VALVES

MEASUREMENT

EQUIPMENT

CATALOGUE

for industrial valves and measurement

LIQUID, GASEOUS, HIGHLY VISCOUS MEDIA // EXTREME TEMPERATURE RANGES // MASSIVE FLOW RATES // HIGH PRESSURE RANGES //

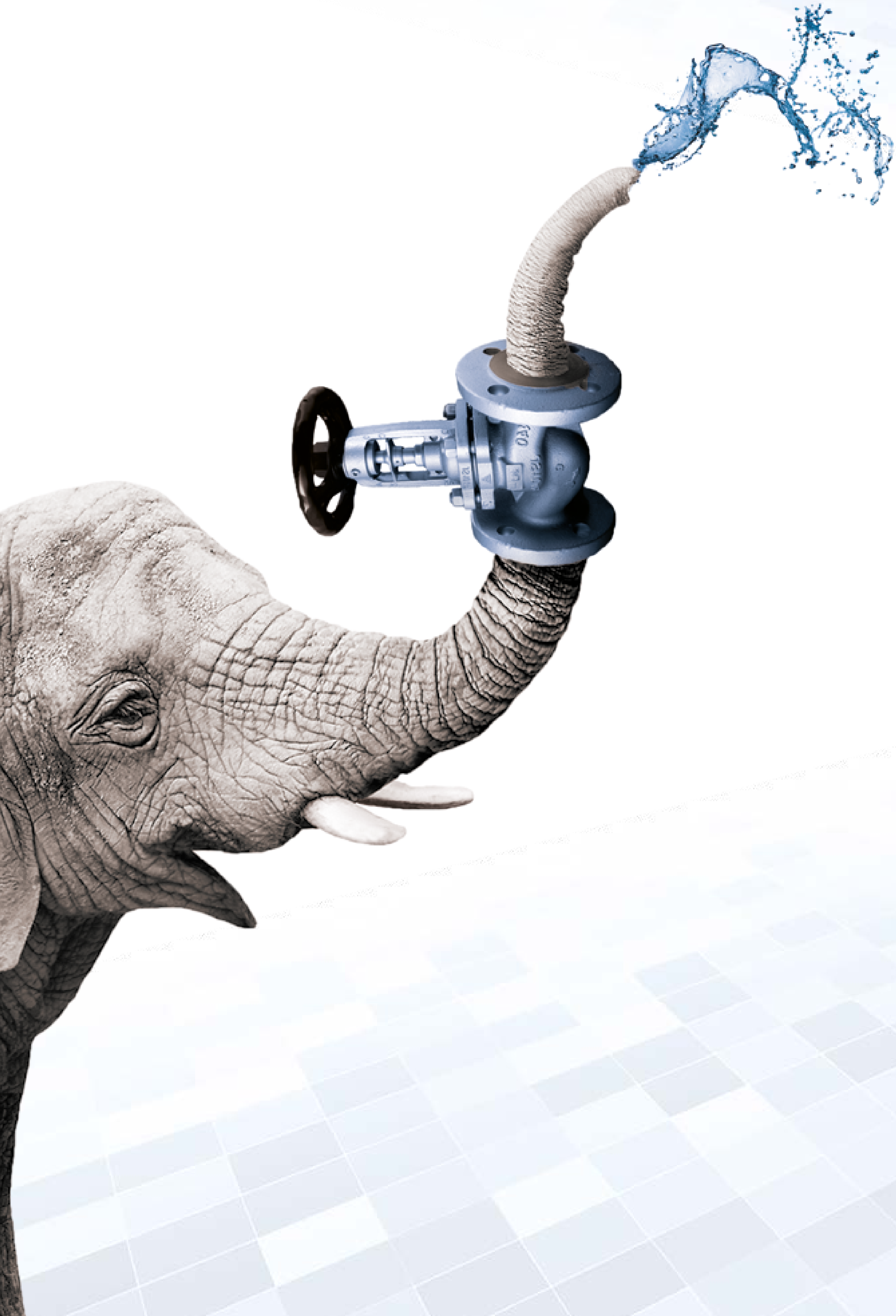
NieRuf GmbH is the right choice as a system provider when it comes to regulating, shutting off, safeguarding and controlling different media.

The nieruf
ELEPHANT

All animal rights activists may rest assured; we do not intend to fit valves from our factory to elephants in the future. Elephants do not need them anyway. Their trunk is a multifunctional organ: for feeling, gripping, breathing, smelling and fighting. The trunk is also used as a suction and pressure pump thus allowing the elephant to drink 200 litres of water in 5 minutes. The trunk can also be used to spread dirt and dust over the skin. No matter whether it's regulating or controlling, water or highly viscous media, the elephant and nieruf can cope it.

»That's why we believe that the elephant best represents the diversity of our valves.«

nieruf®



NieRuf GmbH has its headquarter in the Swabian town of Besigheim near Stuttgart in the heart of Europe. This of course does not prevent us getting our products to you wherever you are in the world. We send our products to all continents whether you need valves for an irrigation system in the Sahara Desert, are situated in the jungle in Ecuador, are constructing a desalination plant in Africa or need our valves and measurement technology components in Australia or North America.

360°

Product views

No detail remains hidden with **nieruf**. Our 360° views help you choose the right product.

www.nieruf.com

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HOW TO FIND YOUR CERTIFICATES

01. Login to the customer portal with your personal login details.

Click on “My Downloads”.

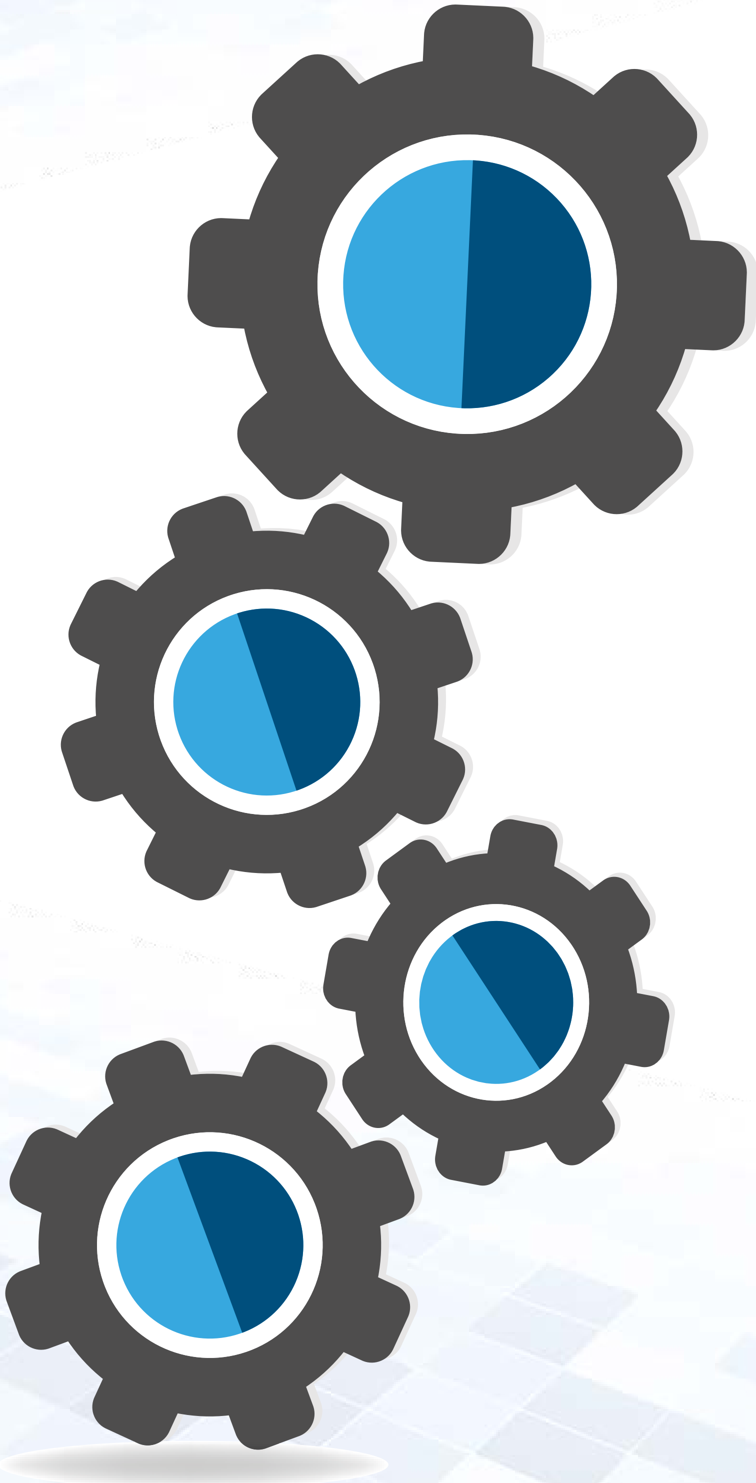
02. Select the desired certificate.

03. Download the certificate.

RESISTANCE CHECK

to the resistance check

The cornerstones of
OUR SUCCESS



COMITTED

Commitment engenders trust. We stand by our word and are convinced that as a result not only our customers but also everyone we work with can rely on us.

MOTIVATED

We always strive to find the best solution for our customers. It is our goal and incentive to have completely satisfied customers.

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CUSTOMER FOCUS EVEN ON YOUR PREMISES

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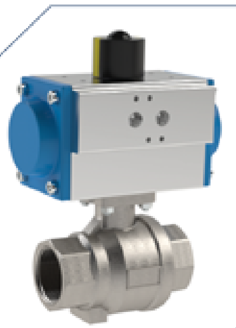
To ensure this you can view all the necessary information about our products around the clock through our webshop and always have transparent pricing. We would be happy to give you free qualified advice on your product selection.

IN A NUTSHELL
Article number system

PK02



Ball valve made of stainless steel with pneumatic actuator

2-way ball valve made of stainless steel TYPE **PK02 with pneumatic actuator single acting (closes) or double acting.** The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	1/2" to 2"
Connection :	Female thread ISO 7-1
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK02	**00** double acting **01** single acting	**00** PTFE	**03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2UGNFWF

TA LUFT · Rost frei

* Higher temperatures on request

This is how the nieruf article number system works

Our article number **PK02010005** consists of :

TYPE	VERSION	SEAL	SIZE
PK02	00 double acting **01** single acting	**00** PTFE	03 1/2“ 04 3/4“ **05** 1“ 06 1 1/4“ 07 1 1/2“ 08 2“
PK02	**01**	**00**	**05**

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VALVES

MEASUREMENT

EQUIPMENT

An overview about possible certification can be found starting page 207

BUTTERFLY VALVES

EQUIPMENT

AK01 | AK02

Butterfly valve made of spheroidal graphite cast iron with epoxyd coating

Intermediate flange butterfly valves **TYPE AK01** | **AK02**. Housing made of spheroidal graphite cast iron with **80 µm epoxyd coating** and valve disc made of stainless steel 1.4408. Easy maintenance due to demountable design. The lug type version AK02 is ideally suitable as an end flap.

Diameter : DN32 up to DN400
Connection : Flange PN6 | PN10 | PN16
Body : EN-JS1030
Disc : Stainless steel 1.4408
Pressure : 0,0 to 16,0 bar
Temperature : -25°C to +150°C*
Authorized for : DVGW-drinking water EPDM
DVGW-gas NBR
Media : Gaseous and liquid

TYPE	PRESSURE	SEAL*	ACTUATION	SIZE
AK01 Wafer type **AK02** Lug type	**AK01 DN32-DN300:** **1** PN6/10/16/ANSI150 **AK01 DN350+DN400:** **1** PN10/16 **2** PN6** **AK02 DN32-DN150:** **1** PN10/16 **2** PN6** **AK02 DN200-DN400:** **0** PN10 **1** PN16** **2** PN6**	**0** EPDM **1** NBR **2** FPM **6** EPDM HT	**00** Lever *** **01** Gearbox **06** Without lever	**06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400

DATASHEET
http://bit.ly/2KLRLs2

DVGW ACS

* **EPDM (DVGW-W/WRAS/ACS) -20°C to +90°C**
NBR (DVGW Gas) -10°C to +60°C
FKM/FPM -25°C to +150°C
EPDM HT (FDA) -20°C to +130°C
** **On request**
*** **Available up to DN200**
(Gearbox recommended starting DN125)

AK05

Butterfly valve for simple applications

Intermediate flange butterfly valves **TYPE AK05** made of grey cast iron with high quality epoxyd coating and stainless steel disc. These butterfly-valves have a long neck for isolation. Suitable for **gaseous and liquid media**.

Diameter : DN32 up to DN300
Connection : Flange PN10/16 | ANSI150
Body : Grey cast iron EN GJL-250
Disc : Stainless steel
Pressure : 0,0 to 16,0 bar
Temperature : -10°C to +110°C*
Media : Gaseous and liquid

TYPE	PRESSURE	SEAL	ACTUATION	SIZE
AK05 Wafer type	**1** PN10/16 | ANSI150**	**0** EPDM **1** NBR	**00** Lever **01** Gearbox	**06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300

DATASHEET
http://bit.ly/2DhGTvR

* **EPDM -10°C to +110°C (vulcanized)**
NBR -10°C to +80°C
** **Starting DN40: ANSI150**

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AK08

Butterfly valve made of stainless steel

Intermediate flange butterfly valves **TYPE AK08**. Housing and valve disc made of stainless steel. This butterfly valve is suitable for high temperatures, aggressive and powdered media and has a long neck for isolation. Overall length in accordance with EN558, flange plate in accordance with ISO 5211.

Diameter :	DN40 up to DN300
Connection :	Flange PN10/PN16/ANSI150
Body :	Stainless steel 1.4408
Disc :	Stainless steel 1.4408
Pressure :	0,0 to 16,0 bar
Temperature :	-30°C to +350°C*
Media :	Gaseous and liquid**

TYPE	PRESSURE	SEAL	ACTUATION	SIZE
AK08 Wafer type	**1** PN10/PN16/ ANSI150	**0** EPDM **3** Metal	**00** Lever **01** Gearbox	**07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250*** **16** DN300***

DATASHEET
http://bit.ly/2UG8Gkp

* **EPDM -20°C to +110°C**
Metal (no leakproofness) -30°C to +350°C
** **For metal sealing: usage for powdery media possible**
*** **Only available with EPDM sealing**

AK09 | AK10

Butterfly valve made of ductile iron with PTFE-sleeve

Intermediate flange butterfly valves **TYPE AK09 | AK10**. Housing made of ductile iron and valve disc made of stainless steel (type AK09) or of stainless steel with PTFE sleeve (type AK10). This butterfly valve is used for aggressive media and has a long neck for isolation. Overall length in accordance with EN 558, flange plate in accordance with ISO 5211.

Diameter :	DN40 to DN200
Connection :	Flange PN10/PN16/ANSI150
Body :	Ductile iron EN GJS 500-7
Disc :	Stainless steel 1.4408 | Stainless steel 1.4408 with PTFE-sleeve
Pressure :	0,0 to 16,0 bar*
Temperature :	-25°C to +200°C*
Media :	Gaseous and liquid

TYPE	PRESSURE	SEAL	ACTUATION	SIZE
AK09 stainless steel disc **AK10** PTFE-disc	**1** PN10/PN16/ ANSI150	**4** PTFE	**00** Lever **01** Gearbox	**07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300

DATASHEET
http://bit.ly/2It2Psd

* **Up to DN150: maximum 16 bar**
Starting DN200: maximum 10 bar
Please consider pressure-temperature-diagram (can be found in datasheet)!

AK01 | AK02

Butterfly valve with electric actuator

Intermediate flange butterfly valves **TYPE AK01 | AK02** with **electric actuator with 24-240V AC/DC**. The drive is equipped as standard with manual override, limit switches, automatic voltage detection as well as an integrated control room heating. Protection class IP67, duty 75%.

Diameter : DN32 to DN200
Connection : Flange PN10 | PN16
Body : EN-JS1030
Disc : Stainless steel 1.4408
Pressure : 0,0 to 16,0 bar
Temperature : -20°C to +70°C*
Authorized for : DVGW-drinking water EPDM
DVGW-gas NBR
Media : Gaseous and liquid

TYPE	PRESSURE	SEAL	ACTUATION	SIZE
AK01 Wafer type **AK02** Lug type	**AK01 DN32-DN300:** **1** PN6/10/16/ ANSI150 **AK01 DN350+400:** **1** PN10/16 **2** PN6** **AK02 DN32-DN150:** **1** PN10/16 **2** PN6** **AK02 DN200:** **0** PN10 **1** PN16** **2** PN6**	**0** EPDM **1** NBR **2** FPM **6** EPDM HT	**02** electric actuator 24-240V AC/DC	**06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200

DATASHEET
http://bit.ly/2ICfgRQ

DVGW ACS

* **EPDM (DVGW-W/WRAS/ACS) -20°C to +70°C**
NBR (DVGW Gas) -10°C to +60°C
FKM/FPM -20°C to +70°C
EPDM HT (FDA) -20°C to +70°C
Higher temperatures on request
** **On request**

AK01 | AK02

Butterfly valve with pneumatic actuator

Intermediate flange butterfly valves **TYPE AK01 | AK02** with **pneumatic actuator single acting (closes) or double acting**. The drive is equipped with an optical position indicator as standard. Actuators are dimensioned for control pressure of 6 bar as well as lubricating media. For lower control pressure or non-lubricating media on request.

Diameter : DN32 to DN400
Connection : Flange PN10 | PN16
Body : EN-JS1030
Disc : Stainless steel 1.4408
Pressure : 0,0 to 16,0 bar
Temperature : -20°C to +80°C*
Authorized for : DVGW-drinking water EPDM
DVGW-gas NBR
Media : Gaseous and liquid

TYPE	PRESSURE	SEAL	ACTUATION	SIZE
AK01 Wafer type **AK02** Lug type	**AK01 DN32-300:** **1** PN6/10/16/ ANSI150 **AK01 DN350+400:** **1** PN10/16 **2** PN6** **AK02 DN32-150:** 1 PN10/16 **2** PN6** **AK02 DN200-400:** **0** PN10 **1** PN16** **2** PN6**	**0** EPDM **1** NBR **2** FPM **6** EPDM HT	**04** pneumatic actuator double acting **05** pneumatic actuator single acting	**06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400

DATASHEET
http://bit.ly/2ICfgRQ

DVGW ACS

* **EPDM (DVGW-W/WRAS/ACS) -20°C to +80°C**
NBR (DVGW Gas) -10°C to +60°C
FKM/FPM -20°C to +80°C
EPDM HT (FDA) -20°C to +80°C
Higher temperatures on request
** **On request**

NAMUR VALVES
can be found on page 74

RESISTANCE CHECK
Informations about chemical resistances
can be found on www.nieruf.com/Resistance

TECHNICAL CONSULTING
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Butterfly valve made of PVC-U

Intermediate flange butterfly valves **TYPE AK07** made of PVC-U with valve disc made of PP-GF. These butterfly valves have an anti-UV coating and can be locked in different positions. Suitable for water as well as acid and alkaline liquid media.

Diameter : DN40 to DN200
Connection : Flange DIN 2501 PN10/16 | ANSI 150
Body : PVC-U
Disc : PP-GF
Pressure : 0,0 to 10,0 bar*
Temperature : 0°C to +50°C
Media : Water and acid / alkaline liquid media

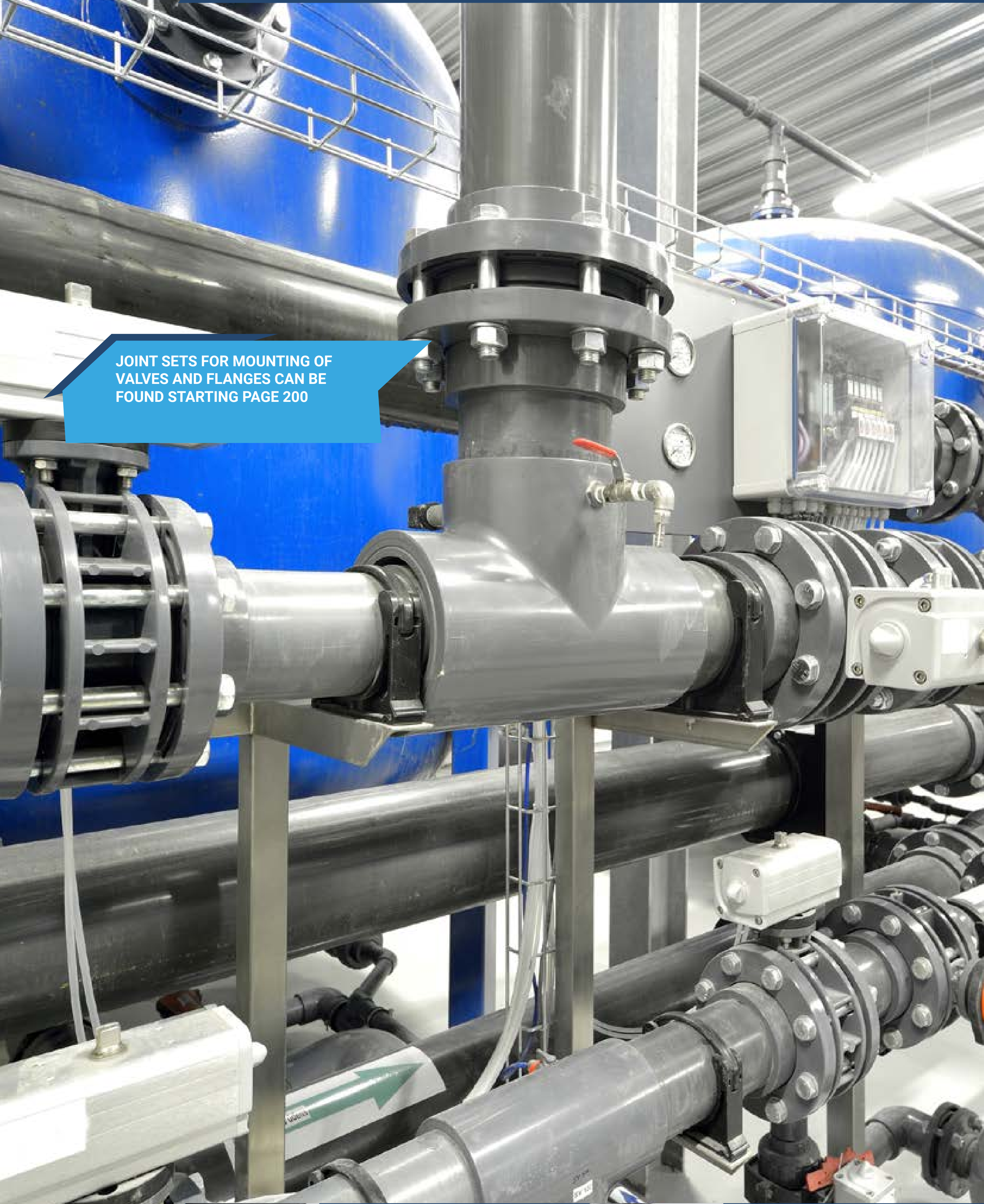
TYPE	PRESSURE	SEAL	ACTUATION	SIZE
AK07	**0** PN10	**0** EPDM	**00** Lever	**07** DN40**
		1 FPM		**08** DN50
				09 DN65
				10 DN80
				11 DN100
				12 DN125
				13 DN150
				14 DN200

DATASHEET
http://bit.ly/2InO3Ty

* Please consider temperature-pressure-diagram (can be found in datasheet)!
** Only available with EPDM sealing

Notes

360° product view



JOINT SETS FOR MOUNTING OF VALVES AND FLANGES CAN BE FOUND STARTING PAGE 200

RESISTANCE CHECK

Informations about chemical resistances
can be found on www.nieruf.com/Resistance

TECHNICAL CONSULTING

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GLOBE VALVES

EQUIPMENT

AV01

Globe valve made of grey cast iron

Globe valves **TYPE AV01** with double-walled stainless steel bellows in straight-way design, available with **isolation plug or regulation cone**. The handwheel is non-rising and has detachable anti-twist protection. The globe valve is tested to **TA Luft**.

Diameter : DN15 to DN300
Connection : Flange DIN EN 1092 PN16
Material : Grey cast iron EN-JL1040
Pressure : 0,0 to 16,0 bar
Temperature : -10°C to +300°C
Authorized for : TA Luft (on request)
Media : Gaseous and liquid

DATASHEET
http://bit.ly/2PaHLae

TA LUFT

* **Please consider temperature-pressure-diagram (can be found in datasheet)!**

TYPE	PRESSURE	PLUG	CONNECTION	SIZE
AV01	**0** PN16	**1** Isolation plug **2** Regulation plug	**00** Flange	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300

AV02

Globe valve made of spheroidal graphite cast iron

Globe valves **TYPE AV02** with double-walled stainless steel bellows in straight-way design, available with **isolation plug or regulation cone**. The handwheel is non-rising and has detachable anti-twist protection. The valve is tested to **TA Luft** and has **DVGW-Gas** approval.

Diameter : DN15 to DN350
Connection : Flange DIN EN 1092 PN16
Material : EN-JS1049
Pressure : 0,0 to 16,0 bar
Temperature : -10°C to +350°C
Authorized for : TA Luft** | DVGW-gas
Media : Gaseous and liquid

DATASHEET
http://bit.ly/2PaHLae

DVGW TA LUFT

* **Please consider temperature-pressure-diagramm (can be found in datasheet))!**
** **TA Luft on request**

TYPE	PRESSURE	PLUG	CONNECTION	SIZE
AV02	**0** PN16	**1** Isolation plug **2** Regulation plug	**00** Flange	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300 **17** DN350

AV03

Globe valve made of carbon steel

Globe valves **TYPE AV03** with double-walled stainless steel bellows in straight-way design, available with **isolation plug or regulation cone**. The handwheel is non-rising and has detachable anti-twist protection. The globe valve is tested to **TA Luft**.

Diameter : DN15 to DN250
Connection : Flange DIN EN 1092 PN40
Material : Carbon steel 1.0619+N
Pressure : 0,0 to 40,0 bar
Temperature : -10°C to +450°C
Authorized for : TA Luft (on request)
Media : Gaseous and liquid

TYPE	PRESSURE	PLUG	CONNECTION	SIZE
AV03	**0** PN40	**1** Isolation plug **2** Regulation plug	**00** Flange	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250

DATASHEET
http://bit.ly/2PaHLae

TA LUFT

* **Please consider temperature-pressure-diagram (can be found in datasheet)!**

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FLANGES page 158

AV04

Globe valve made of stainless steel

Globe valves **TYPE AV04** with double-walled stainless steel bellows in straight-way design, available with **isolation plug or regulation cone**. The handwheel is non-rising and has detachable anti-twist protection. The globe valve is tested to **TA Luft**.

Diameter : DN15 to DN250
Connection : Flange DIN EN 1092
Material : Stainless steel 1.4408
Pressure : 0,0 to 40,0 bar
Temperature : -60°C to +400°C
Authorized for : TA Luft (on request)
Media : Gaseous and liquid

TYPE	PRESSURE	PLUG	CONNECTION	SIZE
AV04	**0** PN16 **1** PN40	**1** Isolation plug **2** Regulation plug	**00** Flange	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250

DATASHEET
http://bit.ly/2GnBLa6

TA LUFT

EDELSTAHL Rost frei

* **Please consider temperature-pressure-diagram (can be found in datasheet)!**

COAXIAL-VALVES

EQUIPMENT

2/2 way coaxial-valve made of brass

CV01

Direct acting **2/2-way coaxial valves TYPE CV01 made of brass**. These coaxial valves are always maintenance-free. They are counter-pressure-proof, have a short switching time and can be flowed through two ways. They have a spring reset and have a pressure-compensating effect.

Design :	2/2 way
Diameter :	3/8“ to 1“
Connection :	Female thread
Material :	Brass
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +100°C
Media :	Gaseous and liquid

TYPE	VOLTAGE	OPTION	FUNCTION	SIZE
CV01	**00** 230V AC **01** 24V DC	**0** Standard **1** for water application	**0** NC - normally closed **1** NO - normally open	**02** G 3/8“ **03** G 1/2“ **04** G 3/4“ **05** G 1“

DATASHEET
http://bit.ly/2Ugf6S8

2/2 way coaxial-valve made of stainless steel

CV02

Direct acting **2/2-way coaxial valves TYPE CV02 made of stainless steel**. These coaxial valves are always maintenance-free. They are counter-pressure-proof, have a short switching time and can be flowed through two ways. They have a spring reset and have a pressure-compensating effect.

Design :	2/2 way
Diameter :	3/8“ to 1“
Connection :	Female thread
Material :	Stainless steel AISI 303
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +100°C
Media :	Gaseous and liquid

TYPE	VOLTAGE	OPTION	FUNCTION	SIZE
CV02	**00** 230V AC **01** 24V DC	**0** standard **1** for water application	**0** NC - normally closed **1** NO - normally open	**02** G 3/8“ **03** G 1/2“ **04** G 3/4“ **05** G 1“

DATASHEET
http://bit.ly/2Ugf6S8

EDELSTAHL Rost frei

FITTINGS
can be found starting p. 168

CV03

3/2 way coaxial-valve made of brass

Direct acting **3/2-way coaxial valves TYPE CV03 made of brass**. These coaxial valves are always maintenance-free. They are counter-pressure-proof, have a short switching time and can be flowed through two ways. They have a spring reset and have a pressure-compensating effect.

Design :	3/2 way
Diameter :	3/8“ to 1“
Connection :	Female thread
Material :	Brass
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +100°C
Media :	Gaseous and liquid

DATASHEET
http://bit.ly/2GpK86c

TYPE	VOLTAGE	OPTION	FUNCTION	SIZE
CV03	**00** 230V AC **01** 24V DC	**0** standard **1** for water application	**0** NC - normally closed **1** NO - normally open	**02** G 3/8“ **03** G 1/2“ **04** G 3/4“ **05** G 1“

Check out the new 3D Viewer on our homepage

Select tab '3D Viewer' in the product details to view our 3D files online

PRESSURE REDUCING VALVES

EQUIPMENT

DM01 | DM02

Pressure reducing valve made of gunmetal

Pressure reducing valves **TYPE DM01 | DM02 made of gunmetal**, standard version with integrated strainer and pressure gauge connection (G 1/4“ axial) for outlet pressure. Type DM01 is tested to **DVGW-Drinking water** in the SP-version. Industrial version made of solid metal with self-balanced valve.

Diameter :	1/2“ to 2“
Connection :	Male thread BSP-T
Material :	Gunmetal CC499K
Diaphragm :	EPDM | FKM
Inlet pressure :	Up to 40,0 bar*
Outlet pressure :	0,5 to 15,0 bar
Temperature :	-20°C to +120°C**
Media :	Gaseous and liquid

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM01 EPDM **DM02** FKM	**01** LP 0,5 to 2,0 bar **02** SP 1,0 to 8,0 bar **03** HP 5,0 to 15,0 bar	**00** Male thread BSP-T	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Dgw3X8

* LP-version: maximum inlet pressure 25,0 bar
** EPDM -20°C to +120°C | FKM -10°C to +120°C

DM03 | DM04

Pressure reducing valve made of stainless steel

Pressure reducing valves **TYPE DM03 | DM04 made of stainless steel**, standard version with integrated strainer and pressure gauge connection (G 1/4“ axial) for outlet pressure. Type DM03 is tested to **DVGW-Drinking water** in the SP-version. Industrial version made of solid metal with self-balanced valve.

Diameter :	1/2“ to 2“
Connection :	Male thread BSP-T
Material :	Stainless steel 1.4408
Diaphragm :	EPDM | FKM
Inlet pressure :	Up to 40,0 bar*
Outlet pressure :	0,5 to 15,0 bar
Temperature :	-20°C to +120°C**
Media :	Gaseoues and liquid

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM03 EPDM **DM04** FKM	**01** LP 0,5 up to 2,0 bar **02** SP 1,0 up to 8,0 bar **03** HP 5,0 up to 15,0 bar	**00** Male thread BSP-T	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Dgw3X8

* LP-version: maximum inlet pressure 25,0 bar
** EPDM -20°C to +120°C | FKM -10°C to +120°C

DM09

Pressure reducing valve for drinking water

Pressure reducing valves **TYPE DM09 made of gunmetal**. **DVGW approval and sound insulation tested** up to DN32, from DN40 inner parts suitable for drinking water. With integrated strainer filter and G 1/4" axial pressure gauge connection (for outlet pressure).

Diameter :	1/2" to 2 1/2"
Connection :	Male thread
Material :	Gunmetal CC499K
Diaphragm :	NBR
Inlet pressure :	Up to 16,0 bar
Outlet pressure :	1,5 to 6,0 bar
Temperature :	0°C to +75°C
Media :	Drinking water (DVGW-approved up to DN32)

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM09	**00** 1,5 to 6,0 bar	**00** Male thread	**03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2" **09** 2 1/2"

DATASHEET
http://bit.ly/2UVefLd

DVGW

DM10

Piston pressure reducing valve made of stainless steel

Stainless steel piston-pressure reducing valves **TYPE DM10** with integrated strainer and pressure gauge connection (G 1/4" axial) for outlet pressure. **Suitable for aggressive liquids as well as for air and gas**. Industrial version made of solid metal.

Diameter :	1/2" to 2"
Connection :	Female thread BSP | NPT
Material :	Stainless steel 1.4408
Seal :	FPM
Inlet pressure :	Up to 40,0 bar
Outlet pressure :	2,0 to 20,0 bar
Temperature :	0°C to +190°C
Media :	Gaseous and liquid*

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM10	**00** 2,0 to 20,0 bar	**00** Female thread BSP **01** Female thread NPT	**03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2GgBcPq

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* **Not suitable for steam**

PRESSURE GAUGES page 144
F ITTINGS page 168

DM12 | DM19

Diaphragm pressure reducing valve made of stainless steel

Diaphragm pressure reducing valves **TYPE DM12 | DM19** made of **stainless steel** with integrated strainer and pressure gauge connection (G 1/4" axial). This pressure reducing valve is suitable for aggressive liquids as well as for air and gas. Industrial version made of solid metal. **Type DM19 is FDA-compliant** and can thus also be used in the food industry.

Diameter :	1/2" to 2"
Connection :	Female thread BSP | NPT
Material :	Stainless steel 1.4408
Diaphragm :	FKM | EPDM
Inlet pressure :	Up to 40,0 bar*
Outlet pressure :	0,2 to 9,0 bar
Temperature :	-20°C to +190°C**
Media :	Gaseous and liquid***

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM12 - FKM **DM19 - EPDM**	**00** 1,5 to 6,0 bar **01** 0,2 to 2,0 bar* **02** 0,5 to 9,0 bar	**00** Female thread BSP **01** Female thread NPT	**03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2Io8UWy

EDELSTAHL Rost frei

* Version 01: maximum inlet pressure 25 bar
** Type DM12: -10°C to +190°C / Type DM19: -20°C to +120°C
*** Not suitable for steam

DM17

Diaphragm pressure reducing valve made of gunmetal

Diaphragm pressure reducing valves **TYPE DM17** made of gunmetal **especially for pressure air applications** with integrated pressure gauge connection G 1/4" axial. Spring bonnet made of brass up to DN25, made of grey cast iron from DN32. Simple adjustment of the outlet pressure by handwheel.

Diameter :	1/4" to 2"
Connection :	Female thread BSP
Material :	Gunmetal CC499K
Diaphragm :	NBR
Inlet pressure :	Up to 25,0 bar
Outlet pressure :	1,5 to 8,0 bar
Temperature :	0°C to +75°C
Media :	Pressure air*

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM17	**00** 1,5 to 8,0 bar	**00** Female thread BSP	**01** 1/4" **02** 3/8" **03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2GnE8tw

* Not suitable for steam

DM18

Pressure reducing valve for steam applications

Pressure reducing valves **TYPE DM18** made of stainless steel **for steam applications**. Available with female thread BSP-P or flange connection DIN 1092-1 PN16. Standard version is delivered with pressure gauge Ø 63mm for outlet pressure.

Diameter : 1/2" to 1"
Connection : Female thread | Flange
Material : Stainless steel
Seal : FKM | PTFE
Inlet pressure : Up to 9,0 bar
Outlet pressure : 1,0 to 8,0 bar
Temperature : 0°C to max. +180°C
Media : Steam

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM18	**00** 1,0 to 6,0 bar **01** 4,0 to 8,0 bar	**00** Female thread BSP-P **01** Flange EN 1092-1 PN16	**03** 1/2" - DN15 **04** 3/4" - DN20 **05** 1" - DN25

DATASHEET
http://bit.ly/2Gr1Kih

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DM14

Piston pressure reducing valve made of brass

Piston-pressure reducing valves **TYPE DM14 made of brass** with integrated pressure gauge connection (G 1/4" axial). These pressure reducing valves with control valve are characterised by their **extremely precise control characteristics**. Pressure adjustment with non-rising stem and handwheel.

Diameter : 1/4" to 2"
Connection : Female thread BSP-P
Material : Gunmetal CC499K
Inlet pressure : Up to 60,0 bar
Outlet pressure : 0,5 to 50,0 bar
Temperature : -40°C to +120°C
Media : Liquid and gaseous, not adhesive*

TYPE	OUTLET PRESSURE	SEAL	SIZE
DM14	**00** 5,0 to 30,0 bar **01** 10,0 to 50,0 bar **02** 0,5 to 15,0 bar*	**00** FKM (-10°C to +120°C) **01** EPDM (-40°C to +120°C)	**01** 1/4" **02** 3/8" **03** 1/2" **04** 3/4" **05** 1" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2v9aAus

* **Outlet pressure 02 only suitable for gaseous media (diaphragm-version)**

PRESSURE GAUGES page 144
F ITTINGS page 168

DM15

Piston pressure reducing valve made of stainless steel

Piston-pressure reducing valves **TYPE DM15 made of stainless steel** with integrated pressure gauge connection (G 1/4“ axial). These pressure reducing valves with control valve are characterised by their **extremely precise control characteristics**. Pressure adjustment with non-rising stem and handwheel.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP-P
Material :	Stainless steel 1.4408
Inlet pressure :	Up to 60,0 bar
Outlet pressure :	0,5 to 50,0 bar
Temperature :	-40°C to +120°C
Media :	liquid and gaseous, not adhesive*

TYPE	OUTLET PRESSURE	SEAL	SIZE
DM15	**00** 5,0 to 30,0 bar **01** 10,0 to 50,0 bar **02** 0,5 to 15,0 bar*	**00** FKM (-10°C to +120°C) **01** EPDM (-40°C to +120°C)	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Gr1AHH

* **Outlet pressure 02 only suitable for gaseous media (diaphragm-version)**

MD01

Diaphragm pressure control valve with secondary venting

Membrane pressure control valves **TYPE MD01 made of plastic**. These pressure control valves are reversible with self-relieving design and have an integrated pressure gauge. Suitable for neutral gases, oiled and non-oiled pressure air.

Diameter :	G 1/4“
Connection :	Female thread
Material :	Plastic PA66
Diaphragm :	NBR
Inlet pressure :	Up to 12,0 bar
Outlet pressure :	0,5 to 8,0 bar
Temperature :	0°C to +50°C
Media :	Oiled/non-oiled presure air

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
MD01	**00** 0,5 to 8,0 bar	**00** Female thread	**01** G 1/4“

DATASHEET
http://bit.ly/2Pf0jGw

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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MD02

Diaphragm pressure control valve with secondary venting

Membrane pressure control valves **TYPE MD02** made of plastic. These pressure control valves are reversible with self-relieving design. An external pressure gauge is included in the scope of supply. Suitable for neutral gases, oiled and non-oiled pressure air.

Diameter :	G 3/8" | G 1/2"
Connection :	Female thread
Material :	Plastic PA66
Diaphragm :	NBR
Inlet pressure :	Up to 16,0 bar
Outlet pressure :	0,5 to 8,0 bar
Temperature :	0°C to +50°C
Media :	Oiled/non-oiled pressure air

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
MD02	**00** 0,5 to 8,0 bar	**00** Female thread	**02** G 3/8" **03** G 1/2"

DATASHEET
http://bit.ly/2ZgE9bw

MD03

Diaphragm pressure control valve with secondary venting

Membrane pressure control valves **TYPE MD03** made of plastic. These pressure control valves are reversible with self-relieving design. An external pressure gauge is included in the scope of supply (0,5 to 8,0 bar). Suitable for oiled and non-oiled pressure air as well as for neutral gases.

Diameter :	G 3/4" | G 1"
Connection :	Female thread
Material :	Plastic PA66
Diaphragm :	NBR
Inlet pressure :	Up to 16,0 bar
Outlet pressure :	0,5 to 8,0 bar
Temperature :	0°C to +50°C
Media :	Oiled/non-oiled pressure air

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
MD03	**00** 0,5 to 8,0 bar	**00** Female thread	**04** G 3/4" **05** G 1"

DATASHEET
http://bit.ly/2V43aHD

DM05 | DM06

Flange pressure reducing valve made of gunmetal

Flange-pressure reducing valves **TYPE DM05 | DM06 made of gunmetal**, standard version with integrated strainer and G 1/4“ pressure gauge connection*. In the SP pressure range this version is tested to **DVGW-Drinking water**. Industrial version in full-metall design.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092
Material :	Gunmetal CC499K
Diaphragm :	EPDM | FKM
Inlet pressure :	Up to 40,0 bar**
Outlet pressure :	0,5 to 15,0 bar
Temperature :	-20°C to +120°C***
Media :	Gaseous and liquid

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM05 EPDM **DM06** FKM	**01** LP 0,5 to 2,0 bar**** **02** SP 1,0 to 8,0 bar **03** HP 5,0 to 15,0 bar*****	**00** Flange PN16 | PN40******	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2Gtfw49

DVGW ACS

*	**Up to DN50: 1x G 1/4“ axial for outlet pressure**
	DN65 + DN80 : 2x G 1/4“ radial for inlet and outlet pressure
	DN100: 2x G 1/4“ axial for inlet and outlet pressure
**	**LP-Version: max. inlet pressure is 25,0 bar**
***	**EPDM -20°C to +120°C | FKM -10°C to +120°C**
****	**Version LP up to DN50**
*****	**Version HP up to DN50, also possible in DN100 but with 5,0 - 13 bar**
******	**PN16 for size DN100**

DM07 | DM08

Flange pressure reducing valve made of stainless steel

Flange pressure reducing valves **TYPE DM07 | DM08 made of stainless steel**, standard version with integrated strainer and pressure gauge connection*. In the SP pressure range this version is tested to **DVGW-Drinking water**. Industrial version in full-metal design.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092
Material :	Stainless steel 1.4408
Diaphragm :	EPDM | FKM
Inlet pressure :	Up to 40,0 bar**
Outlet pressure :	0,5 to 15,0 bar
Temperature :	-20°C to +120°C***
Media :	Gaseous and liquid

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM07 EPDM **DM08** FKM	**01** LP 0,5 to 2,0 bar**** **02** SP 1,0 to 8,0 bar **03** HP 5,0 to 15,0 bar*****	**00** Flange PN40******	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2UElyXc

DVGW EDELSTAHL Rost frei ACS

*	**Up to DN50: 1x G 1/4“ axial for outlet pressure**
	DN65 + DN80 : 2x G 1/4“ radial for inlet and outlet pressure
	DN100: 2x G 1/4“ axial for inlet and outlet pressure
**	**LP-Version: max. inlet pressure is 25,0 bar**
***	**EPDM -20°C to +120°C | FKM -10°C to +120°C**
****	**Version LP up to DN50**
*****	**Version HP up to DN50, also possible in DN100 but with 5,0 - 13 bar**
******	**PN16 for size DN100**

PRESSURE GAUGES
can be found starting p. 144

DM11

Flange piston pressure reducing valve made of stainless steel

Flange piston-pressure reducing valves **TYPE DM11 made of stainless steel** with integrated strainer and pressure gauge connection (G 1/4“ axial) for outlet pressure. **Suitable for aggressive liquids as well as for air and gas**. Industrial version in full-metal design, **available with flange in accordance with ANSI150**.

Diameter :	DN15 to DN50
Connection :	Flange DIN EN 1092 | ANSI150
Material :	Stainless steel 1.4408
Seal :	FPM
Inlet pressure :	Up to 40,0 bar
Outlet pressure :	2,0 to 20,0 bar
Temperature :	0°C to +190°C
Media :	Gaseous and liquid*

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM11	**00** 2,0 to 20,0 bar	**00** Flange PN40 **01** Flange ANSI150	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50

DATASHEET
http://bit.ly/2v9a3ss

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* Not suitable for steam

DM13 | DM20

Flange diaphragm pressure reducing valve made of stainless steel

Diaphragm pressure reducing valves **TYPE DM13 | DM20** made of stainless steel with integrated strainer and pressure gauge connection (G 1/4“ axial). This pressure reducing valve is suitable for aggressive liquids as well as for air and gas. **Available with flange in accordance with ANSI150**. Type **DM20 is FDA-compliant** and suitable for the food industry.

