22	19	59	12	90	
SP-006-0-S1018-...-.			M 18 x 1,5	●			○	S	10	6	22	19	59	12	95	
SP-006-0-S1220-...-.			M 20 x 1,5	●			○	S	12	8	22	22	59	12	100	
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S), extended thread, max. bulkhead thickness 10 mm</p>		SP-006-0-LV008-...-.	M 14 x 1,5	●			○	L	8	6	22	19	79	32	100	
	SP-006-0-XX211-...-.	M 16 x 1,5	○			○	L	10	8	22	19	79	32	110		
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	SP-006-0-WR513-...-.	BSPP 1/4"	●	●	●	●				22	19	57	13	95		
	SP-006-0-WR517-...-.	BSPP 3/8"	●	●	●	○				22	22	58	14	100		
	 <p>hose connection</p>	SP-006-0-SL006-...-.	6 mm	●	●	●	○				22	19	72	25	85	
		SP-006-0-SL009-...-.	9 mm	●	●	●	●				22	19	77	30	90	
SP-006-0-SL011-...-.		11 mm	●	●	●	○				22	19	77	30	95		
SP-006-0-SL013-...-.		13 mm	●	●	●	○				22	19	77	30	110		
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	SP-006-2-WR013-...-.	BSPP 1/4"	●	●	●	●			22	19	56	11	20	70	
		SP-006-2-WR017-...-.	BSPP 3/8"	●	●	●	○			22	19	57	12	20	75	
		SP-006-2-WR021-...-.	BSPP 1/2"	●	●	●	○			22	22	60	15	20	100	
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	SP-006-2-WE017-...-.	BSPP 3/8"	●						22	27	62	12	20	110	
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	SP-006-2-VR013-...-.	BSPP 1/4"	○					6	22	19	56	11	20	70
	SP-006-2-VR017-...-.		BSPP 3/8"	○					6	22	19	57	12	20	75	

Availability: ● Short ● Medium ○ Long

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 metric male thread with 60° sealing cone to DIN 7631	SP-006-2-D0614-...-.	M 14 x 1,5	○					6	22	19	55	10	20	70	
	 metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm	SP-006-2-DV008-...-.	M 14 x 1,5	○					6	22	19	77	32	20	90	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	SP-006-2-L0612-...-.	M 12 x 1,5	●			○	L	6	4	22	19	55	10	20	70
		SP-006-2-L0814-...-.	M 14 x 1,5	●			○	L	8	6	22	19	55	10	20	70
		SP-006-2-L1016-...-.	M 16 x 1,5	●			○	L	10	8	22	19	56	11	20	70
		SP-006-2-L1218-...-.	M 18 x 1,5	○			○	L	12	10	22	19	56	11	20	70
		SP-006-2-S0816-...-.	M 16 x 1,5	○			○	S	8	4	22	19	57	12	20	75
		SP-006-2-S1018-...-.	M 18 x 1,5	●			○	S	10	6	22	19	57	12	20	75
		SP-006-2-S1220-...-.	M 20 x 1,5	●			○	S	12	8	22	22	57	12	20	85
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S), extended thread, max. bulkhead thickness 10 mm	SP-006-2-LV008-...-.	M 14 x 1,5	●			○	L	8	6	22	19	77	32	20	85
SP-006-2-XX211-...-.		M 16 x 1,5	○			○	L	10	8	22	19	77	32	20	95	
 British standard pipe parallel (BSP) female thread to DIN ISO 228	SP-006-2-WR513-...-.	BSP 1/4"	●	●	●	●				22	19	55	13	20	75	
	SP-006-2-WR517-...-.	BSP 3/8"	●	●	●	○				22	22	56	14	20	80	
 hose connection	SP-006-2-SL006-...-.	6 mm	●	●	●	○				22	19	70	25	20	70	
	SP-006-2-SL009-...-.	9 mm	●	●	●	●				22	19	75	30	20	70	
	SP-006-2-SL011-...-.	11 mm	●	●	●	○				22	19	75	30	20	80	
	SP-006-2-SL013-...-.	13 mm	●	●	●	○				22	19	75	30	20	90	
 British standard pipe parallel (BSP) male thread to DIN ISO 228	SP-006-1-WR010-...-.	BSP 1/8"	●	●	●	○				15,5	14	34	8	20	20	
	SP-006-1-WR013-...-.	BSP 1/4"	●	●	●	○				15,5	14	37	11	20	23	
	SP-006-1-WR017-...-.	BSP 3/8"	●	●	●	○				21,9	19	38	12	20	37	
 British standard pipe parallel (BSP) female thread to DIN ISO 228	SP-006-1-WR513-...-.	BSP 1/4"	●	●	●	○				19,6	17	36	13	20	26	
	SP-006-1-WR517-...-.	BSP 3/8"	●	●	●	○				24	22	37	14	20	40	
 hose connection	SP-006-1-SL006-...-.	6 mm	●	●	●	○				11		46		20	13	
	SP-006-1-SL009-...-.	9 mm	●	●	●	○				11		51		20	18	

**characteristic features:**  
 - non squirt feature  
 - stainless steel version 1.440/1.4571 or similar in smooth variant with gripping grooves instead knurling (-GL/-GX)

**optional features:**  
 OV = without valve  
 S = with additional axial safety lock (outer diameter 34 mm)  
 VH = with locking aid

**materials:**  
**standard:**  
 11 = steel, zinc plated  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated

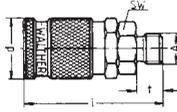
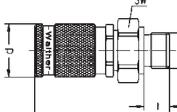
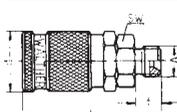
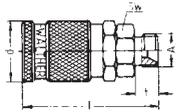
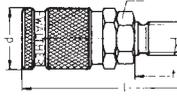
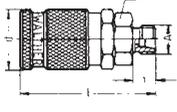
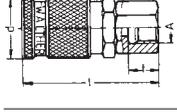
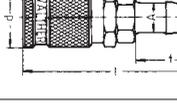
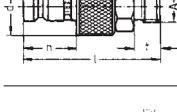
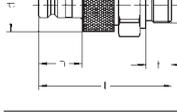
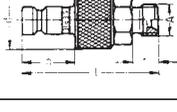
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

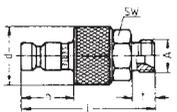
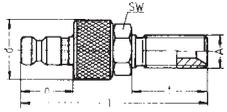
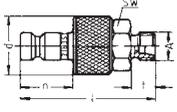
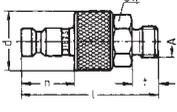
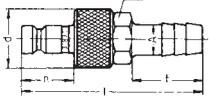
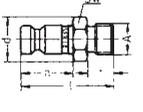
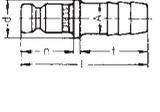
**Availability:** ● Short ○ Medium ○ Long

Self sealing couplings

Self sealing adaptors

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-007-0-WR017-...-	BSPP 3/8"	●	●	●	○				30	24	68	12		200
	LP-007-0-WR021-...-	BSPP 1/2"	●	●	●	○				30	24	71	15		210
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-007-0-WE017-...-	BSPP 3/8"	○	○	○	○				30	27	71	12		220
 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-007-0-VR017-...-	BSPP 3/8"	○	○	○	○			7	30	24	68	12		190
 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-007-0-D0816-...-	M 16 x 1,5	○	○	○	○			8	30	24	67	11		200
 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	LP-007-0-DV010-...-	M 16 x 1,5	○	○	○	○			8	30	24	89,5	33,5		210
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-007-0-L1016-...-	M 16 x 1,5	○	○	○	○	L	10	8	30	24	67	11		190
	LP-007-0-L1218-...-	M 18 x 1,5	○	○	○	○	L	12	10	30	24	67	11		190
	LP-007-0-S1018-...-	M 18 x 1,5	○	○	○	○	S	10	6	30	24	68	12		200
	LP-007-0-S1220-...-	M 20 x 1,5	○	○	○	○	S	12	8	30	24	68	12		200
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-007-0-WR517-...-	BSPP 3/8"	●	●	●	○				30	24	68	14		210
	LP-007-0-WR521-...-	BSPP 1/2"	●	●	●	○				30	27	71	17		230
 <p>hose connection</p>	LP-007-0-SL009-...-	9 mm	●	●	●	○				30	24	86	30		200
	LP-007-0-SL011-...-	11 mm	●	●	●	○				30	24	86	30		200
	LP-007-0-SL013-...-	13 mm	●	●	●	○				30	24	86	30		210
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-007-2-WR017-...-	BSPP 3/8"	●	●	●	○				30	24	66	12	23,3	150
	LP-007-2-WR021-...-	BSPP 1/2"	●	●	●	○				30	24	69	15	23,3	170
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-007-2-WE017-...-	BSPP 3/8"	○	○	○	○				30	27	69	12	23,3	170
 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-007-2-VR017-...-	BSPP 3/8"	○	○	○	○			7	30	24	66	12	23,3	150

Availability: ● Short ● Medium ○ Long

	Part No.	Connec- tion A	steel zinc plated	brass passivated	brass chrome plated	AlSi 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
Self sealing adaptors	 metric male thread with 60° sealing cone to DIN 7631	LP-007-2-D0816-... M 16 x 1,5	○			○			8	30	24	65	11	23,3	150
	 metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm	LP-007-2-DV010-... M 16 x 1,5	○			○			8	30	24	87,5	33,5	23,3	160
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	LP-007-2-L1016-... M 16 x 1,5	●			○	L	10	8	30	24	65	11	23,3	140
		LP-007-2-L1218-... M 18 x 1,5	●			○	L	12	10	30	24	65	11	23,3	140
		LP-007-2-S1018-... M 18 x 1,5	●			○	S	10	6	30	24	66	12	23,3	150
		LP-007-2-S1220-... M 20 x 1,5	●			○	S	12	8	30	24	66	12	23,3	150
 British standard pipe parallel (BSPP) female thread to DIN ISO 228	LP-007-2-WR517-... BSPP 3/8"	●	●	●	●				30	24	66	14	23,3	160	
	LP-007-2-WR521-... BSPP 1/2"	●	●	●	○				30	27	69	17	23,3	180	
 hose connection	LP-007-2-SL009-... 9 mm	●	●	●	○				30	24	84	30	23,3	150	
	LP-007-2-SL011-... 11 mm	●	●	●	○				30	24	84	30	23,3	150	
	LP-007-2-SL013-... 13 mm	●	●	●	●				30	24	84	30	23,3	160	
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	LP-007-1-WR013-... BSPP 1/4"	●	○	○	○			18,9	17	40,5	11	23,3	35	
		LP-007-1-WR017-... BSPP 3/8"	●	○	○	○			21	19	41,5	12	23,3	45	
		LP-007-1-WR021-... BSPP 1/2"	●	●	●	○			26,7	24	44,5	15	23,3	70	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	LP-007-1-WR513-... BSPP 1/4"	●	○	○	○			18,9	17	40,5	13	23,3	37	
		LP-007-1-WR517-... BSPP 3/8"	●	●	●	○			24	22	41,5	14	23,3	55	
		LP-007-1-WR521-... BSPP 1/2"	●	●	●	○			30	27	44,5	17	23,3	75	
 hose connection	LP-007-1-SL009-... 9 mm	●	●	○	○				14		54,5	30	23,3	29	
	LP-007-1-SL011-... 11 mm	●	●	●	○				18		56,5	30	23,3	37	
	LP-007-1-SL013-... 13 mm	●	●	●	○				18		56,5	30	23,3	46	

**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead  
 knurling (-GL/-GX)

**optional features:**  
 OV = without valve

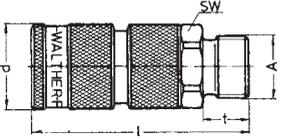
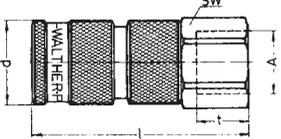
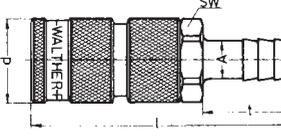
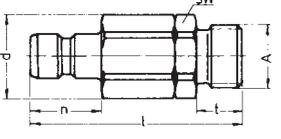
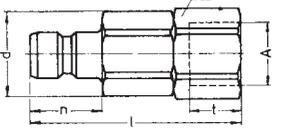
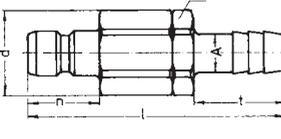
**materials:**  
**standard:**  
 11 = steel, zinc plated  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated

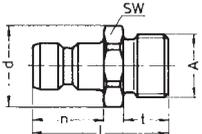
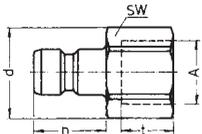
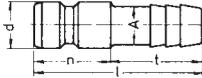
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the  
 technical data on  
 pages 2 - 7, 32 - 33 and the  
 max. working pressures  
 on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc	brass	brass chrome	AISI 316 ti/	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
			plated	passivated	plated	1.4571									
Self sealing couplings	 <p>British stan- dard pipe parallel (BSPP) male thread to DIN ISO 228</p>	BSPP 3/8"	●	●	○	○				28	25	71	12		180
		BSPP 1/2"	●	●	○	○				28	25	71	15		190
	 <p>British stan- dard pipe parallel (BSPP) fe- male thread to DIN ISO 228</p>	BSPP 1/2"	●	●	○	○				28	27	71	17		200
Self sealing adaptors	 <p>hose connection</p>	13 mm	●	●	○	○				28	25	86	30		180
		 <p>British stan- dard pipe parallel (BSPP) male thread to DIN ISO 228</p>	BSPP 3/8"	●	●	○	○				28	25	69,5	12	23,5
	BSPP 1/2"		●	●	○	○				28	25	69,5	15	23,5	130
Self sealing adaptors	 <p>British stan- dard pipe parallel (BSPP) fe- male thread to DIN ISO 228</p>	BSPP 1/2"	●	●	○	○				28	27	69,5	17	23,5	140
		 <p>hose connection</p>	13 mm	●	●	○	○				28	25	84,5	30	23,5

Availability: ● Short ● Medium ○ Long

	Part No.	Conne- tion A	steel zinc	brass	brass chrome	AlSi 316 ti/	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
			plated	passivated	plated	1,4571									
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Thru type adaptors</p>  <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<p><b>SP-009-1-WR017-..</b> <b>SP-009-1-WR021-..</b></p>	<p>BSPP 3/8" BSPP 1/2"</p>	<p>● ●</p>	<p>● ●</p>	<p>○ ○</p>	<p>○ ○</p>				<p>21,9 24</p>	<p>19 22</p>	<p>41,5 46,5</p>	<p>12 15</p>	<p>23,5 23,5</p>	<p>40 60</p>
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<p><b>SP-009-1-WR521-..</b></p>	<p>BSPP 1/2"</p>	<p>●</p>	<p>○</p>	<p>○</p>	<p>○</p>			<p>30</p>	<p>27</p>	<p>45</p>	<p>17</p>	<p>23,5</p>	<p>75</p>
	 <p>hose connection</p>	<p><b>SP-009-1-SL013-..</b></p>	<p>13 mm</p>	<p>○</p>	<p>●</p>	<p>○</p>	<p>○</p>			<p>15</p>		<p>55</p>	<p>30</p>	<p>23,5</p>	<p>37</p>

**characteristic features:**  
 - non squirt feature  
 - can be coupled with type KL-012 (plastic version)  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 44 mm)  
 VH = with locking aid

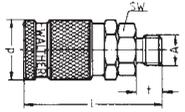
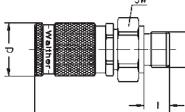
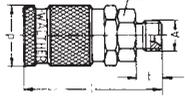
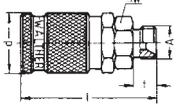
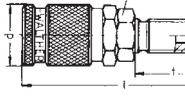
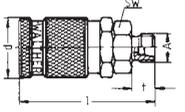
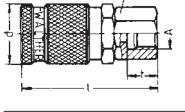
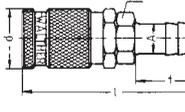
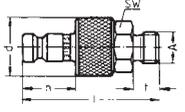
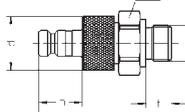
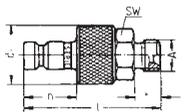
**materials:**  
**standard:**  
 11 = steel, zinc plated  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated

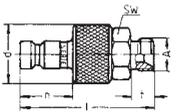
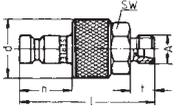
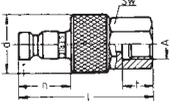
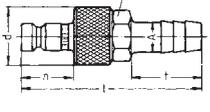
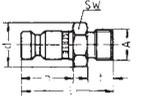
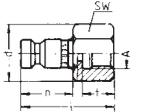
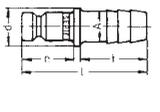
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-012-0-WR021-...-.	BSPP 1/2"	●	●	○				40	32	82	15		380	
		LP-012-0-WR026-...-.	BSPP 3/4"	●	●	○				40	32	84	17		410	
		LP-012-0-WR033-...-.	BSPP 1"	●	○	○				40	36	88	20		470	
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-012-0-WE021-...-.	BSPP 1/2"	○						40	32	84	14		390	
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-012-0-VR021-...-.	BSPP 1/2"	○					12	40	32	82	15		380
	LP-012-0-VR026-...-.		BSPP 3/4"	○					12	40	32	84	17		400	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-012-0-D1018-...-.	M 18 x 1,5	○						10	40	32	78	11		370
		LP-012-0-D1222-...-.	M 22 x 1,5	○						12	40	32	79	12		380
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	LP-012-0-DV015-...-.	M 22 x 1,5	○						12	40	32	106	39		430
		 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-012-0-L1218-...-.	M 18 x 1,5	○				L	12	10	40	32	78	11	
LP-012-0-L1522-...-.			M 22 x 1,5	○				L	15	12	40	32	79	12		380
LP-012-0-S1624-...-.	M 24 x 1,5		○				S	16	12	40	32	81	14		390	
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-012-0-WR521-...-.	BSPP 1/2"	●	●	○				40	32	81	17		420		
	LP-012-0-WR526-...-.	BSPP 3/4"	●	●	○				40	32	83	19		400		
 <p>hose connection</p>	LP-012-0-SL016-...-.	16 mm	●	○	○				40	32	102	35		390		
	LP-012-0-SL019-...-.	19 mm	●	○	○				40	32	102	35		410		
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-012-2-WR021-...-.	BSPP 1/2"	●	●	○				40	32	80	15	29,5	290	
		LP-012-2-WR026-...-.	BSPP 3/4"	●	○	○				40	32	82	17	29,5	320	
		LP-012-2-WR033-...-.	BSPP 1"	●	○	○				40	36	86	20	29,5	380	
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-012-2-WE021-...-.	BSPP 1/2"	○						40	32	82	14	29,5	300	
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-012-2-VR021-...-.	BSPP 1/2"	○					12	40	32	80	15	29,5	290
	LP-012-2-VR026-...-.		BSPP 3/4"	○					12	40	32	82	17	29,5	310	

Availability: ● Short ● Medium ○ Long

	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AlSi 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-012-2-D1018-...- LP-012-2-D1222-...-	M 18 x 1,5 M 22 x 1,5	● ●					10 12	40 40	32 32	76 77	11 12	29,5 29,5	280 290	
		LP-012-2-DV015-...-	M 22 x 1,5	○					12	40	32	104	39	29,5	340	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-012-2-L1218-...- LP-012-2-L1522-...- LP-012-2-S1624-...-	M 18 x 1,5 M 22 x 1,5 M 24 x 1,5	● ● ●				L L S	12 15 16	10 12 12	40 40 40	32 32 32	76 77 79	11 12 14	29,5 29,5 29,5	280 290 290
		 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-012-2-WR521-...- LP-012-2-WR526-...-	BSPP 1/2" BSPP 3/4"	● ●	● ●	● ●	○ ●			40 40	32 32	79 81	17 19	29,5 29,5	330 310
			 <p>hose connection</p>	LP-012-2-SL016-...- LP-012-2-SL019-...-	16 mm 19 mm	● ●	● ●	● ●	○ ○			40 40	32 32	100 100	35 35	29,5 29,5
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-012-1-WR017-... LP-012-1-WR021-... LP-012-1-WR026-...-	BSPP 3/8" BSPP 1/2" BSPP 3/4"	● ● ●	○ ● ●	○ ○ ○			30 30 33	27 27 30	49,5 54,5 54,5	12 15 17	29,5 29,5 29,5	90 100 140		
		 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-012-1-WR521-... LP-012-1-WR526-...-	BSPP 1/2" BSPP 3/4"	● ●	○ ○	○ ○			30 35,5	27 32	50,5 52,5	17 19	29,5 29,5	100 120	
			 <p>hose connection</p>	LP-012-1-SL013-... LP-012-1-SL016-... LP-012-1-SL019-...-	13 mm 16 mm 19 mm	● ● ●	● ○ ●	● ○ ○	○ ○ ○			21 21 25		61 66 68,5	30 35 35	29,5 29,5 29,5

**characteristic features:**  
 - non squirt feature  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 GG= with ring grips (cast aluminium)  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 58 mm)  
 VH= with locking aid

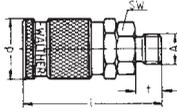
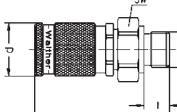
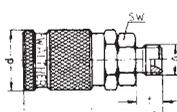
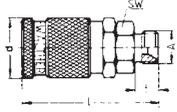
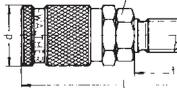
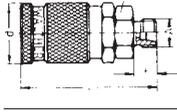
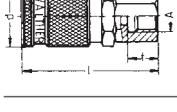
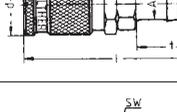
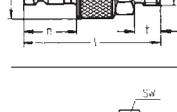
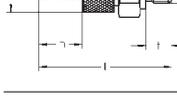
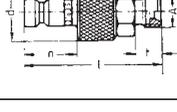
**materials:**  
**standard:**  
 11 = steel, zinc plated  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated

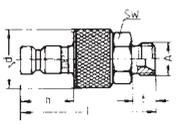
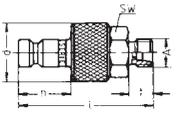
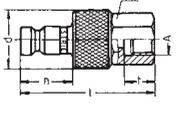
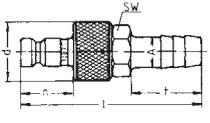
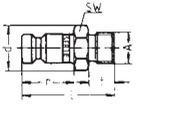
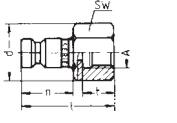
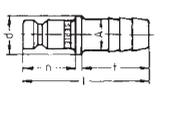
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc	brass	brass chrome	AISI 316 ti/	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]		
			plated	passivated	plated	1.4571											
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-019-0-WR026-...-.	BSPP 3/4"	●	○	○				54	46	100	17		840		
		LP-019-0-WR033-...-.	BSPP 1"	●	●	○				54	46	103	20		870		
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-019-0-WE026-...-.	BSPP 3/4"	○						54	46	102	16		850		
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-019-0-VR026-...-.	BSPP 3/4"	○		○			19	54	46	100	17		830	
	LP-019-0-VR033-...-.		BSPP 1"	○		○			19	54	46	103	20		870		
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-019-0-D1526-...-.	M 26 x 1,5	○			○			15	54	46	95	12		830	
		LP-019-0-D1930-...-.	M 30 x 1,5	○			○			19	54	46	97	14		830	
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	LP-019-0-DV022-...-.	M 30 x 1,5	○			○			19	54	46	128	45		920	
		 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-019-0-L1826-...-.	M 26 x 1,5	○			○	L	18	16	54	46	95	12		830
			LP-019-0-L2230-...-.	M 30 x 2	○			○	L	22	20	54	46	97	14		830
LP-019-0-S2030-...-.			M 30 x 2	○			○	S	20	16	54	46	99	16		850	
LP-019-0-S2536-...-.			M 36 x 2	○			○	S	25	20	54	46	101	18		860	
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-019-0-WR526-...-.	BSPP 3/4"	●	●	○				54	46	94	19		890			
	LP-019-0-WR533-...-.	BSPP 1"	●	●	○				54	46	98	23		880			
	 <p>hose connection</p>	LP-019-0-SL019-...-.	19 mm	○	○	○				54	46	118	35		850		
LP-019-0-SL025-...-.		25 mm	○	○	○				54	46	123	40		870			
LP-019-0-SL028-...-.		28 mm	○	○	○				54	46	128	45		930			
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-019-2-WR026-...-.	BSPP 3/4"	●	○	○			54	46	96	17	32,5	690			
		LP-019-2-WR033-...-.	BSPP 1"	●	●	○			54	46	99	20	32,5	720			
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	LP-019-2-WE026-...-.	BSPP 3/4"	○					54	46	98	16	32,5	700			
 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	LP-019-2-VR026-...-.	BSPP 3/4"	○			○		19	54	46	96	17	32,5	690			
	LP-019-2-VR033-...-.	BSPP 1"	○			○		19	54	46	99	20	32,5	720			

Availability: ● Short ○ Medium ○ Long

	Part No.	Connection A	steel zinc plated	brass passivated	brass chrome plated	AlSi 316 ti/1,4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-019-2-D1526-...- LP-019-2-D1930-...-	M 26 x 1,5 M 30 x 1,5	● ●	○ ○	○ ○			15 19	54 54	46 46	91 93	12 14	32,5 32,5	680 680	
		LP-019-2-DV022-...-	M 30 x 1,5	○	○	○			19	54	46	124	45	32,5	770	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-019-2-L1826-...- LP-019-2-L2230-...- LP-019-2-S2030-...- LP-019-2-S2536-...-	M 26 x 1,5 M 30 x 2 M 30 x 2 M 36 x 2	● ● ● ●	○ ○ ○ ○	○ ○ ○ ○	L L S S	18 22 20 25	16 20 16 20	54 54 54 54	46 46 46 46	91 93 95 97	12 14 16 18	32,5 32,5 32,5 32,5	680 670 690 710	
		 <p>British standard pipe parallel (BSP) female thread to DIN ISO 228</p>	LP-019-2-WR526-...- LP-019-2-WR533-...-	BSP 3/4" BSP 1"	● ●	● ●	○ ○				54 54	46 46	90 94	19 23	32,5 32,5	740 730
			 <p>hose connection</p>	LP-019-2-SL019-...- LP-019-2-SL025-...- LP-019-2-SL028-...-	19 mm 25 mm 28 mm	● ● ●	○ ○ ○	○ ○ ○				54 54 54	46 46 46	114 119 124	35 40 45	32,5 32,5 32,5
 <p>British standard pipe parallel (BSP) male thread to DIN ISO 228</p>		LP-019-1-WR021-... LP-019-1-WR026-... LP-019-1-WR033-...-		BSP 1/2" BSP 3/4" BSP 1"	○ ● ●	○ ○ ○	○ ○ ○				40 40 40	36 36 36	57,5 59,5 62,5	15 17 20	32,5 32,5 32,5	210 220 260
	 <p>British standard pipe parallel (BSP) female thread to DIN ISO 228</p>	LP-019-1-WR526-... LP-019-1-WR533-...-		BSP 3/4" BSP 1"	● ○	○ ○	○ ○			40 45	36 41	57,5 61,5	19 23	32,5 32,5	240 250	
		 <p>hose connection</p>	LP-019-1-SL019-... LP-019-1-SL025-...-	19 mm 25 mm	● ●	○ ○	○ ○				32 32	68,5 73,5	35 40	32,5 32,5	180 190	

Self sealing adaptors

Thru type adaptors

**optional features:**

SI = with additional axial safety lock  
(outer diameter 89 mm)  
GG= with ring grips (cast aluminium)

**materials:**

**standard:**  
11 = steel, zinc plated  
21 = brass, passivated  
22 = brass, chrome plated  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

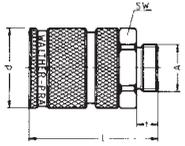
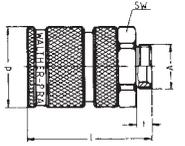
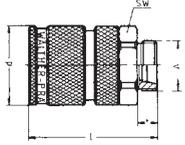
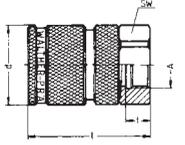
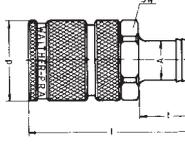
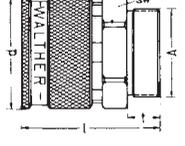
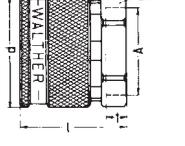
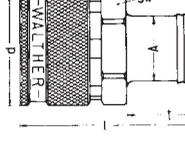
1 = NBR  
2 = FKM  
4 = EPDM

**special materials:**

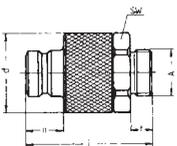
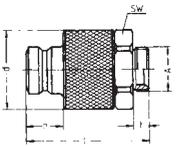
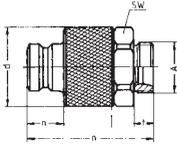
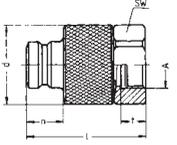
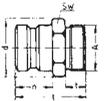
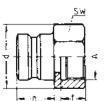
13 = steel, chem. nickel plated  
24 = brass, chem. nickel plated  
31 = aluminium anodized silver

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc	brass	brass chrome	AISI 316 ti/	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
			plated	passivated	plated	1.4571										
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<p>LP-032-0-WR048-...-.</p> <p>LP-032-0-WR060-...-.</p>	BSPP 1 1/2"	●	○	○	○			82	75	139	22		2930	
				○	○	○	○			82	75	143	26		2980	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	<p>LP-032-0-D3245-...-.</p>	M 45 x 1,5	●	○	○	○			32	82	75	128	16		2720
				○	○	○	○									
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<p>LP-032-0-S3852-...-.</p>	M 52 x 2	●	○	○	○	S	38	32	82	75	134	22		2770
○				○	○	○										
Thru type couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<p>LP-032-0-WR548-...-.</p> <p>LP-032-0-WR560-...-.</p>	BSPP 1 1/2"	●	○	○	○			82	75	126	25		2890	
				○	○	○	○			82	75	130	29		2760	
	 <p>hose connection</p>	<p>LP-032-0-SL042-...-.</p>	42 mm	○	○	○	○			82	75	178	61		3090	
				○	○	○	○									
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<p>LP-032-4-WR048-...-.</p> <p>LP-032-4-WR060-...-.</p>	BSPP 1 1/2"	○	○	○	○			82	70	109	22		2230	
○				○	○	○			82	70	113	26		2490		
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<p>LP-032-4-WR542-...-.</p> <p>LP-032-4-WR548-...-.</p> <p>LP-032-4-WR560-...-.</p>	BSPP 1 1/4"	○	○	○	○			82	70	89	25		2000		
			○	○	○	○			82	70	89	25		1930		
			○	○	○	○			82	70	89	29		1690		
 <p>hose connection</p>	<p>LP-032-4-SL042-...-.</p>	42 mm	○	○	○	○			82	70	143	61		2260		

Availability: ● Short ● Medium ○ Long

	Part No.	Connection A	steel zinc plated	brass passivated	brass chrome plated	AlSi 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-032-2-WR048-...- LP-032-2-WR060-...-	BSPP 1 1/2" BSPP 2"	● ○	● ○	● ○	○ ○			82 82	75 75	135,5 139,5	22 26	39 39	2460 2500	
		LP-032-2-D3245-...-	M 45 x 1,5	○	○	○	○			32	82	75	124,5	16	39	2220
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	LP-032-2-S3852-...-	M 52 x 2	○	○	○	○	S	38	32	82	75	130,5	22	39	2280
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-032-2-WR548-...- LP-032-2-WR560-...-	BSPP 1 1/2" BSPP 2"	● ○	● ○	● ○	○ ○			82 82	75 75	122,5 126,5	25 29	39 39	2390 2260	
	 <p>hose connection</p>	LP-032-2-SL042-...-	42 mm	○	○	○	○				82	75	174,5	61	39	2610
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-032-1-WR048-... LP-032-1-WR060-...-	BSPP 1 1/2" BSPP 2"	● ○	○ ○	○ ○	○ ○			60 72,5	55 65	74,5 78,5	22 26	39 39	600 650	
		LP-032-1-WR542-... LP-032-1-WR548-... LP-032-1-WR560-...-	BSPP 1 1/4" BSPP 1 1/2" BSPP 2"	● ● ○	○ ○ ●	○ ○ ●	○ ○ ○			60 65 78	55 60 70	71 71 75	25 25 29	39 39 39	610 640 790	
	 <p>hose connection</p>	LP-032-1-SL042-...-	42 mm	○	○	○	○				54		105	61	39	620

**optional features:**

SI = with additional axial safety lock  
(outer diameter 116 mm)  
GG = with ring grips (cast aluminium)

**materials:**

**standard:**  
11 = steel, zinc plated  
21 = brass, passivated  
22 = brass, chrome plated  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

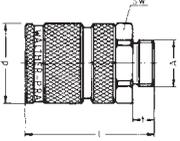
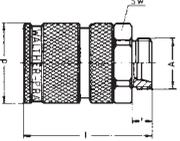
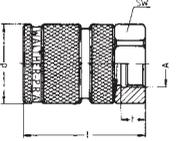
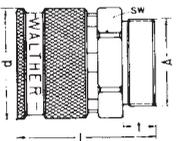
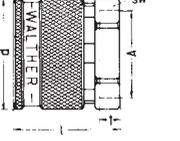
1 = NBR  
2 = FKM  
4 = EPDM

**special materials:**

13 = steel, chem. nickel plated  
24 = brass, chem. nickel plated  
31 = aluminium anodized silver

Please note the technical data on pages 2 - 7, 32 - 33 and the max. working pressures on page 9

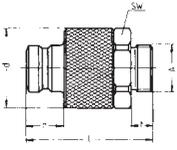
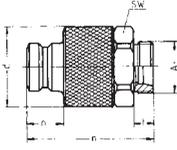
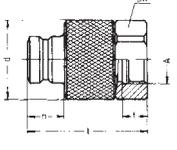
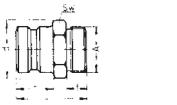
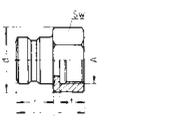
**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc	brass	brass chrome	AISI 316 ti/	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
			plated	passivated	plated	1.4571									
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>LP-050-0-WR060-...-</b>	BSPP 2"	●	○	○	○				112	100	162	26		5550
	<b>LP-050-0-WR075-...-</b>	BSPP 2 1/2"				○				112	100	164	30		5560
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>LP-050-0-L4252-...-</b>	M 52 x 2	●				L	42	36	112	100	158	16		5380
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>LP-050-0-WR560-...-</b>	BSPP 2"	●	○	○	○				112	100	158	29		6150
	<b>LP-050-0-WR575-...-</b>	BSPP 2 1/2"	●	○	○	○				112	100	167	33		5940
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>LP-050-4-WR060-...-</b>	BSPP 2"	○	○	○	○				112	100	132,5	26		3950
	<b>LP-050-4-WR075-...-</b>	BSPP 2 1/2"	○	○	○	○				112	100	136,5	30		4210
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>LP-050-4-WR560-...-</b>	BSPP 2"	●	○		○				112	100	106,5	27		3800
	<b>LP-050-4-WR575-...-</b>	BSPP 2 1/2"				○				112	100	106,5	31		3640

Self sealing couplings

Thru type couplings

Availability: ● Short ○ Medium ○ Long

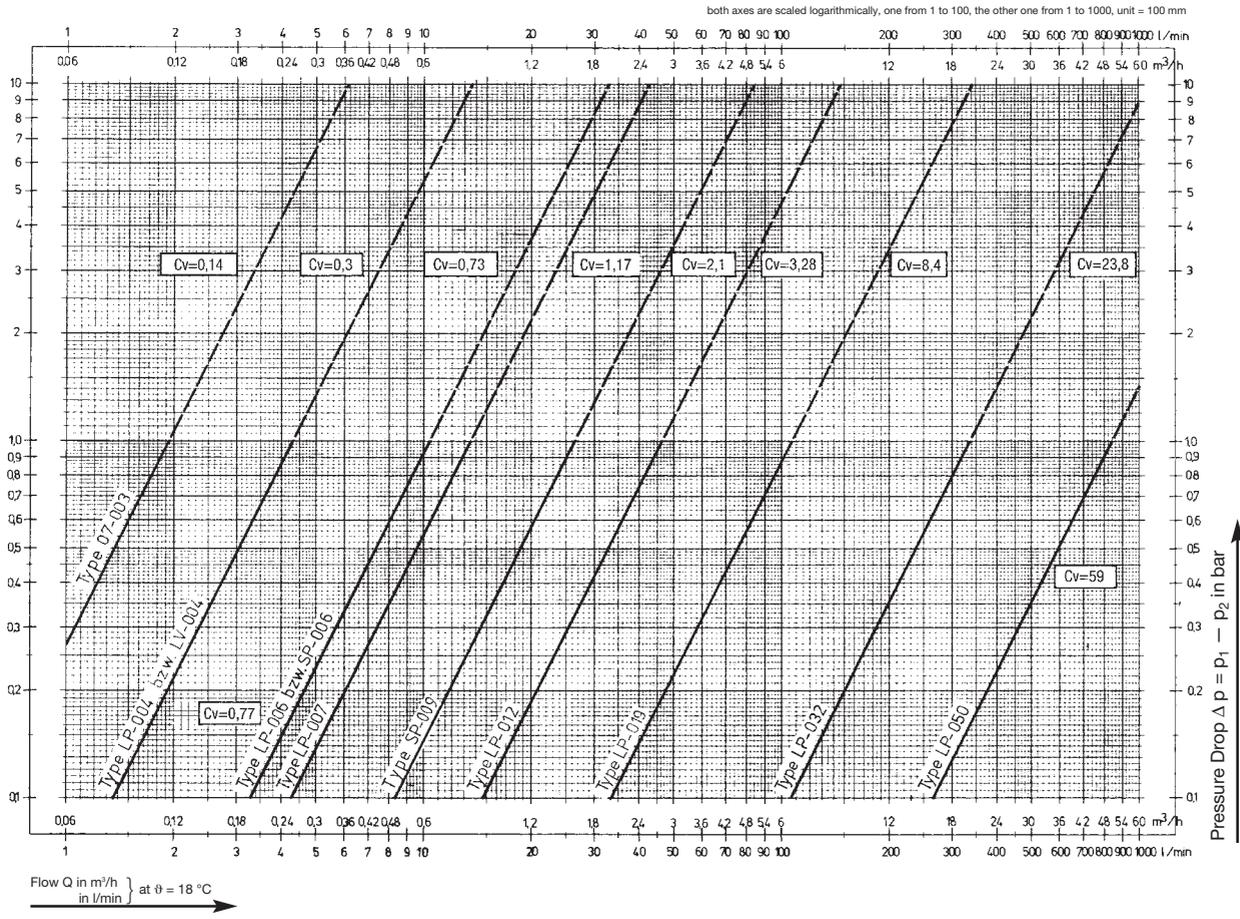
	Part No.	Conne- tion A	steel zinc plated	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-050-2-WR060-...-.	BSPP 2"	●	○	○				112	100	158	26	46	5010
		LP-050-2-WR075-...-.	BSPP 2 1/2"							112	100	160	30	46	5020
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	LP-050-2-L4252-...-.	M 52 x 2	●				L	42	36	112	100	154	16	46
Thru type adaptors	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-050-2-WR560-...-.	BSPP 2"	●	○	○				112	100	154	29	46	5610
		LP-050-2-WR575-...-.	BSPP 2 1/2"	●	○	○	○			112	100	163	33	46	5400
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LP-050-1-WR060-...-.	BSPP 2"	●	○	○					92	85	88	26	46
Thru type adaptors	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LP-050-1-WR560-...-.	BSPP 2"	●	○	○				92	85	82	29	46	1850
		 <p>hose connection</p>	LP-050-1-SL065-...-.	65 mm	○	○	○				90		131	75	46

