



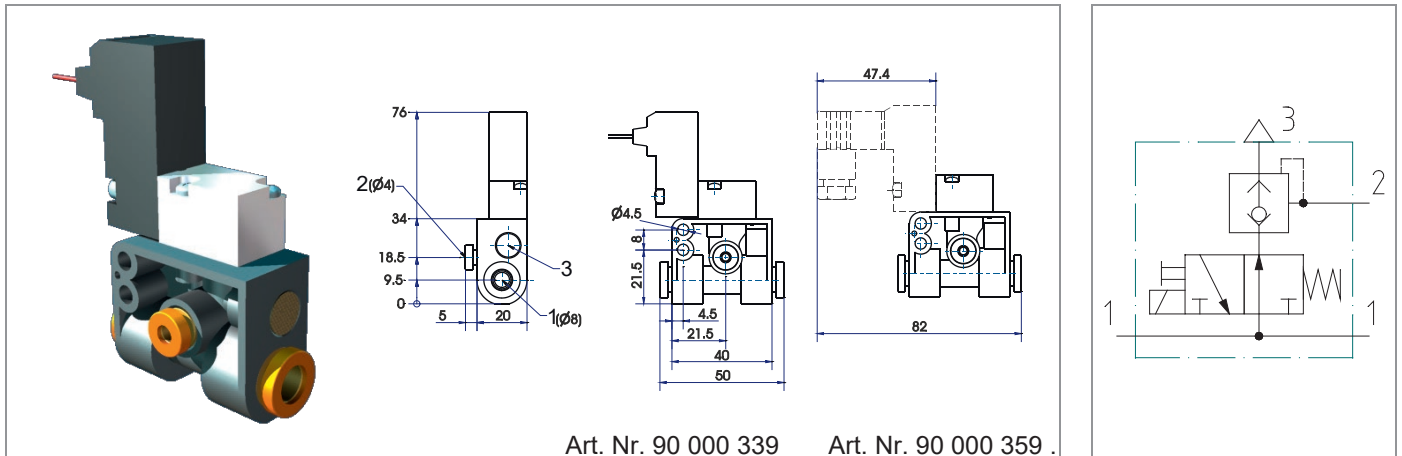
Valves

Version: 10/2021



3/2-way solenoid valve with integrated quick exhaust valve

type V01

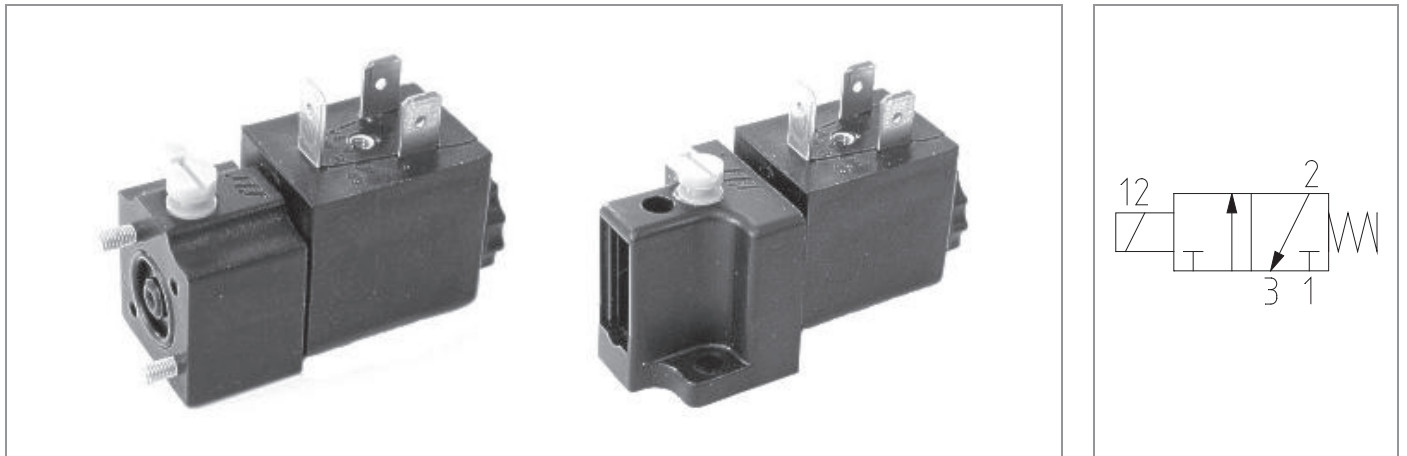


SPECIFICATION	
general	
type	3/2-way poppet valve, normal open, with integrated quick exhaust valve
operator	solenoid or bistable manual override
ports	inlet ports push in raccord diameter 8 mm (2 pieces), outlet port push in raccord diameter 4 mm, exhaust through silencer plate
ambient temperature	-20 °C to +60 °C
fluid temperature	-20 °C to +60 °C
material	valve body POM, seals NBR, internal parts POM and stainless steel, silencer plate bronze
mounting	2 holes
installation	in any position
electrical Data	
standard voltage	24V DC
special voltage	12V DC, 24V AC, 48V AC, 110V AC
voltage tolerance	± 10 %
power consumption	2,5 Watt
duty cycle	100 % ED
protection class	IP 54
electrical connection	flying leads, length 300 mm
pneumatic	
function	3/2 NO
fluid	filtered, lubricated or non lubricated air
operating pressure	0 – 7 bar
nominal flow	QNn: P -> A: 16 NI/min, A -> R: 125 NI/min (p1 = 6 bar, Δp = 1 bar)
nominal diameter	DN 0.8 mm
switch time	10 – 20 ms
max. operating Frequency	300 / min
special functions	valve instead 3/2 NO in 3/2 NC

type	article-nr.	function	weight (approx. g)