Diameter :	DN15 to DN50
Connection :	Flange DIN EN 1092 | ANSI 150
Material :	Stainless steel 1.4408
Diaphragm :	FKM | EPDM
Inlet pressure :	Up to 40,0 bar*
Outlet pressure :	0,2 to 9,0 bar
Temperature :	-20°C to +190°C**
Media :	Gaseous and liquid***

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM13 - FKM **DM20 - EPDM**	**00** 1,5 to 6,0 bar **01** 0,2 to 2,0 bar* **02** 0,5 to 9,0 bar	**00** Flange PN40 **01** Flange ANSI150	**03** DN15 **04** DN20 **05** DN25 **06** DN32**** **07** DN40 **08** DN50

DATASHEET
http://bit.ly/2v5apjX

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* Version 01: Inlet pressure up to 25 bar
** Type DM13: -10°C to +190°C / Type DM20: -20°C to +120°C
*** Not suitable for steam
**** Size DN32 only available with Type DM13

SEALS page 156
FLANGES page 158

DM16

Flange diaphragm pressure reducing valve made of gunmetal

Flange pressure reducing valves **TYPE DM16 made of gunmetal** with diaphragm and integrated pressure gauge connections for inlet pressure and outlet pressure on both sides (connection G 1/4“ radial). These pressure reducing valves are characterised - on account of **diameters DN100, DN125 & DN150** - by very high KVS values.

Diameter :	DN100 to DN150
Connection :	Flange DIN EN 1092 PN16
Material :	Gunmetal CC499K
Diaphragm :	NBR
Inlet pressure :	Up to 16,0 bar
Outlet pressure :	0,5 to 10,0 bar
Temperature :	-10°C to +75°C
Media :	Neutrally liquid and gaseous, not adhesive

TYPE	OUTLET PRESSURE	CONNECTION	SIZE
DM16	**00** 0,5 to 4,0 bar **01** 1,5 to 6,0 bar **02** 3,0 to 10,0 bar	**00** Flange PN16	**11** DN100 **12** DN125 **13** DN150

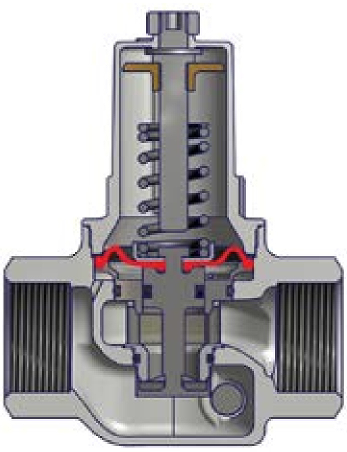
DATASHEET
http://bit.ly/2KFidDH

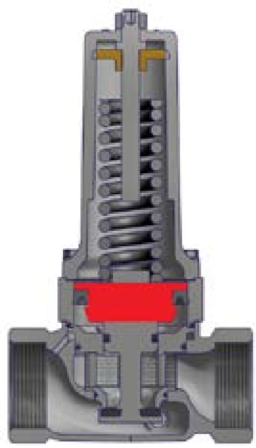
FAQ PRESSURE REDUCING VALVES

Way of control:

Diaphragm-controlled pressure reducing valves have a sensitive control and are used for low to normal outlet pressures.

Piston-controlled pressure reducing valves have a sturdy design and thus offer greater safety in the event of pressure surges. These pressure reducing valves are used with high outlet pressures and aggressive media.





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BALL VALVES

BALL VALVES WITH LEVER

BALL VALVES WITH ELECTRIC ACTUATOR

BALL VALVES WITH PNEUMATIC ACTUATOR

EQUIPMENT

GK01

Threaded ball valve made of brass

Threaded ball valves **TYPE GK01** made of brass with **full port design**. These ball valves have a blow-out-proof and nickel-plated brass stem with double O-ring seal. They are silicone-free and suitable for gaseous and liquid media.

Diameter :	1/4“ to 4“
Connection :	Female thread ISO 228
Body :	Brass CW617N nickel plated
Seal :	PTFE / 2x viton O-rings
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK01	**00** Female thread	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“ **09** 2 1/2“ **10** 3“ **11** 4“

DATASHEET
http://bit.ly/2GeM7cs

GK02

Threaded ball valves made of brass with DVWG-approval

Threaded ball valves **TYPE GK02** made of brass with **full port design**. These ball valves are **DVGW-Gas** and **DVGW-Drinking water** approved. They are silicone-free and have a blow-out-proof stem with double O-ring seal. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female- | Male thread
Body :	Brass CW617N chromed
Seal :	PTFE / 2x viton O-rings
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +170°C*
Authorized for :	DVGW-Gas | -Drinking water
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK02	**00** Female thread ISO 7-1 **01** Female x Male ISO 7-1	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2ZfwRoj

DVGW

* **Gas:** -20°C bis +60°C
Drinking water: up to +65°C (permanent)
up to +95°C (short-time)

FITTINGS
can be found starting p. 168

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GK03

Threaded ball valve made of stainless steel

Threaded ball valves **TYPE GK03** made of stainless steel with reduced port design in short overall length. These ball valves have a shut-off device as well as a blow-out-proof stem. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP-P
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK03	**00** Female thread	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2VOD6NU

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GK05

Ball valve made of stainless steel with DVGW-drinking water approval

Threaded ball valves **TYPE GK05** made of stainless steel with full port design. These ball valves are **DVGW-Drinking water** approved and have a blow-out-proof stem and an adjustable stem packing. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 228
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +180°C
Authorized for :	DVGW-drinking water
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK05	**00** Female thread	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2vg2CA5

DVGW EDELSTAHL Rost frei

* **DVGW-drinking water: PN10 and max. 90°C**

GK04

Three-part ball valve made of stainless steel

Three-part threaded ball valves **TYPE GK04** made of stainless steel **with full port design**. These ball valves have a blow-out-proof stem and an adjustable stem packing. Suitable for gaseous and liquid media.

Diameter :	1/4" to 3"
Connection :	Female thread ISO 7-1 | Butt welding
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 64,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK04	**00** Female thread **01** Butt welding (ANSI B 16.25)	**00** PTFE	**01** 1/4" **02** 3/8" **03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2" **09** 2 1/2" **10** 3"

DATASHEET
http://bit.ly/2V3WHfK

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GK17

Three-part ball valve made of stainless steel for simple applications

Three-part threaded ball valves **TYPE GK17** made of stainless steel **with full port design**. Simplified installation thanks to three-part design. Available with female thread or butt welding. Suitable for liquid and gaseous media.

Diameter :	1/4" to 4"
Connection :	Female thread | Butt welding
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 63,0 bar*
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK17	**00** Female thread BSP **01** Butt welding **02** Female thread NPT	**00** PTFE	**01** 1/4" - DN8 **02** 3/8" - DN10 **03** 1/2" - DN15 **04** 3/4" - DN20 **05** 1" - DN25 **06** 1 1/4" - DN32 **07** 1 1/2" - DN40 **08** 2" - DN50 **09** 2 1/2" - DN65 **10** 3" - DN80 **11** 4" - DN100

DATASHEET
http://bit.ly/2IGyWDO

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* **Up to 3/4": maximum 63 bar**
1" to 2": maximum 40 bar
2 1/2" to 3": maximum 25 bar
4": maximum 20 bar

FITTINGS
can be found starting p. 168

GK06

High pressure ball valves made of stainless steel or carbon steel

High-pressure ball valves **TYPE GK06** with **full port design**. These ball valves have a blow-out-proof stem and an adjustable stem packing. They are silicone-free. The blow-out-proof stem is maintenance-free and thus suitable for high switching cycles. Suitable for gaseous and liquid media.

Diameter : 1/2“ to 2“
Connection : Female thread 7-1
Body : Stainless steel 1.4408 | Carbon steel 1.0619 zinc plated
Seal : TFM
Pressure : 0,0 to 100,0 bar
Temperature : -20°C to +215°C
Media : Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK06	**00** Stainless steel **01** Carbon steel	**00** TFM	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2ZewfPP

EDELSTAHL Rost frei | TA LUFT

GK16

Ball diverter valve made of stainless steel

Ball diverter valve made of stainless steel **TYPE GK16 for cryogenic applications**. The size refers to the inlet side, see the data sheet for the nominal width on the outlet side. Available with T- or L-drilling depending on the version.

Diameter : 1/2“ to 1“
Connection : Female thread ISO 228
Body : Stainless steel 1.4408
Seal : PTFE
Pressure : 0,0 to 63,0 bar
Temperature : -200°C to +120°C
Media : Cryogenic gases

TYPE	VERSION	SEAL	SIZE*
GK16	**00** T-drilling **01** L-drilling	**00** PTFE	**04** 1/2“ **05** 3/4“ **06** 1“

DATASHEET
http://bit.ly/2LaD8Pm

EDELSTAHL Rost frei

* **Size is for connection of safety valves; Inlet size (of pipe, etc.) is one size bigger**

CRYO SAFETY VALVES
can be found on p. 115

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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GK14

Threaded ball valve for gas made of brass with DVGW-gas approval

Gas threaded ball valves **TYPE GK14** made of brass with threaded connection and **full port design**. These ball valves are **DVGW-gas approved** and have a blow-out-proof stem. **Suitable for gas and biogas**.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Brass CW617N nickel plated
Seal :	PTFE
Pressure :	MOP 5
Temperature :	-20°C to +60°C
Authorized for :	DVGW-gas
Media :	Gas and biogas

TYPE	VERSION	SEAL	SIZE
GK14	**00** Female thread	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2VMhSjz

DVGW

GK07

Threaded ball valve for gas made of stainless steel with DVGW-gas approval

Gas threaded ball valves **TYPE GK07** made of stainless steel with threaded connection and **full port design**. These ball valves are **DVGW-gas approved** and have a blow-out-proof stem. **Suitable for gas and biogas**.

Diameter :	1/2“ to 2“
Connection :	Female thread ISO 7-1
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +60°C
Authorized for :	DVGW-gas
Media :	Gas and biogas

TYPE	VERSION	SEAL	SIZE
GK07	**00** Female thread	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2PcQ7hL

DVGW
EDELSTAHL Rost frei

GK08

3-way threaded ball valves made of brass

3-way threaded ball valves **TYPE GK08** made of brass with **full port design**. These ball valves are sealed on all sides and have a floating ball and a blow-out-proof stem. They are available with **T- or L-drilling**. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Brass
Seal :	PTFE
Pressure :	0,0 to 30,0 bar
Temperature :	-20°C to +150°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK08	**00** T-drilling **01** L-drilling	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Ulwvsv

GK09

3-way threaded ball valve made of stainless steel

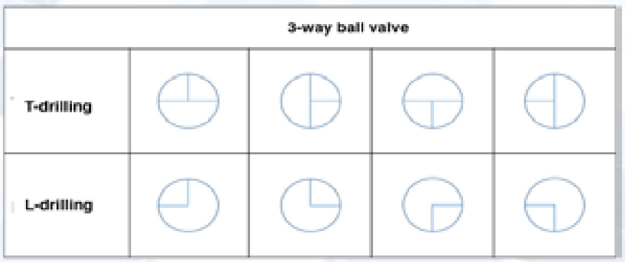
3-way threaded ball valves **TYPE GK09** made of stainless steel with reduced port design. These ball valves have a blow-out-proof stem and a blocking mechanism. They are available with **T- or L-drilling**. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP-P
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-25°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK09	**00** T-drilling **01** L-drilling	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2VOFQdY

EDELSTAHL Rost frei



RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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GK10

Threaded bib-cock ball valve made of brass

Bib-cock ball valves **TYPE GK10** made of brass with male thread connection and hose nozzle. Suitable for gaseous and liquid media. Temperature range for air: -15°C to +110°C, temperature range for water: 0°C to +80°C.

Diameter :	3/8“ to 1“
Connection :	Male thread ISO 228 x hose noozle
Body :	Brass CW617N nickel plated
Seal :	PTFE
Pressure :	0,0 to 15,0 bar
Temperature :	see product description
Media :	Gaseous and liquid

DATASHEET
http://bit.ly/2Gm9qAX

TYPE	VERSION	SEAL	SIZE
GK10	**00** with hose nozzle	**00** PTFE	**02** 3/8“ x 1/2 **03** 1/2“ x 1/2 **04** 3/4“ x 3/4 **05** 1“ x 1

GK11

Ball valve made of brass with stem extension

Threaded ball valves **TYPE GK11** made of brass. These ball valves have a fixed **extended stem** and are thus suitable for pipes which are sheathed for insulation. They have a blow-out-proof stem and are suitable for gaseous and liquid media.

Diameter :	3/8“ to 2“
Connection :	Female thread ISO 228
Body :	Brass CW617N nickel plated
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

DATASHEET
http://bit.ly/2KFMuSM

TYPE	VERSION	SEAL	SIZE
GK11	**00** stem extension	**00** PTFE	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

GK13

Ball valve made of brass with spring return

Threaded ball valves **TYPE GK13** made of brass. These ball valves have a **spring reset** to support closing as well as a blow-out-proof stem. They are suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Brass CW617N nickel plated
Seal :	PTFE
Pressure :	0,0 to 65,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK13	**00** with spring return	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2KH8wVh

GK12

Ball valve made of stainless steel with spring return

Threaded ball valves **TYPE GK12** made of stainless steel. These ball valves have a **spring reset** to support closing as well as a blow-out-proof stem. They are suitable for gaseous and liquid media.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
GK12	**00** with spring return	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2GrT3V6

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FITTINGS
can be found starting p. 168

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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FK01 | FK02

Flange ball valve made of spheroidal graphite cast iron

Silicone-free flange ball valves made of spheroidal graphite cast iron with full port design in **Fire Safe design** and **TA Luft** approval. Available with standard or **DVGW-Gas** ball sealing system. **TYPE FK01** with ball made of steel, **TYPE FK02** with ball made of stainless steel. **Overall length DIN EN 558-1 R14**.

Diameter : DN25 to DN150
Connection : Flange DIN EN 1092-2
Body : GJS 400-18
Seal : Standard | DVGW-gas
Pressure : 0,0 to 16,0 bar
Temperature : -20°C to +180°C*
Authorized for : TA Luft | DVGW-gas | Fire Safe
Media : Gaseous and liquid

TYPE	VERSION	CONNECTION	SIZE
FK01 ball made of chrome plated steel C45	**00** Standard (PTFE+GF / 2x O-ring seal FKM and NBR)	**00** Flange PN16	**05** DN25
FK02 ball made of stainless steel 1.4408	**02** DVGW-gas (PTFE / 2x O-ring seal FKM and NBR)		**06** DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150

DATASHEET
http://bit.ly/2VMfsS1

DVGW TA LUFT

* Gas -20°C to +60°C

FK12

Flange ball valve made of carbon steel with different certifications

Flange ball valves **TYPE FK12** made of carbon steel with full port design. This type is available as standard, **steam**, **Fire Safe** or **DVGW-Gas** version and is both silicone-free and antistatic. Overall length in accordance with DIN EN 558 R27, flange plate in accordance with ISO 5211.

Diameter : DN15 to DN200
Connection : Flange DIN EN 1092-1
Body : Carbon steel 1.0619
Seal : see below (Version)
Pressure : 0,0 to 16,0 bar
Temperature : -20°C to +180°C*
Authorized for : TA Luft | DVGW | Fire Safe
Media : Gaseous and liquid

TYPE	VERSION	CONNECTION	SIZE
FK12	**00** Standard (PTFE+GF / FKM)	**00** Flange PN16	**03** DN15
	01 Steam (PTFE+TFM / Graphite)		**04** DN20
	02 Fire Safe (PTFE+FKM / Graphite)		**05** DN25
	03 DVGW-gas (PTFE / FKM)		**06** DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200

DATASHEET
http://bit.ly/2UoUw2a

DVGW TA LUFT

* Gas -20°C to +60°C

FK06

Flange ball valve made of stainless steel

Flange ball valves **TYPE FK06** made of stainless steel with full port design. These ball valves are available with **DIN EN or ANSI flange connection**. They are antistatic and have a chambered PTFE seal as well as a blow-out-proof stem. Suitable for gaseous and liquid media.

Diameter :	DN15 to DN150
Connection :	Flange DIN EN 1092-1 | ANSI
Length :	DIN EN 558 R27
Body :	Stainless steel 1.4408
Seal :	PTFE (covered) / FKM
Pressure :	0,0 to 40,0 bar
Temperature :	-10°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
FK06	**00** Flange PN16/40*	**00** PTFE	**03** DN15
	01 Flange ANSI 150		**04** DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125**
			13 DN150

DATASHEET
http://bit.ly/2Pga1Zk

* **DN15 to DN50: PN40, starting DN65: PN16**
** **Only available with flange PN16 (ANSI not possible)**

FK05

Flange ball valve made of stainless steel with different certifications

Silicone-free flange ball valves **TYPE FK05** made of stainless steel with full port design. These ball valves are available as standard, **steam**, **Fire Safe**, **DVGW-Gas** or **DVGW-Drinking water** version. They have a blow-out-proof stem and are antistatic. **Overall length DIN EN 558 R27**.

Diameter :	DN15 to DN200
Connection :	Flange DIN EN 1092-1
Body :	Stainless steel 1.4408
Seal :	see below (Version)
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +180°C*
Authorized for :	TA Luft | DVGW | Fire Safe
Media :	Gaseous and liquid

TYPE	VERSION	CONNECTION	SIZE
FK05	**00** Standard (PTFE+GF / FKM)	**00** Flange PN16	**03** DN15
	01 Steam (PTFE+TFM / EPDM)		**04** DN20
	02 Fire Safe (PTFE+FKM / Graphite)		**05** DN25
	03 DVGW-gas (PTFE / FKM)		**06** DN32
	04 DVGW-drinking water (PTFE+GF / EPDM)		**07** DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200

DATASHEET
http://bit.ly/2VNV17l

* **Gas -20°C to +60°C |**
Drinking water: up to +65°C

RESISTANCE CHECK
Informations about chemical resistances
can be found on www.nieruf.com/Resistance

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FK03

Compact ball valve made of carbon steel

Silicone-free flange ball valves **TYPE FK03 made of steel**. These ball valves can be locked and have a blow-out-proof stem. Direct attachment of an actuator is also possible. **TA Luft** approval and **compact overall length**.

Diameter :	DN15 to DN150
Connection :	Flange DIN EN 1092-1
Body :	Carbon steel 1.0619
Seal :	PTFE+TFM / PTFE / Viton
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +180°C
Authorized for :	TA Luft
Media :	Gaseous and liquid

TYPE	VERSION	CONNECTION	SIZE
FK03	**00** PN16	**00** Flange	**03** DN15
	01 PN40*		**04** DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150

DATASHEET
http://bit.ly/2PaMmcu

TA LUFT

* **PN40 available up to DN100**

FK04

Compact ball valve made of stainless steel up to 40,0 bar

Silicone-free flange ball valves **TYPE FK04 made of stainless steel**. These ball valves can be locked and have a blow-out-proof stem. Direct attachment of an actuator is also possible. **Compact overall length** and **TA Luft** approval.

Diameter :	DN15 to DN150
Connection :	Flange DIN EN 1092-1
Body :	Stainless steel 1.4408
Seal :	PTFE+TFM / PTFE / Viton
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +180°C
Authorized for :	TA Luft
Media :	Gaseous and liquid

TYPE	VERSION	CONNECTION	SIZE
FK04	**00** PN16	**00** Flange	**03** DN15
	01 PN40*		**04** DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150

DATASHEET
http://bit.ly/2PaMmcu

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* **PN40 available up to DN100**

SEALS page 156
FLANGES page 158

FK11

Compact ball valve made of stainless steel

Compact ball valves **TYPE FK11** made of stainless steel with DIN EN flange connection. These ball valves have threaded flange holes as well as direct attachment according to ISO 5211 for an actuator. Nominal widths from DN25 to DN100 have a shut-off device. Suitable for gaseous and liquid media.

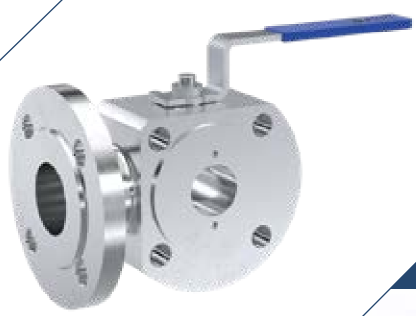
Diameter :	DN15 to DN150
Connection :	Flange DIN EN 1092-1 PN16
Length :	Compact
Body :	Stainless steel 1.4408
Seal :	PTFE+FKM & O-ring FKM
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
FK11	**00** Stainless steel	**00** PTFE	**03** DN15
			04 DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150

DATASHEET
http://bit.ly/2GnDTiq

EDELSTAHL Rost frei

FK07



3/2-way cross over ball valve made of steel with flange connection

3/2-way cross over ball valves **TYPE FK07** in **compact design** with reduced port design. These ball valves are made of steel and have a flange connection in accordance with DIN EN 1092-1. Suitable for gaseous and liquid media.

Diameter :	DN15 to DN50
Connection :	Flange DIN EN 1092-1
Body :	Steel C22 1.0402
Seal :	TFM 25% GF / Viton
Pressure :	PN16 to PN40
Temperature :	-20°C to +180°C
Media :	Gaseous and liquid

TYPE	VERSION	CONNECTION	SIZE
FK07	**00** TFM 25% GF / O-ring Viton	**00** Flange PN40*	**03** DN15
			04 DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50

DATASHEET
http://bit.ly/2UlNYBf

RESISTANCE CHECK
Informations about chemical resistances
can be found on www.nieruf.com/Resistance

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FK08

3-way flange ball valve made of carbon steel

3-way flange ball valves **TYPE FK08** made of carbon steel with full port design. These ball valves have **TA Luft** approval. They are anti-static. Available with T- or L-drilling. Suitable for gaseous and liquid media.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1
Body :	Carbon steel 1.0619
Seal :	TFM 1600+PTFE / FKM Viton
Pressure :	PN16 to PN40*
Temperature :	-20°C to +180°C
Authorized for :	TA Luft
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
FK08	**00** T-drilling **01** L-drilling	**00** TFM 1600 / PTFE	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2IzNPba

* **DN15 to DN50: PN16/40**
Starting DN65: PN16

FK09

3-way flange ball valve made of stainless steel

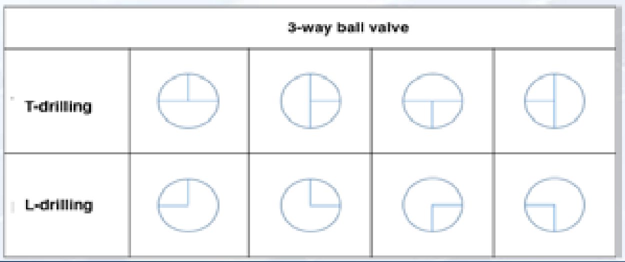
3-way flange ball valves **TYPE FK09** made of stainless steel with full port design. These ball valves have **TA Luft** approval. They are antistatic. Available with T- or L-drilling. Suitable for gaseous and liquid media.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1
Body :	Stainless steel 1.4408
Seal :	TFM 1600+PTFE / FKM Viton
Pressure :	PN16 to PN40*
Temperature :	-20°C to +180°C
Authorized for :	TA Luft
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
FK09	**00** T-drilling **01** L-drilling	**00** TFM 1600 / PTFE	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2IzNPba

* **DN15 to DN50: PN16/40**
Starting DN65: PN16



EK01

Ball valve made of brass with electric actuator

2-way ball valve **TYPE EK01 made of brass with electric actuator made of plastic 24V or 230V 50Hz**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	1/4" to 2"
Connection :	Female thread ISO 7-1
Body :	Brass CW617N nickel plated
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +70°C*
Media :	Gaseous and liquid

TYPE	VERSION**	SEAL	SIZE
EK01	**00** 24V AC/DC **01** 110-240V AC/DC	**00** PTFE	**01** 1/4" **02** 3/8" **03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2XnVQ7p

* Higher temperatures on request
** Starting size 1 1/4": actuator with 24-240V AC/DC

ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

EK02

Ball valve made of stainless steel with electric actuator

2-way ball valve **TYPE EK02 made of stainless steel with electric actuator made of plastic 24V or 230V 50Hz**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	1/4" to 2"
Connection :	Female thread ISO 7-1
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +70°C*
Authorized for :	TA Luft
Media :	Gaseous and liquid

TYPE	VERSION**	SEAL	SIZE
EK02	**00** 24V AC/DC **01** 110-240V AC/DC	**00** PTFE	**01** 1/4" **02** 3/8" **03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2Xnf3pL

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* Higher temperatures on request
** Starting size 1": actuator with 24-240V AC/DC

EK04

Flange ball valve made of spheroidal graphite cast iron with electric actuator

Flange ball valve **TYPE EK04 made of spheroidal graphite cast iron with electric actuator made of plastic 24V to 230V 50Hz**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	DN25 to DN150
Connection :	Flange DIN EN 1092 PN16
Body :	GJS-400-15
Seal :	PTFE + GF
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +70°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
EK04	**00** 24V AC/DC	**00** PTFE + GF	**05** DN25
	01 110-240V AC/DC		**06** DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150

DATASHEET
http://bit.ly/2VJCJ7i

TA LUFT

* **Higher temperatures on request**

ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

EK05

Flange ball valve made of stainless steel with electric actuator

Flange ball valve **TYPE EK05 made of stainless steel with electric actuator made of plastic 24V or 230V 50Hz**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Nennweite :	DN15 to DN100
Anschluss :	Flange DIN EN 1092 PN16
Body :	Stainless steel 1.4408
Dichtsystem :	PTFE (covered) + 15% GF
Druck :	0,0 to 16,0 bar
Temperatur :	-20°C to +70°C*
Medium :	Gaseous and liquid

TYPE	VERSION**	SEAL	SIZE
EK05	**00** 24V AC/DC	**00** PTFE + GF	**03** DN15
	01 110-240V AC/DC		**04** DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100

DATASHEET
http://bit.ly/2KRRkfE

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* **Higher temperatures on request**
** **Starting size DN20: actuator with 24-240V AC/DC**

FITTINGS
can be found starting p. 168

EK06

Compact flange ball valve made of carbon steel with electric actuator

Compact ball valve **TYPE EK06 made of carbon steel with electric actuator made of plastic 24V or 230V 50Hz**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	DN15 to DN125
Connection :	Flange DIN EN 1092 PN16
Body :	Carbon steel 1.0619
Seal :	PTFE / TFM
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +70°C*
Media :	Gaseous and liquid

TYPE	VERSION**	SEAL	SIZE
EK06	**00** 24V AC/DC	**00** PTFE / TFM	**03** DN15
	01 110-240V AC/DC		**04** DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125

DATASHEET
http://bit.ly/2Zj7B0H

TA LUFT

* **Higher temperatures on request**
** **Starting size DN25: actuator with 24-240V AC/DC**

ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

EK07

Compact flange ball valve made of stainless steel with electric actuator

Compact ball valve **TYPE EK07 made of stainless steel with electric actuator made of plastic 24V or 230V 50Hz**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	DN15 to DN125
Connection :	Flange DIN EN 1092 PN16
Body :	Stainless steel 1.4408
Seal :	PTFE (covered) / TFM
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +70°C*
Media :	Gaseous and liquid

TYPE	VERSION**	SEAL	SIZE
EK07	**00** 24V AC/DC	**00** PTFE / TFM	**03** DN15
	01 110-240V AC/DC		**04** DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125

DATASHEET
http://bit.ly/2VMpYbT

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* **Higher temperatures on request**
** **Starting size DN25: actuator with 24-240V AC/DC**

3-way-ball valve made of brass with electric actuator

Threaded 3-way ball valve **TYPE EK08 made of brass with electric actuator made of plastic with 24-230V AC/DC**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Brass, nickel plated
Seal :	PTFE / FKM
Pressure :	0,0 to 30,0 bar
Temperature :	-20°C to +70°C*
Media :	Gaseous and liquid

TYPE	VERSION	ACTUATOR	SIZE
EK08	**00** T-drilling **01** L-drilling	**00** electric 24-240V AC/DC	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
https://bit.ly/2UcwXPG

* **Higher temperatures on request**

ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

3-way-ball valve made of stainless steel with electric actuator

Threaded 3-way ball valve **TYPE EK09 made of stainless steel with electric actuator made of plastic with 24-230V AC/DC**. Ball valve with **reduced bore**. The drive is equipped as standard with a manual emergency actuation, a temperature monitor in the motor and an optical position indicator. Protection class IP67.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Stainless steel 1.4408
Seal :	PTFE / FKM
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +70°C*
Media :	Gaseous and liquid

TYPE	VERSION	ACTUATOR	SIZE
EK09	**00** T-drilling **01** L-drilling	**00** electric 24-240V AC/DC	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
https://bit.ly/35X2YOc

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* **Higher temperatures on request**

PK01

Ball valve made of brass with pneumatic actuator

2-way ball valve made of brass **TYPE PK01 with pneumatic actuator single acting (closes) or double acting**. The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	1/4“ to 2“
Connection :	Female thread ISO 7-1
Body :	Brass CW617N nickel plated
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK01	**00** double acting **01** single acting	**00** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2KMFsMb

* **Higher temperatures on request**

ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

PK02

Ball valve made of stainless steel with pneumatic actuator

2-way ball valve made of stainless steel **TYPE PK02 with pneumatic actuator single acting (closes) or double acting**. The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	1/2“ to 2“
Connection :	Female thread ISO 7-1
Body :	Stainless steel 1.4408
Seal :	PTFE
Pressure :	0,0 to 40,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK02	**00** double acting **01** single acting	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2UGNFWF

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* **Higher temperatures on request**

POSITION INDICATORS
can be found on page 56

PK04

Flange ball valve made of spheroidal graphite cast iron with pneumatic actuator

Flange ball valve made of spheroidal graphite cast iron **TYPE PK04 with pneumatic actuator single acting (closes) or double acting**. The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	DN25 to DN150
Connection :	Flange DIN EN 1092-1 PN16
Body :	GGG 40
Seal :	PTFE + GF
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK04	**00** double acting **01** single acting	**00** PTFE + GF	**05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

DATASHEET
http://bit.ly/2IHDxWr

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ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

PK05

Flange ball valve made of stainless steel with pneumatic actuator

Flange ball valve made of stainless steel **TYPE PK05 with pneumatic actuator single acting (closes) or double acting**. The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	DN15 to DN300
Connection :	Flange DIN EN 1092-1 PN16
Body :	Stainless steel 1.4408
Seal :	PTFE (covered) + 15% GF
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK05	**00** double acting **01** single acting	**00** PTFE (covered) + 15% GF	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300

DATASHEET
http://bit.ly/2UI7H3g

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* **Higher temperatures on request**

PK06

Compact flange ball valve made of carbon steel with pneumatic actuator

Compact ball valve made of carbon steel **TYPE PK06 with pneumatic actuator single acting (closes) or double acting**. The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1 PN16
Body :	Carbon steel 1.0619
Seal :	PTFE / TFM
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK06	**00** double acting **01** single acting	**00** PTFE / TFM	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2Pii5Zt

TA LUFT

* **Higher temperatures on request**

ACTUATOR FOR GREASING MEDIA, NON-GREASING MEDIA ON REQUEST

PK07

Compact flange ball valve made of stainless steel with pneumatic actuator

Compact ball valve made of stainless steel **TYPE PK07 with pneumatic actuator single acting (closes) or double acting**. The drive is dimensioned in such a way that a control pressure from 6,0 to max. 10,0 bar is required. Drive material is aluminium, circuit diagram according to NAMUR.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1 PN16
Body :	Stainless steel 1.4408
Seal :	PTFE / TFM
Pressure :	0,0 to 16,0 bar
Temperature :	-20°C to +80°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
PK07	**00** double acting **01** single acting	**00** PTFE / TFM	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2XsljLP

TA LUFT

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* **Higher temperatures on request**

NAMUR VALVES
can be found on page 74

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

TECHNICAL CONSULTING
+49 (0) 7143 / 9 66 69 - 00

PR02

Position indicator with visual indicator and panel

Compact limit switch box made of aluminum or plastic with 3D display dome, for open and closed position. Available with mechanical microswitch or inductive sensors depending on the version. Optionally also available with two cable connections M20x1.5 for direct connection with Namur valve.

Material : plastic | aluminium
Visual indicator : 3D visual indicator
Switch : mechanic | inductive
Voltage : 12-250V AC/DC | 10-30V DC
Protection class : IP67
Signal : open + close
Temperature : -25°C to +80°C
Hole spacing : 80/130 x 30 x 30 mm

TYPE	MATERIAL	SWITCH	SIZE
PR02	**00** plastic PA	**00** mechanic	**00** 1 x cable gland M20x1,5
	01 aluminium	**01** inductive	**01** 2 x cable glands M20x1,5

DATASHEET
https://bit.ly/3RTgkCo

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KK04 | KK05

PVC ball valve with electric actuator

PVC ball valves **TYPE KK04** | **KK05** with electric drive. These ball valves have a compact design and are suitable for gaseous and liquid media. Available with 230V or 24V electric motor.

Diameter :	DN10 to DN50
Connection :	Cementing socket | thread
Material :	PVC-U
Seal :	EPDM
Pressure :	0,0 to 16,0 bar
Temperature :	0°C to +60°C*
Media :	Gaseous and liquid

TYPE	VERSION	SEAL	SIZE
KK04 Cementing socket **KK05** Thread BSP	**00** 230V **01** 24V	**00** Hytrel/EPDM	**02** DN10 - d16 **03** DN15 - d20 **04** DN20 - d25 **05** DN25 - d32 **06** DN32 - d40 **07** DN40 - d50 **08** DN50 - d63

DATASHEET
http://bit.ly/2ltFlgW

* **Please consider pressure-temperature-diagram (see datasheet)**

This is how the nieruf article number system works

Our article number **PK02010005** consists of :

TYPE	VERSION	SEAL	SIZE
PK02	**00** double acting **01** single acting	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“
PK02	**01**	**00**	**05**

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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SOLENOID VALVES

EV01

2/2-way solenoid valve direct acting G 1/8“ up to 16 bar

2/2-way solenoid valve **TYPE EV01 made of stainless steel** with **G 1/8“** female thread connection. The solenoid valves work direct acting, thus switch from 0,0 bar and are **normally closed**. Suitable for gaseous and liquid media.

Diameter :	1/8“
Connection :	Female thread
Material :	Stainless steel 1.4305
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 16,0 bar*
Temperature :	-10°C to +130°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV01	**1** 230V 50Hz **2** 24V DC	**2** FKM	**0** NC normally closed	**0** Standard	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0 **25** DN 2,5

DATASHEET
http://bit.ly/2VOAEXw

***** **DN 1,0 - 16 bar | DN 1,5 - 13 bar**
DN 2,0 - 10 bar | DN 2,5 - 8 bar

EV03

2/2- way solenoid valve direct acting G 1/4“ up to 48 bar

2/2-way solenoid valve **TYPE EV03 made of stainless steel** with **G 1/4“** female thread connection. The solenoid valves work direct acting, thus switch from 0,0 bar and are **normally closed**. Suitable for gaseous and liquid media.

Diameter :	1/4“
Connection :	Female thread
Material :	Stainless steel 1.4305
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 48,0 bar*
Temperature :	-10°C to +120°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV03	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM	**0** NC normally closed	**0** Standard	**20** DN 2,0 **25** DN 2,5 **30** DN 3,0 **40** DN 4,0 **60** DN 6,0

DATASHEET
http://bit.ly/2Gm5LDd

***** **DN 2,0 - 48 (38) bar | DN 2,5 - 30 (24) bar**
DN 3,0 - 20 (16) bar | DN 4,0 - 10 (8) bar
DN 6,0 - 6,0 (4,8) bar
Please consider reduced maximum pressure in case of direct current (see values in brackets)

EV04

2/2- way solenoid valve servo controlled starting 0,1 bar

2/2-way solenoid valve in diaphragm design **TYPE EV04 made of stainless steel** for high flow rates. The solenoid valves work **servo controlled** and require a pressure of 0,1 bar to switch. The **normally closed** version is delivered as standard.

Diameter : 1/4“ bis 1/2“
Connection : Female thread
Material : Stainless steel 1.4408
Function : NC - normally closed
Control : Servo controlled
Voltage : 230V 50Hz | 24V DC
Pressure : 0,1 to 16,0 bar*
Temperature : -10°C to +130°C (media)**
Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV04	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**01** 1/4“ **02** 3/8“ **03** 1/2“

DATASHEET
http://bit.ly/2V11FtL

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* Please consider that maximum pressure is reduced to 10 bar in case of direct current
** EPDM -10°C to +130°C | FKM -10°C to +120°C
NBR -10°C to +80°C

EV05

2/2-way solenoid valve servo controlled starting 0,5 bar

2/2-way solenoid valve made of stainless steel in diaphragm design **TYPE EV05 for high flow rates**. The solenoid valves work **servo controlled** and require a pressure of 0,5 bar to switch. The **normally closed** version is delivered as standard.

Diameter : 3/8“ to 2“
Connection : Female thread
Material : Stainless steel 1.4408
Function : NC - normally closed
Control : Servo controlled
Voltage : 230V 50Hz | 24V DC
Pressure : 0,5 to 16,0 bar
Temperature : -10°C to +130°C (media)*
Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV05	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2IkJFEE

EDELSTAHL Rost frei

* EPDM -10°C to +130°C | FKM -10°C to +120°C
NBR -10°C to +80°C

FITTINGS
can be found starting p. 168

EV06

2/2-way solenoid valve force pilot operated - optional with ATEX

2/2-way solenoid valve **TYPE EV06 made of stainless steel** with threaded connection, diaphragm design for high flow rates. Solenoid valves work force pilot operated, are available in the versions **normally closed** or **normally open**. **ATEX-version** available as an option.

Diameter :	3/8“ to 2“
Connection :	Female thread
Material :	Stainless steel 1.4308
Function :	NC - normally closed NO - normally open
Control :	Force pilot operated
Voltage :	230V 50Hz | 24V DC | 110V AC
Pressure :	0,0 to 10,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV06	**1** 230V 50Hz **2** 24V DC **3** 110V AC***	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed **1** NO normally open****	**0** Standard **1** ATEX-version*****	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2KWoLy3

EDELSTAHL Rost frei

* Please consider reduced maximum pressure of 8 bar (starting size 1 1/4“ of 6 bar) in case of direct current
** EPDM -10°C to +130°C | FKM -10°C to +120°C | NBR -10°C to +80°C
*** 110V AC version only available as NC - normally closed version and without ATEX
**** Maximum pressure of normally open version: 0,0 to 7,0 bar for 230V | 0,0 to 0,5 bar for 24V DC
***** ATEX-version available up to DN25; only as NC - normally closed version; maximum pressure: 6 bar

EV07

2/2-way solenoid valve force pilot operated

2/2-way solenoid valve **TYPE EV07 made of stainless steel** with thread connection, diaphragm design for high flow rates. Solenoid valves work force pilot operated, thus switch from 0,0 bar and are normally closed. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 1/2“
Connection :	Female thread
Material :	Stainless steel 1.4308
Function :	NC - normally closed
Control :	Force pilot operated
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 20,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV07	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**01** 1/4“ **02** 3/8“ **03** 1/2“

DATASHEET
http://bit.ly/2Gqe8yX

EDELSTAHL Rost frei

* Please consider reducing of maximum pressure to 16 bar in case of direct current
** EPDM -10°C to +130°C | FKM -10°C to +120°C
NBR -10°C to +80°C

EV08

3/2-way solenoid valve direct acting G 1/4“

3/2-way solenoid valve TYPE EV08 made of stainless steel with G 1/4“ threaded connection. The solenoid valves work **direct acting**, thus switch from 0,0 bar and are normally closed. Suitable for gaseous and liquid media.

Diameter :	1/4“
Connection :	Female thread
Material :	Stainless steel 1.4305
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 20,0 bar*
Temperature :	-10°C to +120°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV08	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM	**0** NC normally closed	**0** Standard	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0 **25** DN 2,5

DATASHEET
http://bit.ly/2UhrzoB

EDELSTAHL Rost frei

* **DN 1,0 - 20 bar | DN 1,5 - 15 bar**
DN 2,0 - 10 bar | DN 2,5 - 6 bar

EV09

3/2-way solenoid valve direct acting G 1/8“

3/2-way solenoid valve TYPE EV09 made of stainless steel with G 1/8“ threaded connection. The solenoid valves work **direct acting**, thus switch from 0,0 bar and are normally closed. Suitable for gaseous and liquid media.

Diameter :	1/8“
Connection :	Female thread
Material :	Stainless steel 1.4305
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 12,0 bar*
Temperature :	-10°C to +130°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
EV09	**1** 230V 50Hz **2** 24V DC	**2** FKM	**0** NC normally closed	**0** Standard	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0

DATASHEET
http://bit.ly/2KIzgVw

EDELSTAHL Rost frei

* **DN 1,0 - 12 bar | DN 1,5 - 7 bar | DN 2,0 - 4 bar**

FITTINGS
can be found starting p. 168

FV01

2/2-way flange solenoid valve

2/2-way **flange solenoid valve TYPE FV01** made of stainless steel, diaphragm design for **very high flow rates**. Solenoid valves work force pilot operated, thus switch from 0,0 bar and are normally closed. Suitable for gaseous and liquid media.

Diameter :	DN25 to DN100
Connection :	Flange DIN EN 1092-1
Material :	Stainless steel 1.4308
Function :	NC - normally closed
Control :	Force pilot operated
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 10,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
FV01	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM	**0** NC normally closed	**0** Flange PN10-40***	**05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2IHo6hd

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* DN25: 0-10 (8) bar | DN32-50: 0-10 (6) bar
DN65-100: 0-6 (5) bar
Please consider reducing of maximum pressure in case of direct current (values in brackets)

** EPDM -10°C to +130°C | FKM -10°C to +120°C

FAQ SOLENOID VALVES

Solenoid valves switching function

Direct acting solenoid valves actuate the magnet armature with its sealing element directly via the solenoid (they do not need minimum or differential pressure). By applying tension to the solenoid the magnet armature is tightened and the valve opens. In doing so the force of the operating pressure and the closing spring must be overcome.

A (direct acting) plunger-type solenoid is used as a pilot valve in **servo controlled solenoid valves**. The main valve seat is opened and closed by a diaphragm. The closing function is enabled through the force of the pressure spring as well as through the medium pressure. Pressure is always needed to actuate the solenoid valve. The solenoid valve is not actuated at 0 bar.

Force pilot operated solenoid valves represent a combination of direct acting and servo controlled valves. The valve is actuated at 0 bar. The drive opens a pilot hole and lifts the sealing element either directly or assisted by the operating differential pressure. Advantages such as no differential pressure and large volume flows / high pressure are combined with this actuation method.


ACTUATED BALL VALVES
can be found starting p. 50
NAMUR VALVES
can be found on p. 74
BUTTERFLY VALVES
can be found starting p. 12

MV01

2/2-way solenoid valve made of brass direct acting up to 16 bar

2/2-way solenoid valve **TYPE MV01 made of brass** with **G 1/8“** female thread connection. The solenoid valves work **direct acting**, thus switch from 0,0 bar and are **normally closed**. Suitable for gaseous and liquid media.

Diameter :	1/8“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 16,0 bar*
Temperature :	-10°C to +130°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV01	**1** 230V 50Hz **2** 24V DC	**2** FKM	**0** NC normally closed	**0** 1/8“ IG	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0 **25** DN 2,5

DATASHEET
http://bit.ly/2PguTzy

* **DN 1,0 - 16 bar | DN 1,5 - 13 bar**
DN 2,0 - 10 bar | DN 2,5 - 8 bar

MV02

2/2-way solenoid valve made of brass direct acting up to 20 bar

2/2-way solenoid valve **TYPE MV02 made of brass** with G 1/8“ or G 1/4“ female thread connection. The solenoid valves work **direct acting**, thus switch from 0,0 bar and are **normally closed**. Suitable for gaseous and liquid media.

Diameter :	1/8“ | 1/4“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 20,0 bar*
Temperature :	-10°C to +120°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV02	**1** 230V 50Hz **2** 24V DC	**2** FKM	**0** NC normally closed	**0** 1/8“ IG **1** 1/4“ IG	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0 **25** DN 2,5

DATASHEET
http://bit.ly/2Um9Qws

* **DN 1,0 - 20 bar (15 bar) | DN 1,5 - 16 bar (13 bar)**
DN 2,0 - 13 bar (10 bar) | DN 2,5 - 10 bar (6 bar)
Please consider reducing of maximum pressure in case of direct current (see values in brackets)

MV03

2/2-way solenoid valves made of brass direct acting up to 48 bar

2/2-way solenoid valve **TYPE MV03 made of brass** with **G 1/4"** female thread connection. The solenoid valves work **direct acting**, thus switch from 0,0 bar and are **normally closed**. Suitable for gaseous and liquid media.

