ONE VISION. ZERO EMISSIONS.





TABLE OF CONTENTS

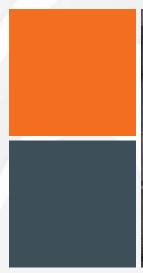


General	5 - 10
Mounting instructions with torque table	11 - 15
DILO couplings for SF ₆ -switchgear	17 - 76
Couplings DN6	17 - 25
Couplings DN7	27 - 32
Couplings DN8	33 - 42
Couplings DN12	43 - 56
Couplings DN20	57 - 70
Couplings DN40	 71 - 76
DILO soldering unions	77 - 84
DILO ball valves	85 - 89
DILO hoses	91 - 99
DILO transition pieces and adapters	101 - 132
DILO SF ₆ bottle connections	133 - 146

C 3099-07

GENERAL







DILO offers the widest valves and couplings product range in the GENERAL world. Whether for medium voltage switchgear, high voltage switchgear or gas-insulated lines (GIL) our products always meet your requirements.

The DILO sealing principle prevents the loss of SF₆ gas and moisture from penetrating the ${\rm SF_6}$ gas system. DILO couplings will eliminate the loss of SF₆ gas by incorrect gas handling. Thanks to their reliability, quality and durability DILO couplings are the world's most widely used connecting system for SF₆ switchgear.

The DILO seal principle	06
Explanation of DILO-pressure stages	07
Surface treatment and cleaning	08
Quality assurance	09
Symbols for valves and fittings	10
Mounting instructions	11-14
Torque table	15

5 C 3099-07

THE DILO SEAL PRINCIPLE

DILO is a seal principle without intermediate seal in the form of groove and tongue with little depth of immersion. This principle guarantees permanent tightness at high static and dynamic alternating stresses which might result from vacuum and pressure in connection with high temperatures and vibrations inside the tubing systems.

Sealing in accordance with the DILO principle is effected by direct contact of the sealing profiles of the groove and tongue parts. The different radii of curvature of groove and tongue are in a certain relation to each other.

Thus, two ring-shaped sealing areas are produced which create high stability.

The additional braking surface prevents plastic deformations at the ring-shaped sealing areas.

DILO fittings are easy to assemble and require no maintenance. They can loosened and re-connected as often as desired. Thus, the re-use of the DILO seal is guaranteed. Due to the little depth of immersion of DILO groove and tongue the tubes can be immediately pulled out laterally after loosing the clamping nut.

The DILO seal principle



open coupling

DILO couplings allow a connection to be made by simply screwing the two coupling parts together. Before the metal to metal seal closes the pressure and vacuum tight coupling is sealed inside by means of an O-ring. When loosening the coupling parts again the same O-ring prevents gas loss whilst the self seal valves close.



closed coupling

Advantages of application

- Self-closing coupling system
- Pressure and vacuum-tight even when coupling and uncoupling
- Leak rate $\leq 1 \times 10^{-8}$ mbar I/s (DN6 DN20)*
- Permanent tightness even when frequently connected and disconnected
- Applicable up to PN 64 bar

- Suitable for temperatures from -60 °C to +80 °C
- Direct connection to DILO service carts without adapter
- Resistant to vibrations without any additional protection
- Available in different materials even for outdoor switchgear

EXPLANATION OF DILO-PRESSURE STAGES



Series	ML1	Valves	Accessories	Hoses
Pressure stage up to	PN2 - PN64		PN 25 / 40 / 64	

DILO-Type explanation

Explanation of abbreviations used in our catalogue

ML1 Soldering-stub unions with metric connecting dimensions

Illustration of different structural shapes of DILO-soldering unions

A Soldering union



B Screw-in stub-soldering union



M Gauge connecting union



Material standards

Material No. DIN	Material designation	DILO material code letter
1.4571	X6CrNiMoTi17-12-2	С
CW614N	CuZn39Pb3	Р
EN AW-6082	EN AW-ALSi1MgMn	Т
1.4305	X10CrNiS189	Е
CW713R	CuZn37Mn3Al2PbSi	Н

SURFACE TREATMENT AND CLEANING

Before dispatch or storage, the finished valves and fittings must be treated as follows:

- austenitic material is cleaned
- brass material is cleaned
- aluminium material is anodised, the thread is lubricated with Molykote

Version

Version of the screw-in stub with O-ring sealing (can also be supplied in special design with edge acc. to DIN 3852-1 form B and DIN EN ISO 1179-4 form B).

Design of the screw-in holes for the isometric thread as well as for Whitworth-pipe threads according to DIN 3852-1 form X and DIN EN ISO 1179-1.

Technical data of threads

Type of thread	Standards	Code designation	Illustration
Metric thread	DIN 13 thread angle 60°	М	
Whitworth thread	DIN/ISO 228 thread angle 55°	G	

Soldering process

DILO-soldering unions can be soldered by the well-known "autogenous" soldering techniques.

Packing

Parts are all hermetically sealed in PVC to ensure they are kept free of dust and dirt. The unions are protected against damage by plastic caps.

O-ring and rubber seal

For all coupling parts an EPDM rubber seal is used as sealing material.

QUALITY ASSURANCE



Quality assurance takes the first place within the DILO-organization. Our approved and authorized experts permanently check the material carefully. The entire raw material is ordered according to DILO approval-/ order regulations. Thus it is guaranteed that all necessary tests have been carried out which is confirmed in test certificates according to EN 10204 (3.1).

By marking of the raw materials and finished products, the identity of materials is guaranteed. Our fittings are TÜV-approved. Furthermore a certificate according to ISO 9001:2015 is available.

Approvals and certifications provided by DILO:

DILO products have been approved by international classification organisations such as:

- Certification according to ISO 9001:2015
- HP0 approval as pressure equipment manufacturer
- Production control in accordance with 2014/68/EU regulations



C 3099-07

SYMBOLS FOR VALVES AND FITTINGS

Soldering stub soldering-union





Blanking disk





Screw-in stub-soldering union





Transition piece





Gauge connection union





Ball valve





Coupled coupling





Coupling halfs







Hose





MOUNTING INSTRUCTIONS



General

- Specify the pipe lenghts exactly and cut off rectangularly.
- Burr the pipe extremity and clean it metallically bright.
- Apply the soldering flux where soldering is to be carried out.
- When soldering, use the auxiliary means recommended by DILO and observe the instructions of the soldering materials supplier.
- Do not touch the soldered parts until the solder has solidified and cooled down (Do not quench the soldering area with water).
- Remove the soldering material by rinsing with water and by pickling is.
- Dry union before mounting.
- When mounting only use the connecting components not being damaged by impacts or by overflowed soldering material.
- It must be strictly observed that the tubing system is tension-free supported and that the tubing sections align to each other. Possible divergences can be straightened with the DILO straightening tool.
- Before final mounting, check that all DILO-groove and tongue parts are clear of impurities.
- In order to reduce the friction, the tube unions should be greased with suitable grease at the threads and contact surfaces of the clamping nut, especially when made of austenitic materials. Thus the torque is better converted into axial force and galling of the threads is avoided. When selecting the grease, observe the operating temperatures, the media, the corrosive degree and the materials.
- A fast and strong tightening of the clamping nut guarantees perfect tightness. (Observe torque)

The standard version of the screw-in stub of the DILO screw-in unions is equipped with O-ring sealing.

When mounting DILO screw-in unions we recommend using softmetal-sealings (e. g. copper plates opposite the housing or block) for sealing of screw-in stub DIN 3852-1 form B and DIN EN ISO 1179-4.

When all these instructions are observed the mounting will be simple and time-saving. Pipes which are too short or not precisely aligned will require extra work.

C 3100-06

MOUNTING INSTRUCTIONS

Mounting illustration:



1. Rectangularly saw off the pipes



2. Deburring of the pipe extremities inside and outside



3. Clean to a bright metallic finish



4. Apply the soldering flux on the pipe



5. Apply the soldering flux at the part to be soldered



6. Use of auxiliary materials

12

MOUNTING INSTRUCTIONS

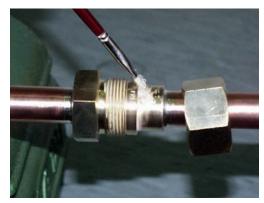




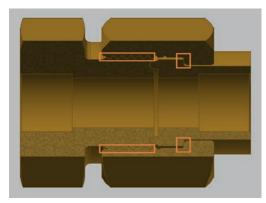
7. Observe the instructions of the soldering materials supplier



8. Before assembling clean the DILO tongue and groove part



9. Lubricate with appropriate lubricants



10. Lubricating points at a DILO tube union



11. Tighten fast and strongly the clamping nut by counteracting force according to torque table



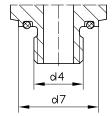
12. A screw in plug is sealed into a housing or block with an O ring or copper seal ring.

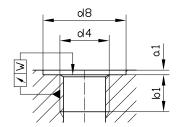
MOUNTING EXAMPLE

Screw-in stub with 0-ring sealing

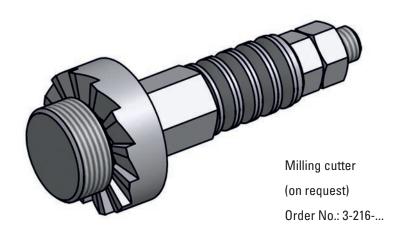
Torque see torque diagram Screw-in thread

Screw-in hole see table
Make screw-in hole according to DIN 3852-1form X and
DIN EN ISO 1179-1
Use milling cutter for tight seat





DN	d4	d7	d8	a1	b1	W
8	M16 x 1,5 G 3/8 A	26	27	1,5	14	0,1
12	G 1/2 A	36	37	2,5	16	0,1
20	M33 x 2 G 1 A	49	50	2,5	20	0,2
40	G 1 1/2 A	65	66	2,5	24	0,2



C 3100-06





DILO profile connection				
Tube diameters	Wrench size	Thread	Material	Torque Nm
AD10	22/24	M20x1,5	Stainless steel / Brass	40
ADAE	27/32	M26x1,5	AL	60
AD15			Stainless steel / Brass	70
ADOO	41	M36x2	AL	80
AD22	41	IVI30XZ	Stainless steel / Brass	120
AD42	60/65	M56x2	Stainless steel / Brass	150
AD54	75/80	M72x2	Stainless steel / Brass	150

Screw-in thread		
Screw-in thread	Material	Torque Nm
G1/8	Brass	15
G1/4	AL / Brass	15
G1/4 / 1/4 NPT safety valve	Brass	15
G3/8	AL	40
03/8	Stainless steel / Brass	40
G3/8 safety valve	Brass	25
	AL	60
G1/2	Stainless steel / Brass	70
G1/2 safety valve	Brass	35
G1A	AL	120
UIA	Stainless steel / Brass	130
041/	AL	120
G1½	Brass	140
M16x1,5	AL / Stainless steel / Brass	40
M16x1,5 safety valve	Brass	25
	AL	120
M33x2	Stainless steel / Brass	130

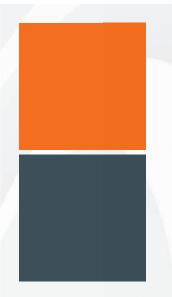
Combinatiom of coupling groove			
Nominal diameters	Тур	Material	Torque Nm
DN6	3-408-R	AL	15
DN8		AL	60
DN8		Stainless steel / Brass	70
DN12	3-888-R	AL	15
DN20		AL	110
DN20		Stainless steel / Brass	140
DN40		Stainless steel / Brass	150

Covering caps			
Nominal diameters	Wrench size	Material	Torque Nm
DN8	24	AL	20
DN20	30	AL	40
DN40	50	AL	40

C 3100-06

DILO COUPLINGS DN6









The coupling allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an 0-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO couplings DN6

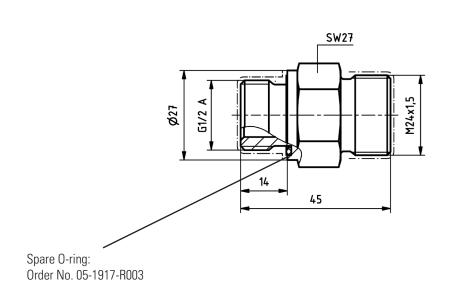
•	3-408-R105	Coupling groove part / PN10 DN6	. 18
٠	3-408-R006	Flange coupling PN10 DN6	. 19
i	3-408-R009	Gauge connecting piece	20
٠	3-408-R007	Covering cap DN6	20
٠	3-408-R101	Coupling tongue part PN10 DN6	21
•	6-1161-R013	Coupling tongue part PN10 DN6 with connecting coupling for measuring device	22
i	3-408-R021/R022	Soldering stub connection DN6	23
•	3-408-R020	Gauge connecting coupling DN6	23
•	3-419-R004	Transition piece to DN8 connections	. 24
	3-419-R003	Adapter piece	25

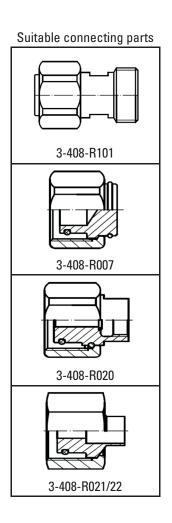
PN10 DN6 COUPLING GROOVE PART

Order No.: 3-408-R105 T

Material: AL







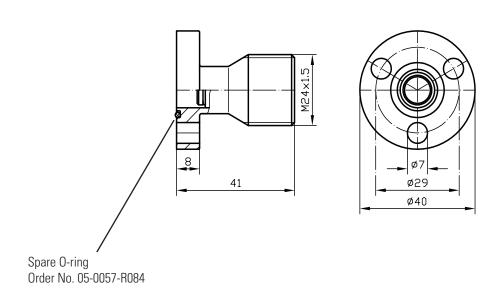
PN10 DN6 FLANGE COUPLING

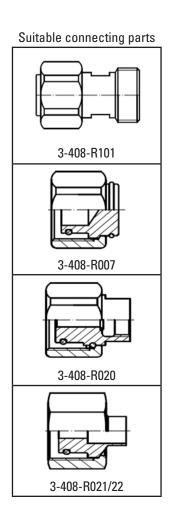


Order No.: 3-408-R006 T

Material: AL







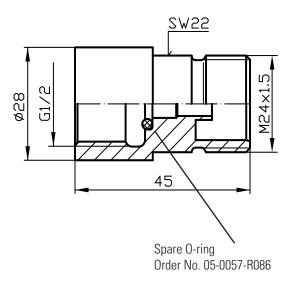
Other flanges are available on request.

