

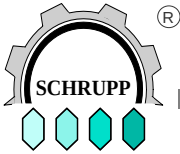


COMPLETE VALVES

Cartridge type valves can be combined in many different ways. This selection gives an overview of the most popular valves. Special designs on request.

Pos	Type	Medium	Pilot	Press. max	Size	Symbol	Page
KV 12	Directional valve	Water, Air, Oil	Electro-hydraulic operated x,y internal or external ND6 Type WEV06	350bar	25 mm 40,50 mm		2 3,4
KV 2	Directional valve	Water, Air, Oil	Electro-hydraulic ND6 Type WEV06	350bar	10-40mm		5
KV 3	Directional Valve	Water, Air, Oil	Electro-hydraulic ND6 Type WEV06	350bar	16-32mm		6
KV 4	Directional Valve with mainstream filter	Water, Air, Oil	Electro-hydraulic ND6 Type WEV06	350bar	16mm		7
KV 7	Pressure relief valve	Water	Pressure relief NDG2 Type DBP2	350bar	16-32mm		10
KV 8	Pressure reducing valve	Water	Pressure relief NDG2 Type DBP2	350bar	16-32mm		11
KV 9	Medium operated valves, non-return valves, stroke limiter,	Water, Air, Oil	Medium operated	350bar	10-40mm		12
KV 13	Throttle Valves	Water Emulsion Oil	Manual operated with servo-hydraulic assistance	350bar	25-200mm		13
KV 10	Directional valve	Water, Air, Oil	Electro-pneumatic-hydraulic	800bar	10-25mm		14
KV 11	Directional valve	Water, Air, Oil	Electro-hydraulic	800bar	10-40mm		15

Valve Type KV6 and KV7 according to produkt data sheet E2.4.8 and D2.4.9 are not available anymore



COMPLETE VALVES

Type 2/2 Directional Valve 850233

This robust soft seated valves can be used for the directional control of gases and fluids.

Replacement for V2003

Technical Data:

Nominal Pressure: 3 - 350bar

Nominal Size: 25mm

Media: Water Emulsion, Oil, compressed Air, others on request

Pilot pressure has to be equal or higher than the operating pressure. Pilot pressure max 400bar

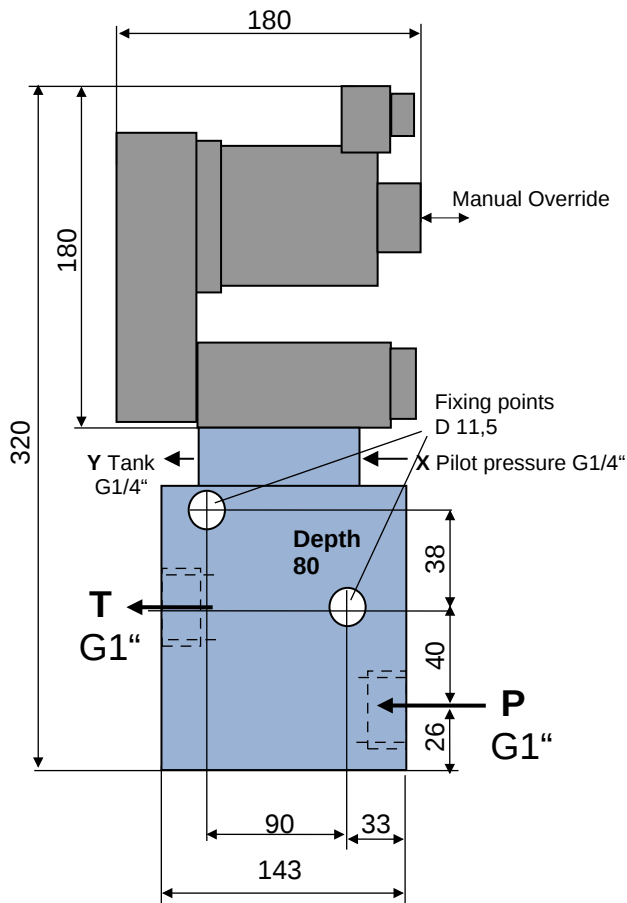
Pressure at port y-for internal operation at port T, has to be min 5bar below the operating pressure at P.

Material: Stainless Steel, Viton, Teflon

Soft seated with metal support

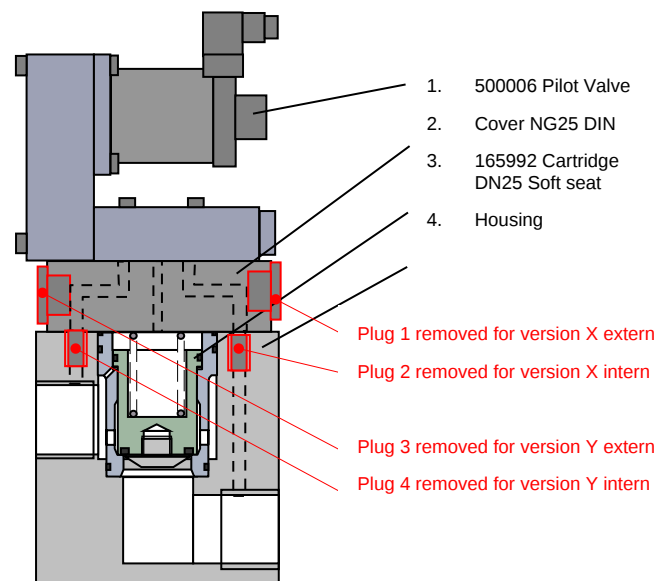
Ambient temperature: 0-50°C

Protection Class: IP65



Ordering Code

850233	x-internal / y-internal	024GL	KV12
	x-extern / y-internal	220 WS	
	x-internal / y-extern	110 WS	
	x-extern / y-extern	048 GL	





COMPLETE VALVES

Type 2/2 Directional Valve 850269

This robust soft seated valve can be used for the directional control of gases and fluids.

Replacement for V2006

Technical Data:

Nominal Pressure: 3 - 350bar

Nominal Size: 50mm

Media: Water Emulsion, Oil, compressed Air, others on request

Pilot pressure has to be equal or higher than the operating pressure. Pilot pressure max 400bar