Diameter :	1/4"
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 48,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV03	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**20** DN 2,0 **25** DN 2,5 **30** DN 3,0 **40** DN 4,0 **60** DN 6,0

DATASHEET
http://bit.ly/2Vf7bt3

* **DN 2,0 - 48 bar (38 bar) | DN 2,5 - 30 bar (24 bar)**
DN 3,0 - 20 bar (16 bar) | DN 4,0 - 10 bar (8 bar)
DN 6,0 - 6 bar (4,8 bar)
Please consider reducing of maximum pressure in case of direct current (see values in brackets)

** **EPDM -10°C to +130°C | FKM -10°C to +120°C | NBR -10°C to +80°C**

MV04

2/2-way solenoid valve made of brass servo controlled starting 0,1 bar

2/2-way solenoid valve in diaphragm design. **TYPE MV04 made of brass** for high flow rates. The solenoid valves work **servo controlled** and require a pressure of 0,1 bar to switch. The **normally closed** version is delivered as standard.

Diameter :	1/4" to 1/2"
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Servo controlled
Voltage :	230V 50Hz | 24V DC
Pressure :	0,1 to 16,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV04	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**01** 1/4" **02** 3/8" **03** 1/2"

DATASHEET
http://bit.ly/2ZgRr7Q

* **Please consider reducing of maximum pressure to 10 bar in case of direct current**

** **EPDM -10°C to +130°C | FKM -10°C to +120°C**
NBR -10°C to +80°C

MV05

2/2-way solenoid valve made of brass servo controlled starting 0,5 bar

2/2-way solenoid valve made of brass in diaphragm design. **TYPE MV05 for high flow rates**. The solenoid valves work **servo controlled** and require a pressure of 0,5 bar to switch. The **normally closed** version is delivered as standard.

Diameter :	3/8“ to 2“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Servo controlled
Voltage :	230V 50Hz | 24V DC
Pressure :	0,5 to 16,0 bar
Temperature :	-10°C to +130°C (media)* Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV05	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Xjx3kD

* **EPDM -10°C to +130°C | FKM -10°C to +120°C | NBR -10°C to +80°C**

MV06

2/2-way solenoid valves made of brass force pilot operated up to 10 bar

2/2-way solenoid valve **TYPE MV06 made of brass** with threaded connection. Diaphragm design for high flow rates. Solenoid valves work force pilot operated, are available in the versions **normally closed** or **normally open**. **ATEX-version** available as an option.

Diameter :	3/8“ to 2“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed NO - normally open
Control :	Force pilot operated
Voltage :	230V 50Hz | 24V DC | 110V AC
Pressure :	0,0 to 10,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV06	**1** 230V 50Hz **2** 24V DC **3** 110V AC***	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed **1** NO normally open****	**0** Standard **1** ATEX-version*****	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2v7uNkz

* **Please consider reduced maximum pressure of 8 bar (starting size 1 1/4“ of 6 bar) in case of direct current**
** **EPDM -10°C to +130°C | FKM -10°C to +120°C | NBR -10°C to +80°C**
*** **110V AC version only available as NC - normally closed version and without ATEX**
**** **Maximum pressure of normally open version: 0,0 to 7,0 bar | 0,0 to 0,5 bar for 24V DC**
***** **ATEX-version available up to DN25; only as NC - normally closed version; maximum pressure: 6 bar**

MV07

2/2-way solenoid valve made of brass force pilot operated up to 20 bar

2/2-way solenoid valve **TYPE MV07 made of brass** with threaded connection. Diaphragm design for high flow rates. Solenoid valves work force pilot operated, thus switch from 0,0 bar and are normally closed. Suitable for gaseous and liquid media.

Diameter :	1/4“ to 1/2“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Force pilot operated
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 20,0 bar*
Temperature :	-10°C to +130°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV07	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM **4** NBR	**0** NC normally closed	**0** Standard	**01** 1/4“ **02** 3/8“ **03** 1/2“

DATASHEET
http://bit.ly/2UpbbCv

* **Please consider reducing of maximum pressure to 16 bar in case of direct current**

** **EPDM -10°C to +130°C | FKM -10°C to +120°C NBR -10°C to +80°C**

MV08

3/2-way solenoid valve made of brass direct acting G 1/4“

3/2-way solenoid valve TYPE MV08 made of brass with G 1/4“ threaded connection. The solenoid valves work **direct acting**, thus switch from 0,0 bar and are normally closed. Suitable for gaseous and liquid media.

Diameter :	1/4“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 20,0 bar*
Temperature :	-40°C to +120°C (media)** Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV08	**1** 230V 50Hz **2** 24V DC	**1** EPDM **2** FKM	**0** NC normally closed	**0** Standard	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0 **25** DN 2,5

DATASHEET
http://bit.ly/2UETWCa

* **DN 1,0 - 20 bar | DN 1,5 - 15 bar DN 2,0 - 10 bar | DN 2,5 - 6 bar**

** **EPDM -40°C to +120°C | FKM -10°C to +120°C**

MV09

3/2-way solenoid valve made of brass direct acting G 1/8“

3/2-way solenoid valve TYPE MV09 made of brass with G 1/8“ threaded connection. The solenoid valves work direct acting, thus switch from 0,0 bar and are **normally closed**. Suitable for neutral gaseous and liquid media.

Diameter :	1/8“
Connection :	Female thread
Material :	Brass
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 12,0 bar*
Temperature :	-10°C to +130°C (media) Max. +50°C (surrounding)

TYPE	VOLTAGE	SEAL	FUNCTION	VERSION	SIZE
MV09	**1** 230V 50Hz **2** 24V DC	**2** FKM	**0** NC normally closed	**0** Standard	**10** DN 1,0 **15** DN 1,5 **20** DN 2,0

DATASHEET
http://bit.ly/2ZkAZDJ

* DN 1,0 - 12 bar | DN 1,5 - 7 bar | DN 2,0 - 4 bar

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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KV01

2/2-way solenoid valves made of plastic direct acting G 1/8“

2/2-way solenoid valve **TYPE KV01 made of plastic** with G 1/8“ threaded connection, diaphragm design. The solenoid valves work direct acting, thus switch from 0,0 bar and are normally closed. Suitable for liquid, gaseous, neutral and especially for **aggressive media**.

Diameter :	1/8“
Connection :	Female thread
Material :	PVC | PTFE
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 6,0 bar*
Temperature :	-30°C to +120°C (media)** max. +50°C (surrounding)

TYPE	MATERIAL	VOLTAGE	SEAL	FUNCTION	SIZE
KV01	**1** PVC **2** PTFE	**1** 230V 50Hz **2** 24V DC	**0** EPDM **1** FKM	**0** NC normally closed	**01** DN 1,0 **02** DN 1,5 **03** DN 2,0 **04** DN 2,5

DATASHEET
http://bit.ly/2UEhhUF

* **DN 1,0 - 6 bar | DN 1,5 - 4 bar**
DN 2,0 - 2 bar | DN 2,5 - 1 bar

** **Please consider pressure-temperature-diagram (can be found in datasheet)!**
PVC 0°C to +60°C | PTFE -30°C to +120°C

KV02

2/2-way solenoid valve made of plastic direct acting

2/2-way solenoid valve **TYPE KV02 made of plastic PVC | PTFE | PVDF**, diaphragm design. The solenoid valves work direct acting, thus switch from 0,0 bar and are **normally closed**. Suitable for liquid, gaseous, neutral and especially for **aggressive media**.

Diameter :	DN 2,0 | DN 4,0 | DN 6,0
Connection :	Cementing spigots | thread welding spigots
Material :	PVC | PTFE | PVDF
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V 50Hz | 24V DC
Pressure :	0,0 to 6,0 bar*
Temperature :	-30°C to +120°C (media)** Max. +50°C (surrounding)

TYPE	MATERIAL	VOLTAGE	SEAL	FUNCTION	SIZE
KV02	**1** PVC*** **2** PTFE**** **3** PVDF *****	**1** 230V 50Hz **2** 24V DC	**0** EPDM **1** FKM	**0** NC normally closed	**01** DN 2,0 **02** DN 4,0 **03** DN 6,0

DATASHEET
http://bit.ly/2IrbTgZ

* **DN 2,0 - 6 bar | DN 4,0 - 4 bar | DN 6,0 - 2 bar**

** **Please consider pressure-temperature-diagram (can be found in datasheet)!**
PVC 0°C to +60°C | PTFE -30°C to +120°C | PVDF -30°C to +120°C

*** **PVC with cementing spigot d 16 mm**

**** **PTFE with female thread G 1/4**

***** **PVDF with welding spigot d 16 mm**

KV04

2/2-way solenoid valve made of plastic servo controlled

2/2-way solenoid valve **TYPE KV04 made of plastic PVC | PTFE | PP**, diaphragm design for **very high flow rates**. The solenoid valves work servo controlled and require a pressure of 0,3 bar to switch. The **normally closed** version is delivered as standard.

Diameter :	DN15 to DN50
Connection :	Cementing socket | thread welding socket
Material :	PVC | PTFE | PP
Function :	NC - normally closed
Control :	Servo controlled
Voltage :	230V 50Hz | 24V DC
Pressure :	0,3 to 6,0 bar
Temperature :	-30°C to +120°C (media)* Max. +50°C (surrounding)

DATASHEET
http://bit.ly/2VOD7Bf

TYPE	MATERIAL	VOLTAGE	SEAL	FUNCTION	SIZE
KV04	**1** PVC**	**1** 230V 50Hz	**0** EPDM	**0** NC normally closed	**01** DN15 - d20
	2 PTFE***	**2** 24V DC	**1** FKM		**02** DN20 - d25
	4 PP****				**03** DN25 - d32
					04 DN32 - d40
					05 DN40 - d50
					06 DN50 - d63

* **Please consider pressure-temperature-diagram (can be found in datasheet)!**
PVC 0°C to +60°C | PTFE -30°C to +120°C | PP +10°C to +80°C

** **PVC with cementing socket**

*** **PTFE with female thread**

**** **PP with welding socket**

Check out the new 3D Viewer on our homepage

Select tab '3D Viewer' in the product details to view our 3D files online

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

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KV05

3/2-way pilot valve direct acting G 1/8“

3/2-way **pilot valve TYPE KV05**. Input G 1/8“ or 6mm connector, output (connection to the valve) **G 1/8“**. Pilot valves work direct acting and switch **normally closed** with a mechanical spring reset. The maximum pressure is -0,9 to 10,0 bar. Suitable for pressure air.

Diameter :	Inlet: G 1/8“ | 6 mm plug
Connection :	Male thread
Material :	Plastic polyamid
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V AC | 24V DC
Pressure :	-0,9 to 10,0 bar
Outlet :	G 1/8“
Temperature :	-10°C to +60°C*

TYPE	VOLTAGE	FUNCTION	CONNECTION (INLET)
KV05	**00** 230V AC **01** 24V DC	**00** normally closed	**01** G 1/8“ **02** 6 mm plug

DATASHEET
http://bit.ly/2ZeyORT

*** -10°C to +60°C for 230V AC | -10°C to +50°C for 24V DC**
Other connections, voltages, normally open versions, NPT-threaded on request

KV06

3/2-way pilot valve direct acting G 1/4“

3/2-way **pilot valve TYPE KV06**, input G 1/8“, output (connection to the valve) **G 1/4“**. Pilot valves work direct acting and switch **normally closed** with a mechanical spring reset. The maximum pressure is 0,0 to 10,0 bar. Suitable for pressure air.

Diameter :	Inlet: G 1/8“
Connection :	Male thread
Material :	Plastic polyamid with aluminium block
Function :	NC - normally closed
Control :	Direct acting
Voltage :	230V AC | 24V DC
Pressure :	0,0 to 10,0 bar
Outlet :	G 1/4“
Temperature :	-10°C to +60°C*

TYPE	VOLTAGE	FUNCTION	CONNECTION (INLET)
KV06	**00** 230V AC **01** 24V DC	**00** normally closed	**01** G 1/8“

DATASHEET
http://bit.ly/2ZeyORT

*** -10°C to +60°C for 230V AC | -10°C to +50°C for 24V DC**
Other connections, voltages, normally open versions, NPT-threaded on request

NA01

3/2-way namur valve

3/2-way namur valve TYPE NA01 made of aluminium with namur connection and spring chamber ventilation. The maximum pressure is 2,0 to 10,0 bar. Suitable for controlling **single acting actuators**.

Diameter : 1/4“
Connection : Namur
Material : Aluminium
Function : Spring return
Voltage : 230V AC | 24V DC | 12V DC
Pressure : 2,0 to 10,0 bar
Temperature : Max. +50°C (for DC)
Max. +60°C (for AC)

TYPE	VOLTAGE	SEAL	SIZE
NA01	**00** 230V AC **01** 24V DC **02** 12V DC	**00** NBR	**01** 1/4“

DATASHEET
http://bit.ly/2PjH6Ue

NA02

5/2-way namur valve

5/2-way namur valve TYPE NA02 made of aluminium with namur connection and spring chamber ventilation. The maximum pressure is 2,0 to 10,0 bar. Suitable for controlling **double acting actuators**.

Diameter : 1/4“
Connection : Namur
Material : Aluminium
Function : Spring return
Voltage : 230V AC | 24V DC | 12V DC
Pressure : 2,0 to 10,0 bar
Temperature : Max. +50°C (for DC)
Max. +60°C (for AC)

TYPE	VOLTAGE	SEAL	SIZE
NA02	**00** 230V AC **01** 24V DC **02** 12V DC	**00** NBR	**01** 1/4“

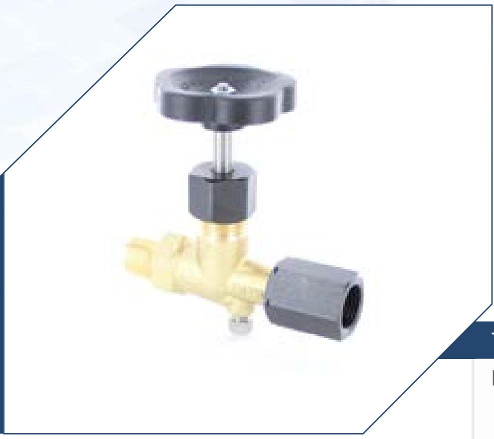
DATASHEET
http://bit.ly/2PjH6Ue

VALVES

MANOMETER GAUGE VALVES

EQUIPMENT

MA01



Manometer gauge valve

Manometer gauge valves **TYPE MA01** with handwheel and G1/2“ pressure gauge connection. These manometer gauge valves are maintenance-free and available in different materials as well as in different versions in terms of the connection.

Diameter :	G 1/2“
Connection :	Various versions
Material :	Brass | steel | stainless steel
Pressure :	0,0 to 400,0 bar*
Temperature :	-10°C bis +200°C
Seal :	Graphite | PTFE**
Media :	Liquid, gaseous and fumes

DATASHEET
http://bit.ly/2GsKCc3

TYPE	VERSION	MATERIAL	SIZE
MA01	**00** Male thread x sleeve **01** Sleeve x sleeve **02** Male thread x adapter for instrument holder with nut adjustable **03** Male thread x sleeve x test connector M20x1,5 **04** Sleeve x sleeve x test connector M20x1,5 **05** Male thread x adapter for instrument holder with nut adjustable x test connector M20x1,5 **06** Male thread x sleeve x test flange 60x25mm	**00** Brass **01** Full brass **02** Steel 1.0460 **03** Stainless steel 1.4571	**03** 1/2“

* **Brass: up to 250 bar**
Steel/stainless steel: up to 400 bar

** **Brass/stainless steel: PTFE**
Steel: Graphite

PRESSURE GAUGES
can be found starting p. 144

Notes

DIAPHRAGM VALVES

EQUIPMENT

MB01

Diaphragm valve made of PVC-U

Diaphragm valves **TYPE MB01 made of PVC** with handwheel for precise flow control of media (300 different switching positions). Waterproof control unit with optical position indicator. Suitable for **gaseous and liquid media** as well as for aggressive chemical applications.

Diameter :	DN15 - DN65 | d20 - d63
Connection :	See below
Material :	PVC-U
Pressure :	PN10
Temperature :	0°C to +60°C
Diaphragm :	EPDM
Media :	Gaseous and liquid

TYPE	MATERIAL	DIAPHRAGM	CONNECTION	SIZE
MB01	**0** PVC-U	**0** EPDM	**00** Cementing spigot **01** Adhesive connection **03** Flange ISO/DIN	**03** DN15 - d20 **04** DN20 - d25 **05** DN25 - d32 **06** DN32 - d40 **07** DN40 - d50 **08** DN50 - d63 **09** DN65*

DATASHEET
http://bit.ly/2Xhd1az

* **Available with flange**

MB01

Diaphragm valve made of PP-H

Diaphragm valves **TYPE MB01 made of PP** with handwheel for precise flow control of media (300 different switching positions). Waterproof control unit with optical position indicator. Suitable for **gaseous and liquid media** as well as for aggressive chemical applications.

Diameter :	DN15 - DN65 | d20 - d63
Connection :	See below
Material :	PP-H
Pressure :	PN10
Temperature :	0°C to +100°C
Diaphragm :	EPDM
Media :	Gaseous and liquid

TYPE	MATERIAL	DIAPHRAGM	CONNECTION	SIZE
MB01	**1** PP-H	**0** EPDM	**01** Welding sleeve **03** Flange ISO/DIN	**03** DN15 - d20 **04** DN20 - d25 **05** DN25 - d32 **06** DN32 - d40 **07** DN40 - d50 **08** DN50 - d63 **09** DN65*

DATASHEET
http://bit.ly/2Xhd1az

* **Available with flange**

MB02

Diaphragm valve made of stainless steel

Diaphragm valve **TYPE MB02 made of stainless steel**, suitable for the flow control of liquid, viscous, aggressive or gaseous media. The design of diaphragm valves of the TYPE MB02 prevents pressure surges when actuated. With optical position indicator.

Diameter :	1/2" - 2"
Connection :	Female thread ISO 228-1
Material :	Stainless steel 1.4435
Pressure :	PN10
Temperature :	-10°C to +80°C
Diaphragm :	EPDM | PTFE/EPDM
Media :	Gaseous and liquid

TYPE	MATERIAL	DIAPHRAGM	CONNECTION	SIZE
MB02	**0** Stainless steel	**0** EPDM **2** PTFE/EPDM one-piece **3** PTFE/EPDM two-piece	**00** Female thread	**03** 1/2" **04** 3/4" **05** 1" **06** 1 1/4" **07** 1 1/2" **08** 2"

DATASHEET
http://bit.ly/2ZlavSs

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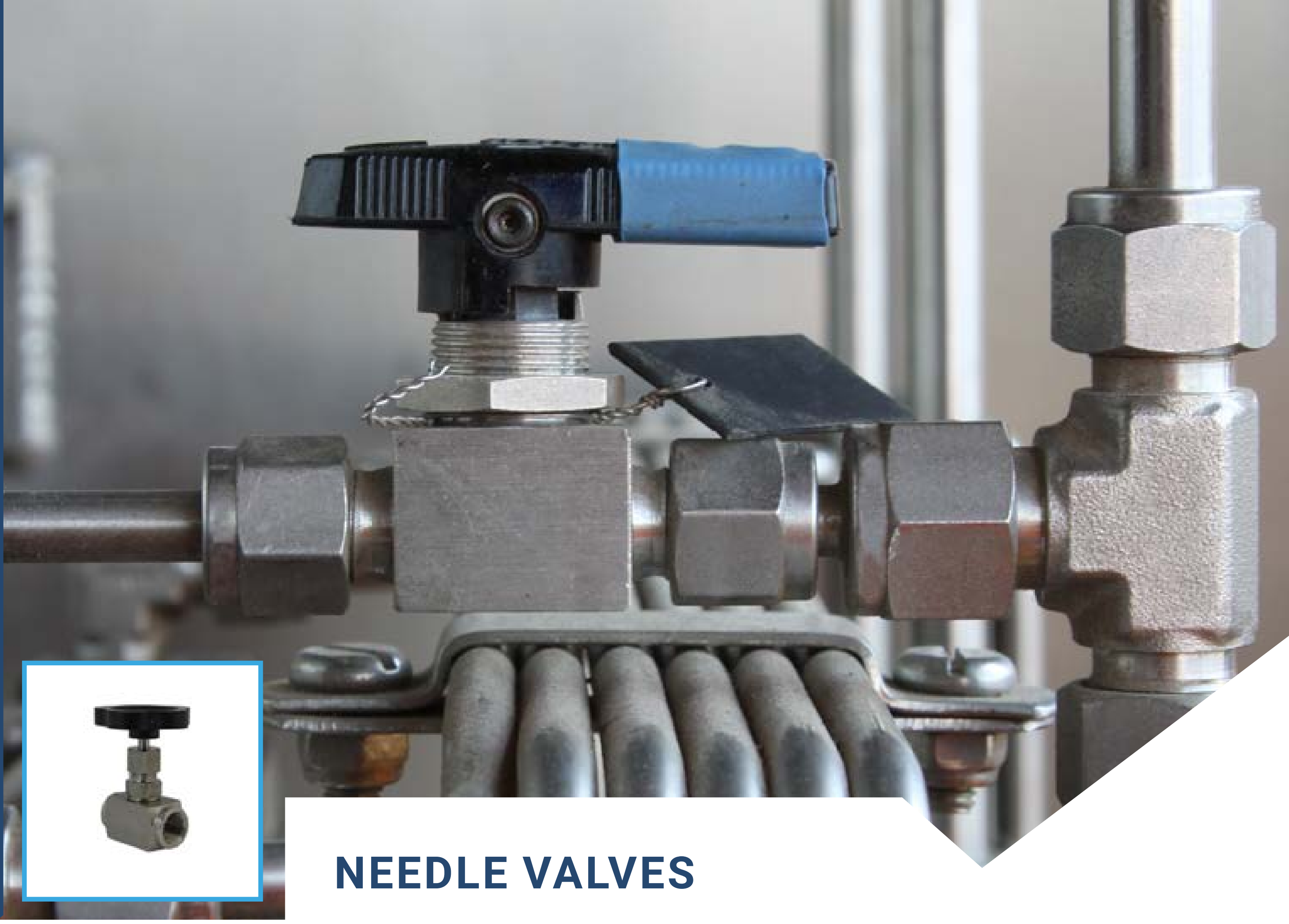
FITTINGS
can be found starting p. 168

Notes

360° product view



NEEDLE VALVES

EQUIPMENT

NV01

Needle valve made of steel or stainless steel

High-pressure needle valves **TYPE VN01** in block design with female thread, made of steel (temperature up to max. +350°C) or stainless steel (temperature up to max. +250°C). Suitable for gaseous and liquid media. **The integrated handwheel is used for the precise control of media flow.**

Diameter :	1/8“ to 2“
Connection :	Female thread
Material :	Steel | stainless steel 1.4571
Pressure :	0,0 to 400,0 bar*
Temperature :	-20°C to +350°C**
Actuation :	Handwheel
Media :	Gaseous and liquid

TYPE	MATERIAL	ACTUATION	SIZE
NV01	**00** Stainless steel 1.4571 **01** Steel (blue galvanized)	**00** Handwheel	**00** 1/8“ **01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2UFArJT

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* **1/8“ to 1/2“: PN400 | 3/4“ to 1“: PN200**
1 1/4“: PN160 | 1 1/2“ to 2“: PN120

** **Pressure reduction for temperatures over 50°C (see datasheet)**

NV02

Needle valve made of brass

Needle valves **TYPE NV02** with female thread, made of brass. Suitable for gaseous and liquid media. **The integrated handwheel is used for the precise control of media flow.**

Diameter :	1/8“ to 2“
Connection :	Female thread
Material :	Brass
Pressure :	0,0 to 100,0 bar
Temperature :	-20°C to +100°C*
Actuation :	Handwheel
Media :	Gaseous and liquid

TYPE	MATERIAL	ACTUATION	SIZE
NV02	**00** Brass	**00** Handwheel	**00** 1/8“ **01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2v9ZDsD

* **Pressure reduction for temperatures over 50°C (see datasheet)**

FITTINGS
can be found starting p. 168

ED01

Proportional motorised valve

Proportional motorised valves **TYPE ED01** made of stainless steel are used for flow control. Based on the electric motor, the flow of the medium is controlled proportionally to the control signal (setpoint). The control head can be turned through 360°.

Diameter :	3/8“ | 1/2“ | 3/4“
Connection :	Female thread BSP-P
Body :	Stainless steel 1.4404
Setpoint :	0-10V | 4-20mA
Seal :	FKM
Pressure :	0,0 to 10,0 bar
Temperature :	-10°C to +90°C | steam +145°C
Media :	Gaseous and liquid

TYPE	CONNECTION	SETPOINT	SIZE
ED01	**00** Female thread	**00** 0 to 10V **01** 4 to 20mA	**02** 3/8“ **03** 1/2“ **04** 3/4“

DATASHEET
http://bit.ly/2VVBHVy

EDELSTAHL Rost frei

This is how the nieruf article number system works

Our article number **PK02010005** consists of :

TYPE	VERSION	SEAL	SIZE
PK02	**00** double acting **01** single acting	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“
PK02	**01**	**00**	**05**

to the resistance check

CHECK VALVES

EQUIPMENT

ZR01 | ZR03

Swing check valve made of steel

Swing check valves permit the medium to flow in only one direction and prevent the medium flowing back. **TYPE ZR01 | ZR03** is characterised by its short overall length and low opening pressures. Optionally available with reset spring (TYPE ZR03). **EPDM and PTFE sealing with approval acc. to DVGW-W, FDA, WRAS, KTW UBA** (up to DN300).

Diameter :	DN32 to DN600
Connection :	Flange PN10-40 | ANSI150
Body :	Steel C22.8 zinc plated
Disc :	Steel C22.8 zinc plated
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM | PTFE
Temperature :	-10°C to +250°C
Pressure :	0,0 to 40,0 bar*

TYPE	VERSION	SEAL	SIZE
ZR01 without spring	**00** DIN***	**01** EPDM (-10°C to +150°C)	**06** DN32
ZR03 with spring**	**10** ANSI150	**02** FPM (-10°C to +230°C)	**07** DN40
		03 PTFE (-10°C to +250°C)	**08** DN50
		04 NBR (-10°C to +100°C)	**09** DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2DmSBFq

DVGW

* **max. pressure depending on temperature up to DN40: max. 40 bar | DN50: max. 25 bar starting DN65: max. 16 bar**

** **available up to DN300**

*** **flange Pressure Nominal (PN) see page 91**

ZR09 | ZR10

Swing check valve made of alu-bronze

Swing check valves permit the medium to flow in only one direction and prevent the medium flowing back. **TYPE ZR09 | ZR10** is ideal for applications in **shipbuilding** due to its material. **EPDM and PTFE sealing with approval acc. to DVGW-W, FDA, WRAS, KTW UBA** (up to DN300).

Diameter :	DN32 to DN300
Connection :	Flange PN10 to PN40
Body :	Alu-bronze 2.0975
Disc :	A 890 Grade 5A
Spring :	Hastelloy C4
Seal :	NBR | EPDM | FPM | PTFE
Temperature :	-10°C to +250°C
Pressure :	0,0 to 40,0 bar*

TYPE	VERSION	SEAL	SIZE
ZR09 without spring	**00** DIN**	**01** EPDM (-10°C to +150°C)	**06** DN32
ZR10 with spring		**02** FPM (-10°C to +230°C)	**07** DN40
		03 PTFE (-10°C to +250°C)	**08** DN50
		04 NBR (-10°C to +100°C)	**09** DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300

DATASHEET
http://bit.ly/2DmSBFq

DVGW

* **max. pressure depending on temperature up to DN50: max. 40 bar | DN65-125: max. 30 bar DN150-300: max. 20 bar**

** **flange Pressure Nominal (PN) see page 91**

SEALS page 156
FLANGES page 158

ZR02 | ZR04

Swing check valve made of stainless steel

Swing check valves permit the medium to flow in only one direction and prevent the medium flowing back. **TYPE ZR02** | **ZR04** is characterised by its short overall length and low opening pressures. Optionally available with reset spring (TYPE ZR04). **EPDM and PTFE sealing with approval acc. to DVGW-W, FDA, WRAS, KTW UBA** (up to DN300).

Diameter :	DN32 to DN600
Connection :	Flange PN10-40 | ANSI150
Body :	Stainless steel 1.4408
Disc :	Stainless steel 1.4408
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM | PTFE | Metal
Temperature :	-196°C to +400°C*
Pressure :	0,0 to 40,0 bar**

TYPE	VERSION	SEAL	SIZE
ZR02 without spring	**00** DIN****	**01** EPDM (-65°C to +150°C)	**06** DN32
ZR04 with spring***	**10** ANSI150	**02** FPM (-30°C to +230°C)	**07** DN40
		03 PTFE (-196°C to +250°C)	**08** DN50
		04 NBR (-30°C to +100°C)	**09** DN65
		05 Metal (-196°C to +400°C)*	**10** DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2DmSBFq

* ZR04 with spring max. +300°C
** max. pressure depending on temperature
up to DN50: max. 40 bar | DN65: max. 30 bar
DN80-100: max 20 bar
starting DN125: max. 16 bar
*** available up to DN300
**** flange Pressure Nominal (PN) see page 91

ZR05 | ZR07

Swing check valve made of PVC-U

Swing check valves permit the medium to flow in only one direction and prevent the medium flowing back. **TYPE ZR05** | **ZR07** is characterised by its short overall length and low opening pressures. Optionally available with reset spring (TYPE ZR07). **EPDM and PTFE sealing with approval acc. to DVGW-W, FDA, WRAS, KTW UBA** (up to DN300).

Diameter :	DN32 to DN600
Connection :	Flange PN10
Body :	PVC-U
Disc :	PVC-U
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM | PTFE
Temperature :	0°C to +60°C
Pressure :	0,0 to 10,0 bar*

TYPE	VERSION	SEAL	SIZE
ZR05 without spring	**00** DIN	**01** EPDM	**06** DN32
ZR07 with spring**		**02** FPM	**07** DN40
		03 PTFE	**08** DN50
		04 NBR	**09** DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2IFR7tl

* up to DN125: max. 10 bar
DN150-200: max. 6 bar
DN250-600: max. 5 bar
please consider pressure-temperature-rating
** available up to DN300

ZR06 | ZR08

Swing check valve made of PP

Swing check valves permit the medium to flow in only one direction and prevent the medium flowing back. **TYPE ZR06 | ZR08** is characterised by its short overall length and low opening pressures. Optionally available with reset spring (TYPE ZR08). **EPDM and PTFE sealing with approval acc. to DVGW-W, FDA, WRAS, KTW UBA** (up to DN300).

Diameter :	DN32 to DN600
Connection :	Flange PN10
Body :	PP-H
Disc :	PP-H
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM | PTFE
Temperature :	0°C to +90°C
Pressure :	0,0 to 8,0 bar*

TYPE	VERSION	SEAL	SIZE
ZR06 without spring	**00** DIN	**01** EPDM	**06** DN32
ZR08 with spring**		**02** FPM	**07** DN40
		03 PTFE	**08** DN50
		04 NBR	**09** DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2IFR7tl

DVGW

* **up to DN65: max. 8 bar | DN80-200: max. 6 bar**
DN250-600: max. 5 bar
please consider pressure-temperature-rating
** **available up to DN300**

ZR12 | ZR13

Swing check valve made of PVDF

Swing check valves permit the medium to flow in only one direction and prevent the medium flowing back. **TYPE ZR12 | ZR13** is characterised by its short overall length and low opening pressures. Optionally available with reset spring (TYPE ZR13). **EPDM and PTFE sealing with approval acc. to DVGW-W, FDA, WRAS, KTW UBA** (up to DN300).

Diameter :	DN32 to DN600
Connection :	Flange PN10
Body :	PVDF
Disc :	PVDF
Spring :	Hastelloy C4
Seal :	NBR | EPDM | FPM | PTFE
Temperature :	-20°C to +120°C
Pressure :	0,0 to 10,0 bar*

TYPE	VERSION	SEAL	SIZE
ZR12 without spring	**00** DIN	**01** EPDM	**06** DN32
ZR13 with spring**		**02** FPM	**07** DN40
		03 PTFE	**08** DN50
		04 NBR (max. +100°C)	**09** DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2IFR7tl

DVGW

* **up to DN125: max. 10 bar**
DN150-200: max. 8 bar
DN250-600: max. 5 bar
please consider pressure-temperature-rating
** **available up to DN300**

DR01

Dual plate check valve made of GGG40

Dual plate check valves **TYPE DR01** for direct fitting between flanges according to DIN (overall length EN 558-1 R16) or ANSI150 (overall length API594). With reset spring as standard. Flow horizontal or vertical from below, up to DN150 flow from above also possible.

Diameter :	DN50 to DN600
Connection :	Flange PN10-40 | ANSI150
Body :	GGG40 (epoxy-covered*)
Plate :	GGG40 (nickel-plated)
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM
Temperature :	-10°C to +200°C
Pressure :	0,0 to 16,0 bar**

TYPE	VERSION	SEAL	SIZE
DR01	**00** DIN***	**01** EPDM (-10°C to +120°C)****	**08** DN50
	10 ANSI150	**02** FPM (-10°C to +200°C)	**09** DN65
		04 NBR (-10°C to +90°C)	**10** DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300**
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2KKP6yL

- * **DVGW approval for epoxy-coating**
- ** **Starting DN300: maximum 10 bar**
- *** **Flange Pressure Nominal (PN) see page 91**
- **** **WRAS drinking water approval up to +85°C**

DR02

Dual plate check valve made of GGG40 with plates made of stainless steel

Dual plate check valves **TYPE DR02** for direct fitting between flanges according to DIN (overall length EN 558-1 R16) or ANSI150 (overall length API594). With reset spring as standard. Flow horizontal or vertical from below, up to DN150 flow from above also possible.

Diameter :	DN50 to DN600
Connection :	Flange PN10-40 | ANSI150
Body :	GGG40 (epoxy-covered*)
Plate :	Stainless steel 1.4408
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM
Temperature :	-10°C to +200°C
Pressure :	0,0 to 16,0 bar**

TYPE	VERSION	SEAL	SIZE
DR02	**00** DIN***	**01** EPDM (-10°C to +120°C)****	**08** DN50
	10 ANSI150	**02** FPM (-10°C to +200°C)	**09** DN65
		04 NBR (-10°C to +90°C)	**10** DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300**
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2KKP6yL

- * **DVGW approval for epoxy-coating**
- ** **Starting DN300: maximum 10 bar**
- *** **Flange Pressure Nominal (PN) see page 91**
- **** **WRAS drinking water approval up to +85°C**

DR03

Dual plate check valve made of stainless steel

Dual plate check valves **TYPE DR03** for direct fitting between flanges according to DIN (overall length EN 558-1 R16) or ANSI150 (overall length API594). With reset spring as standard. Flow horizontal or vertical from below, up to DN150 flow from above also possible.

Diameter :	DN50 to DN600
Connection :	Flange PN10-40 | ANSI150
Body :	Stainless steel 1.4408
Plate :	Stainless steel 1.4408
Spring :	Stainless steel 1.4571*
Seal :	NBR | EPDM | FPM | Metal
Temperature :	-196°C to +400°C
Pressure :	0,0 to 16,0 bar**

TYPE	VERSION	SEAL	SIZE
DR03	**00** DIN***	**01** EPDM (-10°C to +120°C)****	**08** DN50
	10 ANSI150	**02** FPM (-10°C to +200°C)	**09** DN65
		04 NBR (-10°C to +90°C)	**10** DN80
		05 Metal (-196°C to +400°C)*	**11** DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300**
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2KKP6yL

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*	**spring of Inconel X-750 for metallic sealing**
**	**Starting DN300: maximum 10 bar**
***	**Flange Pressure Nominal (PN) see page 91**
****	**WRAS drinking water approval up to +85°C**

SEALS page 156
FLANGES page 158

DR04

Dual plate check valve made of GGG40 with plates made of alu-bronze

Dual plate check valves **TYPE DR04** for direct fitting between flanges according to DIN (overall length EN 558-1 R16) or ANSI150 (overall length API594). With reset spring as standard. Flow horizontal or vertical from below, up to DN150 flow from above also possible.

Diameter :	DN50 to DN600
Connection :	Flange PN10-40 | ANSI150
Body :	GGG40 (epoxy-covered*)
Plate :	Alu-bronze C954
Spring :	Stainless steel 1.4571
Seal :	NBR | EPDM | FPM
Temperature :	-10°C to +200°C
Pressure :	0,0 to 16,0 bar**

TYPE	VERSION	SEAL	SIZE
DR04	**00** DIN***	**01** EPDM (-10°C to +120°C)****	**08** DN50
	10 ANSI150	**02** FPM (-10°C to +200°C)	**09** DN65
		04 NBR (-10°C to +90°C)	**10** DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300**
			17 DN350
			18 DN400
			19 DN450
			20 DN500
			21 DN600

DATASHEET
http://bit.ly/2KKP6yL

*	**DVGW approval for epoxy-coating**
**	**Starting DN300: maximum 10 bar**
***	**Flange Pressure Nominal (PN) see page 91**
****	**WRAS drinking water approval up to +85°C**

GR01

Threaded swing check valve made of stainless steel

Swing check valves **TYPE GR01** made of stainless steel with BSP female thread and metal seal. These swing check valves have a low pressure loss and can be used vertically with rising liquid or horizontally. ATEX-Group II Category 2 GD c T2 Zone 1 & 21.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP
Body :	Stainless steel 1.4408
Disc :	Stainless steel 1.4408
Seal :	Metal / PTFE
Temperature :	-25°C to +180°C
Pressure :	0,0 to 16,0 bar

TYPE	VERSION	SEAL	SIZE
GR01	**00** Stainless steel	**00** Metal	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2XVAUob

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GR02

Threaded swing check valve made of brass

Swing check valves **TYPE GR02** made of brass with female thread and metal or EPDM seal. These swing check valves have a low pressure loss and can be used vertically with rising liquid or horizontally.

Diameter :	3/8“ to 2“
Connection :	Female thread BSP
Body :	Brass CW617N
Disc :	Brass CW617N
Seal :	Metal | EPDM
Temperature :	0°C to +90°C*
Pressure :	0,0 to 16,0 bar

TYPE	VERSION	SEAL	SIZE
GR02	**00** Brass	**01** Metal **02** EPDM	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2VsJj5f

* EPDM +60°C | Metal +90°C

FITTINGS
can be found starting p. 168

RESISTANCE CHECK
Informations about chemical resistances
can be found on www.nieruf.com/Resistance

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Flange Pressure Nominal for check valves

TYP ZR01 | ZR02 | ZR03 | ZR04 | ZR09 | ZR10 | DR01 | DR02 | DR03 | DR04

DN	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
PN	Flange PN10/16/25/40					Flange PN10/16					Flange PN10					

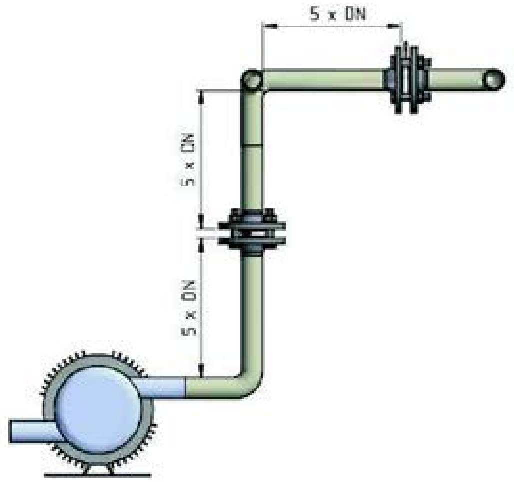
Leakage - test meeting requriements of PED acc. to DIN EN 12266:

Type	Soft seat*	Metall seat
ZR01 to ZR13	A	≥ G
DR01 to DR04	A	≥ G

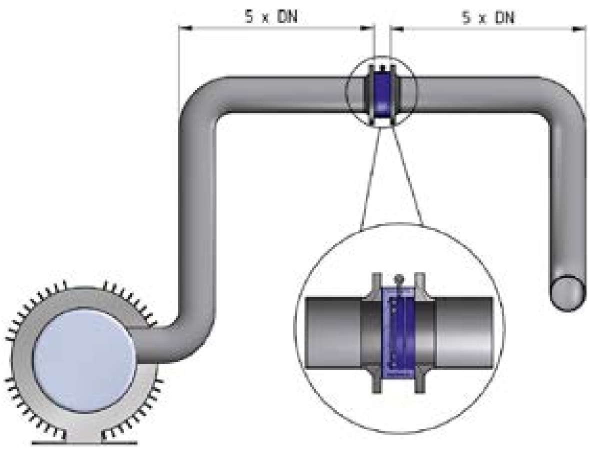
* EPDM, FPM/FKM/Viton, NBR, PTFE

Media: gaseous or liquid,
if pD > 0,5 bar (steam pressure)

Installation instruction for swing check valves TYPE ZR



Installation instruction for dual plate check valves TYP DR



DISCO CHECK VALVES

EQUIPMENT

RV01

DISCO swing check valve

DISCO swing check valves **TYPE RV01** made of stainless steel permit the flow of a medium in only one direction in the system and prevent the medium flowing back. Equipped with reset spring as standard, the overall length is dimensioned in accordance with EN 558-1 series 49.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1 PN10/16/25/40
Material :	Stainless steel 1.4408
Pressure :	0,0 to 40,0 bar
Seal :	NBR | EPDM | FPM | PTFE | Metal
Temperature :	-20°C to +300°C
Media :	Gaseous and liquid

TYPE	MATERIAL	SEAL	SIZE
RV01	**00** Stainless steel	**01** EPDM (-20°C to +150°C)	**03** DN15
		02 FPM (-15°C to +200°C)	**04** DN20
		03 PTFE (-20°C to +250°C)	**05** DN25
		04 NBR (-20°C to +100°C)	**06** DN32
		05 Metal (-20°C to +300°C)	**07** DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100

DATASHEET
http://bit.ly/2DEZIsW

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RV02

DISCO swing check valve with integrated disc guide

DISCO swing check valves **TYPE RV02** permit the flow of a medium in only one direction in the system and prevent the medium flowing back. Equipped with reset spring and **integrated disc guide** as standard, the overall length is dimensioned in accordance with EN 558-1 series 49. **EPDM and PTFE sealing with DVGW-W, FDA, WRAS, KTW UBA** approval.