Measurement of flow coefficients Cv according to DIN EN 60534

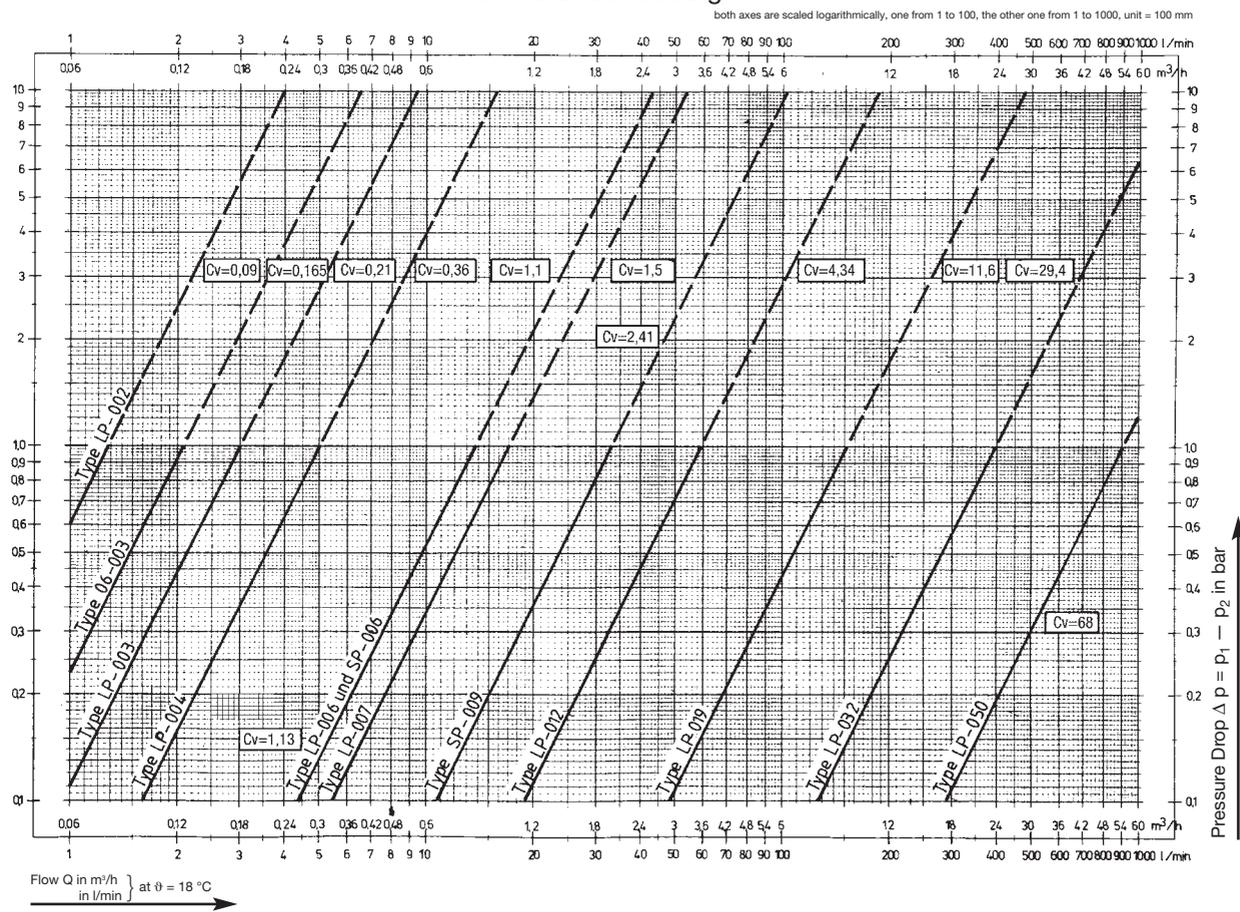
Flow speeds of 8 m/sec should not be exceeded

1 bar = 14,5 PSI

Both sides self sealing



One side self sealing

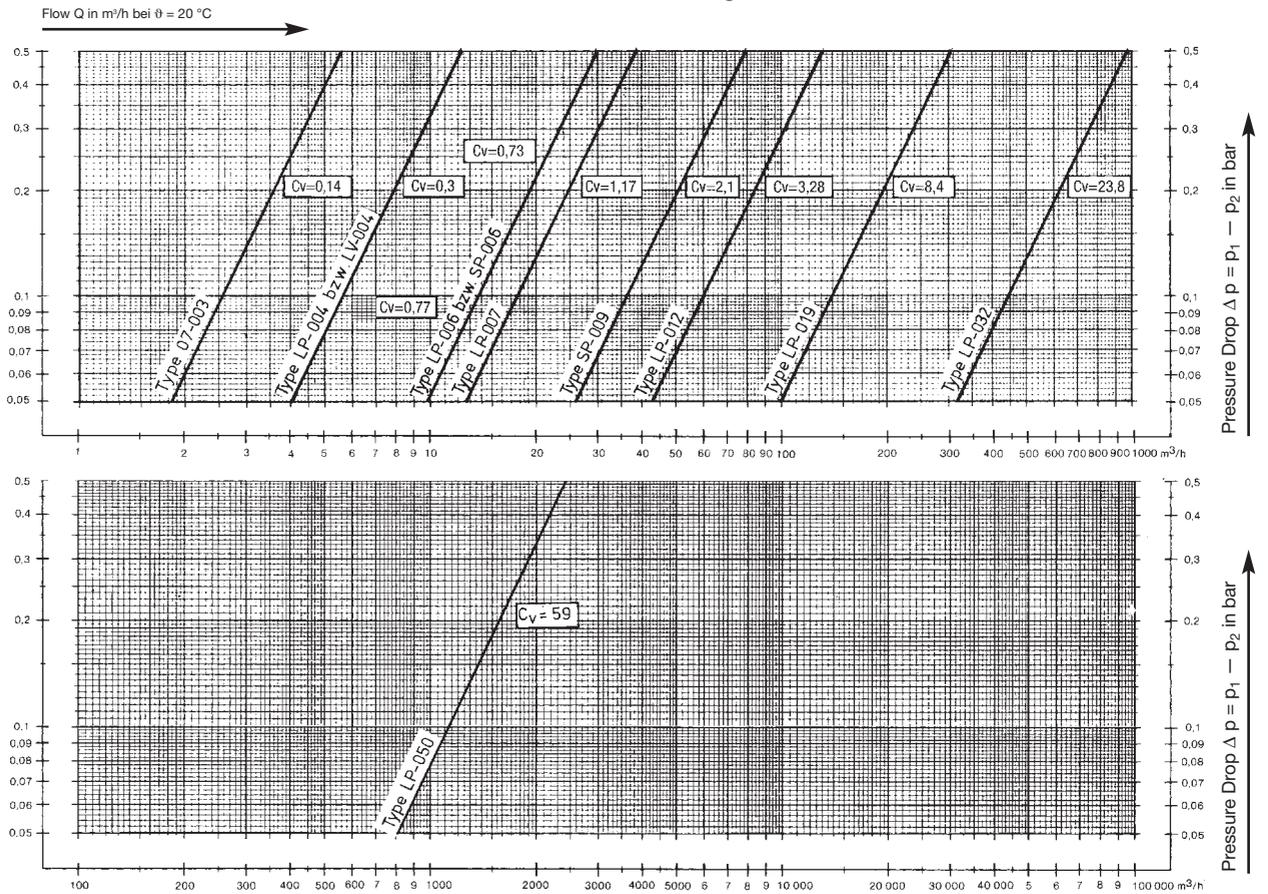


Measurement of flow coefficients  $C_v$  according to DIN EN 60534

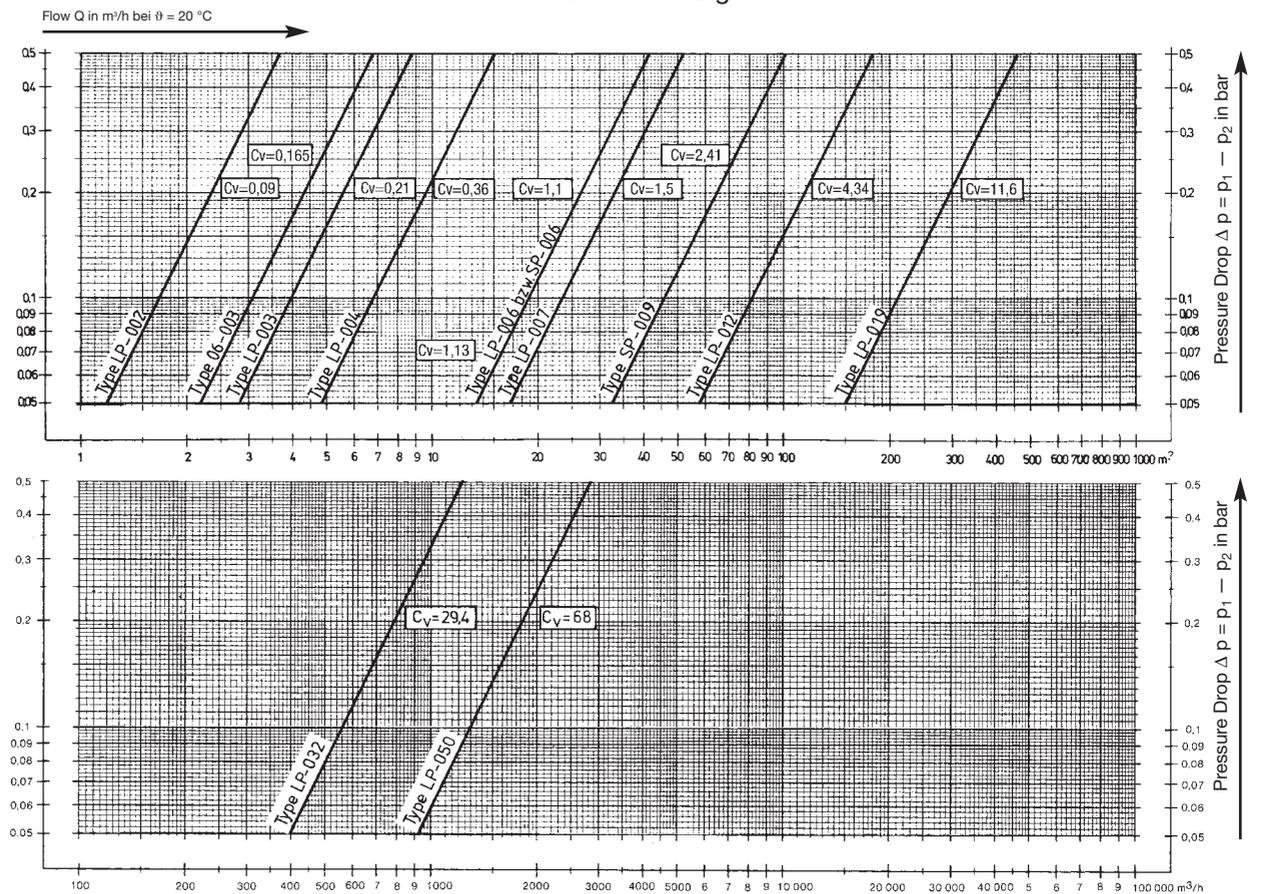
Working pressure 6 bar gauge pressure

1 bar = 14,5 PSI

Both sides self sealing



One side self sealing

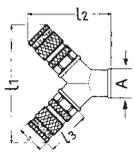
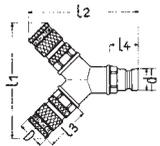


**materials:**  
**standard:**  
 11 = steel, zinc plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

**special materials:**  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar  
 50 = polyamide 11/12, grey (PA)

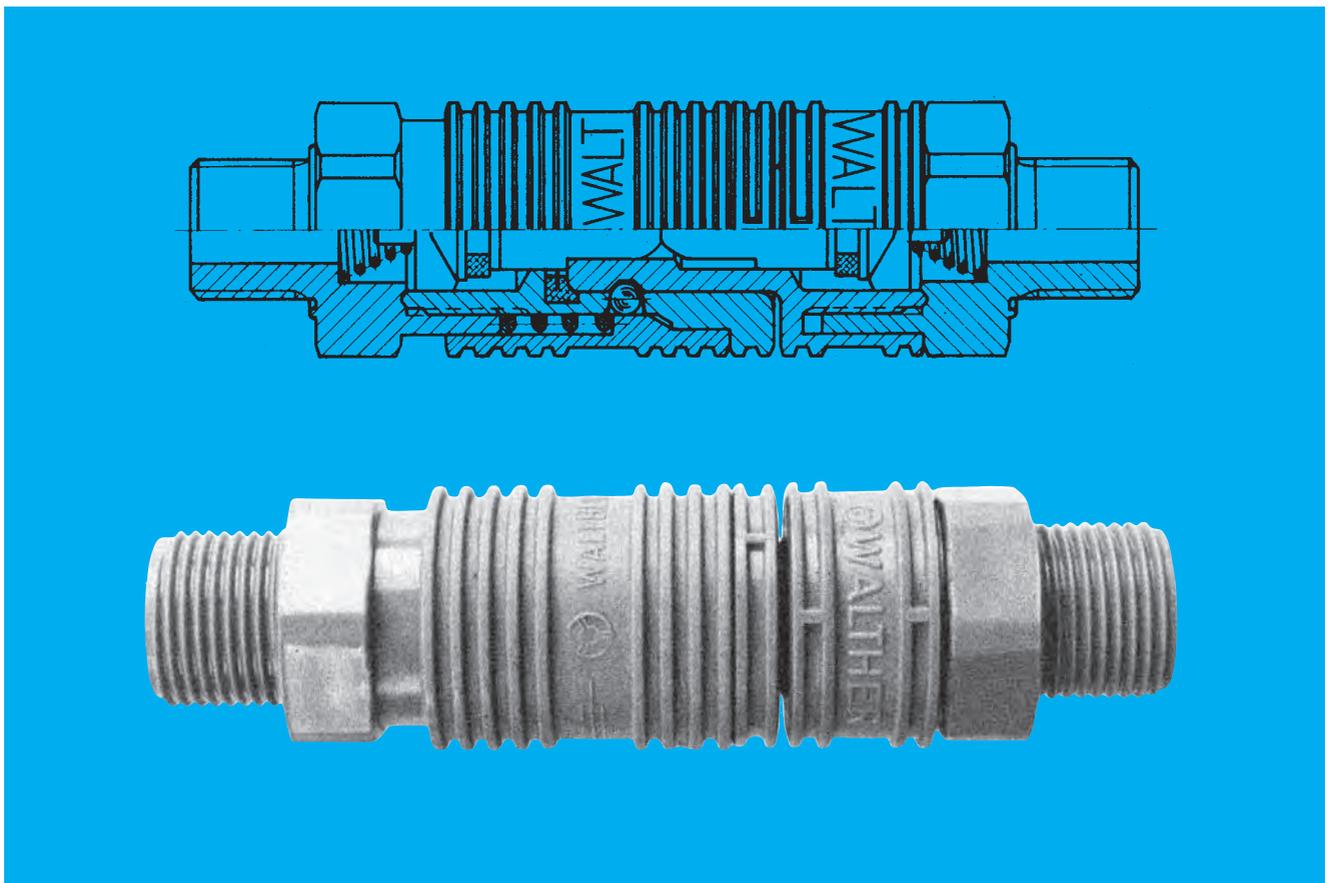
Availability: ● Short ○ Medium ○ Long

	Part No.	equipped with	steel zinc-plated	D	n.b.	d	d1	l	l1	l2	l3	l4	Weight [g]
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228 and 2 self sealing couplings</p>	<b>2R-006-0-WR517-...-</b>	3/8" BSPP, 2 ssc LP-006	○	25	6				116	81	47,5		430
	<b>2R-007-0-WR521-...-</b>	1/2" BSPP, 2 ssc LP-007	○	30	7				140	96	57		710
	<b>2R-012-0-WR533-...-</b>	1" BSPP, 2 ssc LP-012	○	40	12				178	128	65		1440
 <p>1 thru type adaptors and 2 self sealing couplings, type LP-006</p>	<b>2S-006-0-WR517-...-</b>	1 tta, 2ssc, LP-006	○	25	6	12			116	110	47,5	26	430



Nom. bore	Type	Material pressure at 20° C	Max. static working		C <sub>v</sub> value		Cross section [mm <sup>2</sup> ]	Page
			both sides [bar]	one side [psi]	both sides self sealing	one side self sealing		
6	KL-006	polyamide 11/12 grey (PA)	12	170	0.73	1.0	30	36
12	KL-012	polyacetal grey (POM)	10	145	2.32	3.1	120	37
30	KL-030	polyacetal resin (POM)	10	145	23.3	30.46	710	38
Threaded hose connectors, double and reducing connectors								38
Performance diagrams								39 - 40

**Materials:** other materials e. g. PVDF, PP, ... as special types on request



**characteristic features:**  
- can be coupled with type LP-006

**special version:**  
Z14 = self sealing couplings and self sealing adaptors in polypropylene (PP) anthracite (p max. static 3 bar at 20° C)

**optional features:**  
OV = without valve  
SI = with additional axial safety lock (outer diameter 29 mm)

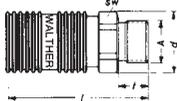
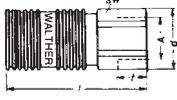
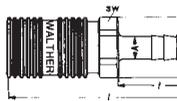
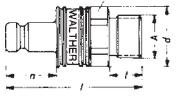
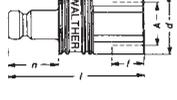
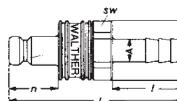
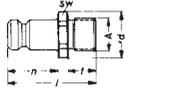
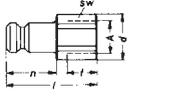
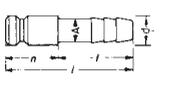
**materials:**  
**standard:**  
50 = polyamide 11/12, grey (PA)

**special materials:**  
other materials as special types on request

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 39 - 40 and the max. working pressures on page 35

**Availability:** ● Short    ◐ Medium    ○ Long

		Part No.	Conne- tion A	PA grey						d	SW	l	t	n	weight [g]		
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>KL-006-0-WR013-50-</b>	BSPP 1/4"	●					24	22	55,3	12			16		
		<b>KL-006-0-WR017-50-</b>	BSPP 3/8"	●					24	22	55,3	12				17	
		<b>KL-006-0-WR021-50-</b>	BSPP 1/2"	●						24	22	55,3	12				18
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>KL-006-0-WR513-50-</b>	BSPP 1/4"	●					24	22	57,3	14				19	
		<b>KL-006-0-WR517-50-</b>	BSPP 3/8"	●						24	22	57,3	14				18
		 <p>hose connection</p>	<b>KL-006-0-SL007-50-</b>	7 mm	●					24	22	68,3	25				16
	<b>KL-006-0-SL009-50-</b>		9 mm	●					24	22	73,3	30				17	
	<b>KL-006-0-SL011-50-</b>		11 mm	●					24	22	73,3	30				18	
	<b>KL-006-0-SL013-50-</b>		13 mm	●					24	22	73,3	30				19	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>KL-006-2-WR013-50-</b>	BSPP 1/4"	●					24	22	53,5	12	20		10		
		<b>KL-006-2-WR017-50-</b>	BSPP 3/8"	●					24	22	53,5	12	20		10		
		<b>KL-006-2-WR021-50-</b>	BSPP 1/2"	●						24	22	53,3	12	20		11	
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>KL-006-2-WR513-50-</b>	BSPP 1/4"	●					24	22	55,5	14	20		13		
		<b>KL-006-2-WR517-50-</b>	BSPP 3/8"	●						24	22	55,5	14	20		12	
		 <p>hose connection</p>	<b>KL-006-2-SL007-50-</b>	7 mm	●					24	22	66,5	25	20		10	
	<b>KL-006-2-SL009-50-</b>		9 mm	●					24	22	71,5	30	20		10		
	<b>KL-006-2-SL011-50-</b>		11 mm	●					24	22	71,5	30	20		11		
	<b>KL-006-2-SL013-50-</b>		13 mm	●					24	22	71,5	30	20		12		
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>KL-006-1-WR010-50</b>	BSPP 1/8"	●					16	15	32	7	20		3		
		<b>KL-006-1-WR013-50</b>	BSPP 1/4"	●					20,5	19	35	9	20		4		
		<b>KL-006-1-WR017-50</b>	BSPP 3/8"	●					24	22	38	11	20		6		
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>KL-006-1-WR510-50</b>	BSPP 1/8"	○					18,5	17	36	13,5	20		4		
		<b>KL-006-1-WR513-50</b>	BSPP 1/4"	●					18,5	17	36	13,5	20		4		
	 <p>hose connection</p>	<b>KL-006-1-SL007-50</b>	7 mm	●					12		46	25	20		3		
		<b>KL-006-1-SL009-50</b>	9 mm	●					12		51	30	20		3		
		<b>KL-006-1-SL011-50</b>	11 mm	●					16		53	30	20		4		
		<b>KL-006-1-SL013-50</b>	13 mm	●					16		53	30	20		5		

**characteristic features:**  
- can be coupled with type LP-012

**special version:**  
Z01 = for partial vacuum couplings with O-ring seal

**optional features:**  
OV = without valve  
SI = with additional axial safety lock (outer diameter 44 mm)

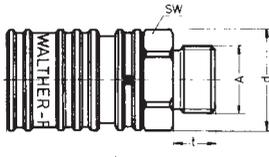
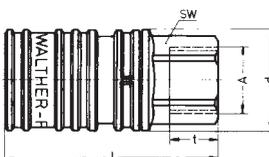
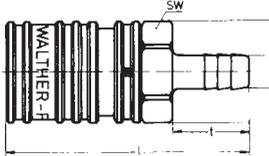
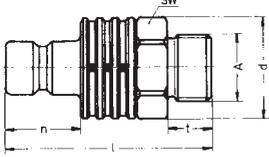
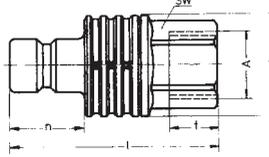
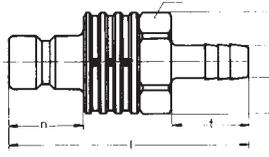
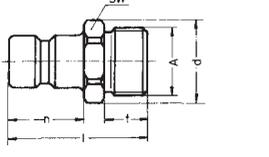
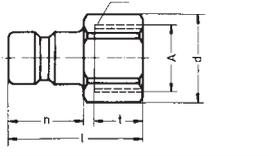
**materials:**  
**standard:**  
40 = polyacetal resin POM, grey  
SI-ring, black

**special materials:**  
other materials as special types on request

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 39 - 40 and the max. working pressures on page 35

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	PA grey						d	SW	l	t	n	weight [g]
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	KL-012-0-WR021-40-.	BSPP 1/2"	●					40	30	88	15		90
		KL-012-0-WR026-40-.	BSPP 3/4"	○					40	30	90	17		90
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	KL-012-0-WR521-40-.	BSPP 1/2"	●					30	82,5	15	17		85
KL-012-0-WR526-40-.		BSPP 3/4"	○					30	84,5	17	19		90	
 <p>hose tailpiece with hose nozzle</p>	KL-012-0-SL016-40-.	16 mm	●					40	30	98	35		90	
	KL-012-0-SL019-40-.	19 mm	●					40	30	102	35		90	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	KL-012-2-WR021-40-.	BSPP 1/2"	●				40	30	86	15	29,5	60	
		KL-012-2-WR026-40-.	BSPP 3/4"	○				40	30	88	17	29,5	60	
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	KL-012-2-WR521-40-.	BSPP 1/2"	●				40	30	82,5	15	29,5	55	
KL-012-2-WR526-40-.		BSPP 3/4"	○				40	30	82,5	17	29,5	60		
 <p>hose tailpiece with hose nozzle</p>	KL-012-2-SL016-40-.	16 mm	●				40	30	96	35	29,5	58		
	KL-012-2-SL019-40-.	19 mm	●				40	30	100	35	29,5	62		
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	KL-012-1-WR021-40	BSPP 1/2"	●				33,1	30	54,5	15	29,5	17	
		KL-012-1-WR026-40	BSPP 3/4"	○				33,1	30	56,5	17	29,5	23	
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	KL-012-1-WR521-40	BSPP 1/2"	○				33,1	30	49	15	29,5	18	
KL-012-1-WR526-40		BSPP 3/4"	○				33,1	30	51	17	29,5	23		
 <p>hose tailpiece with hose nozzle</p>	KL-012-1-SL013-40	13 mm	●				21		61	30	31	13		
	KL-012-1-SL016-40	16 mm	●				21		69,5	35	29,5	13		
	KL-012-1-SL019-40	19 mm	○				25		68,5	35	29,5	18		

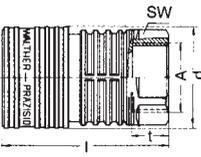
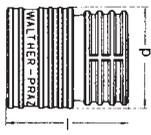
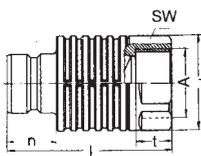
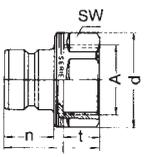
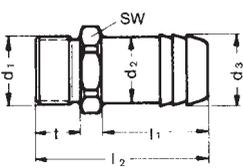
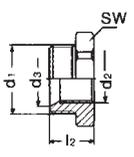
**optional features:**  
OV = without valve

**materials:**  
**standard:**  
40 = polyacetal resin POM, grey, black  
43 = polyacetal resin POM, olive

**seal qualities:**  
1 = NBR  
2 = FPM  
4 = EPDM

**special materials:**  
other materials as special types  
on request

Please note the technical data on pages 2 - 7, 39 - 40 and the max. working pressures on page 35

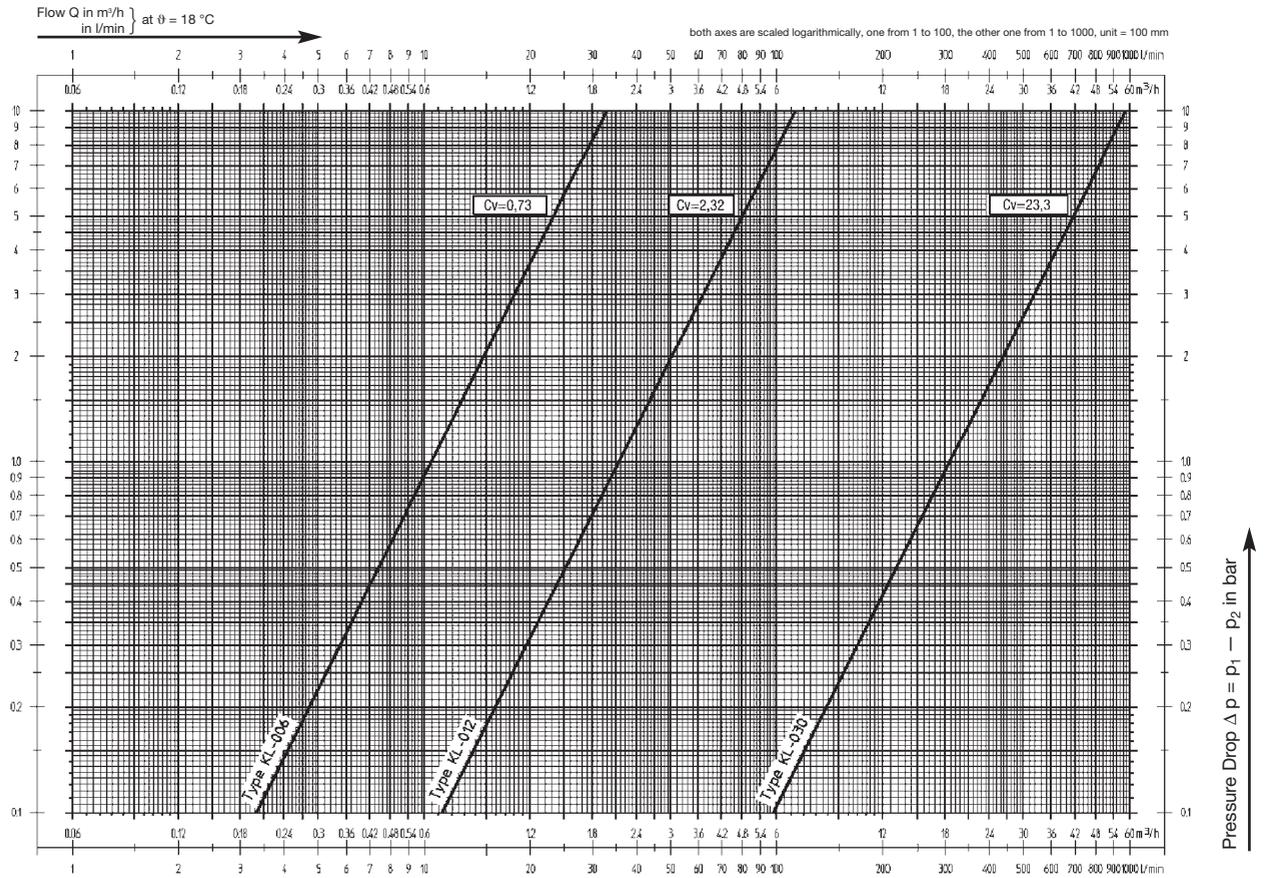
	Part No.	Connection A	POM grey	POM olive	d	SW	l	t	n		Weight [g]	
<b>Self sealing couplings</b> 	British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>KL-030-0-WR548-40-</b> <b>KL-030-0-WR560-40-</b>	BSPP 1 1/2" BSPP 2"	● ○	70 70	60 65	114 116	23,5 26			330 320	
	<b>Thru type couplings</b> 	British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>KL-030-4-WR548-40-</b> <b>KL-030-4-XX002-43-</b>	BSPP 1 1/2" round thread for Vacuflex-hoses	○ ○	70 70		84 84	18 40			240 250
<b>Self sealing adaptors</b> 		British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>KL-030-2-WR548-40-</b> <b>KL-030-2-WR560-40-</b>	BSPP 1 1/2" BSPP 2"	● ○	66 66	60 60	114 116	23,5 26	35 35		230 220
	<b>Thru type adaptors</b> 	British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>KL-030-1-WR548-40</b> <b>KL-030-1-XX003-43</b>	BSPP 1 1/2" i. hexagon AF 36,4 inner cone 0°50'34"	● ○	66 51	60 46	66 44	25 7	35 35		95 33
<b>Threaded hose connectors</b> 			<b>5-AN0-0SL-025-WR048-40</b> <b>5-AN0-0SL-032-WR048-40</b> <b>5-AN0-0SL-042-WR048-40</b>	BSPP 1 1/2" BSPP 1 1/2" BSPP 1 1/2"	● ● ●	18 18 18	25 32 42	27 34 45	40 44 61	73 77 94	50 50 50	19 22 32
	<b>Reducing connectors</b> 		<b>5-AN0-0XX-008-WR533-40</b>	BSPP 1 1/2"	●	G 1	38		30,5	60		55
				d <sub>1</sub>	t	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	SW	n. b.	

Measurement of flow coefficients  $C_v$  according to DIN EN 60534

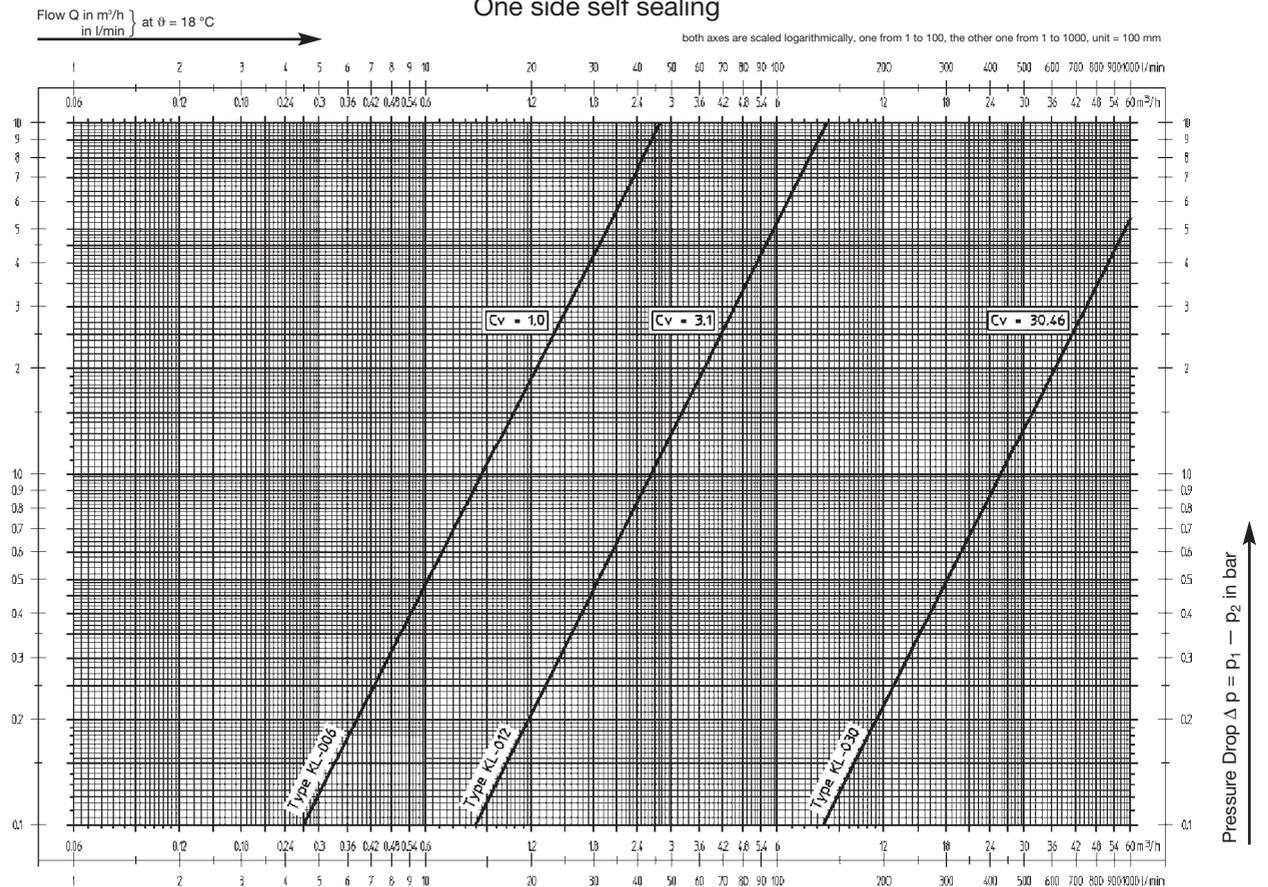
Flow speeds of 8 m/sec should not be exceeded

1 bar = 14,5 PSI

Both sides self sealing



One side self sealing

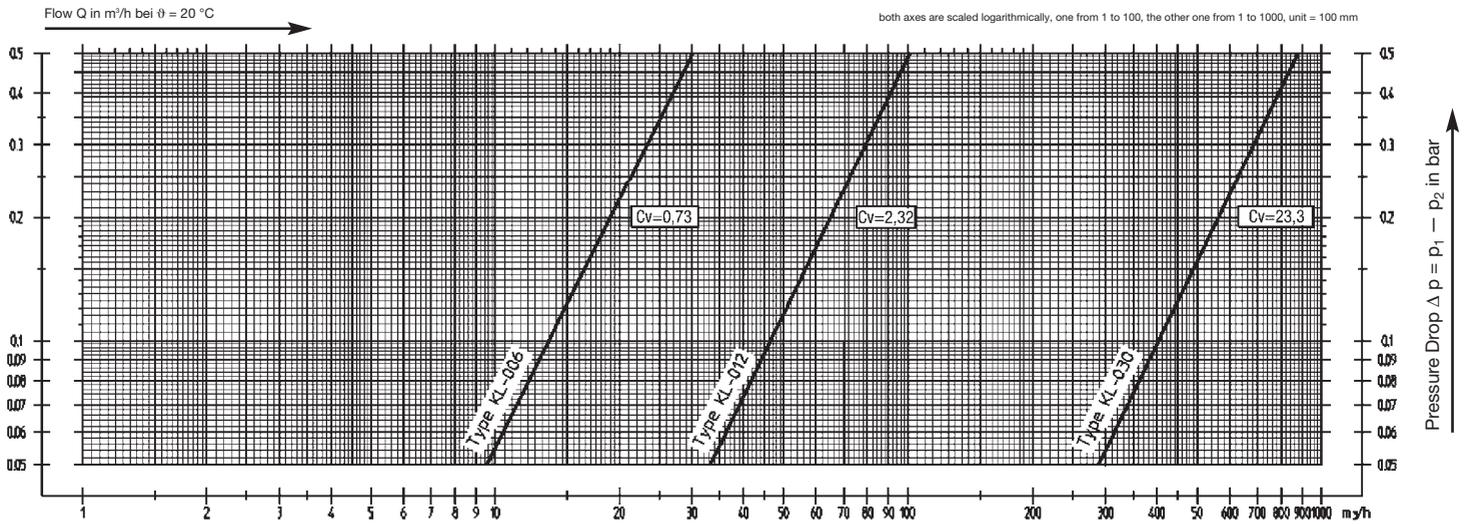


Measurement of flow coefficients Cv according to DIN EN 60534

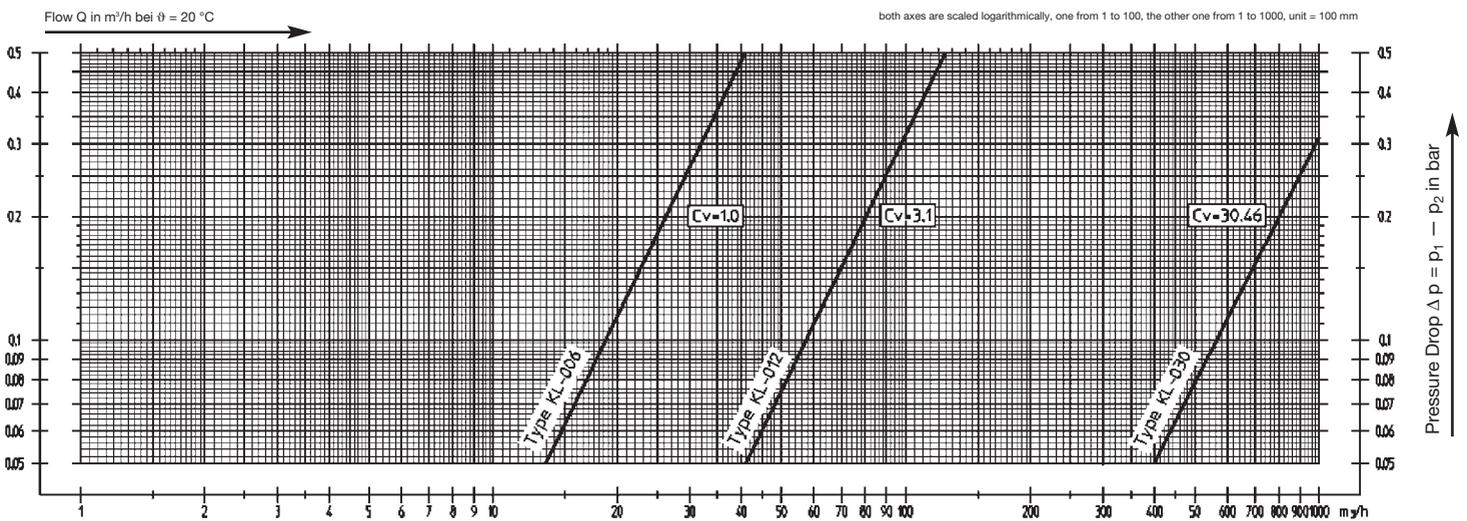
Working pressure 6 bar gauge pressure

1 bar = 14,5 PSI

Both sides self sealing



One side self sealing



## Couplings with various fitting shapes

Due to differently shaped guide components (triangular, square, round) of coupling and adaptor only coupling halves with the same fitting may be connected.