V01	90 000 339	3/2 NO	80
	90 000 359	3/2 NO	85

Direct operated 3/2-way solenoid valve flanged

type V10C-



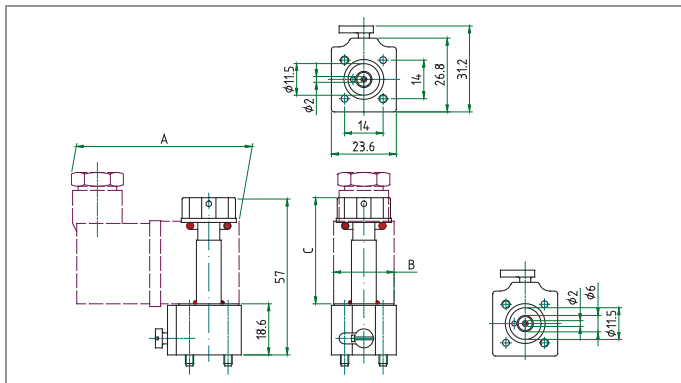
SPECIFICATION	
general	
type	poppet valve
operator	solenoid or by manual override, manual override is equipped with a monostable function (push) and a bistable function (push and turn). The manual override element may be cut off, after which it can be operated by screwdriver only.
Port	flanged
ambient Temperature	-20°C to +50°C
fluid Temperature	-20°C to +50°C
material	body, manual override: POM seals: perbunan (NBR) internal parts: brass, stainless steel coil: encapsulated (polyamide)
mounting	with screws to subbase
installation	in any position
unit of supply	type V10CA-....: valve, flange O-rings 2.31x1.5, 11.5x1.5, 2 screws DIN 965-M3x23,5 type V10CB-....: valve, 2 screws DIN 7985-M4x10
electrical Data	
standard voltage	24V DC, 24V AC (50-60Hz), 110V AC (50-60Hz), 230V AC (50-60Hz),
special voltage	12 - 250V AC, 6 - 110V DC
voltage tolerance	± 10%
power consumption	AC: inrush 6VA, holdpower 4.3VA DC: 2.6W (warm), 3W (cold)
duty cycle	100% , continuous operation
protection class	IP65 with correctly mounted connector according to DIN 40050
electrical connection	connector PG9 (see optionals)