PN10 DN6 GAUGE CONNECTING PIECE

Order No.: 3-408-R009 T

Material: AL



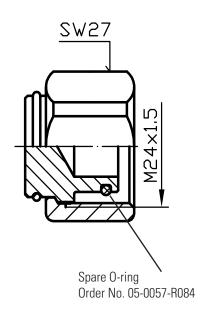


PN10 DN6 COVERING CAP

Order No.: 3-408-R007 T

Material: AL





PN10 DN6 COUPLING TONGUE PART

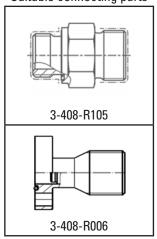


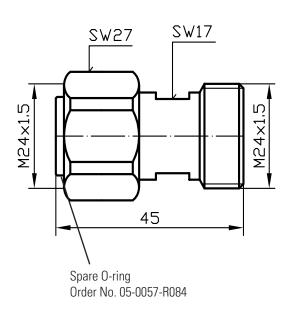
Order No.: 3-408-R101 T

Material: AL



Suitable connecting parts





3-408-R020 3-408-R020 3-419-R004

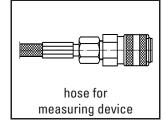
PN10 DN6

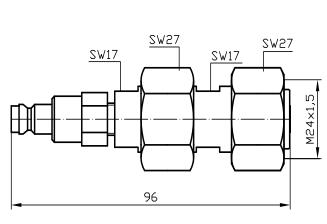
COUPLING TONGUE PART with connecting coupling for measuring device

Order No.: 6-1161-R013 Material: AL / Brass

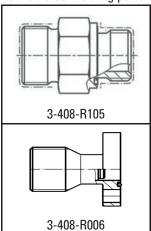


Suitable connecting parts





Suitable connecting parts



PN10 DN6 SOLDERING STUB CONNECTION

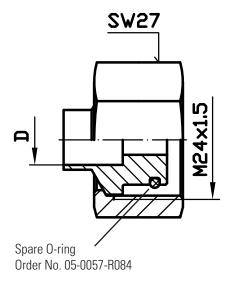


Order No.: 3-408-R021 C D = 10 mm

3-408-R022 C D = 6 mm

Material: Stainless steel



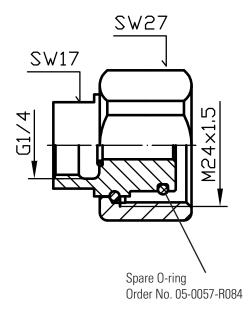


PN10 DN6 GAUGE CONNECTING COUPLING

Order No.: 3-408-R020 T

Material: AL

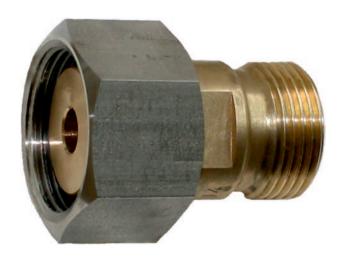


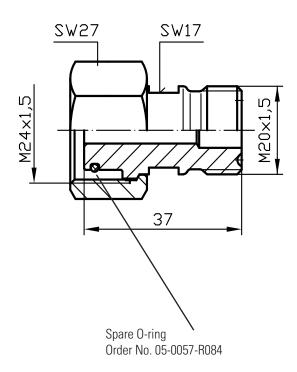


PN10 DN6 TRANSITION PIECE TO DN8 CONNECTIONS

Order No.: 3-419-R004

Material: Stainless steel / Brass





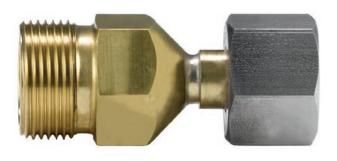
C 3101-07

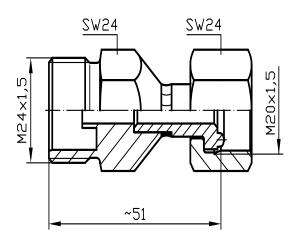




Order No.: 3-419-R003

Material: Stainless steel / Brass





DILO COUPLINGS DN7





The plug connection allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an O-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO couplings DN7

C 3102-04

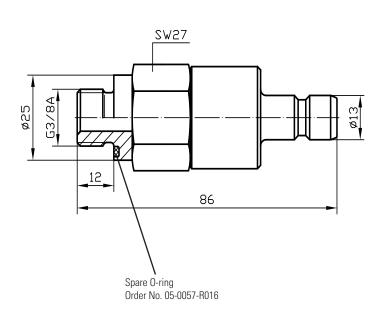
3-308-R003	Plug connection groove part PN30 DN728
3-308-R016	Covering cap for plug connection groove part PN30 DN729
3-308-R002	Plug connection tongue part PN30 DN730
6-11161-R015	Plug connection tongue part PN30 DN7 with connecting coupling for measuring device
3-308-R006	Covering cap for plug connection tongue part PN30 DN732

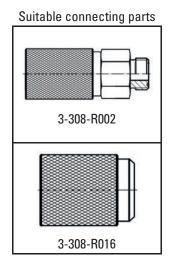
PN30 DN7 PLUG CONNECTION GROOVE PART

Order No.: 3-308-R003 T

Material: AL







C 3102-04

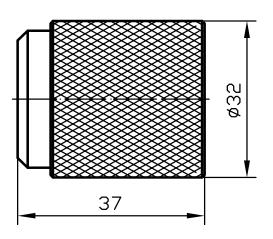
PN30 DN7 COVERING CAP FOR PLUG CONNECTION GROOVE PART

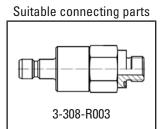


Order No.: 3-308-R016 T

Material: AL







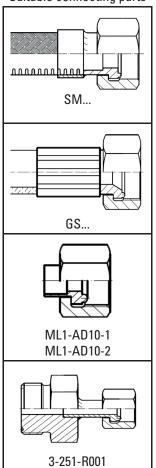
PN30 DN7 PLUG CONNECTION TONGUE PART

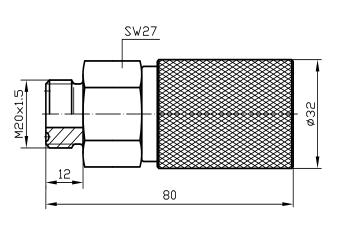
Order No.: 3-308-R002 T

Material: AL

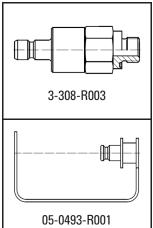


Suitable connecting parts









PN30 DN7 PLUG CONNECTION TONGUE PART with connecting coupling for measuring device

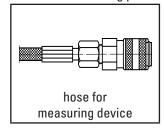


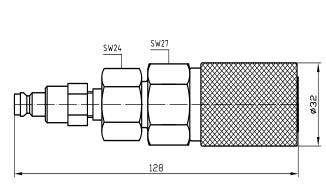
Order No.: 6-1161-R015

Material AL

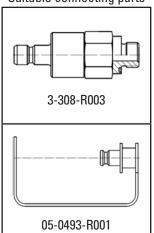


Suitable connecting parts





Suitable connecting parts

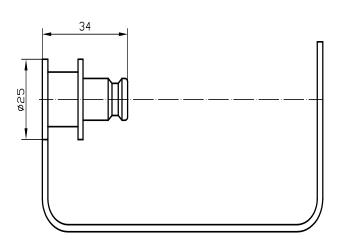


PN30 DN7 COVERING CAP FOR PLUG CONNECTION TONGUE PART

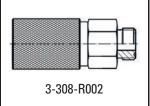
Order No.: 05-0493-R001

Material: PVC









C 3102-04

DILO COUPLINGS DN8









The coupling allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an 0-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

In special version these couplings are also available for a temperature range of -60 $^{\circ}$ C to +80 $^{\circ}$ C.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO couplings DN8

VK/A-02/8	DILO couplings DN8 / PN64 DN8	34
VK/B(G)-03/8	Coupling groove part PN64 DN8 with O-ring	35
SK-272-R001	Flange coupling PN64 DN8	36
SK-272-R003	Flange coupling PN64 DN8	37
3-778-R001	Flange coupling PN64 DN8 with 2-hole flange	38
VK/KN-04/8	Covering cap für coupling groove part PN64 DN8	39
3VK/F-02/8	Coupling tongue part PN64 DN8	40
6-1161-R011	Coupling tongue part PN64 DN8 with connecting coupling for measuring device	41
SK-372-R020/	Gauge connecting coupling	

PN64 DN8......42

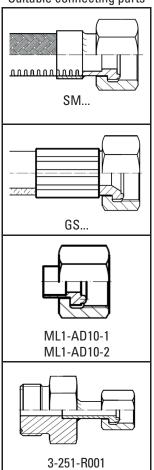
R021

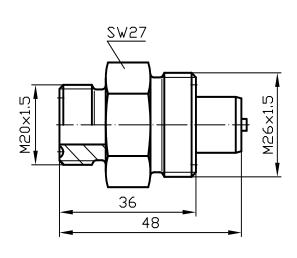
PN64 DN8 COUPLING GROOVE PART



Order No.	Material
VK/A-02/8 T	AL
VK/A-02/8 E	Stainless steel
VK/A-02/8 P	Brass

Suitable connecting parts





Suitable connecting parts SK-372-R... VK/F-02/8

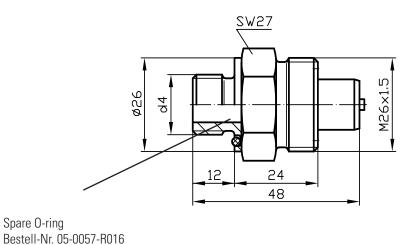
VK/KN-04/8

PN64 DN8 COUPLING GROOVE PART WITH O-RING





d4	Order No.	Material
M16 x 1,5	VK/B-03/8 T	AL
M16 x 1,5	VK/B-03/8 E	Stainless steel
M16 x 1,5	VK/B-03/8 H	Brass
G 3/8 A	VK/BG-03/8 T	AL
G 3/8 A	VK/BG-03/8 E	Stainless steel
G 3/8 A	VK/BG-03/8 H	Brass



SK-372-R...

VK/F-02/8

VK/KN-04/8

Suitable connecting parts

In special version the screw-in thread can also be supplied with sealing edge according to DIN 3852-1 and DIN EN ISO 1179.

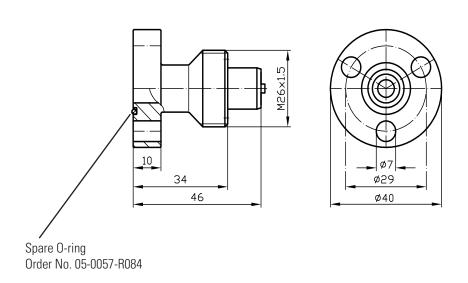
C 3103-04 35

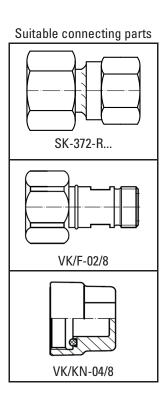
PN64 DN8 FLANGE COUPLING

Order No.: SK-272-R001 T

Material: AL







Other flanges are available on request.

36

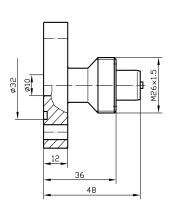
PN64 DN8 FLANGE COUPLING

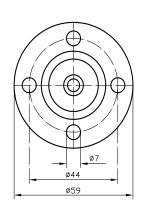


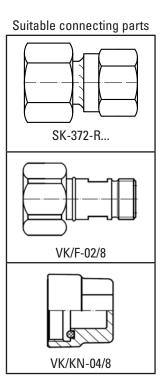
Order No.: SK-272-R003 T

Material: AL









Other flanges are available on request.

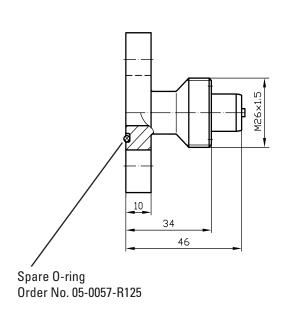
C 3103-04

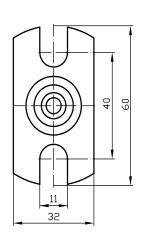
PN64 DN8 FLANGE COUPLING WITH 2-HOLE FLANGE

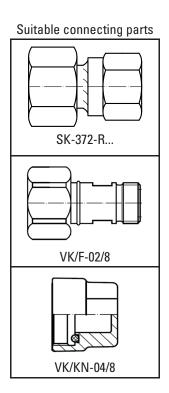
Order No.: 3-778-R001 T

Material: AL









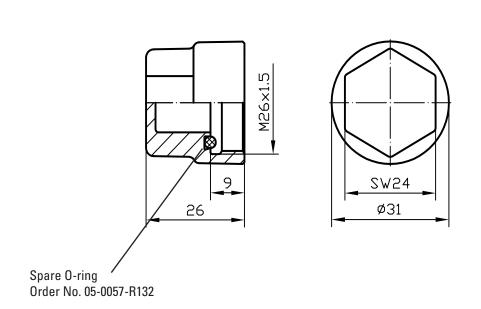
Other flanges are available on request.

PN64 DN8 COVERING CAP FOR COUPLING GROOVE PART





Order No.	Material
VK/KN-04/8 T	AL
VK/KN-04/8 E	Stainless steel



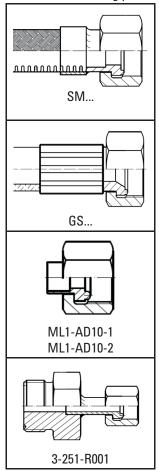
3-778-R001 SK-272-R001 / R003 VK/A-02/8 VK/B-03/8 VK/BG-03/8

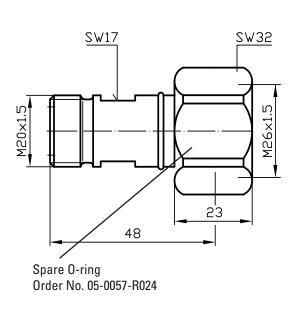
PN64 DN8 COUPLING TONGUE PART



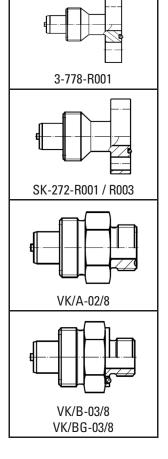
Order No.	Material
VK/F-02/8 T	AL
VK/F-02/8 E	Stainless steel
VK/F-02/8 P	Brass

Suitable connecting parts





Suitable connecting parts

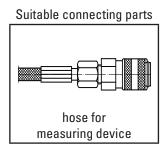


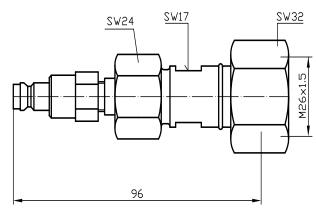
PN35 DN8 COUPLING TONGUE PART with connecting coupling for measuring device

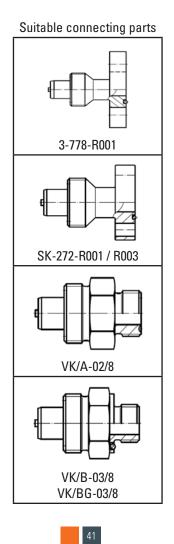


Order No.: 6-1161-R011 Material: Brass





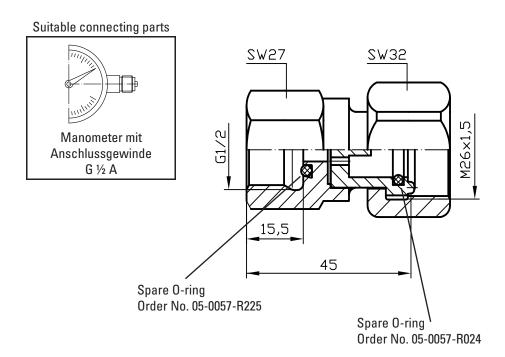




PN64 DN8 GAUGE CONNECTING COUPLING



Order No.	Material
SK-372-R020 P	Brass
SK-372-R021 C	Stainless steel



Description

The gauge connecting coupling serves as connecting piece to a coupling groove part DN8. When coupling, a pin in the gauge connecting coupling opens the flow of the opposite coupling groove part (forced opening). This allows to read the present operating pressure on the screwed-in gauge. When disconnecting, the concial nipple of the groove part is closed by spring load (pressure and vacuum tight). If the gauge connecting coupling is not connected the gauge shows "zero pressure". The connecting coupling allows to install the gauge in any required position (rotatable 360°)

3-778-R001 SK-272-R001 VK/A-02/8 VK/B-03/8 VK/BG-03/8

DILO COUPLINGS DN12





The coupling allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an 0-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO couplings DN12

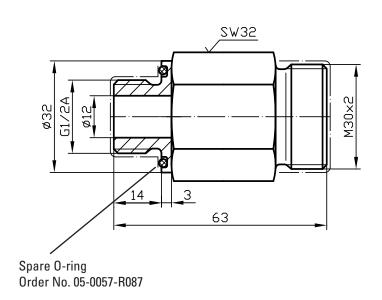
3-888-R005	Coupling groove part / BG PN10 DN12	. 44
3-888-R007	Covering cap	.45
3-888-R001	Coupling tongue part PN10 DN12	. 46
6-1161-R014	Coupling tongue part PN10 DN12 with connecting coupling for measuring device	47
3-888-R031	Gauge connecting coupling PN10 DN12	. 48
3-888-R009	Gauge connecting coupling PN10 DN12	. 49