Other fitting shapes – on request

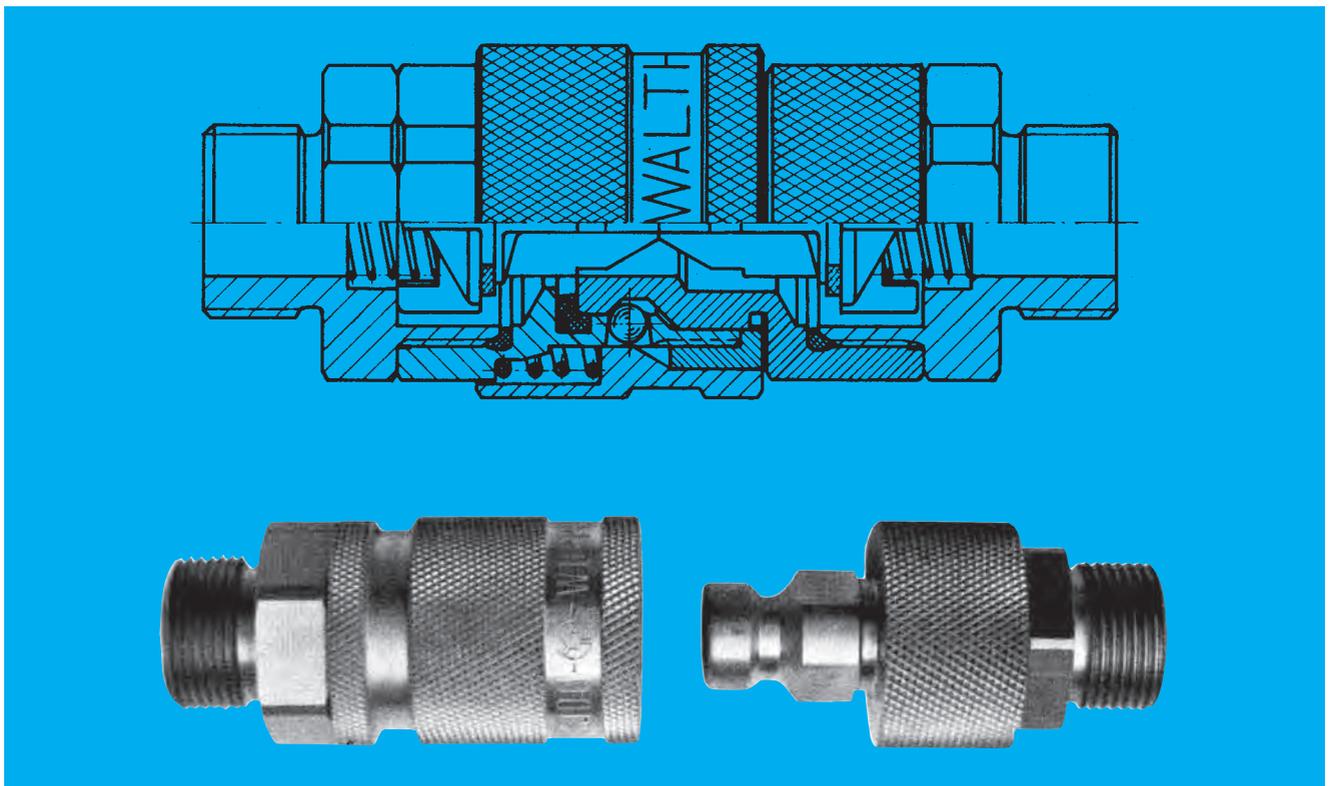
Colour / character markings – on request

Nom. bore	Type	Max. static working pressure brass and st. st. [bar/psi]*		C <sub>v</sub> value		Cross section [mm <sup>2</sup> ]	Page
		for liquids	for gases	both sides self sealing	one side self sealing		
6	UF-006	40 / 580	30 / 435	0.77	1.1	30	42
7	UF-007	40 / 580	25 / 360	1.07	1.4	40	43
12	UF-012	30 / 435	20 / 290	3.25	4.34	120	44
19	UF-019	30 / 435	20 / 290	7.5	11.2	300	45
32	UF-032	30 / 435	10 / 145	23.8	29.4	800	46
Performance diagrams							47 - 48

\* based on experience, valid up to 100 °C

**Please note:** In case of standardised end connections, please take the max. allowable working pressure of the end connection into account when determining the working pressures.

The types UF-006, UF-007, UF-012 und UF-019 in stainless steel (1.4404, 1.4571 or equal) are delivered as standard without knurling but in a smooth version (-GL/-GX) with finger grooves. Actual design differs from drawing.



**characteristic features:**

- ▲...DR = with triangular fitting
- ...VI = with square fitting (non-interchangeable versions) special keys on request
- stainless steel version 1.4404/1.4571 or similar in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**

- OV = without valve
- SI = with additional axial safety lock (outer diameter 29 mm)

**materials:**

- standard:**
- 21 = brass, passivated
- 22 = brass, chrome plated
- 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**

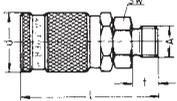
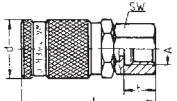
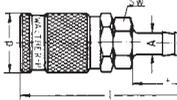
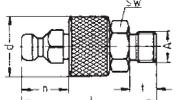
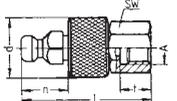
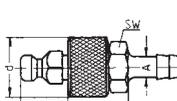
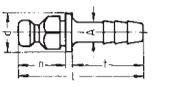
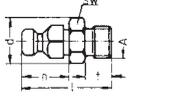
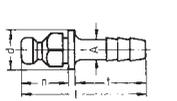
- 24 = brass, chem. nickel plated
- 31 = aluminium anodized silver

**seal qualities:**

- 1 = NBR
- 2 = FKM
- 4 = EPDM

Please note the technical data on pages 2 - 7, 47 - 48 and the max. working pressures on page 41

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571				d	SW	l	t	n	weight [g]
<b>Self sealing couplings</b>	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-006-0-WR013-...-DR	▲ BSPP 1/4"	●	●	○			25	19	58	11		120
		UF-006-0-WR013-...-VI	■ BSPP 1/4"	●	●	○			25	19	58	11		120
		UF-006-0-WR017-...-DR	▲ BSPP 3/8"	●	●	○			25	19	59	12		130
		UF-006-0-WR017-...-VI	■ BSPP 3/8"	●	●	○			25	19	59	12		130
		UF-006-0-WR021-...-DR	▲ BSPP 1/2"	●	●	○			25	22	62	15		150
		UF-006-0-WR021-...-VI	■ BSPP 1/2"	●	●	○			25	22	62	15		150
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-006-0-WR513-...-DR	▲ BSPP 1/4"	●	●	○			25	19	57	13		120
		UF-006-0-WR513-...-VI	■ BSPP 1/4"	●	●	○			25	19	57	13		120
		UF-006-0-WR517-...-DR	▲ BSPP 3/8"	●	●	○			25	22	58	14		130
		UF-006-0-WR517-...-VI	■ BSPP 3/8"	●	●	○			25	22	58	14		130
	 <p>hose connection</p>	UF-006-0-SL006-...-DR	▲ 6 mm	●	●	○			25	19	72	25		120
		UF-006-0-SL006-...-VI	■ 6 mm	●	●	○			25	19	72	25		120
		UF-006-0-SL009-...-DR	▲ 9 mm	●	●	○			25	19	77	30		120
		UF-006-0-SL009-...-VI	■ 9 mm	●	●	○			25	19	77	30		120
		UF-006-0-SL011-...-DR	▲ 11 mm	●	●	○			25	19	77	30		130
UF-006-0-SL011-...-VI		■ 11 mm	●	●	○			25	19	77	30		130	
UF-006-0-SL013-...-DR		▲ 13 mm	●	●	○			25	19	77	30		140	
UF-006-0-SL013-...-VI		■ 13 mm	●	●	○			25	19	77	30		140	
<b>Self sealing adaptors</b>	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-006-2-WR013-...-DR	▲ BSPP 1/4"	●	●	○			25	19	56	11	20,1	90
		UF-006-2-WR013-...-VI	■ BSPP 1/4"	●	●	○			25	19	56	11	20,1	90
		UF-006-2-WR017-...-DR	▲ BSPP 3/8"	●	●	○			25	19	57	12	20,1	100
		UF-006-2-WR017-...-VI	■ BSPP 3/8"	●	●	○			25	19	57	12	20,1	100
		UF-006-2-WR021-...-DR	▲ BSPP 1/2"	●	●	○			25	22	60	15	20,1	120
		UF-006-2-WR021-...-VI	■ BSPP 1/2"	●	●	○			25	22	60	15	20,1	120
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-006-2-WR513-...-DR	▲ BSPP 1/4"	●	●	○			25	19	55	13	20,1	95
		UF-006-2-WR513-...-VI	■ BSPP 1/4"	●	●	○			25	19	55	13	20,1	95
		UF-006-2-WR517-...-DR	▲ BSPP 3/8"	●	●	○			25	22	56	14	20,1	100
		UF-006-2-WR517-...-VI	■ BSPP 3/8"	●	●	○			25	22	56	14	20,1	100
 <p>hose connection</p>	UF-006-2-SL006-...-DR	▲ 6 mm	●	●	○			25	19	70	25	20,1	85	
	UF-006-2-SL006-...-VI	■ 6 mm	●	●	○			25	19	70	25	20,1	85	
	UF-006-2-SL009-...-DR	▲ 9 mm	●	●	○			25	19	75	30	20,1	90	
	UF-006-2-SL009-...-VI	■ 9 mm	●	●	○			25	19	75	30	20,1	90	
	UF-006-2-SL011-...-DR	▲ 11 mm	●	●	○			25	19	75	30	20,1	95	
	UF-006-2-SL011-...-VI	■ 11 mm	●	●	○			25	19	75	30	20,1	95	
	UF-006-2-SL013-...-DR	▲ 13 mm	●	●	○			25	19	75	30	20,1	110	
	UF-006-2-SL013-...-VI	■ 13 mm	●	●	○			25	19	75	30	20,1	110	
<b>Thru type adaptors</b>	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-006-1-WR013-...-DR	▲ BSPP 1/4"	○	○	○			18,9	17	37,5	11	20,1	29
		UF-006-1-WR013-...-VI	■ BSPP 1/4"	○	○	○			18,9	17	37,5	11	20,1	29
		UF-006-1-WR017-...-DR	▲ BSPP 3/8"	○	○	○			21	19	38,5	12	20,1	41
		UF-006-1-WR017-...-VI	■ BSPP 3/8"	○	○	○			21	19	38,5	12	20,1	41
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-006-1-WR513-...-DR	▲ BSPP 1/4"	○	○	○			18,9	17	37,5	13	20,1	31
		UF-006-1-WR513-...-VI	■ BSPP 1/4"	○	○	○			18,9	17	37,5	13	20,1	31
	 <p>hose connection</p>	UF-006-1-SL006-...-DR	▲ 6 mm	●	○	○			16		48,5	25	20,1	20
		UF-006-1-SL006-...-VI	■ 6 mm	●	○	○			16		48,5	25	20,1	20
		UF-006-1-SL009-...-DR	▲ 9 mm	●	○	○			16		53,5	30	20,1	25
		UF-006-1-SL009-...-VI	■ 9 mm	●	○	○			16		53,5	30	20,1	25
UF-006-1-SL011-...-DR		▲ 11 mm	○	○	○			16		53,5	30	20,1	32	
UF-006-1-SL011-...-VI		■ 11 mm	○	○	○			16		53,5	30	20,1	32	

**characteristic features:**

- ▲...DR = with triangular fitting
- ...VI = with square fitting (non-interchangeable versions) special keys on request
- stainless steel version 1.4404/1.4571 or similar in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**

- OV = without valve
- SI = with additional axial safety lock (outer diameter 34 mm)

**materials:**

- standard:**
- 21 = brass, passivated
- 22 = brass, chrome plated
- 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**

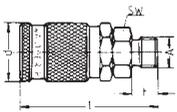
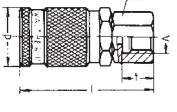
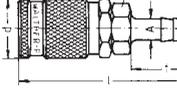
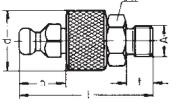
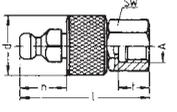
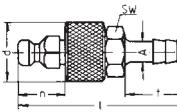
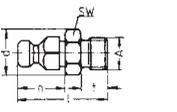
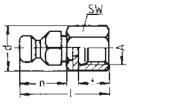
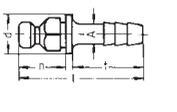
- 24 = brass, chem. nickel plated

**seal qualities:**

- 1 = NBR
- 2 = FKM
- 4 = EPDM

Please note the technical data on pages 2 - 7, 47 - 48 and the max. working pressures on page 41

Availability: ● Short   ● Medium   ○ Long

	Part No.	Con- nection A	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571				d	SW	l	t	n	weight [g]
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>UF-007-0-WR017-...-DR</b> ▲ BSPP 3/8"	●	●	●				30	24	68	12		210
		<b>UF-007-0-WR017-...-VI</b> ■ BSPP 3/8"	●	●	●				30	24	68	12		210
		<b>UF-007-0-WR021-...-DR</b> ▲ BSPP 1/2"	●	●	○				30	24	71	15		230
		<b>UF-007-0-WR021-...-VI</b> ■ BSPP 1/2"	●	●	○				30	24	71	15		230
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>UF-007-0-WR517-...-DR</b> ▲ BSPP 3/8"	●	●	●				30	24	68	14		230
		<b>UF-007-0-WR517-...-VI</b> ■ BSPP 3/8"	●	●	●				30	24	68	14		230
		<b>UF-007-0-WR521-...-DR</b> ▲ BSPP 1/2"	●	●	○				30	27	71	17		240
		<b>UF-007-0-WR521-...-VI</b> ■ BSPP 1/2"	●	●	○				30	27	71	17		240
	 <p>hose connection</p>	<b>UF-007-0-SL009-...-DR</b> ▲ 9 mm	○	○	○				30	24	86	30		210
		<b>UF-007-0-SL009-...-VI</b> ■ 9 mm	○	○	○				30	24	86	30		210
		<b>UF-007-0-SL011-...-DR</b> ▲ 11 mm	○	○	○				30	24	86	30		210
		<b>UF-007-0-SL011-...-VI</b> ■ 11 mm	○	○	○				30	24	86	30		210
<b>UF-007-0-SL013-...-DR</b> ▲ 13 mm		●	●	●				30	24	86	30		220	
<b>UF-007-0-SL013-...-VI</b> ■ 13 mm		●	●	●				30	24	86	30		220	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>UF-007-2-WR017-...-DR</b> ▲ BSPP 3/8"	●	●	●				30	24	67,5	12	23,5	170
		<b>UF-007-2-WR017-...-VI</b> ■ BSPP 3/8"	●	●	●				30	24	67,5	12	23,5	170
		<b>UF-007-2-WR021-...-DR</b> ▲ BSPP 1/2"	●	●	○				30	24	70,5	15	23,5	190
		<b>UF-007-2-WR021-...-VI</b> ■ BSPP 1/2"	●	●	○				30	24	70,5	15	23,5	190
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>UF-007-2-WR517-...-DR</b> ▲ BSPP 3/8"	●	●	●				30	24	67,5	14	23,5	180
		<b>UF-007-2-WR517-...-VI</b> ■ BSPP 3/8"	●	●	●				30	24	67,5	14	23,5	180
		<b>UF-007-2-WR521-...-DR</b> ▲ BSPP 1/2"	●	●	○				30	27	70,5	17	23,5	200
		<b>UF-007-2-WR521-...-VI</b> ■ BSPP 1/2"	●	●	○				30	27	70,5	17	23,5	200
	 <p>hose connection</p>	<b>UF-007-2-SL009-...-DR</b> ▲ 9 mm	○	○	○				30	24	85,5	30	23,5	170
		<b>UF-007-2-SL009-...-VI</b> ■ 9 mm	○	○	○				30	24	85,5	30	23,5	170
		<b>UF-007-2-SL011-...-DR</b> ▲ 11 mm	○	○	○				30	24	85,5	30	23,5	170
		<b>UF-007-2-SL011-...-VI</b> ■ 11 mm	○	○	○				30	24	85,5	30	23,5	170
<b>UF-007-2-SL013-...-DR</b> ▲ 13 mm		●	●	●				30	24	85,5	30	23,5	180	
<b>UF-007-2-SL013-...-VI</b> ■ 13 mm		●	●	●				30	24	85,5	30	23,5	180	
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>UF-007-1-WR017-...-DR</b> ▲ BSPP 3/8"	○	○	○				21	19	41,5	12	23,5	48
		<b>UF-007-1-WR017-...-VI</b> ■ BSPP 3/8"	○	○	○				21	19	41,5	12	23,5	48
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>UF-007-1-WR517-...-DR</b> ▲ BSPP 3/8"	○	○	○				24	22	43	14	23,5	60
		<b>UF-007-1-WR517-...-VI</b> ■ BSPP 3/8"	○	○	○				24	22	43	14	23,5	60
	 <p>hose connection</p>	<b>UF-007-1-SL009-...-DR</b> ▲ 9 mm	○	○	○				18		57,5	30	23,5	31
		<b>UF-007-1-SL009-...-VI</b> ■ 9 mm	○	○	○				18		57,5	30	23,5	31
		<b>UF-007-1-SL011-...-DR</b> ▲ 11 mm	○	○	○				18		57,5	30	23,5	41
		<b>UF-007-1-SL011-...-VI</b> ■ 11 mm	○	○	○				18		57,5	30	23,5	41
		<b>UF-007-1-SL013-...-DR</b> ▲ 13 mm	○	○	○				18		57,5	30	23,5	50
		<b>UF-007-1-SL013-...-VI</b> ■ 13 mm	○	○	○				18		57,5	30	23,5	50

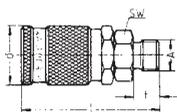
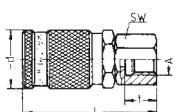
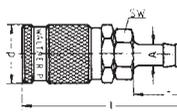
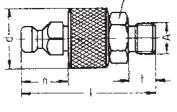
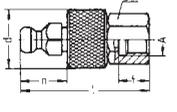
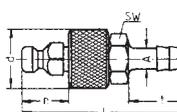
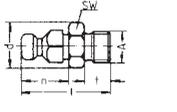
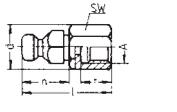
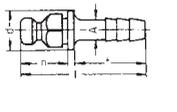
**characteristic features:**  
 ▲...DR = with triangular fitting  
 ■...VI = with square fitting  
 (non-interchangeable versions)  
 special keys on request  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of  
 knurling (-GL/-GX)  
**optional features:**  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 44 mm)

**materials:**  
**standard:**  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar  
**special materials:**  
 24 = brass, chem. nickel plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the  
 technical data on  
 pages 2 - 7, 47 - 48 and the  
 max. working pressures  
 on page 41

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	brass passivated	brass chrome plated	AISI 316 ti/ 1.4571					d	SW	l	t	n	weight [g]	
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-012-0-WR021-...-DR	▲ BSPP 1/2"	●	○	○				40	32	82	15		410	
		UF-012-0-WR021-...-VI	■ BSPP 1/2"	●	○	○					40	32	82	15		410
		UF-012-0-WR026-...-DR	▲ BSPP 3/4"	●	○	○					40	32	84	17		440
		UF-012-0-WR026-...-VI	■ BSPP 3/4"	●	○	○					40	32	84	17		440
		UF-012-0-WR033-...-DR	▲ BSPP 1"	○	○	○					40	36	88	20		510
		UF-012-0-WR033-...-VI	■ BSPP 1"	○	○	○					40	36	88	20		510
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-012-0-WR521-...-DR	▲ BSPP 1/2"	●	○	○				40	32	81	17		450	
		UF-012-0-WR521-...-VI	■ BSPP 1/2"	●	○	○					40	32	81	17		450
		UF-012-0-WR526-...-DR	▲ BSPP 3/4"	●	●	○					40	32	83	19		430
		UF-012-0-WR526-...-VI	■ BSPP 3/4"	●	●	○					40	32	83	19		430
	 <p>hose connection</p>	UF-012-0-SL016-...-DR	▲ 16 mm	●	○	○				40	32	102	35		420	
		UF-012-0-SL016-...-VI	■ 16 mm	●	○	○					40	32	102	35		420
		UF-012-0-SL019-...-DR	▲ 19 mm	●	○	○					40	32	102	35		440
		UF-012-0-SL019-...-VI	■ 19 mm	●	○	○					40	32	102	35		440
	Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-012-2-WR021-...-DR	▲ BSPP 1/2"	●	○	○				40	32	80	15	29,5	330
UF-012-2-WR021-...-VI			■ BSPP 1/2"	●	○	○					40	32	80	15	29,5	330
UF-012-2-WR026-...-DR			▲ BSPP 3/4"	●	○	○					40	32	82	17	29,5	360
UF-012-2-WR026-...-VI			■ BSPP 3/4"	●	○	○					40	32	82	17	29,5	360
UF-012-2-WR033-...-DR			▲ BSPP 1"	○	○	○					40	36	86	20	29,5	320
UF-012-2-WR033-...-VI			■ BSPP 1"	○	○	○					40	36	86	20	29,5	320
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>		UF-012-2-WR521-...-DR	▲ BSPP 1/2"	●	○	○				40	32	79	17	29,5	360	
		UF-012-2-WR521-...-VI	■ BSPP 1/2"	●	○	○					40	32	79	17	29,5	360
		UF-012-2-WR526-...-DR	▲ BSPP 3/4"	●	●	○					40	32	81	19	29,5	340
		UF-012-2-WR526-...-VI	■ BSPP 3/4"	●	●	○					40	32	81	19	29,5	340
 <p>hose connection</p>		UF-012-2-SL016-...-DR	▲ 16 mm	●	○	○				40	32	100	35	29,5	340	
		UF-012-2-SL016-...-VI	■ 16 mm	●	○	○					40	32	100	35	29,5	340
		UF-012-2-SL019-...-DR	▲ 19 mm	●	○	○					40	32	100	35	29,5	360
		UF-012-2-SL019-...-VI	■ 19 mm	●	○	○					40	32	100	35	29,5	360
Thru type adaptors		 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-012-1-WR021-...-DR	▲ BSPP 1/2"	○	○	○				30	27	52,5	15	29,5	110
	UF-012-1-WR021-...-VI		■ BSPP 1/2"	○	○	○					30	27	52,5	15	29,5	110
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-012-1-WR521-...-DR	▲ BSPP 1/2"	○	○	○				33,5	30	52,5	17	29,5	150	
		UF-012-1-WR521-...-VI	■ BSPP 1/2"	○	○	○					33,5	30	52,5	17	29,5	150
	 <p>hose connection</p>	UF-012-1-SL016-...-DR	▲ 16 mm	○	○	○				25		68,5	35	29,5	95	
		UF-012-1-SL016-...-VI	■ 16 mm	○	○	○					25		68,5	35	29,5	95

**characteristic features:**

- ▲...DR = with triangular fitting
- ...VI = with square fitting (non-interchangeable versions) special keys on request
- stainless steel version 1.4404/1.4571 or similar in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**

- OV = without valve
- SI = with additional axial safety lock (outer diameter 62 mm)

**materials:**

- standard:**
- 21 = brass, passivated
- 22 = brass, chrome plated
- 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**

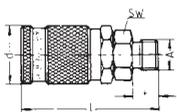
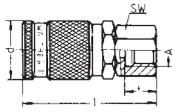
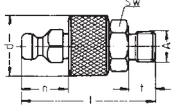
- 24 = brass, chem. nickel plated

**seal qualities:**

- 1 = NBR
- 2 = FKM
- 4 = EPDM

Please note the technical data on pages 2 - 7, 47 - 48 and the max. working pressures on page 41

Availability: ● Short ○ Medium ○ Long

	Part No.	Connec-tion A	brass passivated	brass chrome plated	AISI 316 ti/1.4571				d	SW	l	t	n	weight [g]		
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>UF-019-0-WR026-...-DR</b> ▲ BSPP 3/4" ● ○ ○ <b>UF-019-0-WR026-...-VI</b> ■ BSPP 3/4" ● ○ ○ <b>UF-019-0-WR033-...-DR</b> ▲ BSPP 1" ● ○ ○ <b>UF-019-0-WR033-...-VI</b> ■ BSPP 1" ● ○ ○	●	○	○				60	46	100	17		1080		
		<b>UF-019-0-WR526-...-DR</b> ▲ BSPP 3/4" ● ○ ○ <b>UF-019-0-WR526-...-VI</b> ■ BSPP 3/4" ● ○ ○ <b>UF-019-0-WR533-...-DR</b> ▲ BSPP 1" ● ○ ○ <b>UF-019-0-WR533-...-VI</b> ■ BSPP 1" ● ○ ○	●	○	○						60	46	94	19		1130
		<b>UF-019-0-SL019-...-DR</b> ▲ 19 mm ● ○ ○ <b>UF-019-0-SL019-...-VI</b> ■ 19 mm ● ○ ○ <b>UF-019-0-SL025-...-DR</b> ▲ 25 mm ● ○ ○ <b>UF-019-0-SL025-...-VI</b> ■ 25 mm ● ○ ○ <b>UF-019-0-SL028-...-DR</b> ▲ 28 mm ● ○ ○ <b>UF-019-0-SL028-...-VI</b> ■ 28 mm ● ○ ○	●	○	○						60	46	118	35		1110
		<b>UF-019-0-WR026-...-DR</b> ▲ BSPP 3/4" ● ○ ○ <b>UF-019-0-WR026-...-VI</b> ■ BSPP 3/4" ● ○ ○ <b>UF-019-0-WR033-...-DR</b> ▲ BSPP 1" ● ○ ○ <b>UF-019-0-WR033-...-VI</b> ■ BSPP 1" ● ○ ○	●	○	○						60	46	103	20		1110
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>UF-019-2-WR026-...-DR</b> ▲ BSPP 3/4" ● ○ ○ <b>UF-019-2-WR026-...-VI</b> ■ BSPP 3/4" ● ○ ○ <b>UF-019-2-WR033-...-DR</b> ▲ BSPP 1" ● ○ ○ <b>UF-019-2-WR033-...-VI</b> ■ BSPP 1" ● ○ ○	●	○	○				54	46	96	17	32,5	760		
		<b>UF-019-2-WR526-...-DR</b> ▲ BSPP 3/4" ● ○ ○ <b>UF-019-2-WR526-...-VI</b> ■ BSPP 3/4" ● ○ ○ <b>UF-019-2-WR533-...-DR</b> ▲ BSPP 1" ● ○ ○ <b>UF-019-2-WR533-...-VI</b> ■ BSPP 1" ● ○ ○	●	○	○						54	46	94	19	32,5	830
		<b>UF-019-2-SL019-...-DR</b> ▲ 19 mm ● ○ ○ <b>UF-019-2-SL019-...-VI</b> ■ 19 mm ● ○ ○ <b>UF-019-2-SL025-...-DR</b> ▲ 25 mm ● ○ ○ <b>UF-019-2-SL025-...-VI</b> ■ 25 mm ● ○ ○ <b>UF-019-2-SL028-...-DR</b> ▲ 28 mm ● ○ ○ <b>UF-019-2-SL028-...-VI</b> ■ 28 mm ● ○ ○	●	○	○						54	46	114	35	32,5	790
		<b>UF-019-2-WR026-...-DR</b> ▲ BSPP 3/4" ● ○ ○ <b>UF-019-2-WR026-...-VI</b> ■ BSPP 3/4" ● ○ ○ <b>UF-019-2-WR033-...-DR</b> ▲ BSPP 1" ● ○ ○ <b>UF-019-2-WR033-...-VI</b> ■ BSPP 1" ● ○ ○	●	○	○						54	46	99	20	32,5	790
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>UF-019-1-WR026-...-DR</b> ▲ BSPP 3/4" ○ ○ ○ <b>UF-019-1-WR026-...-VI</b> ■ BSPP 3/4" ○ ○ ○	○	○	○				45,5	41	59,5	17	32,5	280		
		<b>UF-019-1-WR533-...-DR</b> ▲ BSPP 1" ○ ○ ○ <b>UF-019-1-WR533-...-VI</b> ■ BSPP 1" ○ ○ ○	○	○	○						45,5	41	61,5	23	32,5	310
		<b>UF-019-1-SL025-...-DR</b> ▲ 25 mm ○ ○ ○ <b>UF-019-1-SL025-...-VI</b> ■ 25 mm ○ ○ ○	○	○	○						38	81	40	32,5	270	

**characteristic features:**  
 ▲...DR = with triangular fitting  
 ■...VI = with square fitting  
 (non-interchangeable versions)  
 special keys on request

**materials:**  
**standard:**  
 21 = brass, passivated  
 22 = brass, chrome plated  
 01 = stainless steel 1.4404/1.4571 or similar

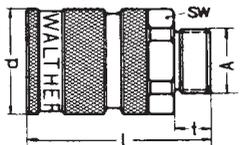
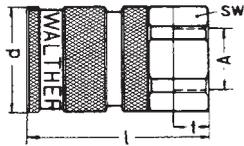
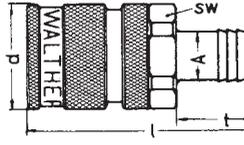
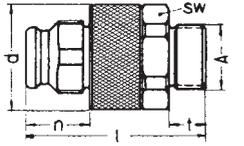
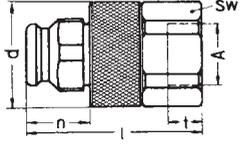
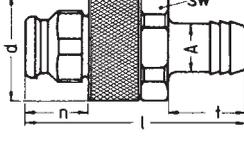
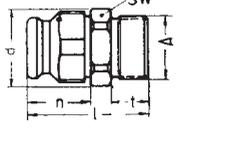
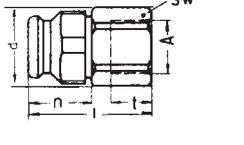
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

**optional features:**  
 GG = with ring grips (cast aluminium)  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 89 mm)

**special materials:**  
 24 = brass, chem. nickel plated

Please note the technical data on pages 2 - 7, 47 - 48 and the max. working pressures on page 41

Availability: ● Short ○ Medium ○ Long

	Part No.	Connection A	brass passivated	brass chrome plated	ASI 316 ti/ 1.4571	d	SW	l	t	n	weight [g]
<b>Self sealing couplings</b>	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-032-0-WR048-...-DR ▲	BSPP 1 1/2"	○	○	82	75	139	22		3290
		UF-032-0-WR048-...-VI ■	BSPP 1 1/2"	○	○	82	75	139	22		3290
		UF-032-0-WR060-...-DR ▲	BSPP 2"	○	○	82	75	143	26		3510
		UF-032-0-WR060-...-VI ■	BSPP 2"	○	○	82	75	143	26		3510
<b>Self sealing couplings</b>	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-032-0-WR548-...-DR ▲	BSPP 1 1/2"	○	○	82	75	126	25		3280
		UF-032-0-WR548-...-VI ■	BSPP 1 1/2"	○	○	82	75	126	25		3280
		UF-032-0-WR560-...-DR ▲	BSPP 2"	○	○	82	75	130	29		3130
		UF-032-0-WR560-...-VI ■	BSPP 2"	○	○	82	75	130	29		3130
<b>Self sealing couplings</b>	 <p>hose connection</p>	UF-032-0-SL042-...-DR ▲	42 mm	○	○	82	75	178	61		3460
		UF-032-0-SL042-...-VI ■	42 mm	○	○	82	75	178	61		3460
		UF-032-0-SL053-...-DR ▲	53 mm	○	○	82	75	182	70		3840
		UF-032-0-SL053-...-VI ■	53 mm	○	○	82	75	182	70		3840
<b>Self sealing adaptors</b>	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-032-2-WR048-...-DR ▲	BSPP 1 1/2"	○	○	82	75	135,5	22	39	2750
		UF-032-2-WR048-...-VI ■	BSPP 1 1/2"	○	○	82	75	135,5	22	39	2750
		UF-032-2-WR060-...-DR ▲	BSPP 2"	○	○	82	75	139,5	26	39	2980
		UF-032-2-WR060-...-VI ■	BSPP 2"	○	○	82	75	139,5	26	39	2980
<b>Self sealing adaptors</b>	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-032-2-WR548-...-DR ▲	BSPP 1 1/2"	○	○	82	75	122,5	25	39	2740
		UF-032-2-WR548-...-VI ■	BSPP 1 1/2"	○	○	82	75	122,5	25	39	2740
		UF-032-2-WR560-...-DR ▲	BSPP 2"	○	○	82	75	126,5	29	39	2600
		UF-032-2-WR560-...-VI ■	BSPP 2"	○	○	82	75	126,5	29	39	2600
<b>Self sealing adaptors</b>	 <p>hose connection</p>	UF-032-2-SL042-...-DR ▲	42 mm	○	○	82	75	174,5	61	39	2940
		UF-032-2-SL042-...-VI ■	42 mm	○	○	82	75	174,5	61	39	2940
		UF-032-2-SL053-...-DR ▲	53 mm	○	○	82	75	178,5	70	39	3320
		UF-032-2-SL053-...-VI ■	53 mm	○	○	82	75	178,5	70	39	3320
<b>Thru type adaptors</b>	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	UF-032-1-WR048-...-DR ▲	BSPP 1 1/2"	○	○	61,3	55	74,5	22	39	680
		UF-032-1-WR048-...-VI ■	BSPP 1 1/2"	○	○	61,3	55	74,5	22	39	680
<b>Thru type adaptors</b>	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	UF-032-1-WR548-...-DR ▲	BSPP 1 1/2"	○	○	66,5	60	72	25	39	720
		UF-032-1-WR548-...-VI ■	BSPP 1 1/2"	○	○	66,5	60	72	25	39	720
<b>Thru type adaptors</b>	 <p>hose connection</p>	UF-032-1-SL042-...-DR ▲	42 mm	○	○	60		108	61	39	730
		UF-032-1-SL042-...-VI ■	42 mm	○	○	60		108	61	39	730

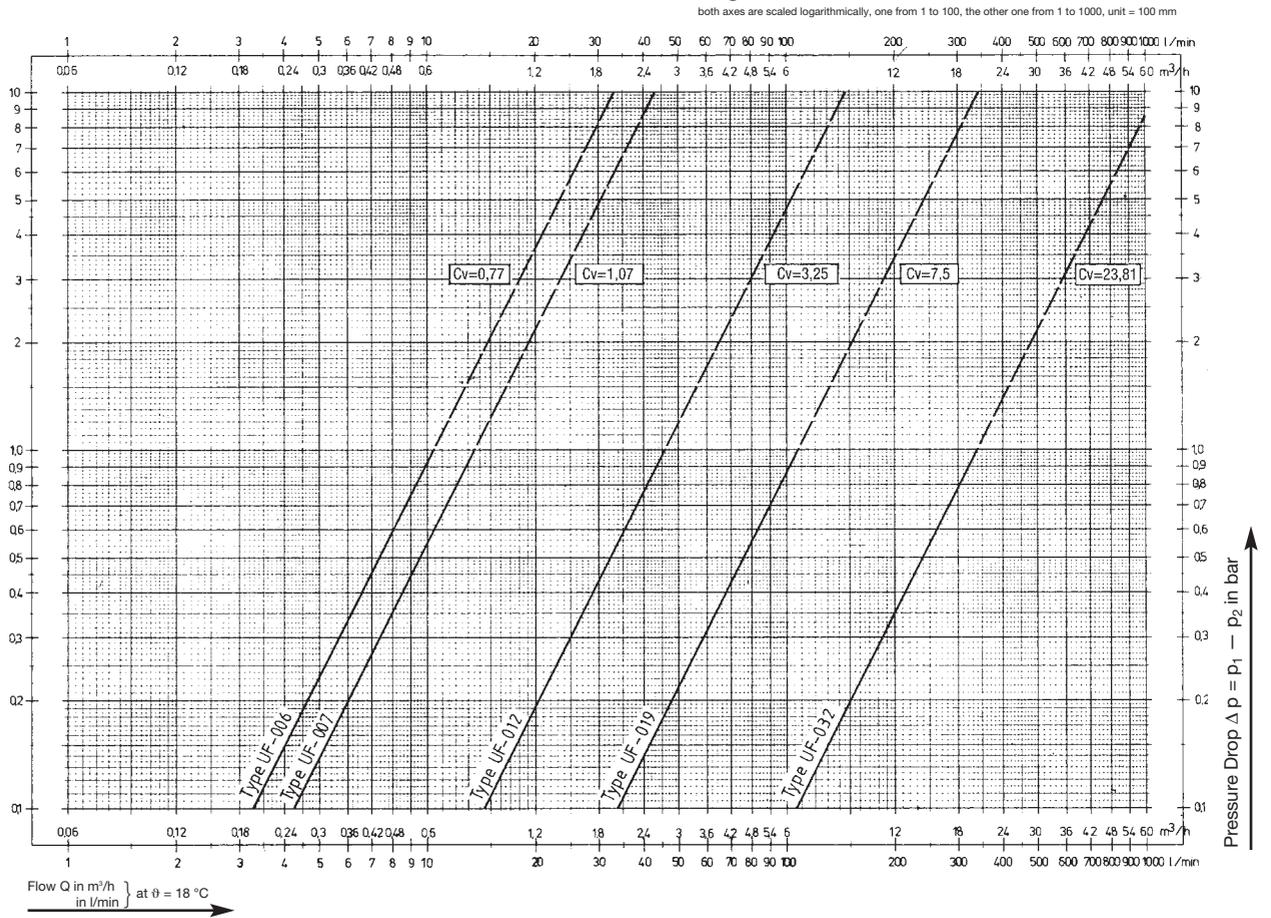
Non-interchangeable version

Measurement of flow coefficients Cv according to DIN EN 60534

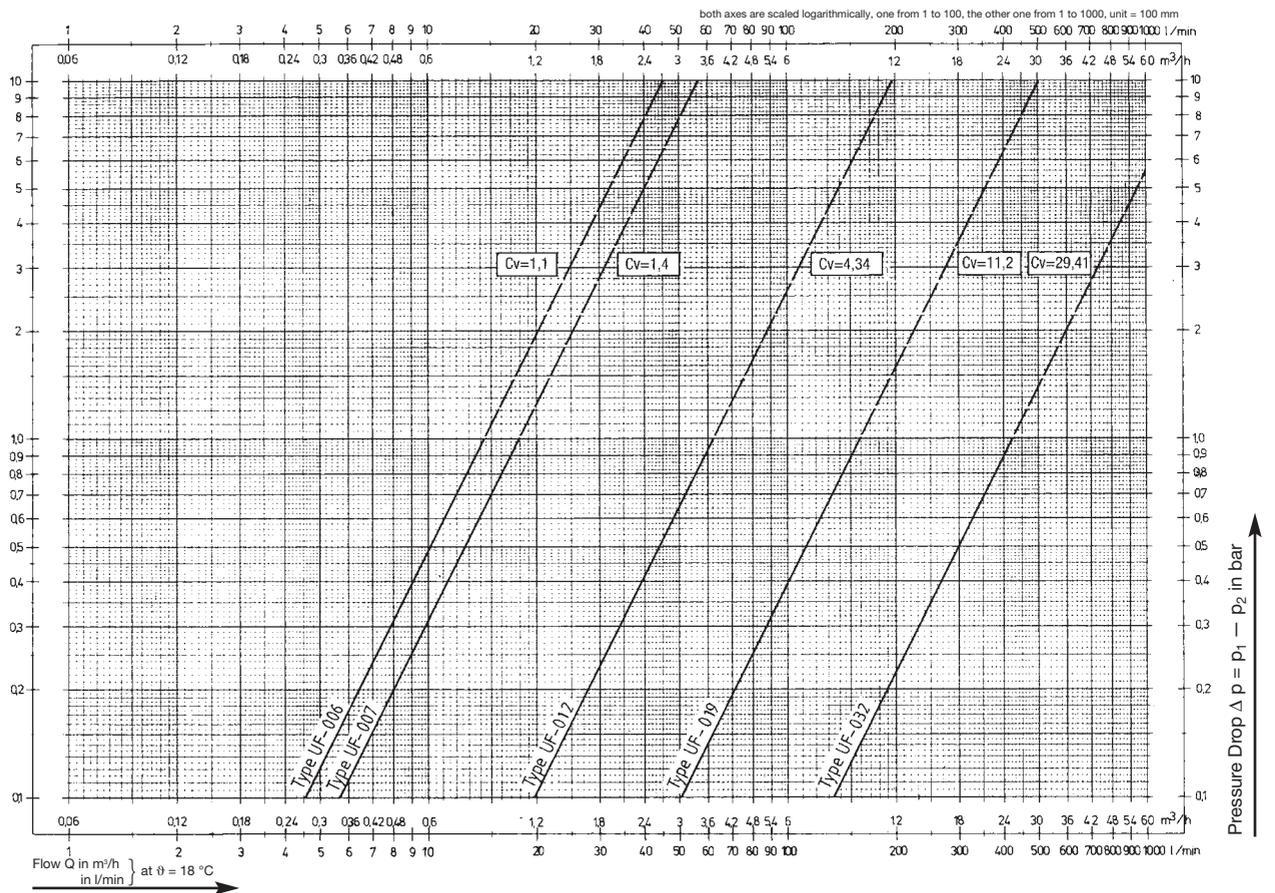
Flow speeds of 8 m/sec should not be exceeded