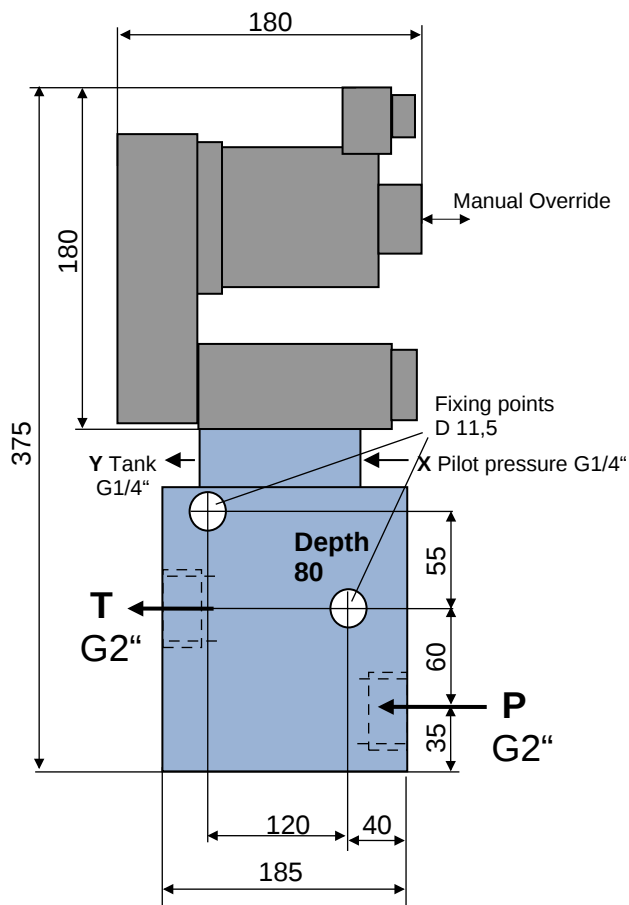
Pressure at port y-for internal operation at port T, has to be min 5bar below the operating pressure at P.

Material: Stainless Steel, Viton, Teflon

Soft seated with metal support

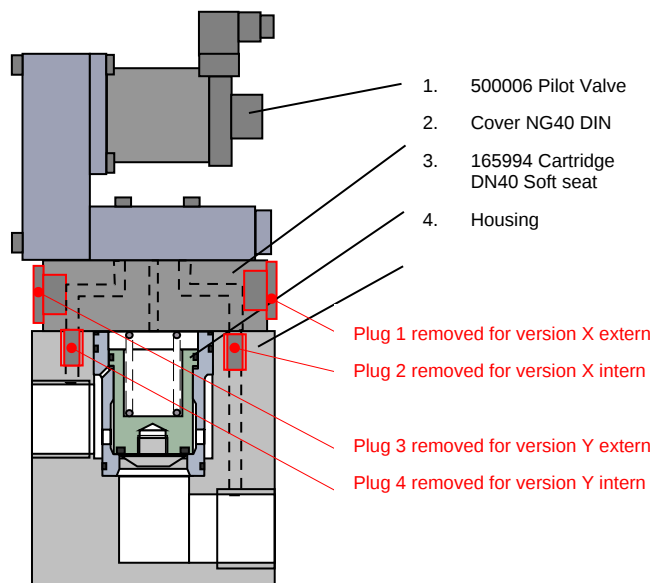
Ambient temperature: 0-50°C

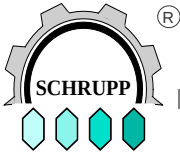
Protection Class: IP65



Ordering Code

850269	x-internal / y-internal	024GL	KV12
	x-external / y-internal	220 WS	
	x-internal / y-external	110 WS	
	x-external / y-external	048 GL	





COMPLETE VALVES

Type 2/2 Directional Valve 850312

This robust soft seated valve can be used for the directional control of gases and fluids.

Replacement for V2005

Technical Data:

Nominal Pressure: 3 - 350bar

Nominal Size: 40mm

Media: Water Emulsion, Oil, compressed Air, others on request

Pilot pressure has to be equal or higher than the operating pressure. Pilot pressure max 400bar

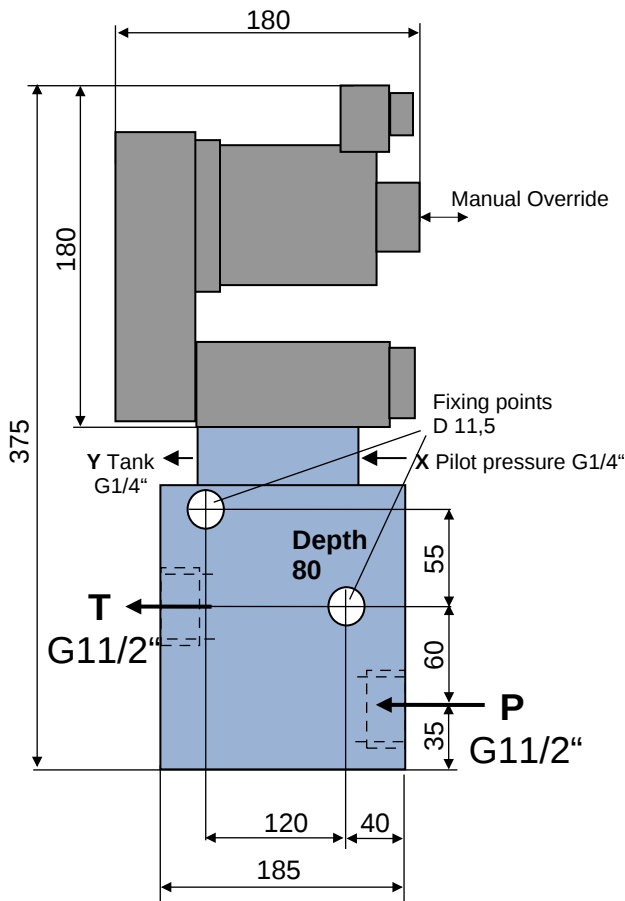
Pressure at port y-for internal operation at port T, has to be min 5bar below the operating pressure at P.

Material: Stainless Steel, Viton, Teflon

Soft seated with metal support

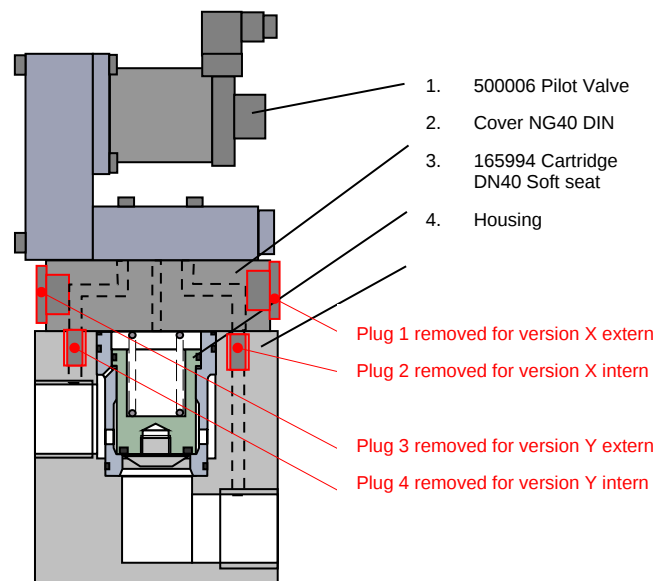
Ambient temperature: 0-50°C

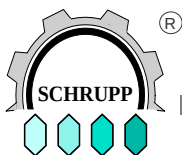
Protection Class: IP65



Ordering Code

850312	x-internal / y-internal	024GL	KV12
	x-external / y-internal	220 WS	
	x-internal / y-external	110 WS	
	x-external / y-external	048 GL	