Direct operated 3/2-way solenoid valve flanged

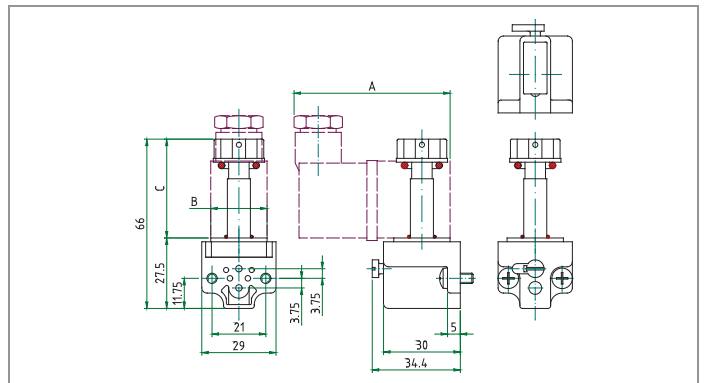
type V10C-

pneumatic function	3/2 NC
fluid	filtered, lubricated or non lubricated compressed air
operating pressure	0 to 10bar
nominal flow	Q _{Nn} (p ₁ =6bar, Δp=1bar) =43Nl/min from P(1) to A(2),
nominal diameter	DN 1.2mm (body), DN 1.2mm (exhaust)
switch time	10 to 20ms
cycles per minute	max. 1200/min
specials	valves are also available with explosion proofed coils EExmIIT5 und T6, and with intrinsic safety version EExialICT6
special equipment	seals in FPM, function 2/2-NC, 2/2-NO, 3/2-NO
optionals	subbases for concentric and CNOMO mounting surfaces

TYP V10CA - B1212 - . D concentric mounting surface



TYP V10CB - B1212 - . D CNOMO - mounting surface



General information: pressure range 0 to 10bar, function 3/2 NC, Nominal diameter 1.2mm, exhaust orifice 1.2mm

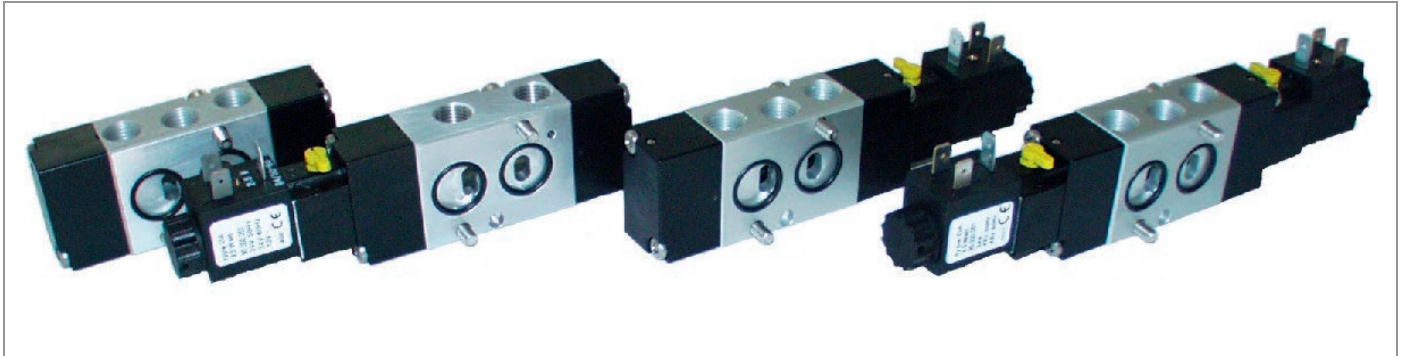
type	article-nr.	mounting surface	coil type	manual override	flow regulation P→A	A (mm)	B (mm)	C (mm)	weight without coil (approx. g)
V10CA-B1212-MD	90 000 063	concentric	DA, DB DC, DD DE, DW DX, DY	yes	no	59	22	39	35
V10CA-B1212-OD	90 000 276	concentric		no	no	59	22	39	35
V10CB-B1212-MD	90 000 079	CNOMO		yes	no	59	22	39	40
V10CB-B1212-OD	90 000 078	CNOMO		no	no	59	22	39	40
V10CB-B1212-BD	90 000 080	CNOMO		yes	yes	59	22	39	50
V10CB-B1212-AD	90 000 081	CNOMO		no	yes	59	22	39	50

Models for intrinsic safety coil EExialICT6

type	article-nr.	mounting surface	coil type	manual override	flow regulation P→A	A (mm)	B (mm)	C (mm)	weight without coil (approx. g)
V10CA-B1212-MD-0001	90 000 085	concentric	DZ	yes	no	67	30	39	35
V10CB-B1212-MD-0001	90 000 277	CNOMO	DZ	yes	no	67	30	39	50