1 bar = 14,5 PSI

### Both sides self sealing



### One side self sealing



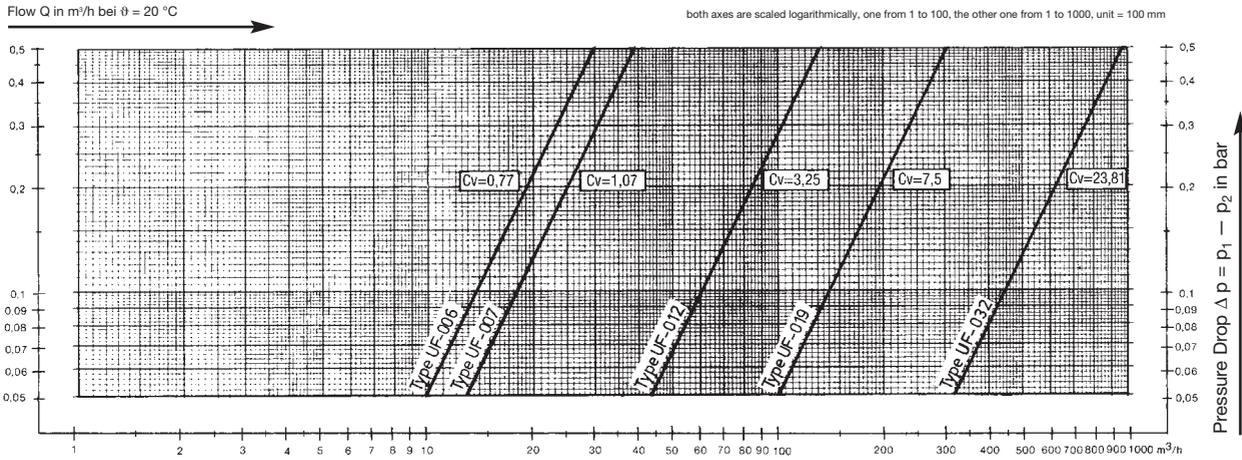
Non-interchangeable version

Measurement of flow coefficients  $C_v$  according to DIN EN 60534

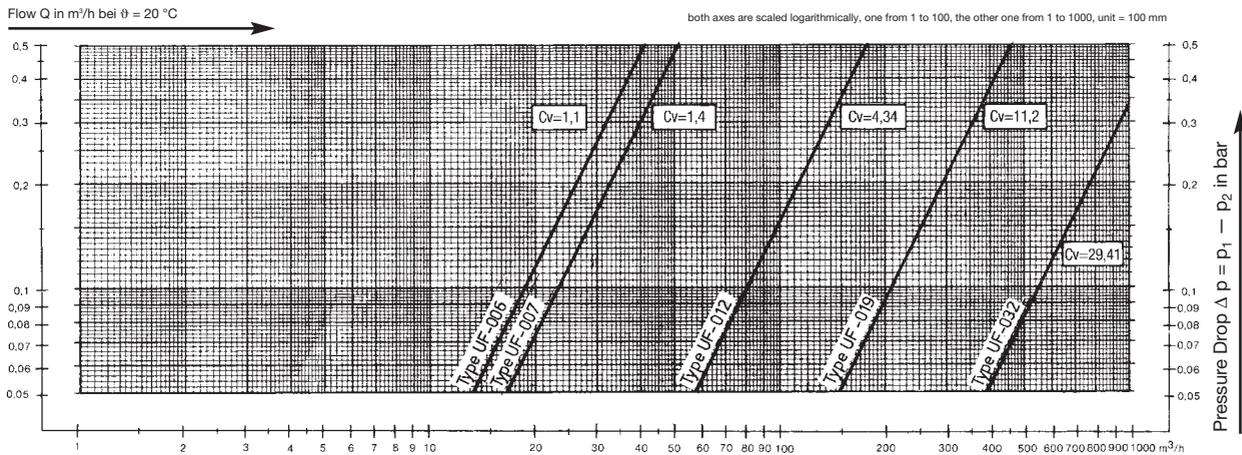
Working pressure 6 bar gauge pressure

1 bar = 14,5 PSI

### Both sides self sealing



### One side self sealing

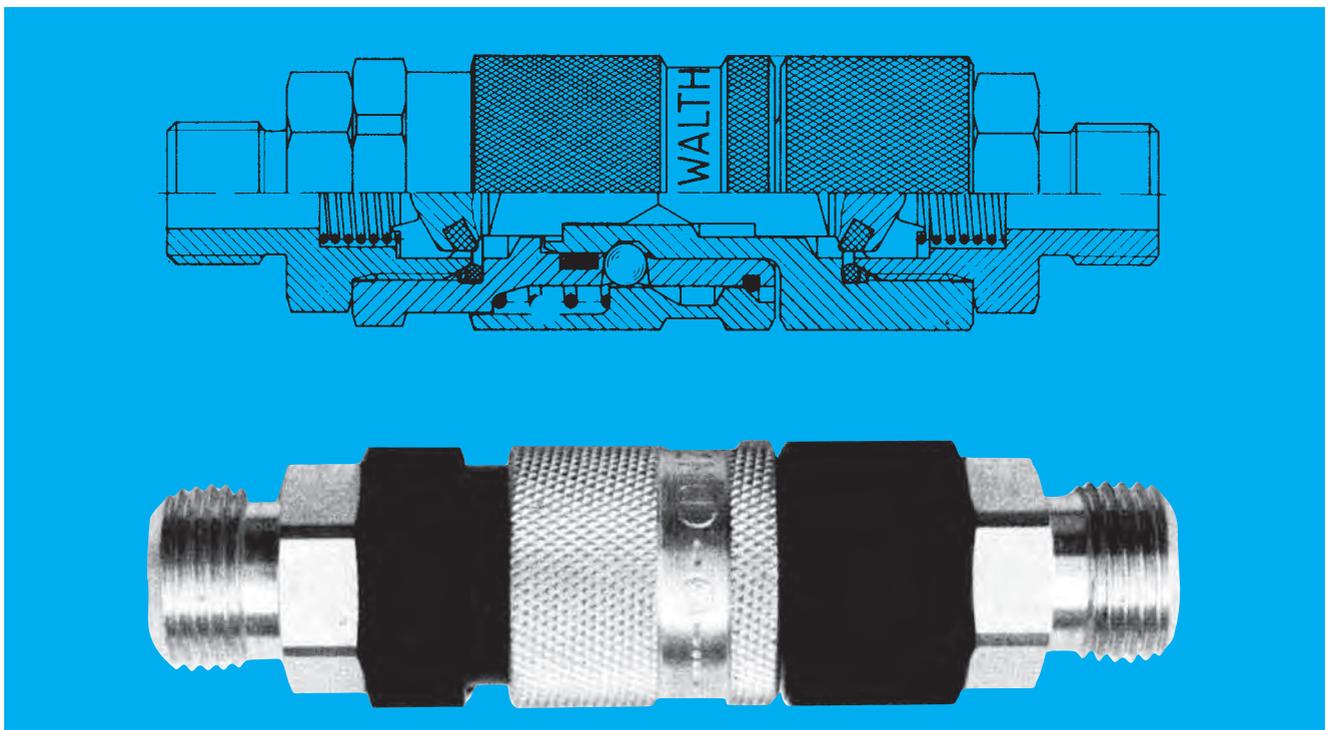


Nom. bore	Type	Max. static working pressure [bar/psi]			Min. burst pressure for steel [bar/psi]	C <sub>v</sub> value		Cross section [mm <sup>2</sup> ]	Page
		steel	brass*	st. st.		both sides self sealing	one side self sealing		
6	SG-006	250/3625	–	–	1400/20300	0.73	1.0	30	50 - 51
6	MD-006	200/2900	40/580	100/1450	1000/14500	0.73	–	30	52 - 53
7	MD-007	250/3625	40/580	100/1450	800/11600	1.07	–	40	54 - 55
12	MD-012	250/3625	40/580	100/1450	750/10900	3.25	–	120	56 - 57
19	MD-019	250/3625	40/580	50/725	750/10900	7.5	–	300	58 - 59
25	MD-025	220/3190	40/580	50/725	750/10900	13.5	–	490	60
32	MD-032	200/2900	40/580	40/580	700/10100	23.8	29.4	800	61 - 62
50	MD-050	100/1450	30/435	30/435	450/6500	59	68	2000	63 - 64
Performance diagrams									65 - 66

\* based on experience, valid up to 100 °C

**Please note:** In case of standardised end connections, please take the max. allowable working pressure of the end connection into account when determining the working pressures.

The types MD-006, MD-007, MD-012, MD-019 and MD-025 in stainless steel (1.4404, 1.4571 or equal) are delivered as standard without knurling but in a smooth version (-GL/-GX) with finger grooves. Actual design differs from drawing.



optional features:  
OV = without valve

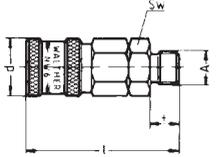
materials:  
standard:  
19 = steel zinc plated, partially oil burnished  
12 = steel, oil burnished  
(only valid for thru type adaptor)

seal qualities:  
1 = NBR  
2 = FPM  
4 = EPDM

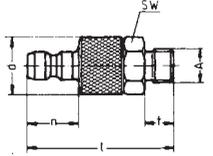
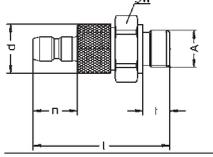
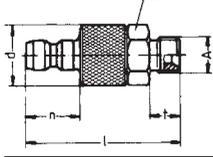
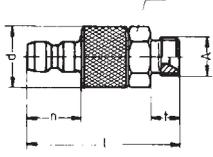
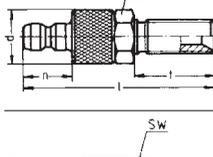
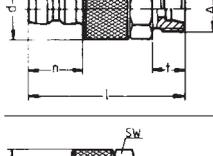
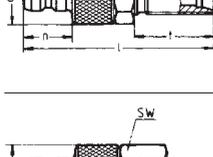
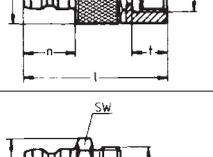
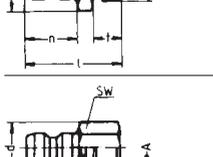
special materials:  
13 = steel, chem. nickel plated

Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	steel oil burnished			series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<p><b>SG-006-0-WR013-...-</b>  <b>SG-006-0-WR017-...-</b>  <b>SG-006-0-WR021-...-</b></p>	<p>BSPP 1/4"                      BSPP 3/8"                      BSPP 1/2"</p>	<p>●                      ●                      ●</p>						22 22 22	19 19 22	58 59 62	11 12 15		90 95 120	
		<p><b>SG-006-0-WE017-...-</b></p>	<p>BSPP 3/8"</p>	<p>○</p>							22	27	64	12		130
		<p><b>SG-006-0-VR013-...-</b>  <b>SG-006-0-VR017-...-</b></p>	<p>BSPP 1/4"                      BSPP 3/8"</p>	<p>○                      ○</p>						6 6	22 22	19 19	58 59	11 12		90 95
	<p><b>SG-006-0-D0614-...-</b></p>	<p>M 14 x 1,5</p>	<p>●</p>							6	22	19	57	10		90
	<p><b>SG-006-0-DV008-...-</b></p>	<p>M 14 x 1,5</p>	<p>○</p>							6	22	19	79	32		110
	<p><b>SG-006-0-L0612-...-</b>  <b>SG-006-0-L0814-...-</b>  <b>SG-006-0-L1016-...-</b>  <b>SG-006-0-L1218-...-</b>  <b>SG-006-0-S0816-...-</b>  <b>SG-006-0-S1018-...-</b>  <b>SG-006-0-S1220-...-</b></p>	<p>M 12 x 1,5                      M 14 x 1,5                      M 16 x 1,5                      M 18 x 1,5                      M 16 x 1,5                      M 18 x 1,5                      M 20 x 1,5</p>	<p>●                      ●                      ●                      ○                      ○                      ●                      ○</p>				L L L L S S S	6 8 10 12 8 10 12	4 6 8 10 4 6 8	22 22 22 22 22 22 22	19 19 19 19 19 19 22	57 57 58 58 59 59 59	10 10 11 11 12 12 12		85 85 90 90 90 95 100	
	<p><b>SG-006-0-LV008-...-</b>  <b>SG-006-0-XX211-...-</b></p>	<p>M 14 x 1,5                      M 16 x 1,5</p>	<p>○                      ○</p>				L L	8 10	6 8	22 22	19 19	79 79	32 32		110 120	
	<p><b>SG-006-0-WR513-...-</b>  <b>SG-006-0-WR517-...-</b></p>	<p>BSPP 1/4"                      BSPP 3/8"</p>	<p>●                      ●</p>								22 22	19 22	57 58	13 14		95 100

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	steel oil burnished			series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	SG-006-2-WR013-...-.	BSPP 1/4"	●						22	19	56	11	20	70	
		SG-006-2-WR017-...-.	BSPP 3/8"	●							22	19	57	12	20	75
		SG-006-2-WR021-...-.	BSPP 1/2"	○							22	22	60	15	20	100
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	SG-006-2-WE017-...-.	BSPP 3/8"	○							22	27	62	12	20	110
	 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	SG-006-2-VR013-...-.	BSPP 1/4"	○					6	22	19	56	11	20	70	
		SG-006-2-VR017-...-.	BSPP 3/8"	○					6	22	19	57	12	20	75	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	SG-006-2-D0614-...-.	M 14 x 1,5	○						6	22	19	55	10	20	70
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	SG-006-2-DV008-...-.	M 14 x 1,5	○						6	22	19	77	32	20	90
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	SG-006-2-L0612-...-.	M 12 x 1,5	●			L	6	4	22	19	55	10	20	70	
		SG-006-2-L0814-...-.	M 14 x 1,5	●			L	8	6	22	19	55	10	20	70	
SG-006-2-L1016-...-.		M 16 x 1,5	●			L	10	8	22	19	56	11	20	75		
SG-006-2-L1218-...-.		M 18 x 1,5	○			L	12	10	22	19	56	11	20	75		
SG-006-2-S0816-...-.		M 16 x 1,5	○			S	8	4	22	19	57	12	20	75		
SG-006-2-S1018-...-.		M 18 x 1,5	○			S	10	6	22	19	57	12	20	80		
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S), extended thread, max. bulkhead thickness 10 mm</p>	SG-006-2-LV008-...-.	M 14 x 1,5	○			L	8	6	22	19	77	32	20	90		
	SG-006-2-XX211-...-.	M 16 x 1,5	○			L	10	8	22	19	77	32	20	100		
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	SG-006-2-WR513-...-.	BSPP 1/4"	●						22	19	55	13	20	75		
	SG-006-2-WR517-...-.	BSPP 3/8"	●						22	22	56	14	20	80		
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	SG-006-1-WR010-...-.	BSPP 1/8"	○						15,5	14	34	8	20	23	
		SG-006-1-WR013-...-.	BSPP 1/4"	○						19,6	14	37	11	20	26	
		SG-006-1-WR017-...-.	BSPP 3/8"	○						21,9	19	38	12	20	37	
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	SG-006-1-WR513-...-.	BSPP 1/4"	○						19,6	17	36	13	20	26	
SG-006-1-WR517-...-.	BSPP 3/8"	○						24	22	37	14	20	40			

**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 OV = without valve  
 SI = with additional axial safety lock (outer diameter 29 mm)

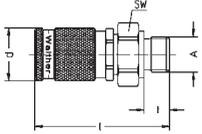
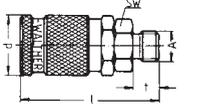
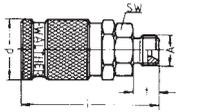
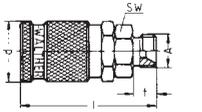
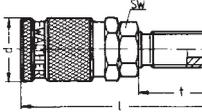
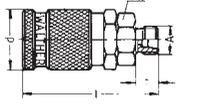
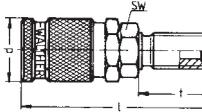
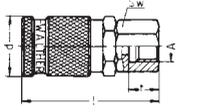
**materials:**  
**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

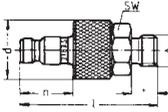
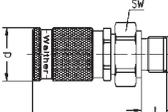
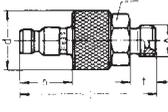
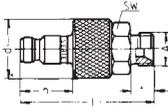
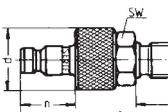
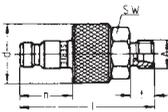
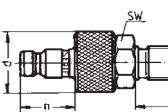
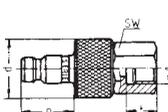
Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571		series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
	<b>MD-006-0-WE017-...</b>	BSPP 3/8"	●							25	27	64	12		157
	<b>MD-006-0-WR013-...</b>	BSPP 1/4"	●	●	○					25	19	58	11		110
	<b>MD-006-0-WR017-...</b>	BSPP 3/8"	●	●	○					25	19	59	12		120
	<b>MD-006-0-WR021-...</b>	BSPP 1/2"	●	●	○					25	22	62	15		140
	<b>MD-006-0-VR013-...</b>	BSPP 1/4"	○		○				6	25	19	58	11		110
	<b>MD-006-0-VR017-...</b>	BSPP 3/8"	●		○				6	25	19	59	12		120
	<b>MD-006-0-D0614-...</b>	M 14 x 1,5	●		○				6	25	19	57	10		110
	<b>MD-006-0-DV008-...</b>	M 14 x 1,5	○						6	25	19	79	32		130
	<b>MD-006-0-L0612-...</b>	M 12 x 1,5	●		○		L	6	4	25	19	57	10		110
	<b>MD-006-0-L0814-...</b>	M 14 x 1,5	●		○		L	8	6	25	19	57	10		110
	<b>MD-006-0-L1016-...</b>	M 16 x 1,5	●		○		L	10	8	25	19	58	11		110
	<b>MD-006-0-L1218-...</b>	M 18 x 1,5	○		○		L	12	10	25	19	58	11		110
	<b>MD-006-0-S0816-...</b>	M 16 x 1,5	○		○		S	8	4	25	19	59	12		120
	<b>MD-006-0-S1018-...</b>	M 18 x 1,5	○		○		S	10	6	25	19	59	12		120
	<b>MD-006-0-S1220-...</b>	M 20 x 1,5	●		○		S	12	8	25	22	59	12		130
	<b>MD-006-0-LV008-...</b>	M 14 x 1,5	○				L	8	6	25	19	79	32		130
	<b>MD-006-0-XX211-...</b>	M 16 x 1,5	○				L	10	8	25	19	79	32		140
	<b>MD-006-0-WR513-...</b>	BSPP 1/4"	●	●	○					25	19	57	13		120
	<b>MD-006-0-WR517-...</b>	BSPP 3/8"	●	●	○					25	22	58	14		130

Self sealing couplings

Availability: ● Short ● Medium ○ Long

		Part No.	Conne- tion A	steel/zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571		series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>MD-006-2-WR013-...-.</b>	BSPP 1/4"	●	●	○					25	19	57,5	11	21,7	85	
		<b>MD-006-2-WR017-...-.</b>	BSPP 3/8"	●	●	○						25	19	58,5	12	21,7	90
		<b>MD-006-2-WR021-...-.</b>	BSPP 1/2"	●	●	○						25	22	61,5	15	21,7	110
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	<b>MD-006-2-WE017-...-.</b>	BSPP 3/8"	○							25	27	63	12	21,7	127	
	 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	<b>MD-006-2-VR013-...-.</b> <b>MD-006-2-VR017-...-.</b>	BSPP 1/4" BSPP 3/8"	○ ●		○				6 6	25 25	19 19	57,5 58,5	11 12	21,7 21,7	85 95	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	<b>MD-006-2-D0614-...-.</b>	M 14 x 1,5	●		○				6	25	19	56,5	10	21,7	85	
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	<b>MD-006-2-DV008-...-.</b>	M 14 x 1,5	○						6	25	19	78,5	32	21,7	100	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>MD-006-2-L0612-...-.</b> <b>MD-006-2-L0814-...-.</b> <b>MD-006-2-L1016-...-.</b> <b>MD-006-2-L1218-...-.</b> <b>MD-006-2-S0816-...-.</b> <b>MD-006-2-S1018-...-.</b> <b>MD-006-2-S1220-...-.</b>	M 12 x 1,5 M 14 x 1,5 M 16 x 1,5 M 18 x 1,5 M 16 x 1,5 M 18 x 1,5 M 20 x 1,5	● ● ● ○ ○ ● ●		○ ○ ○ ○ ○ ○ ○		L L L L S S S	6 8 10 12 8 10 12	4 6 8 10 4 6 8	25 25 25 25 25 25 25	19 19 19 19 19 19 22	56,5 56,5 57,5 57,5 58,5 58,5 58,5	10 10 11 11 12 12 12	21,7 21,7 21,7 21,7 21,7 21,7 21,7	85 85 85 85 90 90 100	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S), extended thread, max. bulkhead thickness 10 mm</p>	<b>MD-006-2-LV008-...-.</b> <b>MD-006-2-XX211-...-.</b>	M 14 x 1,5 M 16 x 1,5	○ ○				L L	8 10	6 8	25 25	19 19	78,5 78,5	32 32	21,7 21,7	100 110	
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>MD-006-2-WR513-...-.</b> <b>MD-006-2-WR517-...-.</b>	BSPP 1/4" BSPP 3/8"	● ●	● ●	○ ○						25 25	19 22	56,5 57,5	13 14	21,7 21,7	90 95

**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 OV = without valve  
 SI = with additional axial safety lock (outer diameter 34 mm)

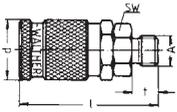
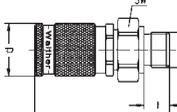
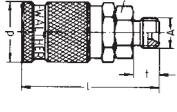
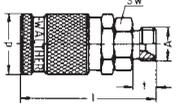
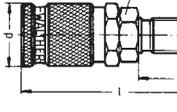
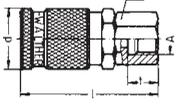
**materials:**  
**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>MD-007-0-WR017-...-</b>	BSPP 3/8"	●	●	○				30	24	68	12		200
	<b>MD-007-0-WR021-...-</b>	BSPP 1/2"	●	●	○				30	24	71	15		220
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	<b>MD-007-0-WE017-...-</b>	BSPP 3/8"	○	○	○				30	27	71	12		220
 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	<b>MD-007-0-VR017-...-</b>	BSPP 3/8"	○	○	○			7	30	24	68	12		210
 <p>metric male thread with 60° sealing cone to DIN 7631</p>	<b>MD-007-0-D0816-...-</b>	M 16 x 1,5	●	○	○			8	30	24	67	11		200
	<b>MD-007-0-DV010-...-</b>	M 16 x 1,5	○	○	○			8	30	24	89,5	33,5		220
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>MD-007-0-L1016-...-</b>	M 16 x 1,5	●	○	○	L	10	8	30	24	67	11		190
	<b>MD-007-0-L1218-...-</b>	M 18 x 1,5	○	○	○	L	12	10	30	24	67	11		190
	<b>MD-007-0-S1018-...-</b>	M 18 x 1,5	●	○	○	S	10	6	30	24	68	11		200
	<b>MD-007-0-S1220-...-</b>	M 20 x 1,5	●	○	○	S	12	8	30	24	68	12		200
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>MD-007-0-WR517-...-</b>	BSPP 3/8"	●	●	○				30	24	68	14		210
	<b>MD-007-0-WR521-...-</b>	BSPP 1/2"	●	●	○				30	27	71	17		230

Self sealing couplings



**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 OV = without valve  
 SI = with additional axial safety lock (outer diameter 44 mm)

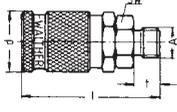
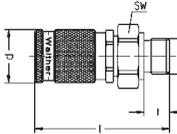
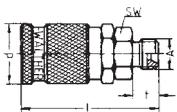
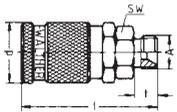
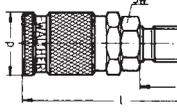
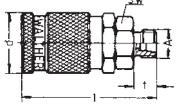
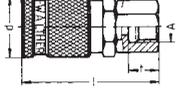
**materials:**  
**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

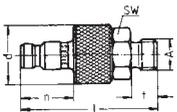
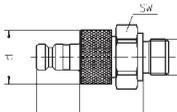
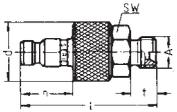
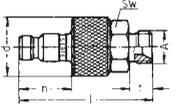
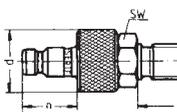
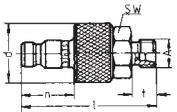
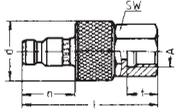
Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>MD-012-0-WR021-...</b>	BSPP 1/2"	●	●	○				40	32	82	15		390
	<b>MD-012-0-WR026-...</b>	BSPP 3/4"	●	●	○				40	32	84	17		420
	<b>MD-012-0-WR033-...</b>	BSPP 1"	●	○	○				40	36	88	20		480
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	<b>MD-012-0-WE021-...</b>	BSPP 1/2"	○					40	32	84	14		400
		 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	<b>MD-012-0-VR021-...</b>	BSPP 1/2"	●	○			12	40	32	82	15	
	<b>MD-012-0-VR026-...</b>		BSPP 3/4"	○	○			12	40	32	84	17		410
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	<b>MD-012-0-D1018-...</b>	M 18 x 1,5	●		○		10	40	32	78	11		380
		<b>MD-012-0-D1222-...</b>	M 22 x 1,5	●		○		12	40	32	79	12		390
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	<b>MD-012-0-DV015-...</b>	M 22 x 1,5	○				13	40	32	106	39		440
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>MD-012-0-L1218-...</b>	M 18 x 1,5	●		○	L	12	10	40	32	78	11		380
	<b>MD-012-0-L1522-...</b>	M 22 x 1,5	●		○	L	15	12	40	32	79	12		390
	<b>MD-012-0-S1624-...</b>	M 24 x 1,5	●		○	S	16	12	40	32	81	14		400
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>MD-012-0-WR521-...</b>	BSPP 1/2"	●	●	○			40	32	81	17		430	
	<b>MD-012-0-WR526-...</b>	BSPP 3/4"	●	●	●			40	32	83	19			410

Self sealing couplings

Availability: ● Short ● Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 Ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>MD-012-2-WR021-...</b> <b>MD-012-2-WR026-...</b> <b>MD-012-2-WR033-...</b>	BSPP 1/2"	●	●	○			40	32	82	15	31,5	300	
		BSPP 3/4"	●	●	○			40	32	84	17	31,5	330	
		BSPP 1"	●	○	○			40	36	88	20	31,5	390	
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	<b>MD-012-2-WE021-...</b>	BSPP 1/2"	○					40	32	84	14	31,5	310
	 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	<b>MD-012-2-VR021-...</b> <b>MD-012-2-VR026-...</b>	BSPP 1/2"	●	○			12	40	32	82	15	31,5	300
			BSPP 3/4"	○	○			12	40	32	84	17	31,5	320
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	<b>MD-012-2-D1018-...</b> <b>MD-012-2-D1222-...</b>	M 18 x 1,5	○				10	40	32	78	11	31,5	290
			M 22 x 1,5	○	○			12	40	32	79	12	31,5	300
 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	<b>MD-012-2-DV015-...</b>	M 22 x 1,5	○				13	40	32	106	39	31,5	350	
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>MD-012-2-L1218-...</b> <b>MD-012-2-L1522-...</b> <b>MD-012-2-S1624-...</b>	M 18 x 1,5	●	○		L	12	10	40	32	78	11	31,5	290
		M 22 x 1,5	●	○		L	15	12	40	32	79	12	31,5	300
		M 24 x 1,5	●	○		S	16	12	40	32	81	14	31,5	310
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>MD-012-2-WR521-...</b> <b>MD-012-2-WR526-...</b>	BSPP 1/2"	●	●	○			40	32	81	17	31,5	340	
		BSPP 3/4"	●	●	●			40	32	83	19	31,5	320	

Self sealing adaptors

Series MD

**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead of knurling (-GL/-GX)

**optional features:**  
 GG = with ring grips (cast aluminium)  
 OV = without valve  
 SI = with additional axial safety lock (outer diameter 58 mm)

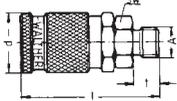
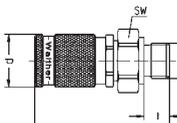
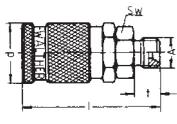
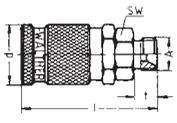
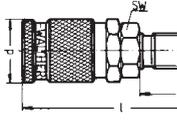
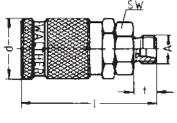
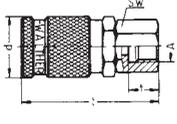
**materials:**  
**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated

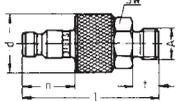
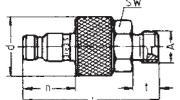
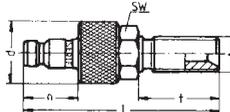
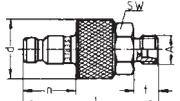
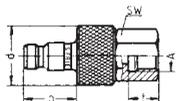
**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>MD-019-0-WR026-...-</b> <b>MD-019-0-WR033-...-</b>	BSPP 3/4" BSPP 1"	●	○				54	46	100	17		840
				●	○				54	46	103	20		870
	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, sealing profile "E" to DIN 3852-11 for o-ring or sealing ring.</p>	<b>MD-019-0-WE026-...-</b>	BSPP 3/4"	○					54	46	102	16		850
	 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	<b>MD-019-0-VR026-...-</b> <b>MD-019-0-VR033-...-</b>	BSPP 3/4" BSPP 1"	○		○		19	54	46	100	17		850
				○		○		19	54	46	103	20		880
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	<b>MD-019-0-D1526-...-</b> <b>MD-019-0-D1930-...-</b>	M 26 x 1,5 M 30 x 1,5	○		○		15	54	46	95	12		830
				○		○		19	54	46	97	14		830
 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	<b>MD-019-0-DV022-...-</b>	M 30 x 1,5	○				19	54	46	128	45		920	
 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>MD-019-0-L1826-...-</b> <b>MD-019-0-L2230-...-</b> <b>MD-019-0-S2030-...-</b> <b>MD-019-0-S2536-...-</b>	M 26 x 1,5 M 30 x 2 M 30 x 2 M 36 x 2	○		○		L	18	16	54	46	95	12	830
			●		○		L	22	20	54	46	97	14	830
			●		○		S	20	16	54	46	99	16	850
			●		○		S	25	20	54	46	101	18	870
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>MD-019-0-WR526-...-</b> <b>MD-019-0-WR533-...-</b>	BSPP 3/4" BSPP 1"	●	○	○				54	46	94	19	900	
			●	○	○				54	46	98	23		880

Availability: ● Short ● Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 Ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	<b>MD-019-2-WR026-...</b> <b>MD-019-2-WR033-...</b>	BSPP 3/4" BSPP 1"	● ● ● ●	○ ○ ○ ○				54 54	46 46	99 102	17 20	35,5 35,5	710 740	
		<b>MD-019-2-WE026-...</b>	BSPP 3/4"	○					54	46	101	16	35,5	720	
	 <p>BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone</p>	<b>MD-019-2-VR026-...</b> <b>MD-019-2-VR033-...</b>	BSPP 3/4" BSPP 1"	○ ● ○ ●	○ ○ ○ ○			19 19	54 54	46 46	99 102	17 20	35,5 35,5	710 740	
		<b>MD-019-2-D1526-...</b> <b>MD-019-2-D1930-...</b>	M 26 x 1,5 M 30 x 1,5	○ ● ○ ●	○ ○ ○ ○			15 19	54 54	46 46	94 96	12 14	35,5 35,5	700 700	
	 <p>metric male thread with 60° sealing cone to DIN 7631, extended thread for bulkhead mounting, max. thickness 10 mm</p>	<b>MD-019-2-DV022-...</b>	M 30 x 1,5	○				19	54	46	127	45	35,5	790	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	<b>MD-019-2-L1826-...</b> <b>MD-019-2-L2230-...</b> <b>MD-019-2-S2030-...</b> <b>MD-019-2-S2536-...</b>	M 26 x 1,5 M 30 x 2 M 30 x 2 M 36 x 2	○ ● ● ● ● ● ● ●	○ ○ ○ ○ ○ ○		L L S S	18 22 20 25	16 20 16 20	54 54 54 54	46 46 46 46	94 96 98 100	12 14 16 18	35,5 35,5 35,5 35,5	700 700 720 740
		 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	<b>MD-019-2-WR526-...</b> <b>MD-019-2-WR533-...</b>	BSPP 3/4" BSPP 1"	● ● ● ●	○ ○ ○ ○				54 54	46 46	93 97	19 23	35,5 35,5	770 750

Series MD

**characteristic features:**  
 - stainless steel version 1.4404/1.4571 or similar  
 in smooth variant with gripping grooves instead  
 knurling (-GL/-GX)

**optional features:**  
 GG = with ring grips (cast aluminium)  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 58 mm)

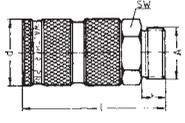
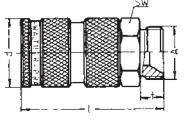
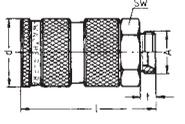
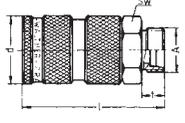
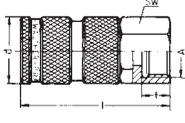
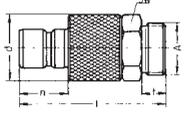
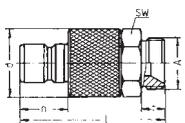
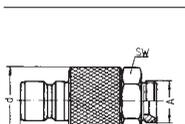
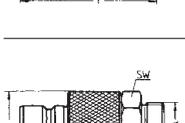
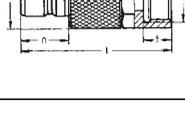
**materials:**  
**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**special materials:**  
 13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated

**seal qualities:**  
 1 = NBR  
 2 = FPM  
 4 = EPDM

Please note the  
 technical data on  
 pages 2 - 7, 65 and the  
 max. working pressures  
 on page 49

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571		series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	MD-025-0-WR048-...-	BSPP 1 1/2"	●	○	○				62	55	132	22		1710	
	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	MD-025-0-VR048-...-	BSPP 1 1/2"	●		○				62	55	132	22		1640	
	 metric male thread with 60° sealing cone to DIN 7631	MD-025-0-D2538-...-	M 38 x 1,5	●		○			25	62	55	124	14		1650	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	MD-025-0-S3042-...-	M 42 x 2	●		○		S	30	25	62	55	130	20	1610	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	MD-025-0-WR548-...-	BSPP 1 1/2"	●	○	○				62	55	138,5	25		1740	
Self sealing adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	MD-025-2-WR048-...-	BSPP 1 1/2"	●	○	○				62	55	133	22	45	1370	
	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	MD-025-2-VR048-...-	BSPP 1 1/2"	●		○				62	55	133	22	45	1300	
	 metric male thread with 60° sealing cone to DIN 7631	MD-025-2-D2538-...-	M 38 x 1,5	●		○			25	62	55	125	14	45	1310	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	MD-025-2-S3042-...-	M 42 x 2	●		○		S	30	25	62	55	131	20	45	1280
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	MD-025-2-WR548-...-	BSPP 1 1/2"	●	○	○				62	55	139,5	25	45	1400	
	 BSPP female thread to DIN ISO 228 with 60° sealing cone	MD-025-2-VR548-...-	BSPP 1 1/2"	●		○				62	55	139,5	25	45	1400	

**optional features:**

GG = with ring grips (cast aluminium)  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 89 mm)

**materials:**

**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

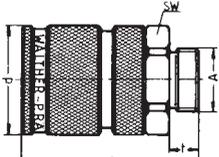
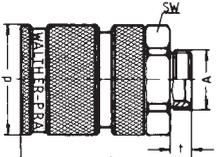
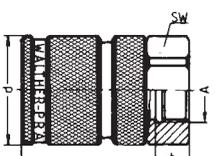
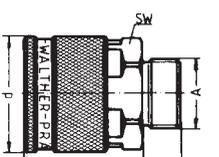
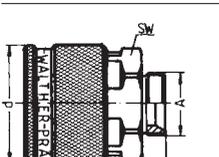
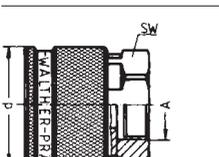
1 = NBR  
 2 = FKM  
 4 = EPDM

**special materials:**

13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated  
 31 = aluminium anodized silver

Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

**Availability:** ● Short    ◐ Medium    ○ Long

	Part No.	Conne- tion A	steel/zinc/ oil burn.	brass passivated	AISI 316 Ti/ 1.4571	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>MD-032-0-WR048-...</b> <b>MD-032-0-WR060-...</b>	BSPP 1 1/2"	●	◐	○			82	75	139	22		3080	
		BSPP 2"	○	○	○			82	75	143	26		3290	
	 metric male thread with 60° sealing cone to DIN 7631 <b>MD-032-0-D3245-...</b>	M 45 x 1,5	○					32	82	75	128	16		2880
		M 52 x 2	◐			S	38	32	82	75	134	22		2940
Thru type couplings	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>MD-032-0-WR548-...</b> <b>MD-032-0-WR560-...</b>	BSPP 1 1/2"	●	◐	○			82	75	126	25		3050	
		BSPP 2"	◐	◐	○			82	75	130	29		2920	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228 <b>MD-032-4-WR048-...</b> <b>MD-032-4-WR060-...</b>	BSPP 1 1/2"	○	○	○			82	70	110	23		2190	
		BSPP 2"	○	○	○			82	70	113	26		2390	
Thru type couplings	 metric male thread with 60° sealing cone to DIN 7631 <b>MD-032-4-D3245-...</b>	M 45 x 1,5	○	○	○			32	82	70	103	16		2140
		M 52 x 2	○	○	○	S	38	32	82	70	109	22		2200
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228 <b>MD-032-4-WR548-...</b> <b>MD-032-4-WR560-...</b>	BSPP 1 1/2" BSPP 2"	○ ○	○ ○	○ ○			82 82	70 70	87 87	25 27		1890 1700	

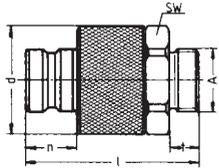
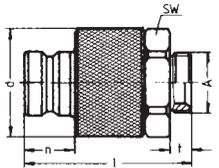
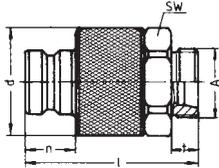
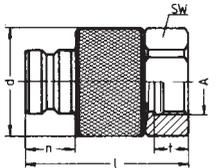
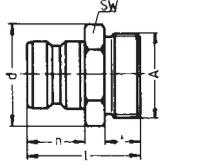
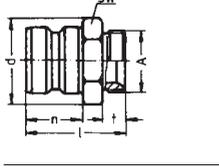
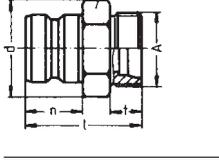
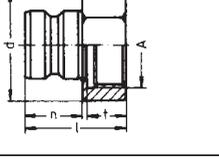
optional features:  
OV = without valve

materials:  
standard:  
19 = steel zinc plated, partially oil burnished  
21 = brass, passivated  
01 = stainless steel 1.4404/1.4571 or similar  
12 = steel, oil burnished  
special materials:  
13 = steel, chem. nickel plated  
24 = brass, chem. nickel plated  
22 = brass, chrome plated  
31 = aluminium anodized silver

seal qualities:  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571	steel oil burnished	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	MD-032-2-WR048-... MD-032-2-WR060-...	BSPP 1 1/2" BSPP 2"	● ○	● ○	○ ○				82 82	75 75	137,5 141,5	22 26	41 41	2600 2810
		 <p>metric male thread with 60° sealing cone to DIN 7631</p>	MD-032-2-D3245-...	M 45 x 1,5	○					32	82	75	126,5	16	41
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	MD-032-2-S3852-...	M 52 x 2	●			S	38	32	82	75	132,5	22	41	2460
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	MD-032-2-WR548-... MD-032-2-WR560-...	BSPP 1 1/2" BSPP 2"	● ●	● ●	○ ○				82 82	75 75	124,5 128,5	25 29	41 41	2570 2440
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	MD-032-1-WR048-... MD-032-1-WR060-...	BSPP 1 1/2" BSPP 2"	○ ○	○ ○	○ ○				60 72,5	55 65	82 88	22 26	41 41	620 670
		 <p>metric male thread with 60° sealing cone to DIN 7631</p>	MD-032-1-D3245-...	M 45 x 1,5	○	○	○			32	61,3	55	70,5	16	41
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	MD-032-1-S3852-...	M 52 x 2	○	○	○	S	38	32	66,9	60	82	22	41	630
	 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	MD-032-1-WR548-... MD-032-1-WR560-...	BSPP 1 1/2" BSPP 2"	○ ○	○ ○	○ ○				66 78	60 70	75 77	25 27	41 41	700 820