Diameter :	DN15 to DN300
Connection :	Flange DIN EN 1092-1* / ANSI150/ANSI300
Material :	Stainless steel 1.4408 | DUPLEX | cast steel 1.0619
Pressure :	0,0 to 40,0 bar
Seal :	NBR | EPDM | FPM | PTFE | Metal
Temperature :	-196°C to +300°C**
Media :	Gaseous and liquid

TYPE	MATERIAL**	SEAL**	SIZE
RV02	**00** Stainless steel (-196°C to +400°C)	**01** EPDM (-65°C to +150°C)	**03** DN15
	10 Cast steel (-10°C to +400°C)	**02** FPM (-30°C to +230°C)	**04** DN20
	20 DUPLEX (-10°C to +250°C)	**03** PTFE (-196°C to +250°C)	**05** DN25
		04 NBR (-30°C to +100°C)	**06** DN32
		05 Metal (-196°C to +300°C)	**07** DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125***
			13 DN150***
			14 DN200***
			15 DN250***
			16 DN300***

DATASHEET
http://bit.ly/2IE9Qpb

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* **PN6/10/16/40**

** **Temperatures of Material and Sealing needs to be combined!! Please also see detailed informations in datasheet.**

Temperatures higher than +300°C on request

*** **DN125-300 exclusively available in stainless steel or cast steel**

SEALS page 156
FLANGES page 158

RV03

DISCO swing check valve made of plastic

DISCO swing check valves **TYPE RV03 made of plastic** permit the flow of a medium in only one direction in the system and prevent the medium flowing back. Equipped with reset spring and integrated disc guide as standard.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1 PN10
Material :	PVC-U | PP-H | PVDF
Pressure :	0,0 to 10,0 bar*
Seal :	NBR | EPDM | FPM | PTFE
Temperature :	-20°C to +120°C**
Media :	Gaseous and liquid

TYPE	MATERIAL**	SEAL**	SIZE
RV03	**00** PVC-U (0°C to +60°C) **01** PP-H (0°C to +90°C) **02** PVDF (-20°C to +120°C)	**01** EPDM (-20°C to +120°C) **02** FPM (-15°C to +120°C) **03** PTFE (-20°C to +120°C) **04** NBR (-20°C to +90°C)	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2KO0xG9

* **PP-H DN65-DN100: 0,0 to 6,0 bar**

** **Temperatures of Material and Sealing needs to be combined!! Please also see detailed informations in datasheet.**

RV04

Y-design check valve

Piston-operated check valves **TYPE RV04** in Y-design made of stainless steel with female thread. The Y-design makes it possible to achieve **very high flow rates**. The valve disc is equipped with a reset spring and integrated disc guide as standard.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP
Material :	Stainless steel 1.4408
Pressure :	0,0 to 40,0 bar
Seal :	PTFE
Temperature :	-25°C to +200°C
Media :	Gaseous and liquid

TYPE	MATERIAL	SEAL	SIZE
RV04	**00** Stainless steel	**03** PTFE	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2GeIkf2

EDELSTAHL Rost frei

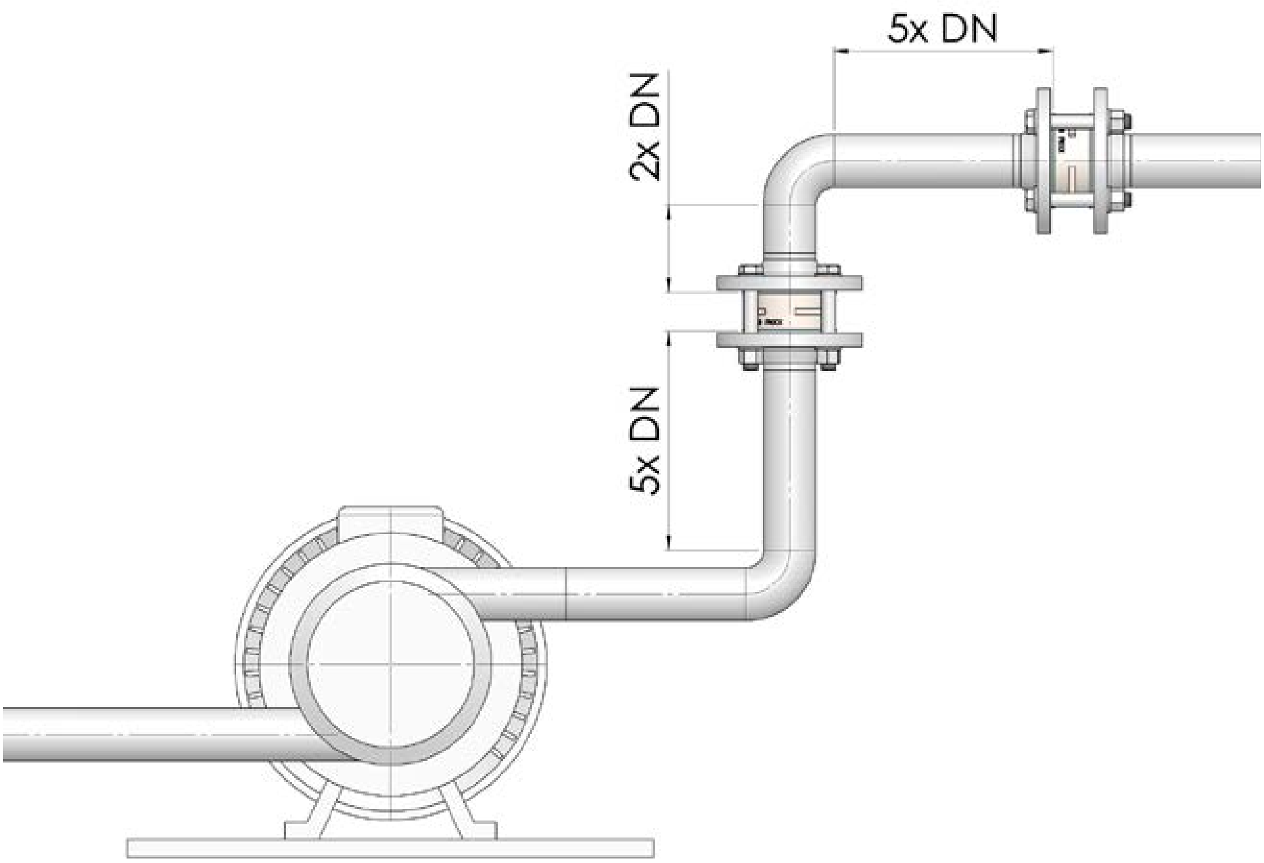
FITTINGS
can be found starting p. 168

Leakage - test meeting requirements of PED acc. to DIN EN 12266:

Type	Soft seat*	Metal seat
RV01	A	≥ G
RV02	A	≥ G
RV03	A	--
RV04	D**	--

* Soft seat: EPDM, FPM/FKM/Viton, NBR, PTFE
** Leakage rate A on request

Installation instruction for check valves TYP RV01 to RV03



SIGHT GLASSES

EQUIPMENT

BS01

Sight glass fitting - PN2,5

Sight glass fitting **TYPE BS01** with borosilicate glass, stainless steel frame and C4400 Klingersil seal. These sight flow indicators are for direct welding. Base and cover flange included. Lightweight version, **maximum operating pressure of 2,5 bar.**

Diameter :	DN50 to DN200
Connection :	For welding on or into tanks
Material :	Stainless steel 1.4571 / 1.4541
Seal :	C4400 Klingersil
Pressure :	0,0 to 2,5 bar
Temperature :	0°C to +150°C
Media :	Gaseous and liquid
Norm :	Similiar to DIN 28120

TYPE	GLASS	VERSION	SIZE
BS01	**00** Borosilicate glass	**00** Standard	**08** DN50 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200

DATASHEET
http://bit.ly/2UERjk1

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BS02

Sight glass fitting - up to 16,0 bar

Sight glass fitting **TYPE BS02** with borosilicate glass, stainless steel frame and C4400 Klingersil seal. These sight flow indicators are for direct welding. Base and cover flange included. Version with **maximum operating pressure of up to 16,0 bar**.

Diameter :	DN25 to DN200
Connection :	For welding on or into tanks
Material :	Stainless steel 1.4571
Seal :	C4400 Klingersil
Pressure :	0,0 to 16,0 bar*
Temperature :	0°C to +150°C
Media :	Gaseous and liquid
Norm :	DIN 28120

TYP	GLASS	VERSION	SIZE
BS02	**00** Borosilicate glass	**00** Standard	**05** DN25 **08** DN50 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 *

DATASHEET
http://bit.ly/2GhwPDH

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* **Up to DN150: PN10/16**
Starting DN200: PN10

BS04

Sight glass fitting - pressureless

Sight glass fitting **TYPE BS04** with borosilicate glass, stainless steel frame and C4400 Klingersil seal. These sight flow indicators are for direct welding. Base and cover flange included. Pressureless version with **maximum operating pressure of 0,0 bar**.

Diameter :	DN50 to DN200
Connection :	For welding on or into tanks
Material :	Stainless steel 1.4571
Seal :	C4400 Klingersil
Pressure :	0,0 bar - pressureless
Temperature :	0°C to +150°C
Media :	Gaseous and liquid
Norm :	Similiar to DIN 28120

TYPE	GLASS	VERSION	SIZE
BS04	**00** Borosilicate glass	**00** Standard	**08** DN50
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200

DATASHEET
http://bit.ly/2KEo243

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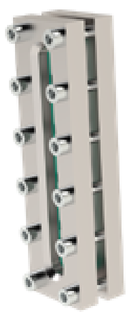
BS03



Sight glass fitting - rectangular

Sight glass fitting **TYPE BS03** in rectangular design with borosilicate glass, stainless steel frame and C4400 Klingersil seal. These sight flow indicators are for direct welding. Base and cover flange included. Version with **maximum operating pressure of up to 16,0 bar**.

Diameter :	Different lengths
Connection :	For welding on or into tanks
Material :	Stainless steel 1.4571
Seal :	C4400 Klingersil
Pressure :	0,0 to 16,0 bar
Temperature :	0°C to +150°C
Media :	Gaseous and liquid

TYPE	GLASS	VERSION	SIZE
BS03	**00** Borosilicate glass	**00** Standard	**01** 170mm
			02 220mm
			03 250mm
			04 310mm
			05 370mm
			06 500mm
			07 620mm
			08 740mm
			09 930mm

DATASHEET
http://bit.ly/2DrKgAD

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GS01 – GS03

Threaded sight flow indicator

Sight flow indicator **TYPE GS01 | GS02 | GS03** with threaded connection. Housing and cover of these sight flow indicators are made of **grey cast iron, carbon steel or stainless steel** depending on the type. The glass panel can be provided made of soda lime glass or borosilicate glass. Also available with flap or PTFE-spinner.

Diameter :	1/4“ bis 2“
Connection :	Female thread BSP
Material :	Grey cast iron | Carbon steel Stainless steel
Seal :	Graphit
Pressure :	0,0 to 16,0 bar
Temperature :	-10°C to +280°C
Media :	Gaseous and liquid

TYPE	GLASS	VERSION	SIZE
GS01 Grey cast iron GG25	**01** Soda lime glass*	**00** Standard	**01** 1/4“
GS02 Carbon steel GS-C 25	**02** Borosilicate glass	**01** Flap	**02** 3/8“
GS03 Stainless steel 1.4408		**02** PTFE-spinner	**03** 1/2“
			04 3/4“
			05 1“
			06 1 1/4“
			07 1 1/2“
			08 2“

DATASHEET
http://bit.ly/2KZ238v

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* **Maximum temperature: up to +150°C**

FITTINGS
can be found starting p. 168

GS04

Screw-type sight flow indicator made of stainless steel

Screw-type sight flow indicator **TYPE GS04** made of stainless steel with **dairy screw clamp**. The NBR seals used are **FDA-conform**. Simplified fitting in container, tank or similar due to milk thread connection.

Diameter :	DN25 to DN150
Connection :	Dairy screw clamp
Material :	Stainless steel 1.4404
Seal :	NBR (FDA compliant)
Pressure :	0,0 to 6,0 bar
Vacuum :	Maximum 1,3 mbar
Temperature :	0°C to +110°C
Media :	Gaseous and liquid

TYPE	GLASS	SEAL	SIZE
GS04	**02** Borosilicate glass	**00** NBR	**05** DN25 - RD 52 x 1/6“
			06 DN32 - RD 58 x 1/6“
			07 DN40 - RD 65 x 1/6“
			08 DN50 - RD 78 x 1/6“
			09 DN65 - RD 95 x 1/6“
			10 DN80 - RD 110 x 1/4“
			11 DN100 - RD 130 x 1/4“
			12 DN125 - RD 160 x 1/4“
			13 DN150 - RD 190 x 1/4“

DATASHEET
http://bit.ly/2XlkxkL

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FS01 – FS03

Sight flow indicator with flange connection

Sight flow indicator **TYPE FS01** | **FS02** | **FS03** with flange connection. Body and cover are made of **grey cast iron, carbon steel or stainless steel** depending on the type. The glass panel can be provided made of soda lime glass or borosilicate glass. Available with drop nose, flap or PTFE-spinner.

Diameter :	DN15 to DN200
Connection :	Flange DIN EN 1092 PN16
Material :	Grey cast iron | Carbon steel Stainless steel
Seal :	Graphite
Pressure :	0,0 to 16,0 bar*
Temperature :	-10°C to +280°C
Media :	Gaseous and liquid

TYPE	GLASS	VERSION	SIZE
FS01 Grey cast iron GG25	**01** Soda lime glass**	**00** Drop nose	**03** DN15
FS02 Carbon steel GS-C 25	**02** Borosilicate glass	**01** Flap	**04** DN20
FS03 Stainless steel 1.4408		**02** PTFE-spinner	**05** DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200

DATASHEET
http://bit.ly/2VP2umr

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* Starting DN150: 10,0 bar
** Maximum temperature: up to +150°C

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PRESSURE GAUGES
can be found starting p. 144

CAD AND STEP FILES
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STRAINERS

EQUIPMENT

SZ01

Threaded strainer made of stainless steel

Strainers are always used when a medium has to be filtered or cleaned. Strainers **TYPE SZ01 made of stainless steel** and in Y-design with draining cap. The stainless steel filter has a mesh of 1 mm.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP
Material :	Stainless steel 1.4408
Filter :	Stainless steel 1.4408
Mesh :	1 mm
Pressure :	PN16
Seal :	PTFE
Temperature :	-20°C to +200°C

TYPE	MATERIAL	PRESSURE	SIZE
SZ01	**00** Stainless steel	**00** PN16	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2VNcFrP

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SZ05

Fine strainer with threaded connection made of stainless steel

Fine strainers **TYPE SZ05 mesh filter 0,25 mm** made of stainless steel with draining cap. The filter can be changed quickly and easily.

Diameter :	1/4“ to 2“
Connection :	Female thread BSP
Material :	Stainless steel 1.4408
Filter :	Stainless steel 1.4401
Mesh :	0,25 mm
Pressure :	PN40
Seal :	PTFE
Temperature :	0°C to +200°C

TYPE	MATERIAL	PRESSURE	SIZE
SZ05	**00** Stainless steel	**00** PN40	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Zl7Zvu

EDELSTAHL Rost frei

FITTINGS
can be found starting p. 168

SZ02

Threaded strainer made of brass

Strainers are always used when a medium has to be filtered or cleaned. Strainers **TYPE SZ02** made of **brass** and in Y-design. The stainless steel filter has a mesh of 0,85 mm.

Diameter :	3/8“ to 2“
Connection :	Female thread BSP
Material :	Brass CW 617N
Filter :	Stainless steel 1.4301
Mesh :	0,85 mm
Pressure :	PN16
Seal :	EPDM
Temperature :	-10°C to +120°C

TYPE	MATERIAL	PRESSURE	SIZE
SZ02	**00** Brass	**00** PN16	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2GlmXZJ

ACS

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RESISTANCE CHECK
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SZ04

Strainer with flange connection made of grey cast iron

Strainers **TYPE SZ04** are made of **grey cast iron with blue epoxy resin coating** in Y-design with flange connection DIN EN 1092 and drain plug. The stainless steel filter can be removed and has the following mesh:
DN40 to DN80: 1,5mm
DN100 to DN300: 2mm

Diameter :	DN40 to DN300
Connection :	Flange DIN EN 1092-1
Material :	Grey cast iron GG25
Filter :	Stainless steel 1.4301
Mesh :	See product description
Pressure :	PN10 | PN16
Seal :	EPDM
Temperature :	-10°C to +80°C

TYPE	MATERIAL	PRESSURE	SIZE
SZ04	**00** Grey cast iron	**00** PN16	**07** DN40
		10 PN10*	**08** DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200
			15 DN250
			16 DN300

DATASHEET
http://bit.ly/2PhVNqw

ACS

* **PN10 available starting DN200**

SZ07

Strainer with flange connection made of grey cast iron for steam applications

Flange strainers **TYPE SZ07** made of grey cast iron with blue RAL coating. Due to the material and the graphite seal, this strainer is suitable for temperatures of up to **+300°C** and can thus also be used for **steam**. Mesh: 1 mm up to DN50; 1,25 mm with DN65 to DN80; 1,6 mm from DN100.

Diameter :	DN15 to DN200
Connection :	Flange DIN EN 1092-2
Material :	Grey cast iron GG25
Filter :	Stainless steel 1.4301
Mesh :	See product description
Pressure :	0,0 to 16,0 bar*
Seal :	Graphite
Temperature :	-10°C to +300°C

TYPE	MATERIAL	PRESSURE	SIZE
SZ07	**00** Grey cast iron	**00** PN10/16**	**03** DN15
			04 DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200

DATASHEET
http://bit.ly/2Df6S7d

* **Steam application: maximum 10 bar**
** **PN10/16: DN15 up to DN150**
PN16: starting DN200

SEALS page 156
FLANGES page 158

SZ03

Strainer with flange connection made of stainless steel

Strainers **TYPE SZ03** are made of **stainless steel** in Y-design with **flange connection, drain plug and emptying opening**. The stainless steel filter has the following mesh: up to DN50 0,8 mm, from DN65 to DN80 1 mm and from DN100 3 mm.

Diameter :	DN15 to DN200
Connection :	Flange DIN EN 1092-1
Material :	Stainless steel 1.4408
Filter :	Stainless steel 1.4301
Mesh :	See product description
Pressure :	PN16
Seal :	PTFE
Temperature :	-20°C to +200°C

DATASHEET
http://bit.ly/2IGj6sR

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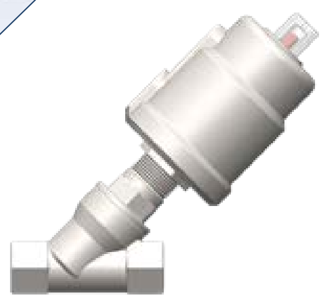
TYPE	MATERIAL	PRESSURE	SIZE
SZ03	**00** Stainless steel	**00** PN16	**03** DN15
			04 DN20
			05 DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100
			12 DN125
			13 DN150
			14 DN200

SEALS page 156
FLANGES page 158

ANGLE SEAT VALVES

SC01



2/2-way angle seat valve - closing with flow direction

Piston-operated angle seat valves **TYPE SC01** are closed by spring force and **closing with flow direction**. The control piston is controlled by pressure air. This version should only be used for gaseous media, if used with liquid media there is a risk of pressure blows in the system.

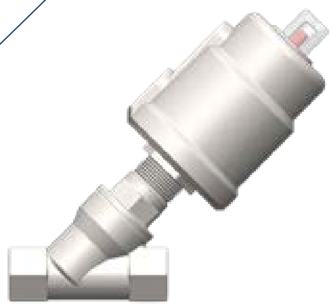
Diameter :	3/8“ to 2“
Connection :	Female thread | Butt welding
Material :	Stainless steel 1.4408
Pressure :	0,0 to 16,0 bar
Temperature :	-10°C to +180°C (media) -10°C to +60°C (surrounding)
Media :	Gaseous

TYPE	CONNECTION	SEAL	SIZE
SC01	**00** Female thread **01** Butt welding *	**00** PTFE	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2Pg0lho

* **Butt welding available starting 1/2“**

SC02



2/2-way angle seat valve - closing against flow direction

Piston-operated angle seat valves **TYPE SC02** are closed by spring force and **closing against flow direction**. The control piston is actuated by pressure air. The control piston is equipped with an optical position indicator as standard.

Diameter :	3/8“ to 2“
Connection :	Female thread | Butt welding
Material :	Stainless steel 1.4408
Pressure :	0,0 to 16,0 bar*
Temperature :	-10°C to +180°C (media) -10°C to +60°C (surrounding)
Media :	Gaseous and liquid

TYPE	CONNECTION	SEAL	SIZE
SC02	**00** Female thread **01** Butt welding**	**00** PTFE	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2IoFVCl

* **Pressure stages can be found on page 109**
** **Butt welding available starting 1/2“**

PILOT VALVES
can be found on page 73

RESISTANCE CHECK
Informations about chemical resistances
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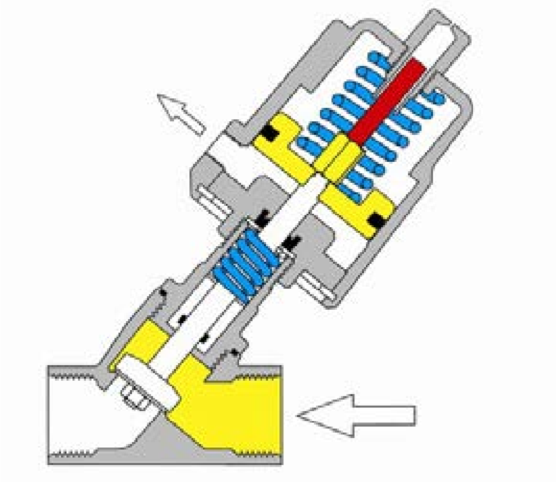
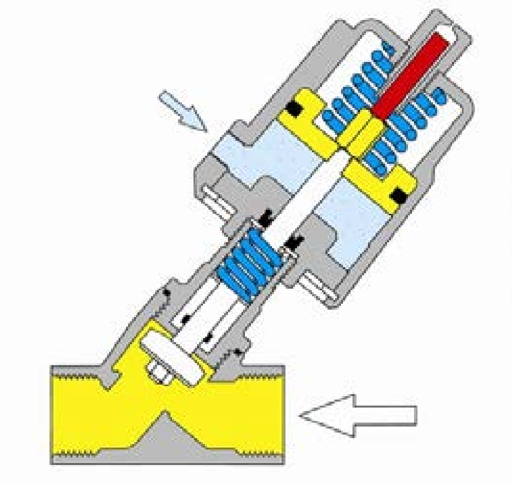
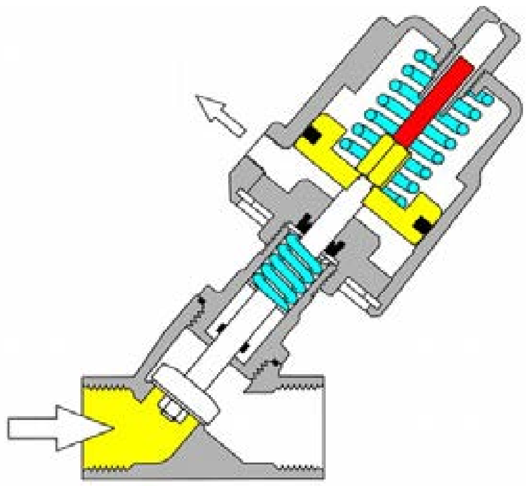
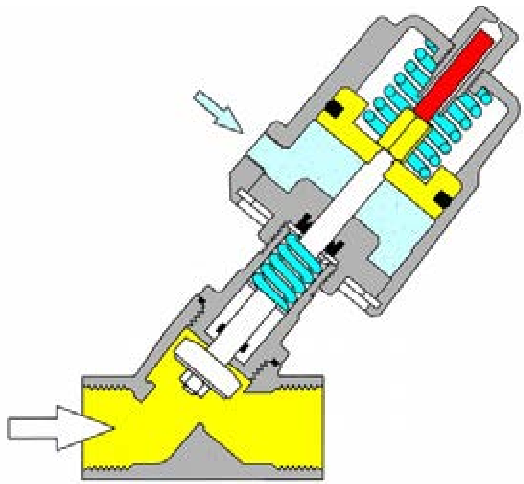
Functional principle of angle seat valve TYPE SC01





Functional principle of angle seat valve TYPE SC02 :





Pressure stages for angle seat valve TYPE SC02 :

DN	3/8“	1/2“	3/4“	1“	1 1/4“	1 1/2“	2“
Pressure in bar	0 - 16	0 - 16	0 - 10	0 - 8	0 - 11	0 - 8	0 - 9
KV value in m³/h	4,7	4,7	9,5	18,1	23,1	32,9	52,8

SAFETY VALVES

SV01

Atmospheric discharge safety valve made of brass

TÜV safety valves with twist-type lifting mechanism. **TYPE SV01 for securing pressure vessels**. **Suitable for air** and other neutral, non-toxic and non-combustible gases, which may be discharged freely to the atmosphere. **Safety valves are set and sealed at the factory.**

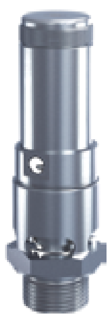
Diameter :	1/4“ to 2“
Connection :	Male thread BSP-P
Material :	Brass CW617N
Media :	Neutral gaseoues
TÜV type test :	TÜV-SV-2055 D/G
Temperature :	-20°C to +200°C
Set pressure :	0,2 to 50,0 bar*
Lifting :	Twist-type

TYPE	LIFTING MECHANISM	SEAL*	SIZE
SV01	**00** Twist-type	**00** FKM **03** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2ZkfxyA

* **Set pressure starting 25 bar with PTFE sealing**

SV02



Atmospheric discharge safety valve made of stainless steel

TÜV safety valves **TYPE SV02** made of **stainless steel for securing pressure vessels**. **Suitable for air** and other neutral, non-toxic and non-combustible gases, which may be discharged freely to the atmosphere. Requirements in accordance with EN ISO 4126-1 & AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	1/4“ to 2“
Connection :	Male thread BSP-P
Material :	Stainless steel 1.4404
Media :	Neutral gaseous
TÜV type test :	TÜV-SV-2055 D/G
Temperature :	-20°C to +200°C
Set pressure :	0,2 to 50,0 bar*
Lifting :	Twist-type

TYPE	LIFTING MECHANISM	SEAL*	SIZE
SV02	**00** Twist-type	**00** FKM **03** PTFE	**01** 1/4“ **02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2ZkfxyA

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* **Set pressure starting 25 bar with PTFE sealing**

SV03 | SV04

Safety valve made of gunmetal - for liquid media

Angle-type safety valves **TYPE SV03 | SV04 made of gunmetal for liquid media**. Optionally with bellows. The bellows protect springs and sliding parts as well as the surroundings from the influence of the medium. Requirements in accordance with EN ISO 4126-1 & AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	1/2“ to 2“
Connection :	Female | Male thread BSP-P
Material :	Gunmetal CC499K
Media :	Liquid
TÜV type test :	TÜV-SV-684 F
Temperature :	-60°C to +225°C*
Set pressure :	0,5 to 50,0 bar**
Lifting :	Twist-type | Lifting lever

TYPE	LIFTING MECH.	CONNECTION	SEAL	SIZE INL.xOUTL.
SV03	**0** Twist-type	**0** Female thread	**01** EPDM	**03** 1/2“ x 1"
SV04 With bellows	**1** Lifting lever	**1** Male thread	**02** FKM	**04** 3/4“ x 1 1/4"
			03 PTFE	**05** 1“ x 1 1/2"
			04 NBR	**06** 1 1/4“ x 2"
				07 1 1/2“ x 2"
				08 2“ x 2"

DATASHEET
http://bit.ly/2XksBSP

* **EPDM -40°C to +170°C**
FKM -20°C to +200°C
NBR -30°C to +130°C
PTFE -60°C to +225°C

** **Set pressure starting 25 bar:**
PTFE-carbon sealing

SV05 | SV06

Safety valve made of stainless steel - for liquid media

Angle-type safety valves **TYPE SV05 | SV06 made of stainless steel for liquid media**. Optionally with bellows. The bellows protect springs and sliding parts as well as the surroundings from the influence of the medium. Requirements in accordance with EN ISO 4126-1 and AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	1/2“ to 2“
Connection :	Female | Male thread BSP-P
Material :	Stainless steel 1.4408
Media :	Liquid
TÜV type test :	TÜV-SV-684 F
Temperature :	-60°C to +400°C*
Set pressure :	0,5 to 70,0 bar**
Lifting :	Twist-type | Lifting lever

TYPE	LIFTING MECH.	CONNECTION	SEAL	SIZE INL.xOUTL.
SV05	**0** Twist-type	**0** Female thread	**01** EPDM	**03** 1/2“ x 1"
SV06 With bellows	**1** Lifting lever	**1** Male thread	**02** FKM	**04** 3/4“ x 1 1/4"
			03 PTFE	**05** 1“ x 1 1/2"
			04 NBR	**06** 1 1/4“ x 2"
			05 Metal	**07** 1 1/2“ x 2"
				08 2“ x 2"

DATASHEET
http://bit.ly/2XksBSP

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Bellows :

Safety valves with bellows for neutral and non-neutral media and/or counter pressure up to 4 bar. Spring, moving parts and the environment are protected from being affected by the medium.

* **EPDM -40°C to +170°C**
FKM -20°C to +200°C
NBR -30°C to +130°C
PTFE -60°C to +225°C
Metal -60°C to +400°C

** **Set pressure starting 25 bar:**
PTFE-carbon sealing

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SV07 | SV08

Safety valve made of gunmetal - for gaseous media

Angle-type safety valves **TYPE SV07 | SV08 made of gunmetal for gaseous media**. Optionally with bellows. The bellows protect springs and sliding parts as well as the surroundings from the influence of the medium. Requirements in accordance with EN ISO 4126-1 and AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	1/2“ to 2“
Connection :	Female | Male thread BSP-P
Material :	Gunmetal CC499K
Media :	Gaseous
TÜV type test :	TÜV-SV-666 D/G
Temperature :	-60°C to +225°C*
Set pressure :	0,5 to 50,0 bar**
Lifting :	Twist-type | Lifting lever

TYPE	LIFTING MECH.	CONNECTION	SEAL	SIZE INL.xOUTL.
SV07	**0** Twist-type	**0** Female thread	**01** EPDM	**03** 1/2“ x 1"
SV08 With bellows	**1** Lifting lever	**1** Male thread	**02** FKM	**04** 3/4“ x 1 1/4"
			03 PTFE	**05** 1“ x 1 1/2"
			04 NBR	**06** 1 1/4“ x 2"
				07 1 1/2“ x 2"
				08 2“ x 2"

DATASHEET
http://bit.ly/2KM9bEX

* **EPDM -40°C to +170°C**
FKM -20°C to +200°C
NBR -30°C to +130°C
PTFE -60°C to +225°C
** **Set pressure starting 25 bar:**
PTFE-carbon sealing

SV09 | SV10

Safety valve made of stainless steel - for gaseous media

Angle-type safety valves **TYPE SV09 | SV10 made of stainless steel for gaseous media**. Optionally with bellows. The bellows protect springs and sliding parts as well as the surroundings from the influence of the medium. Requirements in accordance with EN ISO 4126-1 and AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	1/2“ to 2“
Connection :	Female | Male thread BSP-P
Material :	Stainless steel 1.4408
Media :	Gaseous
TÜV type test :	TÜV-SV-666 D/G
Temperature :	-60°C to +400°C*
Set pressure :	0,5 to 70,0 bar**
Lifting :	Twist-type | Lifting lever

TYPE	LIFTING MECH.	CONNECTION	SEAL	SIZE INL.xOUTL.
SV09	**0** Twist-type	**0** Female thread	**01** EPDM	**03** 1/2“ x 1"
SV10 With bellows	**1** Lifting lever	**1** Male thread	**02** FKM	**04** 3/4“ x 1 1/4"
			03 PTFE	**05** 1“ x 1 1/2"
			04 NBR	**06** 1 1/4“ x 2"
			05 Metal	**07** 1 1/2“ x 2"
				08 2“ x 2"

DATASHEET
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* **EPDM -40°C to +170°C**
FKM -20°C to +200°C
NBR -30°C to +130°C
PTFE -60°C to +225°C
Metal -60°C to +400°C
** **Set pressure starting 25 bar:**
PTFE-carbon sealing

FITTINGS
can be found starting p. 168

SV11 | SV12

Safety valve made of stainless steel - for gaseous and liquid media, small sizes

Mini angle-type safety valves **TYPE SV11 | SV12 made of stainless steel for gaseous and liquid media**. Optionally with bellows. The bellows protect springs, sliding parts and the surroundings from the influence of the medium. Requirements in accordance with EN ISO 4126-1 & AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	1/4“, 3/8“
Connection :	Male thread BSP-P
Material :	Stainless steel 1.4404
Media :	Gaseous and liquid
TÜV Type test :	TÜV-SV-2069 D/G/F
Temperature :	-40°C to +225°C*
Set pressure :	0,5 to 50,0 bar**
Lifting :	Without | Lifting lever

TYPE	LIFTING MECH.	CONNECTION	SEAL	SIZE INL.xOUTL.
SV11	**0** Without	**0** Male thread	**01** EPDM	**01** 1/4“ x 3/8"
SV12 With bellows	**1** Lifting lever		**02** FKM	**02** 3/8“ x 3/8"
			03 PTFE	

DATASHEET
http://bit.ly/2VRuITf

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* EPDM -40°C to +170°C | FKM -20°C to +200°C | PTFE -40°C to +225°C
** Type SV11 will automatically be delivered for set pressure starting 0,5 bar to 1,5 bar, type SV12 with bellows will automatically be delivered for set pressure starting 1,6 bar to 50 bar. EPDM/FKM only possible up to set pressure of 30bar. Set pressure higher than 30 bar only with PTFE-sealing.

SV13

Safety valve made of stainless steel - for gaseous and liquid media

Angle-type safety valves **TYPE SV13 made of stainless steel for gaseous and liquid media**. Optionally with NPT connection. The surroundings are protected from the influence of the medium by the gastight spring bonnet. Requirements in accordance with EN ISO 4126-1 and AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter :	3/8“ to 1“
Connection :	Male thread BSP-P | NPT
Material :	Stainless steel 1.4408
Media :	Gaseous and liquid
TÜV type test :	TÜV-SV-2067 D/G/F
Temperature :	-60°C to +225°C*
Set pressure :	0,2 to 25,0 bar
Lifting :	Without | Lifting lever

TYPE	LIFTING MECHANISM	CONNECTION	SEAL	SIZE
SV13	**0** Without	**0** Male thread BSP-P	**01** EPDM	**02** 3/8“
	1 Lifting lever	**1** Male thread NPT	**02** FKM	**03** 1/2“
			03 PTFE	**04** 3/4“
			04 NBR	**05** 1“

DATASHEET
http://bit.ly/2VBzVMz

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* EPDM -50°C to +150°C
NBR -30°C to +130°C
FKM -20°C to +200°C
PTFE -60°C to +225°C

SV14

Cryo safety valve

Cryo safety valves **TYPE SV14 suitable for cryogenic liquefied gases**. These safety valves are always delivered **oil- and grease-free**, making the valve suitable for applications with oxygen. Requirements in accordance with EN ISO 4126-1 and AD2000-A2. **Safety valves are set and sealed at the factory.**

Diameter : 1/4“ to 1 1/2“
Connection : Male thread BSP-P
Material : Stainless steel 1.4408
Media : Cryogenic liquefied gases
TÜV type test : TÜV-SV-2091 D/G/F
Temperature : -200°C to +200°C
Set pressure : 0,2 to 70,0 bar
Lifting : Without | Lifting lever

TYPE	LIFTING MECHANISM	CONNECTION	SEAL	SIZE INLT.xOUTL.	
SV14	**0** Without	**0** Male thread	**03** PTFE	**01**	1/4“ x 3/8“
	1 Lifting lever			**02**	3/8“ x 1/2“
				02.1	3/8“ x 3/8“
				03	1/2“ x 3/4“
				03.1	1/2“ x 1/2“
				04	3/4“ x 1“
				04.1	3/4“ x 3/4“
				05	1“ x 1 1/2“
				05.1	1“ x 1“
				06	1 1/4“ x 1 1/2“
				06.1	1 1/4“ x 2“
				07	1 1/2“ x 2“

DATASHEET
http://bit.ly/2GuOOYJ

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SV15

High pressure safety valve made of stainless steel

High-pressure safety valves **TYPE SV15 made of stainless steel for gaseous media**. With this version a **setting pressure of up to 350 bar is possible**. Optionally available with bonnet. This allows controlled discharge of the medium and connection to a pipe. **Safety valves are set and sealed at the factory.**

Diameter : 1/4“ to 3/4“
Connection : Male thread BSP-P
Material : Stainless steel 1.4404
Media : Gaseous
TÜV type test : TÜV-SV-2076 D/G
Temperature : -60°C to +180°C
Set pressure : 50,0 to 350,0 bar
Lifting : Without | Lifting lever

TYPE	LIFTING MECHANISM	VERSION	SEAL	SIZE
SV15	**0** Without	**0** Atmospheric discharge	**00** MD/PAI	**01** 1/4“
	1 Lifting lever*	**1** Gastight version**		**02** 3/8“
				03 1/2“
				04 3/4“

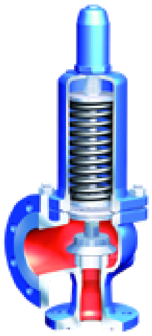
DATASHEET
http://bit.ly/2GFRwtf

EDELSTAHL Rost frei

* **On request, only available for version with atmospheric discharge**
** **Only available for version without lifting mechanism**

FITTINGS
can be found starting p. 168

SF01



Flange safety valve made of grey cast iron

Normal safety valves with flange connection **TYPE SF01 made of grey cast iron for non-sticky liquid and gaseous media** for protection against or prevention of excess pressure. Requirements in accordance with EN ISO 4126-1, AD2000-A2& VdTÜV 100. **Safety valves are set and sealed at the factory.**

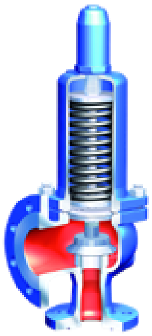
Diameter : DN15 to DN100
Connection : Flange DIN EN 1092-2 PN16
Material : Grey cast iron EN-JL1040
Media : Gaseous and liquid
TÜV type test : TÜV-SV-811 D/G/F
Temperature : -10°C to +300°C*
Set pressure : 0,2 to 40,0 bar*

TYPE	VERSION	SEAL	SIZE
SF01	**00** Closed lifting & closed bonnet	**00** Metal	**03** DN15
	01 Gastight cap & closed bonnet	**01** EPDM	**04** DN20
	02 Open lifting & open bonnet (only for neutral gaseous media)	**02** FPM	**05** DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100

DATASHEET
http://bit.ly/2v8OU1E

* **Please consider pressure-temperature-rating (can be found in datasheet)!**

SF02



Flange safety valve made of carbon steel

Normal safety valves with flange connection **TYPE SF02 made of carbon steel for non-sticky liquid and gaseous media** for protection against or prevention of excess pressure. Requirements in accordance with EN ISO 4126-1, AD2000-A2& VdTÜV 100. **Safety valves are set and sealed at the factory.**

Diameter : DN15 to DN100
Connection : Flange DIN EN 1092-1 PN40
Material : Carbon steel 1.0619+N
Media : Carbon steel
TÜV type test : TÜV-SV-811 D/G/F
Temperature : -10°C to +450°C*
Set pressure : 0,2 to 40,0 bar*

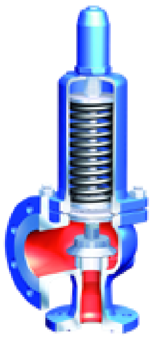
TYPE	VERSION	SEAL	SIZE
SF02	**00** Closed lifting & closed bonnet	**00** Metal	**03** DN15
	01 Gastight cap & closed bonnet	**01** EPDM	**04** DN20
	02 Open lifting & open bonnet (only for neutral gaseous media)	**02** FPM	**05** DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100

DATASHEET
http://bit.ly/2v8OU1E

* **Please consider pressure-temperature-rating (can be found in datasheet)!**

Flange safety valve made of stainless steel

SF03



Flange safety valve made of stainless steel

Normal safety valves with flange connection **TYPE SF03 made of stainless steel for non-sticky liquid and gaseous media** for protection against or prevention of excess pressure. Requirements in accordance with EN ISO 4126-1, AD2000-A2& VdTÜV 100. **Safety valves are set and sealed at the factory.**

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1 PN40
Material :	Stainless steel 1.4408
Media :	Gaseous and liquid
TÜV type test :	TÜV-SV-811 D/G/F
Temperature :	-60°C to +400°C*
Set pressure :	0,2 to 40,0 bar*

TYPE	VERSION	SEAL	SIZE
SF03	**00** Closed lifting & closed bonnet **01** Gastight cap & closed bonnet	**00** Metal **01** EPDM **02** FPM	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100

DATASHEET
http://bit.ly/2v8OU1E

EDELSTAHL Rost frei

* **Please consider pressure-temperature-rating (can be found in datasheet)!**

SF04

Flange safety valve made of stainless steel with high discharge capacity

Flange safety valves made of stainless steel **TYPE SF04 with very high discharge capacity**. Available with gastight spring bonnet and / or bellows. The bellows protect springs and sliding parts as well as the surroundings from the influence of the medium. **Safety valves are set and sealed at the factory.**

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092-1
Flange :	Inlet: PN40 / Outlet: PN16
Material :	Stainless steel 1.4408
Media :	Gaseous and liquid
TÜV type test :	TÜV-SV-2094 D/G/F
Temperatuer :	-60°C to +400°C*
Set pressure :	0,2 to 40,0 bar**

TYPE	LIFTING MECHANISM	VERSION	SEAL	SIZE INLETxOUTLET
SF04	**0** Without **1** Lifting lever	**0** Gastight bonnet **2** Gastight bonnet & bellows**	**00** Metal **01** EPDM **02** FPM **03** PTFE **06** FFKM	**03** DN15 x DN25 **04** DN20 x DN32 **05** DN25 x DN40 **06** DN32 x DN50 **07** DN40 x DN65 **08** DN50 x DN80 **09** DN65 x DN100 **10** DN80 x DN125 **11** DN100 x DN150

DATASHEET
http://bit.ly/2IF0iu3

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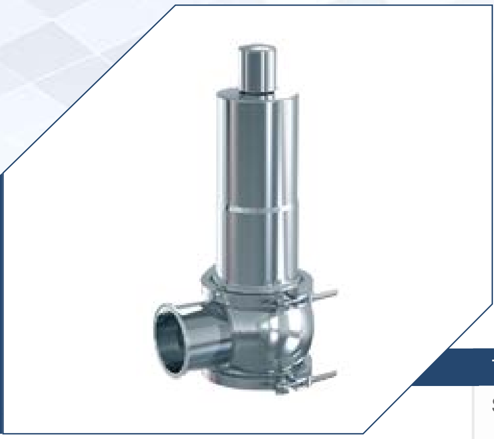
* **Metall -60°C to +400°C**
EPDM -40°C to +170°C
FPM -20°C to +200°C
PTFE -60°C to +225°C
FFKM -10°C to +260°C

** **Possible set pressures differ depending on version and size. Please check datasheet!**

SEALS page 156
FLANGES page 158

CAD AND STEP FILES
can be found on www.nieruf.com/cad

FURTHER INFORMATIONS ON OUR PRODUCTS
Customer account, downloads and datasheets,
FAQ´s and much more can be found on **www.nieruf.com**



Safety valve made of stainless steel for hygienic applications

Safety valves made of stainless steel **TYPE SF05 for hygienic applications**. This version is characterised by its minimised dead spot and gap clearance in the valve. Surface roughness of the wetted parts < 0,8 µm. CIP/SIP capable thanks to the optional pneumatic lifting device. **Safety valves are set and sealed at the factory.**

Diameter :	DN25 to DN100
Connection :	Clamp DIN 32676-A / DIN 11866
Material :	Stainless steel 1.4404
Media :	Gaseous and liquid
TÜV type test :	TÜV-SV-2095 D/G/F
Temperature :	-40°C to +200°C*
Set pressure :	0,4 to 16,0 bar

TYPE	LIFTING MECHANISM	VERSION	SEAL	SIZE INLETxOUTLET
SF05	**0** Without	**0** Standard	**01** EPDM	**05** DN25 x DN40
	1 Pneumatic lifting device		**02** FPM	**07** DN40 x DN65
				08 DN50 x DN80
				09 DN65 x DN100
				10 DN80 x DN125
				11 DN100 x DN150

DATASHEET
http://bit.ly/2Dir6wE

EDELSTAHL Rost frei

* **FPM -20°C to +200°C**
EPDM -40°C to +170°C

FAQ SAFETY VALVES

What is the set pressure / response pressure of a safety valve?

The set pressure / response pressure is the pressure at which the safety valve starts to open to blow off the (excess) pressure. The set pressure is subject to a tolerance according to DIN EN ISO 4126-1 of +/- 3% or, for valves with set pressure under 3 bar, +/- 0,1 bar.

What is the closing pressure of a safety valve?

The closing pressure is the pressure value at which the safety valve is completely closed again after it has blown off the excess pressure. This value is 20% below the set pressure for liquid media (the value is 0,6 bar below for a set pressure < 3,0 bar). The value for gaseous media is 10% below the set pressure in accordance with AD2000 and 15% below the set pressure (the value is 0,3 bar below the set pressure for a set pressure < 3,0 bar) in accordance with DIN EN ISO 4126-1.

Opening pressure of a safety valve?

The opening pressure or blow-off pressure is the overpressure at which the safety valve reaches the maximum lift required for discharging the mass flow. This pressure is a maximum of 10% above the set pressure for normal lift safety valves and a maximum of 5% above the set pressure for full lift safety valves.

Operating pressure & safety valve?

The operating pressure is the working pressure of a plant or system under normal circumstances. The operating pressure is ideally 5% below the closing pressure of a safety valve.

CAD AND STEP FILES

can be found on www.nieruf.com/cad

FURTHER INFORMATIONS ON OUR PRODUCTS

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FAQ´s and much more can be found on **www.nieruf.com**

OVERFLOW VALVES

EQUIPMENT

UV01 | UV02

Angle-type overflow valve made of gunmetal

Angle-type overflow valves **TYPE UV01 | UV02** made of gunmetal **can be set and adjusted under operating conditions**. Due to the gastight spring bonnet no medium can escape to the outside. They open proportionally when the preset pressure is exceeded.

Diameter : 3/8“ to 2“
Connection : Female thread BSP-P
Material : Gunmetal CC499K
Seal : FKM | PTFE
Temperature : -60°C to +225°C*
Set pressure : 0,2 to 20,0 bar
Media : Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT	CONNECTION	SIZE
UV01 FKM **UV02** PTFE	**00** 0,2 to 0,8 bar** **01** 0,5 to 2,5 bar **02** 2,0 to 12,0 bar **03** 12,0 to 20,0 bar***	**00** Female thread	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2PpkotX

* FKM -20°C to +200°C | PTFE -60°C to +225°C
** Only available for type UV01
*** Only available for type UV02

FITTINGS
can be found starting p. 168

UV14

Angle-type overflow valve made of gunmetal - counter-pressure-compensated

Angle-type overflow valves made of gunmetal **with bellows**, which makes the spring bonnet gastight and protects sliding parts and the surroundings from the medium. **TYPE UV14 is counter-pressure-compensated up to 4,0 bar** and can be set under operating conditions.