COMPLETE VALVES

Type 2/2 Way Directional Valve

Medium Water, Air, Oil
Oper. Press. 350bar
Filtration 25mic
Sealing Soft seat, metal supported

Material SS, brass
Sizes* 10, 16, 25, 32, 40 mm
Voltage* 24V, 48V, 98V, 196V dc
Additional rectifier 110V/50Hz, 220V/50Hz ac

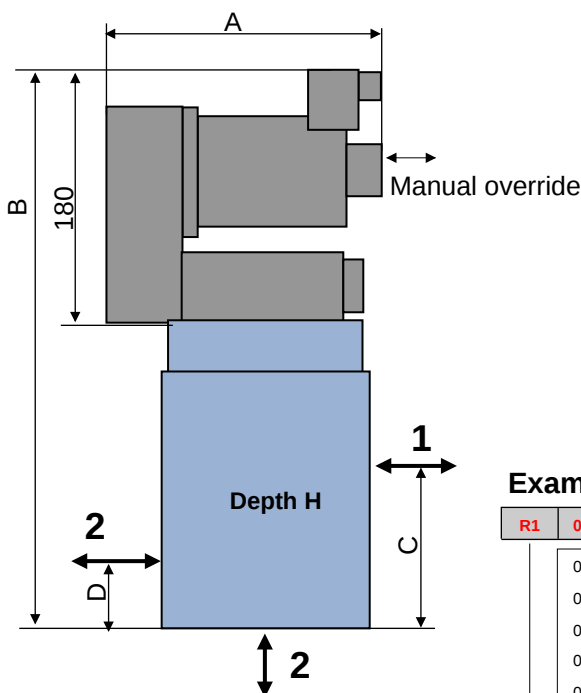
Not applicable for descaling water (please see our catalogue Descaling Valves, Pilot Valves)

*Other voltages on request.

Symbol



Dimensions



ND	Connections			A	B	C	D	H
10		G1/2"		180	280	55	26	60
16	G1/2"	G3/4"	SAE 3/4" Standard	180	320	71	32	65
25	G3/4"	G1"	SAE 1" Standard	180	345	86	36	85
32	G1"	G1 1/4"	SAE 1 1/4" Standard	180	370	103	39	102
40		G1 1/2"	SAE 1 1/2" Standard	180	400	116	47	125

Example / Ordering Code

R1	016		17		024G	B	KV2
----	-----	--	----	--	------	---	-----

010 = Size 10
016 = Size 16
025 = Size 25
032 = Size 32
040 = Size 40

B = Square ac connector small
D = Square dc connector large
F = Square conn. for ac and dc with ign.light

R10 = ND10 thread-connections G1/2"
R12 = ND10 flanges SAE 1/2"
R1 = ND16 thread-connections G1/2"
R2 = ND16 thread-connections G3/4"
R3 = ND16 flanges SAE 3/4"
R4 = ND25 thread-connections G3/4"
R5 = ND25 thread-connections G1"
R6 = ND25 flanges SAE 1"
R7 = ND32 thread-connections G1"
R8 = ND32 thread-connections G1 1/4"
R9 = ND32 flanges SAE 1 1/4"
R13 = ND32 thread-connect. G1 1/2"
R14 = ND32 flanges SAE 1 1/2"

024G = 24V dc
098G = 98V dc
196G = 196V dc
110W = 110V ac
220W = 220V ac

17 = Normally closed (NC)
18 = Normally open (NO)



COMPLETE VALVES

Type 2/2 Way Directional Valve

Medium Water, Air, Oil
Oper. Press. 350bar
Filtration 80mic
Sealing Soft seat, metal supported

Material SS, brass
Sizes* 16, 25, 32mm
Voltage* 24V, 48V, 98V, 196V dc
Additional rectifier 110V/50Hz, 220V/50Hz ac

* Other voltages and sizes on request.

Symbol

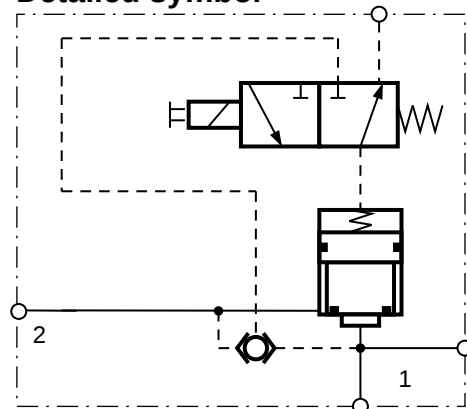


Description

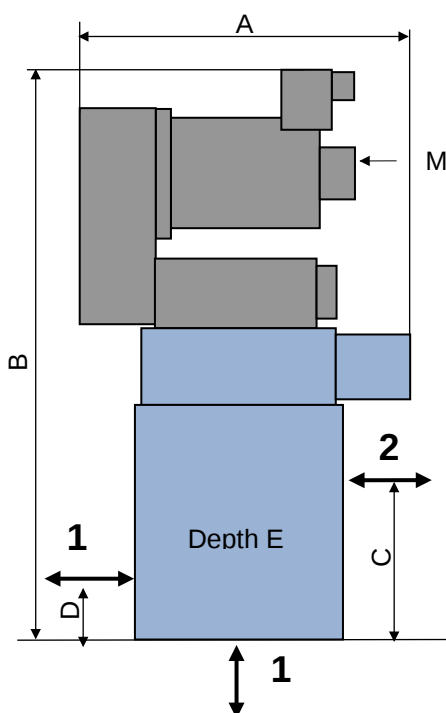
This valve can be used where air has to be sluiced from a high into a low-pressure reservoir. A pilot pressure input from the inlet and outlet side makes sure that the valve stays closed in case of failure even when the pressure in high-pressure port 1 is lower than in port 2.

The robust and compact design allows use of the valve in various fields of applications.

Detailed symbol



Dimensions



Manual override

ND	Connections			A	B	C	D	E
16	G1/2"	G3/4"	SAE 3/4" Standard	180	325	71	32	68
25	G3/4"	G1"	SAE 1" Standard	180	350	86	36	85
32	G1"	G1 1/4"	SAE 1 1/4" Standard	180	375	103	43	102

Example / Ordering Code

R2	016		17		024G	B	KV3
----	-----	--	----	--	------	---	-----

016 = Size 16
025 = Size 25
032 = Size 32

R1 = ND16 thread-connections G1/2"
R2 = ND16 thread-connections G3/4"
R3 = ND16 flanges SAE 3/4"
R4 = ND25 thread-connections G3/4"
R5 = ND25 thread-connections G1"
R6 = ND25 flanges SAE 1"
R7 = ND32 thread-connections G1"
R8 = ND32 thread-connections G1 1/4"
R9 = ND32 flanges SAE 1 1/4"

B = Square ac connector small
D = Square dc connector large
F = Square conn. for ac and dc with ign.light

024G = 24V dc
098G = 98V dc
196G = 196V dc
110W = 110V ac
220W = 220V ac

17 = normally closed (NC)
18 = normally open (NO)



COMPLETE VALVES

Type 2/2 Way Directional Valve

Medium Water, Air, Oil
Oper. Press. 350bar
Filtration 80mic integrated
Sealing Soft seat, metal supported

Material SS, brass
Sizes 16, 25, 32mm
Voltage* 24V, 48V, 98V, 196V dc
Additional rectifier 110V/50Hz, 220V/50Hz ac

* Other voltages on request.