**optional features:**

GG = with ring grips (cast aluminium)  
 OV = without valve  
 SI = with additional axial safety lock  
 (outer diameter 116 mm)

**materials:**

**standard:**  
 19 = steel zinc plated, partially oil burnished  
 21 = brass, passivated  
 01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

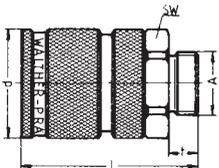
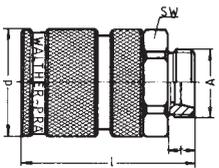
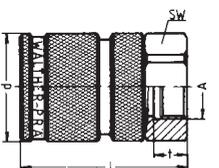
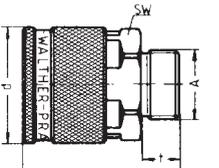
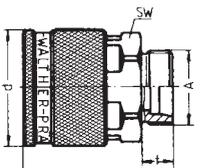
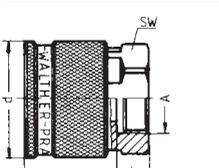
1 = NBR  
 2 = FKM  
 4 = EPDM

**special materials:**

13 = steel, chem. nickel plated  
 24 = brass, chem. nickel plated  
 22 = brass, chrome plated  
 31 = aluminium anodized silver

Please note the technical data on pages 2 - 7, 65 and the max. working pressures on page 49

**Availability:** ● Short    ◐ Medium    ○ Long

	Part No.	Conne- tion A	steel/zinc/ oil burn.	brass passivated	AISI 316 ti/ 1.4571		series	pipe OD	n. b.	d	SW	l	t	n	weight [g]
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228	MD-050-0-WR060-... MD-050-0-WR075-...	BSPP 2" BSPP 2 1/2"	● ○	○ ○	○ ○				112 112	100 100	162 164	26 30		5530 5540
		MD-050-0-D4965-...	M 65 x 2						49	112	100	159	18		5460
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	MD-050-0-L4252-...	M 52 x 2	○			L	42	36	112	100	158	16		5410
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	MD-050-0-WR560-... MD-050-0-WR575-...	BSPP 2" BSPP 2 1/2"	● ○	○ ○	○ ○				112 112	100 100	158 167	29 33		6140 5930
Thru type couplings		 British standard pipe parallel (BSPP) male thread to DIN ISO 228	MD-050-4-WR060-... MD-050-4-WR075-...	BSPP 2" BSPP 2 1/2"	○ ○	○ ○				112 112	100 100	132,5 137,5	26 30		4090 4340
	MD-050-4-D4965-...		M 65 x 2						49	112	100	125,5	18		3980
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	MD-050-4-L4252-...	M 52 x 2				L	42	36	112	100	122	16		3920
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	MD-050-4-WR560-... MD-050-4-WR575-...	BSPP 2" BSPP 2 1/2"	○ ○	○ ○	○ ○				112 112	100 100	112 112	29 33		4600 4100

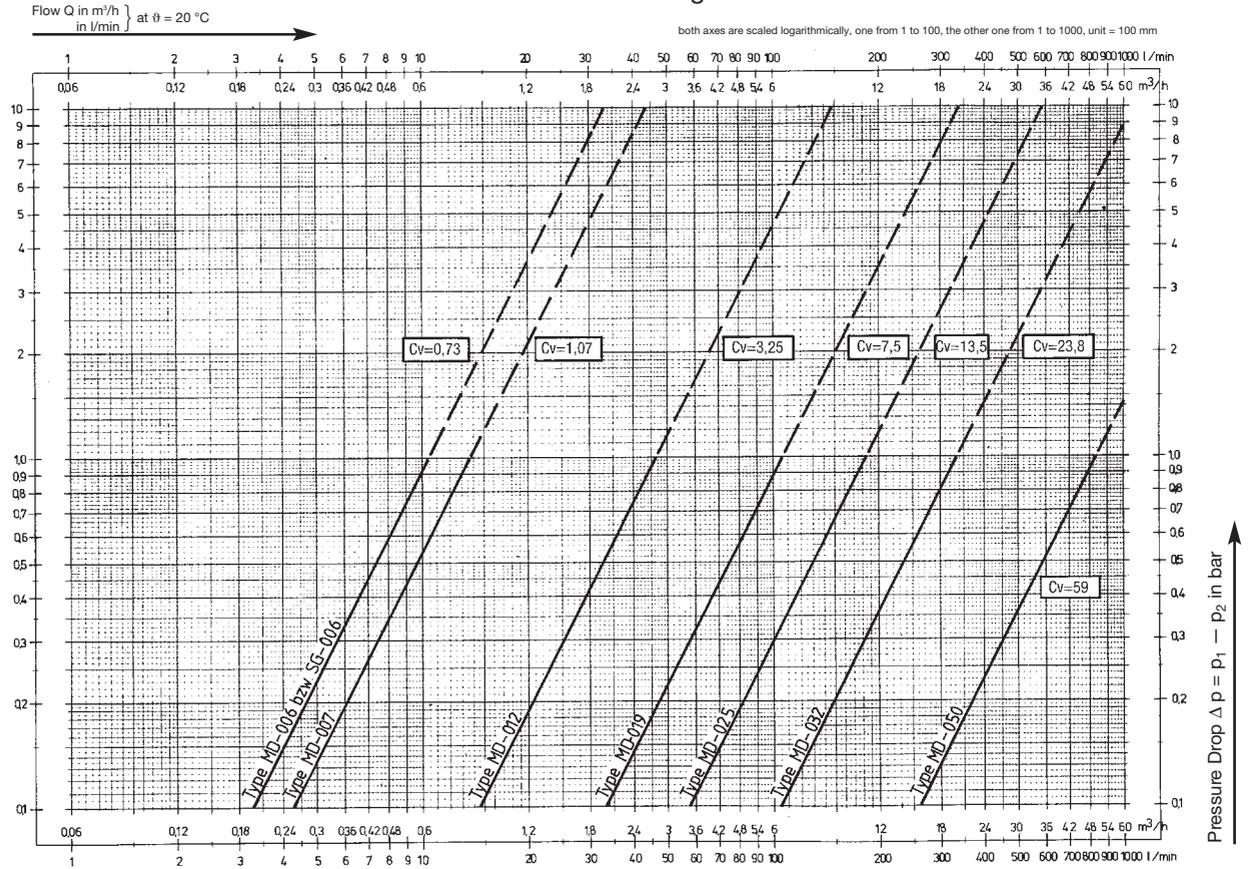


Measurement of flow coefficients  $C_v$   
according to DIN EN 60534

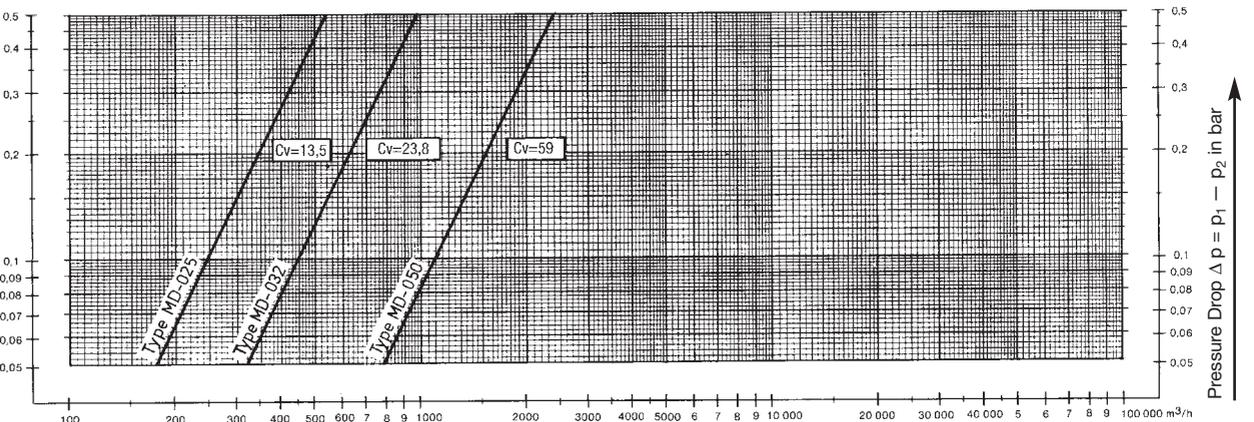
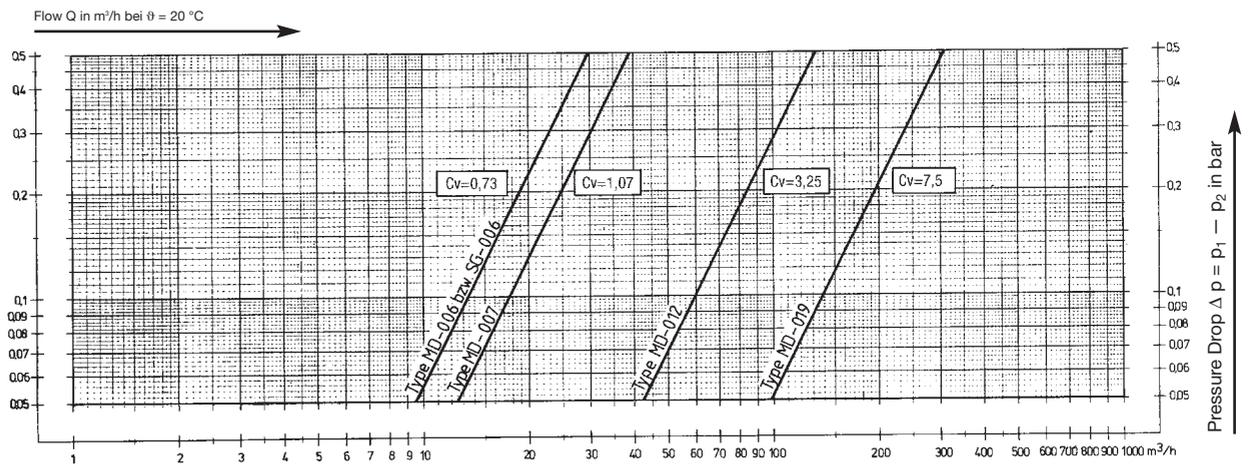
Flow speeds of 8 m/sec  
should not be exceeded

1 bar = 14,5 PSI

Medium Water  
both sides self sealing

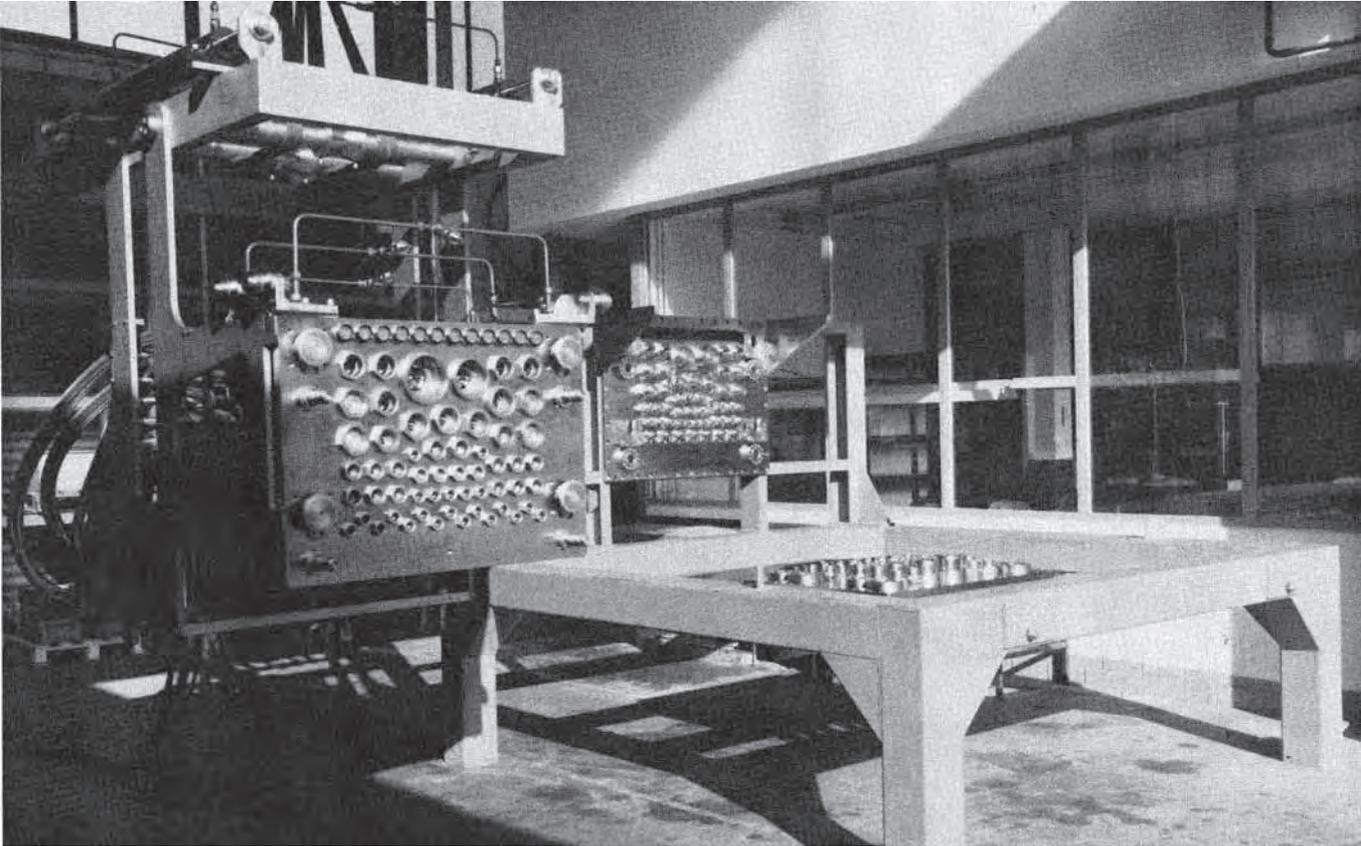


Medium Air working pressure 6 bar gauge pressure  
both sides self sealing



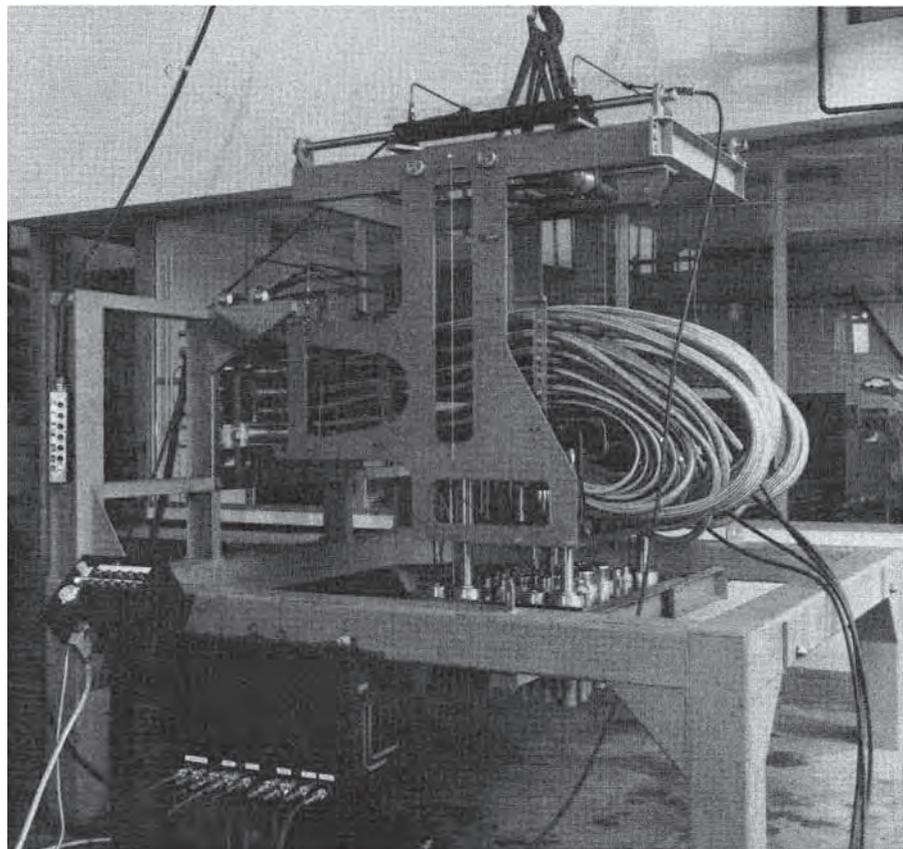
## Know-how:

# WALTHER Quick Release Coupling Systems for Nuclear Technology



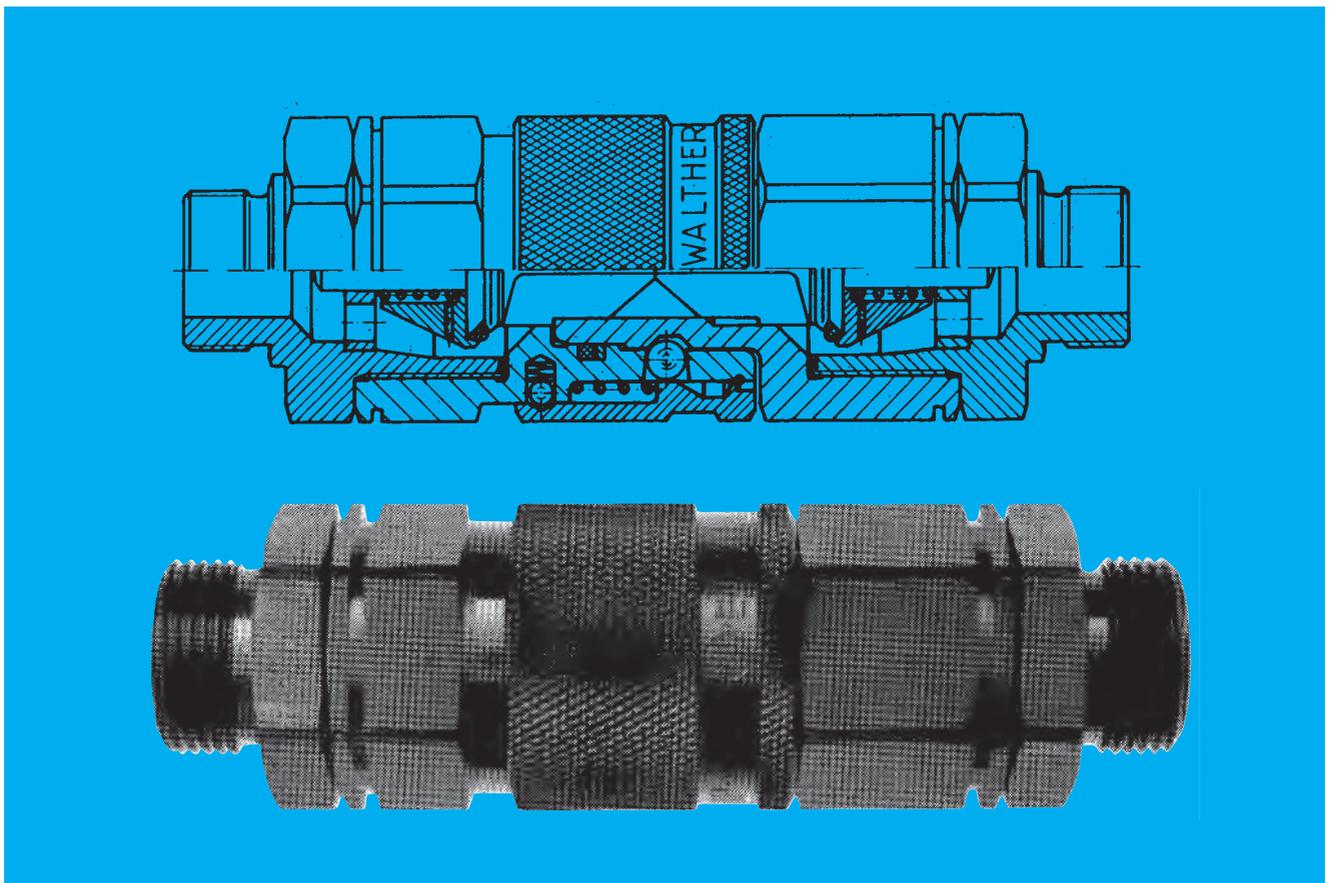
**Examples:** Two way docking system which is seismic shock proof and forms part of power supply and regulating system to Modules.

WALTHER quick release coupling systems have been approved for many years. Monocouplings and multicouplings are incorporated in equipment for routine applications or forming part of extremely complex



Nom. bore	Type	Max. static working pressure [bar/psi]			Min. burst pressure for steel [bar/psi]	C <sub>v</sub> value		Cross section [mm <sup>2</sup> ]	Page
		steel	1.4404/1.4571 ss	1.4404/1.4571 ss with 1.4418 QT900		both sides self sealing	one sides self sealing		
2.5	02-003	500/7250	–	–	2350/34075	0.10	–	5	68
4	HP-004	2000/29000	500/7250	1000/14500	4000/58000	0.24	0.4	13	69
6	HP-006	1000/14500	320/4640	650/9425	2300/33350	0.65	1.0	30	70
10	HP-010	600/8700	300/4350	470/6815	2000/29000	1.9	2.5	80	71
16	HP-016	500/7250	250/3625	450/6525	1800/26100	5.5	8.1	200	72
20	HP-020	400/5800	180/2610	350/5075	1600/22700	8.5	13.0	315	73
32	HP-032	300/4350	180/2610	250/3625	1300/18850	23.8	29.4	800	74
50	HP-050	200/2900	–	–	1000/14500	65	–	2000	75
Performance diagrams									76
Fitted hose lines, nom. bore 2.5; p. n. 500									68

When determining the working pressure of the coupling the max. permissible working pressure of the end connection is to be taken into account if standardized threads are used.



**characteristic features:**  
- can only be used self sealing both sides

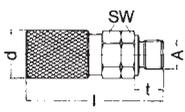
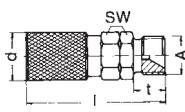
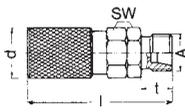
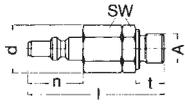
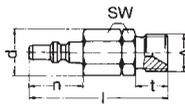
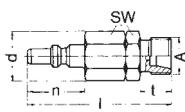
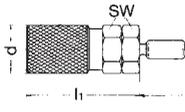
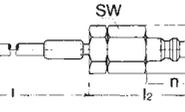
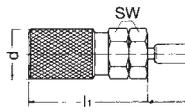
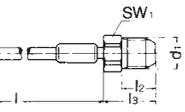
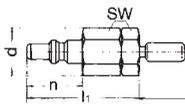
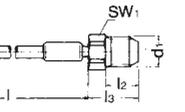
**materials:**  
**standard:**  
12 = steel, oil burnished

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

**special materials:**  
13 = steel, chem. nickel plated

Please note the technical data on pages 2 - 7, 76 and the max. working pressures on page 67

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel oil burnished	d	d <sub>i</sub>	SW	SW <sub>1</sub>	l	l <sub>s</sub>	l <sub>1</sub>	l <sub>2</sub>	t	n	weight [g]
Self sealing couplings	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	02-003-0-WB010-...-	BSPP 1/8"	●	16,2		14	46				9,5		42
	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	02-003-0-VR013-...-	BSPP 1/4"	●	16,2		14	47,5				11,5		45
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	02-003-0-L0612-...-	M 12 x 1,5	●	16,2		14	46,5				10		42
Self sealing adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	02-003-2-WB010-...-	BSPP 1/8"	●	16,2		14	45,5				9,5	18,5	30
	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	02-003-2-VR013-...-	BSPP 1/4"	●	16,2		14	47				11	18,5	33
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	02-003-2-L0612-...-	M 12 x 1,5	●	16,2		14	46				10	18,5	30
Hose lines fitted with:	 Self sealing coupling	95021-0-LG020-...-	self sealing	○	16,2		14	200		38	37,5		18,5	75
	 Self sealing adaptor	95021-0-LG040-...-	coupling	○	16,2		14	400		38	37,5		18,5	80
		95021-0-LG063-...-	+ sealing	○	16,2		14	630		38	37,5		18,5	80
		95021-0-LG080-...-	adaptor	○	16,2		14	800		38	37,5		18,5	85
		95021-0-LG100-...-		○	16,2		14	1000		38	37,5		18,5	90
Hose lines fitted with:	 Self sealing coupling	95020-0-LG020-...-	self sealing	○	16,2	M10x1	14	11	200	19	38	11		60
	 Self sealing adaptor	95020-0-LG040-...-	coupling	○	16,2	M10x1	14	11	400	19	38	11		65
		95020-0-LG063-...-	+ thread	○	16,2	M10x1	14	11	630	19	38	11		65
		95020-0-LG080-...-	connection	○	16,2	M10x1	14	11	800	19	38	11		70
		95020-0-LG100-...-		○	16,2	M10x1	14	11	1000	19	38	11		75
Hose lines fitted with:	 Self sealing coupling	95020-2-LG020-...-	self sealing	○	16,2	M10x1	14	11	200	19	37,5	11	18,5	44
	 Self sealing adaptor	95020-2-LG040-...-	adaptor	○	16,2	M10x1	14	11	400	19	37,5	11	18,5	48
		95020-2-LG063-...-	+ thread	○	16,2	M10x1	14	11	630	19	37,5	11	18,5	50
		95020-2-LG080-...-	connection	○	16,2	M10x1	14	11	800	19	37,5	11	18,5	55
		95020-2-LG100-...-		○	16,2	M10x1	14	11	1000	19	37,5	11	18,5	60

**characteristic features:**

- with vibration lock
- with ring valve

test pressure 3000 bar / 43500 PSI  
when using a suitable steel end connection

**materials:**

**standard:**  
12 = steel, oil burnished

**special materials:**

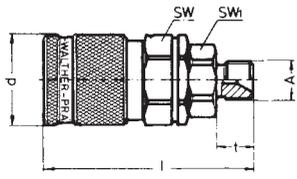
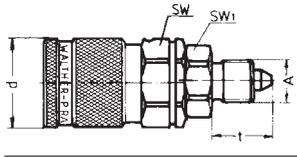
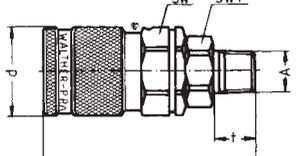
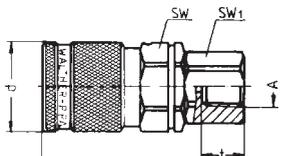
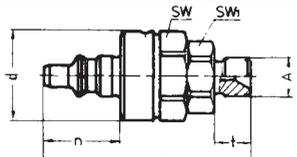
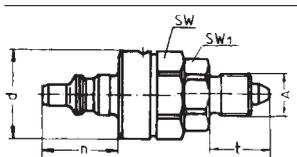
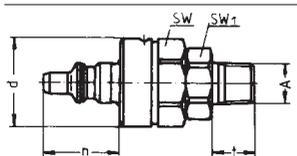
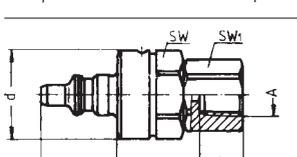
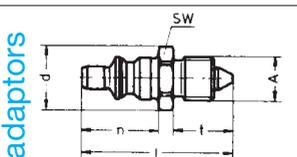
13 = steel, chem. nickel plated  
W1 = AISI 316 ti/1.4571, adaptor front part 1.4418 QT900  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 76 and the max. working pressures on page 67

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Connection A	steel oil burnished	AISI 316 ti/1.4571	1.4404/1.4418 QT900	d	SW	SW1	l	t	n	weight [g]
Self sealing couplings	 end connection male thread G 1/4 A with 60° sealing cone	HP-004-0-XX001-...-.	BSPP 1/4" male 60° sealing cone	●	○	30	27	22	69,5	12		220
	 end connection UNF 9/16 male thread with 58° sealing cone	HP-004-0-XX002-...-.	UNF 9/16" male 58° sealing cone	●	○	30	27	22	75,5	18		220
	 conical pipe thread NPT, male	HP-004-0-NP013-...-.	NPT 1/4"	●	○	30	27	22	71,5	14		220
	 conical pipe thread NPT, female	HP-004-0-NP513-...-.	NPT 1/4"	●	○	30	27	22	68,5	14		230
Self sealing adaptors	 end connection male thread G 1/4 A with 60° sealing cone	HP-004-2-XX001-...-.	BSPP 1/4" male 60° sealing cone	●	○	30	27	22	69,5	12	25,5	160
	 end connection UNF 9/16 male thread with 58° sealing cone	HP-004-2-XX002-...-.	UNF 9/16" male 58° sealing cone	●	○	30	27	22	75,5	18	25,5	160
	 conical pipe thread NPT, male	HP-004-2-NP013-...-.	NPT 1/4"	●	○	30	27	22	71,5	14	25,5	160
	 conical pipe thread NPT, female	HP-004-2-NP513-...-.	NPT 1/4"	●	○	30	27	22	68,5	14	25,5	170
Thru type adaptors	 end connection UNF 9/16 male thread with 58° sealing cone	HP-004-1-XX002-..	UNF 9/16" male 58° sealing cone	●	○	18,9	17	51	18	25,5	45	

**characteristic features:**  
- with vibration lock

**optional features:**

- OV = without valve
- SI = with additional axial safety lock (outer diameter 38 mm)
- RV = with ring valve (cannot be coupled with standard valve)  
Recommended for high pulsating pressures and rough working conditions.

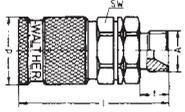
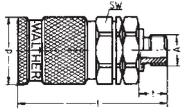
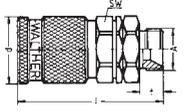
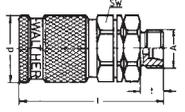
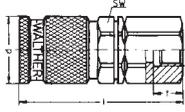
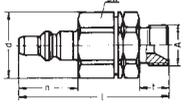
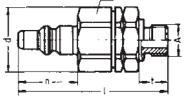
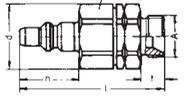
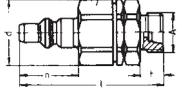
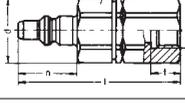
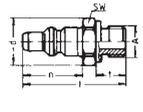
**materials:**  
**standard:**  
12 = steel, oil burnished

**special materials:**  
13 = steel, chem. nickel plated  
W1 = AISI 316 ti/1.4571, adaptor front part 1.4418 QT900  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 76 and the max. working pressures on page 67

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel oil burnished	AISI 316 ti/ 1.4571	1.4404/ 1.4418 QT900	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone  conical pipe thread NPT male	HP-006-0-VR017-...-	BSPP 3/8"	●	○			6	34	30	77,5	12		250	
		HP-006-0-NP017-...-	NPT 3/8"	●	○			6	34	30	80,5	15		260	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-006-0-WB017-...-	BSPP 3/8"	●	○			6	34	30	80	14,5		320	
		 metric male thread with 60° sealing cone to DIN 7631	HP-006-0-D0614-...-	M 14 x 1,5	●	○			6	34	30	75,5	10		300
	HP-006-0-D0816-...-		M 16 x 1,5	○	○			8	34	30	76,5	11		300	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-006-0-S0816-...-	M 16 x 1,5	●	○		S	8	4	34	30	77,5	12		320
		HP-006-0-S1018-...-	M 18 x 1,5	●	○		S	10	6	34	30	77,5	12		310
		HP-006-0-S1220-...-	M 20 x 1,5	●	○		S	12	8	34	30	77,5	12		330
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228  conical pipe thread female	HP-006-0-WR517-...-	BSPP 3/8"	●	○			6	34	30	75	15		350	
		HP-006-0-NP517-...-	NPT 3/8"	○	○			6	34	30	81,5	15		320	
Self sealing adaptors	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone  conical pipe thread NPT male	HP-006-2-VR017-...-	BSPP 3/8"	●	○	○		6	34	30	77,5	12	30,5	210	
		HP-006-2-NP017-...-	NPT 3/8"	●	○	○		6	34	30	80,5	15	30,5	220	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-006-2-WB017-...-	BSPP 3/8"	●	○	○		6	34	30	80	14,5	30,5	210	
		 metric male thread with 60° sealing cone to DIN 7631	HP-006-2-D0614-...-	M 14 x 1,5	●	○	○		6	34	30	75,5	10	30,5	190
	HP-006-2-D0816-...-		M 16 x 1,5	○	○	○		8	34	30	76,5	11	30,5	190	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-006-2-S0816-...-	M 16 x 1,5	●	○	○	S	8	4	34	30	77,5	12	30,5	210
		HP-006-2-S1018-...-	M 18 x 1,5	●	○	○	S	10	6	34	30	77,5	12	30,5	200
		HP-006-2-S1220-...-	M 20 x 1,5	●	○	○	S	12	8	34	30	77,5	12	30,5	220
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228  conical pipe thread female	HP-006-2-WR517-...-	BSPP 3/8"	●	○	○		6	34	30	75	15	30,5	270	
		HP-006-2-NP517-...-	NPT 3/8"	○	○	○		6	34	30	81,5	15	30,5	240	
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-006-1-WB017-..	BSPP 3/8"	●	○	○		6	25	22	54	14,5	30,5	70	

**characteristic features:**

- with vibration lock

**optional features:**

OV = without valve

 SI = with additional axial safety lock  
(outer diameter 50 mm)

RV = with ring valve

 (cannot be coupled with standard valve)  
Recommended for high pulsating pressures  
and rough working conditions.

**special version:**

2 non-interchangeable versions

**materials:**
**standard:**

12 = steel, oil burnished

**special materials:**

13 = steel, chem. nickel plated

W1 = AISI 316 ti/1.4571, adaptor front part 1.4418 QT900

01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

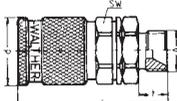
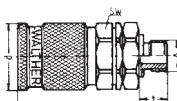
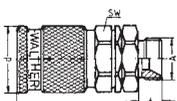
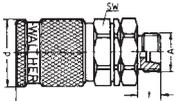
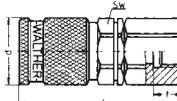
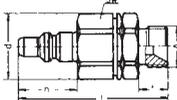
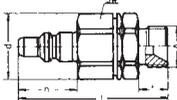
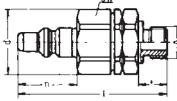
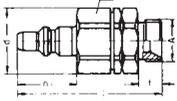
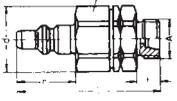
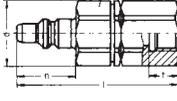
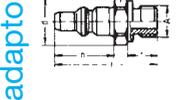
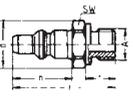
1 = NBR

2 = FKM

4 = EPDM

 Please note the  
technical data on  
pages 2 - 7, 76 and the  
max. working pressures  
on page 67

**Availability:** ● Short ◐ Medium ○ Long

	Part No.	Conne- ction A	steel oil burnished	AISI 316 ti/ 1.4571	1.4404/ 1.4418 QT900	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	HP-010-0-VR021-...-.	BSPP 1/2"	◐	○			10	46	41	95,5	15		680	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-010-0-WB021-...-.	BSPP 1/2"	●	○			10	46	41	97,5	17		690	
	 metric male thread with 60° sealing cone to DIN 7631	HP-010-0-D1018-...-. HP-010-0-D1222-...-.	M 18 x 1,5 M 22 x 1,5	○ ○	○ ○			10 12	46 46	41 41	91,5 92,5	11 12		670 670	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-010-0-S1220-...-. HP-010-0-S1422-...-. HP-010-0-S1624-...-.	M 20 x 1,5 M 22 x 1,5 M 24 x 1,5	● ○ ●	○ ○ ○		S S S	12 14 16	8 10 12	46 46 46	41 41 41	92,5 94,5 94,5	12 14 14		670 670 680
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	HP-010-0-WR521-...-.	BSPP 1/2"	◐	○			10	46	41	96,5	17		840	
	 conical pipe thread NPT female	HP-010-0-NP521-...-.	NPT 1/2"	○	○			10	46	41	100,5	18		850	
Self sealing adaptors	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	HP-010-2-VR021-...-.	BSPP 1/2"	◐	○	○		10	46	41	95,5	15	36	460	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-010-2-WB021-...-.	BSPP 1/2"	●	○	○		10	46	41	97,5	17	36	470	
	 metric male thread with 60° sealing cone to DIN 7631	HP-010-2-D1018-...-. HP-010-2-D1222-...-.	M 18 x 1,5 M 22 x 1,5	○ ○	○ ○	○ ○		10 12	46 46	41 41	91,5 92,5	11 12	36 36	450 450	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-010-2-S1220-...-. HP-010-2-S1422-...-. HP-010-2-S1624-...-.	M 20 x 1,5 M 22 x 1,5 M 24 x 1,5	● ○ ●	○ ○ ○	○ ○ ○	S S S	12 14 16	8 10 12	46 46 46	41 41 41	92,5 94,5 94,5	12 14 14	36 36 36	460 460 470
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	HP-010-2-WR521-...-.	BSPP 1/2"	◐	○	○		10	46	41	96,5	17	36	620	
	 conical pipe thread NPT female	HP-010-2-NP521-...-.	NPT 1/2"	○	○	○		10	46	41	100,5	18	36	630	
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-010-1-WB021-...-.	BSPP 1/2"	◐	○	○		10	30	27	63	17	36	130	

**characteristic features:**  
- with vibration lock

**optional features:**

OV = without valve  
SI = with additional axial safety lock  
(outer diameter 62 mm)  
RV = with ring valve  
(cannot be coupled with standard valve)  
Recommended for high pulsating pressures  
and rough working conditions.

**materials:**  
**standard:**  
12 = steel, oil burnished

**special materials:**

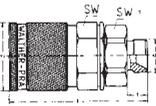
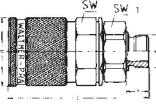
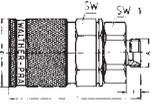
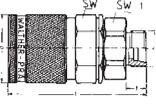
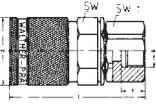
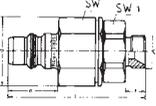
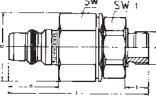
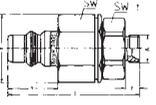
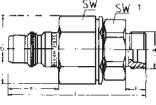
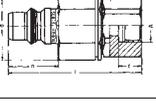
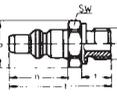
13 = steel, chem. nickel plated  
W1 = AISI 316 ti/1.4571, adaptor front part 1.4418 QT900  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

1 = NBR  
2 = FKM  
4 = EPDM

Please note the  
technical data on  
pages 2 - 7, 76 and the  
max. working pressures  
on page 67

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel oil burnished	AISI 316 ti/ 1.4571	1.4404/ 1.4418 QT900	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	HP-016-0-VR026-...-	BSPP 3/4"	●	○			16	56	46	113,5	17		1130	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-016-0-WB026-...-	BSPP 3/4"	●	○			16	56	46	115,5	19		1140	
	 metric male thread with 60° sealing cone to DIN 7631	HP-016-0-D1222-...-	M 22 x 1,5	○	○			12	56	46	108,5	12		1110	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-016-0-S1624-...- HP-016-0-S2030-...-	M 24 x 1,5 M 30 x 2	● ●	○ ○		S S	16 20	12 16	56 56	46 46	110,5 112,5	14 16	1120 1140	
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	HP-016-0-WR526-...-	BSPP 3/4"	○	○			16	56	46	110,5	19		1360	
Self sealing adaptors	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	HP-016-2-VR026-...-	BSPP 3/4"	●	○			16	56	46	112,5	17	41	780	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-016-2-WB026-...-	BSPP 3/4"	●	○			16	56	46	114,5	19	41	790	
	 metric male thread with 60° sealing cone to DIN 7631	HP-016-2-D1222-...-	M 22 x 1,5	○	○			12	56	46	107,5	12	41	760	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-016-2-S1624-...- HP-016-2-S2030-...-	M 24 x 1,5 M 30 x 2	● ●	○ ○		S S	16 20	12 16	56 56	46 46	109,5 111,5	14 16	41 41	770 790
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	HP-016-2-WR526-...-	BSPP 3/4"	○	○			16	56	46	109,5	19	41	1000	
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-016-1-WB026-..	BSPP 3/4"	●	○			16	56	36	72	19	41	250	

**characteristic features:**  
- with vibration lock

**optional features:**

GG = with ring grips (cast aluminium)  
OV = without valve  
SI = with additional axial safety lock  
(outer diameter 68 mm)  
RV = with ring valve  
(cannot be coupled with standard valve)  
Recommended for high pulsating pressures  
and rough working conditions.