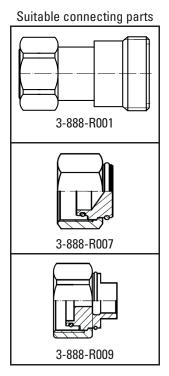
PN10 DN12 COUPLING GROOVE PART

Order No.: 3-888-R005 T

Material: AL







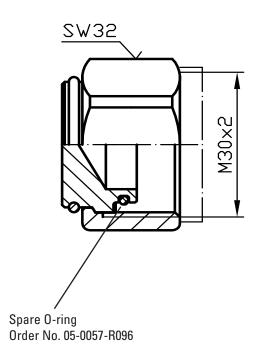




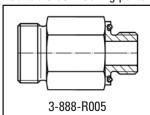
Order No.: 3-888-R007 T

Material: AL





Suitable connecting parts

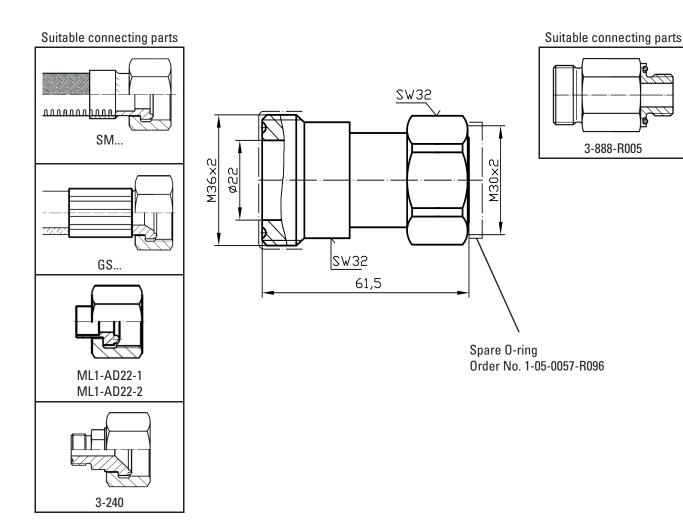


PN10 DN12 COUPLING TONGUE PART

Order No.: 3-888-R001 T

Material: AL







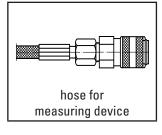


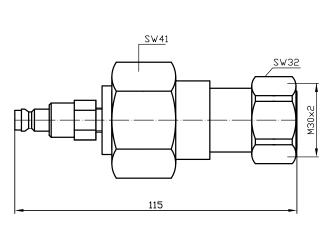
Order No.: 6-1161-R014

Material: AL



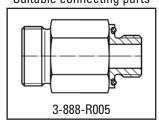
Suitable connecting parts





C 3104-07

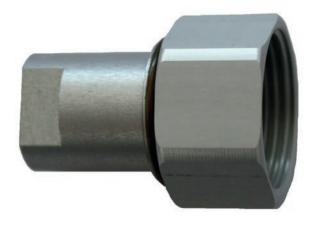
Suitable connecting parts

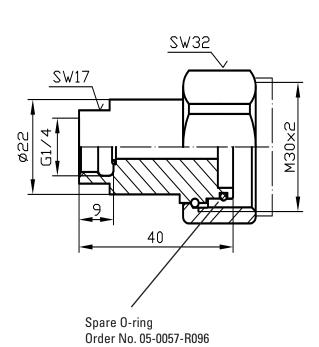


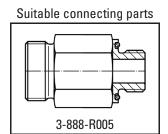
PN10 DN12 GAUGE CONNECTING COUPLING

Order No.: 3-888-R031 T

Material: AL







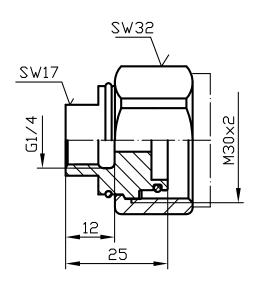
PN10 DN12 GAUGE CONNECTING COUPLING

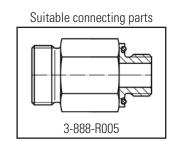


Order No.: 3-888-R009 T

Material: AL







DILO PLUG-IN COUPLINGS DN12





The plug-in connection allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an O-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO Plug-in couplings DN12

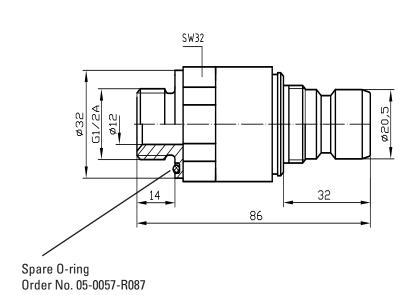
3 -1095-R005	Plug-in connection groove part PN8 DN12	. 52
3 -1095-R016	Covering cap for plug-in connection groove part PN8 DN12	. 53
3 -1095-R001	Plug-in connection tongue part PN8 DN12	. 54
3 -1095-R002	Plug-in connection tongue part PN8 DN12 with connecting coupling for measuring device	.55
3 -1095-R017	Density gauge connection PN8 DN12	. 56

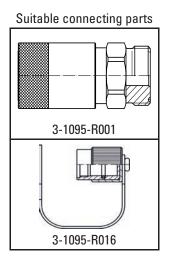
PN8 DN12 PLUG-IN CONNECTION GROOVE PART

Order No.: 3-1095-R005 T

Material: AL







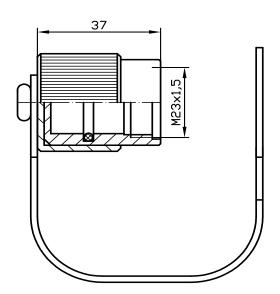
PN8 DN12 COVERING CAP FOR PLUG-IN CONNECTION GROOVE PART

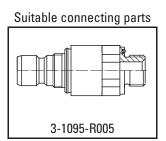


Order No.: 3-1095-R016 T

Material: AL







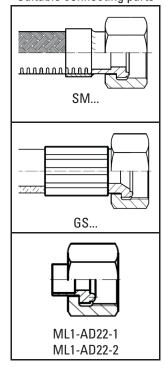
PN8 DN12 PLUG-IN CONNECTION TONGUE PART

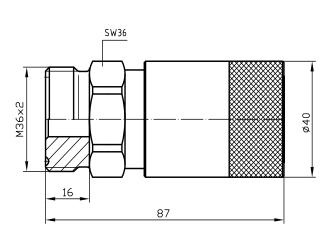
Order No.: 3-1095-R001 T

Material: AL

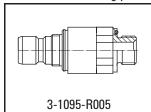


Suitable connecting parts









PN8 DN12 PLUG-IN CONNECTION TONGUE PART with connecting coupling for measuring device

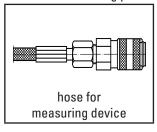


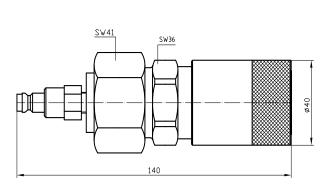
Order No.: 3-1095-R002 T

Material: AL



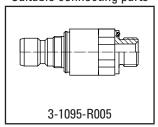
Suitable connecting parts





C 3104-07

Suitable connecting parts



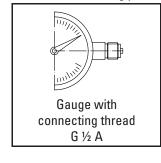
PN8 DN12 DENSITY GAUGE CONNECTION

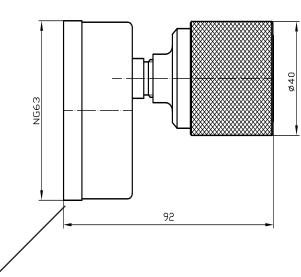
Order No.: 3-1095-R017 T

Material: AL

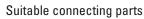


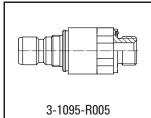






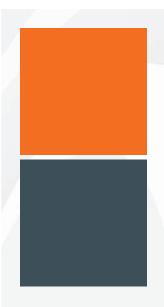
Gauge is not included in the delivery





DILO COUPLINGS DN20









The coupling allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an 0-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

In special version these couplings are also available for a temperature range of -60 $^{\circ}$ C to +80 $^{\circ}$ C.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO couplings DN20

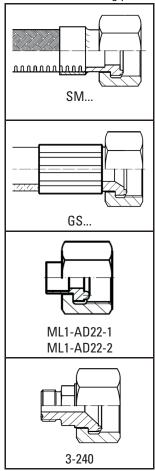
VK/A-02/20	Coupling groove part PN64 DN20 58
VK/B(G)-03/20	Coupling groove part PN64 DN20 with O-ring59
VK/FL-01/20	Flange coupling PN64 DN2060
3 -777-R001	Flange coupling PN64 DN20 with 2-hole flange61
3 -685-R001	Flange coupling PN64 DN20 62
VK/KN-04/20	Covering cap for coupling groove part PN64 DN2063
VK/F-02/20	Coupling tongue part PN64 DN2064
3 -1121-R003	Quick coupling DN2065
• 6-1161-R012	Coupling tongue part PN64 DN20 with connecting coupling for 66 measuring device
6 -1206-R001	Coupling tongue part PN64 DN2067
6 -1092-R006	Transition piece PN64 DN2068
• 6-1281-R001	Coupling tongue part with air filter69
SK-282-R020	Gauge connecting coupling PN64 DN2070

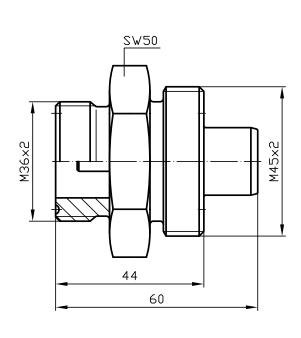
PN64 DN20 COUPLING GROOVE PART

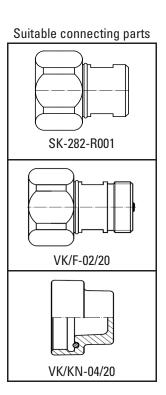


Order No.	Material
VK/A-02/20 T	AL
VK/A-02/20 P	Brass
VK/A-02/20 E	Stainless steel

Suitable connecting parts





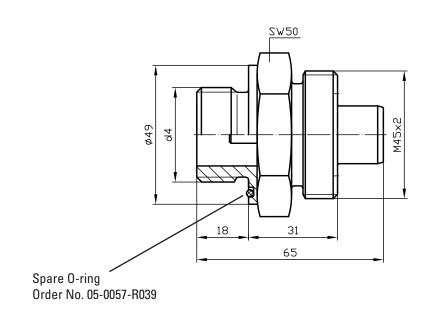


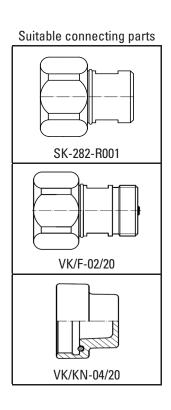
PN64 DN20 COUPLING GROOVE PART WITH O-RING





d4	Order No.	Material
M33 x 2	VK/B-03/20 T	AL
M33 x 2	VK/B-03/20 E	Stainless steel
M33 x 2	VK/B-03/20 P	Brass
G 1 A	VK/BG-03/20 T	AL
G 1 A	VK/BG-03/20 E	Stainless steel
G 1 A	VK/BG-03/20 P	Brass



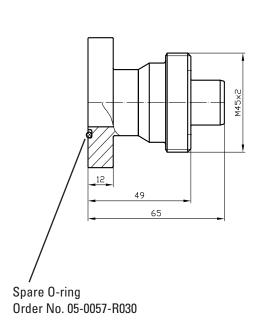


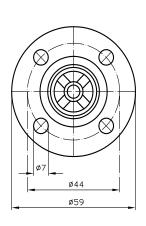
In special version the screw-in thread can also be supplied with sealing edge according to DIN 3852-1 and DIN EN ISO 1179.

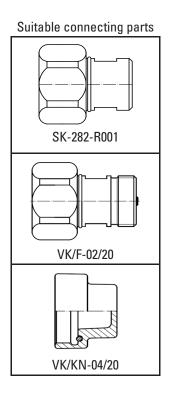
PN64 DN20 FLANGE COUPLING



Order No.	Material
VK/FL-01/20 T	AL
VK/FL-01/20 E	Stainless steel







Other flanges are available on request.

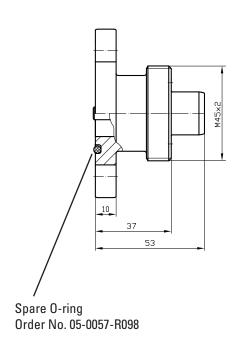
PN64 DN20 FLANGE COUPLING WITH 2-HOLE FLANGE

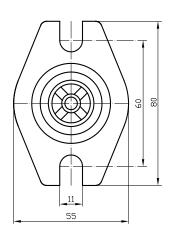


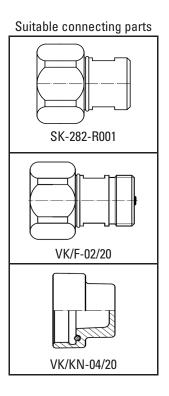
Order No.: 3-777-R001 T

Material: AL









61

Other flanges are available on request.

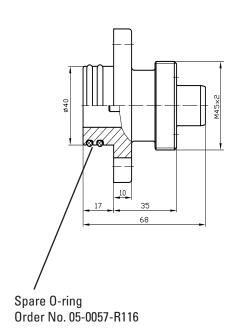
C 3105-09

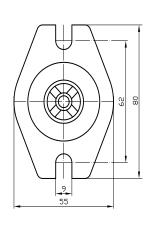
PN64 DN20 FLANGE COUPLING

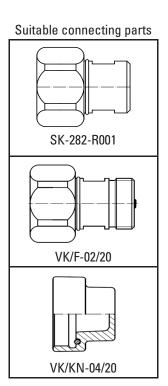
Order No.: 3-685-R001 T

Material: AL









Other flanges are available on request.

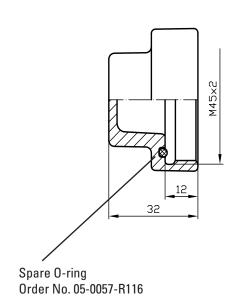
PN64 DN20 COVERING CAP FOR COUPLING GROOVE PART

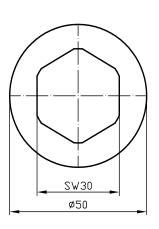




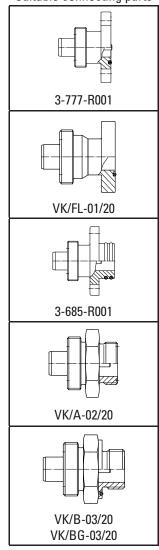


Order No.	Material
VK/KN-04/20 T	AL
VK/KN-04/20 E	Stainless steel
VK/KN-04/20 PA	Plastic material





Suitable connecting parts

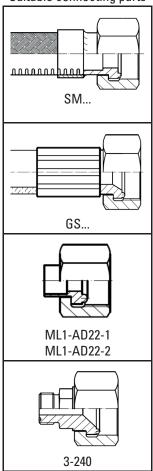


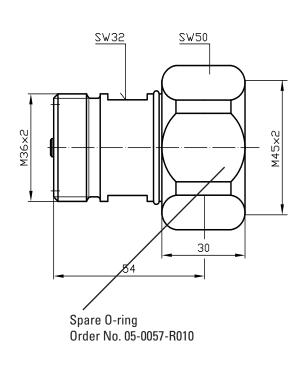
PN64 DN20 COUPLING TONGUE PART



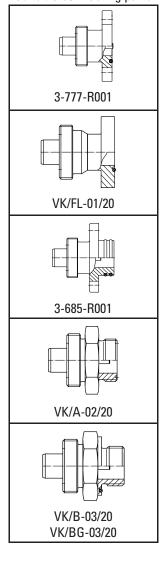
Order No.	Material
VK/F-02/20 T	AL
VK/F-02/20 E	Stainless steel
VK/F-02/20 P	Brass

Suitable connecting parts





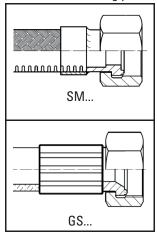
Suitable connecting parts



3-1121-R003 QUICK COUPLING DN20 / PN10



Suitable connecting parts

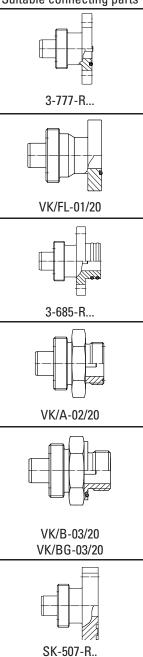




closed coupling



Suitable connecting parts



open coupling



Mount for safe fixation on the wall and as dust protection Article-No. 3-1121-R093

For easy coupling and uncoupling of hoses

The quick coupling is very useful in all fields of application where hoses have to be frequently loosened and reconnected e. g. during final tests of completely mounted GIS fields. Thanks to the clamp lock the DN20 hoses can easily be connected without any loss of SF6 gas. Thus the handling times in GIS production are shortened and productivity is increased considerably.