3/2, 5/2 und 5/3-way valve according to NAMUR standard

type V46 ..., solenoid or pneumatic operated

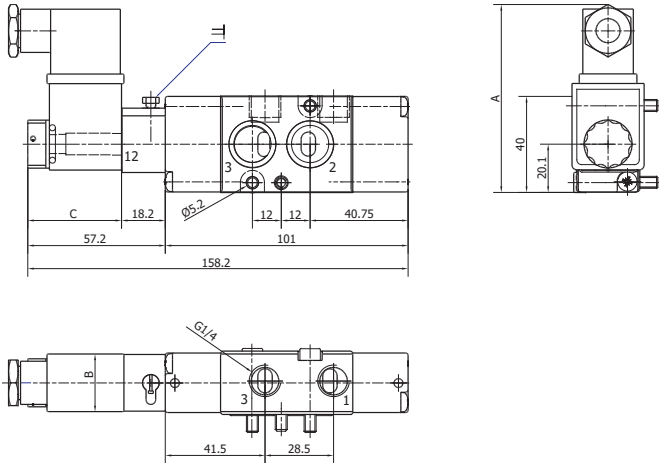


SPECIFICATION	
general	
type of construction	spool valve
operator	solenoid or pneumatic operated or by manual override. Manual override is equipped with a monostable function (push) and a bistable function (push and turn). The manual override element may be cut off, after which it can be operated by screwdriver only.
return	pneumatic spring, mechanical spring, solenoid operated, pneumatic operated
ports	ISO 228 /1-G 1/4
ambient temperature	-20°C to +60°C (EX-system -15°C to +50°C)
fluid temperature	-20°C to +80°C (EX-system -15°C to +50°C)
material	body and internal parts: aluminium, technical anodised, brass end caps reinforced: plastic seals: perbunan (NBR) and polyurethane (AU)
mounting	2 holes according NAMUR standard and according VDI / VDE 3845
installation	in any position
unit of supply	valve without coil, including 2 O-rings 16x2 mm, 1 set screw DIN 913-45H M5x10 mm, and 2 fixing screws M5x30
electrical data	
standard voltage	24V=, 24V/50, 110V/50 and 230V/50
special voltage	6V= to 110V=, and 12V to 254V, 50Hz or 60Hz
voltage tolerance	±10% for standard
power consumption	standard coil: AC inrush 6 VA, hold power 4,3 VA (warm) DC 2,6W (warm), 3W (cold)
duty cycle	100% ED (DB), continuous operation
protection class	IP65 with correctly mounted connector according to DIN 40050
electrical connection	connector Pg 9 (see optionals)
pneumatic	
function	3/2-way NC (V46C2), 5/2-way (V46K2), 5/3-NC (V46L2), 5/3-exhausted (V46M2) and 5/3-pressurized (V46N2)
fluid	filtered (50 micron), lubricated or non lubricated compressed air, also dried to a dew point of -20 °C
operating pressure	p _{min} see table, p _{max} =10bar
nominal flow	type V46-K2: Q _{Nn} =1060NI/min, type V46C2: 1-2 Q _{Nn} =1060 NI/min, 2-3 Q _{Nn} =1060 NI/min, V46L2: Q _{Nn} =850 NI/min, V46M2: Q _{Nn} =850 NI/min, V46N2: Q _{Nn} =850 NI/min
nominal diameter	DN 7mm
switch time	approx. 40ms
special equipment	explosion protected coil (different implementations)
optional extras	see page 7 and 8

3/2, 5/2 und 5/3-way valve according to NAMUR standard

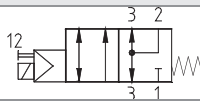
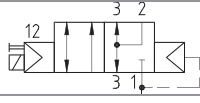
type V46 ..., solenoid or pneumatic operated

NAMUR-valve 3/2 way solenoid operated



Measures A, B, C please find on sheet of the coils type D.

Coils and connectors must be ordered separately.

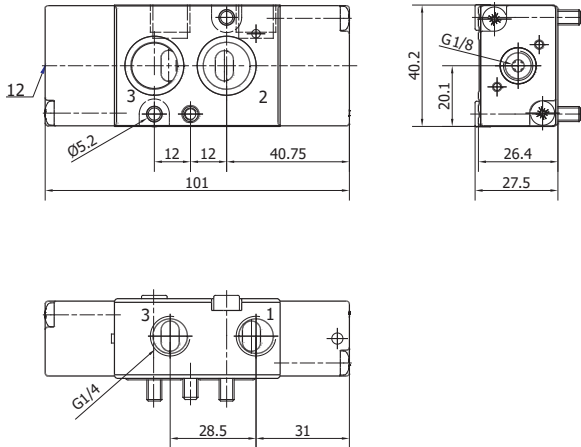
type *	symbol	article-nr.	pressure (bar)	weight (approx. g)
V46C2-15		90 000 502	2.5 - 10	210
solenoid operated, return by mechanical spring				
V46C2-16		90 000 500	1.8 - 10	210
standard valve, solenoid operated, return by pneumatic spring				