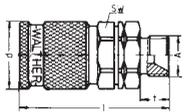
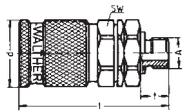
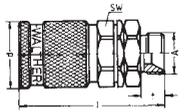
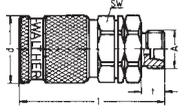
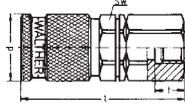
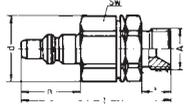
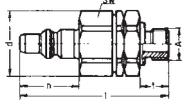
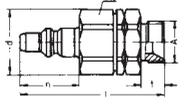
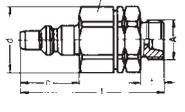
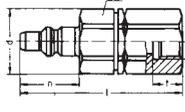
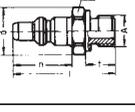
**materials:**  
**standard:**  
12 = steel, oil burnished

**special materials:**  
13 = steel, chem. nickel plated  
W1 = AISI 316 ti/1.4571, adaptor front part 1.4418 QT900  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**  
1 = NBR  
2 = FKM  
4 = EPDM

Please note the technical data on pages 2 - 7, 76 and the max. working pressures on page 67

**Availability:** ● Short    ◐ Medium    ○ Long

	Part No.	Conne- tion A	steel oil burnished	AISI 316 ti/ 1.4571	1.4404/ 1.4418 QT900	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	HP-020-0-VR033-...-	BSPP 1"	○	○			20	62	55	118,5	20		1450	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-020-0-WB033-...-	BSPP 1"	●	○			20	62	55	119,5	21		1450	
	 metric male thread with 60° sealing cone to DIN 7631	HP-020-0-D1526-...- HP-020-0-D1930-...-	M 26 x 1,5 M 30 x 1,5	○ ●	○ ○			15 19	62 62	55 55	110,5 112,5	12 14		1400 1410	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-020-0-S2030-...- HP-020-0-S2536-...-	M 30 x 2 M 36 x 2	○ ●	○ ○		S S	20 25	16 20	62 62	55 55	114,5 116,5	16 18		1410 1440
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	HP-020-0-WR533-...-	BSPP 1"	○	○			20	62	55	123	23		1720	
Self sealing adaptors	 BSPP male thread to DIN ISO 228/BS 5200 with 60° sealing cone	HP-020-2-VR033-...-	BSPP 1"	○	○			20	62	55	118,5	20	43	1070	
	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-020-2-WB033-...-	BSPP 1"	●	○			20	62	55	119,5	21	43	1070	
	 metric male thread with 60° sealing cone to DIN 7631	HP-020-2-D1526-...- HP-020-2-D1930-...-	M 26 x 1,5 M 30 x 1,5	○ ●	○ ○	○		15 19	62 62	55 55	110,5 112,5	12 14	43 43	1030 1040	
	 metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)	HP-020-2-S2030-...- HP-020-2-S2536-...-	M 30 x 2 M 36 x 2	○ ●	○ ○	○	S S	20 25	16 20	62 62	55 55	114,5 116,5	16 18	43 43	1030 1060
	 British standard pipe parallel (BSPP) female thread to DIN ISO 228	HP-020-2-WR533-...-	BSPP 1"	○	○	○		20	62	55	123	23	43	1340	
Thru type adaptors	 British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B	HP-020-1-WB033-...-	BSPP 1"	○	○	○		20	45	41	74	21	43	310	

**characteristic features:**  
- with vibration lock

**optional features:**

- GG = with ring grips (cast aluminium)
- OV = without valve
- SI = with additional axial safety lock (outer diameter 96 mm)
- RV = with ring valve (cannot be coupled with standard valve)  
Recommended for high pulsating pressures and rough working conditions.

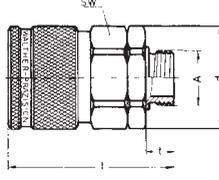
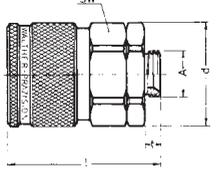
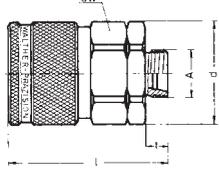
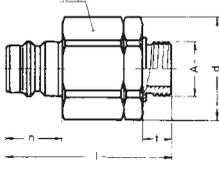
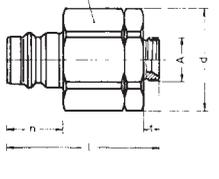
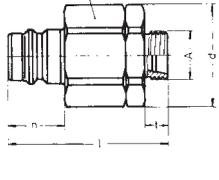
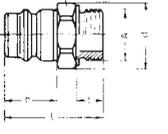
**materials:**  
**standard:**  
12 = steel, oil burnished

**special materials:**  
13 = steel, chem. nickel plated  
W1 = AISI 316 ti/1.4571, adaptor front part 1.4418 QT900  
01 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**  
1 = NBR  
2 = FPM  
4 = EPDM

Please note the technical data on pages 2 - 7, 76 and the max. working pressures on page 67

**Availability:** ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	steel oil burnished	AISI 316 ti/ 1.4571	1.4404/ 1.4418 QT900	series	pipe OD	n. b.	d	SW	l	t	n	weight [g]	
Self sealing couplings	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B</p>	HP-032-0-WB048-...-.	BSPP 1 1/2"	○	○			32	90	80	144,5	25		3790	
		HP-032-0-WB060-...-.	BSPP 2"	○	○			32	90	80	149,5	30		4290	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	HP-032-0-D2538-...-.	M 38 x 1,5	○	○			25	90	80	133,5	14		3690	
		HP-032-0-D3245-...-.	M 45 x 1,5	○	○			32	90	80	135,5	16		3680	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	HP-032-0-S3042-...-.	M 42 x 2	●	○		S	30	25	90	80	139,5	20		3730
		HP-032-0-S3852-...-.	M 52 x 2	●	○		S	38	32	90	80	141,5	22		3790
Self sealing adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B</p>	HP-032-2-WB048-...-.	BSPP 1 1/2"	○	○			32	90	80	144	25	49,5	2740	
		HP-032-2-WB060-...-.	BSPP 2"	○	○			32	90	80	149	30	49,5	3240	
	 <p>metric male thread with 60° sealing cone to DIN 7631</p>	HP-032-2-D2538-...-.	M 38 x 1,5	○	○			25	90	80	133	14	49,5	2630	
		HP-032-2-D3245-...-.	M 45 x 1,5	○	○			32	90	80	135	16	49,5	2620	
	 <p>metric male thread with 24° sealing cone to DIN 2353 (light duty series L, heavy duty series S)</p>	HP-032-2-S3042-...-.	M 42 x 2	●	○		S	30	25	90	80	139	20	49,5	2670
		HP-032-2-S3852-...-.	M 52 x 2	●	○		S	38	32	90	80	141	22	49,5	2730
Thru type adaptors	 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228, screwed plug to DIN 3852-2 form B</p>	HP-032-1-WB048-...-.	BSPP 1 1/2"	○	○			32	61,5	55	90,5	25	49,5	690	
HP-032-1-WB060-...-.	BSPP 2"	○	○			32	86	75	92,5	27	49,5	1190			

**characteristic features:**  
 - with vibration lock  
 - with ring grips (cast aluminium)

**optional features:**  
 OV = without valve  
 RV = with ring valve  
 (cannot be coupled with standard valve)

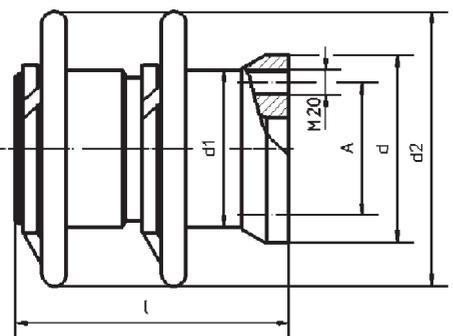
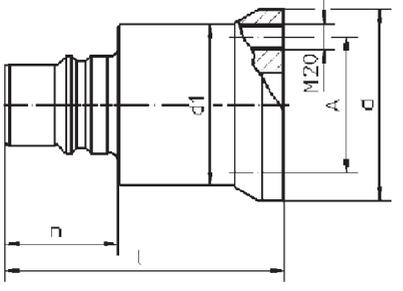
**materials:**  
**standard:**  
 12 = steel, oil burnished

**special materials:**  
 13 = steel, chem. nickel plated

**seal qualities:**  
 1 = NBR  
 2 = FKM  
 4 = EPDM

Please note the technical data on pages 2 - 7, 76 and the max. working pressures on page 67

Availability: ● Short   ● Medium   ○ Long

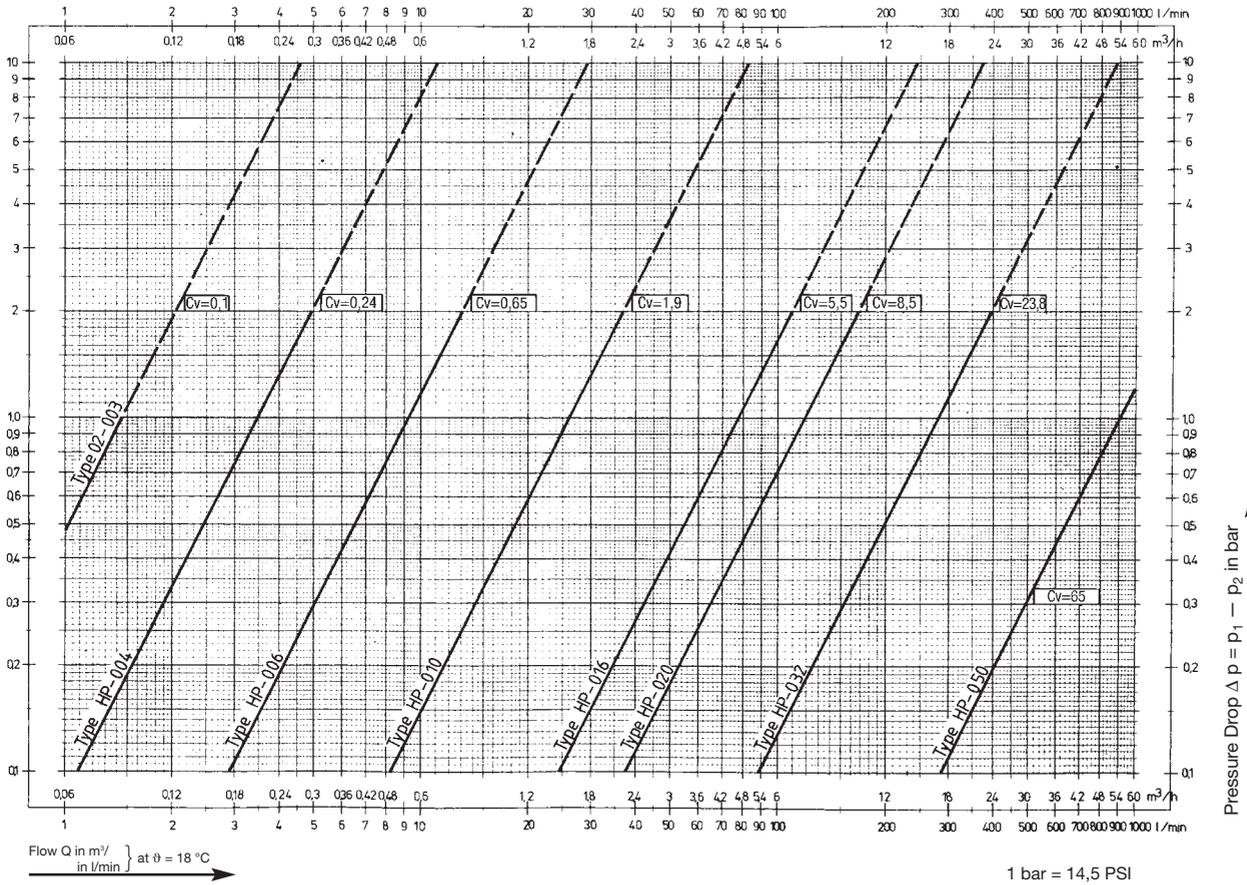
	Part No.	Connection A	steel oil burnished	series	pipe OD	n. b.	d	d <sub>1</sub>	d <sub>2</sub>	l	n	weight (kg)
 <p>Self sealing couplings</p>	HP-050-0-XX007-...-	SAE-flange for pipe OD 65 4xM20 44,5x96,8			65	50	150	126	220	219		15,3
 <p>Self sealing adaptors</p>	HP-050-2-XX007-...-	SAE-flange for pipe OD 65 4xM20 44,5x96,8			65	50	150	126		217,5	87,5	11,4

Measurement of flow coefficients  $C_v$   
according to DIN EN 60534

Flow speeds of 8 m/sec  
should not be exceeded

Both sides self sealing

both axes are scaled logarithmically, one from 1 to 100, the other one from 1 to 1000, unit = 100 mm

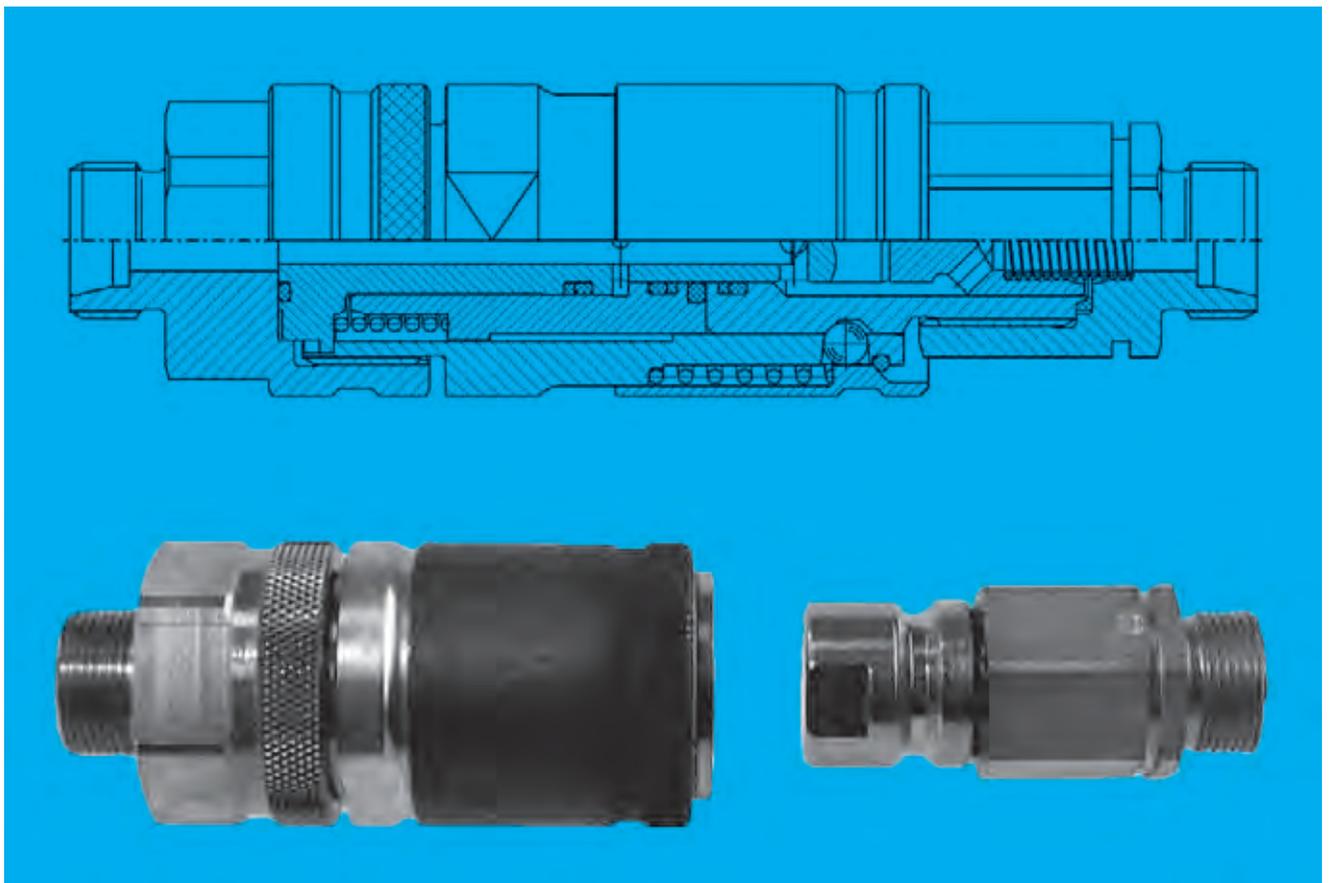


Nom. bore	Type	Max. static working pressure [bar/psi] steel	C <sub>v</sub> value both sides self sealing	Page
6	HC-G06	650/9500	0.5	78
8	HC-G08	600/8700	1.0	78
12	HC-G12	600/8700	2.3	78
16	HC-G16	600/8700	3.4	78
20	HC-G20	600/8700	5.7	78
performance diagrams				79

**Please note:** In case of standardised end connections, please take the max. allowable working pressure of the end connection into account when determining the working pressures.

**Features:** Leak-free disconnection and connection without air inclusion thanks to clean break valves  
 Splatter-free operation  
 Locking mechanism (one-hand operation)  
 For self-lubricating substances

**Options:** Z12 = Self sealing coupling and self sealing adaptor with dirt protection  
 Z11 = Self sealing coupling and self sealing adaptor with pressure relief (starting from DN 12)  
 Z13 = Self sealing coupling and self sealing adaptor with dirt protection and pressure relief (starting from DN 12)



**characteristic features:**

- automatic lock (one hand operation)
- disconnection without loss of medium
- connection without air inclusion

**materials:**

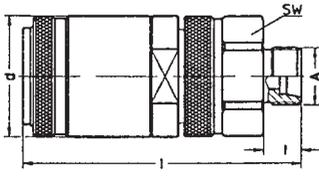
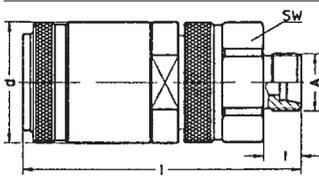
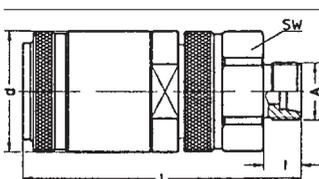
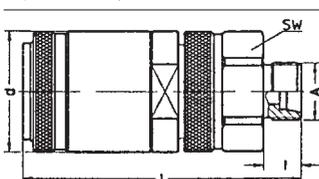
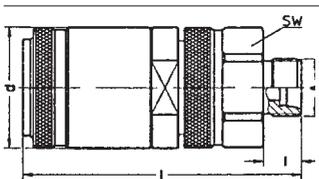
- standard:**
- steel, zinc plated, yellow chromated
- locking sleeve, black phosphatized

**seal qualities:**

- special seals
- suitable for hydraulic fluids on mineral oil basis, HFA and HFB liquids

Please note the technical data on pages and the 2 - 7, 79 max. working pressures on page 77

Availability: ● Short ○ Medium ○ Long

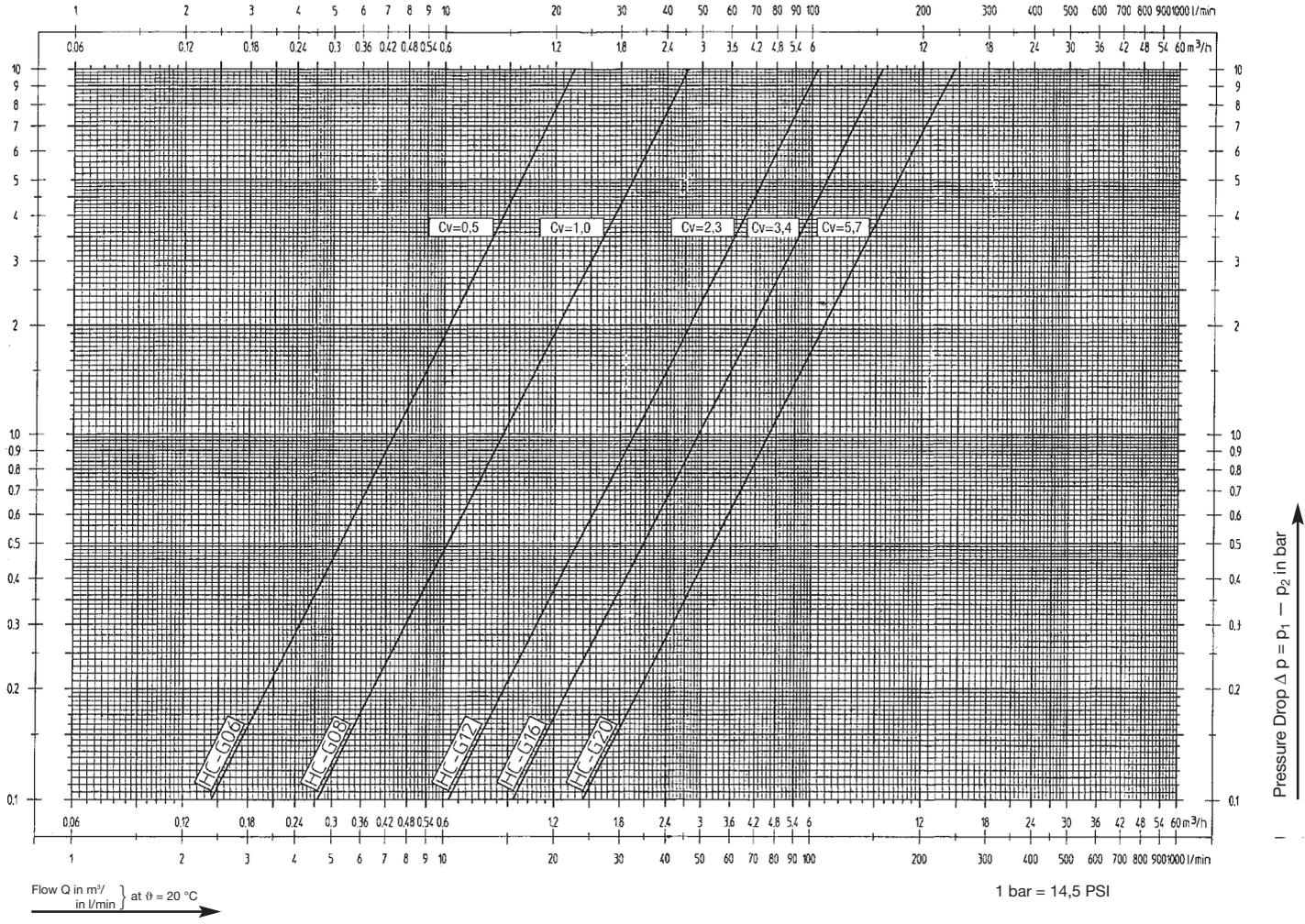
	Part No.	Connec- tion A	steel zinc plated	series	pipe OD	d	SW	l	t	n	weight [g]
 <p>metric male thread with 24° sealing cone to DIN 2353 (heavy duty series S)</p>	<b>HC-G06-0-S1018-AABA-Z10</b>	M 18 x 1,5	●	S	10	34	27	98,8	12		455
	<b>HC-G06-2-S1018-AABB-Z10</b>	M 18 x 1,5	●	S	10	30,1	27	69	12	23,4	177
 <p>metric male thread with 24° sealing cone to DIN 2353 (heavy duty series S)</p>	<b>HC-G08-0-S1220-AABA-Z10</b>	M 20 x 1,5	●	S	12	42,4	32	104,8	12		660
	<b>HC-G08-2-S1220-AABB-Z10</b>	M 20 x 1,5	●	S	12	30,1	27	69,2	12	26,8	220
 <p>metric male thread with 24° sealing cone to DIN 2353 (heavy duty series S)</p>	<b>HC-G12-0-S1624-AABB-Z10</b>	M 24 x 1,5	●	S	16	47,2	41	102,6	14		818
	<b>HC-G12-2-S1624-AABB-Z10</b>	M 24 x 1,5	●	S	16	33,5	30	74,2	14	28,5	251
 <p>metric male thread with 24° sealing cone to DIN 2353 (heavy duty series S)</p>	<b>HC-G16-0-S2030-AABA-Z10</b>	M 30 x 2	●	S	20	57,8	50	112,4	16		1406
	<b>HC-G16-2-S2030-AABB-Z10</b>	M 30 x 2	●	S	20	45,6	41	80,4	16	31	487
 <p>metric male thread with 24° sealing cone to DIN 2353 (heavy duty series S)</p>	<b>HC-G20-0-S2536-AABA-Z10</b>	M 36 x 2	●	S	25	63,2	50	145,6	18		2005
	<b>HC-G20-2-S2536-AABB-Z10</b>	M 36 x 2	●	S	25	51,2	46	111,5	18	36	909

Measurement of flow coefficients  $C_v$   
according to DIN EN 60534

A flow speed of 8 m/sec  
should not be exceeded

Both sides  
self sealing

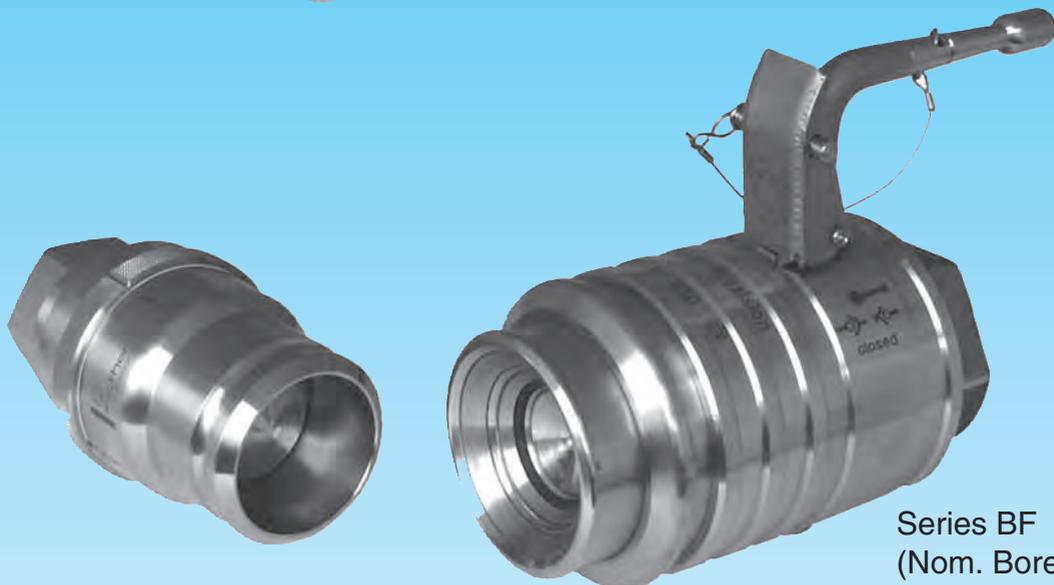
both axes are scaled logarithmically, one from 1 to 100, the other one from 1 to 1000,



Series HC  
(Nom. Bore 6, 8, 12, 16, 20 mm)



Series BF  
(Nom. Bore 5, 9, 12 mm)

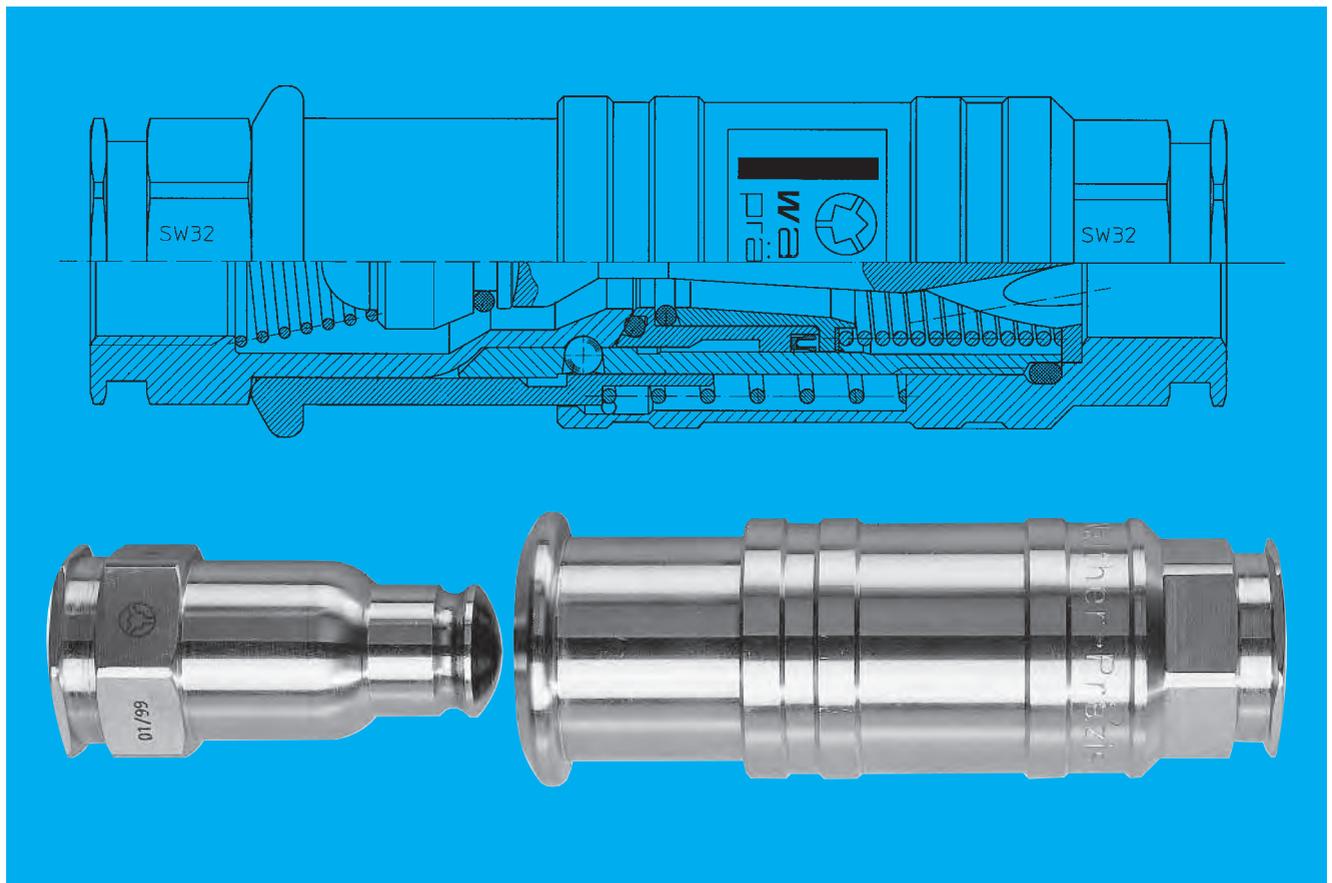


Series BF  
(Nom. Bore 25, 50 mm)

Nom. bore	Type	Max. static working pressure [bar/psi] stainless steel	C <sub>v</sub> value both sides self sealing	Page
5	BF-005	64/930*	0.8	82
9	BF-009	64/930*	4.0	82
12	BF-012	64/930*	8.0	82
Performance diagrams				84

\* Restrictions possible when using perfluorelastomer seals.

Clean break coupling in stainless steel, particularly for challenging fluids or gaseous media. Highest safety standard and optimal handling through automatic lock. Can be used for both, non-lubricating media (such as demineralized water, “dry gases”) as well as self-lubricating media (such as oils and soap solutions). Long-term proven for solvents, chemical fluids, thermal oils and steam. Also used for lyes, various acids and many other media.



**characteristic features:**

- automatic lock (one hand operation)
- disconnection without loss of medium
- connection without air inclusion
- easy cleaning

**materials:**

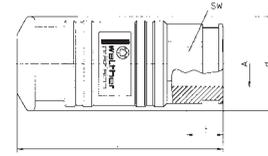
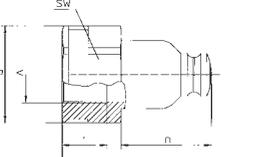
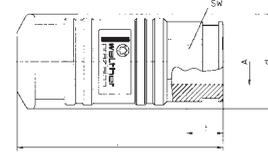
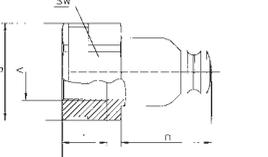
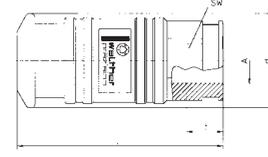
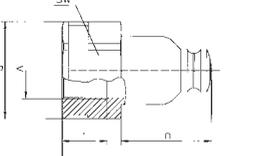
**standard:**  
1 = stainless steel 1.4404/1.4571 or similar

**seal qualities:**

2 = FKM  
4 = EPDM  
FFKM = perfluorine elastomers

Please note the technical data on pages and the 2 - 7, 84 max. working pressures on page 81

Availability: ● Short ○ Medium ○ Long

	Part No.	Conne- tion A	AISI 316 or 1.4571		series	pipe OD	d	SW	l	t	n	weight [g]
  British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>BF-005-0-WR513-...-</b>	BSPP 1/4"	●				29	22	64	13		165
	<b>BF-005-2-WR513-...-</b>	BSPP 1/4"	●				24,5	22	37,5	13	23,5	50
  British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>BF-009-0-WR521-...-</b>	BSPP 1/2"	●				44	32	118	17		630
	<b>BF-009-2-WR521-...-</b>	BSPP 1/2"	●				35,7	32	68	15	47,8	190
  British standard pipe parallel (BSPP) female thread to DIN ISO 228	<b>BF-012-0-WR526-...-</b>	BSPP 3/4"	●				64	46	137	19		1300
	<b>BF-012-2-WR526-...-</b>	BSPP 3/4"	●				51,2	46	78,3	17,5	54,2	440

### Features

- clean break (with little spillage and air inclusion)
- easy cleanable smooth ball-face contour when locking sleeve is pulled back
- squirt-free
- low couple force
- good precentering during connection
- automatic lock
- identical female threads in for self sealing coupling and adaptor
- very little volume displacement from beginning of connection until point of valve opening
- protective caps for self sealing couplings and adaptors available
- ATEX version available

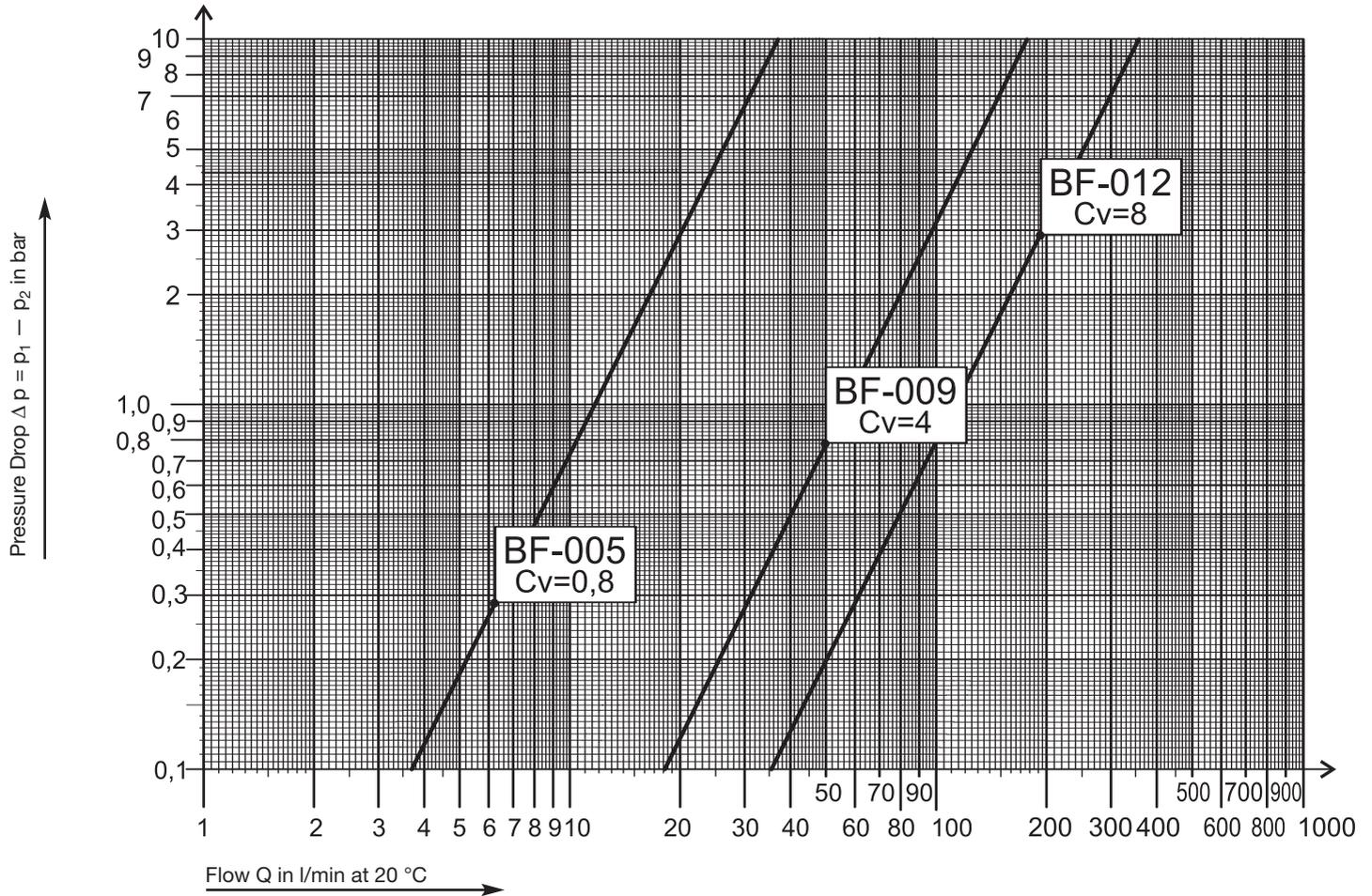
### Technical values

	BF-005	BF-009	BF-012
<b>Connection force depressurized</b>	70 N	110 N	160 N
<b>Displacement volume until start of flow</b> Adaptor: Coupling:	approx. 0.02 cm <sup>3</sup> approx. 0.13 cm <sup>3</sup>	approx. 0.12 cm <sup>3</sup> approx. 0.20 cm <sup>3</sup>	approx. 1.60 cm <sup>3</sup> approx. 1.80 cm <sup>3</sup>
<b>Displacement volume at full couple stroke</b>	approx. 0.75 cm <sup>3</sup>	approx. 6.20 cm <sup>3</sup>	approx. 15.8 cm <sup>3</sup>
<b>Max. pressure in 1 coupling half</b> when connecting with max. 300 N force per adaptor (coupling 0) per coupling (adaptor 0)	64 bar / 930 psi 25 bar / 360 psi	12 bar / 175 psi 6 bar / 90 psi	7 bar / 100 psi 3 bar / 45 psi
<b>Inclusion volume during connection</b>	approx. 0.011 cm <sup>3</sup>	approx. 0.078 cm <sup>3</sup>	approx. 0.125 cm <sup>3</sup>
<b>Theoretical leakage volume during disconnection</b> for incompressible liquids	approx. 0.013 cm <sup>3</sup>	approx. 0.091 cm <sup>3</sup>	approx. 0.150 cm <sup>3</sup>

Measurement of flow coefficients  $C_v$  according to DIN EN 60534

A flow speed of 8 m/sec should not be exceeded.