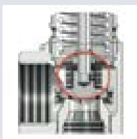
Diameter : 1/2“ to 2“
Connection : Female | Male BSP-P
Material : Gunmetal CC499K
Seal : PTFE
Temperature : -60°C to +225°C
Set pressure : 0,5 to 25,0 bar
Media : Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT*	CONNECTION	SIZE (INLET X OUTLET)
UV14	**01** Spring 01 **02** Spring 02 **03** Spring 03 **04** Spring 04 **05** Spring 05 **06** Spring 06 **07** Spring 07 **08** Spring 08	**00** Female thread **01** Male thread**	**03** 1/2“ x 1" **04** 3/4“ x 1 1/4" **05** 1“ x 1 1/2" **06** 1 1/4“ x 2" **07** 1 1/2“ x 2" **08** 2“ x 2"

DATASHEET
http://bit.ly/2UMqkTt

* Range of adjustment of different springs can be found on page 125
** Male thread only available on inlet

Bellows :
Overflow valves with bellows for neutral and non-neutral media and/or counter pressure up to 4 bar. Spring, moving parts and the environment are protected from being affected by the medium.



UV03 | UV04

Angle-type overflow valve made of stainless steel

Angle-type overflow valves **TYPE UV03 | UV04** made of stainless steel **can be set and adjusted under operating conditions**. Due to the gastight spring bonnet, no medium can escape to the outside. They open proportionally when the preset pressure is exceeded.

Diameter :	3/8“ to 2“
Connection :	Female | Male BSP-P
Material :	Stainless steel 1.4408
Seal :	FKM | PTFE
Temperature :	-60°C to +225°C*
Set pressure :	0,2 to 20,0 bar
Media :	Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT	CONNECTION	SIZE
UV03 FKM **UV04** PTFE	**01** 0,5 to 2,5 bar** **02** 2,0 to 12,0 bar **03** 12,0 to 20,0 bar***	**00** Female thread **01** Male thread****	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2PpkotX

FITTINGS
can be found starting p. 168

* FKM -20°C to +200°C | PTFE -60°C to +225°C
** Only available for type UV03
*** Only available for type UV04
**** Male thread only available on inlet

UV15

Angle-type overflow valve - counter-pressure-compensated

Angle-type overflow valves made of stainless steel **with bellows**, which makes the spring bonnet gastight and protects sliding parts and the surroundings from the medium. **TYPE UV15 is counter-pressure-compensated up to 4,0 bar** and can be set under operating conditions.

Diameter :	1/2“ to 2“
Connection :	Female | Male BSP-P
Material :	Stainless steel 1.4408
Seal :	PTFE
Temperature :	-60°C to +225°C
Set pressure :	0,5 to 25,0 bar
Media :	Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT*	CONNECTION	SIZE (INLET X OUTLET)
UV15	**01** Spring 01 **02** Spring 02 **03** Spring 03 **04** Spring 04 **05** Spring 05 **06** Spring 06 **07** Spring 07 **08** Spring 08	**00** Female thread **01** Male thread**	**03** 1/2“ x 1" **04** 3/4“ x 1 1/4" **05** 1“ x 1 1/2" **06** 1 1/4“ x 2" **07** 1 1/2“ x 2" **08** 2“ x 2"

Bellows :
Overflow valves with bellows for neutral and non-neutral media and/or counter pressure up to 4 bar. Spring, moving parts and the environment are protected from being affected by the medium.

DATASHEET
http://bit.ly/2UMqkTt

* Range of adjustment of different springs can be found on page 125
** Male thread only available on inlet

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

TECHNICAL CONSULTING
+49 (0) 7143 / 9 66 69 - 00

UV05 | UV06

Overflow valve made of gunmetal in straightway form

Diaphragm-controlled overflow valves **TYPE UV05 | UV06** made of gunmetal can be set and adjusted under operating conditions. **The straight-way form makes it possible to achieve very high flow rates with small differential pressures**. With pressure gauge connection.

Diameter : 1/2“ to 2“
Connection : Male | Female thread BSP-T
Material : Gunmetal CC499K
Seal : EPDM | FKM
Temperature : -10°C to +95°C
Set pressure : 0,5 to 10,0 bar
Media : Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT	CONNECTION	SIZE
UV05 EPDM	**01** 0,5 to 2,0 bar	**00** Male thread	**03** 1/2“
UV06 FKM	**02** 1,5 to 6,0 bar	**01** Female thread*	**04** 3/4“
	03 5,5 to 10,0 bar		**05** 1“
			06 1 1/4“
			07 1 1/2“
			08 2“

DATASHEET
http://bit.ly/2ZlhFpG

* only for sizes 1/2“, 3/4“ and 1“

UV09 | UV10

Flange overflow valve made of gunmetal

Diaphragm-controlled flange overflow valves **TYPE UV09 | UV10** made of gunmetal can be set and adjusted under operating conditions. **The straight-way form makes it possible to achieve very high flow rates with small differential pressures**. With pressure gauge connection.

Diameter : DN15 to DN100
Connection : Flange DIN EN 1092 PN40*
Material : Gunmetal CC499K
Diaphragm : EPDM | FKM
Temperature : -10°C to +95°C
Set pressure : 0,5 to 10,0 bar
Media : Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT	CONNECTION	SIZE
UV09 EPDM	**01** 0,5 to 2,0 bar	**00** Flange	**03** DN15
UV10 FKM	**02** 1,5 to 6,0 bar**		**04** DN20
	03 5,5 to 10,0 bar		**05** DN25
			06 DN32
			07 DN40
			08 DN50
			09 DN65**
			10 DN80**
			11 DN100**

DATASHEET
http://bit.ly/2GtECj0

* Size DN100 with flange PN16
** DN65 and DN80 only available with pressure range of 1,0 to 6,0 bar | DN100 only with pressure range 1,0 to 5,5 bar

PRESSURE GAUGES
can be found starting p. 144

UV07 | UV08

Overflow valve made of stainless steel in straightway form

Diaphragm-controlled overflow valves **TYPE UV07 | UV08** made of stainless steel can be set and adjusted under operating conditions. **The straight-way form makes it possible to achieve very high flow rates with small differential pressures**. With pressure gauge connection.

Diameter :	1/2“ to 2“
Connection :	Male | Female thread BSP-T
Material :	Stainless steel 1.4408
Seal :	EPDM | FKM
Temperature :	-10°C to +95°C
Set pressure :	0,5 to 10,0 bar
Media :	Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT	CONNECTION	SIZE
UV07 EPDM **UV08** FKM	**01** 0,5 to 2,0 bar **02** 1,5 to 6,0 bar **03** 5,5 to 10,0 bar	**00** Male thread **01** Female thread*	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“

DATASHEET
http://bit.ly/2ZlhFpG

EDELSTAHL Rost frei

* **only for sizes 1/2“, 3/4“ and 1“**

UV11 | UV12

Flange overflow valve made of stainless steel

Diaphragm-controlled flange overflow valves **TYPE UV11 | UV12** made of stainless steel can be set and adjusted under operating conditions. **The straight-way form makes it possible to achieve very high flow rates with small differential pressures**. With pressure gauge connection.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092 PN40*
Material :	Stainless steel 1.4408
Diaphragm :	EPDM | FKM
Temperature :	-10°C to +95°C
Set pressure :	0,5 to 10,0 bar
Media :	Gaseous and liquid

TYPE	RANGE OF ADJUSTMENT	CONNECTION	SIZE
UV11 EPDM **UV12** FKM	**01** 0,5 to 2,0 bar **02** 1,5 to 6,0 bar** **03** 5,5 to 10,0 bar	**00** Flange	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65** **10** DN80** **11** DN100**

DATASHEET
http://bit.ly/2GtECj0

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* **Size DN100 with flange PN16**
** **DN65 and DN80 only available with pressure range of 1,0 to 6,0 bar | DN100 only with pressure range 1,0 to 5,5 bar**

PRESSURE GAUGES p. 144
FLANGES p. 158

Flange overflow valve with bellow

Flange overflow valves **TYPE UV13** in straight-way form can be set and adjusted under operating conditions. The metallic design allows the overflow valves to be used for **applications at temperatures up to +450°C**. Type UV13 is **TA Luft** approved.

Diameter :	DN15 to DN100
Connection :	Flange DIN EN 1092 PN16
Material :	See below
Seal :	Metal
Temperature :	-10°C to +450°C*
Set pressure :	0,5 to 10,0 bar
Media :	Gaseous and liquid, steam

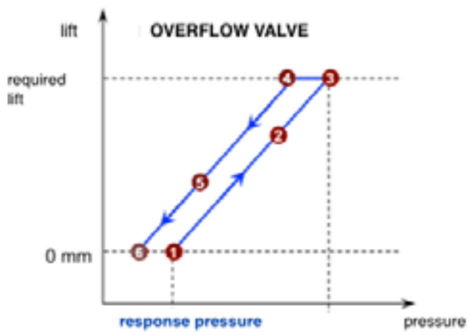
TYPE	RANGE OF ADJUSTMENT	MATERIAL	GRÖSSE
UV13	**01** 0,5 to 1,5 bar	**01** Grey cast iron EN-JL1040	**03** DN15
	02 1,0 to 3,0 bar	**02** Spheroidal graphite cast iron EN-JS1049	**04** DN20
	03 2,0 to 5,0 bar	**03** Carbon steel 1.0619	**05** DN25
	04 4,0 to 10,0 bar	**04** Stainless steel 1.4408	**06** DN32
			07 DN40
			08 DN50
			09 DN65
			10 DN80
			11 DN100

DATASHEET
http://bit.ly/2PiMNld

* **Please consider pressure-temperature-rating (can be found in datasheet)!**

Functional principle of overflow valves:

1. Response pressure is reached; overflow valve is still closed
2. Response pressure is exceeded; overflow valve opens in proportion to the Pressure increase and discharges capacity
3. Required overflow capacity is reached; required lift is triggered
4. System pressure drops again; start of the closing process
5. System pressure drops further; lift is reduced
6. Valve is closed and sealed just below the response pressure; lift equates to zero



Range of adjustment TYPE UV14 | UV15:

Diameter DN	15	20	25	32	40	50
Inlet*	½"	¾"	1"	1 ¼"	1 ½"	2"
Outlet*	1"	1 ¼"	1 ½"	2"	2"	2"
Range of adjustment	in bar	in bar	in bar	in bar	in bar	in bar
Spring 01	0,5-0,9	0,5-1	0,5-0,9	0,5-0,9	0,5-0,9	0,5-0,9
Spring 02	1-1,3	1-1,6	0,9-1,5	1-1,3	1-1,3	1-1,3
Spring 03	1,3-2,9	1,6-2,8	1,5-2	1,4-3	1,4-3	1,4-3
Spring 04	2,9-3,9	2,8-5,3	2,1-4,5	3,1-5,5	3,1-5,5	3,1-5,5
Spring 05	3,9-7,9	5,4-10	4,6-8	5,6-11	5,6-11	5,6-11
Spring 06	8-11,5	10-12	8,1-14	11-16	11-16	11-16
Spring 07	11-16	12-25	14-25	16-25	16-25	16-25
Spring 08	16-25	--	--	--	--	--

* Thread / connection according to DIN EN ISO 228

VENT VALVES

nieruf®

VB01 | VB02

Vent valve made of stainless steel

Vent-valves for neutral, gaseous media. **TYPE VB01** opens at -6 mbar, throughput increases as differential pressure increases. **TYPE VB02** is available from -100 to -800 mbar, throughput is independent of setting pressure and increases as differential pressure increases.

Diameter : 1/2“ to 1“
Connection : Male thread BSP-P
Material : Stainless steel 1.4404
Set pressure : -6 mbar to -800 mbar
Seal : PTFE/PTFE-carbon
Temperature : -60°C to +225°C
Media : Neutral gaseous

TYPE	CONNECTION	SEAL	SIZE
VB01 Range of adjustment: -6 mbar **VB02** Range of adjustment: -100 to -800 mbar	**00** Male thread	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“

DATASHEET
http://bit.ly/2IoZudu

EDELSTAHL Rost frei

VB03 | VB04

Vent valve made of brass

Vent-valves for neutral, gaseous media. **TYPE VB03** opens at -6 mbar, throughput increases as differential pressure increases. **TYPE VB04** is available from -100 to -800 mbar, throughput is independent of setting pressure and increases as differential pressure increases.

Diameter : 1/2“ to 1“
Connection : Male thread BSP-P
Material : Brass CW617N
Set pressure : -6 mbar to -800 mbar
Seal : PTFE/PTFE-carbon
Temperature : -60°C to +225°C
Media : Neutral gaseous

TYPE	CONNECTION	SEAL	SIZE
VB03 Range of adjustment: -6 mbar **VB04** Range of adjustment: -100 to -800 mbar	**00** Male thread	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“

DATASHEET
http://bit.ly/2UtGVGx

PRESSURE SENSORS

DS01

Pressure sensor in compact design

High-quality pressure sensors **TYPE DS01 with interior ceramic membrane**, in compact design. These pressure sensors have high corrosion resistance and long-term stability. Available as 2-wire (4-20mA) and 3-wire (0-10V). With ATEX on request.

Diameter :	G 1/4“ B | G 1/2“ B | G 1/2“ B IB*
Connection :	Male thread
Material :	Stainless steel
Pressure :	0,0 to 600,0 bar
Temperature :	-40°C to +100°C
Media :	Gaseous and liquid

TYPE	RANGE OF PRESSURE	SEAL	ELECTRICAL OUTPUT	SIZE
DS01	**00** 0 to 250 mbar	**0** FPM	**0** 2-wire (4-20mA)	**01** G 1/4“ B
	01 0 to 400 mbar	**1** EPDM	**1** 3-wire (0-10V)	**03** G 1/2“ B
	02 0 to 600 mbar			**03.1** G 1/2“ B IB
	03 0 to 1 bar			
	04 0 to 1,6 bar			
	05 0 to 2,5 bar			
	06 0 to 4 bar			
	07 0 to 6 bar			
	08 0 to 10 bar			
	09 0 to 16 bar			
	10 0 to 25 bar			
	11 0 to 40 bar			
	12 0 to 60 bar			
	13 0 to 100 bar			
	14 0 to 160 bar			
	15 0 to 250 bar			
	16 0 to 320 bar			
	17 0 to 400 bar			
	18 0 to 600 bar			

DATASHEET
http://bit.ly/2GrR4QE

* **IB: internal drill**

DS03

Pressure sensore in compact design with digital display

High-quality pressure switches and pressure transmitters **TYPE DS03 with digital display** and interior ceramic membrane, in compact design. These pressure switches/pressure transmitters have high corrosion resistance and long-term stability.

Diameter :	G 1/4“ B | G 1/2“ B G 1/2“ B IB*
Connection :	Male thread
Material :	Stainless steel
Pressure :	0,0 to 600,0 bar
Temperature :	-40°C to +100°C
Media :	Gaseous and liquid

DATASHEET
http://bit.ly/2VMd5yB

* **IB: internal drill**

TYPE	RANGE OF PRESSURE	SEAL	ELECTRICAL OUTPUT	SIZE
DS03	**00** 0 to 250 mbar **01** 0 to 400 mbar **02** 0 to 600 mbar **03** 0 to 1 bar **04** 0 to 1,6 bar **05** 0 to 2,5 bar **06** 0 to 4 bar **07** 0 to 6 bar **08** 0 to 10 bar **09** 0 to 16 bar **10** 0 to 25 bar **11** 0 to 40 bar **12** 0 to 60 bar **13** 0 to 100 bar **14** 0 to 160 bar **15** 0 to 250 bar **16** 0 to 320 bar **17** 0 to 400 bar **18** 0 to 600 bar	**0** FPM **1** EPDM	**0** 4-wire, 2xPNP **1** 4-wire, 1xPNP, 1x4-20mA **2** 5-wire, 2xPNP, 1x4-20mA **3** 4-wire, 1xPNP, 1x4-20mA, Desina	**01** G 1/4“ B **03** G 1/2“ B **03.1** G 1/2“ B IB

This is how the nieruf article number system works

Our article number **PK02010005** consists of :

TYPE	VERSION	SEAL	SIZE
PK02	**00** double acting **01** single acting	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“
PK02	**01**	**00**	**05**

CAD AND STEP FILES

can be found on www.nieruf.com/cad

FURTHER INFORMATIONS ON OUR PRODUCTS

Customer account, downloads and datasheets,
FAQ´s and much more can be found on **www.nieruf.com**

VARIABLE AREA FLOWMETERS

Information on the dimensioning of variable area flowmeters:

The nieruf flowmeters types SK01 to SK07 work on the basis of the variable area principle:

The measuring unit consists of a plastic cone (types SK01 to SK03), a glass cone (types SK04 to SK06) or a measuring tube (type SK07) with a measuring ring in which a float can move up and down.

The conical float is raised by the measuring material (medium) flowing from the bottom to the top. The annular gap increases until a balance has been established between the weight force F_G, the buoyant force F_A and the force F_S due to the flow resistance.

The variable area flowmeters are set and calibrated to a specific operating and media state and delivered in accordance with previosuly defined measurement conditions.

The flow values specified in the data sheets and catalogue refer to the media of water and air in depressurised applications! If your media and operating data are different individual calculations must be made as to what design and what type are suitable for your application.

Therefore following data must be specified for a precise dimensioning:

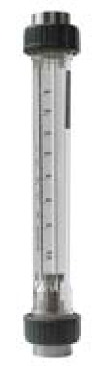
Media data:

- Media
- Density
- Temperature
- Viscosity

Operating data:

- Operating pressure
- Flow rate

SK01 – SK03



Variable area flowmeter

Variable area flowmeter with female thread **TYPE SK01** | **SK02** or cementing socket **TYPE SK03**. These flow meters are maintenance-free. Simple installation and handling. Suitable for water, air and gases (depending on the version). Optionally possible with contacts.

Diameter : 1/4“ to 2“ | d20, d32, d63
Material : Trogamid
Connection : Female thread | Cementing socket
Connection of : PVC
Pressure : 0,0 to 10,0 bar
Temperature : 0°C to +60°C (water +50°C)

DATASHEET
http://bit.ly/2PfDq5G

TYPE	SEAL	MEDIA*	MEASURING RANGE	SIZE
SK01 IG DIN ISO 228	**0** NBR	**0** Water	**01** Type 01	**01** 1/4“
SK02 IG NPT	**1** EPDM	**1** Air	**02** Type 02	**02** 3/8“
SK03 Cementing socket**	**2** FKM		**03** Type 03	**03** 1/2“
			04 Type 04	**04** 3/4“ | d20
			05 Type 05	**05** 1“
			06 Type 06	**06** 1 1/4“ | d32
			07 Type 07	**07** 1 1/2“
			08 Type 08	**08** 2“
			09 Type 09	**09** d63
			10 Type 10	
			11 Type 11	
			12 Type 12	

* Other media on request
** Only available in sizes 04, 06 and 09

Notes

360° product view

RESISTANCE CHECK
Informations about chemical resistances can be found on www.nieruf.com/Resistance

TECHNICAL CONSULTING
+49 (0) 7143 / 9 66 69 - 00

Measuring ranges:

Liquids (p=1 kg/l, viscocity: 1mPa s)										
Female thread		**1/4“**	**3/8“**	**1/2“**	**3/4“**	**1“**	**1 1/4“**	**1 1/2“**	**2“**	**Pressure loss Float**
Cementing socket		**d20 mm**			**d32 mm**		**d63 mm**			
Type	Dynamic	l/h	l/h	l/h	l/h	l/h	l/h	l/h	l/h	mbar
01	1:10	125	125	125	--	--	--	--	--	11
02	1:10	315	315	315	--	--	--	--	--	13
03	1:10	--	--	--	650	650	--	--	--	17
04	1:10	--	--	--	1.000	1.000	--	--	--	17
05	1:10	--	--	--	1.600	1.600	--	--	--	20
06	1:10	--	--	--	2.500	2.500	--	--	--	24
07	1:10	--	--	--	--	--	4.000*	4.000*	4.000*	25
08	1:10	--	--	--	--	--	6.500*	6.500*	6.500*	27
09	1:10	--	--	--	--	--	10.000*	10.000*	10.000*	32
10	1:4	--	--	--	--	--	16.000*	16.000*	16.000*	51
11	1:3	--	--	--	--	--	20.000*	20.000*	20.000*	65
12	1:3	--	--	--	--	--	25.000*	25.000*	25.000*	91

* guided float

Air (Pabs=1,013 bar, T=0°C, p=1,239 kg/m³, v=0,0181 mPA s)										
Female thread		**1/4“**	**3/8“**	**1/2“**	**3/4“**	**1“**	**1 1/4“**	**1 1/2“**	**2“**	**Pressure loss Float**
Cementing socket		**d20 mm**			**d32 mm**		**d63 mm**			
Type	Dynamic	l/h	l/h	l/h	l/h	l/h	l/h	l/h	l/h	mbar
01	1:10	2.000	2.000	2.000	--	--	--	--	--	4
02	1:10	5.000	5.000	5.000	--	--	--	--	--	5
03	1:10	--	--	--	10.000	10.000	--	--	--	7
04	1:10	--	--	--	16.000	16.000	--	--	--	7
05	1:10	--	--	--	28.000	28.000	--	--	--	7
06	1:10	--	--	--	40.000	40.000	--	--	--	8
07	1:10	--	--	--	--	--	64.000*	64.000*	64.000*	9
08	1:10	--	--	--	--	--	100.000*	100.000*	100.000*	10
09	1:10	--	--	--	--	--	160.000*	160.000*	160.000*	13
10	1:4	--	--	--	--	--	280.000*	280.000*	280.000*	23
11	1:3	--	--	--	--	--	350.000*	350.000*	350.000*	31
12	1:3	--	--	--	--	--	430.000*	430.000*	430.000*	43

* Guided float

Units of measuring ranges : 1/4“ to 1“ in l/h, starting 1 1/4“ in m³/h

The dynamic gives information about the measuring range. Example: A variable flow meter with a dynamic of 1:10 on 2.000 l/h has a measuring range of 200-2.000 l/h.

SK04 – SK06

Variable area flowmeter made of stainless steel

Variable area flowmeter **TYPE SK04** | **SK05** | **SK06 made of stainless steel with borosilicate glass** for high temperatures and aggressive media. Available with female thread G, NPT thread or flange connection.

Diameter :	1/4“ to 2“ | DN10 to DN80
Material :	Borosilicate glass and Stainless steel
Connection :	Female thread | Flange
Connection of :	Stainless steel 1.4571
Pressure :	0,0 to 10,0 bar*
Temperature :	-10°C to +150°C**

TYPE	SEAL	MEDIA****	MEASURING RANGE	SIZE
SK04 FM DIN ISO 228	**1** EPDM	**0** Liquids	**01** Type 01	**01** 1/4“
SK05 FM NPT***	**2** FKM	**1** Air	**02** Type 02	**02** 3/8“ | DN10
SK06 Flange	**3** FFKM***		**03** Type 03	**03** 1/2“ | DN15
			....	**04** 3/4“ | DN20
			....	**05** 1“ | DN25
			....	**06** 1 1/4“ | DN32
			....	**07** 1 1/2“ | DN40
			35 Type 35	**08** 2“ | DN50
			36 Type 36	**09** DN65
				10 DN80

DATASHEET
http://bit.ly/2KKwHSB

- * Maximum 10 bar for +20°C; Starting Width 58mm (measurement range): maximum 8 bar for +20°C
- ** Starting 90°C: Upcharge for engraved scale Surrounding -20°C to +80°C
- *** On request
- **** Other media on request

FITTINGS page 168
FLANGES page 158

Measuring ranges:

0: Liquids (p=1 kg/l, viscosity 1mPa s) | **1: Air** (Pabs=1,013 bar, T=0°C, p=1,239 kg/m³, v=0,0181 mPA s)

Viewing area		Width 19mm		Width 38mm		Width 58mm		Pressure loss Float	
Female thread		1/4“ 3/8“ 1/2“		1/2“ 3/4“ 1“		1“ 1 1/4“ 1 1/2“ 2“			
Flange		DN10 PN40, DN15 PN40, DN20 PN40, DN25 PN40		DN25 PN40, DN32 PN40, DN40 PN40, DN50 PN40		DN40 PN40, DN50 PN40, DN65 PN16, DN80 PN16			
		l/h (starting type 27 in m^3/h)		l/h (starting type 27 in m^3/h)		l/h (starting type 27 in m^3/h)		mbar	
Type	Dynamic	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**
01	1:10	1	16	--	--	--	--	10	4
02	1:10	3	50	--	--	--	--	10	4
03	1:10	5	80	--	--	--	--	10	4
04	1:10	10	160	--	--	--	--	10	4
05	1:10	16	300	--	--	--	--	10	4
06	1:10	25	450	--	--	--	--	10	4
07	1:10	30	500	--	--	--	--	10	4
08	1:10	40	650	--	--	--	--	10	4
09	1:10	50	800	--	--	--	--	10	4
10	1:10	65	1.100	--	--	--	--	10	4
11	1:10	80	1.400	--	--	--	--	10	4
12	1:10	100	1.600	--	--	--	--	10	4
13	1:10	125	2.000	--	--	--	--	20	6,5
14	1:10	160	3.000	--	--	--	--	20	6,5
15	1:10	200	3.600	--	--	--	--	20	6,5
16	1:10	250	4.000	--	--	--	--	20	6,5
17	1:10	315	5.000	--	--	--	--	40	15
18	1:10	400	6.400	--	--	--	--	40	15
19	1:10	500	8.000	--	--	--	--	40	15
20	1:10	--	--	650	10.000	--	--	19	7
21	1:10	--	--	800	13.000	--	--	19	7
22	1:10	--	--	1.000	16.000	--	--	19	7
23	1:10	--	--	1.250	20.000	--	--	24	7
24	1:10	--	--	1.600	28.000	--	--	24	9
25	1:10	--	--	2.000	36.000	--	--	33	9
26	1:10	--	--	2.500	40.000	--	--	33	12
27	1:10	--	--	3.000	50.000	--	--	25	12
28	1:10	--	--	--	--	4.000	64.000*	25	10
29	1:10	--	--	--	--	5.000	80.000*	25	10
30	1:10	--	--	--	--	6.500	100.000*	25	10
31	1:10	--	--	--	--	8.000	140.000*	25	10
32	1:10	--	--	--	--	10.000	160.000*	25	10
33	1:6	--	--	--	--	12.500	200.000*	25	10
34	1:4	--	--	--	--	16.000	280.000*	25	10
35	1:3	--	--	--	--	20.000	350.000*	25	10
36	1:3	--	--	--	--	25.000	430.000*	25	10

* Guided float

The dynamic gives information about the measuring range. Example: A variable flow meter with a dynamic of 1:10 on 2.000 l/h has a measuring range of 200-2.000 l/h.

SK07

Flange variable area flowmeter for high temperature/pressure

Maintenance-free variable area flowmeter **TYPE SK07 made of solid metal** with flange connection. The flowmeters can be used under rough conditions for aggressive media and in high pressure areas. Optionally with contacts.

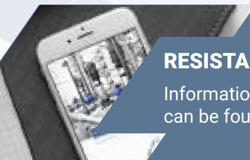
Diameter : DN15 to DN150
Material : Stainless steel 1.4404
Connection : Flange DIN EN 1092-1 PN40
Connection of : Stainless steel
Pressure : 0,0 to 40,0 bar*
Temperature : -40°C to +200°C
Media : Gaseous and liquid

DATASHEET
http://bit.ly/2Zo0B2D

* **Pressure up to maximum 160,0 bar on request**
** **Please see table below for possible combinations**

TYPE	DIAMETER**	MEDIA	MEASUREMENT RANGE	SIZE**
SK07	**1** DN15 **2** DN25 **3** DN40 **4** DN50 **5** DN80 **6** DN100	**0** Liquids **1** Air	**01** Type 01 **02** Type 02 **03** Type 03 .... **25** Type 25 **26** Type 26	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

Diameter	**Flange connections / Size**						**PN**
1 - DN15	DN15	DN20	DN25	DN32	DN40	DN50	PN40
2 - DN25	DN20	DN25	DN32	DN40	DN50	--	PN40
3 - DN40	DN32	DN40	DN50	DN65	--	--	PN40
4 - DN50	DN50	DN65	DN80	DN100	--	--	PN40
5 - DN80	DN80	DN100	DN125	--	--	--	PN40
6 - DN100	DN100	DN125	DN150	--	--	--	PN40



Measuring ranges:

Type	Dynamic	Liquids Water* l/h	Gases Air** m^3/h	Diameter – Pressure loss (mbar) 1 - DN15	2 - DN25	3 - DN40	4 - DN50	5 - DN80	6 - DN100
01	1:10	5	0,15	40	--	--	--	--	--
02	1:10	10	0,30	40	--	--	--	--	--
03	1:10	16	0,48	40	--	--	--	--	--
04	1:10	25	0,75	40	--	--	--	--	--
05	1:10	40	1,3	40	--	--	--	--	--
06	1:10	50	1,5	40	--	--	--	--	--
07	1:10	70	2,1	40	--	--	--	--	--
08	1:10	100	3,0	60	--	--	--	--	--
09	1:10	160	4,6	60	--	--	--	--	--
10	1:10	250	7,0	60	--	--	--	--	--
11	1:10	400	11	70	--	--	--	--	--
12	1:10	600	17	80	--	--	--	--	--
13	1:10	1.000	30	--	60	--	--	--	--
14	1:10	1.600	46	--	70	--	--	--	--
15	1:10	2.500	70	--	100	50	--	--	--
16	1:10	4.000	110	--	240	120	80	--	--
17	1:10	6.000	170	--	--	180	90	--	--
18	1:10	10.000	290	--	--	--	110	--	--
19	1:10	16.000	460	--	--	--	230	70	--
20	1:10	20.000	550	--	--	--	230	70	--
21	1:10	25.000	700	--	--	--	500	100	--
22	1:10	40.000	1.100	--	--	--	--	350	120
23	1:10	50.000	1.350	--	--	--	--	350	120
24	1:10	60.000	1.700	--	--	--	--	--	360
25	1:10	80.000	2.400	--	--	--	--	--	600
26	1:10	100.000	3.000	--	--	--	--	--	600

* Water (p=1 kg/l, viscosity 1mPa s)

** Air (Pabs=1,013 bar, T=0C, p=1,239 kg/m^3, v=0,0181 mPA s)

The dynamic gives information about the measuring range. Example: A variable flow meter with a dynamic of 1:10 on 2.000 l/h has a measuring range of 200-2.000 l/h.

MI01

Electromagnetic flow sensor

Electromagnetic flow sensors **TYPE MI01** in remote design, **with external measuring transducer and operating module** (incl. 5 m cable***). Suitable for the linear flow measurement of electrically conductive liquids.

Diameter : DN15 to DN600
Connection : Flange DIN 2501 / ANSI 150
Material : Welded steel housing
Meas. tube : Stainless steel
Pressure : PN40*
Temperature : -10°C to +180°C**
Lining : Hard rubber | PTFE
Display : External, incl. cable (5m)

DATASHEET
http://bit.ly/2Lajumi

* DN15 to DN50: PN40
DN65 to DN150: PN16
DN200 to DN600: PN10
** Hard Rubber VHE/102: maximum +90°C
PTFE: maximum +180°C
*** Different cable length on request

TYPE	LINING	VERSION	COMMUNICATION	SIZE
MI01	**00** Hard Rubber	**1** AC 230V 50/60Hz	**1** 4-20mA	**03** DN15
	01 PTFE	**2** 18-36V		**05** DN25
				06 DN32
				07 DN40
				08 DN50
				09 DN65
				10 DN80
				11 DN100
				12 DN125
				13 DN150
				14 DN200
				15 DN250
				16 DN300
				17 DN350
				18 DN400
				19 DN450
				20 DN500
				21 DN600

Notes

MI02

Electromagnetic flow sensor

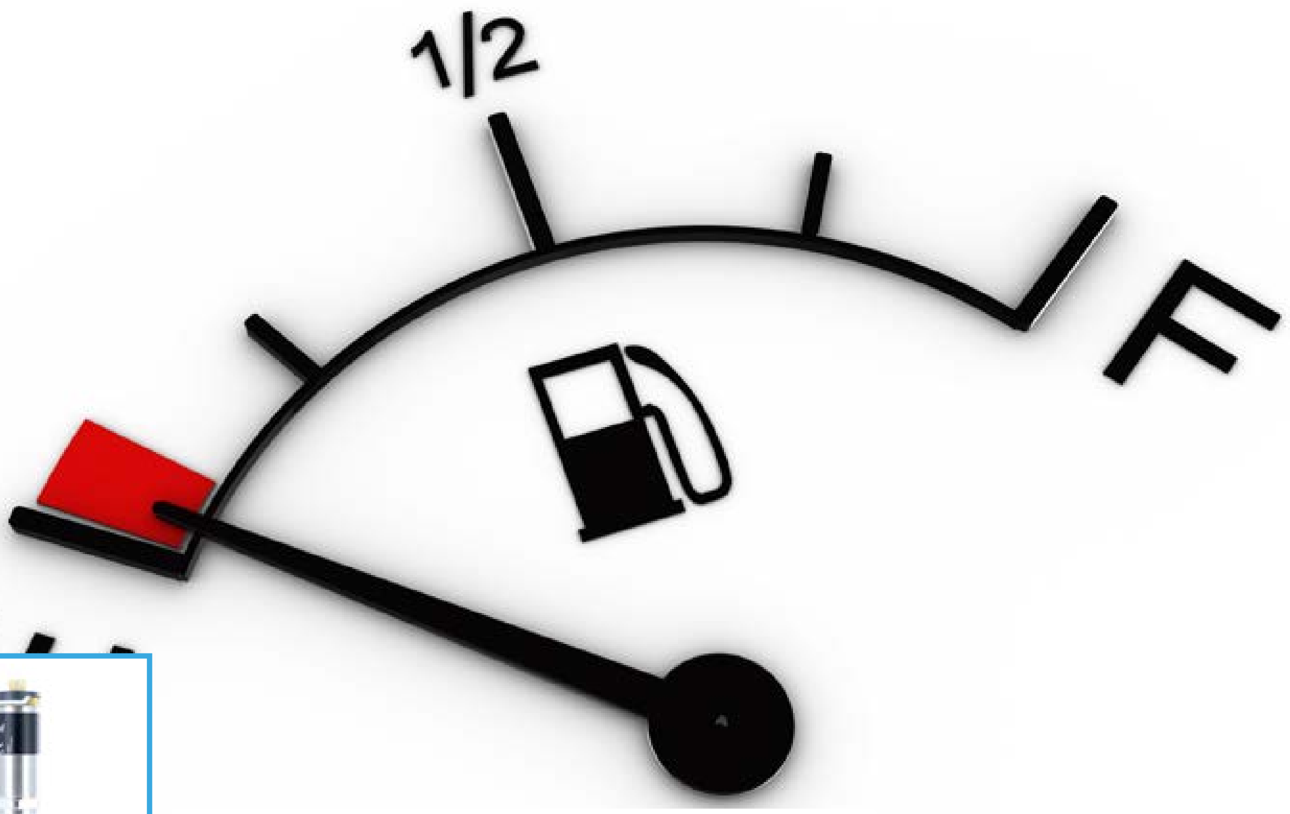
Electromagnetic flow sensors **TYPE MI02** in compact design, with attached measuring transducer and operating module. Suitable for the linear flow measurement of electrically conductive liquids.

Diameter : DN15 to DN600
Connection : Flange DIN 2501 / ANSI 150
Material : Welded steel housing
Meas. tube : Stainless steel
Pressure : PN40*
Temperature : -10°C to +180°C**
Auskleidung: Hard Rubber | PTFE
Display : Mounted

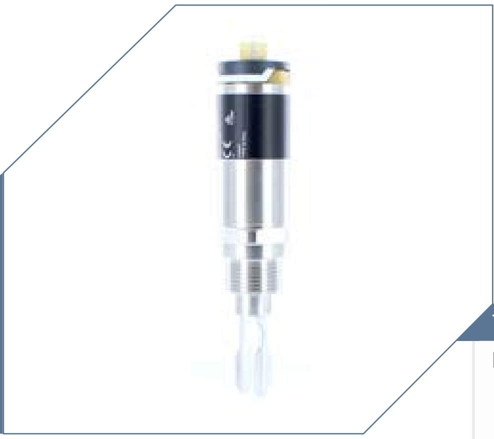
DATASHEET
http://bit.ly/2Lajumi

TYPE	LINING	VERSION	COMMUNICATION	SIZE
MI02	**00** Hard Rubber **01** PTFE	**1** AC 230V 50/60Hz **2** 18-36V	**1** 4-20mA	**03** DN15 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150 **14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400 **19** DN450 **20** DN500 **21** DN600

* **DN15 to DN50: PN40**
DN65 to DN150: PN16
DN200 to DN600: PN10
** **Hard Rubber VHE/102: maximum +90°C**
PTFE: maximum +180°C



FLUID LEVEL GAUGES



FM01

Fluid level gauge in compact design

High-quality vibrating tuning fork level switch **TYPE FM01 for monitoring filling levels**. Output signal via DC-PNP or AC/DC. Threaded connection in accordance with ISO 228. Suitable for measuring liquid media in the temperature range from -40°C to +100°C.

Diameter :	G 1/2“ | G 3/4“
Connection :	Male thread
Material :	Stainless steel
Voltage :	10-30V DC | 20-253V AC/DC
Pressure :	-1,0 to +40,0 bar
Temperature :	-40°C to +100°C
Media :	Liquid

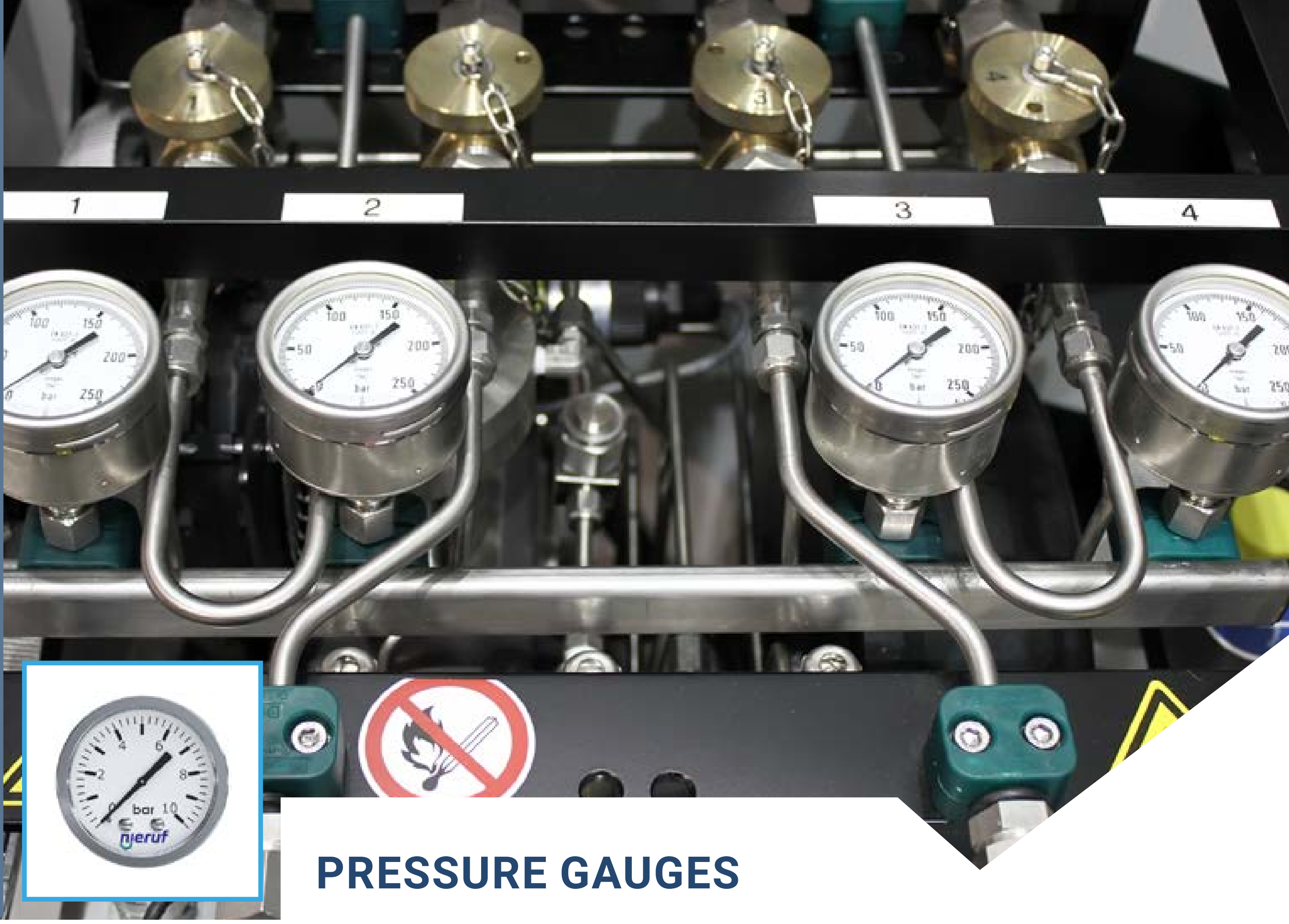
DATASHEET
http://bit.ly/2Xe7u4r

TYPE	VERSION	CONNECTION	ELECTR. OUTPUT	SIZE
FM01	**00** -40°C to +100°C	**0** Valve plug **1** Plug M12	**0** 20-253V AC/DC* **1** 10-30V DC	**03** G 1/2“ **04** G 3/4“

* **AC/DC-version only available with valve plug**

Check out the new 3D Viewer on our homepage

Select tab '3D Viewer' in the product details to view our 3D files online



PRESSURE GAUGES

EQUIPMENT

MM03

DATASHEET
http://bit.ly/2Pe2euV

* Non-crystallising / non-high viscosity

Pressure gauge G 1/4“ made of steel with pipe-spring measuring element

Pressure gauge **TYPE MM03** with pipe spring measuring element in steel version with G 1/4" connection. Suitable for gaseous and liquid, non-high viscosity and non-crystallising media. The welding nipples are made of brass. **Diameter of the viewing window: 50 mm**.

Diameter : G 1/4“ B
Connection : Radial | Axial
Body : Steel
Viewing glass : Plastic
Connection of : Brass
Accuracy : 1,6%
Media : Gaseous and liquid*

TYPE	CONNECTION	OPTION	RANGE	SIZE
MM03	**0** Axial (behind) **1** Radial (below)	**0** Standard	**01** 0,0 to 2,5 bar **02** 0,0 to 4,0 bar **03** 0,0 to 10,0 bar **04** 0,0 to 16,0 bar	**01** G 1/4“ B (NG50)

MM05

Pressure gauge made of stainless steel with pipe-spring measuring element

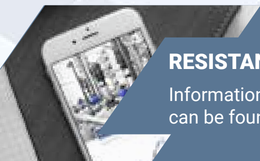
Pressure gauge **TYPE MM05** with pipe spring measuring element in **stainless steel** version with G 1/4" or G 1/8" connection. Suitable for non-crystallising and non-high viscosity, liquid and gaseous media. For pipes with heavy vibrations also available with glycerine filling to dampen these vibrations in the display area. Ambient temperature -25°C to +60°C, medium temperature -20°C to +80°C.

Diameter :	G 1/8“ B | G 1/4“ B
Connection :	Radial | Axial
Material :	Stainless steel
Viewing glass :	Polycarbonat
Connection of :	Stainless steel
Accuracy :	1,6%
Media :	Gaseous and liquid*

TYPE	CONNECTION	OPTION	RANGE	SIZE
MM05	**0** Radial (below) **1** Axial (behind)	**0** Standard **1** Glycerine filling	**05** 0,0 to 4,0 bar **06** 0,0 to 6,0 bar **07** 0,0 to 10,0 bar **08** 0,0 to 16,0 bar **09** 0,0 to 25,0 bar **10** 0,0 to 40,0 bar **11** 0,0 to 60,0 bar **12** 0,0 to 100,0 bar **13** 0,0 to 160,0 bar **14** 0,0 to 250,0 bar **15** 0,0 to 400,0 bar	**00** G 1/8“ B (NG40) **01** G 1/4“ B (NG50)

DATASHEET
http://bit.ly/2UNg39T

* Non-crystallising / non-high viscosity



Pressure gauge made of stainless steel with pipe-spring measuring element

Pressure gauge **TYPE MM06 NG63** | **MM07 NG100** with pipe spring measuring element in **stainless steel** version with G 1/4" or G 1/2" connection. Suitable for non-crystallising and non-high viscosity, liquid and gaseous media. For pipes with heavy vibrations also available with glycerine filling to dampen these vibrations in the display area.