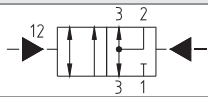
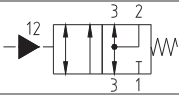
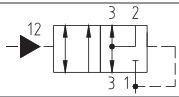
* **bold printed valves are preferred types**

3/2, 5/2 und 5/3-way valve according to NAMUR standard

type V46 ..., solenoid or pneumatic operated

NAMUR-valve 3/2 way pneumatic operated



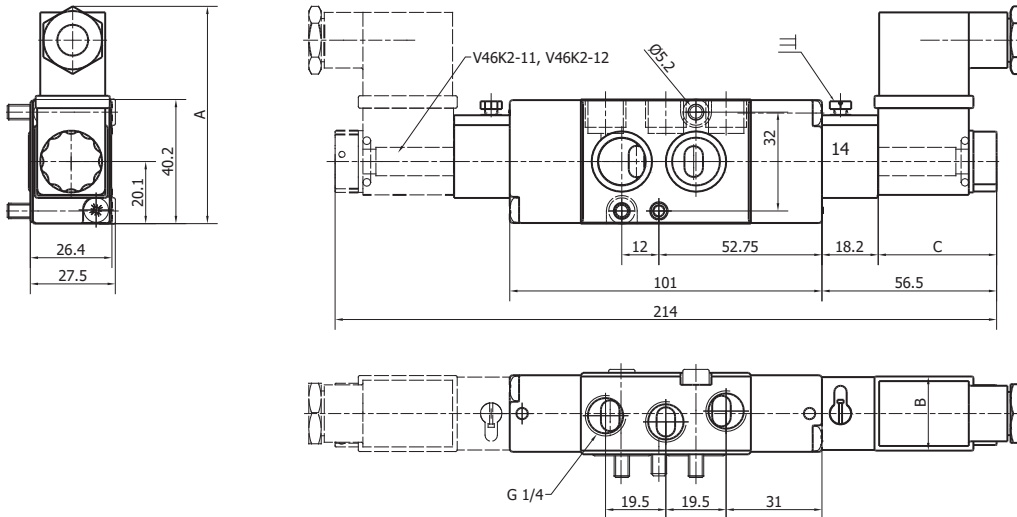
type *	symbol	article-nr.	pressure (bar)	weight (approx. g)
V46C2-33		90 000 507	1.0 - 10	200
bistable valve, pneumatic operated, return by air				
V46C2-35		90 000 508	2.5 - 10	200
pneumatic operated, return by mechanical spring				
V46C2-36		90 000 501	1.8 - 10	200
pneumatic operated, return by internal air				

* **bold printed valves are preferred types**

3/2, 5/2 und 5/3-way valve according to NAMUR standard

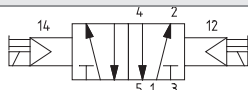
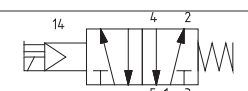
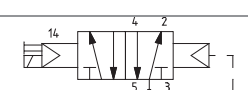
type V46 ..., solenoid or pneumatic operated

NAMUR-valve 5/2 way solenoid operated



Measures A, B, C please find on sheet of the coils type D.

Coils and connectors must be ordered separately.

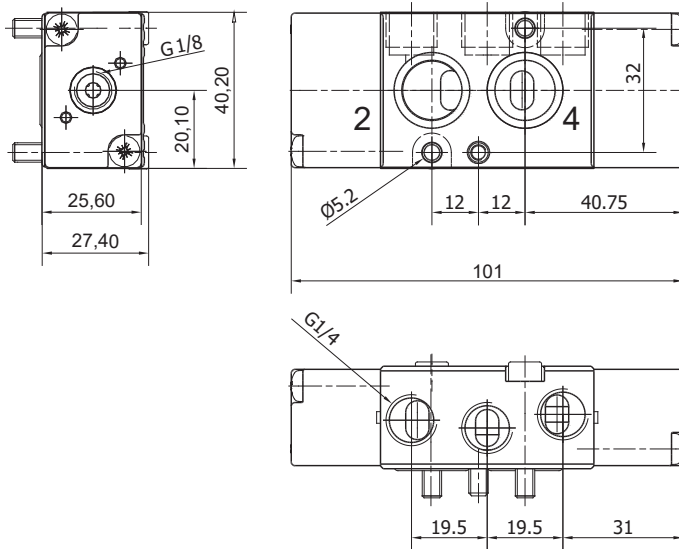
type *	symbol	article-nr.	pressure (bar)	weight (approx. g)
V46K2-11		90 000 490	1.0 - 10	230
bistable valve, both directions solenoid operated				
V46K2-15		90 000 491	2.5 - 10	210
monostable valve, solenoid operated, return mechanical spring				
V46K2-16		90 000 489	1.8 - 10	210
monostable valve, solenoid operated, return pneumatic spring				