Both sides self sealing



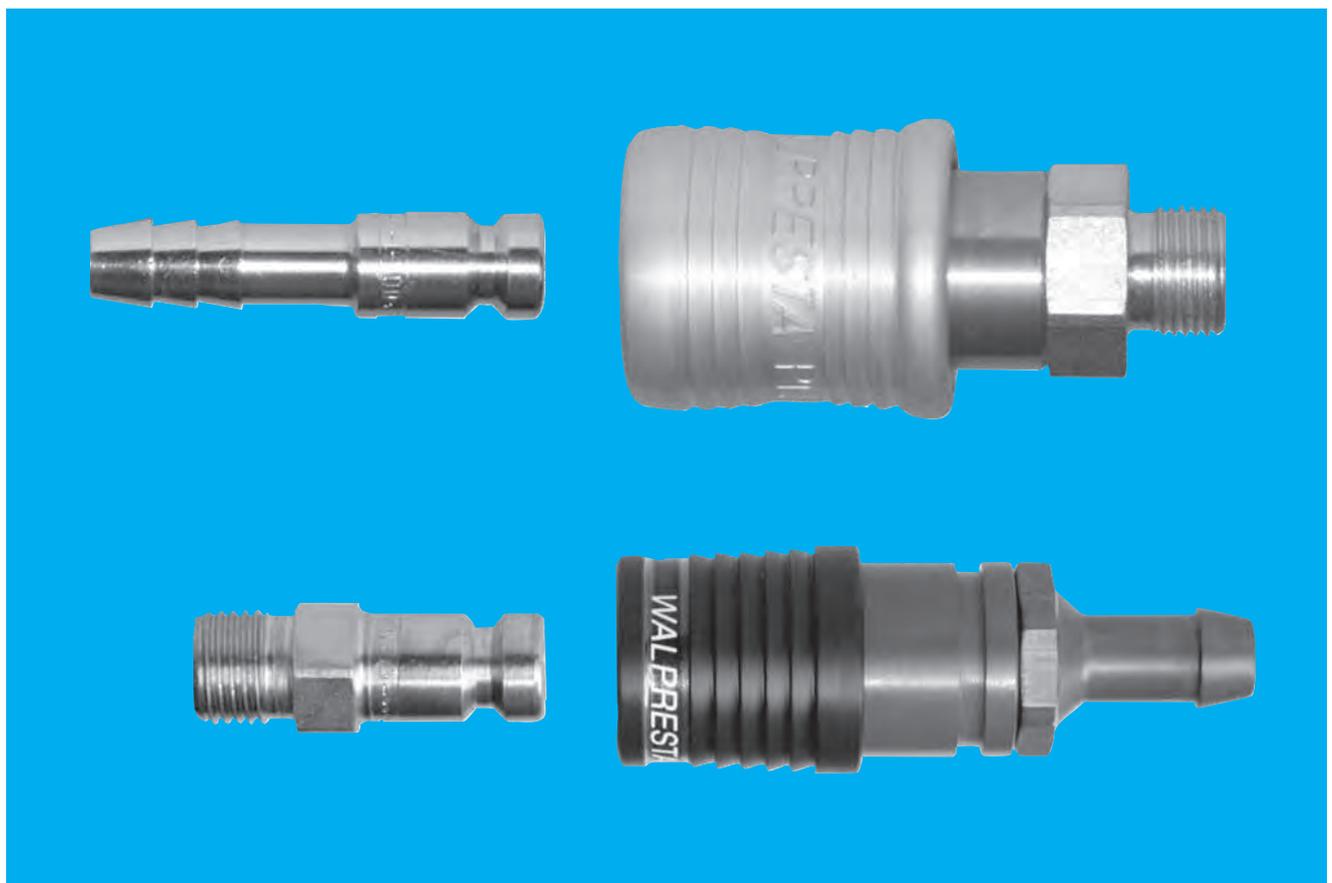
Nom. bore	Type	Max. stat working pressure [bar/psi] for Air	C <sub>v</sub> value one side selfsealing	Page
6,5	LS-006	12/175	1.71	86
9	LS-009	12/175	4.32	86
11	LS-E11	12/175	5.14	86
6,5	LT-006	12/175	1.71	87
9	LT-009	12/175	4.32	87
11	LT-E11	12/175	5.14	87
Performance diagrams				88

The safety coupling for compressed air type LS-006 is the first coupling to work pressure controlled. It denies by a positive lock false operation. This abandons the dangerous whip effect completely.

The pressurized air coupling type LT-006 is intended for use at the tool and proves itself by very good flow characteristics.

Both couplings are designed to fit on two widely spread nipple contours – the Walther LP-006 and DIN 14152 (the so called Euronipple)

For LS-006 use only hardened thin-type adaptors.



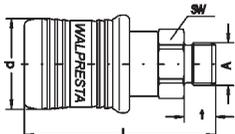
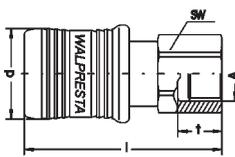
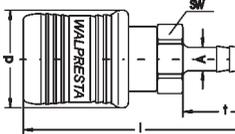
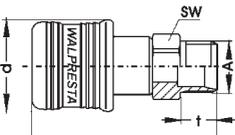
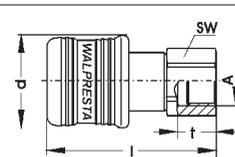
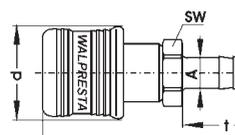
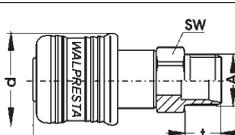
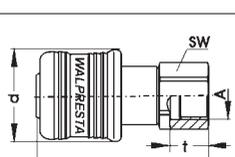
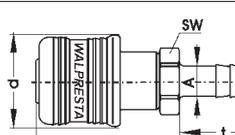
**characteristic features:**  
 - automatic lock  
 (one hand operation)  
 - safety unlocking  
 (dependent on residual pressure)  
 - connectable on adaptor contour  
 LP-006-1 and DIN 14152  
 (so-called "Euro" adaptor)

**materials:**  
**standard:**  
 - coupling housing: steel chem. nickel plated  
 - locking sleeve: brass passivated  
 - connecting pieces: steel, zinc plated

**seal qualities:**  
 1 = NBR

Please note the technical data on pages and the 2 - 7, 88 max. working pressures on page 85

Availability: ● Short ○ Medium ○ Long

	Part No.	Connection A	steel zinc plated	series	pipe OD	d	SW	l	t	n	weight [g]
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LS-006-0-WR013-AAAA-Z01	BSPP 1/4"	●			37	24	72,5	11		255
	LS-006-0-WR017-AAAA-Z01	BSPP 3/8"	●			37	24	73,5	12		265
	LS-006-0-WR021-AAAA-Z01	BSPP 1/2"	●			37	24	76,5	15		275
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LS-006-0-WR513-AAAA-Z01	BSPP 1/4"	●			37	24	74,5	13		275
	LS-006-0-WR517-AAAA-Z01	BSPP 3/8"	●			37	24	75,5	14		275
	LS-006-0-WR521-AAAA-Z01	BSPP 1/2"	●			37	27	78,5	17		295
 <p>hose connection</p>	LS-006-0-SL009-AAAA-Z01	9 mm	○			37	24	91,5	30		265
	LS-006-0-SL011-AAAA-Z01	11 mm	○			37	24	91,5	30		265
	LS-006-0-SL013-AAAA-Z01	13 mm	○			37	24	91,5	30		275
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LS-009-0-WR021-AAAA	BSPP 1/2 A	○			40,6	25	82,6	15		300
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LS-009-0-WR521-AAAA	BSPP 1/2"	○			40,6	27	79,6	17		315
	LS-009-0-WR526-AAAA	BSPP 3/4"	○			40,6	32	81,6	19		334
 <p>hose connection</p>	LS-009-0-SL013-AAAA	13 mm	○			40,6	25	94,4	30		298
 <p>British standard pipe parallel (BSPP) male thread to DIN ISO 228</p>	LS-E11-0-WR021-AAAA	BSPP 1/2"	○			40,6	25	81	15		290
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LS-E11-0-WR521-AAAA	BSPP 1/2"	○			40,6	27	78	17		305
	LS-E11-0-WR526-AAAA	BSPP 3/4"	○			40,6	32	80	19		324
 <p>hose connection</p>	LS-E11-0-SL013-AAAA	13 mm	○			40,6	25	93	30		293

Further end connections on request.

Suitable thru type adaptors for LS-006 are listed on page 17 (Type LP-006-1)

Suitable thru type adaptors for LS-009 are listed on page 23 (Type SP-009-1)

Suitable thru type adaptors for LS-E11 on request.

**characteristic features:**

- connectable on adaptor contour LP-006-1 and DIN 14152 (so-called "Euro" adaptor)
- compact design
- extremely low weight

**materials:**

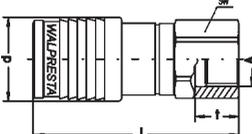
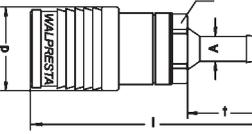
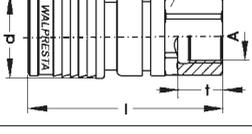
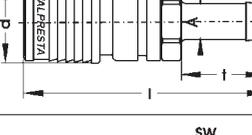
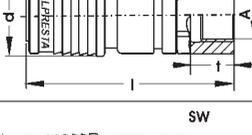
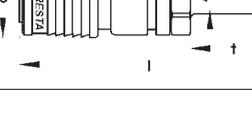
- standard:**
- coupling housing: Alu hc
- locking sleeve: plastic
- connecting pieces: AAAA = Alu anodized
- connecting pieces: AAAF = Alu anodized

**seal qualities:**

1 = NBR

Please note the technical data on pages and the 2 - 7, 88 max. working pressures on page 85

Availability: ● Short   ● Medium   ○ Long

	Part No.	Connection A	brass passivated	series	pipe OD	d	SW	l	t	n	weight [g]
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LT-006-0-WR513-AAAF-Z07	BSPP 1/4"	●			28	22	61	11		62
	LT-006-0-WR517-AAAF-Z07	BSPP 3/8"	●			28	22	62	11		64
 <p>hose connection</p>	LT-006-0-XX009-AAAF-Z07	9 mm	●			28	22	78	13		50
	LT-006-0-XX011-AAAF-Z07	11 mm	●			28	22	78	13		51
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LT-009-0-WR521-AAAA	BSPP 1/2"	●			30	27	71	17		90
	LT-009-0-WR526-AAAA	BSPP 3/4"	●			30	32	73	19		95
 <p>hose connection</p>	LT-009-0-XX011-AAAA	11 mm	●			30	25	86	30		65
	LT-009-0-XX013-AAAA	13 mm	●			30	25	86	30		69
 <p>British standard pipe parallel (BSPP) female thread to DIN ISO 228</p>	LT-E11-0-WR521-AAAA	BSPP 1/2"	●			30	27	77,5	17		95
	LT-E11-0-WR526-AAAA	BSPP 3/4"	●			30	32	79,5	19		100
 <p>hose connection</p>	LT-E11-0-XX011-AAAA	11 mm	●			30	25	92,5	30		71
	LT-E11-0-XX013-AAAA	13 mm	●			30	25	92,5	30		75

Further end connections on request.

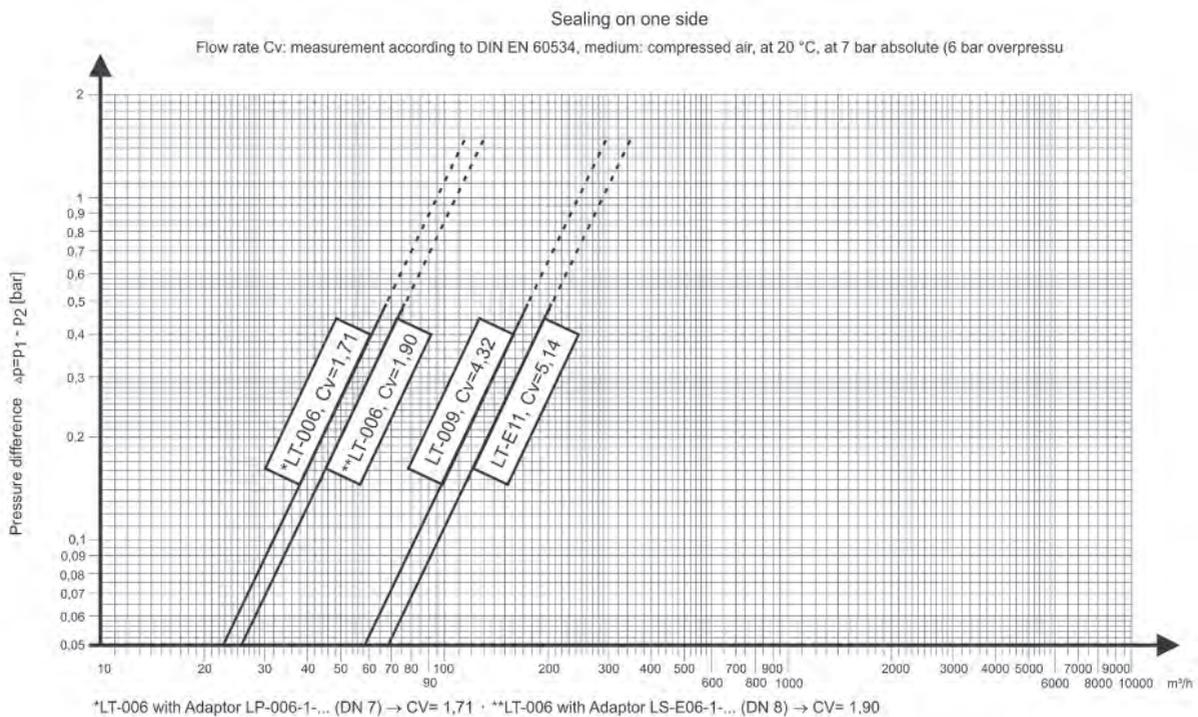
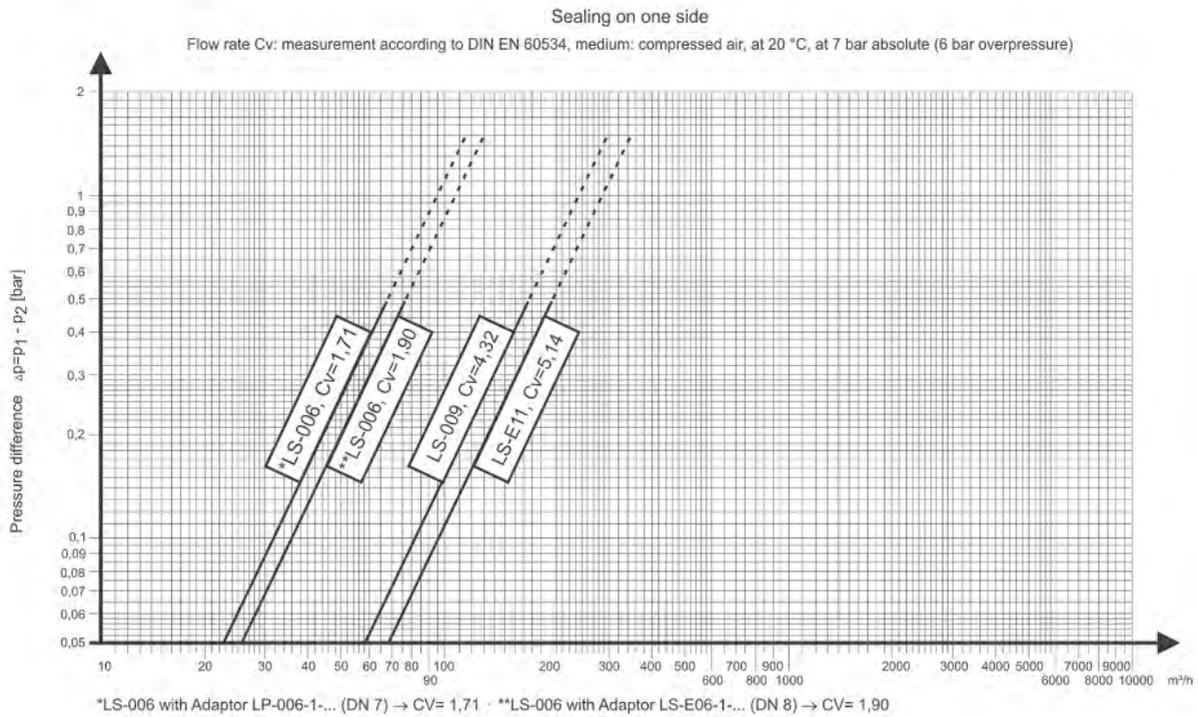
Suitable thru type adaptors for LT-006 are listed on page 17 (Type LP-006-1)

Suitable thru type adaptors for LT-009 are listed on page 23 (Type SP-009-1)

Suitable thru type adaptors for LT-E11 on request.

Measurement of flow coefficients Cv according to DIN EN 60534, test medium water

1 bar = 14,5 psi



Number of connections	Type	Nom. bore	Max. static working pressure [bar/psi] per element	Page
4	90405	4	10/145	90
8	90405	2	10/145	90
18	90405	2	10/145	91
8	90408	4	10/145	91
20	90408	3	10/145	92
12 - 20	90410	2 and 4	10/145	93
Accessories, individual parts				94

**Applications:**

Pneumatic measuring, control and monitoring loops with logic circuits and/or direct valve actuation.

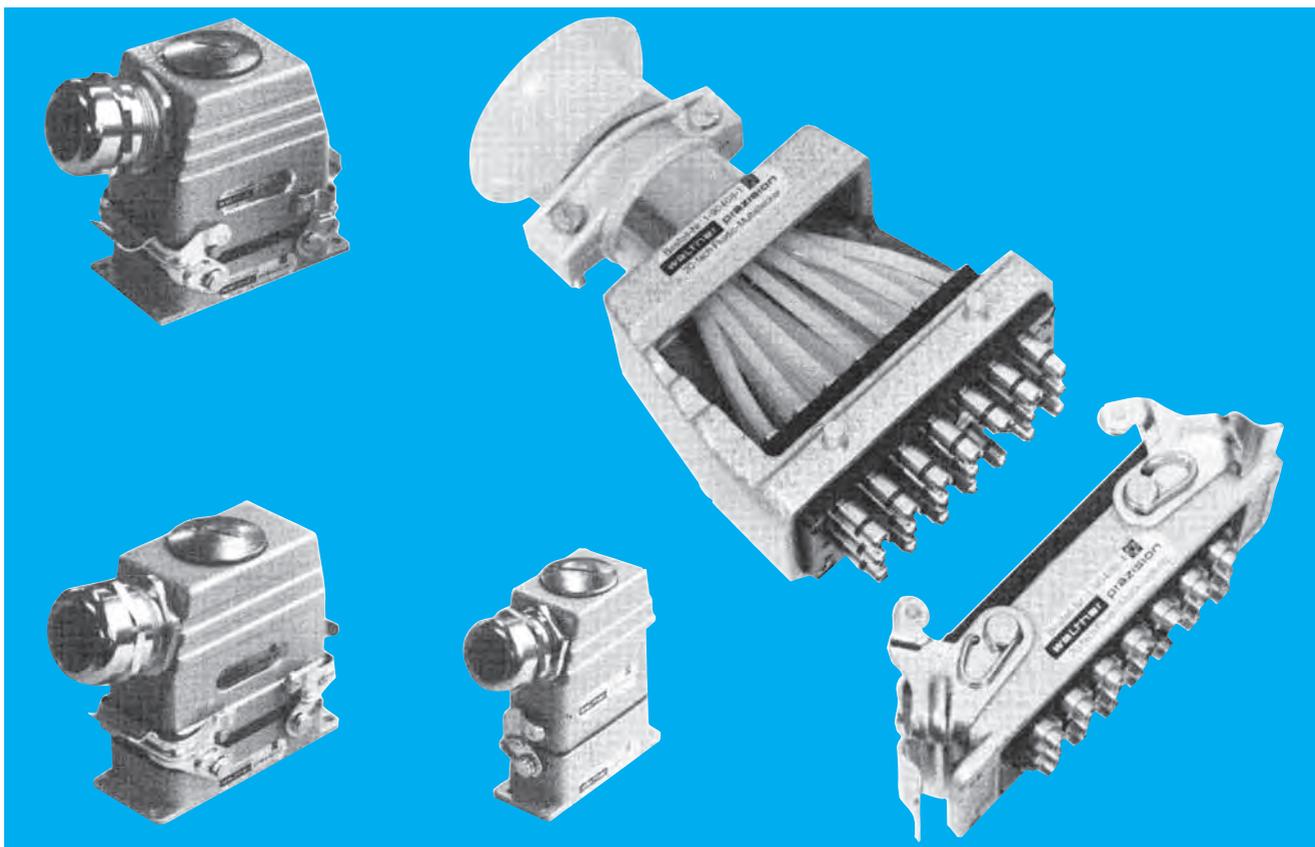
**Ready made:**

Ready made and tested complete assemblies as requested.

**Special version:**

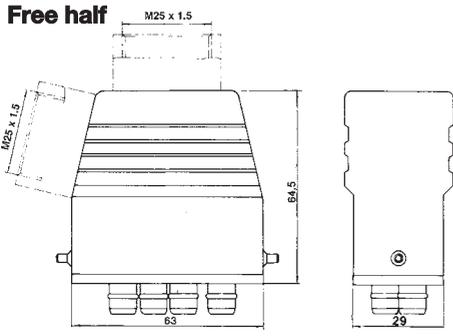
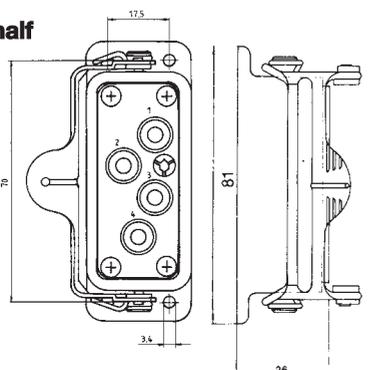
With additional electrical plug elements – on request

With self sealing valves – on request



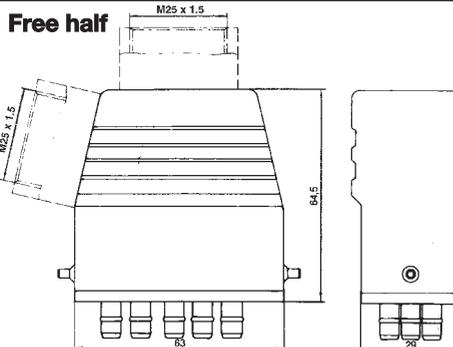
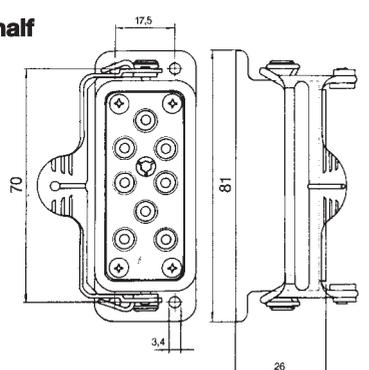
Please note the technical data on pages 2-7 and the max. working pressure on page 89

Availability: ● Short ○ Medium ○ Long

	Number of elements	n.b.	Part No.	End connections		Weight [g]
<b>Free half</b> 	4	4	<b>90405-1-LT016-31-1-Z30-AN</b>	Quick push connection for hose od 6 mm id 4 mm	●	290
	4	4	<b>90405-1-LT016-31-1-Z60-AN</b>	straight conduit	●	290
					angled conduit	
<b>Fixed half</b> 	4	4	<b>90405-4-FT016-31-1-Z10-AN</b>	Quick push connection for hose od 6 mm id 4 mm	●	150

**Materials:**  
**Carrier plates:** aluminium anodized  
**Elements:** brass nickel-plated

**Quick push connections:** brass passivated  
**Housing:** light alloy hammergrey enamel  
**Seals:** NBR, low friction

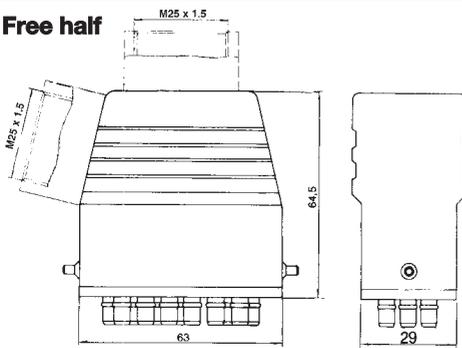
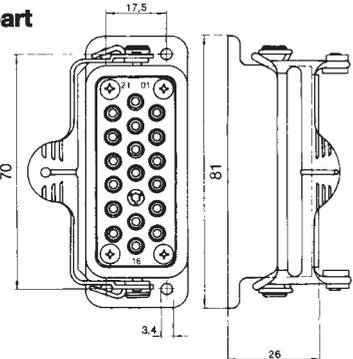
<b>Free half</b> 	8	2	<b>90405-1-LT019-31-1-Z30-AO</b>	Quick push connection for hose od 4 mm id 2 mm	●	280
	8	2	<b>90405-1-LT019-31-1-Z60-AO</b>	straight conduit	●	280
					angled conduit	
<b>Fixed half</b> 	8	2	<b>90405-4-FT019-31-1-Z10-AO</b>	Quick push connection for hose od 4 mm id 2 mm	●	140

**Materials:**  
**Carrier plates:** aluminium anodized  
**Elements:** brass nickel-plated

**Quick push connections:** brass passivated  
**Housing:** light alloy hammergrey enamel  
**Seals:** NBR, low friction

Please note the technical data on pages 2-7 and the max. working pressure on page 89

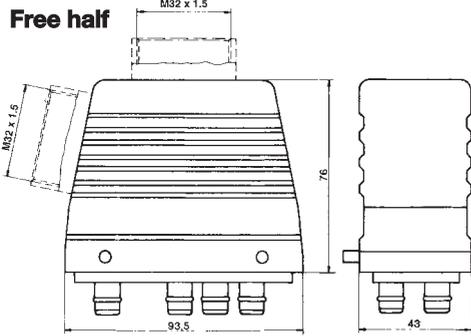
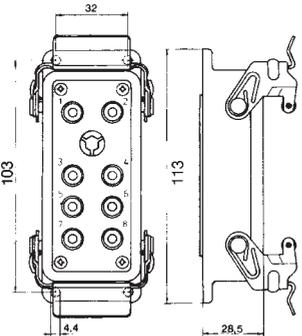
Availability: ● Short ○ Medium ○ Long

	Number of elements	n.b.	Part No.	End connections	Weight [g]	
<p><b>Free half</b></p>  <p><b>Fixed part</b></p> 	18	2	<b>90405-1-LT001-PA-1-Z30-AA</b>	Push ferrule connection for hose od 4 mm id 2 mm straight conduit	● 240	
	18	2	<b>90405-1-LT001-PA-1-Z30-AB</b>	Standard pattern: U1-type pattern		
	18	2	<b>90405-1-LT001-PA-1-Z30-AC</b>	U2-type pattern		
		18	2	<b>90405-1-LT001-PA-1-Z60-AA</b>	angled conduit	● 240
	18	2	<b>90405-1-LT001-PA-1-Z60-AB</b>	Standard pattern: U1-type pattern		
	18	2	<b>90405-1-LT001-PA-1-Z60-AC</b>	U2-type pattern		
		18	2	<b>90405-4-FT002-PA-0-Z10-AA</b>	Push ferrule connection for hose od 4 mm id 2 mm straight conduit	● 110
	18	2	<b>90405-4-FT002-PA-0-Z10-AB</b>	Standard pattern: U1-type pattern		
	18	2	<b>90405-4-FT002-PA-0-Z10-AC</b>	U2-type pattern		

**Non-interchangeability:**  
**3 different patterns:**  
**Standard, U1 or U2**

**Materials:**  
**Carrier plates: polyamide 6.6, 30 % glas fibre reinforced**  
**Plug elements: brass, nickel-plated**

**Housings: light alloy, hammergrey enamel**  
**Seals: NBR, low friction**  
**Ferrules for push-ferrule-connections must be ordered separately.**

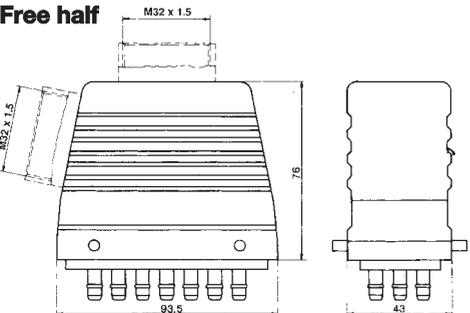
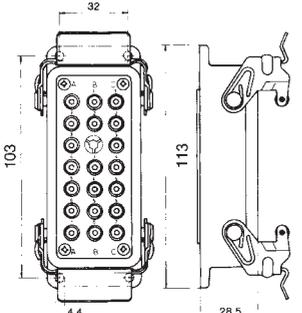
<p><b>Free half</b></p>  <p><b>Fixed half</b></p> 	8	4	<b>90408-1-LT006-PA-1-Z30-AF</b>	Quick push connection for hose od 6 mm id 4 mm carrier plates made of polyamide	● 440	
	8	4	<b>90408-1-LT006-PA-1-Z60-AF</b>	straight conduit		
		8	4	<b>90408-1-LT006-PA-1-Z60-AF</b>	angled conduit	
		8	4	<b>90408-1-LT006-31-1-Z30-AF</b>	carrier plates made of anodized aluminium	● 520
	8	4	<b>90408-1-LT006-31-1-Z30-AF</b>	straight conduit		
		8	4	<b>90408-1-LT006-31-1-Z60-AF</b>	angled conduit	
		8	4	<b>90408-4-FT006-PA-1-Z01-AF</b>	Quick push connection for hose od 6 mm id 4 mm carrier plates made of polyamide	● 210
	8	4	<b>90408-4-FT006-31-1-Z01-AF</b>	carrier plates made of anodized aluminium		

**Materials:**  
**Carrier plates: polyamide 6.6, 25 % glas fibre reinforced or aluminium anodized**  
**Plug elements: brass, nickel-plated**

**Quick push connections: brass passivated**  
**Housings: light alloy, hammergrey enamel**  
**Seals: NBR, low friction**

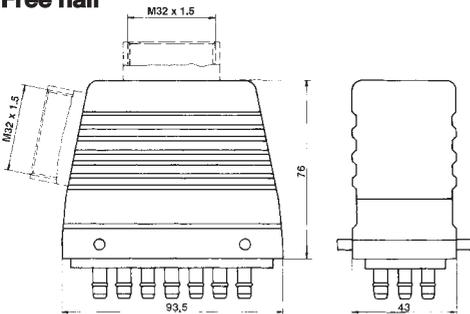
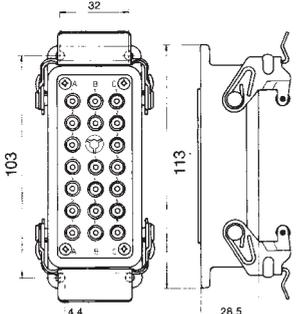
Please note the technical data on pages 2-7 and the max. working pressure on page 89

Availability: ● Short ○ Medium ○ Long

	Number of elements	n.b.	Part No.	End connections		Weight [g]
<p><b>Free half</b></p>  <p><b>Fixed half</b></p> 	20	3	<b>90408-1-LT001-PA-1-Z30-AA</b>	Quick push connection for hose od 4 mm id 2 mm carrier plates made of polyamide straight conduit	●	460
	20	3	<b>90408-1-LT001-PA-1-Z60-AA</b>	angled conduit	●	460
	20	3	<b>90408-1-LT001-31-1-Z30-AA</b>	carrier plates made of aluminium straight conduit	●	520
	20	3	<b>90408-1-LT001-31-1-Z60-AA</b>	angled conduit	●	520
	20	3	<b>90408-4-FT001-PA-1-Z01-AA</b>	Quick push connection for hose od 4 mm id 2 mm carrier plates made of polyamide	●	240
	20	3	<b>90408-4-FT001-31-1-Z01-AA</b>	carrier plates made of aluminium	●	300

**Materials:**  
Carrier plates: polyamide 6.6, 30 % glas fibre reinforced or aluminium anodized  
Plug elements: brass, nickel-plated

**Quick push connections: brass passivated**  
**Housings: light alloy, hammergey enamel**  
**Seals: NBR, low friction**

<p><b>Free half</b></p>  <p><b>Fixed half</b></p> 	20	3	<b>90408-1-LT002-PA-1-Z30-AA</b>	Push ferrule connection for hose od 6 mm id 4 mm straight conduit	●	510	
	20	3	<b>90408-1-LT002-PA-1-Z60-AA</b>	angled conduit	●	510	
					In case of angled conduit only 17 connections are useable		
	20	3	<b>90408-4-FT002-PA-0-Z01-AA</b>	Push ferrule connection for hose od 6 mm id 4 mm	●	280	

**Materials:**  
Carrier plates: polyamide 6.6, 30 % glas fibre reinforced  
Plug elements: brass, nickel-plated

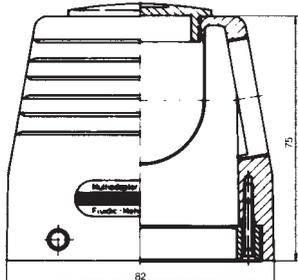
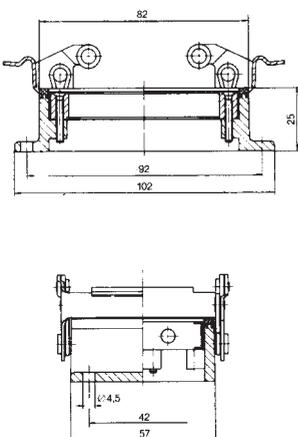
**Housings: light alloy, hammergey enamel**  
**Seals: NBR, low friction**  
**Ferrules for push-ferrule-connections must be ordered separately.**

**Spezial versions:**  
 spezial codings  
 with fluidical and electrical  
 elements on request

**Materials:**  
 Carrier plates free half: Polyamide PA 6.6, 25 % glass fibre reinforced  
 Carrier plates fixed half: Trogamid TG 35  
 Retaining bar: Z 410 nickel-plated  
 Thru Type Adaptors: brass nickel-plated  
 Quick push connections: brass passivated  
 Coding pins and bushes: stainless steel 1.4305  
 Housing: light alloy, hammergey enamel  
 Seals: NBR, low friction

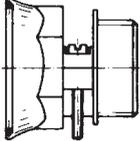
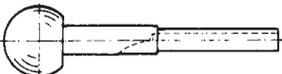
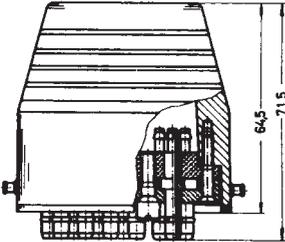
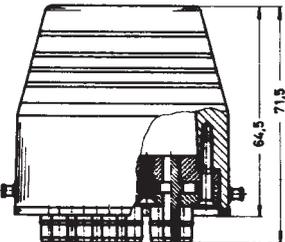
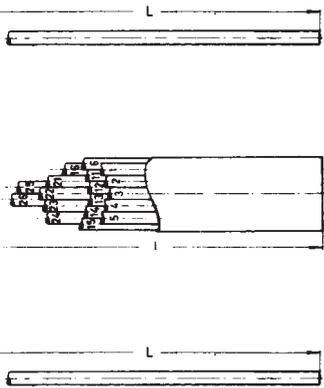
Please note the  
 technical data on  
 pages 2-7 and the  
 max. working pressure  
 on page 89

**Availability:** ● Short ○ Medium ○ Long

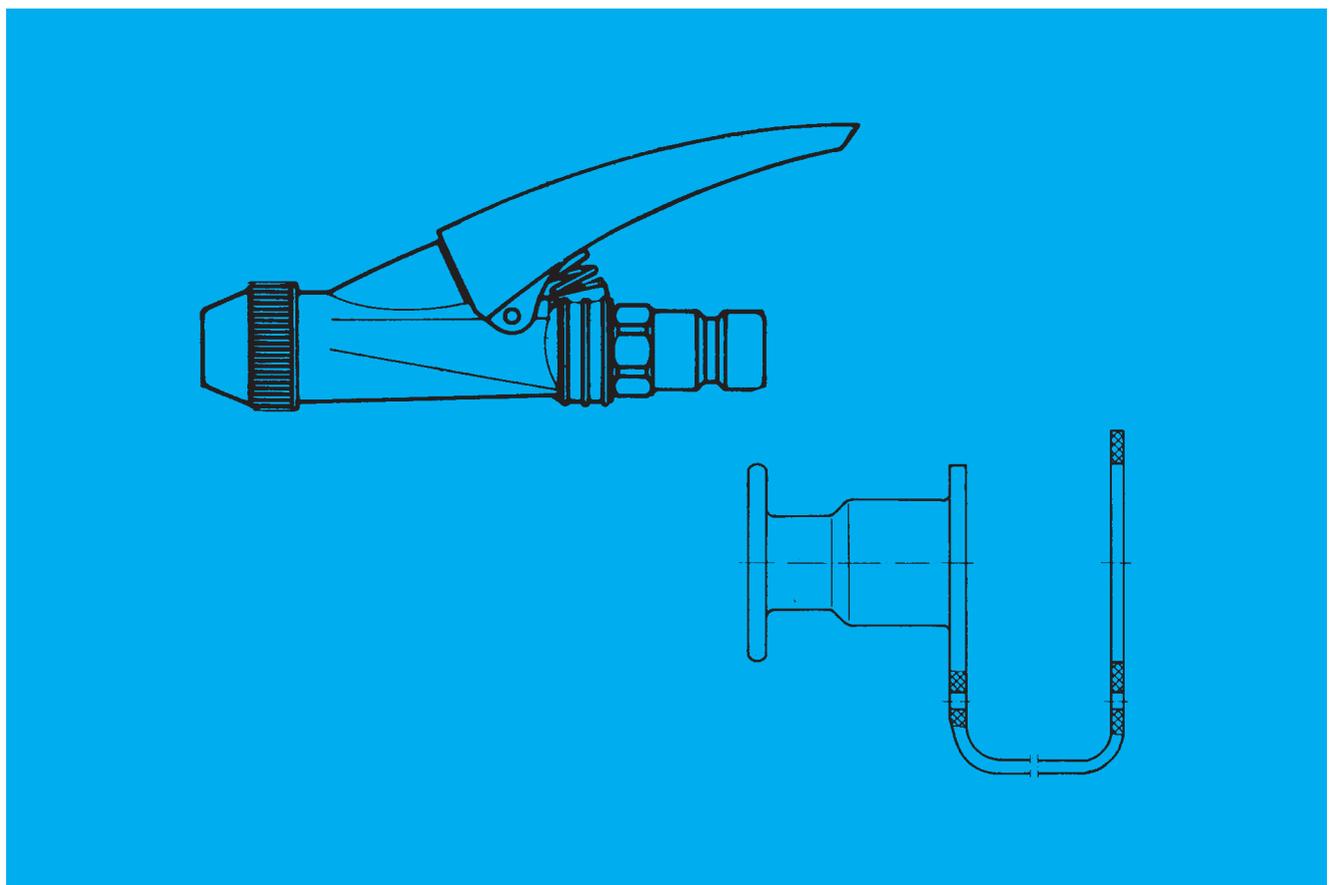
	Number of elements	End connections: A Connection for flexible, numbered plastic lines, made of Rilsan od 4 mm, id 2 mm or od 4 mm id 2,7 mm B Connection for flexible, numbered plastic lines, made of Rilsan od 6 mm, id 4 mm	Part No.		Weight [g]
			Free half	Fixed half	
<b>Free half</b> Straight and inclined entry 	12	12 x Quick push connection B	<b>90410-1-LT002-PA-1-Z04-AB</b>		550
	13	4 x Quick push connection A 9 x Quick push connection B	<b>90410-1-LT004-PA-1-Z04-AD</b>	<b>90410-4-FT002-PA-1-Z03-AB</b>	280
	14	8 x Quick push connection A 6 x Quick push connection B	<b>90410-1-LT003-PA-1-Z04-AC</b>	<b>90410-4-FT004-PA-1-Z03-AD</b>	280
	15	12 x Quick push connection A 3 x Quick push connection B	<b>90410-1-LT005-PA-1-Z04-AE</b>	<b>90410-4-FT003-PA-1-Z03-AC</b>	270
	20	20 x Quick push connection A	<b>90410-1-LT001-PA-1-Z04-AA</b>	<b>90410-4-FT005-PA-1-Z03-AE</b>	270
<b>Fixed half</b> 	20	20 x Quick push connection A	<b>90410-1-LT001-PA-1-Z04-AA</b>		520
				<b>90410-4-FT001-PA-1-Z03-AA</b>	290