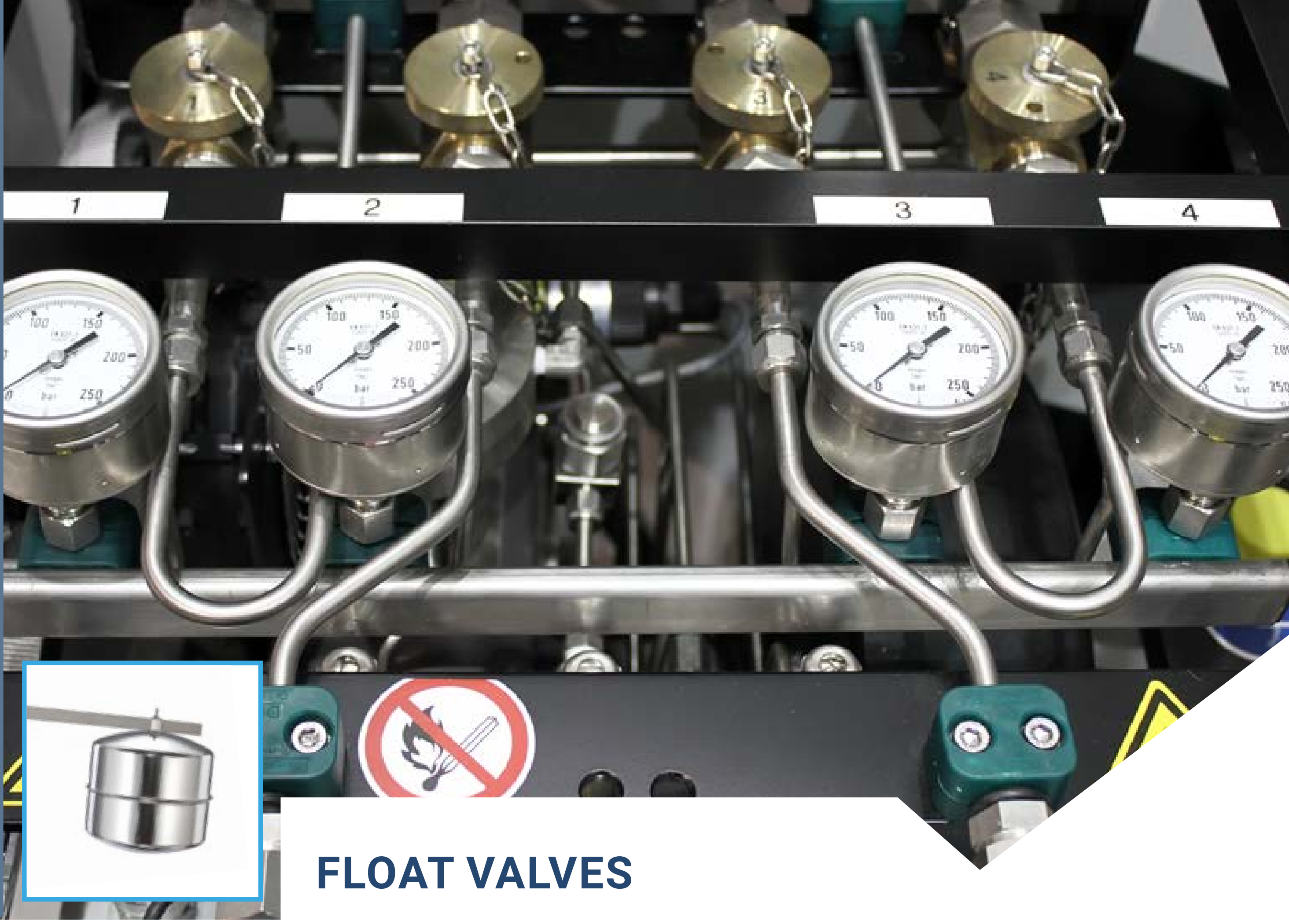
Diameter :	G 1/4“ B | G 1/2“ B
Connection :	Radial | Axial
Material :	Stainless steel
Viewing glass :	Laminated safety glass
Connection of :	Stainless steel
Accuracy :	1,0% | 1,6%**
Media :	Gaseous and liquid*

DATASHEET
http://bit.ly/2Vza3kv

TYPE***	CONNECTION	OPTION	RANGE	SIZE
MM06	**0** Radial (below)	**0** Standard	**02** 0,0 to 1,0 bar	**01** G1/4“ B (NG63)
MM07	**1** Axial (behind)	**1** Glycerine filling	**03** 0,0 to 1,6 bar	**02** G1/2“ B (NG100)
			04 0,0 to 2,5 bar	
			05 0,0 to 4,0 bar	
			06 0,0 to 6,0 bar	
			07 0,0 to 10,0 bar	
			08 0,0 to 16,0 bar	
			09 0,0 to 25,0 bar	
			10 0,0 to 40,0 bar	
			11 0,0 to 60,0 bar	
			12 0,0 to 100,0 bar	
			13 0,0 to 160,0 bar	
			14 0,0 to 250,0 bar	
			15 0,0 to 400,0 bar	
			Vacuum:	
			30 -1,0 to 0,0 bar	
			31 -1,0 to +0,6 bar	
			32 -1,0 to +1,5 bar	
			33 -1,0 to +3,0 bar	
			34 -1,0 to +5,0 bar	
			35 -1,0 to +9,0 bar	
			36 -1,0 to +15,0 bar	

* Non-crystallising / non-high viscosity
** NG63 1,6% | NG100 1,0% acc. to EN 837-1/5
*** MM06 : NG63 | MM07 : NG100

MANOMETER GAUGE VALVES page 75



FLOAT VALVES

SW01

Float valve made of brass

Float valves **TYPE SW01** made of brass with 3/8" and 1/2" male thread connection in accordance with ISO 228 in lightweight version. In the case of variable fluid level the float can be moved on the float arm. The valve seat is exchangeable.

Diameter : 3/8" | 1/2"
Connection : Male thread ISO 228
Material : Brass
Seal : NBR
Pressure : 0,0 to 6,0 bar
Temperature : Maximum +80°C
Media : Water and other neutral liquids

TYPE	MATERIAL	FLOAT	SIZE
SW01	**00** Brass	**00** Plastic	**02** 3/8" **03** 1/2"

DATASHEET
http://bit.ly/2v8PxZ4

SW02

Float valve made of stainless steel - pressure-tight with control flap

Pressure-tight float valves **TYPE SW02** with control flap. These valves are made of **stainless steel** with male thread connection in accordance with ISO 228 in the sizes from 3/8" to 3/4". In the case of variable fluid level the float can be moved on the float arm. The valve seat is exchangeable.

Diameter : 3/8" to 3/4"
Connection : Male thread ISO 228
Material : Stainless steel 1.4404
Seal : FPM
Pressure : 0,0 to 10,0 bar
Temperature : Maximum 190°C
Media : Aggressive liquids and purified water

TYPE	MATERIAL	FLOAT	SIZE
SW02	**00** Stainless steel	**01** Stainless steel	**02** 3/8" **03** 1/2" **04** 3/4"

DATASHEET
http://bit.ly/2ItmGXZ

SW03

Float valve made of gunmetal with dip tube connection and piston control

Float valves **TYPE SW03** with dip tube connection and piston control. These valves are made of gunmetal with male thread connection in accordance with ISO 228 in the sizes from 1/2" to 1". The valve seat and the piston are exchangeable. The float is available in plastic or copper.

Diameter :	1/2“ to 1“
Connection :	Male thread ISO 228
Material :	Gunmetal
Seal :	FPM
Pressure :	0,0 to 12,0 bar*
Temperature :	Maximum + 80°C
Media :	Water and other neutral liquids

TYPE	MATERIAL	FLOAT	SIZE
SW03	**00** Gunmetal	**00** Plastic **02** Copper	**03** 1/2“ **04** 3/4“ **05** 1“

DATASHEET
http://bit.ly/2VY2KzX

* **Max. pressure for copper-float and size 1/2" is 9 bar. Higher pressure on reuqest.**

SW04

Float valve made of stainless steel with dip tube connection

Float valves **TYPE SW04** with dip tube connection, closed design. These valves are made of stainless steel with male thread connection in accordance with ISO 228 in the sizes from 1/2" to 1". The valve seat and the piston are exchangeable.

Diameter :	1/2“ to 1“
Connection :	Male thread ISO 228
Material :	Stainless steel 1.4408
Seal :	FPM
Pressure :	0,0 to 12,0 bar
Temperature :	Maximum +190°C
Media :	Aggressive liquids and purified water

TYPE	MATERIAL	FLOAT	SIZE
SW04	**00** Stainless steel	**01** Stainless steel	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“ **09** 2 1/2“

DATASHEET
http://bit.ly/2GkO7A4

Float valve with free drainage at the bottom and DVGW-approval

Float valves **TYPE SW05** with free drainage at the bottom and open design. These valves are made of brass with male thread connection in accordance with ISO 228 in the sizes from 3/8" to 3". The valve seat is exchangeable. Valves of TYPE SW05 have **DVGW approval**.

Diameter :	3/8“ to 3“
Connection :	Male thread ISO 228
Material :	Brass
Seal :	EPDM
Pressure :	0,0 to 12,0 bar
Temperature :	Maximum +80°C
Media :	Drinking water and other neutral liquids

SW05

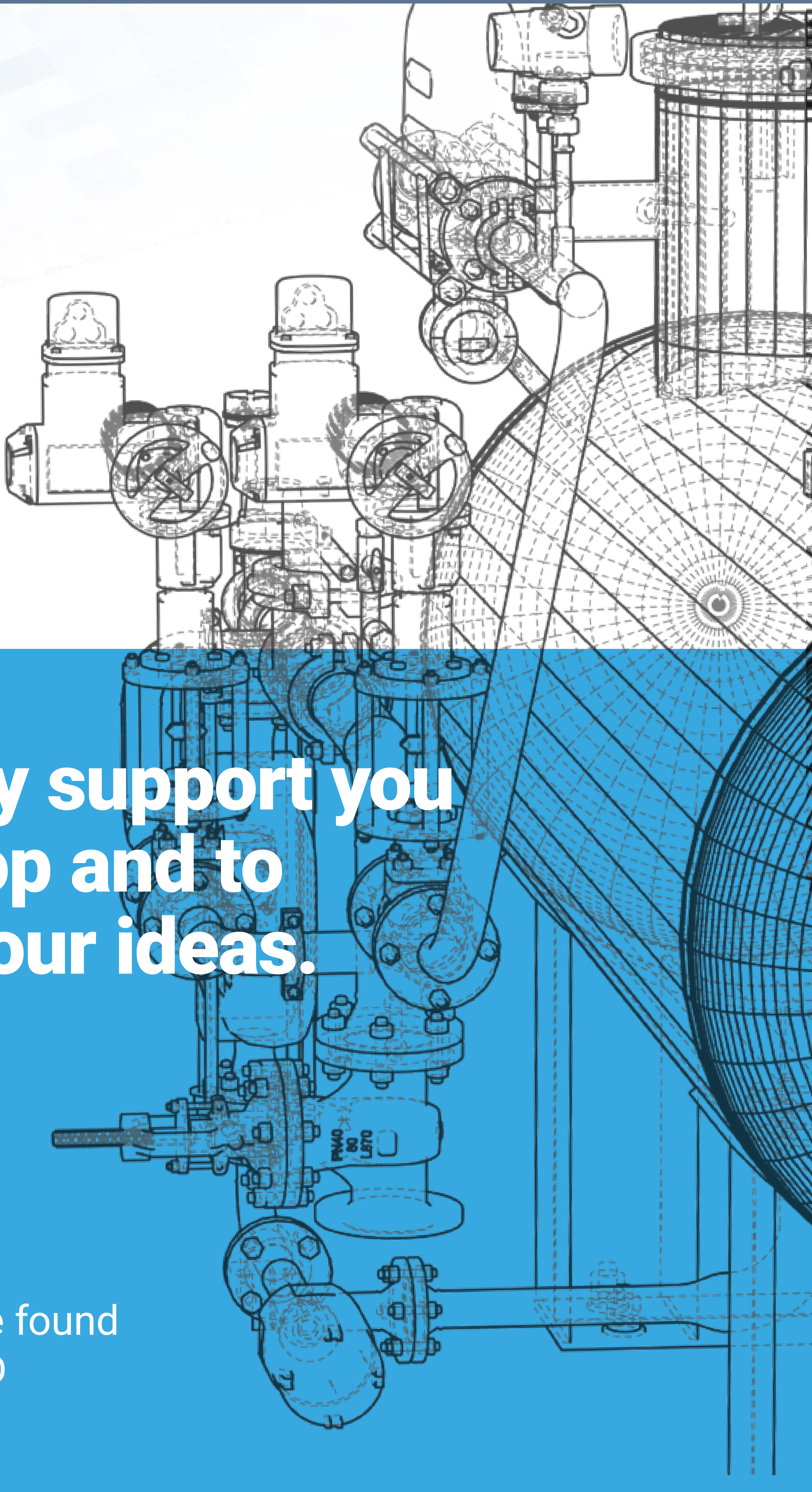
TYPE	MATERIAL	FLOAT	SIZE
SW05	**00** Brass	**02** Copper	**02** 3/8“ **03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“ **09** 2 1/2“ **10** 3“

DATASHEET
http://bit.ly/2L1utib

DVGW

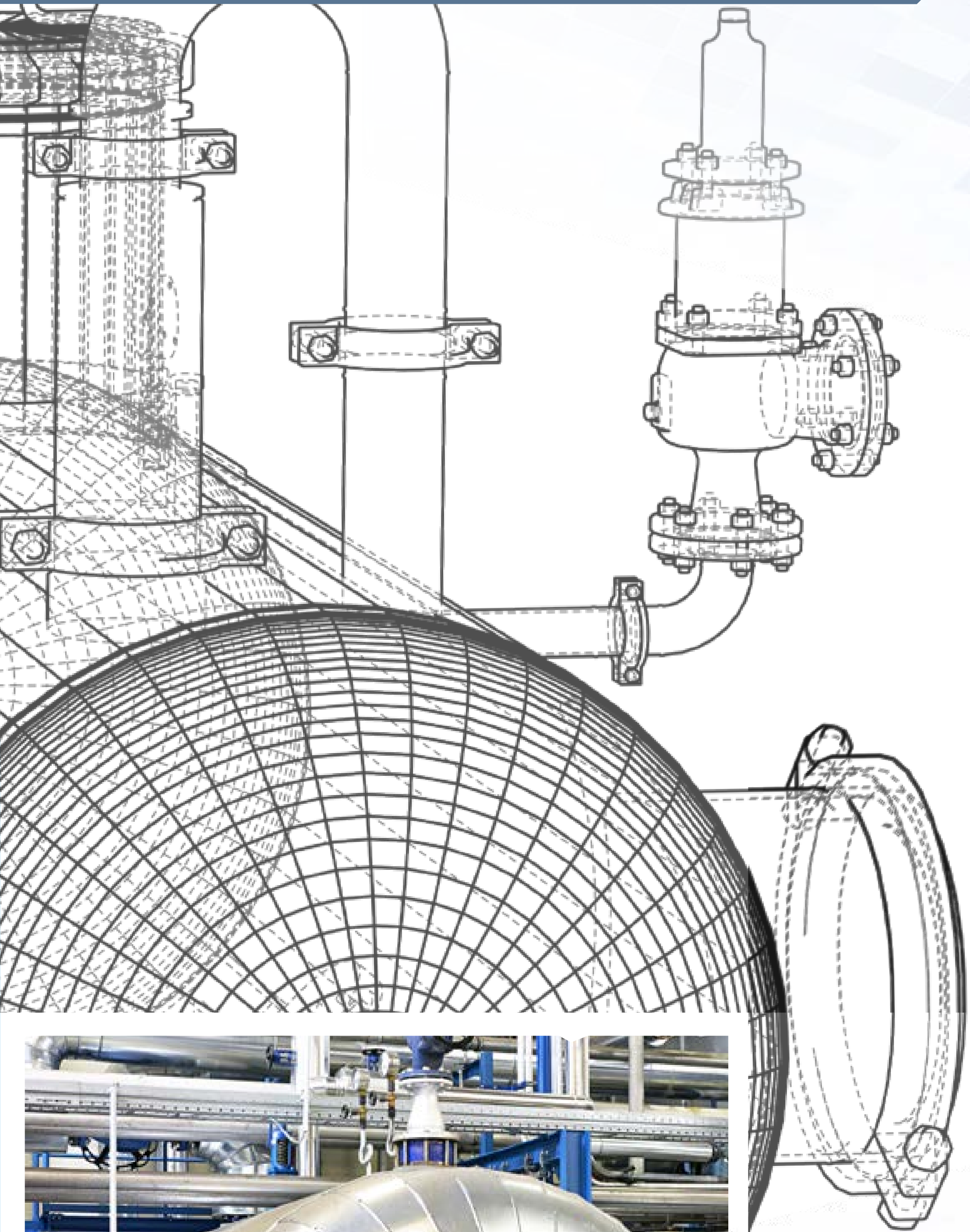
Notes

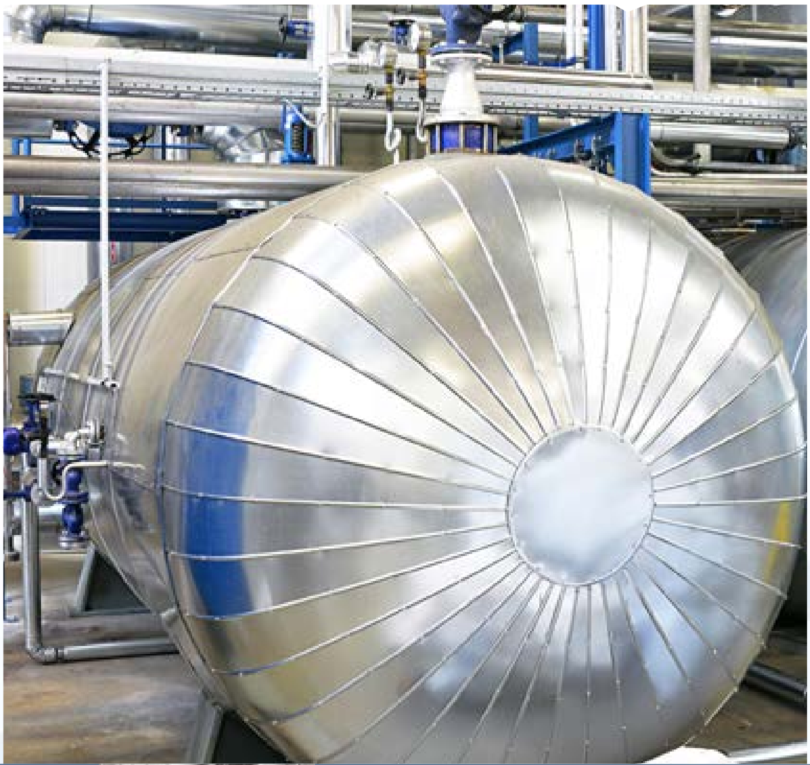
360° product view



We gladly support you to develop and to realize your ideas.

CAD Files can be found
on nieruf.de/CAD



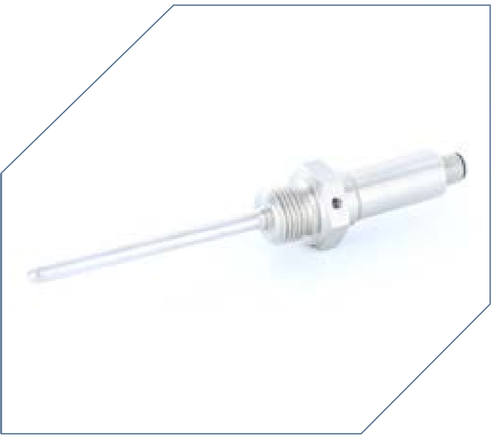


CAD & STEP FILES

can be found on nieruf.de/cad

TEMPERATURE SENSORS

TM01



Temperature sensor made of stainless steel

High-quality compact thermometers **TYPE TM01** made of stainless steel. These thermometers are available in different versions with various measuring ranges, sensor lengths, electronic outputs and sensor diameters. Suitable for the temperature measurement of gaseous and liquid media.

Diameter :	G1/2" B
Connection :	Male thread
Material :	Stainless steel
Electr. connection :	Plug M12 IP67
Temperature :	-50°C to +150°C
Temp. surround. :	-40°C to +85°C
Accuracy :	0,1k / 0,08%
Media :	Gaseous and liquid

DATASHEET
http://bit.ly/2IEf5oV

TYPE	MEASURING RANGE	SENSOR LENGTH	ELECTR.-OUTPUT	SIZE	SENSOR DIAMETER
TM01	**00** -50°C to +100°C **01** -40°C to +60°C **02** -30°C to +60°C **03** -30°C to +150°C **04** -30°C to +70°C **05** -20°C to +20°C **06** -20°C to +60°C **07** -10°C to +40°C **08** 0°C to +50°C **09** 0°C to +100°C **10** 0°C to +150°C	**0** 50 mm **1** 100 mm **2** 150 mm **3** 200 mm	**0** 2-wire, 1x 4-20mA **1** Pt100, 4-wire, type 1 **2** Pt100, 4-wire, type 2	**03** G 1/2" B	**.6** 6 mm **.8** 8 mm **.10** 10 mm

TM03

Temperature sensor made of stainless steel with display

High-quality digital temperature switches **TYPE TM03** made of stainless steel with screw-in thread in the sizes G 1/4" B and G 1/2" B. The housing and the display value can be turned. A password function protects the settings from changes. Suitable for gaseous and liquid media.

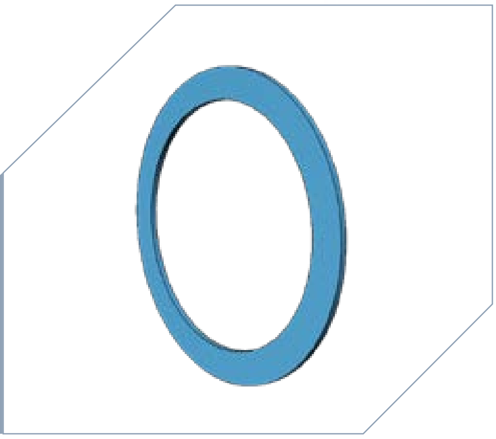
Diameter :	G 1/4" B | G 1/2" B
Connection :	Male thread
Material :	Stainless steel
Electr. connection :	Plug M12 IP67
Temperature :	-99°C to +500°C
Temp. surround. :	-40°C to +85°C
Accuracy :	≤0,08% FS
Media :	Gaseous and liquid

DATASHEET
http://bit.ly/2XmQHwa

TYPE	MEASURING RANGE	SENSOR LENGTH	ELECTR. OUTPUT	SIZE	SENSOR DIAMETER
TM03	**00** -99°C to +200°C **01** -99°C to +500°C	**0** 50 mm **1** 100 mm **2** 150 mm **3** 200 mm	**0** 2x PNP **1** 1x PNP, 1x 4-20mA **2** 2xPNP, 1x 4-20mA **3** 1x PNP, 1x 4-20mA Desina	**02** G 1/4" B **03** G 1/2" B	**.6** 6 mm **.8** 8 mm **.10** 10 mm

SEALS

FD01



DATASHEET
http://bit.ly/2Vsy7Wc

* **Maximum temperature: +400°C at pressure 0 bar**

Flange seals in accordance with DIN EN 1514-1 Form IBC

Flange seals **TYPE FD01** for sealing flange connections in accordance with DIN EN 1092. These flange seals are used with oils, refrigerants, hot water, steam, gases, saline solutions, fuels, acids and lyes among other things.

Diameter :	DN10 to DN600
Material :	Klingersil C 4400
Temperature :	-100°C to +160°C*
Pressure :	Maximum 60 bar
Registration :	DVGW, BAM, TA-Luft
Hint :	Asbestos-free

Diameter DN10 to DN80

TYPE	MATERIAL	NOMINAL PRESSURE	SIZE
FD01	**00** Klingersil C 4400	**01** PN10/16/25/40	**02** DN10 **03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40 **08** DN50 **09** DN65 **10** DN80

Diameter DN100 to DN150

TYPE	MATERIAL	NOMINAL PRESSURE	SIZE
FD01	**00** Klingersil C 4400	**01** PN10/16 **02** PN25/40	**11** DN100 **12** DN125 **13** DN150

Diameter DN200

TYPE	MATERIAL	NOMINAL PRESSURE	SIZE
FD01	**00** Klingersil C 4400	**01** PN10/16 **03** PN25 **04** PN40	**14** DN200

Diameter DN250 to DN600

TYPE	MATERIAL	NOMINAL PRESSURE	SIZE
FD01	**00** Klingersil C 4400	**01** PN10 **02** PN16 **03** PN25 **04** PN40	**15** DN250 **16** DN300 **17** DN350 **18** DN400 **19** DN450 **20** DN500 **21** DN600

FLANGES

EQUIPMENT

DATASHEET
http://bit.ly/2lpypXx

Welding neck flanges acc. to DIN EN 1092-1 type 11, flat face type B1

Diameter DN10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE
FL01	**00** Stainless steel 1.4541 **01** Stainless steel 1.4571 **02** Steel C22.8 bare	**01** PN10/16/25/40	**03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40

Diameter DN50 to DN150

TYPE	MATERIAL	CONNECTION	SIZE
FL01	**00** Stainless steel 1.4541 **01** Stainless steel 1.4571 **02** Steel C22.8 bare	**01** PN10/16 **02** PN25/40	**08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

Diameter DN200 to DN600

TYPE	MATERIAL	CONNECTION	SIZE
FL01	**00** Stainless steel 1.4541 **01** Stainless steel 1.4571 **02** Steel C22.8 bare	**01** PN10 **02** PN16 **03** PN25 **04** PN40	**14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400 **19** DN450 **20** DN500 **21** DN600

FL02

DATASHEET
http://bit.ly/2GlgzBT

Plane welding flange acc. to DIN EN 1092-1 type 01, flat face type A

Diameter DN10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE
FL02	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16/25/40	**02** DN10 **03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40

Diameter DN50 to DN150

TYPE	MATERIAL	CONNECTION	SIZE
FL02	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16 **02** PN25/40	**08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

Diameter DN200 to DN400

TYPE	MATERIAL	CONNECTION	SIZE
FL02	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10 **02** PN16 **03** PN25 **04** PN40	**14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400

Comparison of the previous DIN Norm and the new Norm DIN EN 1092-1

New Type-No.	Description	Previous DIN-No.
01	Plane welding flange	2573 2576
02	Lapped flange for plain collar (type 32) or collar (type 33)	2641 2642 2655 2656
04	Lapped flange for weld neck collar (type 34)	2673
05	Blind flange	2527
11	Welding neck flange	2627 to 2638
13	Screwed flange	2566
32	Plain collar for type 02	2655 2656
33	Collar for type 02	2641 2642
34	Weld neck collar for type 04	2673

DATASHEET
http://bit.ly/2Uip8Co

Lapped flange acc. to DIN EN 1092-1 type 02, flat face type A

Diameter DN10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE
FL03	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16/25/40	**02** DN10 **03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40

Diameter DN50 to DN150

TYPE	MATERIAL	CONNECTION	SIZE
FL03	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16 **02** PN25/40	**08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

Diameter DN200 to DN400

TYPE	MATERIAL	CONNECTION	SIZE
FL03	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10 **02** PN16 **03** PN25 **04** PN40	**14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400

<table>
<tr><th colspan="2">Comparison of flat face type in accordance with previous DIN-Norm and new DIN EN 1092-1</th></tr>
<tr><td>Form A</td><td rowspan="2">Form A</td></tr>
<tr><td>Form B</td></tr>
<tr><td>Form C</td><td rowspan="2">Form B1</td></tr>
<tr><td>Form D</td></tr>
<tr><td>Form E</td><td>Form B2</td></tr>
<tr><td>Form F</td><td>Form C</td></tr>
<tr><td>Form N</td><td>Form D</td></tr>
<tr><td>Vorm V 13</td><td>Form E</td></tr>
<tr><td>Form R 13</td><td>Form F</td></tr>
<tr><td>Form R 14</td><td>Form G</td></tr>
<tr><td>Form V 14</td><td>Form H</td></tr>
</table>

FL04

DATASHEET
http://bit.ly/2Xg4LHO

Lapped flange acc. to DIN EN 1092-1 type 04, flat face type A

Diameter DN 10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE
FL04	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16/25/40	**02** DN10 **03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40

Diameter DN50 to DN150

TYPE	MATERIAL	CONNECTION	SIZE
FL04	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16 **02** PN25/40	**08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

Diameter DN200 to DN400

TYPE	MATERIAL	CONNECTION	SIZE
FL04	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10 **02** PN16 **03** PN25 **04** PN40	**14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400

Notes

FL05

DATASHEET
http://bit.ly/2UlPfbv

Blind flange acc. to DIN EN 1092-1 type 05, flat face type A

Diameter DN10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE
FL05	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16/25/40	**02** DN10 **03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40

Diameter DN50 to DN150

TYPE	MATERIAL	CONNECTION	SIZE
FL05	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10/16 **02** PN25/40	**08** DN50 **09** DN65 **10** DN80 **11** DN100 **12** DN125 **13** DN150

Diameter DN200 to DN400

TYPE	MATERIAL	CONNECTION	SIZE
FL05	**00** Stainless steel 1.4541 **02** Steel C22.8 bare	**01** PN10 **02** PN16 **03** PN25 **04** PN40	**14** DN200 **15** DN250 **16** DN300 **17** DN350 **18** DN400

FL06

DATASHEET
http://bit.ly/2XdRwaw

Screwed flange acc. to DIN EN 1092-1 type 13, flat face type B1

Diameter DN10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE / PIPE THREAD
FL06	**00** Stainless steel 1.4571 **01** Stainless steel 1.4541 **02** Steel C22.8 bare **03** Steel C22.8 electrogalvanized	**01** PN16/40	**02** DN10 | 3/8“ **03** DN15 | 1/2“ **04** DN20 | 3/4“ **05** DN25 | 1“ **06** DN32 | 1 1/4“ **07** DN40 | 1 1/2“

Diameter DN50 to DN100

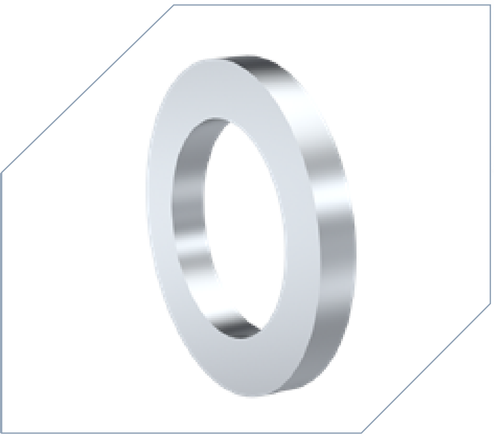
TYPE	MATERIAL	CONNECTION	SIZE / PIPE THREAD
FL06	**00** Stainless steel 1.4571 **01** Stainless steel 1.4541 **02** Steel C22.8 bare **03** Steel C22.8 electrogalvanized	**02** PN16 **04** PN40	**08** DN50 | 2“ **09** DN65 | 2 1/2“ **10** DN80 | 3“ **11** DN100 | 4“

This is how the nieruf article number system works

Our article number **PK02010005** consists of :

TYPE	VERSION	SEAL	SIZE
PK02	**00** double acting **01** single acting	**00** PTFE	**03** 1/2“ **04** 3/4“ **05** 1“ **06** 1 1/4“ **07** 1 1/2“ **08** 2“
PK02	**01**	**00**	**05**

FL07



DATASHEET
http://bit.ly/2IGCdTG

Further diameter on request

Plain collar acc. to DIN EN 1092-1 type 32, flat face type A

Diameter DN 10 to DN40

TYPE	MATERIAL	CONNECTION	SIZE
FL07	**02** Steel C22.8 bare	**01** PN10/16/25/40	**02** DN10 **03** DN15 **04** DN20 **05** DN25 **06** DN32 **07** DN40

Diameter DN50 to DN80

TYPE	MATERIAL	CONNECTION	SIZE
FL07	**02** Steel C22.8 bare	**01** PN10/16	**08** DN50 **09** DN65 **10** DN80

FL08

Collar based on DIN 2642

Type : FL08
Material : Stainless steel 1.4571
Norm : Based on DIN 2642

DN	D	S2	S1	ARTICLE CODE	WEIGHT
	in mm	in mm	in mm	1.4571	in kg
15	21,3	3,0	2,0	FL08010330	0,040
20	26,9	3,0	2,0	FL08010430	0,070
25	33,7	3,0	2,0	FL08010530	0,100
25	33,7	3,5	2,6	FL08010535	0,120
32	42,4	3,0	2,0	FL08010630	0,130
32	42,4	3,5	2,6	FL08010635	0,130
40	48,3	3,0	2,0	FL08010730	0,160
40	48,3	3,5	2,6	FL08010735	0,180
40	483,	4,0	3,0	FL08010740	0,180
50	60,3	2,5	2,0	FL08010825	0,200
50	60,3	3,5	2,6	FL08010835	0,260
50	60,3	4,0	3,0	FL08010840	0,260
65	76,1	2,5	2,0	FL08010925	0,260
65	76,1	3,5	2,6	FL08010935	0,310
65	76,1	4,0	3,0	FL08010940	0,360
80	88,9	2,5	2,0	FL08011025	0,330
80	88,9	3,5	2,6	FL08011035	0,390
80	88,9	4,0	3,0	FL08011040	0,450
100	114,3	2,5	2,0	FL08011125	0,390
100	114,3	3,5	2,6	FL08011135	0,420
100	114,3	4,0	3,0	FL08011140	0,530
125	139,7	2,5	2,0	FL08011225	0,450
125	139,7	3,0	2,5	FL08011230	0,540
125	139,7	3,5	3,0	FL08011235	0,630
150	168,3	2,5	2,0	FL08011325	0,600
150	168,3	3,0	2,6	FL08011330	0,720
150	168,3	3,5	3,0	FL08011335	0,840
200	219,1	2,5	2,0	FL08011425	0,590
200	219,1	3,0	2,6	FL08011430	0,808
200	219,1	4,0	3,0	FL08011440	0,830
250	273,0	3,0	2,7	FL08011530	1,680
300	323,9	3,0	2,7	FL08011630	1,500

THREADED FITTINGS

Technical information about threads

Our threaded fittings are manufactured as standard with a thread in accordance with **DIN EN 10226-1**. Threads of this standard are conical on the outside (R-thread) and cylindrical on the inside (Rp-thread).

Our nipples are manufactured with a thread in accordance with **ISO 228-1**. Threads of this standard are cylindrical on the inside and outside (G-thread).

Our **NPT** fittings are manufactured with a thread in accordance with ANSI B1.20.1. Threads of this standard are conical on the inside and outside.

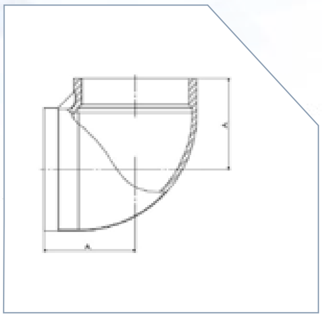
Combinations of G- and R-threaded connections:
Combinations of G- and R-threads are possible but only in the form of a cylindrical G-female thread with a tapered R-male thread.

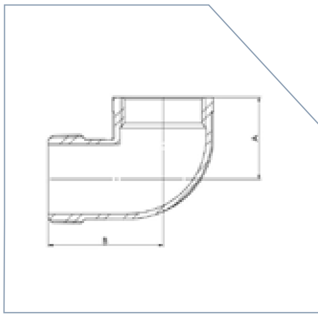
Pressure recommendation:
We recommend a maximum pressure of 20 bar for our thread fittings at a temperature of +20°C.

Abstract of thread table

Code letter	Description	Norm	Application	Area
G	Cylindrical pipe thread for connections where the seal is not made on the thread	DIN EN ISO 228-1	**Male thread** for tubes, tube connections and valves	Europe
			Female thread for tubes, tube connections and valves	
RP	Cylindrical pipe thread for connections where the seal is made on the thread	DIN EN 10226-1	**Female thread** for threaded tubes and fittings	
		DIN 3858	**Female thread** for pipe couplings	
R	Tapered pipe thread for connections where the seal is made on the thread	DIN EN 10226-1	**Male thread** for threaded tubes and fittings	
		DIN 3858	**Male thread** for threaded tubes and fittings	
NPT	Tapered pipe thread, only for low pressure and low temperature variation self-sealing	ANSI B1.20.1	**Female and male thread** for pipe couplings	USA
NPTF	Tapered pipe thread, self-sealing	ANSI B1.20.3	**Female and male thread** for pipe couplings	

GF01-0





GF01-0

Angle 90°

Type : GF01-0
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

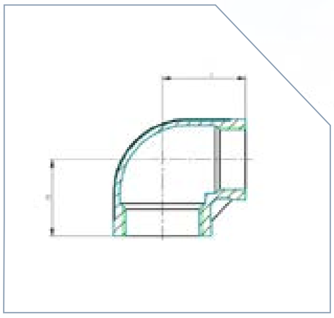
SIZE	A	WEIGHT	ARTICLE CODE
Rp	in mm	in kg	
1/8“	17,0	0,022	GF01000100
1/4“	19,0	0,036	GF01000101
3/8“	22,0	0,052	GF01000102
1/2“	24,0	0,061	GF01000103
3/4“	27,5	0,085	GF01000104
1“	33,0	0,145	GF01000105
1 1/4“	40,0	0,218	GF01000106
1 1/2“	43,0	0,286	GF01000107
2“	52,0	0,480	GF01000108
2 1/2“	65,0	0,770	GF01000109
3“	78,0	1,418	GF01000110
4“	93,0	2,662	GF01000111

Angle 90° Female x Male

Type : GF01-0
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread x Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	A	B	WEIGHT	ARTICLE CODE
Rp x R	in mm	in mm	in kg	
1/8“	16,0	24,0	0,017	GF01001100
1/4“	19,0	28,5	0,023	GF01001101
3/8“	20,0	32,0	0,045	GF01001102
1/2“	22,0	35,5	0,061	GF01001103
3/4“	27,5	41,0	0,091	GF01001104
1“	30,5	47,5	0,147	GF01001105
1 1/4“	37,9	55,0	0,249	GF01001106
1 1/2“	41,0	59,0	0,297	GF01001107
2“	51,5	73,0	0,553	GF01001108
2 1/2“	63,0	87,0	0,979	GF01001109
3“	74,0	102,0	1,422	GF01001110
4“	97,0	122,0	2,750	GF01001111

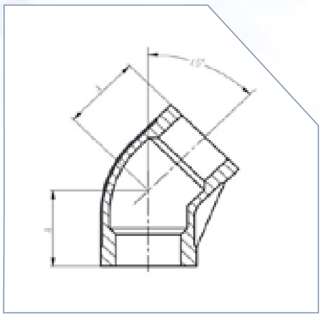
GF01-0

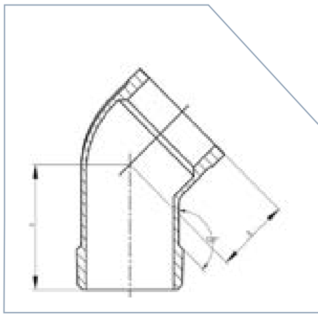


Angle 90°, reduced

Type : GF01-0
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	I	R	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
3/8" x 1/4"	22,0	19,0	0,040	GF01002100
1/2" x 3/8"	26,0	22,0	0,062	GF01002101
3/4" x 3/8"	28,0	28,0	0,079	GF01002102
3/4" x 1/2"	30,0	28,0	0,089	GF01002103
1" x 1/2"	32,0	30,0	0,102	GF01002104
1" x 3/4"	33,0	30,5	0,121	GF01002105
1 1/4" x 3/4"	36,0	33,0	0,182	GF01002106
1 1/4" x 1"	38,5	36,0	0,191	GF01002107
1 1/2" x 1"	45,0	40,0	0,292	GF01002108
1 1/2" x 1 1/4"	43,0	40,0	0,260	GF01002109
2" x 1 1/4"	54,0	48,0	0,520	GF01002110
2" x 1 1/2"	52,0	48,0	0,510	GF01002111





GF01-0

Angle 45°

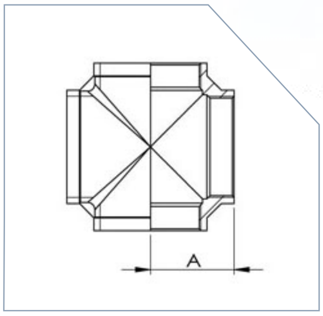
Type : GF01-0
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

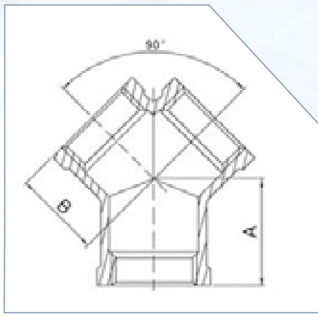
SIZE	A	WEIGHT	ARTICLE CODE
Rp	in mm	in kg	
1/8“	17,0	0,017	GF01000000
1/4“	18,0	0,042	GF01000001
3/8“	20,0	0,059	GF01000002
1/2“	22,0	0,064	GF01000003
3/4“	25,0	0,088	GF01000004
1“	28,0	0,110	GF01000005
1 1/4“	32,0	0,215	GF01000006
1 1/2“	35,0	0,271	GF01000007
2“	42,0	0,444	GF01000008
2 1/2“	48,0	0,750	GF01000009
3“	52,0	1,060	GF01000010
4“	62,0	1,790	GF01000011

Angle 45° Female x Male

Type : GF01-0
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread x Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	A	B	WEIGHT	ARTICLE CODE
Rp x R	in mm	in mm	in kg	
1/4“	28,0	16,0	0,030	GF01001001
3/8“	30,0	18,0	0,045	GF01001002
1/2“	32,0	20,0	0,060	GF01001003
3/4“	37,0	230	0,085	GF01001004
1“	43,0	27,0	0,137	GF01001005
1 1/4“	50,0	30,0	0,202	GF01001006
1 1/2“	57,0	33,0	0,338	GF01001007
2“	65,0	42,0	0,576	GF01001008
2 1/2“	75,0	49,0	0,815	GF01001009
3“	79,0	60,0	1,010	GF01001010





Cross fitting

Type : GF01-1
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

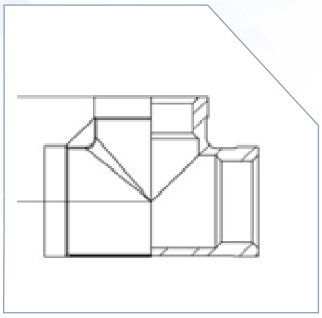
SIZE	A	WEIGHT	ARTICLE CODE
Rp	in mm	in kg	
1/8“	17,0	0,029	GF01101100
1/4“	19,0	0,052	GF01101101
3/8“	23,0	0,086	GF01101102
1/2“	25,0	0,113	GF01101103
3/4“	27,5	0,140	GF01101104
1“	33,0	0,242	GF01101105
1 1/4“	40,0	0,396	GF01101106
1 1/2“	43,0	0,430	GF01101107
2“	52,0	0,759	GF01101108
2 1/2“	68,0	1,335	GF01101109
3“	80,0	2,220	GF01101110
4“	93,0	3,475	GF01101111

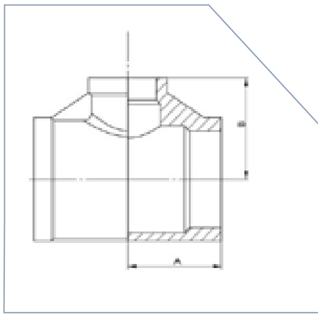
Y-fitting

Type : GF01-1
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	A	B	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
1/4“	20,0	18,0	0,080	GF01103201
3/8“	25,0	20,0	0,110	GF01103202
1/2“	30,0	25,0	0,119	GF01103203
3/4“	35,0	28,0	0,165	GF01103204
1“	41,0	33,0	0,304	GF01103205
1 1/4“	50,0	45,0	0,425	GF01103206
1 1/2“	52,0	46,0	0,570	GF01103207
2“	62,0	52,0	1,045	GF01103208

GF01-1





GF01-1

T-fitting

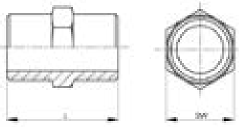
Type : GF01-1
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

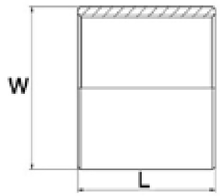
SIZE	A	WEIGHT	ARTICLE CODE
R	in mm	in kg	
1/8“	17,0	0,031	GF01100100
1/4“	19,0	0,049	GF01100101
3/8“	22,0	0,065	GF01100102
1/2“	25,0	0,080	GF01100103
3/4“	27,5	0,113	GF01100104
1“	33,0	0,185	GF01100105
1 1/4“	40,0	0,268	GF01100106
1 1/2“	43,0	0,367	GF01100107
2“	52,0	0,584	GF01100108
2 1/2“	65,0	1,015	GF01100109
3“	78,0	1,640	GF01100110
4“	93,0	2,575	GF01100111

T-fitting, reduced

Type : GF01-1
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	A	B	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
3/8“ x 1/4“	20,0	22,0	0,058	GF01102102.1
1/2“ x 3/8“	23,0	23,5	0,075	GF01102103.1
3/4“ x 3/8“	25,0	27,0	0,113	GF01102104.1
3/4“ x 1/2“	27,5	29,5	0,121	GF01102104.2
1“ x 1/2“	31,0	34,0	0,165	GF01102105.1
1“ x 3/4“	34,0	35,0	0,192	GF01102105.2
1 1/4“ x 1/2“	29,0	36,5	0,393	GF01102106.1
1 1/4“ x 3/4“	31,5	38,5	0,367	GF01102106.2
1 1/4“ x 1“	37,0	38,0	0,330	GF01102106.3
1 1/2“ x 1/2“	29,5	39,0	0,372	GF01102107.1
1 1/2“ x 3/4“	32,0	39,0	0,268	GF01102107.2
1 1/2“ x 1“	40,5	44,0	0,246	GF01102107.3
1 1/2“ x 1 1/4“	42,0	42,0	0,262	GF01102107.4
2“ x 3/4“	35,0	45,0	0,584	GF01102108.1
2“ x 1“	36,5	46,0	0,390	GF01102108.2
2“ x 1 1/4“	45,5	48,0	0,520	GF01102108.3
2“ x 1 1/2“	46,0	49,5	0,510	GF01102108.4





GF01-3

Double nipple (6-kt., ab 1" 8-kt.)