Symbol

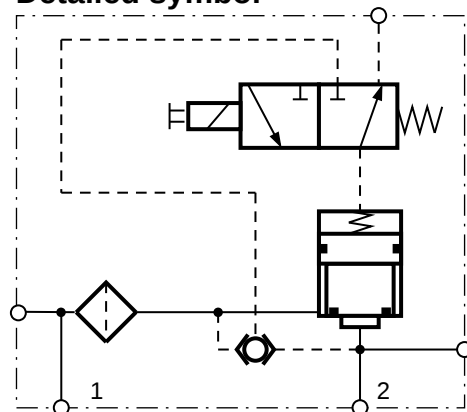


Description

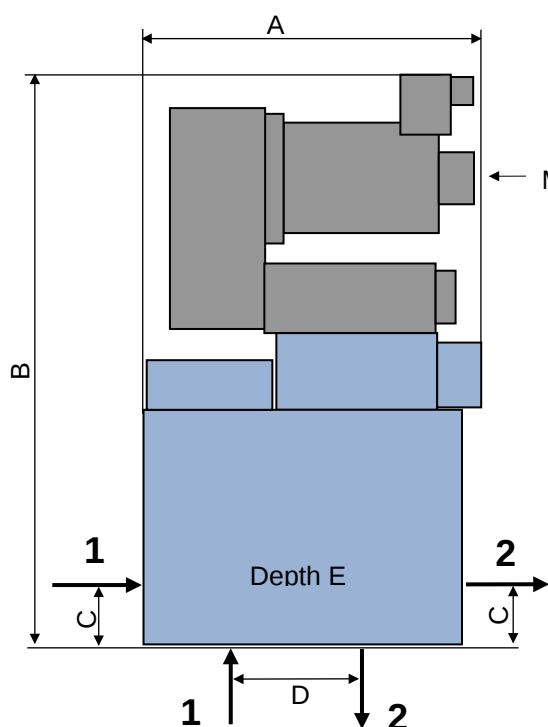
This valve can be used where air has to be sluiced from a high into a low-pressure reservoir. A pilot pressure input from the inlet and outlet side makes sure that the valve stays closed in case of failure even when the pressure in high-pressure port 1 is lower than in port 2. An 80micron filter is integrated to protect main and pilot valve.

The robust and compact design allows use of the valve in various fields of applications.

Detailed symbol



Dimensions



ND	Connections			A	B	C	D	E
16	G1/2"	G3/4"	SAE 3/4" Standard	200	325	32	70	70

Manual override

Example / Ordering Code

R11	016	17	024G	B	KV4
-----	-----	----	------	---	-----

B = Square ac connector small
D = Square dc connector large
F = Square conn. for ac and dc with ign.light

024G = 24V DC
098G = 98V DC
196G = 196V DC
110W = 110V AC
220W = 220V AC

17 = Normally Closed (NC)
18 = Normally open (NO)



COMPLETE VALVES

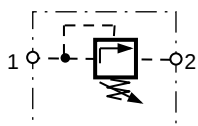
Type Pressure Relief Valve

Medium Water
Oper. Press. 350bar
Filtration 25mic
Sealing Hard seated

Material SS, brass
Sizes* 16, 25, 32mm

*Other sizes on request.

Symbol

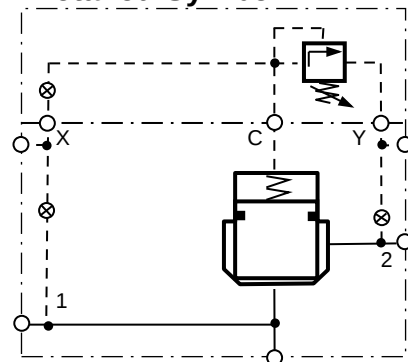


Description

This valve can be used to protect a system against overpressure. Also it is possible to remotely operate the valve by an external pressure.

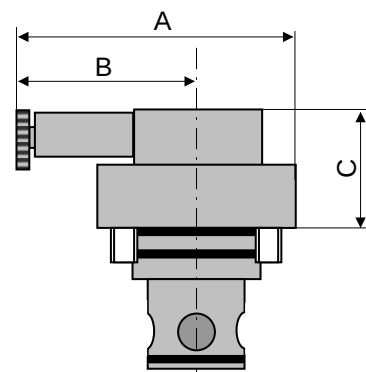
The robust and compact design allows use of the valve in various fields of applications.

Detailed Symbol



Dimensions

ND	Connections 1,2			A	B	C	D	E	F	G	H
16	G1/2"	G3/4"	SAE 3/4" Standard	160	128	70	32	71	175	170	65
25	G3/4"	G1"	SAE 1" Standard	170	128	70	36	86	200	180	85
32	G1"	G1 1/4"	SAE 1 1/4" Standard	180	128	70	43	103	225	187	102

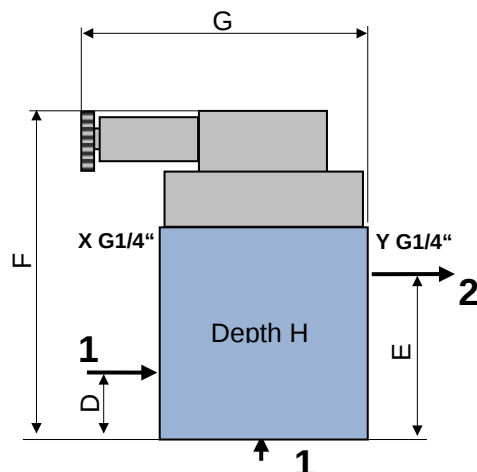


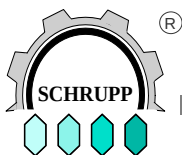
Example / Ordering Code

EO	016	DX	05	2	D	23	FS	0000	0	H KV7
----	-----	----	----	---	---	----	----	------	---	-------

016 = Size 16
025 = Size 25
032 = Size 32

EO = for manifold mounting
R1 = ND16 thread-connections G1/2"
R2 = ND16 thread-connections G3/4"
R3 = ND16 flanges SAE 3/4"
R4 = ND25 thread-connections G3/4"
R5 = ND25 thread-connections G1"
R6 = ND25 flanges SAE 1
R7 = ND32 thread-connections G1"
R8 = ND32 thread-connections G1 1/4"
R9 = ND32 flanges SAE 1 1/4"





COMPLETE VALVES

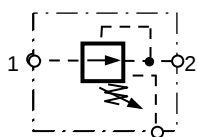
Type Pressure Reducing Valve

Medium Water
Oper. Press. 350bar
Filtration 25mic
Sealing Hard seated

Material SS, brass
Sizes* 16, 25, 32mm

*Other sizes on request.