Important note:

The quick coupling is only compatible with DILO coupling groove parts of version 2 (additional "V2" stamp on the flange or wrench size).

Please see our product video!



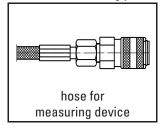
PN35 DN20

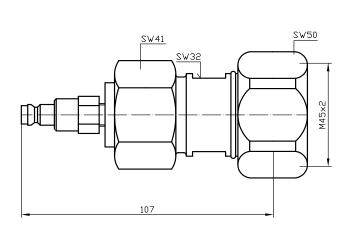
COUPLING TONGUE PART with connecting coupling for measuring device

Order No.: 6-1161-R012 Material: Messing

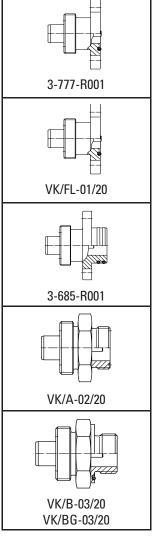


Suitable connecting parts









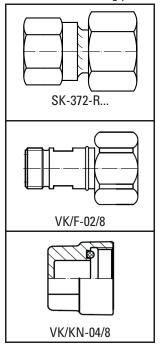
PN64 DN20 COUPLING TONGUE PART

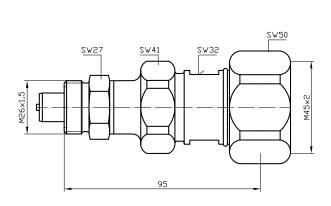


Order No.: 6-1206-R001 Material: Messing

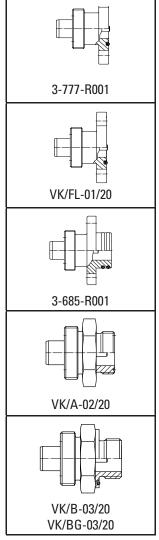


Suitable connecting parts





Suitable connecting parts

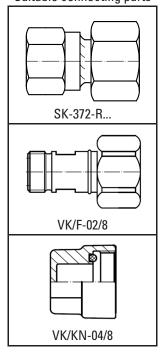


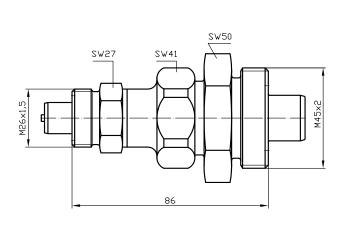
PN64 DN20 / DN8 TRANSITION PIECE

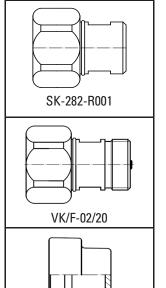
Order No.: 6-1092-R006



Suitable connecting parts







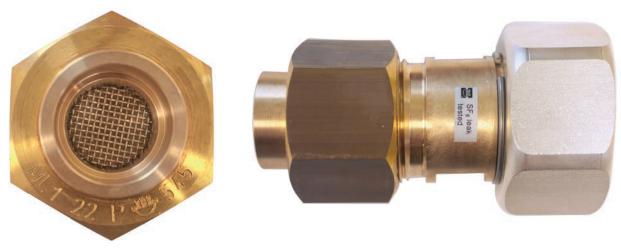
VK/KN-04/20

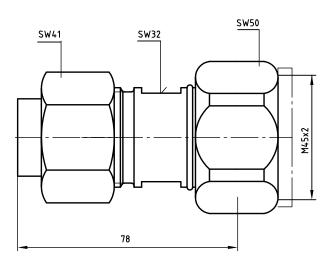
Suitable connecting parts

PN64 DN20 COUPLING TONGUE PART WITH AIR FILTER



Order No.: 6-1281-R001 Material: Brass





Description

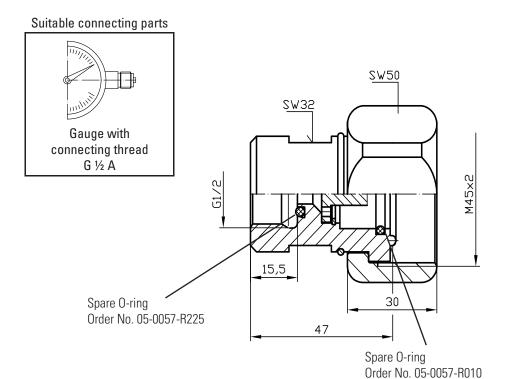
This coupling tongue part allows gas compartments which are under vacuum to be flooded with air after the SF6 gas recovery and it is not necessary to use any service cart. The integrated 100-µm filter sieve prevents dirt particles from ambient air penetrating the gas compartment during the flooding process.

3-777-R001 VK/FL-01/20 3-685-R001 VK/A-02/20 VK/B-03/20 VK/BG-03/20

PN64 DN20 GAUGE CONNECTING COUPLING



Order No.	Materials
SK-282-R020 T	AL
SK-282-R020 P	Brass



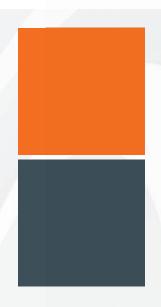
Description:

The gauge connecting coupling serves as connecting piece to a coupling groove part DN20. When coupling, a pin in the gauge connecting coupling opens the flow of the opposite coupling groove part (forced opening). This allows to read the present operating pressure on the screwed-in gauge. When disconnecting, the concial nipple of the groove part is closed by spring load (pressure and vacuum tight). If the gauge connecting coupling is not connected the gauge shows "zero pressure". The connecting coupling allows to install the gauge in any required position (rotatable 360°).

3-777-R001 3-777-R001 VK/FL-01/20 VK/A-02/20 VK/B-03/20 VK/BG-03/20 VK/BG-03/20

DILO COUPLINGS DN40









The coupling allows to establish a connection by simply fitting both coupling parts into each other. Before load relieving of the coupling seats the pressure- and vacuum tight coupling is sealed inside with an 0-ring during the coupling process. The coupling is forced to be open in coupled position. If both coupling sides are separated again the sealing seats shut off automatically.

All couplings are temperature-resistant from -40 °C to +80 °C.

DILO couplings DN40 have a leakrate of 1 x 10^{-6} mbar I/s.

The suitable connecting parts for DILO couplings must be ordered separately.

DILO couplings DN40

VK/A	-02/40

VK/	FI -(11/	41

VK/KN-01/40

- VK/F-01/40
- 6-1092-R001

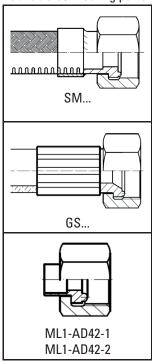
Coupling groove part PN16 DN40	72
Flange coupling PN16 DN40	73
Covering cap PN16 DN40	74
Coupling tongue part PN16 DN40	75
Transition piece PN16 DN40	76

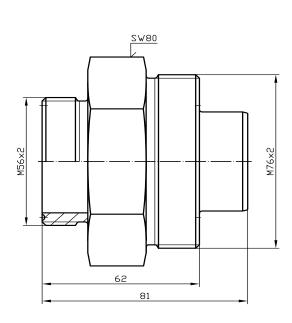
PN16 DN40 COUPLING GROOVE PART

Order No.: VK/A-02/40 E Material: Stainless steel

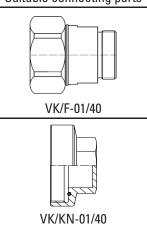


Suitable connecting parts





Suitable connecting parts

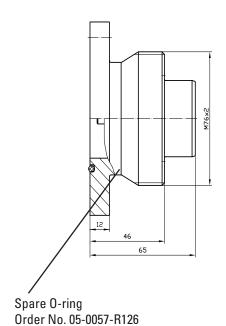


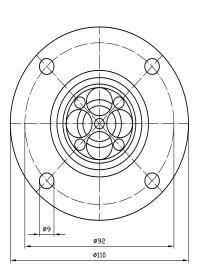
PN16 DN40 FLANGE COUPLING

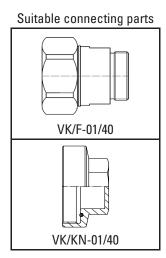


Order No.: VK/FL-01/40 E Material: Stainless steel









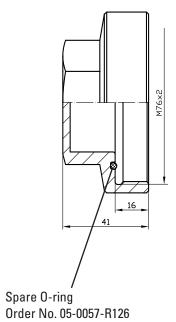
Other flanges are available on request.

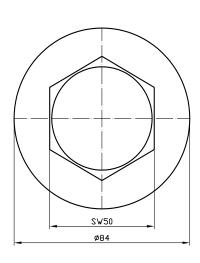
PN16 DN40 COVERING CAP

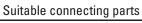
Order No.: VK/KN-01/40 T

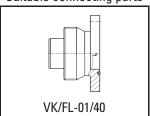
Material: AL











C 3106-08

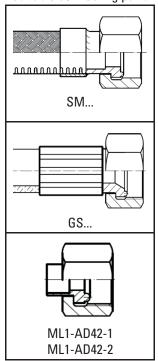
PN16 DN40 COUPLING TONGUE PART

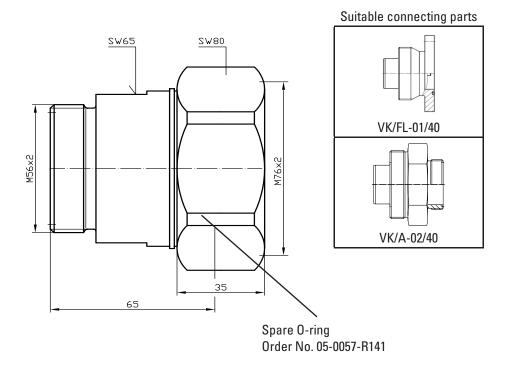


Order No.: VK/F-01/40 E Material: Stainless steel



Suitable connecting parts





C 3106-08

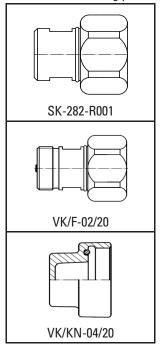
PN16 DN40 / DN20 TRANSITION PIECE

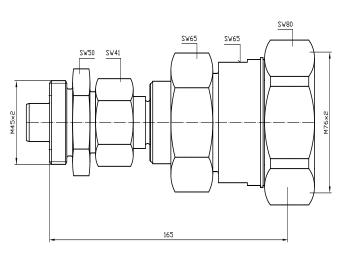
Order No.: 6-1092-R001

Material: Brass / Stainless steel

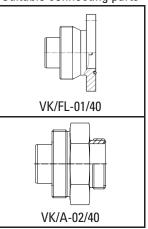


Suitable connecting parts





Suitable connecting parts



5

DILO SOLDERING UNIONS





DILO soldering unions are particularly used in factory fabrication area piping. DILO offers a very wide variety of unions. Soldering unions are available either with soldering connections on both ends where the highest vibration resistance is required or with a soldering connection on one end and a screw in thread on the other.

DILO soldering unions withstand pressures up to 64 bar.

Different materials are available for all applications.

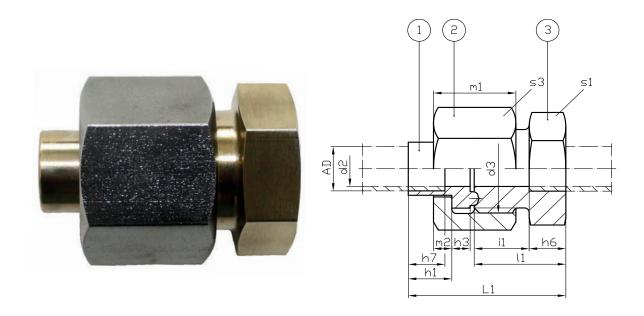
The suitable connecting parts for DILO couplings must be ordered separately.

DILO soldering unions of the ML1 series for pressures up to PN64

ML1A-AD	Soldering stub-soldering union PN64	78
ML1BO-AD	Screw-in stub-soldering union PN64 with O-ring	79
■ ML1M-AD10	Gauge union PN64 DN8	80
3 -328-R020	Gauge union PN64 DN8	81
ML18	Blanking disk PN64	82
VST03	Plug PN64	82
05-1545-R	Tee piece	83
05-1545-R	Angle piece	83
05-1545-R	Plug-in angle piece	84

PN64

SOLDERING STUB-SOLDERING UNION



Tube outside diameter Ø AD	d2	d3	L1	l1	h1	h3	h6	h7	m1	m2	i1	s1	s3	Order No.
10	8	M20x1,5	35	20	9,5	4	8	8	18	4	12	22	24	ML1A-AD10 P
10	8	M20x1,5	35	20	9,5	4	8	8	18	4	12	22	24	ML1A-AD10 C
15	12	M26x1,5	52	22	13,5	5	10	10	20	5	12	27	32	ML1A-AD15 P
22	19	M36x2	54	31	15,5	6	12	12	26	7	16	41	41	ML1A-AD22 P
22	19	M36x2	54	31	15,5	6	12	12	26	7	16	41	41	ML1A-AD22 C
42	35	M56x2	65	37	19,5	7	20	20	29	7	18	60	65	ML1A-AD42 P
42	35	M56x2	65	37	19,5	7	20	20	29	7	18	60	65	ML1A-AD42 C

Piece	Designation	Order No.	Material
1	Soldering shoulder-tongue part	ML1-AD1	P = Brass / C = Stainless steel
2	Clamping nut	ML1-AD2	P = Brass / C = Stainless steel
3	Soldering stub-groove part	ML1-AD3	P = Brass / C = Stainless steel

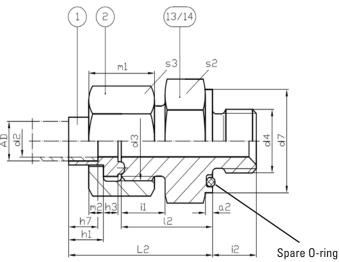
Note: For the nominal width (outside diameter 10) the clamping nut is made of stainless steel.

PN64

SCREW-IN STUB-SOLDERING UNION WITH O-RING







Order No. AD10: 05-0057-R016 AD15: 05-0057-R087

AD22: 05-0057-R039 AD42: 05-0057-R126

Tube outside diameter Ø AD	d2	d3	d4	d7	L2	12	h1	h3	h7	m1	m2	i1	i2	a2	s2	s3	Order No.
10	8	M20x1,5	M16x1,5	26	40	25	9,5	4	8	18	4	12	12	2	27	24	ML1BO-AD10 P
10	8	M20x1,5	M16x1,5	26	40	25	9,5	4	8	18	4	12	12	2	27	24	ML1BO-AD10 T
10	8	M20x1,5	G 3/8 A	26	40	25	9,5	4	8	18	4	12	12	2	27	24	ML1BO-AD10G P
10	8	M20x1,5	G 3/8 A	26	40	25	9,5	4	8	18	4	12	12	2	27	24	ML1B0-AD10G T
15	12	M26x1,5	G 1/2 A	32	47	27	13,5	5	10	20	5	12	14	3	32	32	ML1BO-AD15G P
22	19	M36x2	M33x2	49	59	36	15,5	6	12	26	7	16	18	3	50	41	ML1BO-AD22 P
22	19	M36x2	M33x2	49	59	36	15,5	6	12	26	7	16	18	3	50	41	ML1BO-AD22 T
22	19	M36x2	G 1 A	49	59	36	15,5	6	12	26	7	16	18	3	50	41	ML1BO-AD22G P
22	19	M36x2	G 1 A	49	59	36	15,5	6	12	26	7	16	18	3	50	41	ML1BO-AD22G T
42	35	M56x2	G 1½ A	65	69	41	19,5	7	20	29	7	18	22	3	65	65	ML1BO-AD42G P

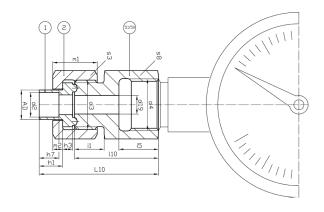
Piece	Designation	Order No.	Material
1	Soldering shoulder-tongue part	ML1-AD1	P = Brass / C = Stainless steel
2	Clamping nut	ML1-AD2	P = Brass / C = Stainless steel
13	Screw-in stub (M16x1,5 / M33x2)	ML1-AD13	P = Brass / T = AL
14	Screw-in stub (G 3/8 A / G ½ A / G 1 A / G 1½ A)	ML1-AD14	P = Brass / T = AL

Note: For the nominal width (outside diameter 10) the clamping nut is made of stainless steel. Regarding material AL only part 13 or 14 is made of AL, part 1 and 2 are made of stainless steel.