Type : GF01-3
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

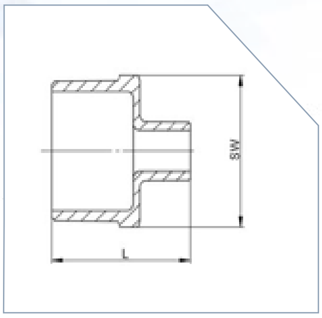
SIZE	L	SW	WEIGHT	ARTICLE CODE
R	in mm	in mm	in kg	
1/8"	25,0	10,8	0,008	GF01300000
1/4"	29,0	14,5	0,013	GF01300001
3/8"	29,5	18,0	0,022	GF01300002
1/2"	35,0	22,0	0,030	GF01300003
3/4"	39,0	27,5	0,048	GF01300004
1"	44,0	34,0	0,066	GF01300005
1 1/4"	49,5	43,0	0,112	GF01300006
1 1/2"	49,5	49,5	0,130	GF01300007
2"	58,5	61,5	0,219	GF01300008
2 1/2"	64,0	77,0	0,395	GF01300009
3"	76,0	90,0	0,509	GF01300010
4"	86,5	116,0	0,890	GF01300011

Screw connection

Type : GF01-3
Material : Stainless steel AISI 316 L (V4A)
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	W	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
1/8"	17,0	15,2	0,010	GF01302000
1/4"	25,0	18,2	0,030	GF01302001
3/8"	26,0	21,3	0,035	GF01302002
1/2"	34,0	25,2	0,050	GF01302003
3/4"	36,0	30,5	0,080	GF01302004
1"	43,0	37,2	0,100	GF01302005
1 1/4"	48,0	46,7	0,160	GF01302006
1 1/2"	48,0	52,8	0,185	GF01302007
2"	56,0	65,5	0,320	GF01302008
2 1/2"	65,0	81,9	0,470	GF01302009
3"	71,0	95,4	0,650	GF01302010
4"	83,0	122,4	1,670	GF01302011

GF01-2

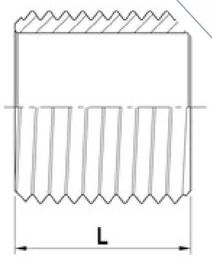


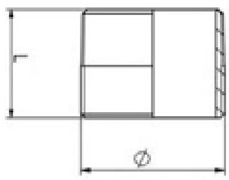
Reducing nipple (hex., starting 1“ oct.)

Type :	GF01-2
Material :	Stainless steel 1.4408 (AISI 316) V4A
Connection :	Male thread
Thread :	In accordance with DIN EN 10226-1
Pressure :	Maximum 20 bar at +20°C

SIZE	L	SW	WEIGHT	ARTICLE CODE
R	in mm	in mm	in kg	
1/4“ x 1/8“	26,5	14,5	0,012	GF01200000
3/8“ x 1/8“	29,0	18,0	0,016	GF01200001
3/8“ x 1/4“	29,5	18,0	0,018	GF01200002
1/2“ x 1/8“	32,0	21,5	0,026	GF01200003
1/2“ x 1/4“	32,0	21,5	0,026	GF01200004
1/2“ x 3/8“	32,5	21,5	0,027	GF01200005
3/4“ x 1/4“	34,5	27,5	0,042	GF01200006
3/4“ x 3/8“	35,0	27,5	0,044	GF01200007
3/4“ x 1/2“	37,0	27,5	0,046	GF01200008
1“ x 3/8“	38,0	34,5	0,064	GF01200009
1“ x 1/2“	39,5	34,5	0,067	GF01200010
1“ x 3/4“	41,5	34,5	0,069	GF01200011
1 1/4“ x 1/2“	44,0	42,5	0,098	GF01200012
1 1/4“ x 3/4“	45,5	42,5	0,109	GF01200013
1 1/4“ x 1“	47,0	42,5	0,105	GF01200014

SIZE	L	SW	WEIGHT	ARTICLE CODE
R	in mm	in mm	in kg	
1 1/2“ x 3/4“	45,5	49,5	0,134	GF01200015
1 1/2“ x 1“	48,5	49,5	0,135	GF01200016
1 1/2“ x 1 1/4“	50,0	49,5	0,138	GF01200017
2“ x 1/2“	42,5	61,5	0,208	GF01200017.1
2“ x 3/4“	50,0	61,5	0,213	GF01200017.2
2“ x 1“	52,0	61,5	0,210	GF01200018
2“ x 1 1/4“	54,5	61,5	0,218	GF01200019
2“ x 1 1/2“	54,5	61,5	0,384	GF01200020
2 1/2“ x 1 1/4“	56,5	76,5	0,396	GF01200021
2 1/2“ x 1 1/2“	57,5	76,5	0,384	GF01200022
2 1/2“ x 2“	61,5	76,5	0,374	GF01200023
3“ x 2“	68,5	90,0	0,535	GF01200024
3“ x 2 1/2“	70,5	91,0	0,547	GF01200025
4“ x 2“	75,0	116,0	0,920	GF01200026
4“ x 2 1/2“	76,0	116,0	1,330	GF01200027
4“ x 3“	82,5	116,0	0,930	GF01200028





Nipple

Type : GF01-5
Material : Stainless steel AISI 316 L V4A
Connection : Male thread
Thread : In accordance with ISO 228-1
Pressure : Maximum 20 bar at +20°C

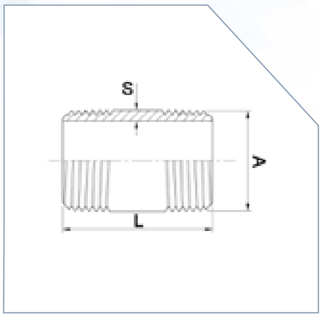
SIZE	L	WEIGHT	ARTICLE CODE
G	in mm	in kg	
1/8“	16,0	0,010	GF01501000
1/4“	18,0	0,010	GF01501001
3/8“	22,0	0,010	GF01501002
1/2“	25,0	0,030	GF01501003
3/4“	30,0	0,030	GF01501004
1“	35,0	0,050	GF01501005
1 1/4“	38,0	0,060	GF01501006
1 1/2“	38,0	0,090	GF01501007
2“	45,0	0,140	GF01501008
2 1/2“	55,0	0,200	GF01501009
3“	60,0	0,300	GF01501010
4“	70,0	0,650	GF01501011

Weld-on nipple

Type : GF01-7
Material : Stainless steel AISI 316 L V4A
Connection : Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	ø	WEIGHT	ARTICLE CODE
R	in mm	in mm	in kg	
1/8“	30,0	10,2	0,010	GF01700000
1/4“	30,0	13,5	0,020	GF01700001
3/8“	30,0	17,2	0,030	GF01700002
1/2“	35,0	21,3	0,040	GF01700003
3/4“	40,0	26,9	0,060	GF01700004
1“	40,0	33,7	0,080	GF01700005
1 1/4“	50,0	42,4	0,130	GF01700006
1 1/2“	50,0	48,3	0,150	GF01700007
2“	50,0	60,3	0,195	GF01700008
2 1/2“	60,0	76,1	0,295	GF01700009
3“	70,0	88,9	0,490	GF01700010
4“	80,0	114,3	0,725	GF01700011

GF01-5



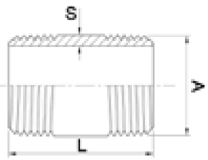
Pipe nipple

Type : GF01-5
Material : Stainless steel 1.4571 V4A
Connection : Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	A	S	WEIGHT	ARTICLE CODE
R	in mm	in mm	in mm	in kg	
1/8"	40,0	10,2	2,0	0,015	GF01500000
1/8"	50,0	10,2	2,0	0,015	GF01500000.1
1/8"	60,0	10,2	2,0	0,019	GF01500000.2
1/8"	80,0	10,2	2,0	0,025	GF01500000.3
1/8"	120,0	10,2	2,0	0,035	GF01500000.4
1/8"	150,0	10,2	2,0	0,049	GF01500000.5
1/8"	200,0	10,2	2,0	0,065	GF01500000.6
1/4"	30,0	13,5	2,3	0,015	GF01500001.0
1/4"	40,0	13,5	2,3	0,020	GF01500001
1/4"	60,0	13,5	2,3	0,035	GF01500001.1
1/4"	80,0	13,5	2,3	0,045	GF01500001.2
1/4"	100,0	13,5	2,3	0,060	GF01500001.3
1/4"	120,0	13,5	2,3	0,079	GF01500001.4
1/4"	150,0	13,5	2,3	0,090	GF01500001.5
1/4"	200,0	13,5	2,3	0,110	GF01500001.6
3/8"	30,0	17,2	2,3	0,018	GF01500002.0
3/8"	40,0	17,2	2,3	0,025	GF01500002
3/8"	60,0	17,2	2,3	0,040	GF01500002.1
3/8"	80,0	17,2	2,3	0,060	GF01500002.2
3/8"	100,0	17,2	2,3	0,075	GF01500002.3
3/8"	120,0	17,2	2,3	0,103	GF01500002.4
3/8"	150,0	17,2	2,3	0,120	GF01500002.5
3/8"	200,0	17,2	2,3	0,165	GF01500002.6
1/2"	40,0	21,3	2,6	0,035	GF01500003.0
1/2"	60,0	21,3	2,6	0,060	GF01500003
1/2"	80,0	21,3	2,6	0,075	GF01500003.1

SIZE	L	A	S	WEIGHT	ARTICLE CODE
R	in mm	in mm	in mm	in kg	
1/2"	100,0	21,3	2,6	0,100	GF01500003.2
1/2"	120,0	21,3	2,6	0,130	GF01500003.6
1/2"	150,0	21,3	2,6	0,160	GF01500003.3
1/2"	180,0	21,3	2,6	0,195	GF01500003.7
1/2"	200,0	21,3	2,6	0,220	GF01500003.4
1/2"	250,0	21,3	2,6	0,274	GF01500003.8
1/2"	300,0	21,3	2,6	0,335	GF01500003.5
3/4"	40,0	26,9	2,6	0,040	GF01500004.0
3/4"	60,0	26,9	2,6	0,070	GF01500004
3/4"	80,0	26,9	2,6	0,100	GF01500004.1
3/4"	100,0	26,9	2,6	0,125	GF01500004.2
3/4"	120,0	26,9	2,6	0,160	GF01500004.3
3/4"	150,0	26,9	2,6	0,205	GF01500004.4
3/4"	180,0	26,9	2,6	0,285	GF01500004.5
3/4"	200,0	26,9	2,6	0,280	GF01500004.6
3/4"	300,0	26,9	2,6	0,475	GF01500004.7
1"	30,0	33,7	3,2	0,040	GF01500005.0
1"	40,0	33,7	3,2	0,055	GF01500005.1
1"	60,0	33,7	3,2	0,105	GF01500005
1"	80,0	33,7	3,2	0,160	GF01500005.2
1"	100,0	33,7	3,2	0,193	GF01500005.3
1"	120,0	33,7	3,2	0,250	GF01500005.4
1"	150,0	33,7	3,2	0,315	GF01500005.5
1"	180,0	33,7	3,2	0,380	GF01500005.6
1"	200,0	33,7	3,2	0,435	GF01500005.7
1"	250,0	33,7	3,2	0,545	GF01500005.8

GF01-5



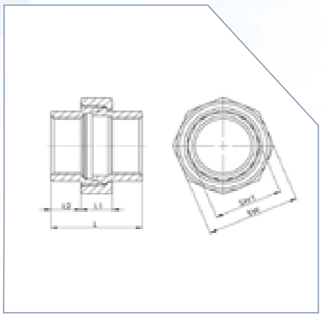
Pipe nipple

Type : GF01-5
Material : Stainless steel 1.4571 V4A
Connection : Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	A	S	WEIGHT	ARTICLE CODE
R	in mm	in mm	in mm	in kg	
1"	300,0	33,7	3,2	0,733	GF01500005.9
1 1/4"	40,0	42,4	3,2	0,070	GF01500006.0
1 1/4"	50,0	42,4	3,2	0,090	GF01500006.1
1 1/4"	60,0	42,4	3,2	0,127	GF01500006.2
1 1/4"	80,0	42,4	3,2	0,195	GF01500006
1 1/4"	100,0	42,4	3,2	0,250	GF01500006.3
1 1/4"	120,0	42,4	3,2	0,295	GF01500006.4
1 1/4"	150,0	42,4	3,2	0,375	GF01500006.5
1 1/4"	200,0	42,4	3,2	0,560	GF01500006.6
1 1/4"	250,0	42,4	3,2	0,660	GF01500006.7
1 1/4"	300,0	42,4	3,2	0,800	GF01500006.8
1 1/2"	40,0	48,3	3,2	0,110	GF01500007.0
1 1/2"	60,0	48,3	3,2	0,165	GF01500007.1
1 1/2"	80,0	48,3	3,2	0,220	GF01500007
1 1/2"	100,0	48,3	3,2	0,280	GF01500007.2
1 1/2"	120,0	48,3	3,2	0,340	GF01500007.3
1 1/2"	150,0	48,3	3,2	0,455	GF01500007.4
1 1/2"	200,0	48,3	3,2	0,610	GF01500007.5
1 1/2"	250,0	48,3	3,2	0,785	GF01500007.6
1 1/2"	300,0	48,3	3,2	0,945	GF01500007.7
2"	40,0	60,3	3,6	0,110	GF01500008.0
2"	50,0	60,3	3,6	0,130	GF01500008.1
2"	60,0	60,3	3,6	0,230	GF01500008.2
2"	80,0	60,3	3,6	0,460	GF01500008.3
2"	100,0	60,3	3,6	0,385	GF01500008
2"	120,0	60,3	3,6	0,490	GF01500008.4

SIZE	L	A	S	WEIGHT	ARTICLE CODE
R	in mm	in mm	in mm	in kg	
2"	150,0	60,3	3,6	0,635	GF01500008.5
2"	180,0	60,3	3,6	0,780	GF01500008.6
2"	200,0	60,3	3,6	0,875	GF01500008.7
2"	250,0	60,3	3,6	1,130	GF01500008.8
2"	300,0	60,3	3,6	1,533	GF01500008.9
2 1/2"	60,0	76,1	3,6	0,279	GF01500009.0
2 1/2"	80,0	76,1	3,6	0,335	GF01500009.1
2 1/2"	100,0	76,1	3,6	0,465	GF01500009
2 1/2"	120,0	76,1	3,6	0,590	GF01500009.2
2 1/2"	150,0	76,1	3,6	0,780	GF01500009.3
2 1/2"	200,0	76,1	3,6	1,100	GF01500009.4
2 1/2"	300,0	76,1	3,6	1,730	GF01500009.5
3"	60,0	88,9	4,0	0,290	GF01500010.0
3"	80,0	88,9	4,0	0,440	GF01500010.1
3"	100,0	88,9	4,0	0,615	GF01500010.2
3"	120,0	88,9	4,0	0,795	GF01500010
3"	150,0	88,9	4,0	1,035	GF01500010.3
3"	200,0	88,9	4,0	1,460	GF01500010.4
3"	250,0	88,9	4,0	1,900	GF01500010.5
3"	300,0	88,9	4,0	2,400	GF01500010.6
4"	80,0	114,3	4,0	0,884	GF01500011.0
4"	100,0	114,3	4,0	1,360	GF01500011.1
4"	120,0	114,3	4,0	0,920	GF01500011
4"	150,0	114,3	4,0	1,360	GF01500011.2
4"	200,0	114,3	4,0	2,210	GF01500011.3
4"	300,0	114,3	4,0	3,314	GF01500011.4

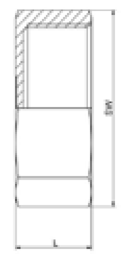
GF01-4

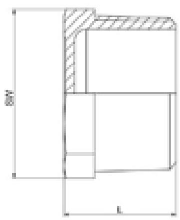


Coupler, flat seat (PTFE-sealing included)

Type : GF01-4
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	L1	L2	SW	SW1	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in mm	in mm	in mm	in kg	
1/8“	30,0	12,0	9,0	26,5	16,5	0,060	GF01400000
1/4“	30,0	12,0	9,0	26,5	16,5	0,060	GF01400001
3/8“	32,5	12,5	10,0	31,0	20,5	0,070	GF01400002
1/2“	38,0	14,0	12,0	35,0	24,0	0,098	GF01400003
3/4“	40,0	14,0	13,0	43,0	30,0	0,141	GF01400004
1“	49,0	17,0	16,0	50,0	37,0	0,222	GF01400005
1 1/4“	50,0	17,0	16,5	60,5	45,0	0,290	GF01400006
1 1/2“	56,0	19,0	18,5	67,0	52,0	0,388	GF01400007
2“	62,0	21,0	20,5	81,0	64,0	0,601	GF01400008
2 1/2“	68,0	23,0	22,5	104,5	82,5	1,065	GF01400009
3“	77,0	26,0	25,5	121,5	96,0	1,550	GF01400010
4“	83,0	30,0	26,5	150,0	126,0	2,765	GF01400011





Lid

Type : GF01-3
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

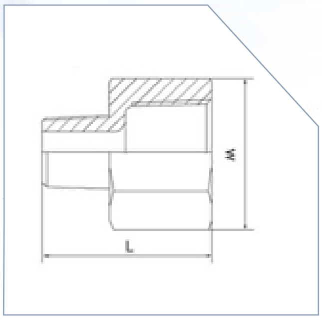
SIZE	L	SW	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
1/8“	15,0	14,0	0,011	GF01303000
1/4“	18,0	16,5	0,019	GF01303001
3/8“	20,0	20,0	0,024	GF01303002
1/2“	18,5	24,0	0,040	GF01303003
3/4“	19,0	29,5	0,060	GF01303004
1“	22,0	37,0	0,081	GF01303005
1 1/4“	25,0	45,5	0,117	GF01303006
1 1/2“	25,0	52,0	0,164	GF01303007
2“	30,0	64,0	0,294	GF01303008
2 1/2“	34,5	80,5	0,439	GF01303009
3“	38,5	94,0	0,630	GF01303010
4“	45,5	119,5	1,095	GF01303011

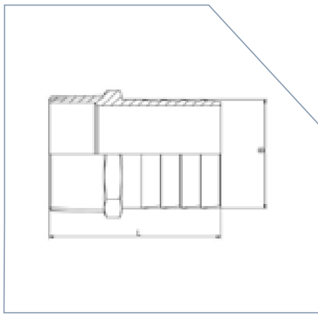
Plug (hex., starting 1“ oct.)

Type : GF01-3
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	SW	WEIGHT	ARTICLE CODE
R	in mm	in mm	in kg	
1/8“	15,5	12,8	0,011	GF01301000
1/4“	15,5	15,8	0,011	GF01301001
3/8“	17,0	18,0	0,015	GF01301002
1/2“	20,0	22,0	0,023	GF01301003
3/4“	22,0	28,0	0,039	GF01301004
1“	24,0	35,0	0,055	GF01301005
1 1/4“	27,5	43,5	0,115	GF01301006
1 1/2“	28,0	49,5	0,117	GF01301007
2“	32,5	62,0	0,196	GF01301008
2 1/2“	36,0	77,5	0,362	GF01301009
3“	41,5	90,0	0,482	GF01301010
4“	45,0	117,0	0,925	GF01301011

GF01-8





ST01

Socket nipple

Type : GF01-8
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread x Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

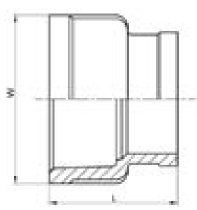
SIZE	W	L	WEIGHT	ARTICLE CODE
Rp x R	in mm	in mm	in kg	
3/8" x 1/4"	20,5	27,5	0,030	GF01800002
3/8" x 3/8"	20,5	27,5	0,034	GF01800003
1/2" x 3/8"	25,5	31,5	0,050	GF01800004
1/2" x 1/2"	25,5	33,5	0,052	GF01800005
3/4" x 1/2"	30,5	34,5	0,070	GF01800006
3/4" x 3/4"	30,5	37,0	0,073	GF01800007
1" x 3/4"	38,0	40,0	0,110	GF01800008
1" x 1"	38,0	41,5	0,112	GF01800009
1 1/4" x 3/4"	47,5	46,0	0,186	GF01800010
1 1/4" x 1"	47,5	48,0	0,190	GF01800011
1 1/2" x 1"	52,5	49,0	0,212	GF01800012
1 1/2" x 1 1/4"	52,5	50,5	0,220	GF01800013
1 1/2" x 1 1/2"	52,5	52,5	0,240	GF01800014
2" x 1 1/4"	65,5	53,0	0,345	GF01800015
2" x 1 1/2"	65,5	54,5	0,310	GF01800016
2" x 2"	65,5	59,5	0,312	GF01800017

Hose nozzle (hex., starting 1“ oct.)

Type : ST01
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Male thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	B	WEIGHT	ARTICLE CODE
R	in mm	in mm	in kg	
1/8“	35,0	7,0	0,011	ST01000000
1/4“	41,0	9,0	0,019	ST01000001
3/8“	42,5	11,0	0,025	ST01000002
1/2“	51,0	12,7	0,039	ST01000003
3/4“	57,3	19,0	0,068	ST01000004
1“	63,5	25,4	0,120	ST01000005
1 1/4“	66,0	31,8	0,152	ST01000006
1 1/2“	78,0	38,1	0,243	ST01000007
2“	84,0	50,8	0,341	ST01000008
2 1/2“	102,0	63,5	0,553	ST01000009
3“	115,0	76,1	0,825	ST01000010
4“	120,0	102,0	1,450	ST01000011

GF01-9

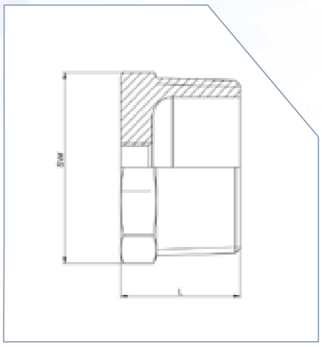


Reducing socket (hex., starting 1" oct.)

Type : GF01-9
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	W	L	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
1/4" x 1/8"	20,0	27,5	0.0200	GF01900000
3/8" x 1/8"	20,0	27,5	0.0260	GF01900001
3/8" x 1/4"	20,0	29,0	0.0260	GF01900002
1/2" x 1/4"	25,0	29,5	0.0360	GF01900003
1/2" x 3/8"	25,0	31,5	0.0420	GF01900004
3/4" x 3/8"	30,0	31,5	0.0490	GF01900005
3/4" x 1/2"	30,0	33,5	0.0600	GF01900006
1" x 3/8"	38,0	35,5	0.0910	GF01900007
1" x 1/2"	38,0	36,5	0.0920	GF01900008
1" x 3/4"	38,0	37,5	0.0930	GF01900009
1 1/4" x 1/2"	47,0	40,5	0.1950	GF01900010
1 1/4" x 3/4"	47,0	41,5	0.1300	GF01900011
1 1/4" x 1"	47,0	43,0	0.1460	GF01900012
1 1/2" x 1/2"	53,5	42,5	0.1800	GF01900013
1 1/2" x 3/4"	53,5	43,5	0.1840	GF01900014
1 1/2" x 1"	53,5	45,0	0.1920	GF01900015
1 1/2" x 1 1/4"	53,5	47,5	0.1980	GF01900016

SIZE	W	L	WEIGHT	ARTICLE CODE
Rp	in mm	in mm	in kg	
2" x 1/2"	66,0	45,0	0.2940	GF01900017
2" x 3/4"	66,0	46,0	0.2940	GF01900018
2" x 1"	66,0	49,0	0.2860	GF01900019
2" x 1 1/4"	66,0	50,0	0.3116	GF01900020
2" x 1 1/2"	66,0	51,5	0.2940	GF01900021
2 1/2" x 1"	83,0	55,5	0.5200	GF01900022
2 1/2" x 1 1/4"	83,0	56,5	0.4800	GF01900023
2 1/2" x 1 1/2"	83,0	58,0	0.4200	GF01900024
2 1/2" x 2"	83,0	63,5	0.4980	GF01900025
3" x 1"	97,7	59,5	0.6350	GF01900026
3" x 1 1/2"	97,7	62,5	0.6260	GF01900027
3" x 2"	97,7	68,0	0.6760	GF01900028
3" x 2 1/2"	97,7	71,5	0.6530	GF01900029
4" x 2"	124,0	72,5	1.2600	GF01900030
4" x 2 1/2"	124,0	76,0	1.2400	GF01900031
4" x 3"	124,0	77,0	1.0500	GF01900032

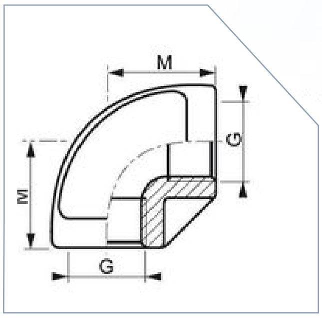


Reducing fitting (hex., starting 1“ oct.)

Type : GF01-6
Material : Stainless steel 1.4408 (AISI 316) V4A
Connection : Male thread x Female thread
Thread : In accordance with DIN EN 10226-1
Pressure : Maximum 20 bar at +20°C

SIZE	L	SW	WEIGHT	ARTICLE CODE
R x Rp	in mm	in mm	in kg	
1/4“ x 1/8“	15,5	15,8	0,008	GF01600000
3/8“ x 1/8“	17,0	18,0	0,015	GF01600001
3/8“ x 1/4“	17,0	18,0	0,013	GF01600002
1/2“ x 1/8“	20,0	22,0	0,027	GF01600003
1/2“ x 1/4“	20,0	22,0	0,025	GF01600004
1/2“ x 3/8“	20,0	22,0	0,020	GF01600005
3/4“ x 1/4“	22,0	28,0	0,054	GF01600006
3/4“ x 3/8“	22,0	28,0	0,044	GF01600007
3/4“ x 1/2“	22,0	28,0	0,037	GF01600008
1“ x 1/4“	24,0	35,0	0,080	GF01600009.1
1“ x 3/8“	24,0	35,0	0,071	GF01600009
1“ x 1/2“	24,0	35,0	0,069	GF01600010
1“ x 3/4“	24,0	35,0	0,052	GF01600011
1 1/4“ x 3/8“	27,5	43,5	0,150	GF01600011.1
1 1/4“ x 1/2“	27,5	43,5	0,129	GF01600012
1 1/4“ x 3/4“	27,5	43,5	0,131	GF01600013
1 1/4“ x 1“	27,5	43,5	0,150	GF01600014
1 1/2“ x 1/4“	28,0	49,5	0,209	GF01600014.1
1 1/2“ x 1/2“	28,0	49,5	0,180	GF01600015.1
1 1/2“ x 3/4“	28,0	49,5	0,160	GF01600015

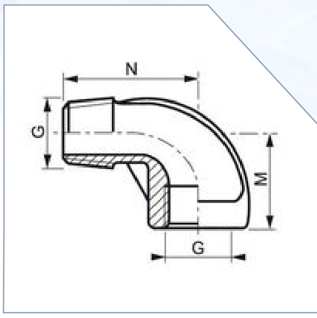
SIZE	L	SW	WEIGHT	ARTICLE CODE
R x Rp	in mm	in mm	in kg	
1 1/2“ x 1“	28,0	49,5	0,166	GF01600016
1 1/2“ x 1 1/4“	28,0	49,5	0,175	GF01600017
2“ x 1/4“	32,5	62,0	0,187	GF01600017.1
2“ x 1/2“	32,5	62,0	0,315	GF01600018.1
2“ x 3/4“	32,5	62,0	0,318	GF01600018.2
2“ x 1“	32,5	62,0	0,313	GF01600018
2“ x 1 1/4“	32,5	62,0	0,245	GF01600019
2“ x 1 1/2“	32,5	62,0	0,195	GF01600020
2 1/2“ x 1“	36,0	77,5	0,543	GF01600022
2 1/2“ x 1 1/4“	36,0	77,5	0,516	GF01600023
2 1/2“ x 1 1/2“	36,0	77,5	0,500	GF01600024
2 1/2“ x 2“	36,0	77,5	0,377	GF01600025
3“ x 1 1/2“	41,5	90,0	0,765	GF01600026
3“ x 2“	41,5	90,0	0,683	GF01600021
3“ x 2 1/2“	41,5	90,0	0,435	GF01600027
4“ x 1 1/2“	45,0	117,0	1,670	GF01600028
4“ x 2“	45,0	117,0	1,440	GF01600029
4“ x 2 1/2“	45,0	117,0	1,185	GF01600030
4“ x 3“	45,0	117,0	0,978	GF01600031



Angle 90°

Type :	GF04-0
Material :	Stainless steel 316
Connection :	Female thread
Thread :	NPT in accordance with ANSI B1.20.1
Pressure :	Maximum 20 bar at +20°C

SIZE	M	WEIGHT	ARTICLE CODE
NPT	in mm	in kg	
1/4“	20	0,038	GF04000101
3/8“	24	0,054	GF04000102
1/2“	28	0,062	GF04000103
3/4“	32	0,086	GF04000104
1“	38	0,148	GF04000105
1 1/4“	45	0,240	GF04000106
1 1/2“	50	0,300	GF04000107
2“	58	0,465	GF04000108
2 1/2“	70	0,880	GF04000109
3“	78	1,300	GF04000110

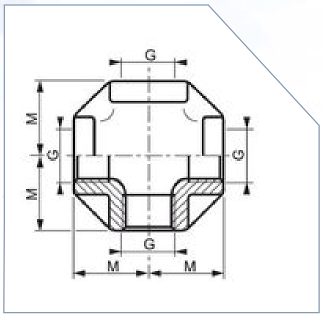


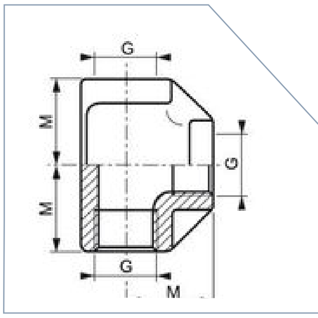
Angle 90° Female x Male

Type :	GF04-0
Material :	Stainless steel 316
Connection :	Female thread x Male thread
Thread :	NPT in accordance with ANSI B1.20.1
Pressure :	Maximum 20 bar at +20°C

SIZE	M	N	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in kg	
1/4“	20	28	0,036	GF04001101
3/8“	24	36	0,047	GF04001102
1/2“	28	40	0,065	GF04001103
3/4“	32	46	0,100	GF04001104
1“	38	54	0,160	GF04001105
1 1/4“	45	62	0,270	GF04001106
1 1/2“	50	69	0,330	GF04001107
2“	58	80	0,534	GF04001108
2 1/2“	70	98	1,100	GF04001109
3“	78	112	1,360	GF04001110

GF04-0





GF04-1

Cross fitting

Type : GF04-1
Material : Stainless steel 316
Connection : Female thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

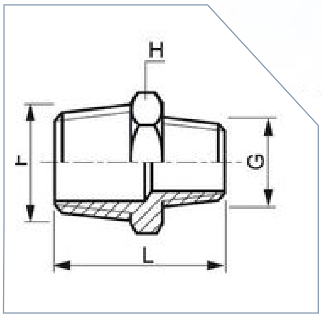
SIZE	A	WEIGHT	ARTICLE CODE
NPT	in mm	in kg	
1/8“	17	0,041	GF04101100
1/4“	20	0,061	GF04101101
3/8“	24	0,090	GF04101102
1/2“	28	0,105	GF04101103
3/4“	32	0,140	GF04101104
1“	38	0,230	GF04101105
1 1/4“	45	0,376	GF04101106
1 1/2“	50	0,468	GF04101107
2“	58	0,760	GF04101108

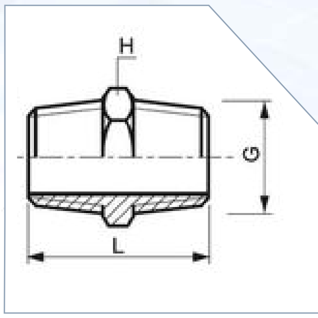
T-fitting

Type : GF04-1
Material : Stainless steel 316
Connection : Female thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

SIZE	M	WEIGHT	ARTICLE CODE
NPT	in mm	in kg	
1/8“	17	0,033	GF04100100
1/4“	20	0,050	GF04100101
3/8“	24	0,069	GF04100102
1/2“	28	0,085	GF04100103
3/4“	32	0,121	GF04100104
1“	38	0,185	GF04100105
1 1/4“	45	0,310	GF04100106
1 1/2“	50	0,385	GF04100107
2“	58	0,630	GF04100108

GF04-2





GF04-3

Reducing nipple

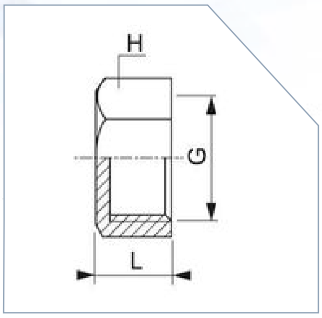
Type : GF04-2
Material : Stainless steel 316L
Connection : Male thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

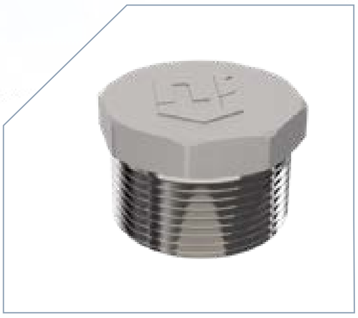
SIZE	L	H	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in kg	
1/4“ x 1/8“	27	14	0,010	GF04200000
3/8“ x 1/8“	29	19	0,025	GF04200001
3/8“ x 1/4“	30	19	0,025	GF04200002
1/2“ x 1/4“	32	23	0,040	GF04200004
1/2“ x 3/8“	33	23	0,040	GF04200005
3/4“ x 3/8“	38	27	0,070	GF04200007
3/4“ x 1/2“	39	27	0,070	GF04200008
1“ x 1/2“	43	36	0,130	GF04200010
1“ x 3/4“	47	36	0,130	GF04200011
1 1/4“ x 1“	52	46	0,280	GF04200014
2“ x 1 1/2“	57	60	0,500	GF04200020

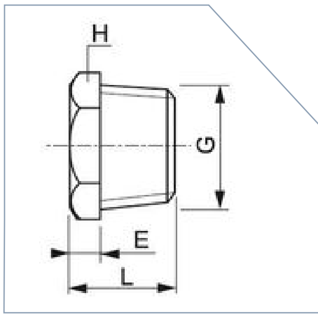
Double nipple (hex.)

Type : GF04-3
Material : Stainless steel 316
Connection : Male thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

SIZE	L	W	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in kg	
1/8“	25	12	0,007	GF04300000
1/4“	33	15	0,016	GF04300001
1/2“	42	23	0,041	GF04300003
3/4“	48	29	0,062	GF04300004
1“	52	36	0,099	GF04300005
1 1/4“	58	46	0,156	GF04300006
1 1/2“	58	52	0,203	GF04300007
2“	64	63	0,350	GF04300008







GF04-3

Lid (hex.)

Type : GF04-3
Material : Stainless steel 316L
Connection : Female thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

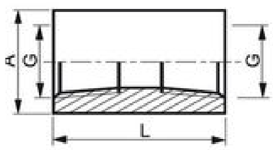
SIZE	L	H	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in kg	
1/4“	12	17	0,010	GF04303001
3/8“	16	21	0,020	GF04303002
1/2“	18	24	0,025	GF04303003
3/4“	18	30	0,050	GF04303004
1“	22	38	0,075	GF04303005
1 1/4“	22	46	0,110	GF04303006
1 1/2“	26	55	0,220	GF04303007
2“	26	65	0,260	GF04303008
2 1/2“	29	84	0,520	GF04303009
3“	34	95	0,670	GF04303010
4“	40	124	1,270	GF04303011

Plug (6-kt.)

Type : GF04-3
Material : Stainless steel 316L
Connection : Male thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

SIZE	L	E	H	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in mm	in kg	
1/8“	13	5	10	0,010	GF04301000
1/4“	16	5	14	0,015	GF04301001
3/8“	16	5	19	0,030	GF04301002
1/2“	21	7	23	0,055	GF04301003
3/4“	23	7	27	0,095	GF04301004
1“	25	7	36	0,165	GF04301005
1 1/4“	28	8	46	0,310	GF04301006
1 1/2“	32	10	50	0,440	GF04301007
2“	36	11	60	0,795	GF04301008
2 1/2“	37	12	78	1,340	GF04301009
3“	42	12	92	2,115	GF04301010

GF04-3

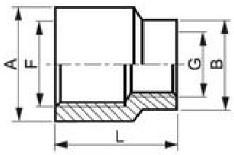


Screw connection

Type : GF04-3
Material : Stainless steel 316L
Connection : Female thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

SIZE	A	L	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in kg	
1/8“	14	25	0,016	GF04302000
1/4“	18	28	0,029	GF04302001
3/8“	22	32	0,037	GF04302002
1/2“	25	36	0,070	GF04302003
3/4“	32	42	0,100	GF04302004
1“	38	45	0,162	GF04302005
1 1/4“	50	55	0,239	GF04302006
1 1/2“	55	55	0,273	GF04302007
2“	65	60	0,444	GF04302008

GF04-9

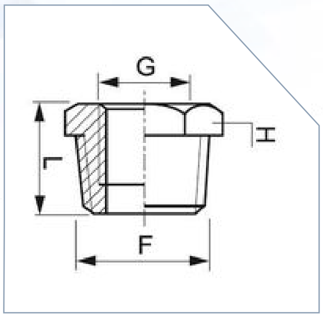


Reducing socket

Type : GF04-9
Material : Stainless steel 316L
Connection : Female thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

SIZE	L	A	B	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in mm	in kg	
1/4" x 1/8"	27	18	14	0,025	GF04900000
3/8" x 1/4"	30	22	17	0,045	GF04900002
1/2" x 1/4"	36	25	17	0,070	GF04900003
1/2" x 3/8"	36	25	21	0,070	GF04900004
3/4" x 3/8"	38	32	21	0,120	GF04900005
3/4" x 1/2"	38	32	27	0,110	GF04900006
1" x 1/2"	43	40	27	0,150	GF04900008
1" x 3/4"	43	40	33	0,150	GF04900009
2" x 1"	57	70	42	0,670	GF04900019
2" x 1 1/4"	57	70	55	0,650	GF04900020
2" x 1 1/2"	57	70	60	0,650	GF04900021

GF04-6



Reducing fitting

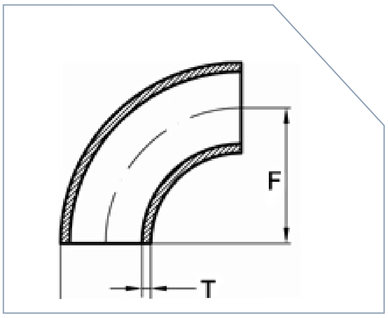
Type : GF04-6
Material : Stainless steel 316L
Connection : Male thread x Female thread
Thread : NPT in accordance with ANSI B1.20.1
Pressure : Maximum 20 bar at +20°C

SIZE	W	L	WEIGHT	ARTICLE CODE
NPT	in mm	in mm	in kg	
1/4“ x 1/8“	13	14	0,010	GF04600000
3/8“ x 1/8“	15	19	0,020	GF04600001
3/8“ x 1/4“	15	19	0,020	GF04600002
1/2“ x 1/8“	18	23	0,045	GF04600003
1/2“ x 1/4“	18	23	0,035	GF04600004
1/2“ x 3/8“	18	23	0,025	GF04600005
3/4“ x 1/4“	22	27	0,070	GF04600006
3/4“ x 3/8“	22	27	0,060	GF04600007
3/4“ x 1/2“	22	27	0,040	GF04600008
1“ x 1/4“	23	36	0,165	GF04600009.1
1“ x 3/4“	23	36	0,075	GF04600011
1 1/4“ x 3/4“	27	46	0,220	GF04600013
1 1/4“ x 1“	27	46	0,135	GF04600014
1 1/2“ x 3/4“	30	50	0,340	GF04600015
1 1/2“ x 1“	30	50	0,265	GF04600016
1 1/2“ x 1 1/4“	30	50	0,130	GF04600017
2“ x 1 1/2“	34	60	0,350	GF04600020

PIPE FITTINGS

Welded elbows 90°

Type : RF01-0 | RF03-0
Material : Stainless steel 1.4571 | 1.4541
Norm : DIN 2605 / EN 10253-4, Type A
Version : Type 3 - r ≈ 1,5d

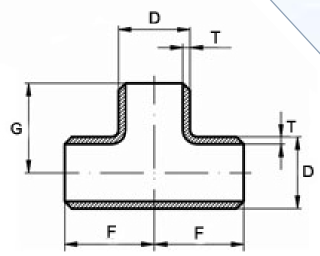


D*		T*	F	ARTICLE CODE		WEIGHT
DN	in mm	in mm	in mm	1.4571	1.4541	in kg
15	21,3	2,0	28,0	RF01010301	RF03010301	0,04
20	26,9	2,0	29,0	RF01010401	RF03010401	0,06
25	33,7	2,0	38,0	RF01010501	RF03010501	0,10
32	42,4	2,0	48,0	RF01010601	RF03010601	0,16
40	48,3	2,0	57,0	RF01010701	RF03010701	0,22
50	60,3	2,0	76,0	RF01010801	RF03010801	0,34
65	76,1	2,0	95,0	RF01010901	RF03010901	0,62
80	88,9	2,0	114,0	RF01011001	RF03011001	0,81
100	114,3	2,0	152,0	RF01011101	RF03011101	1,30
100	114,3	2,6	152,0	RF01011103	-	1,50
100	114,3	3,0	152,0	RF01011105	RF03011105	2,00
125	139,7	2,0	190,0	RF01011201	RF03011201	2,06
125	139,7	3,0	190,0	RF01011205	RF03011205	3,08
150	168,3	2,6	229,0	RF01011303	RF03011303	3,75
150	168,3	3,0	229,0	RF01011305	RF03011305	4,47
200	219,1	3,0	305,0	RF01011405	RF03011405	7,80
250	273,0	3,0	381,0	RF01011505	RF03011505	12,14
300	323,9	3,0	457,0	RF01011605	RF03011605	17,31

* Further sizes / thickness on request

Welded tees

Type : RF01-1 | RF03-1
Material : Stainless steel 1.4571 | 1.4541
Norm : DIN 2615 / EN 10253-4, Type A



D*		T*	F	G	ARTICLE CODE		WEIGHT
DN	in mm	in mm	in mm	in mm	1.4571	1.4541	in kg
15	21,3	2,0	25,0	25,0	RF01100301	RF03100301	0,09
20	26,9	2,0	29,0	29,0	RF01100401	RF03100401	0,12
25	33,7	2,0	38,0	38,0	RF01100501	RF03100501	0,20
32	42,4	2,0	48,0	48,0	RF01100601	RF03100601	0,25
40	48,3	2,0	57,0	57,0	RF01100701	RF03100701	0,46
50	60,3	2,0	64,0	64,0	RF01100801	RF03100801	0,57
65	76,1	2,0	76,0	76,0	RF01100901	RF03100901	0,94
80	88,9	2,0	86,0	86,0	RF01101001	RF03101001	1,25
100	114,3	2,6	105,0	105,0	RF01101103	RF03101103	2,25
100	114,3	3,0	105,0	105,0	RF01101105	RF03101105	2,67
125	139,7	2,6	124,0	124,0	RF01101203	RF03101203	3,30
125	139,7	3,0	124,0	124,0	RF01101205	RF03101205	4,40
150	168,3	2,6	143,0	143,0	RF01101303	RF03101303	4,00
150	168,3	3,0	143,0	143,0	RF01101305	RF03101305	6,00
200	219,1	3,0	178,0	178,0	RF01101405	RF03101405	8,90
250	273,0	3,0	216,0	216,0	RF01101505	RF03101505	11,00
300	323,9	3,0	254,0	254,0	RF01101605	RF03101605	19,00