Symbol

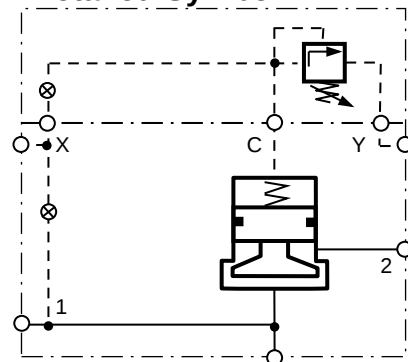


Description

This valve can be used to reduce a pressure from a high-pressure circuit to a constant lower pressure, without any pressure influence from the feeding pressure system. Also it is possible to remotely operate the valve by an external pressure.

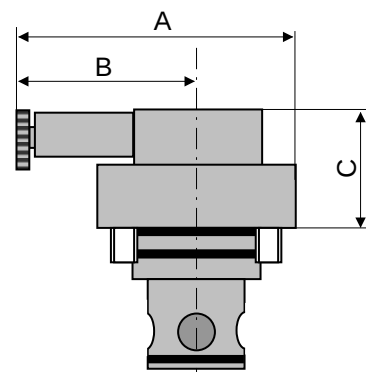
The robust and compact design allows use of the valve in various fields of applications.

Detailed Symbol



Dimensions

ND	Connections 1,2			A	B	C	D	E	F	G	H
16	G1/2"	G3/4"	SAE 3/4" Standard	160	128	70	32	71	175	170	65
25	G3/4"	G1"	SAE 1" Standard	170	128	70	36	86	200	180	85
32	G1"	G1 1/4"	SAE 1 1/4" Standard	180	128	70	43	103	225	187	102

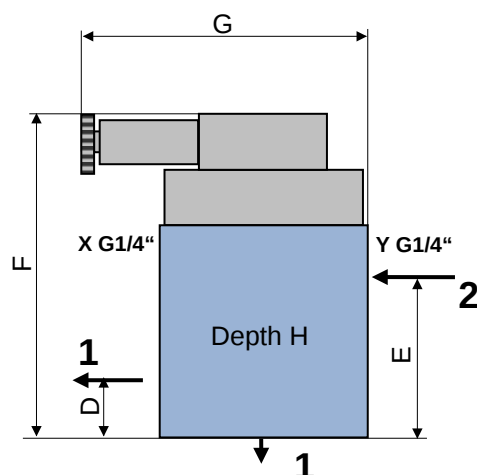


Example / Ordering Code

EO	016	DX	05	2	D	24	FS	0000	0	H KV8
----	-----	----	----	---	---	----	----	------	---	-------

016 = Size 16
025 = Size 25
032 = Size 32

EO = for manifold mounting
R1 = ND16 thread-connections G1/2"
R2 = ND16 thread-connections G3/4"
R3 = ND16 flanges SAE 3/4"
R4 = ND25 thread-connections G3/4"
R5 = ND25 thread-connections G1"
R6 = ND25 flanges SAE 1
R7 = ND32 thread-connections G1"
R8 = ND32 thread-connections G1 1/4"
R9 = ND32 flanges SAE 1 1/4"





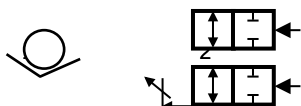
COMPLETE VALVES

Typ Non Return and hydraulically operated Valves, Stroke Limiters

Medium	Water, Airl, Oil	Material	SS, brass
Ope. pressure	350bar	Sizes*	10, 16, 25, 32, 40 mm
Filtration	25mic		
Sealing	Soft seat, metal supported		

*Other sizes on request.

Symbol

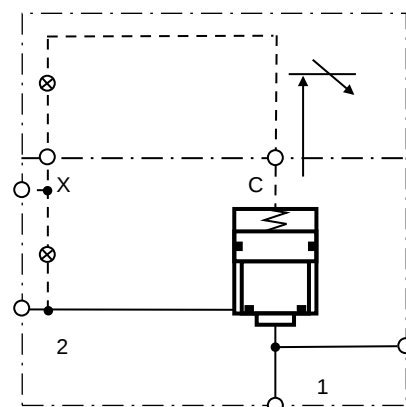


Description

These valves are used for directional control and shut off functions. Additional stroke limiters allow also a throttling of the flow.

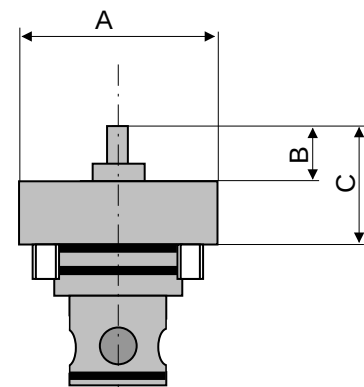
The robust and compact design allows use of the valve in various fields of applications.

Detailed Symbol



Dimensions

ND	Connections			A	C	B	D	E	F	G	H
10		G1/2"		52	50	25	26	55	125	70	52
16	G1/2"	G3/4"	SAE 3/4" Standard	65	75	40	32	71	180	85	65
25	G3/4"	G1"	SAE 1" Standard	85	92	57	36	86	222	105	85
32	G1"	G1 1/4"	SAE 1 1/4" Standard	102	114	79	39	103	269	120	102
40		G1 1/2"	SAE 1 1/2" Standard	125	120	80	47	116	300	145	125



Example / Ordering Code

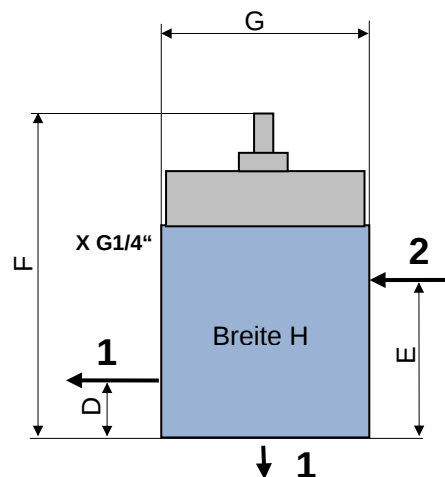
EO	016	SX	08	6	D	11	F0	0000	0	0 KV9
----	-----	----	----	---	---	----	----	------	---	-------

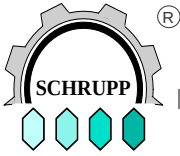
010 = Size 10
to
040 = Size 40

02 = Cover without limiter
11 = Cover with stroke limiter

EO = Manifold mounting
R1 = ND16 thread-connections G1/2"
R2 = ND16 thread-connections G3/4"
R3 = ND16 flanges SAE 3/4"
R4 = ND25 thread-connections G3/4"
R5 = ND25 thread-connections G1"
R6 = ND25 flanges SAE 1
R7 = ND32 thread-connections G1"
R8 = ND32 thread-connections G1 1/4"
R9 = ND32 flanges SAE 1 1/4"

HX = no stroke limiter
SX = stroke limiter



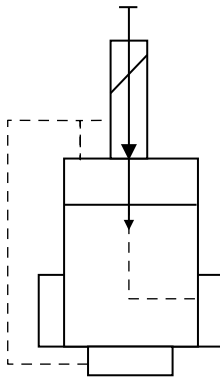


COMPLETE VALVES

Servo Cartridges

Servo assisted throttle and shut off Valves

This robust and leak-free closing valve with patented servo assistance allows an easy operation with very low manual force even after a long period of non-use. For accumulator shut off functions the valve can be operated in combination together with an electrically operated pilot valve. Without electrical power the valve will close automatically (fail safe). It is always possible to close it manually or in case of maintaining the system to secure it in closed position even if the pilot valve will be energized.