In special version the screw-in thread can also be supplied with sealing edge according to DIN 3852-1 and DIN EN ISO 1179.

PN64 **GAUGE UNION**





Tube outside diameter Ø AD	d2	d3	d4	d19	L10	l10	h1	h3	h7	m1	m2	i1	i5	s3	s8	Order No.
10	8	M20x1,5	G 1/2	7,5	49	34	9,5	4	8	18	4	12	16	24	24	ML1M-AD10/51
10	8	M20x1,5	G 1/4	5,5	44	29	9,5	4	8	18	4	12	13	24	22	ML1M-AD10/59

Piece	Designation	Order No.	Material
1	Soldering shoulder-tongue part	ML1-AD10-1 P	Brass
2	Clamping nut	ML1-AD10-2 C	Stainless steel
51	Gauge connecting piece	M1-10-51 P	Brass
59	Gauge connecting piece	M1-10-59 P	Brass

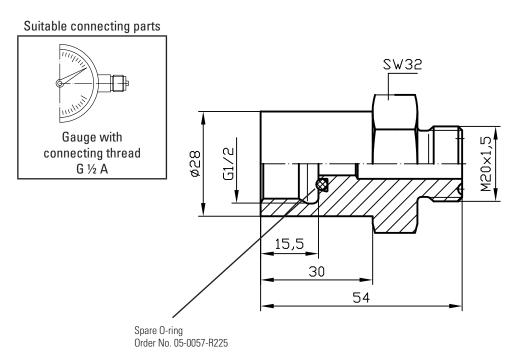
C 3107-07

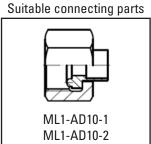




Order No.: 3-328-R020 P Material: Brass

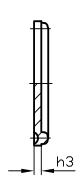


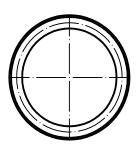




PN64 BLANKING DISK



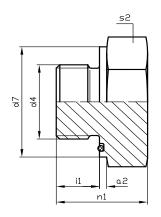




Tube outside diameter Ø AD	h3	Order No.	Material
10	1,5	ML1-10-8 P	Brass
22	2	ML1-22-8 P	Brass
42	3	ML1-42-8 P	Brass

PN64 PLUG



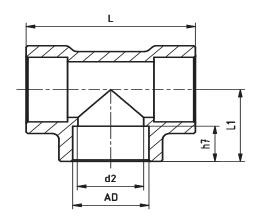


Metric fine thread ISO								V	/hitworth pipe thre	Spare O-ring	
d4	d7	n1	i1	a2	s2	Order No.	Material	d4	Order No.	Material	Order No.
	23	23	12	2	24			G 1/4 A	VST03 / G 1/4 A T	AL	05-0057-R088
M16x1,5	26	24	12	2	27	VST03 / M16x1,5	AL	G 3/8 A	VST03 / G 3/8 A T	AL	05-0057-R016
	36	32	15	3	36			G 1/2 A	VST03 / G 1/2 A T	AL	05-0057-R033
M33x2	49	38	18	3	50	VST03 / M33x2 T	AL	G1A	VST03 / G 1 A T	AL	05-0057-R039
	65	45	22	3	65			G 1½ A	VST03 / G 1½ A T	AL	05-0057-R126

Tee piece



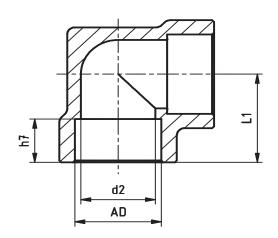




Tube outside diameter Ø AD	PN	d2	L	L1	h7	Order No.	Material
10	64	8	29	14,5	8	05-1545-R001	Brass
15	64	12	38	19	10	05-1545-R004	Brass
22	64	19	49	24,5	12	05-1545-R002	Brass
42	25	39	90	45	20	05-1545-R003	Brass

Angle piece

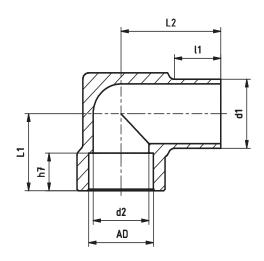




Tube outside diameter Ø AD	PN	d2	L1	h7	Order No.	Material
10	64	8	14,5	8	05-1545-R005	Brass
15	64	12	19	10	05-1545-R008	Brass
22	64	19	24,5	12	05-1545-R006	Brass
42	25	39	45	20	05-1545-R007	Brass

PLUG-IN ANGLE PIECE





Tube outside diameter Ø AD	PN	d2	L1	h7	L2	d1	l 1	Order No.	Material
10	64	8	14,5	8	21,5	10	10	05-1545-R010	Brass
15	64	12	19	10	26	15	13	05-1545-R011	Brass
22	64	19	24,5	12	34	22	16	05-1545-R012	Brass
42	25	39	45	20	56,4	42	24	05-1545-R013	Brass

C 3107-07

DILO BALL VALVES





The ball valve has a compact design and is maintenance-free. The notch on the spindle head and the position of the handle show the flow rate (closed or opened). The flow rate is controlled by a ball which is stored in a sealing. Each ball valve is tested for tightness in our works.

All ball valves are temperature-resistant from -40 $^{\circ}\text{C}$ to +80 $^{\circ}\text{C}$.

The suitable connecting parts must be ordered separately.

DILO ball valves for pressures up to PN64

•	3-365-R001	Ball valve PN64 DN8	86
•	3-365-R008	Ball valve with handwheel PN64 DN8	87
•	3-383-R001	Ball valve PN64 DN20	88
٠	3-679-R001	Ball valve PN25 DN40	89

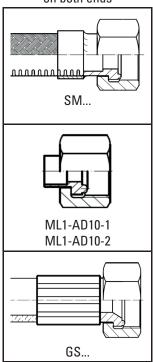
C 3108-03

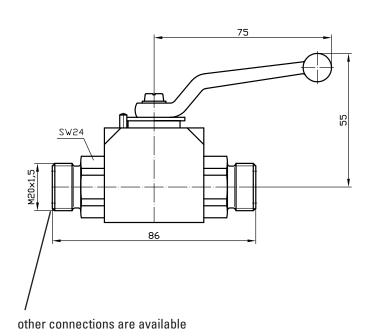
PN64 DN8 BALL VALVE

Order No.: 3-365-R001 P Material: Brass



Suitable connecting parts on both ends





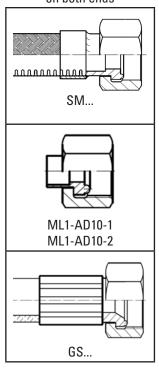
PN64 DN8 BALL VALVE WITH HANDWHEEL

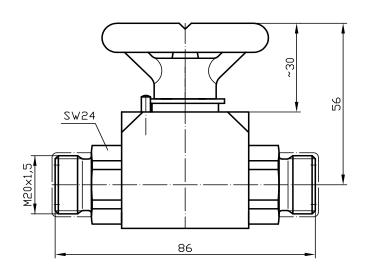


Order No.: 3-365-R008 P Material: Brass



Suitable connecting parts on both ends





C 3108-03

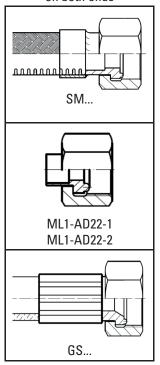
PN64 DN20 BALL VALVE

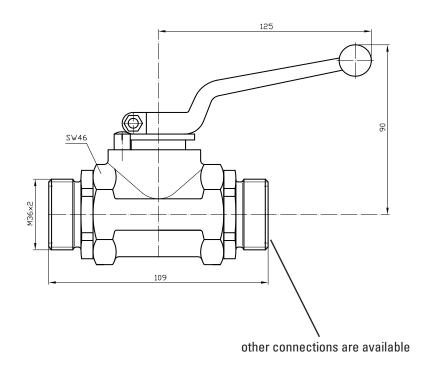
Order No.: 3-383-R001 P

Material: Brass



Suitable connecting parts on both ends





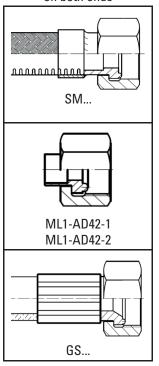


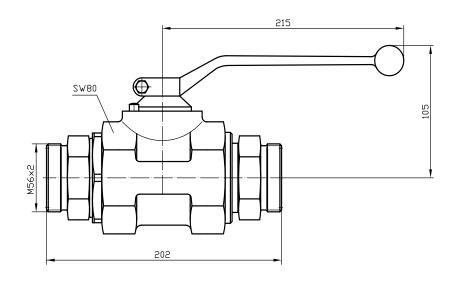


Order No.: 3-679-R001 P Material: Brass



Suitable connecting parts on both ends





DILO HOSES





We also offer wire braided stainless steel hoses as well as rubber hoses. They are pressure and vacuum tight and are available with different coupling connections. No matter whether you need a hose for connection to ${\rm SF}_{\rm 6}$ maintenance devices, gas insulated fabrication plants or other devices, we can offer the appropriate hose connection.

The suitable connecting parts must be ordered separately.

DILO hoses up to nominal diameters DN40

■ SM01	Wire braided hose	. 92
■ SM03	Wire braided hose with elbow connection	. 93
■ SM07	Wire braided hose with elbow connections	. 94
■ SM10	Wire braided hose with protective hose	. 95
■ SM16	Wire braided hose with heat shrink tubing	.96
• GS01	Rubber hose	. 97
• GS03	Rubber hose with elbow connection	98

Ordering examples

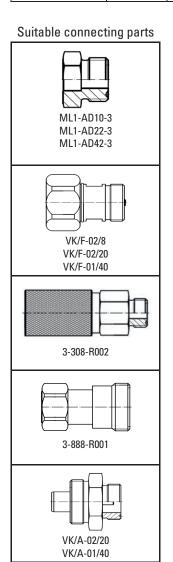
99

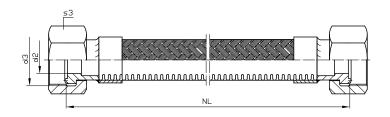
DN8 / DN20 / DN40 WIRE BRAIDED HOSE



nominal pressure level	hose DN	minimum bending radius / onetime bending in mm	nominal bending radius / frequent movements in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No.* NL in mm
64	8	38	130	10	8	M20x1,5	24	SM0108L
40	20	70	170	22	19	M36x2	41	SM0120L
64	20	70	285	22	19	M36x2	41	SM1520L
40	40	130	300	42	35	M56x2	65	SM0140L

*Ordering example see page 99





Range of application and temperature:

Reduction factors apply for the operating pressure with increasing temperature in accordance with DIN EN ISO 10380, e.g. at 100° C the 0.74 factor applies. Only conditionally suitable for use in a marine or coastal atmosphere. Corrosion resistance tested according to IEC 60068-2-52.

UV-resistant. Increased service life and temperature resistance compared to rubber hose.

Materials and composition:

Full metal wall made of 1.4404 with outside wire sheathing made of stainless steel. Supply length: max. 25 m

Fitting material: brass or stainless steel

For nominal diameter DN8 the clamping nut is made of stainless steel.

DN8 / DN20 / DN40 WIRE BRAIDED HOSE WITH ELBOW CONNECTION

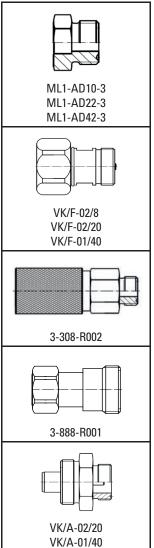


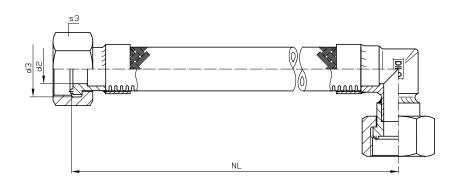


nominal pressure level	hose DN	minimum bending radius / onetime bending in mm	nominal bending radius / frequent movements in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No.* NL in mm
64	8	38	130	10	8	M20x1,5	24	SM0308L
40	20	70	170	22	19	M36x2	41	SM0320L
25	40	130	300	42	35	M56x2	65	SM0340L

*Ordering example see page 99

Suitable connecting parts





Range of application and temperature:

Reduction factors apply for the operating pressure with increasing temperature in accordance with DIN EN ISO 10380, e.g. at 100° C the 0.74 factor applies. Only conditionally suitable for use in a marine or coastal atmosphere. Corrosion resistance tested according to IEC 60068-2-52. UV-resistant. Increased service life and temperature resistance compared to rubber hose.

Materials and composition:

Full metal wall made of 1.4404 with outside wire sheathing made of stainless steel. Supply length: max. $25\,\mathrm{m}$

Fitting material: brass or stainless steel

For nominal diameter DN8 the clamping nut is made of stainless steel.

C 3109-08

93

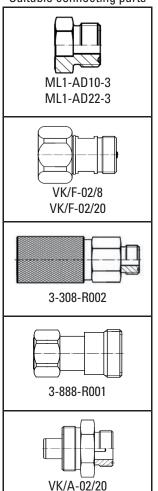
DN8 / DN20 / DN40 WIRE BRAIDED HOSE WITH ELBOW CONNECTIONS

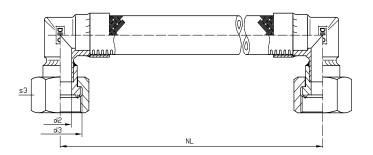


nominal pressure level	hose DN	minimum bending radius / onetime bending in mm	nominal bending radius / frequent movements in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No.* NL in mm
64	64 8 38 130		10	8	M20x1,5	24	SM0708L 	
40	20	70	170	22	19	M36x2	41	SM0720L

^{*}Ordering example see page 99

Suitable connecting parts





Range of application and temperature:

Reduction factors apply for the operating pressure with increasing temperature in accordance with DIN EN ISO 10380, e.g. at 100° C the 0.74 factor applies. Only conditionally suitable for use in a marine or coastal atmosphere. Corrosion resistance tested according to IEC 60068-2-52. UV-resistant. Increased service life and temperature resistance compared to rubber hose.

Materials and composition:

Full metal wall made of 1.4404 with outside wire sheathing made of stainless steel. Supply length: max. 25 m

Fitting material: brass or stainless steel

For nominal diameter DN8 the clamping nut is made of stainless steel.

DN8 / DN20 / DN40 WIRE BRAIDED HOSE WITH PROTECTIVE HOSE

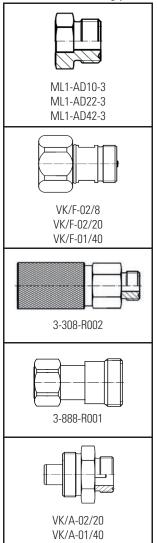


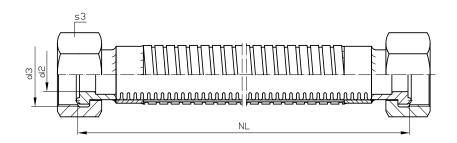


nominal pressure level	hose DN	minimum bending radius / onetime bending in mm	nominal blending radius / frequent movements in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No.* NL in mm
64	8	38	130	10	8	M20x1,5	24	SM1008L
40	20	70	170	22	19	M36x2	41	SM1020L
40	40	130	300	42	35	M56x2	65	SM1040L

*Ordering example see page 99

Suitable connecting parts





Range of application and temperature:

Reduction factors apply for the operating pressure with increasing temperature in accordance with DIN EN ISO 10380, e.g. at 100° C the 0.74 factor applies. Only conditionally suitable for use in a marine or coastal atmosphere. Corrosion resistance tested according to IEC 60068-2-52. UV-resistant. Increased service life and temperature resistance. Particularly robust against mechanical stress.