Please note the technical data on pages 2-7 and the max. working pressure on page 89

Availability: ● Short    ◐ Medium    ○ Long

		Part No.	Materials		Weight [g]
	Hose-clamp PG 21 PG 29 M 25 x 1,5 M 32 x 1,5	<b>96001-9-PG021-PCAA</b> <b>96001-9-PG029-PCAA</b> <b>96001-9-6M025-23-1</b> <b>96001-9-6M032-23-1</b>	plastic plastic brass nickel-plated brass nickel-plated	● ● ● ●	25 48 79 144
	Ferrule for hose OD4/ID2 for hose OD6/ID4	<b>90405/510</b> <b>90405/512</b>	brass nickel-plated brass nickel-plated	● ●	1 1
	Assembly tool for push ferrule connection for hose OD4 for hose OD6	<b>90405/550</b> <b>90405/558</b>	steel, oil-burnished steel, oil-burnished	● ●	27 43
<p><b>Bridge connector</b></p>  <p><b>Blind half</b></p> 	Bridge connector for Type 90405 / 18-way  <b>Ferrules for push-ferrule-connections must be ordered separately.</b>  Blind half for fixed side for Type 90405 / 18-way	Standard: <b>90405-1-LT001-PA-1-Z03-AA</b>  Version U1: <b>90405-1-LT001-PA-1-Z03-AB</b>  Version U2: <b>90405-1-LT001-PA-1-Z03-AC</b>  Blind half for fixed <b>90405-6-LT003-PA-1-Z03-AA</b>	Housing: light alloy hammergey enamel  Carrier plates: Polyamide  Elements: brass nickel-plated  Seals: Buna, low friction	● ● ● ●	230 190
	Hoselines for Fluidic-Multicouplings numbered single hose 4x1 (od 4 mm / id 2 mm) numbers 01-06, 11-16, 21-26  numbered 19-way hosebundle 4x1 (od 4 mm / id 2 mm) numbers 01-06, 11-16, 21-26 + neutral bending radius: min. 170 mm  Single hose 6x1 (od 6 mm / id 4 mm)	<b>7-112-04010-0000-WP</b>  <b>7-113-04010-0019-WP</b>  <b>7-112-06010-0000-WP</b>	Soft Polyethylene  Soft Polyethylene  Soft Polyethylene, black	● ● ●	

	page
Dust caps, Dust plugs	92 - 93
Air blowers	94
Air guns	95
Threaded hose connectors, Revolving connectors	96

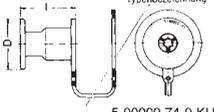
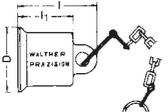
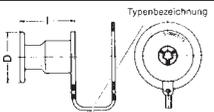
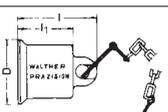
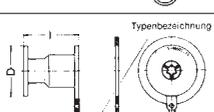
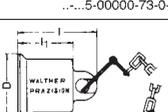
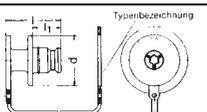
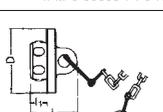
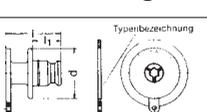
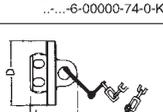
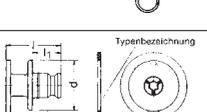
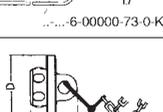


# 96 Dust caps – Dust plugs

Plastic version

**Materials:**  
Soft-PVC  
Polyurethane

Availability: ● Short ○ Medium ○ Long

	Materials	For Series / Type			Part No.	d	l	l <sub>1</sub>		Weight [g]
		low pressure	medium pressure	high pressure						
Dust caps for self-sealing adaptors and thru types adaptors	 Typenbezeichnung .....5-00000-74-0-KU	Polyurethane LP/LV-004 soft-PVC grey	LP/LV-004 SP-006 LP-006 LP-007 LP-012 LP-019		<b>LP-004-5-74-KU</b> <b>SP-006-5-74-KU</b> <b>LP-006-5-74-KU</b> <b>LP-007-5-74-KU</b> <b>LP-012-5-74-KU</b> <b>LP-019-5-74-KU</b>	18 22 22 25 32 44	23 24 24 27 33,5 37,5		● ● ● ● ● ●	4 5 5 7 12 20
		soft-PVC grey chains + rings: steel nickel-plated	SP-009 LP-032 LP-050		<b>SP-009-5-74-KK</b> <b>LP-032-5-74-KK</b> <b>LP-050-5-74-KK</b>	25,5 73 114,5	46 76 110	31 58 92	● ● ●	16 65 110
	 Typenbezeichnung .....5-00000-74-0-KU	soft-PVC grey		SG-006 MD-006 MD-007 MD-012 MD-019	<b>SP-006-5-74-KU</b> <b>MD-006-5-74-KU</b> <b>MD-007-5-74-KU</b> <b>MD-012-5-74-KU</b> <b>LP-019-5-74-KU</b>	22 22 25 32 44	24 24 27 33,5 37,5		● ● ● ● ●	7 7 7 11 20
		soft-PVC grey chains + rings: steel nickel-plated		MD-032 MD-050	<b>LP-032-5-74-KK</b> <b>LP-050-5-74-KK</b>	73 114,5	76 110	58 92	● ●	65 110
	 Typenbezeichnung .....5-00000-73-0-KU	soft-PVC black		HP-004 HP-006 HP-010 HP-016 HP-020	<b>HP-004-5-73-KU</b> <b>HP-006-5-73-KU</b> <b>HP-010-5-73-KU</b> <b>HP-016-5-73-KU</b> <b>HP-020-5-73-KU</b>	23 30 34 41 45	27,5 33 38 43 45		● ● ● ● ●	7 11 16 20 25
		soft-PVC grey chains + rings: steel nickel-plated		HP-032 HP-050	<b>HP-032-5-74-KK</b> <b>HP-050-5-74-KK</b>	73 114,5	76 110	58 92	● ●	65 110
Dust plugs for self-sealing couplings and thru type couplings	 Typenbezeichnung .....6-00000-74-0-KU	Polyurethane soft-PVC grey	LP/LV-004 SP-006 LP-006 LP-007 LP-012 LP-019		<b>LP-004-6-74-KU</b> <b>SP-006-6-74-KU</b> <b>LP-006-6-74-KU</b> <b>LP-007-6-74-KU</b> <b>LP-012-6-74-KU</b> <b>LP-019-6-74-KU</b>	18 22 22 25 32 44	24 25 30 34 43 46	12 13 18 18 23 26	● ● ● ● ● ●	5 7 8 10 19 34
		soft-PVC grey chains + rings: steel nickel-plated	SP-009 LP-032 LP-050		<b>SP-009-6-74-KK</b> <b>LP-032-6-74-KK</b> <b>LP-050-6-74-KK</b>	34 82 112	35 60 66	19 32 37	● ● ●	19 160 240
	 Typenbezeichnung .....6-00000-74-0-KU	soft-PVC grey		SG-006 MD-006 MD-007 MD-012 MD-019	<b>SP-006-6-74-KU</b> <b>MD-006-6-74-KU</b> <b>MD-007-6-74-KU</b> <b>MD-012-6-74-KU</b> <b>LP-019-6-74-KU</b>	22 22 25 32 44	25 30 34 43 46	13 18 18 23 26	● ● ● ● ●	7 8 9 19 34
		soft-PVC grey chains + rings: steel nickel-plated		MD-032 MD-050	<b>LP-032-6-74-KK</b> <b>LP-050-6-74-KK</b>	82 112	60 66	32 37	● ●	160 240
	 Typenbezeichnung .....6-00000-73-0-KU	soft-PVC black		HP-004 HP-006 HP-010 HP-016 HP-020	<b>HP-004-6-73-KU</b> <b>HP-006-6-73-KU</b> <b>HP-010-6-73-KU</b> <b>HP-016-6-73-KU</b> <b>HP-020-6-73-KU</b>	20 30 34 41 45	27,5 33 42 45 47	15,5 17 22 25 27	● ● ● ● ●	7 13 23 32 40
		soft-PVC grey chains + rings: steel nickel-plated		HP-032 HP-050	<b>HP-032-6-74-KK</b> <b>HP-050-6-74-KK</b>	82 112	60 66	32 37	● ●	160 240

# Dust caps – Dust plugs

pressure tight version

Materials:

Dichtungen

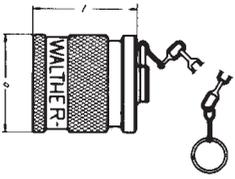
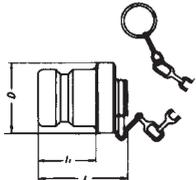
- 1 = NBR)
- 2 = FKM
- 4 = EPDM

working pressure:  
as matching Type

Standard:

- 11 = steel zinc-plated
- 19 = steel zinc-plated/oil burnished
- 12 = steel oil burnished

Availability: ● Short ○ Medium ○ Long

	Materials	For Series / Type			Part No.	d	l	l <sub>1</sub>		Weight [g]	
		low pressure	medium pressure	high pressure							
Dust caps with chain and ring for self-sealing adaptors and thru type adaptors  	steel zinc-plated chains + rings: steel, nickel-plated	SP-006			<b>SP-006-5-11-</b>	22	38		●	100	
		LP-006			<b>LP-006-5-11-</b>	25	45		●	120	
		LP-007			<b>LP-007-5-11-</b>	30	52		●	200	
		LP-012			<b>LP-012-5-11-</b>	40	58		●	340	
		LP-019			<b>LP-019-5-11-</b>	54	64		●	610	
		LP-032			<b>LP-032-5-11-</b>	82	88		●	2150	
		LP-050			<b>LP-050-5-11-</b>	112	103		●	4400	
	steel zinc-plated/ oil-burnished chains + rings: steel, nickel-plated		MD-006			<b>MD-006-5-19-</b>	25	45		●	120
			MD-007			<b>MD-007-5-19-</b>	30	52		●	200
			MD-012			<b>MD-012-5-19-</b>	40	58		●	350
			MD-019			<b>MD-019-5-19-</b>	54	64		●	610
			MD-032			<b>MD-032-5-19-</b>	82	88		●	2150
		MD-050			<b>MD-050-5-19-</b>	112	103		●	4400	
	steel oil-burnished chains + rings: steel, nickel-plated				HP-006	<b>HP-006-5-12-</b>	34	52		●	250
					HP-010	<b>HP-010-5-12-</b>	46	60		●	400
					HP-016	<b>HP-016-5-12-</b>	56	73		●	870
					HP-020	<b>HP-020-5-12-</b>	62	73		●	1000
					HP-032	<b>HP-032-5-12-</b>	90	94		●	2650
Dust plugs with chain and ring for self-sealing couplings  	brass passivated	LP-004			<b>LP-004-6-21</b>	18	28	16	●	36	
		steel zinc-plated chains + rings: steel, nickel-plated	SP-006			<b>SP-006-6-11</b>	22	33	20	●	60
	LP-006				<b>LP-006-6-11</b>	25	38	20	●	75	
	LP-007				<b>LP-007-6-11</b>	25	38	23,3	●	70	
	LP-012				<b>LP-012-6-11</b>	30	44	29,5	●	110	
	LP-019				<b>LP-019-6-11</b>	40	50	32,5	●	200	
	LP-032				<b>LP-032-6-11</b>	65	58	39	●	580	
	LP-050				<b>LP-050-6-11</b>	100	66	46	●	1650	
	steel oil-burnished chains + rings: steel, nickel-plated		MD-006			<b>MD-006-6-12</b>	25	38	21,7	●	70
			MD-007			<b>MD-007-6-12</b>	25	38	25	●	60
			MD-012			<b>MD-012-6-12</b>	30	44	31,5	●	95
			MD-019			<b>MD-019-6-12</b>	40	50	35,5	●	200
			MD-032			<b>MD-032-6-12</b>	65	58	41	●	520
			MD-050			<b>MD-050-6-12</b>	100	70	50	●	1630
	steel oil-burnished chains + rings: steel, nickel-plated				HP-006	<b>HP-006-6-12</b>	30	48	30,5	●	100
					HP-010	<b>HP-010-6-12</b>	40	50	36	●	150
					HP-016	<b>HP-016-6-12</b>	40	58	41	●	210
					HP-020	<b>HP-020-6-12</b>	40	60	43	●	250
					HP-032	<b>HP-032-6-12</b>	62	71,5	49,5	●	570

# 98 Air Blowers

Blast pipes, nozzles, self-sealing, with lever operation, flexible

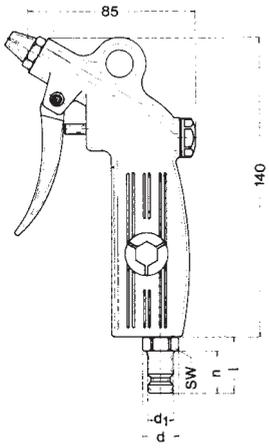
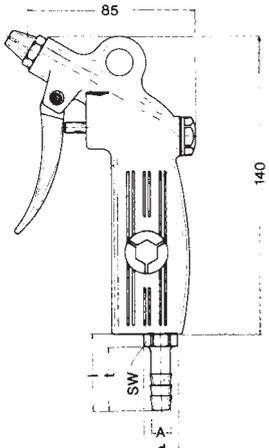
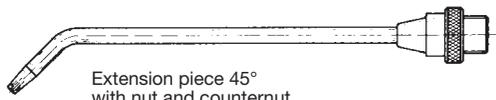
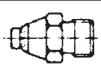
Availability: ● Short ○ Medium ○ Long

	Material	Part No.	Connection A	d	l	t		Weight [g]	
Hose tailpiece	Polyamide	<b>95001-9-SL009</b>	9 mm	33	153	30	○	180	
		<b>95001-9-SL011</b>	11 mm	33	153	30	○	180	
		<b>95001-9-SL013</b>	13 mm	33	153	30	●	190	
		<b>95001-9-SL016</b>	16 mm	33	158	35	○	220	
		<b>95001-9-SL019</b>	19 mm	33	158	35	●	220	
		Nozzle size 3 mm, other nozzles of 4 mm, 6 mm and 8 mm available on request							
Hose tailpiece	Brass passivated	<b>95002-9-SL006</b>	6 mm	22	126	25	●	200	
		<b>95002-9-SL009</b>	9 mm	22	138	30	●	210	
		<b>95002-9-SL011</b>	11 mm	22	138	30	○	220	
		<b>95002-9-SL013</b>	13 mm	22	138	30	○	220	
		Nozzle size 2 mm, other nozzles of 2,5 mm, 3 mm, 4 mm and 5 mm available on request							
Hose tailpiece	Soft-PVC	<b>95000-9-SL009</b>	9 mm	24	135	30	●	100	
		<b>95000-9-SL011</b>	11 mm	24	135	30	○	100	
		<b>95000-9-SL013</b>	13 mm	24	135	30	○	110	
		Also available with suspension hook							
Thru type adaptor connection	Polyamide	<b>95001-9-ST006</b>	LP-006-1	33	143	20	○	180	
		<b>95001-9-ST007</b>	LP-007-1	33	146,5	23,3	○	190	
		<b>95001-9-ST012</b>	LP-012-1	33	152,5	29,5	○	220	
			Nozzle size 3 mm, other nozzles of 4 mm, 6 mm and 8 mm available on request						
	Thru type adaptor connection	Brass passivated	<b>95002-9-ST006</b>	LP-006-1	21	128	20	●	220
<b>95002-9-ST007</b>			LP-007-1	21	133	23,3	○	230	
		Nozzle size 2 mm, other nozzles of 2,5 mm, 3 mm, 4 mm and 5 mm available on request							
Thru type adaptor connection	Soft-PVC	<b>95000-9-ST006</b>	LP-006-1	24	123	20	●	100	
		<b>95000-9-ST007</b>	LP-007-1	24	126,5	23,3	○	110	
		Also available with suspension hook							

**Materials:**

gun body – Aluminium  
 nozzle 1,5 mm – brass nickel-plated  
 extension piece – brass nickel-plated  
 plug connection (thru type adaptor) – steel, hardened, zinc-plated  
 hose tailpiece – brass passivated

Availability: ● Short ○ Medium ○ Long

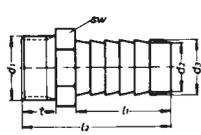
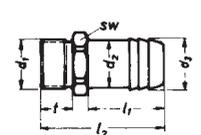
	Part No.	Connection A	SW	l	t	n	d	d <sub>1</sub>		Weight [g]
	<b>95003-9-ST006</b>	Thru type adaptor LP-006-1	14	26		20	15,5	12	●	250
	<b>95003-9-ST007</b>	LP-007-1	17	29,5		23,3	18,9	14	●	260
	<b>95003-9-SL006</b>	Hose tailpiece 6 mm	14	31	25		15,5		●	250
	<b>95003-9-SL009</b>	9 mm	17	36	30		18,5		●	250
	<b>95003-9-SL011</b>	11 mm	17	36	30		18,5		●	260
	<b>95003-9-SL013</b>	13 mm	17	36	30		18,5		●	270
 <p>Extension piece 45° with nut and counter nut brass nickel-plated</p>	<b>95004-9-LG100</b>	Length 100 mm	For better aiming in inaccessible places. Air consumption as regular nozzle.						●	40
	<b>95004-9-LG150</b>	150 mm							●	46
	<b>95004-9-LG250</b>	250 mm							○	60
 <p>Muffling nozzle, Aluminium M 12x1,5</p>	<b>95012</b>	Muffling nozzles reduce noise substantially, without reduction of blowing force. The air consumption is approx. 50% higher than a regular nozzle.							●	6
 <p>Full-blow nozzle, Polyamide</p>	<b>95013</b>	This nozzle increases the quantity of blown air 3 or 4-fold by sucking more air. The full jet is especially suitable for blowing off large areas (e.g. drying). The air consumption is approx. like the muffling nozzle.							●	12
 <p>Nozzle with air jacket, Aluminium</p>	<b>95014</b>	Around the blowing jet a cone-sharper air jacket is located, which prevents recoiling of whirled up particles							●	6
 <p>Protection shield</p>	<b>95015</b>	The protection shield, 70 mm dia, made of plastic, serves as protection for the eyes against recoiling, sharp articles. It is recommended by associations for safety-at-work.							●	9

# 100 Threaded Hose Connectors

**Materials:**

21 = brass passivated  
40 = Polyacetals (POM)

Availability: ● Short ○ Medium ○ Long

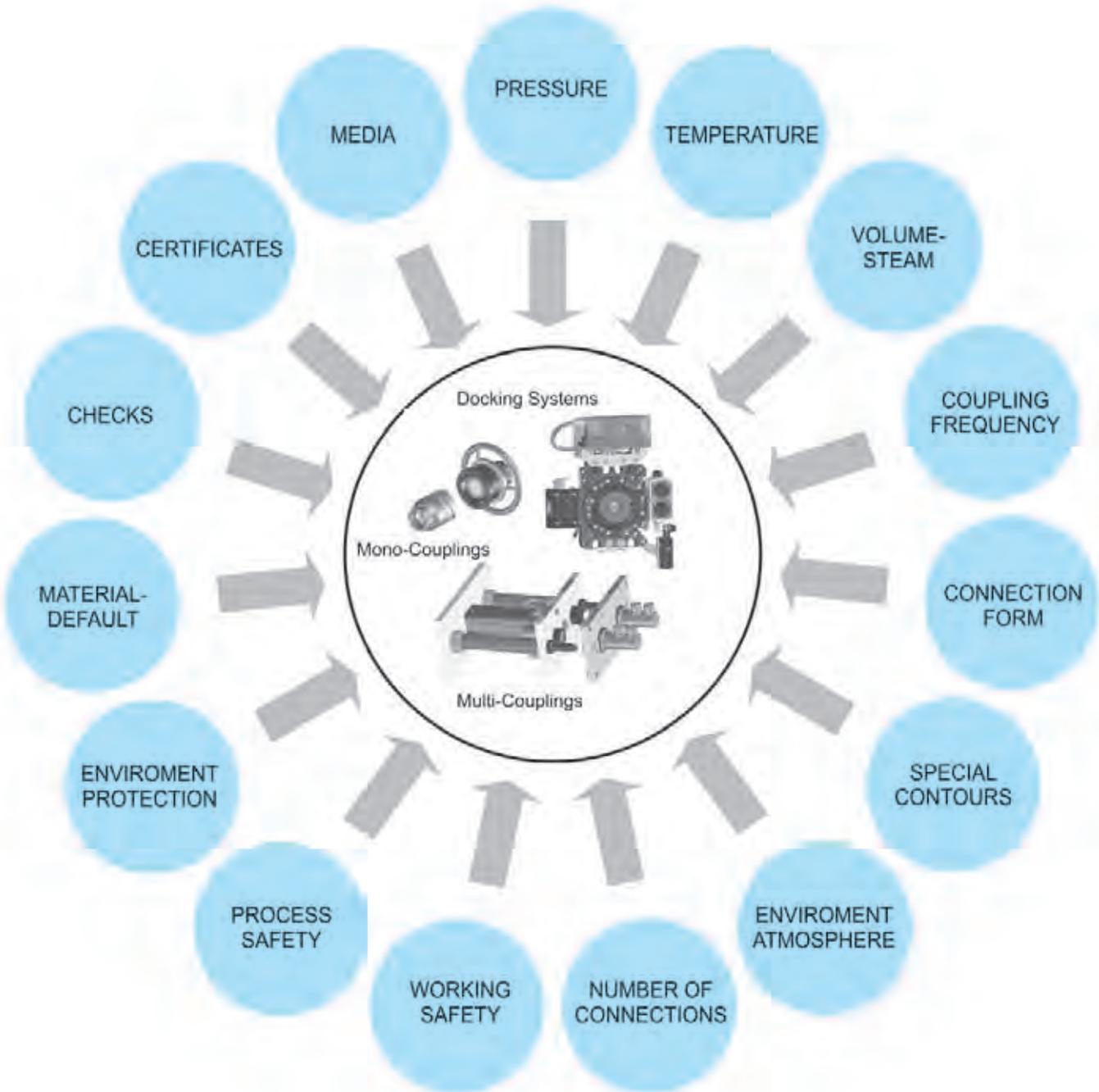
	Part No.	Thread		Hose Tailpiece			Total Length $l_2$	Hexagon AF	n.b.		Weight [g]
		$\varnothing$ $d_1$	Length $t$	$\varnothing$ $d_2$	$\varnothing$ $d_3$	Length $l_1$					
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Threaded Hose Connector</p>  <p>Material: brass passivated</p>	<b>5-AN0-OSL-006-WR010-21</b>	G 1/8 A	8	6	7,5	25	38	11	4	●	10
	<b>5-AN0-OSL-009-WR010-21</b>	G 1/8 A	8	8	9,5	25	38	11	6	●	12
	<b>5-AN0-OSL-006-WR013-21</b>	G 1/4 A	9	6	7,5	25	39	14	4	●	15
	<b>5-AN0-OSL-009-WR013-21</b>	G 1/4 A	9	8	9,5	25	39	14	6	●	19
	<b>5-AN0-OSL-011-WR013-21</b>	G 1/4 A	9	10	11,5	25	39	14	7	●	22
	<b>5-AN0-OSL-013-WR013-21</b>	G 1/4 A	9	13	14,5	30	44	17	10	●	30
	<b>5-AN0-OSL-006-WR017-21</b>	G 3/8 A	9	6	7,5	25	39	17	4	●	21
	<b>5-AN0-OSL-009-WR017-21</b>	G 3/8 A	9	8	9,5	25	39	17	6	●	24
	<b>5-AN0-OSL-011-WR017-21</b>	G 3/8 A	9	10	11,5	25	39	17	7	●	27
	<b>5-AN0-OSL-013-WR017-21</b>	G 3/8 A	9	13	14,2	30	44	17	10	●	29
	<b>5-AN0-OSL-006-WR021-21</b>	G 1/2 A	11	6	7,5	25	42	22	4	●	32
	<b>5-AN0-OSL-009-WR021-21</b>	G 1/2 A	11	8	9,5	25	42	22	6	●	34
	<b>5-AN0-OSL-011-WR021-21</b>	G 1/2 A	11	10	11,5	25	42	22	7	●	39
	<b>5-AN0-OSL-013-WR021-21</b>	G 1/2 A	11	13	14,2	30	47	22	10	●	40
<b>5-AN0-OSL-016-WR021-21</b>	G 1/2 A	11	16	17,5	30	47	22	12	●	50	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Threaded Hose Connector</p>  <p>Material: Polyacetals (POM)</p>	<b>5-AN0-OSL-013-WR021-40</b>	G 1/2 A	14,5	13	14	30	52,5	24	8	●	10
	<b>5-AN0-OSL-025-WR048-40</b>	G 1 1/2 A	18	25	27	40	73	50	19	●	19
	<b>5-AN0-OSL-032-WR048-40</b>	G 1 1/2 A	18	32	34	45	78	50	22	●	28
	<b>5-AN0-OSL-042-XX004-40</b>	G 1 1/2 A	18	42	45	61	94	50	32	●	33

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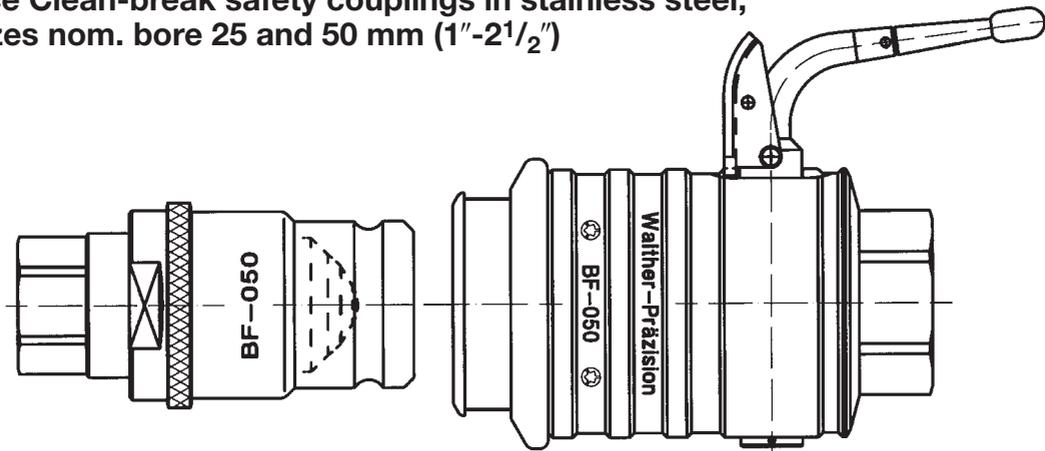
<b>Some examples from 300,000 variants</b>	page
Ball-Face couplings, nom. bore 25 and 50 mm	103
Monocouplings with proximity switches	103
Couplings with Teflon seals	104
Hook-in couplings	104
Tear-away couplings	105
Multicouplings	106

Nominal sizes of our couplings extend from 2 to 300 mm, with pressure ranges from vacuum to 3,000 bar, covering a temperature range from less than -250 °C (-423 °F) to over 800 °C (1,475 °F). Couplings can be adapted to customer requirements.

Over the years we have developed many solutions for handling aggressive substances or media which pose environmental or health hazards. Our docking systems can be tailored to meet all individual customer requirements.

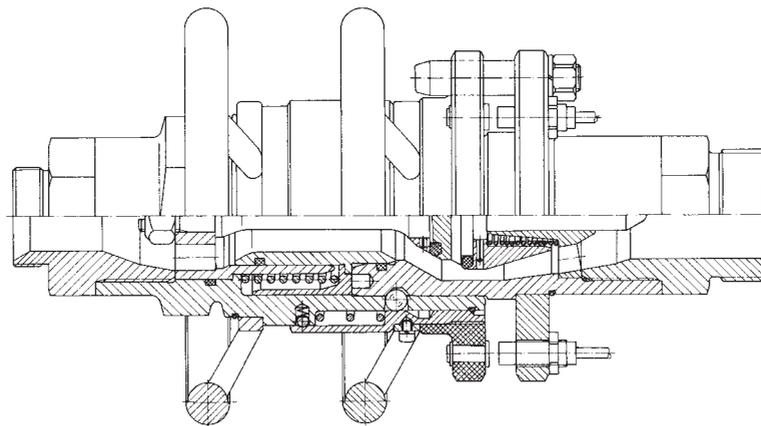


### Ball-Face Clean-break safety couplings in stainless steel, large sizes nom. bore 25 and 50 mm (1"-2 1/2")



- push to connect clean-break couplings size 1" to 2 1/2", mainly for applications in the chemical and pharmaceutical industry
- totally squirt free engagement and disengagement at full max. working pressure. Separate operation of coupling connection and opening of valves by turning of handle
- low couple forces, because mechanical connection does not yet open valves
- the couplings can be used for lubricating and non lubricating media
- metal parts are made of stainless steel 1.4404 (AISI 316l) or 1.4571 (AISI 316ti). In combination with the seal compatibility of FKM or perfluorine seals (FFKM) in combination with PTFE a very wide range of media can be allowed
- couple areas are easy to clean
- the main seals sit in one easy to replace seal module
- consideration of all necessary safety aspects

### Couplings with Proximity Switches



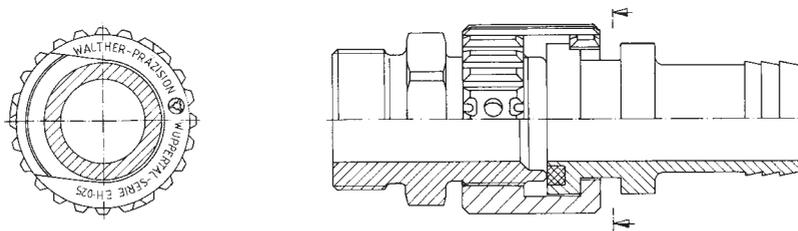
A control of the coupling position is possible when proximity switches are integrated into the coupling. As required the following data can be inquired and controlled:

- yes/no-indication of the coupled and locked state
- yes/no-indication of the opened state of the valves
- identification which of several free halves is connected with which counterpart by coding with several sensors and contacts (see drawing).

By BCD-coding of the switches product processing can be checked and monitored by computers.

Request further information.

## Hook-in Couplings



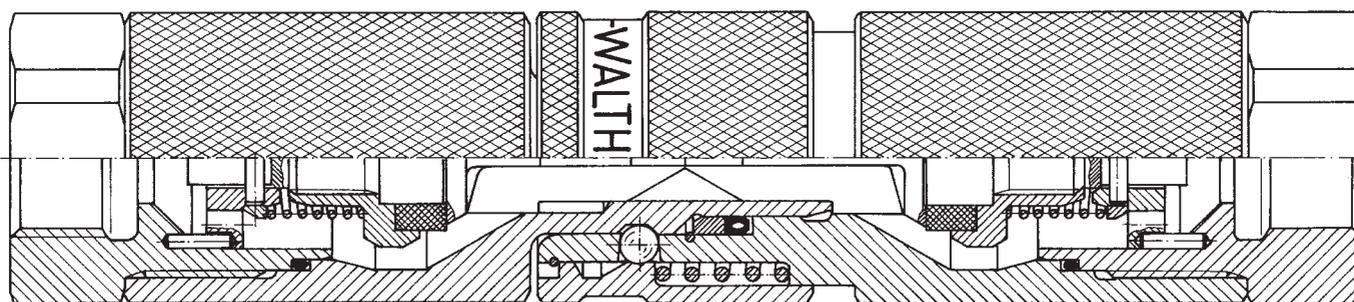
The thru-type adaptor with its front face seal is hooked into the slit on the coupling nut. When the nut is tightened the seal is pressed against the face of the coupling housing. This design allows a free media flow without interference from valves.

The advantages of a hook-in coupling are:

- suitability for paste and powdery media
- easy cleaning of couplings
- extremely short design
- due to the low axial couple stroke also applicable for pipe lines with limited movement
- very easy maintenance
- nearly smooth inner bore without recesses, thus suitability for food because all medium touched surface can be cleaned easy and without problems (no dirt traps).

Request further information.

## Couplings with PTFE Seals

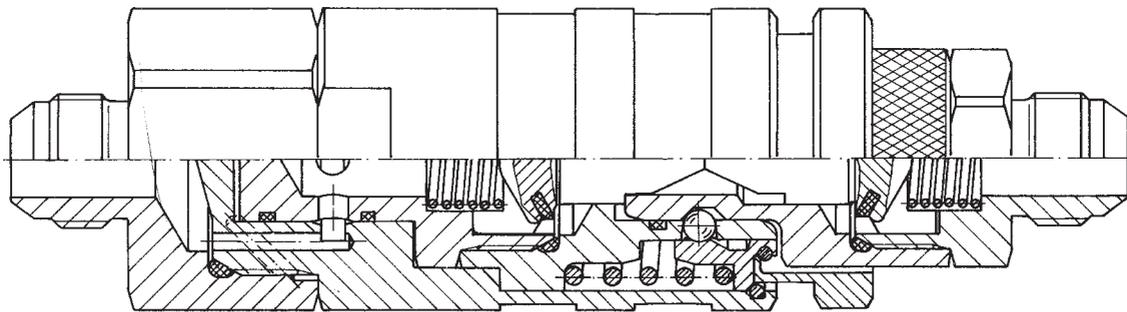


Couplings with PTFE seals have to show other constructional features as such which are outlined for elastomers to make up for the bad readjusting properties of the sealing material PTFE. The couplings of the TE-Series offer this feature and can be used for

- especially aggressive media
- media combinations which have no common elastomeric seal
- temperatures up to +250 °C (+482 °F).
- temperatures up to -50 °C (-58 °F).

Request further information.

**Tear-away Couplings**



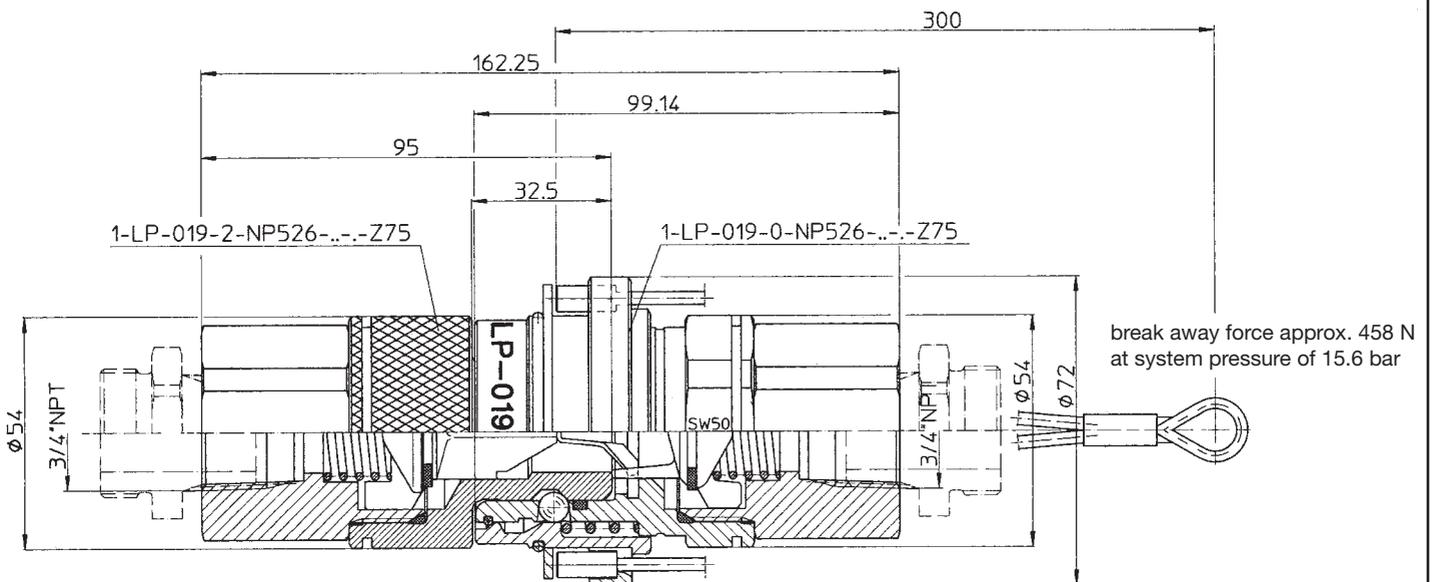
Tear-away couplings protect environment and expensive loading equipment from damage resulting from destruction of media lines at high tensile strain. Mobile facilities which are being filled, e.g. tank lorries, wagons or ships can be moved when insufficient secured or emergency situations occur, before lines were properly disconnected.

Tear-away couplings avoid damages by

- automatic disconnection on tensile loads, thus preserving the loading equipment from damages
- sealing both line sides automatically during disconnection and consequently prevent medium loss
- releasing alarm through integrated proximity switches.

Contrary to many other kinds of safety devices against “tear away”, these quick connect couplings are re-usable and can be tested on all functions at any time.

**Approved break-away couplings for LPG stations**



To avoid release of gas to atmosphere by hose rupture because of prematurely moving vehicles, the requirement for quick disconnection points was established. With certificate of 3/9/2001 the German Federal Authority TÜV approved the break-away coupling LP-019-Z75 in stainless steel and brass to be a suitable safety service.

Approval No. **TÜV.ST.BCD.006 – 99.LPG.PN 40**

Multi-couplings provide for simultaneous manual or automated operation of several pneumatic, hydraulic or electrical lines. They are used wherever several lines need to be connected quickly and safely. Multi-connectors and/or docking systems comprise a fixed and a free half. The free half moves to the fixed half during the connection process. The respective arrangement of the coupling-elements in the coupling-system is designed to match the respective requirements. Automated production, testing, controlling and operating processes are preferred applications for multi-couplings and docking systems. Guide systems ensure exact alignment.

The fixed arrangement of the connector elements on the coupling-system eliminates the risk of false connections.

## Manually Operated Multi-Couplings

without operating assistance

with operating assistance

 <p><b>Case Design Fluidic-Type</b> 90405, 90408, 90410</p>	 <p><b>Compact Design</b> with central locking on the inside or outside Type 91013</p>	 <p><b>Coaxial Coupling</b> Type 91006</p>	 <p><b>Plate Mounted Design</b> Modular design, colour labelling and/or coding available to prevent false connections Type 90039</p>	 <p><b>Plate Mounted Design</b> In arrangements of several multi-connectors: colour labelling and/or coding available to prevent false connections Type 90635</p>	 <p><b>Compact Design:</b> Screw coupling with interior plug elements Type 91509</p>
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## Docking Systems (servo-assisted)

without feed unit

with feed unit

for robots

 <p><b>Without mechanical locking</b> coupling and uncoupling by way of on-site rod actuators or mechanical actuators Type 90868</p>	 <p><b>With mechanical locking</b> coupling and uncoupling by way of on-site rod actuators or mechanical actuators Type 91522</p>	 <p><b>Push-in technology</b> coupling and uncoupling via rod actuators Type 91369</p>	 <p><b>Pull-in technology</b> Force-neutral coupling and uncoupling thanks to pulling actuator Type 91442</p>	 <p><b>Tool changer system</b> Tool Master for industrial robots Type 91489</p>
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WALTHER-PRÄZISION can also provide you with complete solution for your mono- or multicouplings applications. In the range of mono-couplings, this includes ready for use compressed air sets, complete refuelling systems for hydrogen gas and sampling systems or, in the range of multi-couplings, "Toolmaster" systems, enabling fast tool changes, for example. For multi-couplings and docking systems control components and protectors for adverse working conditions are available.

**Advantages:**

- Fewer interfaces (all from one source)
- Perfectly compatible components
- Tested as a system



WALTHER TOOL MASTER  
Tool changing system with parking station



WALTHER pneumatic set (WALPRESTA-program)  
consisting of spiral hose, tool coupling and blow gun



WALTHER safety sampling unit  
type 95-005

WALTHER high pressure refuelling system with emergency realase coupling series HG



WALTHER multi coupling system  
with hose bundle (HFL)





# International Partners



With more than 20 bases in Germany and more than 30 further partners abroad WALTHERR-PRÄZISION is always close by.

You will find all current addresses on the internet under:

[www.walther-praezision.de/english/index.html](http://www.walther-praezision.de/english/index.html)



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