* Further sizes / thickness on request

THREE-PART BALL VALVES
can be found on page 39

ANGLE SEAT VALVES
can be found starting page 107

PIPE FITTINGS
can be found starting page 191

FLOW METERS
can be found starting page 132

RESISTANCE CHECK
Informations about chemical resistances
can be found on www.nieruf.com/Resistance

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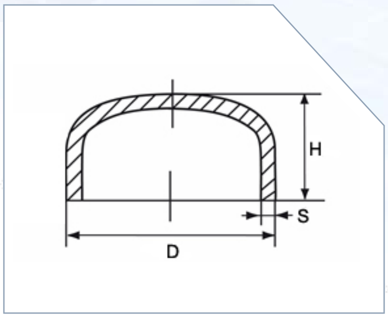
Caps

Type : RF02
Material : Stainless steel 1.4571 | 1.4541
Norm : Analog to DIN 28011



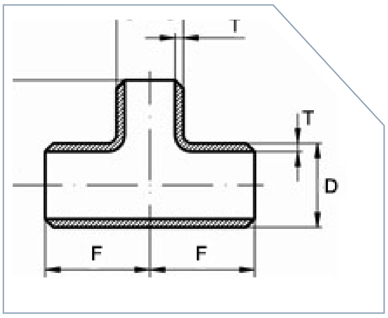
D*		S*	H	ARTICLE CODE		WEIGHT
DN	in mm	in mm	in mm	1.4571	1.4541	in kg
15	21,3	2,0	12,0	RF02010301	RF02020301	0,02
20	26,9	2,0	15,0	RF02010401	RF02020401	0,02
25	33,7	2,0	14,0	RF02010501	RF02020501	0,05
32	42,4	2,0	16,0	RF02010601	RF02020601	0,04
40	48,3	2,0	20,0	RF02010701	RF02020701	0,05
50	60,3	2,0	27,0	RF02010801	RF02020801	0,11
65	76,1	2,0	27,0	RF02010901	RF02020901	0,13
80	88,9	2,0	35,0	RF02011001	RF02021001	0,17
100	114,3	2,0	36,0	RF02011101	-	0,26
125	139,7	3,0	47,0	RF02011205	RF02021205	0,60
150	168,3	3,0	45,0	RF02011305	RF02021305	0,85
200	219,1	3,0	48,0	RF02011405	RF02021405	1,40
250	273,0	3,0	70,0	RF02011505	RF02021505	2,10

* Further sizes / thickness on request

RF01 | RF03

Welded tees, reduced

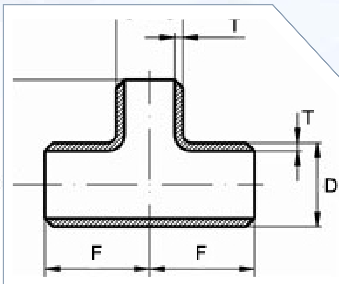
Type : RF01-2 | RF03-2
Material : Stainless steel 1.4571 | 1.4541
Norm : DIN 2615 / EN 10253-4, Type A



D*		T*	D1*		T*	F	G	ARTICLE CODE		WEIGHT
DN	in mm	in mm	DN	in mm	in mm	in mm	in mm	1.4571	1.4541	in kg
20	26,9	2,0	15	21,3	2,0	29,0	29,0	RF01200401.1	RF03200401.1	0,15
25	33,7	2,0	15	21,3	2,0	38,0	38,0	RF01200501.1	RF03200501.1	0,24
25	33,7	2,0	20	26,9	2,0	38,0	38,0	RF01200501.2	RF03200501.2	0,20
32	42,4	2,0	15	21,3	2,0	48,0	48,0	RF01200601.1	RF03200601.1	0,32
32	42,4	2,0	20	26,9	2,0	48,0	48,0	RF01200601.2	RF03200601.2	0,42
32	42,4	2,0	25	33,7	2,0	48,0	48,0	RF01200601.3	RF03200601.3	0,25
40	48,3	2,0	15	21,3	2,0	57,0	57,0	RF01200701.1	RF03200701.1	0,59
40	48,3	2,0	20	26,9	2,0	57,0	57,0	RF01200701.2	RF03200701.2	0,46
40	48,3	2,0	25	33,7	2,0	57,0	57,0	RF01200701.3	RF03200701.3	0,46
40	48,3	2,0	32	42,4	2,0	57,0	57,0	RF01200701.4	RF03200701.4	0,46
50	60,3	2,0	15	21,3	2,0	64,0	42,0	RF01200801.1	RF03200801.1	0,50
50	60,3	2,0	20	26,9	2,0	64,0	44,0	RF01200801.2	RF03200801.2	0,50
50	60,3	2,0	25	33,7	2,0	64,0	51,0	RF01200801.3	RF03200801.3	0,50
50	60,3	2,0	32	42,4	2,0	64,0	57,0	RF01200801.4	RF03200801.4	0,57
50	60,3	2,0	40	48,3	2,0	64,0	60,0	RF01200801.5	RF03200801.5	0,57
65	76,1	2,3	32	42,4	2,0	76,0	64,0	RF01200902.2	RF03200902.2	1,04
65	76,1	2,3	40	48,3	2,0	76,0	67,0	RF01200902.3	RF03200902.3	1,04
65	76,1	2,3	50	60,3	2,0	76,0	70,0	RF01200902.4	RF03200902.4	1,04
80	88,9	2,6	32	42,4	2,0	86,0	70,0	RF01201003.1	-	0,46
80	88,9	2,6	40	48,3	2,0	86,0	73,0	RF01201003.2	RF03201003.2	1,30
80	88,9	2,6	50	60,3	2,0	86,0	76,0	RF01201003.3	RF03201003.3	1,35
80	88,9	2,6	65	76,1	2,3	86,0	83,0	RF01201003.4	RF03201003.4	1,40

Welded tees, reduced

Type : RF01-2 | RF03-2
Material : Stainless steel 1.4571 | 1.4541
Norm : DIN 2615 / EN 10253-4, Type A



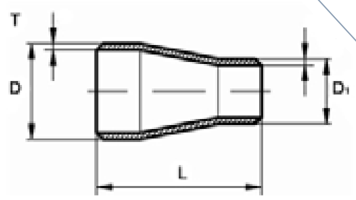
D*		T*	D1*		T*	F	G	ARTICLE CODE		WEIGHT
DN	in mm	in mm	DN	in mm	in mm	in mm	in mm	1.4571	1.4541	in kg
100	114,3	2,6	40	48,3	2,0	105,0	86,0	RF01201103.2	-	2,15
100	114,3	2,6	50	60,3	2,0	105,0	89,0	RF01201103.3	RF03201103.3	2,25
100	114,3	2,6	65	76,1	2,3	105,0	95,0	RF01201103.4	RF03201103.4	2,25
100	114,3	2,6	80	88,9	2,3	105,0	98,0	RF01201103.5	RF03201103.5	2,25
125	139,7	2,9	50	60,3	2,0	124,0	105,0	RF01201204.1	RF03201204.1	3,00
125	139,7	2,9	65	76,1	2,3	124,0	108,0	RF01201204.2	RF03201204.2	3,10
125	139,7	2,9	80	88,9	2,6	124,0	111,0	RF01201204.3	RF03201204.3	3,10
125	139,7	2,9	100	114,3	2,6	124,0	117,0	RF01201204.4	RF03201204.4	3,30
150	168,3	2,9	50	60,3	2,0	143,0	115,0	RF01201304.1	RF03201304.1	5,00
150	168,3	2,9	65	76,1	2,3	143,0	121,0	RF01201304.2	RF03201304.2	5,00
150	168,3	2,9	80	88,9	2,6	143,0	124,0	RF01201304.3	RF03201304.3	5,00
150	168,3	2,9	100	114,3	2,6	143,0	130,0	RF01201304.4	RF03201304.4	5,30
150	168,3	2,9	125	139,7	2,9	143,0	137,0	RF01201304.5	RF03201304.5	5,30
200	219,1	2,9	100	114,3	2,6	178,0	156,0	RF01201404.1	RF03201404.1	7,00
200	219,1	2,9	125	139,7	2,9	178,0	162,0	RF01201404.2	RF03201404.2	7,20
200	219,1	2,9	150	168,3	2,9	178,0	168,0	RF01201404.3	RF03201404.3	7,20
250	273,0	3,0	150	168,3	2,6	216,0	194,0	RF01201505.1	-	13,00
250	273,0	3,0	200	219,1	3,0	216,0	203,0	RF01201505.2	-	10,30
300	323,9	3,0	200	219,1	3,0	254,0	229,0	RF01201605.1	-	14,58
300	323,9	3,0	250	273,0	3,0	254,0	241,0	RF01201605.2	-	14,58

* Further sizes / thickness on request

RF01 | RF03

Welded reducers

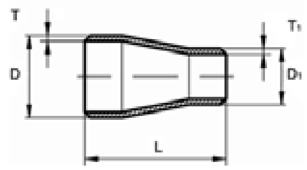
Type : RF01-3 | RF03-3
Material : Stainless steel 1.4571 | 1.4541
Design : Concentric
Norm : DIN 2616-2 / EN 10253-4, Type B



D*		T*	D1*		T*	L	ARTICLE CODE		WEIGHT
DN	in mm	in mm	DN	in mm	in mm	in mm	1.4571	1.4541	in kg
20	26,9	2,0	15	21,3	2,0	38,0	RF01300401.1	RF03300401.1	0,05
25	33,7	2,0	15	21,3	1,6	51,0	RF01300501.1	RF03300501.1	0,07
25	33,7	2,0	20	26,9	2,0	51,0	RF01300501.2	RF03300501.2	0,07
32	42,4	2,0	25	33,7	2,0	51,0	RF01300601.1	RF03300601.1	0,12
40	48,3	2,0	25	33,7	2,0	64,0	RF01300701.1	RF03300701.1	0,15
40	48,3	2,0	32	42,4	2,0	64,0	RF01300701.2	RF03300701.2	0,15
50	60,3	2,0	32	42,4	2,0	76,0	RF01300801.1	RF03300801.1	0,20
50	60,3	2,0	40	48,3	2,0	76,0	RF01300801.2	RF03300801.2	0,20
65	76,1	2,3	50	60,3	2,0	89,0	RF01300902.1	RF03300902.1	0,47
80	88,9	2,6	50	60,3	2,0	89,0	RF01301003.1	RF03301003.1	0,49
80	88,9	2,6	65	76,1	2,3	89,0	RF01301003.2	RF03301003.2	0,46
100	114,3	2,6	50	60,3	2,0	102,0	RF01301103.1	RF03301103.1	0,85
100	114,3	2,6	65	76,1	2,3	102,0	RF01301103.2	RF03301103.2	0,86
100	114,3	2,6	80	88,9	2,3	102,0	RF01301103.3	RF03301103.3	0,69
125	139,7	2,9	50	60,3	2,0	127,0	RF01301204.1	RF03301204.1	1,40
125	139,7	2,9	65	76,1	2,3	127,0	RF01301204.2	RF03301204.2	1,16
125	139,7	2,9	80	88,9	2,6	127,0	RF01301204.4	RF03301204.4	1,22
125	139,7	2,9	100	114,3	2,6	127,0	RF01301204.5	RF03301204.5	1,25

Welded reducers

Type : RF01-3 | RF03-3
Material : Stainless steel 1.4571 | 1.4541
Design : Concentric
Norm : DIN 2616-2 / EN 10253-4, Type B

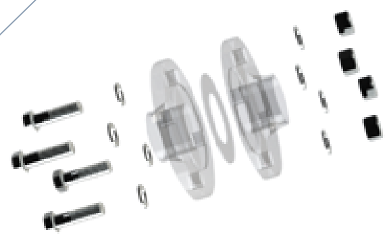


D*		T*	D1*		T*	L	ARTICLE CODE		WEIGHT
DN	in mm	in mm	DN	in mm	in mm	in mm	1.4571	1.4541	in kg
150	168,3	2,9	50	60,3	2,0	140,0	RF01301304.1	RF03301304.1	1,80
150	168,3	2,9	65	76,1	2,3	140,0	RF01301304.2	RF03301304.2	1,76
150	168,3	2,9	80	88,9	2,3	140,0	RF01301304.3	RF03301304.3	1,76
150	168,3	2,9	80	88,9	2,6	140,0	RF01301304.4	RF03301304.4	1,76
150	168,3	2,9	100	114,3	2,6	140,0	RF01301304.5	RF03301304.5	1,80
150	168,3	2,9	125	139,7	2,9	140,0	RF01301304.6	RF03301304.6	1,80
200	219,1	2,9	125	139,7	2,6	152,0	RF01301404.2	RF03301404.2	2,40
200	219,1	2,9	125	139,7	2,9	152,0	RF01301404.3	RF03301404.3	2,25
200	219,1	2,9	150	168,3	2,9	152,0	RF01301404.4	RF03301404.4	2,42
250	273,0	3,0	125	139,7	3,0	178,0	RF01301505.1	RF03301505.1	3,50
250	273,0	3,0	150	168,3	3,0	178,0	RF01301505.2	RF03301505.2	3,56
250	273,0	3,0	200	219,1	3,0	178,0	RF01301505.3	RF03301505.3	3,56

* Further sizes / thickness on request

JOINT SETS

VS01

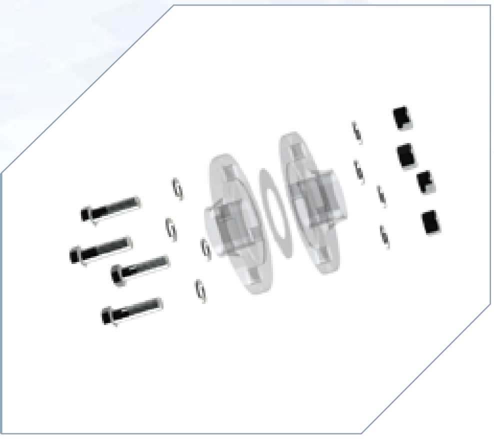


Joint set flange

Type : VS01
Application : Flange to flange
Material : Stainless steel | steel, zinc-plated
Components : Srews (DIN933) + nut (DIN934) + washers (DIN125)
Thread : Metric

DN	FLANGE	SCREW	NUT	WASHER	ARTICLE CODE	
					Stainless steel	Steel, zinc-plated
10	PN10/16/25/40	4x M12x50mm	4x M12	8x M12	VS01000102	VS01010102
15	PN10/16/25/40	4x M12x50mm	4x M12	8x M12	VS01000103	VS01010103
20	PN10/16/25/40	4x M12x55mm	4x M12	8x M12	VS01000104	VS01010104
25	PN10/16/25/40	4x M12x55mm	4x M12	8x M12	VS01000105	VS01010105
32	PN10/16/25/40	4x M16x60mm	4x M16	8x M16	VS01000106	VS01010106
40	PN10/16/25/40	4x M16x60mm	4x M16	8x M16	VS01000107	VS01010107
50	PN10/16/25/40	4x M16x60mm	4x M16	8x M16	VS01000108	VS01010108
65	PN10/16/25	4x M16x60mm	4x M16	8x M16	VS01000109	VS01010109
	PN40	4x M16x65mm	4x M16	8x M16	VS01000409	VS01010409
80	PN10/16/25	8x M16x60mm	8x M16	16x M16	VS01000110	VS01010110
	PN40	8x M16x70mm	8x M16	16x M16	VS01000410	VS01010410
100	PN10/16/25	8x M16x60mm	8x M16	16x M16	VS01000111	VS01010111
	PN40	8x M20x75mm	8x M20	16x M20	VS01000411	VS01010411
125	PN10/16/25	8x M16x65mm	8x M16	16x M16	VS01000112	VS01010112
	PN40	8x M24x80mm	8x M24	16x M24	VS01000412	VS01010412
150	PN10/16/25	8x M16x70mm	8x M16	16x M16	VS01000113	VS01010113
	PN40	8x M24x85mm	8X M24	16x M24	-	VS01010413
200	PN10	8x M20x75mm	8x M20	16x M20	VS01000114	VS01010114
	PN16	12x M20x75mm	12x M20	24x M20	VS01000214	VS01010214
	PN25	12x M24x95mm	12x M24	24x M24	-	VS01010314
	PN40	12x M27x110mm	12x M27	24x M27	VS01000414	VS01010414
250	PN10	12x M20x75mm	12x M20	24x M20	VS01000115	VS01010115
	PN16	12x M24x80mm	12x M24	24x M24	VS01000215	VS01010215
	PN40	12x M30x120mm	12x M30	24x M30	VS01000415	VS01010415
300	PN10	12x M20x75mm	12x M20	24x M20	VS01000116	VS01010116
	PN16	12x M24x85mm	12x M24	24x M24	-	VS01010216
	PN25	12x M27x110mm	12x M27	24x M27	VS01000316	VS01010316
	PN40	12x M30x130mm	12x M30	24x M30	-	VS01010416

VS02



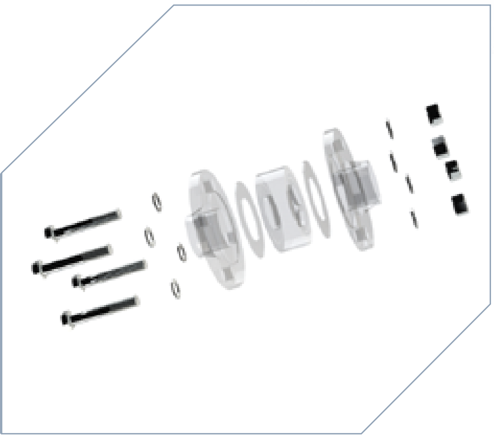
Joint set swing check valve

Type : VS02
Application : Swing check valves (type ZR01 to ZR04) to flange
Material : Stainless steel | steel, zinc-plated
Components : Srews (DIN933) + nut (DIN934) + washers (DIN125)
Thread : Metric

DN	FLANGE	SCREW	NUT	WASHER	ARTICLE CODE	
					Stainless steel	Steel, zinc-plated
32	PN10/16	4x M16x75mm	4x M16	8x M16	VS02000106	VS02010106
40	PN10/16	4x M16x75mm	4x M16	8x M16	VS02000107	VS02010107
50	PN10/16	4x M16x75mm	4x M16	8x M16	VS02000108	VS02010108
65	PN10/16	4x M16x75mm	4x M16	8x M16	VS02000109	VS02010109
80	PN10/16	8x M16x80mm	8x M16	16x M16	VS02000110	VS02010110
100	PN10/16	8x M16x80mm	8x M16	16x M16	VS02000111	VS02010111
125	PN10/16	8x M16x85mm	8x M16	16x M16	VS02000112	VS02010112
150	PN10/16	8x M20x90mm	8x M20	16x M20	VS02000113	VS02010113
200	PN10	8x M20x100mm	8x M20	16x M20	VS02000114	VS02010114
	PN16	12x M20x100mm	12x M20	24x M20	VS02000214	VS02010214
250	PN10	12x M20x110mm	12x M20	24x M20	VS02000115	VS02010115
300	PN10	12x M20x110mm	12x M20	24x M20	VS02000116	VS02010116

SWING CHECK VALVES
can be found starting page 85

VS05



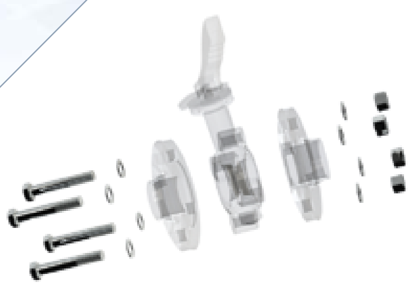
Joint set DISCO check valve

Type : VS05
Application : DISCO check valve (type RV01 and RV02) to flange
Material : Stainless steel | steel, zinc-plated
Components : Srews (DIN933) + nut (DIN934) + washers (DIN125)
Thread : Metric

DN	FLANGE	SCREW	NUT	WASHER	ARTICLE CODE	
					Stainless steel	Steel, zinc-plated
15	PN10/16/25/40	4x M12x70mm	4x M12	8x M12	VS05000103	VS05010103
20	PN10/16/25/40	4x M12x80mm	4x M12	8x M12	VS05000104	VS05010104
25	PN10/16/25/40	4x M12x80mm	4x M12	8x M12	VS05000105	VS05010105
32	PN10/16/25/40	4x M16x90mm	4x M16	8x M16	VS05000106	VS05010106
40	PN10/16/25/40	4x M16x95mm	4x M16	8x M16	VS05000107	VS05010107
50	PN10/16	4x M16x110mm	4x M16	8x M16	VS05000108	VS05010108
	PN25/40	4x M16x110mm	4x M16	8x M16	VS05000208	VS05010208
65	PN10/16	4x M16x110mm	4x M16	8x M16	VS05000109	VS05010109
	PN25/40	4x M16x120mm	4x M16	8x M16	VS05000209	VS05010209
80	PN10/16	8x M16x120mm	8x M16	16x M16	VS05000110	VS05010110
	PN25/40	8x M16x130mm	8x M16	16x M16	VS05000210	VS05010210
100	PN10/16	8x M16x130mm	8x M16	16x M16	VS05000111	VS05010111
	PN25/40	8x M20x140mm	8x M20	16x M20	VS05000211	VS05010211
125	PN25/40	8x M24x180mm	8x M24	16x M24	VS05000212	VS05010212
150	PN10/16	8x M20x180mm	8x M20	16x M20	VS05000113	VS05010113
	PN25/40	8x M24x240mm	8x M24	16x M24	VS05000213	VS05010213
200	PN10	8x M20x220mm	8x M20	16x M20	-	VS05010114
	PN16	12x M20x220mm	12x M20	24x M20	-	VS05010214
	PN25	12x M24x240mm	12x M24	24x M24	-	VS05010314
250	PN10	12x M20x230mm	12x M20	24x M20	-	VS05010115
	PN16	12x M24x240mm	12x M24	24x M24	-	VS05010215

DISCO CHECK VALVES
can be found on page 92

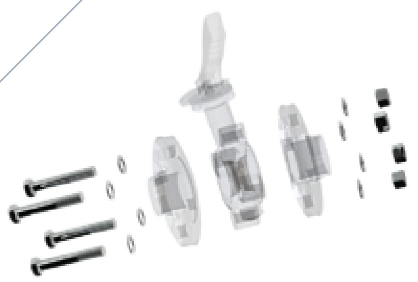
VS03



Joint set butterfly valve

Type : VS03
Application : Butterfly valve (type AK01, AK05, AK08, AK09 and AK10) to flange
Material : Steel, zinc-plated
Components : Srews (DIN933) + nut (DIN934) + washers (DIN125)
Thread : Metric

DN	FLANGE	SCREW	NUT	WASHER	ARTICLE CODE	
					Stainless steel	Steel, zinc-plated
25	PN6	4x M10x80mm	4x M10	8x M10	VS03000005	VS03010005
	PN10	4x M12x90mm	4x M12	8x M12	VS03000105	VS03010105
	PN16	4x S12x90mm	4x M12	8x M12	VS03000205	VS03010205
32	PN6	4x M12x80mm	4x M12	8x M12	VS03000006	VS03010006
	PN10	4x M16x90mm	4x M16	8x M16	VS03000106	VS03010106
	PN16	4x M16x90mm	4x M16	8x M16	VS03000206	VS03010206
40	PN6	4x M12x80mm	4x M12	8x M12	VS03000007	VS03010007
	PN10	4x M16x90mm	4x M16	8x M16	VS03000107	VS03010107
	PN16	4x M16x90mm	4x M16	8x M16	VS03000207	VS03010207
50	PN6	4x M12x90mm	4x M12	8x M12	VS03000008	VS03010008
	PN10	4x M16x100mm	4x M16	8x M16	VS03000108	VS03010108
	PN16	4x M16x100mm	4x M16	8x M16	VS03000208	VS03010208
65	PN6	4x M12x90mm	4x M12	8x M12	VS03000009	VS03010009
	PN10	4x M16x110mm	4x M16	8x M16	VS03000109	VS03010109
	PN16	4x M16x110mm	4x M16	8x M16	VS03000209	VS03010209
80	PN6	4x M16x100mm	4x M16	8x M16	VS03000010	VS03010010
	PN10	8x M16x110mm	8x M16	16x M16	VS03000110	VS03010110
	PN16	8x M16x110mm	8x M16	16x M16	VS03000210	VS03010210
100	PN6	4x M16x110mm	4x M16	8x M16	VS03000011	VS03010011
	PN10	8x M16x120mm	8x M16	16x M16	VS03000111	VS03010111
	PN16	8x M16x120mm	8x M16	16x M16	VS03000211	VS03010211
125	PN6	8x M16x120mm	8x M16	16x M16	VS03000012	VS03010012
	PN10	8x M16x130mm	8x M16	16x M16	VS03000112	VS03010112
	PN16	8x M16x130mm	8x M16	16x M16	VS03000212	VS03010212
150	PN6	8x M16x130mm	8x M16	16x M16	VS03000013	VS03010013
	PN10	8x M20x130mm	8x M20	16x M20	VS03000113	VS03010113
	PN16	8x M20x130mm	8x M20	16x M20	VS03000213	VS03010213



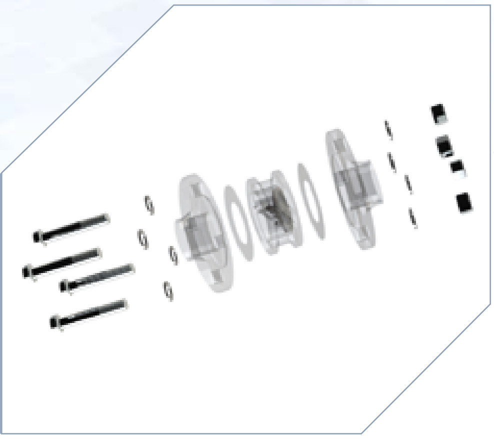
Joint set butterfly valve

Typ : VS03
Application : Butterfly valve (type AK01, AK05, AK08, AK09 and AK10) to flange
Material : Steel, zinc-plated
Components : Srews (DIN933) + nut (DIN934) + washers (DIN125)
Thread : Metric

DN	FLANGE	SCREW	NUT	WASHER	ARTICLE CODE	
					Stainless steel	Steel, zinc-plated
200	PN6	8x M16x130mm	8x M16	16x M16	VS03000014	VS03010014
	PN10	8x M20x140mm	8x M20	16x M20	VS03000114	VS03010114
	PN16	12x M20x140mm	12x M20	24x M20	VS03000214	VS03010214
250	PN6	12x M16x140mm	12x M16	24x M16	VS03000015	VS03010015
	PN10	12x M20x150mm	12x M20	24x M20	VS03000115	VS03010115
	PN16	12x M24x160mm	12x M24	24x M24	VS03000215	VS03010215
300	PN6	12x M20x160mm	12x M20	24x M20	VS03000016	VS03010016
	PN10	12x M20x160mm	12x M20	24x M20	VS03000116	VS03010116
	PN16	12x M24x170mm	12x M24	24x M24	-	VS03010216

BUTTERFLY VALVES
can be found starting page 12

VS06



Joint set dual plate check valve

Type : VS06
Application : Dual plate check valve (type DR01 to DR04) to flange
Material : Stainless steel | steel, zinc-plated
Components : Srews (DIN933) + nut (DIN934) + washers (DIN125)
Thread : Metric

DN	FLANGE	SCREW	NUT	WASHER	ARTICLE CODE	
					Stainless steel	Steel, zinc-plated
50	PN10/16	4x M16x110mm	4x M16	8x M16	VS06000108	VS06010108
65	PN10/16	4x M16x110mm	4x M16	8x M16	VS06000109	VS06010109
80	PN10/16	8x M16x130mm	8x M16	16x M16	VS06000110	VS06010110
100	PN10/16	8x M16x130mm	8x M16	16x M16	VS06000111	VS06010111
125	PN10/16	8x M16x140mm	8x M16	16x M16	VS06000112	VS06010112
150	PN10/16	8x M20x150mm	8x M20	16x M20	VS06000113	VS06010113
200	PN10	8x M20x170mm	8x M20	16x M20	VS06000114	VS06010114
	PN16	12x M20x170mm	12x M20	24x M20	VS06000214	VS06010214
250	PN10	12x M20x200mm	12x M20	24x M20	VS06000115	VS06010115
	PN16	12x M24x210mm	12x M24	24x M24	-	VS06010215
300	PN10	12x M20x200mm	12x M20	24x M20	VS06000116	VS06010116
	PN16	12x M24x210mm	12x M24	24x M24	-	VS06010216

DUAL PLATE CHECK VALVES
can be found starting page 88

Category	Type	Can be found on page	ATEX	Factory certificate EN 10204 - 2.2	Material test certificate 3.1	Test certificate EN 10204 - 3.1	Individual inspection EN 10204 - 3.2	TA-Luft	Fire-Safe	DVGW-G	DVGW-T	FDA	TÜV component test	Pressure Equipment Directive (CE)	EC-Type examination	ASME	EAC	DNV	Germanischer Lloyd - GL	Lloyds Register	ABS	Bureau Veritas	Russian Maritime Register of Shipping	Oil- and fat-free cleaning	Silicone-free	ACS product
Butterfly valve	AK01	13	-	A	A	A	A	-	-	S	S	-	-	S	S	-	A	-	A	A	-	A	A	-	-	S
Butterfly valve	AK02	13	-	A	A	A	A	-	-	S	S	-	-	S	S	-	A	-	A	A	-	A	A	-	-	S
Butterfly valve	AK03	14	-	A	A	A	A	-	-	-	S	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Butterfly valve	AK04	14	-	A	A	A	A	-	-	-	S	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Butterfly valve	AK05	13	-	S	A	-	-	-	-	-	-	-	-	S	-	-	-	-	-	S	-	-	-	-	-	-
Butterfly valve	AK06	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butterfly valve	AK07	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butterfly valve	AK08	14	H	K	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	S	-	A	-	-	-	-
Butterfly valve	AK09	15	H	K	-	A	-	-	-	-	-	A^3	-	S	-	-	-	-	-	S	-	-	-	-	-	-
Butterfly valve	AK10	15	H	K	-	A	-	-	-	-	-	A^3	-	S	-	-	-	-	-	S	-	-	-	-	-	-
Globe valve	AV01	20	-	A	A	A	A	S	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Globe valve	AV02	20	-	A	A	A	A	S	-	S	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Globe valve	AV03	21	-	A	A	A	A	S	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Globe valve	AV04	21	-	A	A	A	A	S	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Pressure reducing valve	DM01	26	H	A	A	A^2	A^2	-	-	-	S	A^3	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM02	26	H	A	A	A^2	A^2	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM03	26	H	A	A	A^2	A^2	-	-	-	S	A^3	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM04	26	H	A	A	A^2	A^2	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM05	32	H	A	A	A^2	A^2	-	-	-	S	A^3	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM06	32	H	A	A	A^2	A^2	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM07	32	H	A	A	A^2	A^2	-	-	-	S	A^3	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM08	32	H	A	A	A^2	A^2	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A^3	-	A
Pressure reducing valve	DM09	27	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM10	27	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM11	33	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM12	28	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM13	33	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM14	29	H	A	A	A^2	A^2	-	-	-	-	A^3	-	S	-	-	A	A	A	A	A	A	A	A^3	-	-
Pressure reducing valve	DM15	30	H	A	A	A^2	A^2	-	-	-	-	A^3	-	S	-	-	A	-	-	A	A	A	A	A^3	-	-
Pressure reducing valve	DM16	34	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM17	28	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM18	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pressure reducing valve	DM19	28	H	A	A	A	A	-	-	-	-	S	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Pressure reducing valve	DM20	33	H	A	A	A	A	-	-	-	-	S	-	S	-	-	-	-	-	-	-	-	-	A^3	-	-
Ball valve	EK01	50	-	A	-	-	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	A	-	-
Ball valve	EK02	50	-	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	A	-	-
Ball valve	EK04	51	-	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	EK05	51	-	A	A	A	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	EK06	52	-	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	EK07	52	-	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-

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Ball valve	FK01	45	H	A	A	A	A	S	-	S	-	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	FK02	45	H	A	A	A	A	S	-	S	-	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	FK03	47	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	FK04	47	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	FK05	46	H	A	A	A	A	S	S	S	S	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	FK06	46	-	K	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Ball valve	FK07	48	H	A	A	A	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	FK08	49	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	FK09	49	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	FK11	48	-	K	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Ball valve	FK12	45	H	A	A	A	A	S	S	S	-	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	GK01	37	H	A	-	-	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	GK02	37	H	A	-	-	A	-	-	S	S	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	GK03	38	-	K	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Ball valve	GK04	39	H	A	A	A	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	GK05	38	H	A	A	A	A	-	-	-	S	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	GK06	40	H	A	A	A	A	S	-	A	A	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	GK07	41	H	A	A	A	A	-	-	S	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	GK08	42	H	A	-	-	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	GK09	42	H	K	A	-	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Ball valve	GK10	43	H	A	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ball valve	GK11	43	H	A	-	-	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	GK12	44	H	A	A	A	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	GK13	44	H	A	-	-	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	GK14	41	H	A	-	-	A	-	-	S	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	GK16	40	H	A	A	-	-	-	-	-	-	A³	-	S	-	-	A	-	-	-	-	-	-	A³	-	-
Ball valve	GK17	39	-	K	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Ball valve	KK04	58	-	S	-	A	-	-	-	-	-	S	-	S	-	-	-	-	-	-	-	-	-	-	S	-
Ball valve	KK05	58	-	S	-	A	-	-	-	-	-	S	-	S	-	-	-	-	-	-	-	-	-	-	S	-
Ball valve	PK01	53	H	A	-	-	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	A	-	-
Ball valve	PK02	53	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	A	-	-
Ball valve	PK04	54	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	A	S	-
Ball valve	PK05	54	H	A	A	A	A	-	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	-	-
Ball valve	PK06	55	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Ball valve	PK07	55	H	A	A	A	A	S	-	-	-	-	-	S	-	-	A	-	-	-	-	-	-	-	S	-
Solenoid valve	EV01	60	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	EV03	60	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	EV04	61	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	EV05	61	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	EV06	62	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-

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Solenoid valve	EV07	62	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	EV08	63	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	R	-
Solenoid valve	EV09	63	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	FV01	64	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV01	66	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV02	66	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV03	67	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV04	67	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV05	68	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV06	68	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV07	69	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	MV08	69	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	-
Solenoid valve	MV09	70	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Solenoid valve	KV01	71	H	A	A^3	A^3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solenoid valve	KV02	71	-	A	A^3	A^3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solenoid valve	KV04	72	H	A	A	A^3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manometer gauge valve	MA01	76	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Diaphragm valve	MB01	78	-	A	-	A	-	-	-	-	-	S	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Needle valve	NV01	81	H	A	A	A	A	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Needle valve	NV02	81	H	A	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	DR01	88	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	A	-	-	-	A	R	-
Check valve	DR02	88	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	DR03	89	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	DR04	89	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	ZR01	85	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	A	A	-	-	-	A	A	-
Check valve	ZR02	86	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	A	A	-	-	-	A	A	-
Check valve	ZR03	85	H	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	A	A	-	-	-	A	A	-
Check valve	ZR04	86	H	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	A	A	-	-	-	A	A	-
Check valve	ZR05	85	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	ZR06	87	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	ZR07	86	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	ZR08	87	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	ZR09	85	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	A	-
Check valve	ZR10	85	H	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	A	-
Check valve	ZR12	87	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	ZR13	87	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	R	-
Check valve	GR01	90	H	K	A	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Check valve	GR02	90	-	K	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
DISCO check valve	RV01	93	H	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	A	-
DISCO check valve	RV02	93	H	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	A	A	-	-	-	A	A	-

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DISCO check valve	RV03	94	-	A	A	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	A	A	-
DISCO check valve	RV04	94	H	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	-
Sight glass	BS01	97	H	A	A	-	-	S	-	-	-	A	-	A	-	-	-	-	-	-	-	-	-	A³	A³	-
Sight glass	BS02	97	H	A	A	-	-	S	-	-	-	A	-	A	-	-	-	-	-	-	-	-	-	A³	A³	-
Sight glass	BS03	98	H	A	A	-	-	S	-	-	-	A	-	A	-	-	-	-	-	-	-	-	-	A³	A³	-
Sight glass	BS04	98	H	A	A	-	-	S	-	-	-	A	-	A	-	-	-	-	-	-	-	-	-	A³	A³	-
Sight glass	FS01	100	H	A	-	A	-	S	-	-	-	-	-	S		-	A	-	-	-	-	-	-	A³	A³	-
Sight glass	FS02	100	H	A	-	A	-	S	-	-	-	-	-	S		-	A	-	-	-	-	-	-	A³	A³	-
Sight glass	FS03	100	H	A	-	A	-	S	-	-	-	-	-	S		-	A	-	-	-	-	-	-	A³	A³	-
Sight glass	GS01	99	H	A	-	A	-	S	-	-	-	-	-	S		-	A	-	-	-	-	-	-	A³	A³	-
Sight glass	GS02	99	H	A	-	A	-	S	-	-	-	-	-	S		-	A	-	-	-	-	-	-	A³	A³	-
Sight glass	GS03	99	H	A	-	A	-	S	-	-	-	-	-	S		-	A	-	-	-	-	-	-	A³	A³	-
Sight glass	GS04	99	H	A	A	-	-	-	-	-	-	S	-	A	-	-	-	-	-	-	-	-	-	A³	A³	-
Strainer	SZ01	103	-	K	A	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Strainer	SZ02	104	-	K	-	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	S
Strainer	SZ03	106	H	K	A	-	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	S	-	-	-	-
Strainer	SZ04	105	H	K	A	-	-	-	-	-	-	-	-	S	-	-	-	S	-	-	-	-	-	-	-	S
Strainer	SZ05	103	H	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	-
Strainer	SZ06	106	H	A	-	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-
Strainer	SZ07	105	-	K	-	A	-	-	-	-	-	-	-	S	-	-	-	-	-	-	-	S	-	-	-	-
Angle seat valve	SC01	108	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	-
Angle seat valve	SC02	108	H	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	-
Safety valve	SF01	116	-	A	A	A	A	-	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Safety valve	SF02	116	-	A	A	A	A	-	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Safety valve	SF03	117	-	A	A	A	A	-	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Safety valve	SF04	117	H	A	A	A	A	-	-	-	-	A³	S	S	S	-	A	-	-	-	A	A	-	A³	-	-
Safety valve	SF05	118	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	-	-	-	A	A	A	A³	-	-
Safety valve	SV01	111	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV02	111	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV03	112	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV04	112	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV05	112	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV06	112	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV07	113	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV08	113	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV09	113	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV10	113	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV11	114	H	A	A	A	A	-	-	-	-	A³	S	S	S	-	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV12	114	H	A	A	A	A	-	-	-	-	A³	S	S	S	-	A	A	A	A	A	A	A	A³	-	-
Safety valve	SV13	114	H	A	A	A	A	-	-	-	-	A³	S	S	S	-	A	A	A	A	A	A	A	A³	-	-

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Category	Type	Can be found on page	ATEX	Factory certificate EN 10204 - 2.2	Material test certificate 3.1	Test certificate EN 10204 - 3.1	Individual inspection EN 10204 - 3.2	TA-Luft	Fire-Safe	DVGW-G	DVGW-T	FDA	TÜV component test	Pressure Equipment Directive (CE)	EC-Type examination	ASME	EAC	DNV	Germanischer Lloyd - GL	Lloyds Register	ABS	Bureau Veritas	Russian Maritime Register of Shipping	Oil- and fat-free cleaning	Silicone-free	ACS product
Safety valve	SV14	115	H	A	A	A	A	-	-	-	-	A³	S	S	S	A	A	-	-	A	A	A	-	A³	-	-
Safety valve	SV15	115	H	A	A	A	A	-	-	-	-	-	S	S	S	A	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV01	121	H	A	A	A²	A²	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV02	121	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV03	122	H	A	A	A²	A²	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV04	122	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV05	123	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV06	123	H	A	A	A²	A²	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV07	124	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV08	124	H	A	A	A²	A²	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV09	123	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV10	123	H	A	A	A²	A²	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV11	124	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV12	124	H	A	A	A²	A²	-	-	-	-	-	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV13	125	-	A	A	A	A	S	-	-	-	-	-	S	S	-	A	-	A	A	-	A	A	-	-	-
Overflow valve	UV14	121	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Overflow valve	UV15	122	H	A	A	A²	A²	-	-	-	-	A³	-	S	-	-	A	A	A	A	A	A	A	A³	-	-
Vent valve	VB01	127	H	A	A	A	A	-	-	-	-	A³	-	-	-	-	A	-	-	-	-	-	-	A³	-	-
Vent valve	VB02	127	H	A	A	A	A	-	-	-	-	A³	-	-	-	-	A	-	-	-	-	-	-	A³	-	-
Vent valve	VB03	127	H	A	A	A	A	-	-	-	-	A³	-	-	-	-	A	-	-	-	-	-	-	A³	-	-
Vent valve	VB04	127	H	A	A	A	A	-	-	-	-	A³	-	-	-	-	A	-	-	-	-	-	-	A³	-	-

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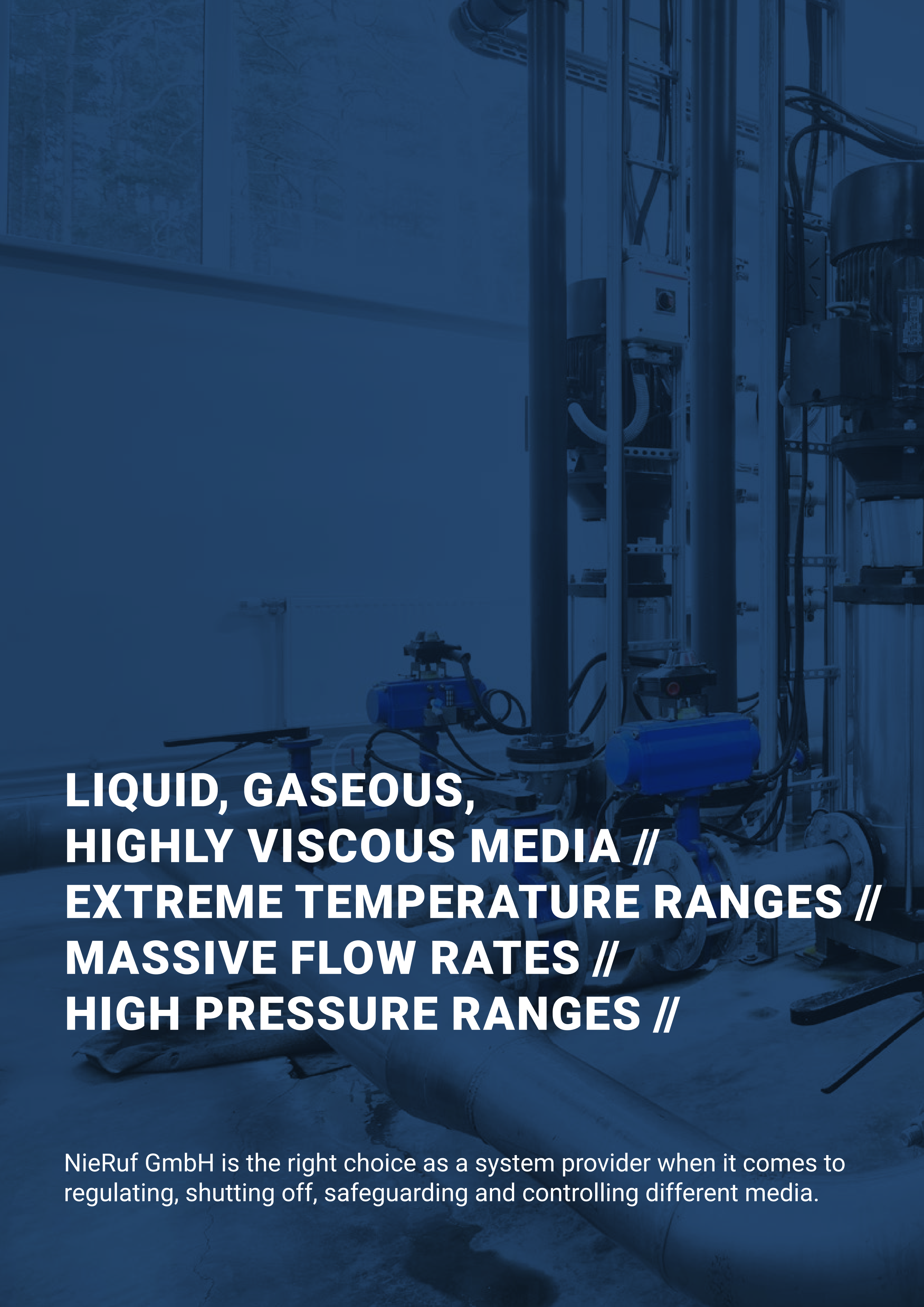

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