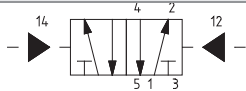
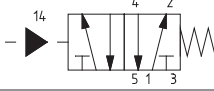
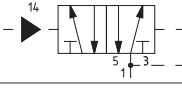
* bold printed valves are preferred types

3/2, 5/2 und 5/3-way valve according to NAMUR standard

type V46 ..., solenoid or pneumatic operated

NAMUR-valve 5/2 way pneumatic operated



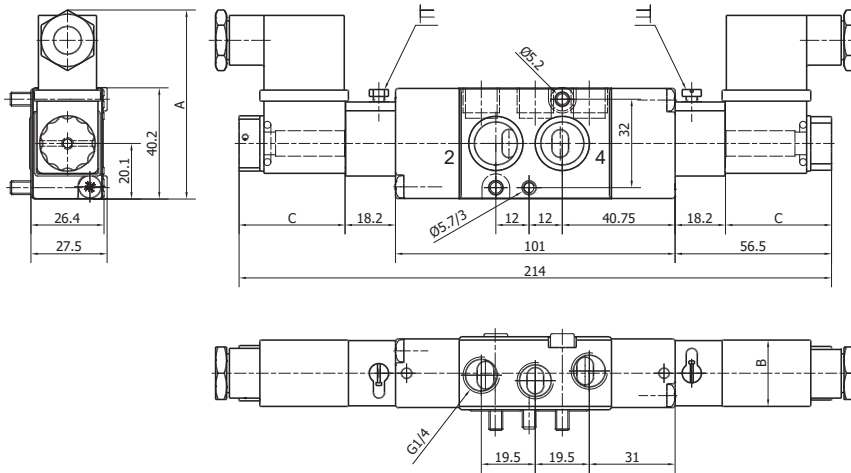
type *	symbol	article-nr.	pressure (bar)	weight (approx. g)
V46K2-33		90 000 493	1.0 - 10	200
bistable valve, pneumatic operated, return by air				
V46K2-35		90 000 492	2.5 - 10	200
pneumatic operated, return mechanical spring				
V46K2-36		90 000 503	1.8 - 10	200
pneumatic operated, return pneumatic spring				

* **bold printed valves are preferred types**

3/2, 5/2 und 5/3-way valve according to NAMUR standard

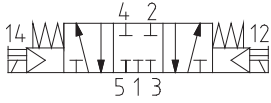
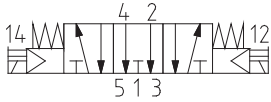
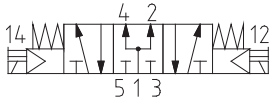
type V46 ..., solenoid or pneumatic operated

NAMUR-valve 5/3 way solenoid operated



Measures A, B, C please find on sheet of the coils type D.

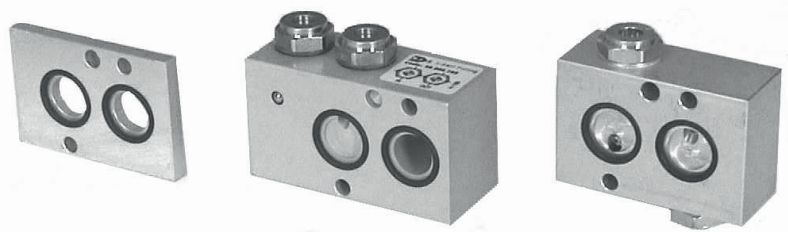
Coils and connectors must be ordered separately

type	symbol	article-nr.	pressure (bar)	weight (approx. g)
V46L2-11		90 000 494	2.5 - 8	290
central position, NC				
V46M2-11		90 000 495	2.5 - 8	290
central position exhausted				
V46N2-11		90 000 496	2.5 - 8	290
central position pressurized				