Materials and composition:

Full metal wall made of 1.4404 with outside wire sheathing made of stainless steel. Flexible protection hose and securely against rotation, particularly tensile and with high mechanical strength according to DIN EN ISO 15465.

Supply length: max. 25 m

Fitting material: brass or stainless steel

For nominal diameter DN8 the clamping nut is made of stainless steel.

C 3109-08

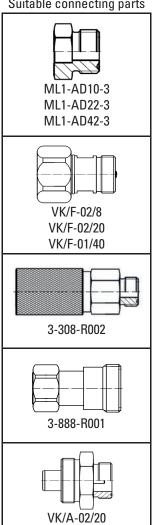
DN8 / DN20 / DN40 WIRE BRAIDED HOSE WITH HEAT SHRINK TUBING

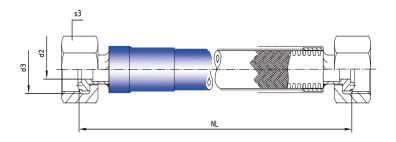


nominal pressure level	hose DN	minimum bending radius / onetime bending in mm	nominal bending radius / frequent movements in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No.* NL in mm
64	8	100	140	10	8	M20x1,5	24	SM1608L
40	20	180	220	22	19	M36x2	41	SM1620L

*Ordering example see page 99

Suitable connecting parts





Range of application and temperature:

Reduction factors apply for the operating pressure with increasing temperature in accordance with DIN EN ISO 10380, e.g. at 100° C the 0.74 factor applies. Suitable for corrosive environment. Exceed the corrosion resistance according to IEC 60068-2-52. Increased service life and temperature resistance.

Materials and composition:

Full metal wall made of 1.4404 with outside wire sheathing made of stainless steel, covered with UV-resistant plastic heat shrink tubing.

Supply length: max. 25 m

Fitting material:

Stainless steel

VK/A-02/40

DN8 / DN20 / DN40 RUBBER HOSE

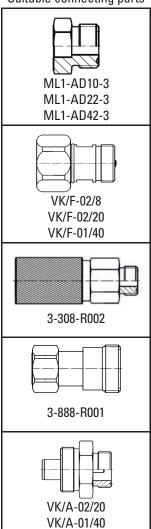


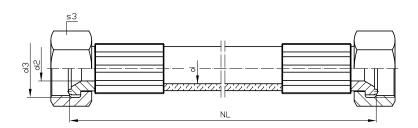


nominal pressure level	hose DN	hose d	bending radius in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No.* NL in mm
64	8	8	50	10	5,5	M20x1,5	24	GS0108L
50	20	19	180	22	15,5	M36x2	41	GS0120L
64	40	38	500	42	33	M56X2	65	GS0140L

*Ordering example see page 99

Suitable connecting parts





Range of application and temperature:

From -40 °C to +100 °C depending on medium (see DIN EN 853/854)

Materials and composition:

The hoses consist of an oil- and water-resistant inner layer of synthetic rubber and an oil- and weather-resistant rubber outer layer.

Fitting material:

The press nipple and clamping nut are made of brass.

C 3109-08

For nominal diameter DN8 the clamping nut is made of stainless steel.

DN8 / DN20

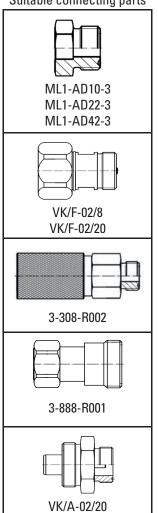
RUBBER HOSE WITH ELBOW CONNECTION

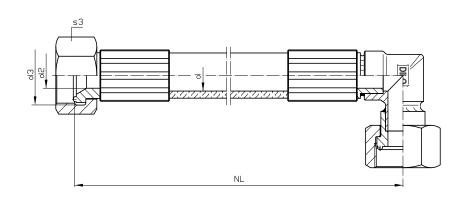


nominal pressure level	hose DN	hose d	bending radius in mm	fitting AD	fitting d2	fitting d3	fitting s3	Order No. * NL in mm
64	8	7,9	50	10	5,5	M20x1,5	24	GS0308L
50	20	19	240	22	15,5	M36x2	41	GS0320L

*Ordering example see page 99

Suitable connecting parts





Range of application and temperature:

From -40 °C to +100 °C depending on medium (see DIN EN 853/854)

Materials and composition:

The hoses consist of an oil- and water-resistant inner layer of synthetic rubber and an oil- and weather-resistant rubber outer layer.

Fitting material: Brass

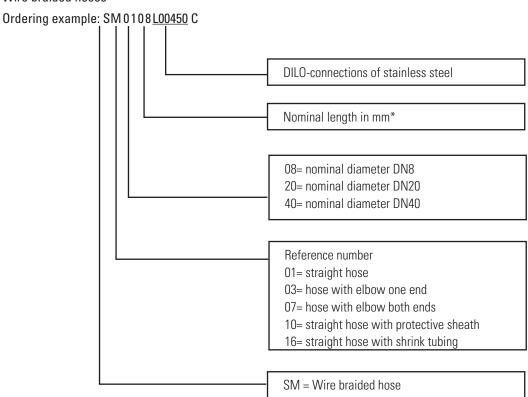
The press nipple and clamping nut are made of brass.

For nominal diameter DN8 the clamping nut is made of stainless steel.

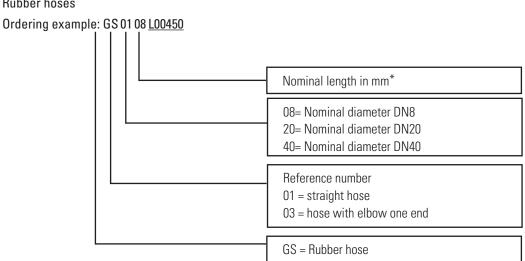
ORDERING EXAMPLES WIRE BRAIDED HOSES AND RUBBER HOSES



Wire braided hoses



Rubber hoses



*Rubber hoses are available in the following length increments:

Length	Length increment
< 1 m	50 mm
1 m bis < 5 m	100 mm
5 m bis < 10 m	500 mm
10 m bis < 20 m	1 m

DILO TRANSITION PIECES AND ADAPTERS





Our product range comprises a large variety of transition pieces and adapters to establish connections between components with different nominal lengths. Thus DILO connecting couplings and hoses allow the comfortable adaption to other coupling systems on switchgear.

The suitable connecting parts must be ordered separately.

DILO transition pieces and adapters for pressures up to PN64

•	6-1033-R001/ 6-1058-R/ SK-279-R/6-1027-R	Adapter DILO-couplings DN20 ASEA / Magrini / Siemens/ Westinghouse	102 - 106
÷	3-920-R002/R001	Adapter - Hansen connection	107 - 108
i	3-353-R005/ R006	Adapter DILO DN8 - Michelin valve	. 109 - 110
	6-1059-R/ 6-1203-R	Adapter with flange coupling on both ends	. 111
ŧ	K022R02	Tee piece with DILO couplings	.112
÷	3-351-R001 P	Screw-in stub	. 113
١	SK-386 T/ 3-240-R/ 3-251-R001/ 3-314-R001	Transition pieces	. 114 - 117
	3-227-R001/ 3-311-R001/ 3-984-R001	Intermediate pieces	118
	3-816-R001/ R002/ R003 / R005	Transition pieces	119 - 122
۰	K018-R02/ R06/ 3-717-R/K018R07/ K018R	Angle pieces	123 - 127
÷	K020R	Tee pieces	128 - 129
÷	3-718-R006/R036	Distributor	130 - 131
÷	3-1026-R002	Tubings	132

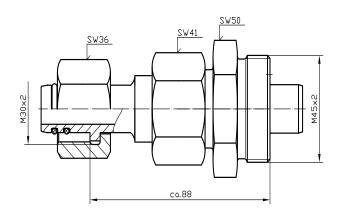
PN64 DN20 ADAPTER DILO COUPLING DN20 ASEA CONNECTION

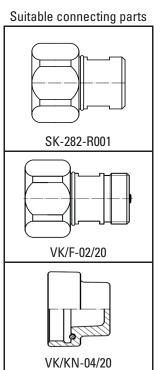
Order No.: 6-1033-R001 Material: Brass



Suitable connecting parts

ASEA connection



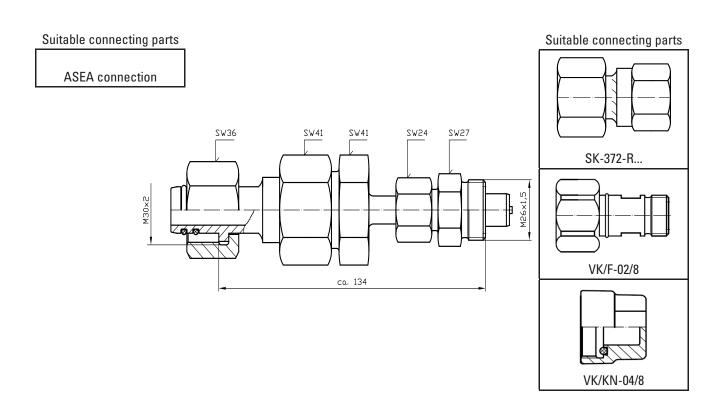


PN64 DN8 ADAPTER DILO COUPLING DN8 ASEA CONNECTION



Order No.: 6-1033-R003 Material: Brass





PN64 DN20

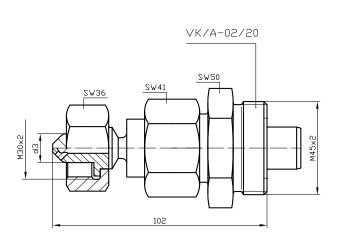
ADAPTER DILO COUPLING DN20 -MAGRINI CONNECTION



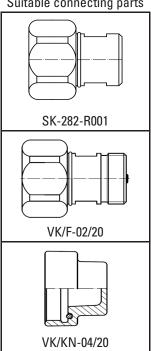
d 3	Order No.	Material
Ø 14	6-1058-R001	Brass
Ø 16	6-1058-R002	Brass

Suitable connecting parts

Magrini connection



Suitable connecting parts



PN64 DN8



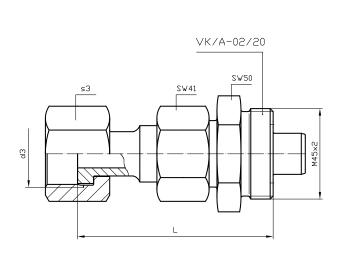


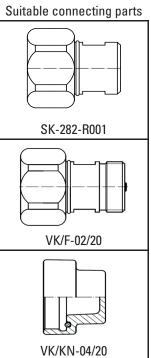


d3	L	S 3	Order No.	Material
G 3/4	97	32	SK-279-R001 P	Brass
G 1	98	41	SK-279-R002 P	Brass
G 1 1/4	93	50	SK-279-R003 P	Brass

Suitable connecting parts

Siemens connection





PN64 DN20

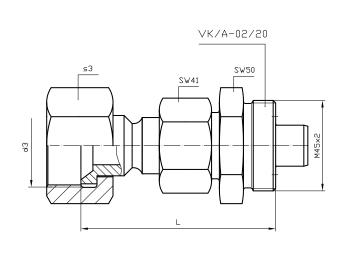
ADAPTER DILO COUPLING DN20 -WESTINGHOUSE CONNECTION



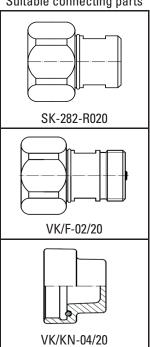
d3	L	S 3	Order No.	Material
1 5/8 - 12UN	97	50	6-1027-R001	Brass
1 5/16 - 12UN	95	41	6-1027-R002	Brass
1 1/16 - 12UN	90	32	6-1027-R003	Brass

Suitable connecting parts

Westinghouse connection



Suitable connecting parts



PN64 DN20 ADAPTER DILO COUPLING DN20 - HANSEN CONNECTION

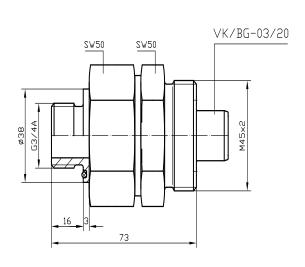


Order No.: 3-920-R002 P Material: Brass



Suitable connecting parts

Hansen connection G 3/4 A



Suitable connecting parts SK-282-R020 VK/F-02/20 VK/KN-04/20

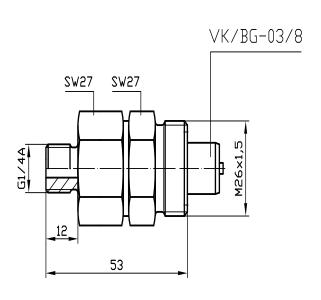
PN64 DN8 ADAPTER DILO COUPLING DN8 HANSEN CONNECTION

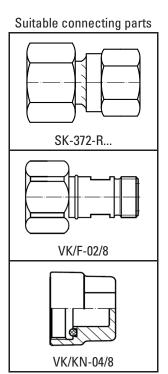
Order No.: 3-920-R001 P Material: Brass



Suitable connecting parts

Hansen connection G 1/4 A



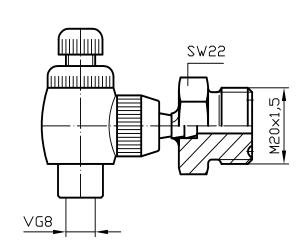


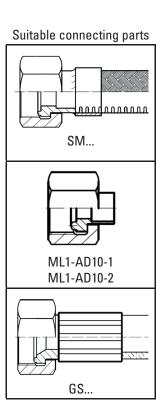
PN2 DN8 ADAPTER DILO DN8 - MICHELIN VALVE



Order No.: 3-353-R005 P Material: Brass

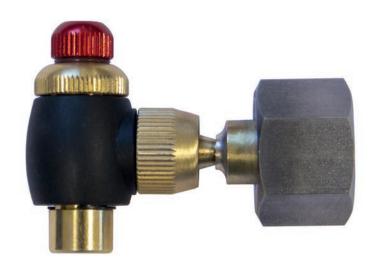


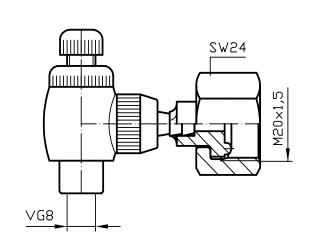


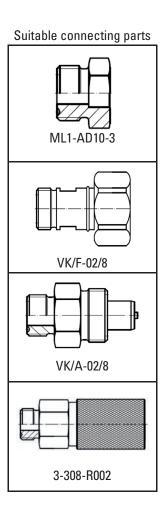


PN2 DN8 ADAPTER DILO DN8 - MICHELIN VALVE

Order No.: 3-353-R006 P Material: Brass







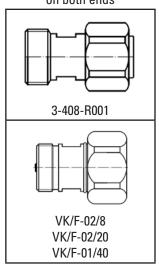
ADAPTER WITH FLANGE COUPLING ON BOTH ENDS

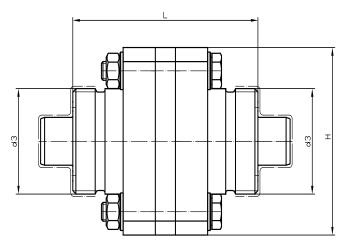




DN	for coupling tongue part	d3	L	Н	PN	Order No.	Material
6	3-408-R101	M24x1,5	92	Ø 40	10	6-1059-R014	AL
8	VK/F-02/8	M26x1,5	74	Ø 40	64	6-1059-R012	AL
20	VK/F-02/20	M45x2	92	Ø 80	64	6-1059-R011	AL
40	VK/F-01/40	M76x2	102	Ø 110	16	6-1203-R001	Stainless steel

Suitable connecting parts on both ends

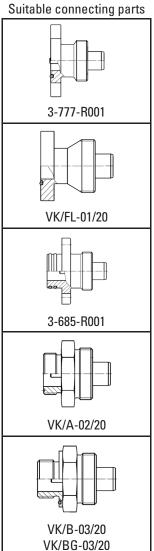




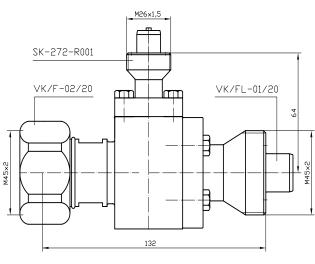
PN64 DN8 / DN20 TEE PIECE WITH DILO COUPLINGS

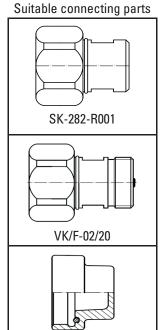
Order No.: K022R02 Material: AL











VK/KN-04/20

Other versions are available.