Technical Data:

Operating Pressure:	up to 350bar
Sizes:	25 – 200mm
Media:	Water, Oil
Material:	Stainless Steel, Buna, Viton, Teflon
Temperature:	0-50°C

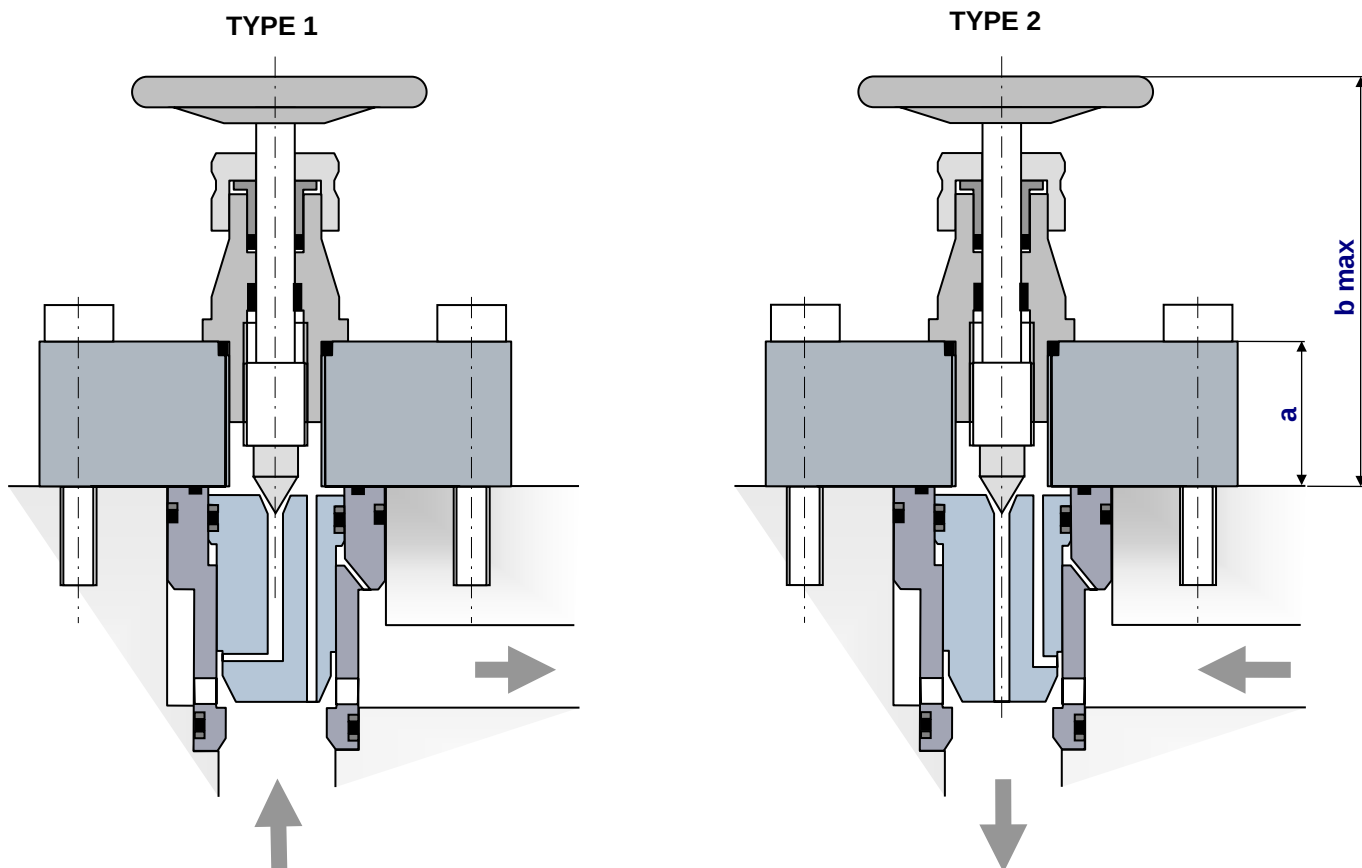




COMPLETE VALVES

Servo Cartridges

Servo assisted throttle and shut off Valves



DN	a	b max	PART NO.
25 TYPE 1	27	114	850193
25 TYPE 2	27	114	850193-01
32 TYPE 1	40	126	851281
32 TYPE 2	40	126	851281-01
40 TYPE 1	40	126	851276
40 TYPE 2	40	126	851276-01

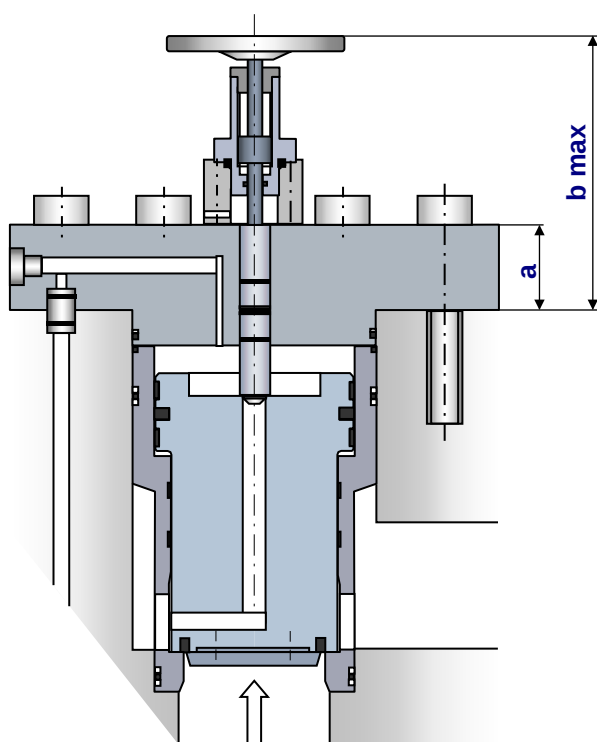


COMPLETE VALVES

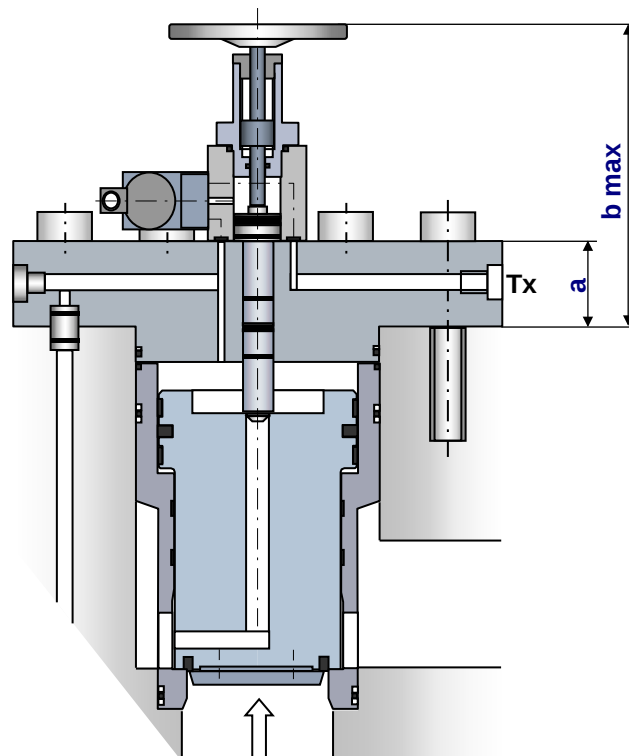
Servo Cartridges

Servo assisted throttle and shut off Valves

TYPE 1
manually operated



TYPE 2:
solenoid and electrically operated



DN	a	b max	Tx	PART NO.
50 TYPE 1	45	249	-	851270
50 TYPE 2	45	288	G 1/2"	851270-01
63 TYPE 1	50	254	-	851223
63 TYPE 2	50	293	G 1/2"	851223-01
80 TYPE 1	80	284	-	851216
80 TYPE 2	80	323	G 1/2"	851216-01
100 TYPE 1	80	284	-	851233
100 TYPE 2	80	323	G 1/2"	851233-01
125 TYPE 1	100	388	-	851243
125 TYPE 2	100	427	G 1/2"	851243-01
150 TYPE 1	120	408	-	851247
150 TYPE 2	120	447	G 1/2"	851247-01
200 TYPE 1	150	512	-	851261
200 TYPE 2	150	551	G 1/2"	851261-01

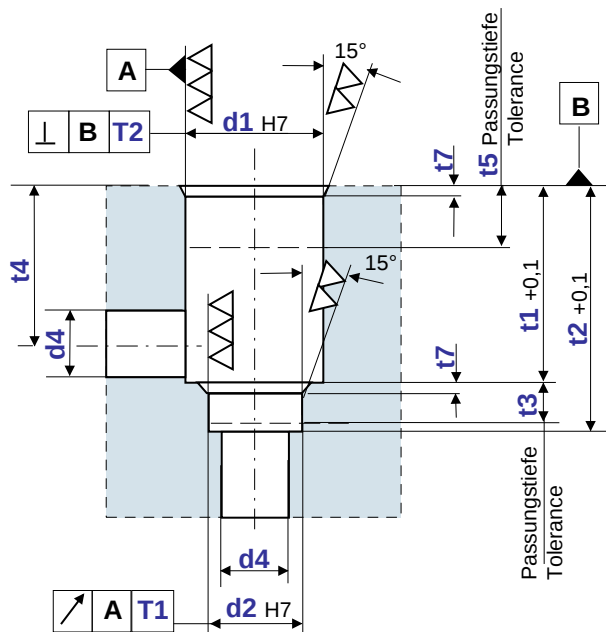
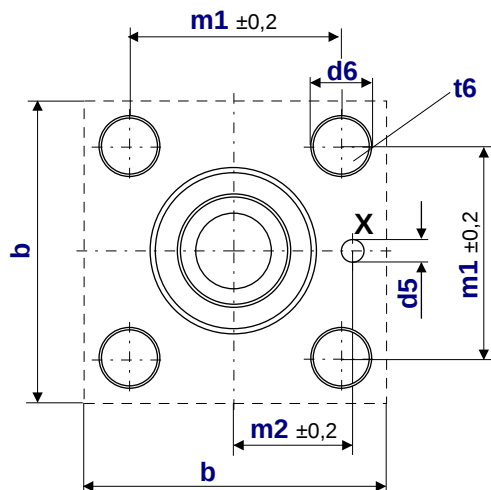


COMPLETE VALVES

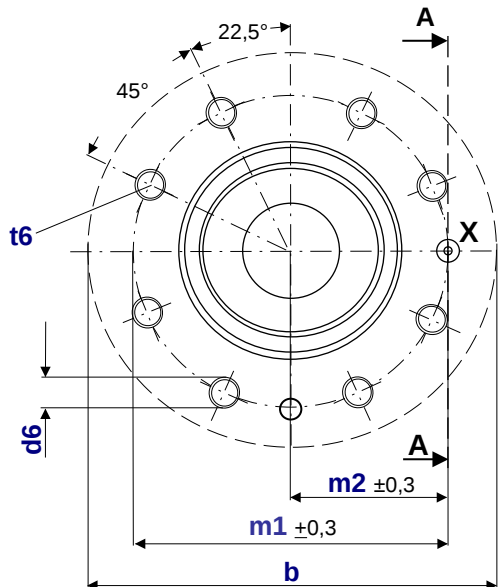
Servo Cartridges

Servo assisted throttle and shut off Valves

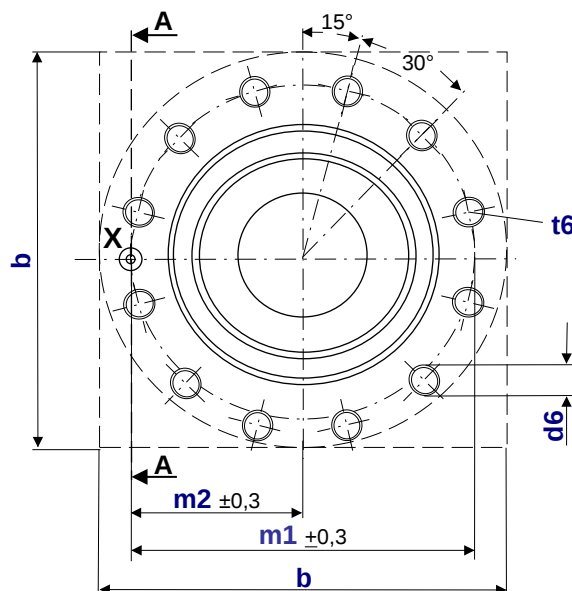
Abmessungen / Dimensions DIN 24342, DN25-50