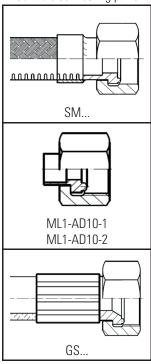


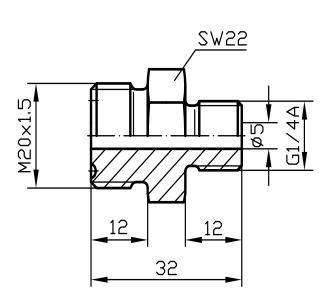


Order No.: 3-351-R001 P Material: Brass



Suitable connecting parts





Suitable connecting parts

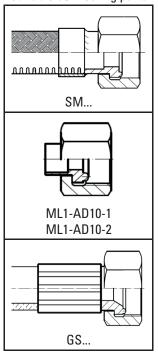
internal thread G 1/4

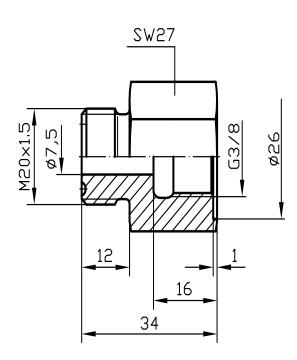
PN64 DN8 TRANSITION PIECE DN8

Order No.: SK-386 T Material: AL



Suitable connecting parts





Suitable connecting parts

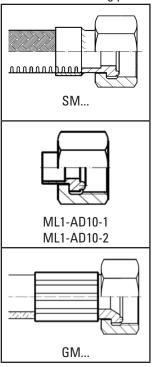
G 3/8 external thread

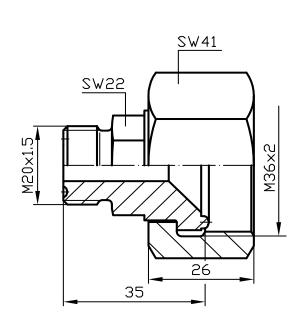


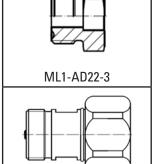


Order No.	Material
3-240-R001 P	Brass
3-240-R002 C	Stainless steel

Suitable connecting parts







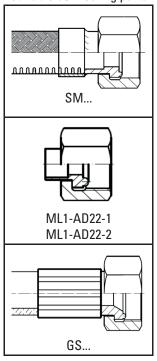
VK/F-02/20

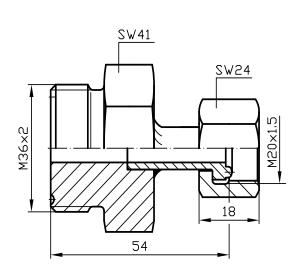
VK/A-02/20

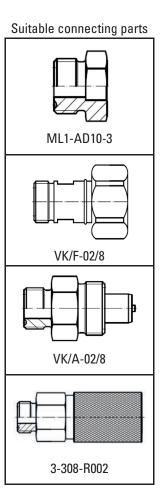
Order No.: 3-251-R001 P Material: Brass



Suitable connecting parts

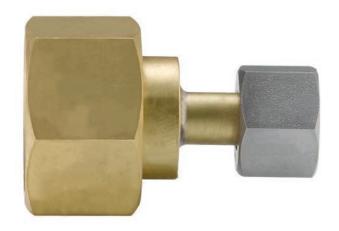




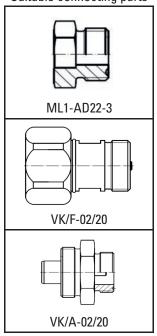


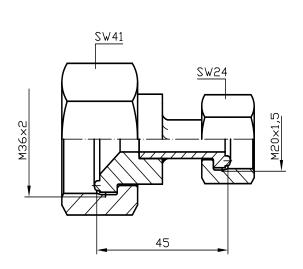


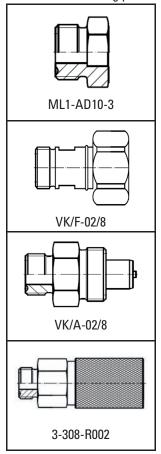
Order No.: 3-314-R001 P Material: Brass



Suitable connecting parts



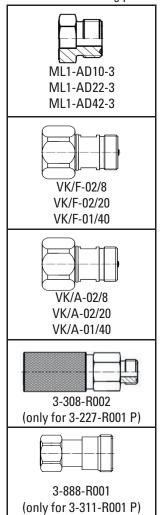


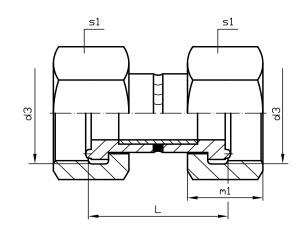


PN64 DN8 / DN20 / DN40 INTERMEDIATE PIECE



AD	d3	L	m1	s1	Order No.	Material
10	M20x1,5	32	18	24	3-227-R001 P	Brass
22	M36x2	48	26	41	3-311-R001 P	Brass
42	M56x2	58	29	65	3-984-R001 P	Brass

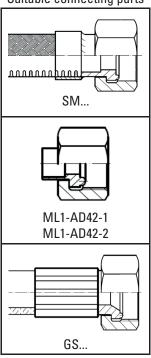


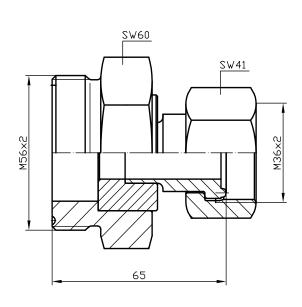


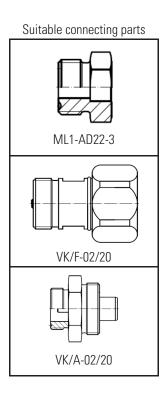


Order No.: 3-816-R001 P Material: Brass



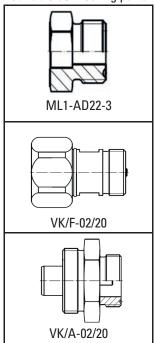


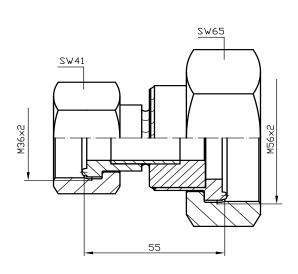


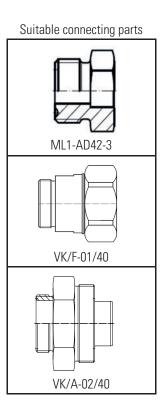


Order No.: 3-816-R002 Material: Brass







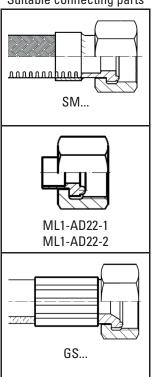


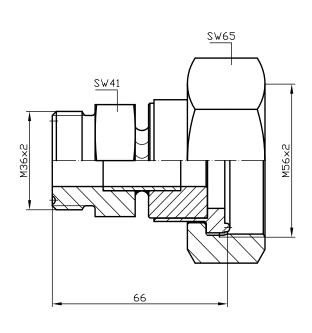


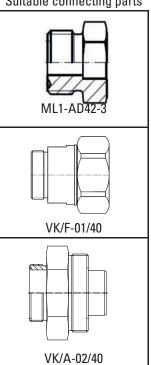
Order No.: 3-816-R003 Material: Brass



Suitable connecting parts





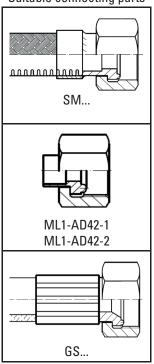


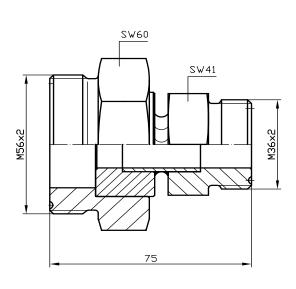
Order No.: 3-816-R005 P

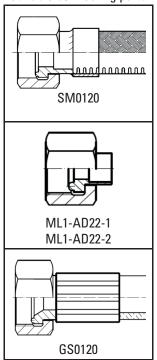
Material: Brass



Suitable connecting parts







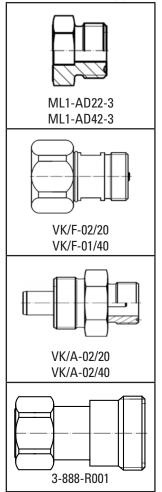
DN 8 / DN20 / DN40 ANGLE TRANSITION PIECE

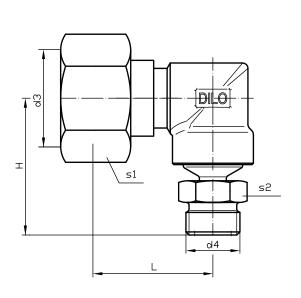


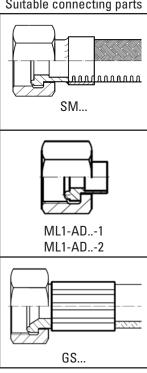


AD	PN	d3	d4	L	Н	s1	s2	Order No.	Material
10/22	64	M36x2	M20x1,5	45	51	41	22	K018R02	Brass
22/42	25	M56x2	M36x2	64	81	65	41	K018R06	Brass

Suitable connecting parts





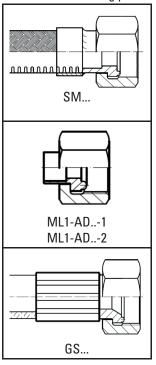


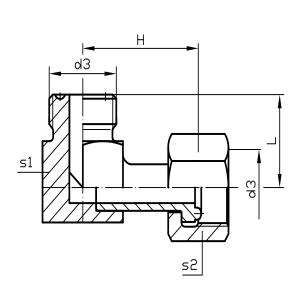
DN8 / DN20 / DN40 ANGLE PIECE

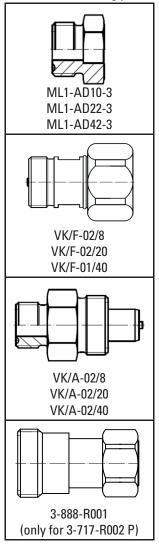


AD	PN	d3	L	Н	s1	s2	Order No.	Material
10	64	M20x1,5	32	31	22	24	3-717-R001 P	Brass
22	64	M36x2	48	46	36	41	3-717-R002 P	Brass
42	25	M56x2	58	65	60	65	K018R07	Brass

Suitable connecting parts





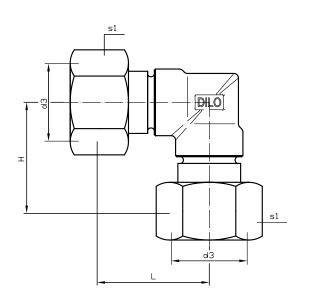


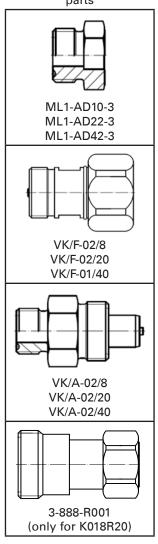
DN 8 / DN20 / DN40 ANGLE PIECE





AD	PN	d3	L	Н	s1	Order No.	Material
10	64	M20x1,5	32	32	24	K018R10	Brass
22	64	M36x2	50	50	41	K018R20	Brass
42	25	M56x2	65	80	65	K018R32	Brass

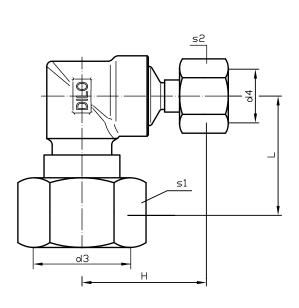




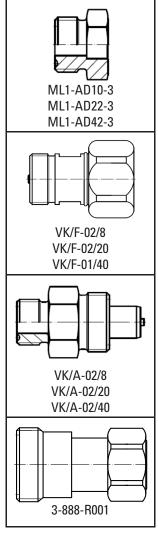
DN8 / DN20 / DN40 ANGLE TRANSITION PIECE



AD	PN	d3	d4	L	Н	s1	s2	Order No.	Material
10/22	64	M36x2	M20x1,5	45	46	41	24	K018R27	Brass
22/42	25	M56x2	M36x2	64	72	65	41	K018R31	Brass



Suitable connecting parts



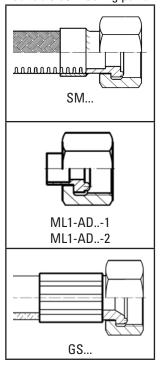
126 C 3110-09

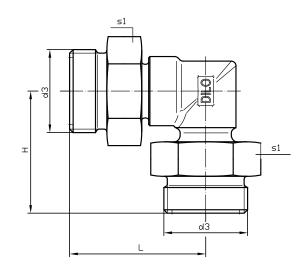
DN 8 / DN20 / DN40 ANGLE PIECE





AD	PN	d3	L	Н	s1	Order No.	Material
10	64	M20x1,5	38	34	22	K018R41	Brass
22	64	M36x2	59	53	41	K018R40	Brass
42	25	M56x2	85	73	60	K018R29	Brass

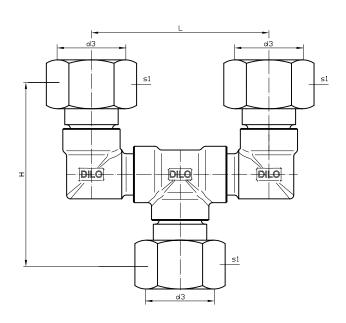




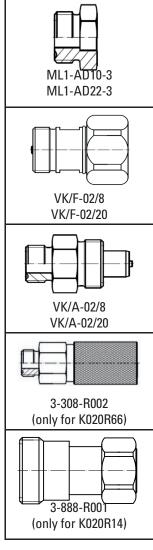
PN64 DN8 / DN20 TEE PIECE



AD	d3	L	Н	s1	Order No.	Material
10	M20x1,5	56	64	24	K020R66	Brass
22	M36x2	93	98	41	K020R14	Brass



Suitable connecting parts



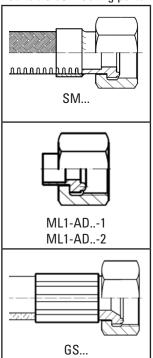
128

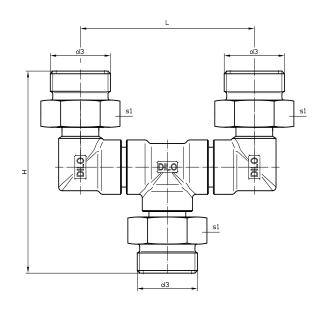
PN64 DN 8 / DN20 TEE PIECE





AD	d3	L	Н	s1	Order No.	Material
10	M20x1,5	56	75	22	K020R26	Brass
22	M36x2	104	112	41	K020R59	Brass

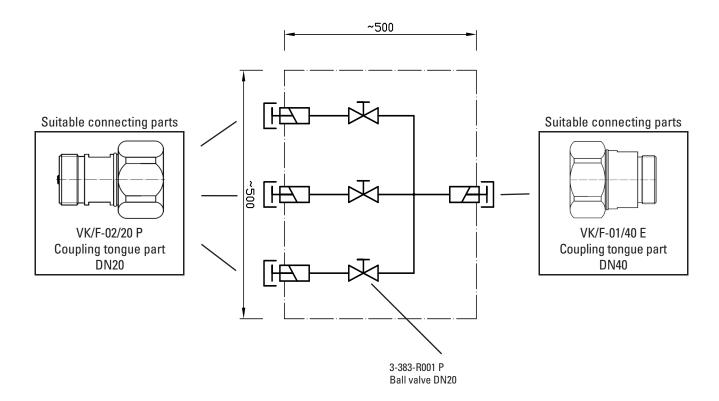




3 X DN20 / 1 X DN40 DISTRIBUTOR PN16

Order No.: 3-718-R006



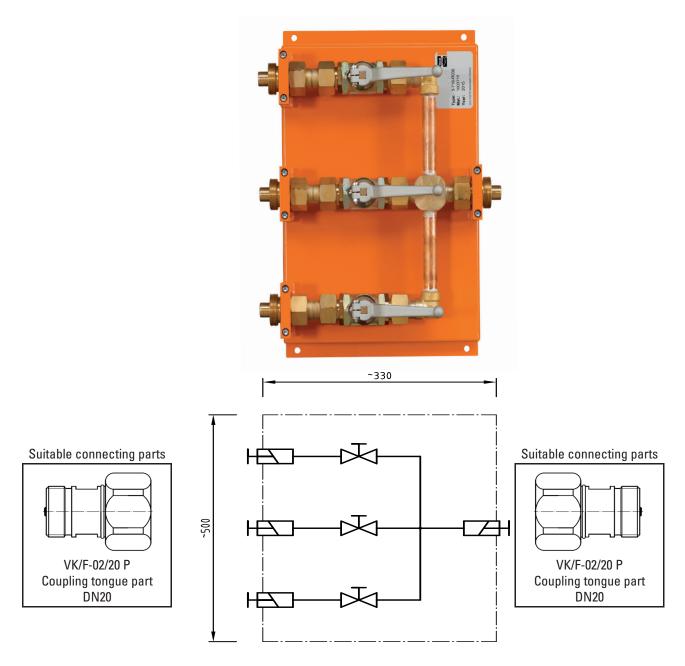


Other versions are available.

4 X DN20 DISTRIBUTOR PN64

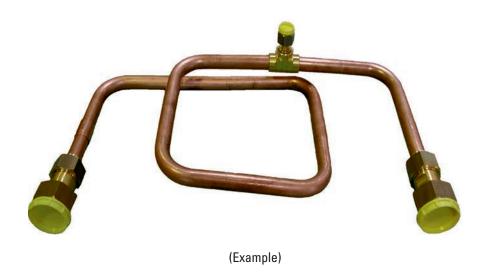


Order No.: 3-718-R036





Order No.: 3-1026-R002



Other versions are available.

■ DILO SF₆ BOTTLE CONNECTIONS





DILO offers a wide range of connections suitable for all commercial SF $_6$ bottles. Thus safe and quick connection of hoses of DILO service carts or SF $_6$ gas refilling devices to the SF $_6$ gas bottles is guaranteed. This refers to bottle connections for new gas as well as for reuse gas.

The suitable connecting parts must be ordered separately.

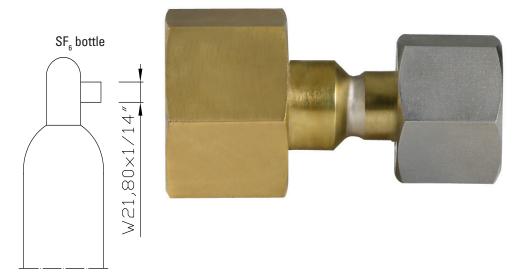
DILO SF₆ bottle connections

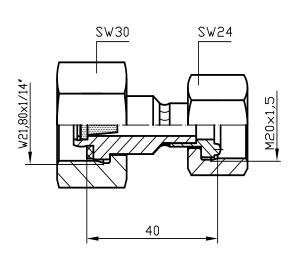
•	3-316-R001	SF ₆ bottle connection	134
•	3-858-R001	Angle SF ₆ bottle connection	135
•	3-643-R001	Chinese SF ₆ bottle connection	136
•	3-643-R002	Chinese SF ₆ bottle connection	137
•	3-245-R001	American SF ₆ bottle connection	138
•	3-334-R002	American SF ₆ bottle connection	139
•	3-245-R002	English SF ₆ bottle connection	140
•	3-245-R004	English SF ₆ bottle connection	141
•	3-851-R002	Connection for reuse gas bottle	142
•	3-851-R003	Connection for reuse gas bottle	143
•	3-858-R002	Angle for connection of reuse gas bottle	144
•	6-1037-R050	Storage connecting hose DN20	145
•	6-1041-R050	Storage connecting hose DN8	146

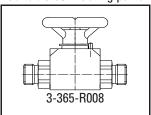
SF₆ BOTTLE CONNECTION W21,80X1/14" - DIN 477 Nr. 6

Order No.: 3-316-R001 P

Material: Stainless steel / Brass



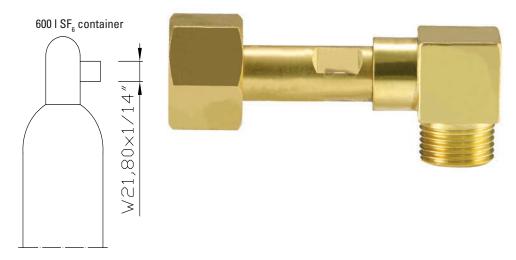


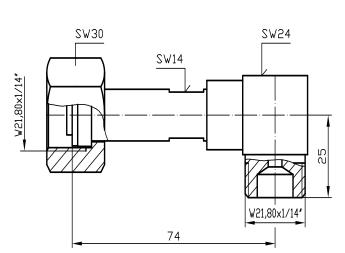


PN64 DN8 ANGLE SF₆ BOTTLE CONNECTION W21,80X1/14" - DIN 477 NR. 6

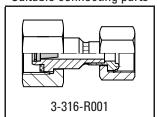


Order No.: 3-858-R001 P Material: Brass



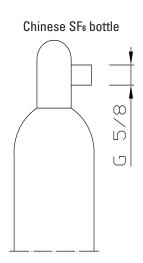




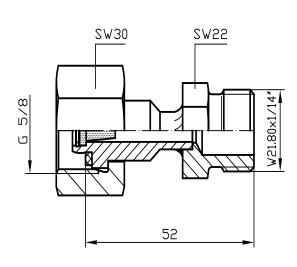


CHINESE SF₆ BOTTLE CONNECTION G 5/8 - 0,960"-14NGO-LH-EXT - CGA 590

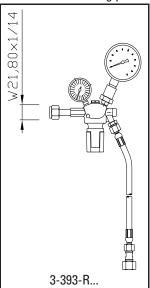
Order No.: 3-643-R001 P Material: Brass









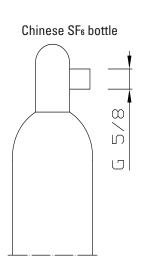


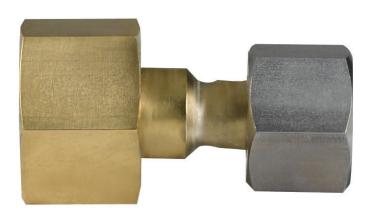
CHINESE SF₆ BOTTLE CONNECTION G 5/8 - 0,960"-14NGO-LH-EXT - CGA 590

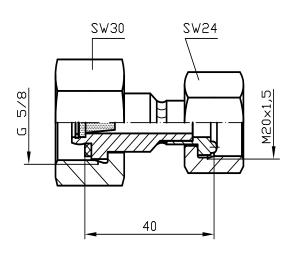


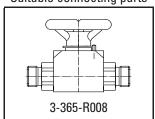
Order No.: 3-643-R002 P

Material: Stainless steel / Brass





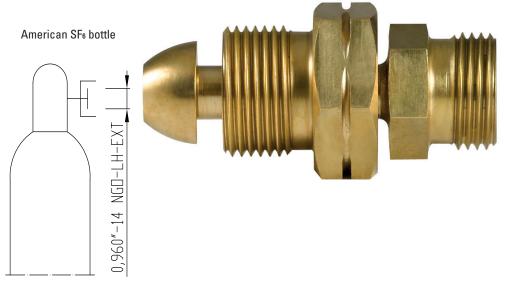


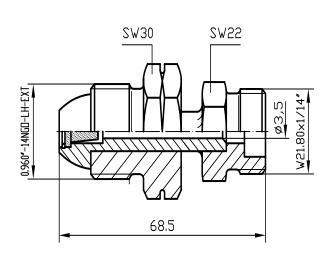


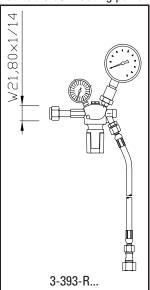
AMERICAN SF₆ BOTTLE CONNECTION 0,960"-14NGO-LH-EXT - CGA 590

Order No.: 3-245-R001 P

Material: Brass







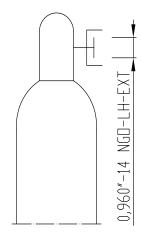
AMERICAN SF₆ BOTTLE CONNECTION 0,960"-14NGO-LH-EXT - CGA 590

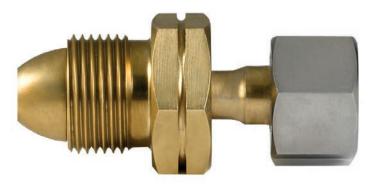


Order No.: 3-334-R002 P

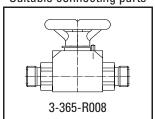
Material: Stainless steel / Brass

American SF₆ bottle



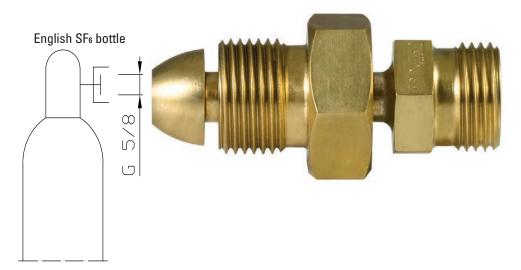


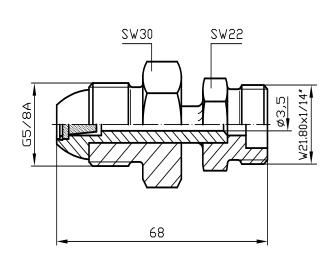
SW30 SW24 WZ0X1.5

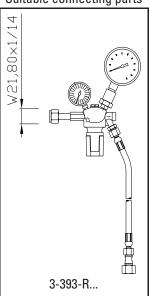


PN64 DN8 ENGLISH SF₆ BOTTLE CONNECTION G 5/8 - BS No. 3

Order No.: 3-245-R002 P Material: Brass





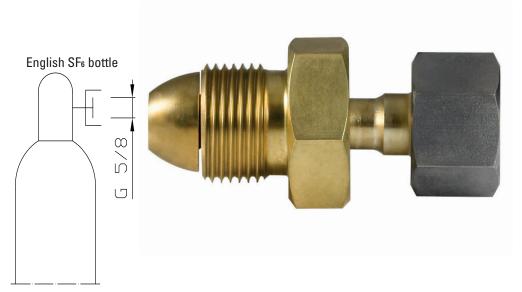


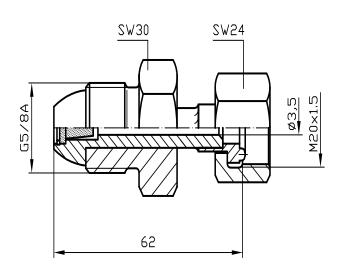
PN64 DN8 ENGLISH SF₆ BOTTLE CONNECTION G 5/8 - BS NO. 3

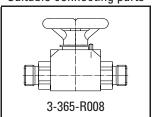


Order No.: 3-245-R004 P

Material: Stainless steel / Brass



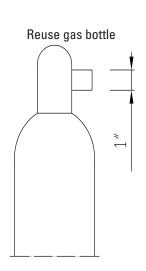


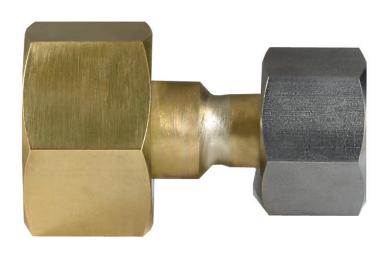


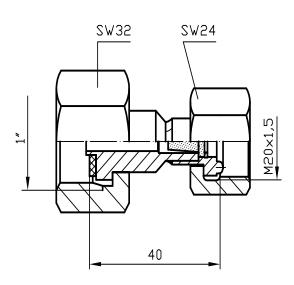
PN64 DN8 CONNECTION FOR REUSE GAS BOTTLE 1" DIN 477 Nr. 8

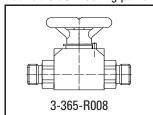
Order No.: 3-851-R002 P

Material: Stainless steel / Brass





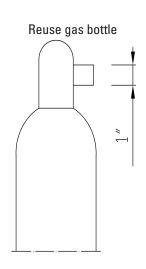




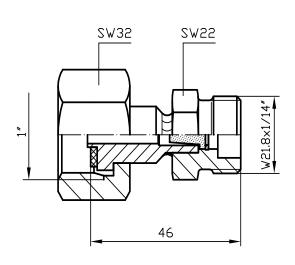
PN64 DN8 CONNECTION FOR REUSE GAS BOTTLE 1" DIN 477 NR. 8



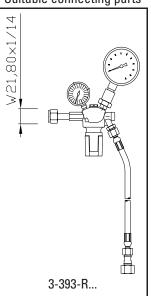
Order No.: 3-851-R003 P Material: Brass





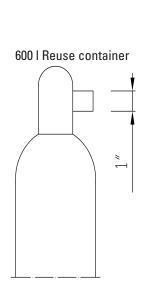




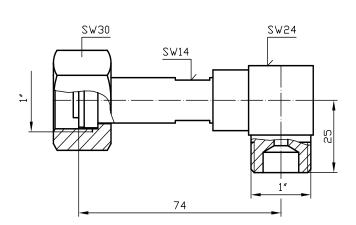


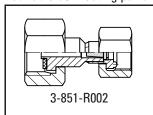
ANGLE FOR CONNECTION OF REUSE GAS BOTTLE 1" - DIN 477 Nr. 8

Order No.: 3-858-R002 P Material: Brass









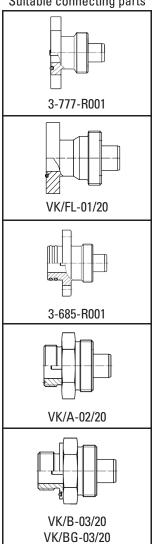
PN64 DN20 STORAGE CONNECTING HOSE DN20

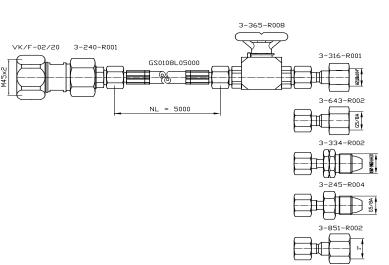


Order No.: 6-1037-R050







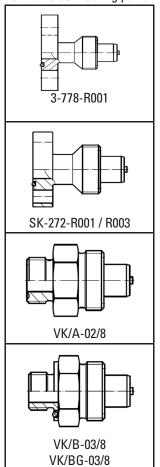


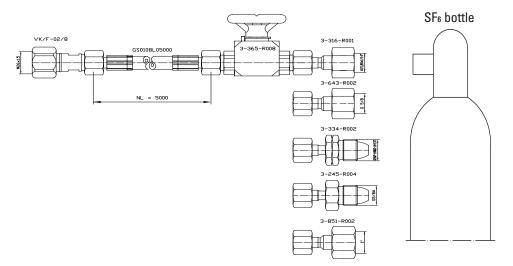


PN64 DN8 STORAGE CONNECTING HOSE DN8

Order No.: 6-1041-R050







FOR YOUR NOTES



ONE VISION. ZERO EMISSIONS.



SF ₆ GAS	ALTERNATIVE GASES	INDUSTRIAL GAS EQUIPMENT	HIGH PRESSURE PRODUCTS	
DILO CERTIFIED GAS	AFTER SALES SERVICES	TRAINING & CERTIFICATION		

DILO Armaturen und Anlagen GmbH

Frundsbergstrasse 36 D-87727 Babenhausen