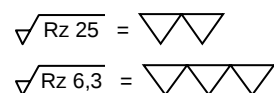
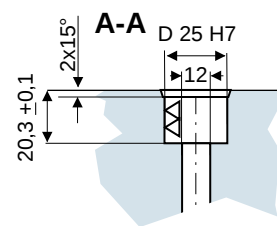
Abmessungen / Dimensions DIN 24342, DN63-100

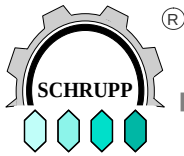


Abmessungen / Dimensions DIN 24342, DN125-200



DN	b	d1	d2	d4	d5	d6	m1	m2	t1	t2	t3	t4	t5	t6	t7	T1	T2
25	85	45	34	25	-	M12	58	-	58	72	12	44	30	13	2,5	0,03	0,05
32	102	60	45	32	-	M16	70	-	70	85	13	52	34	25	2,5	0,03	0,1
40	125	75	55	40	-	M20	85	-	87	105	15	64	42	30	3	0,05	0,1
50	140	90	68	50	8	M20	100	58	115	137	17	87	61	30	4	0,05	0,1
63	225	120	90	63	-	M24	175	87,5	150	175	20	115	82	35	4	0,05	0,2
80	250	145	110	80	-	M24	200	100	195	225	25	150	108	35	5	0,05	0,2
100	300	180	135	100	-	M30	245	125	230	265	29	175	130	40	5	0,05	0,2
125	360	220	180	125	-	M36	290	145	284	325	41	208	70	50	5	0,05	0,2
150	400	255	210	150	-	M36	330	165	330	375	41	245	75	50	5	0,05	0,2
200	530	355	275	200	-	M48	435	217,5	430	475	41	320	75	70	5	0,05	0,2





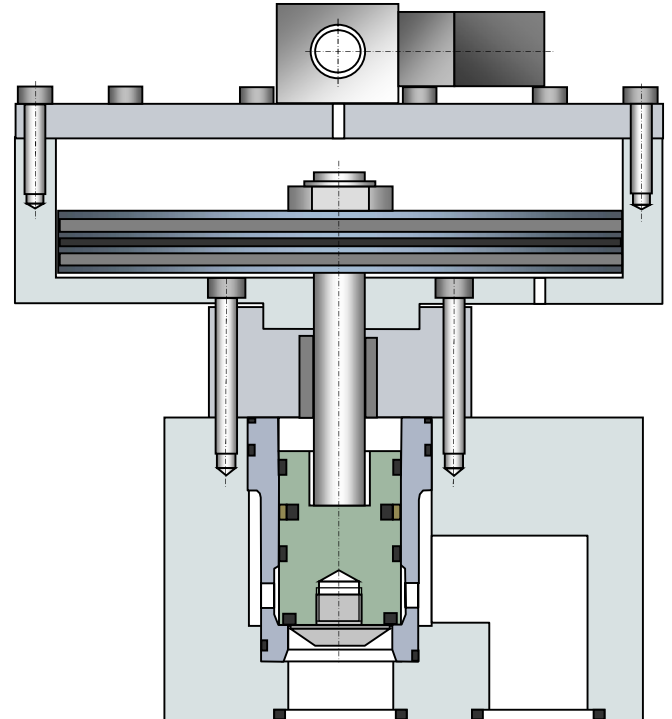
COMPLETE VALVES

2/2 Way Directional Valve 800bar with electro-pneumatic Pilot valve

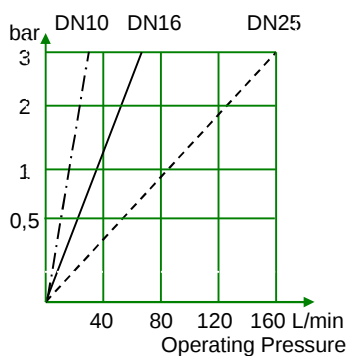
These electro-pneumatically piloted valves are designed for use in the harsh environments found in the steel and aluminum industries. Housing and the leak free soft seat cartridge are manufactured from stainless steel. Housings are also available with flange connections or for manifold mounting.

Technical Data:

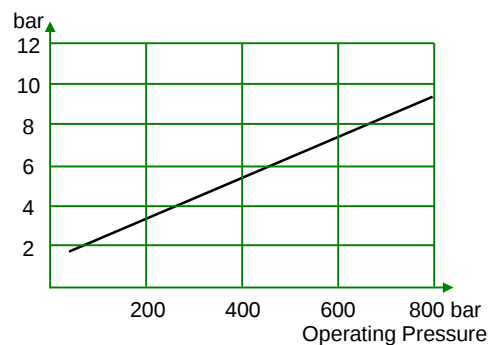
Nominal Dimensions	10,16,25mm
Operating Pressure	800bar
Pneumatic Pilot Pressure	2-10bar
Filtration Rate min	50micron
Electrical Power Consumption	8W
Voltage Tolerance	10%
Electrical Protection	IP65



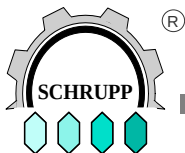
Pressure Drop Water



Pilot Pressure Air



Design details on request



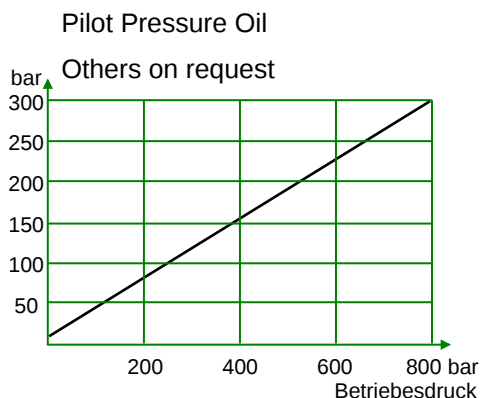
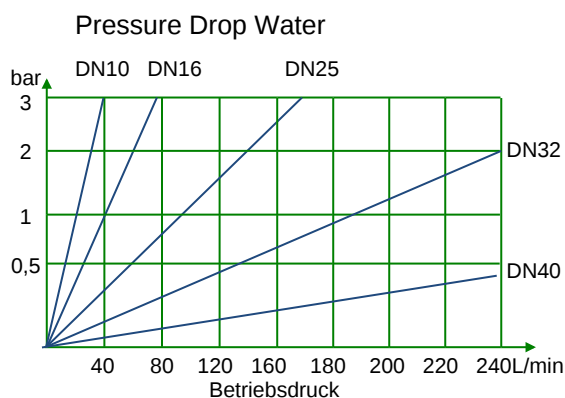
COMPLETE VALVES

2/2 Way Valve 800bar with solenoid operated pilot

These electro-hydraulically piloted valves are designed for use in the harsh environments found in the steel and aluminum industries or at offshore applications. Housing and the leak free soft seat cartridge are manufactured from stainless steel. Housings are also available with flange connections or for manifold mounting.

Technical Data:

Nominal Dimensions	10,16,25mm
Operating Pressure	800bar
Pneumatic Pilot Pressure	2-10bar
Filtration Rate min	50micron



Design details on request