3/2, 5/2 und 5/3-way valve according to NAMUR standard

type V46 ..., solenoid or pneumatic operated

Adapter plates and adapter plates for flow control



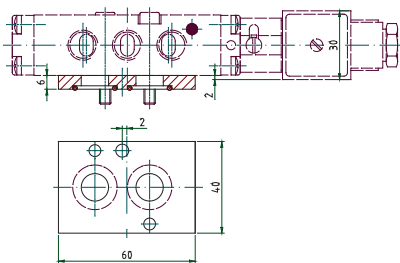
Adapter plates for use with more than 22mm wide coils

dimensions	article-nr.	supply item	weight (approx. g)
40x60x6	90 000 062	1 pc. adapter plate, 2 pcs. O-rings 16x2, 1 pc. set screw DIN 913-45H, M5x16, 2 pcs. screws M5x35	45

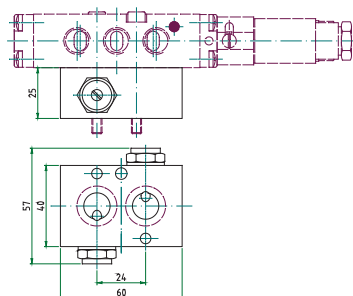
Adapter plates for flow control

dimensions	article-nr.	function	supply item	weight (approx. g)
40x60x25	90 000 066	3/2 way and 5/2 way flow control closing	1 pc. adapter plate with 1 pc. flow control valve, 1 pc. hollow screw, 2 pcs. O-rings 16x2, 1 pc. set screw DIN 913-45H M5x35, 2 pcs. fixing screws M5x55	210
40x60x25	90 000 065	3/2 way flow control opening	1 pc. adapter plate with 1 pc. flow control valve, 1 pc. hollow screw, 2 pcs. O-rings 16x2, 1 pc. set screw DIN 913-45H, M5x35, 2 pcs. fixing screw M5x55	210
40x75x30	90 000 268	3/2 way flow control both directions	1 pc. adapter plate with 2 pcs. flow control valve, 2 pcs. O-rings 16x2, 1 pc. set screw DIN 913-45H M5x10, 2 pcs. fixing screws M5x60	250
40x60x25	90 000 064	5/2 way flow control both directions	1 pc. adapter plate 2 pcs. flow control valve, 2 pcs. O-rings 16x2, 1 pc. set screw DIN 913-45H, M5x35, 2 pcs. fixing screws M5x55	210

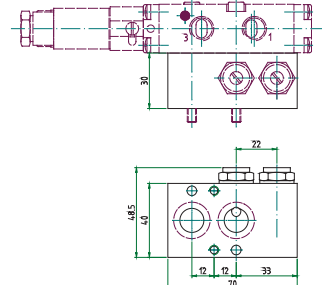
Adapter plates for use with width more than 22mm



Adapter plate for flow control 5/2 way or 3/2 way



Adapter plate for flow control 3/2 way both directions



Accessories

type	article-nr.	description	thread	weight (approx. g)
	10 000 293	silencer	M5	2
	10 000 471	silencer	G1/4 A	35
	10 000 472	flow control silencer	G1/4 A	50

3/2, 5/2 und 5/3-way valve according to NAMUR standard



type V46 ..., solenoid or pneumatic operated

Coils* (Type D) and Connectors*



type *	article-nr.	voltage	usalbe also for	A	B	C	weight (approx. g)
DA24-	90 000 051	24V = (DC)	48V/50, 48V/60	59	22	39	50
DA2450	90 000 052	24V/50 (AC)	24V/60; 12V = (DC)	59	22	39	50
DA11050	90 000 100	110V/50 (AC)	110V/60, 115V/60, 127V/50, 48V = (DC)	59	22	39	50
DA23050	90 000 053	230V/50 (AC)	230V/60, 220V/50, 220V/60 110V = (DC)	59	22	39	50

Connectors*

type *	article-nr.	voltage	protective system	LED	usalbe or coil	weight (approx. g)
22mm Standard	90 000 058	0 - 250V, AC, DC	none	no	DA	20
22mm 24V VDR, LED	90 000 059	24V AC und DC	VDR-resistor	yes	DA	20
22mm 230V VDR, LED	90 000 060	230V, AC	VDR-resistor	yes	DA	20
30mm Standard	90 000 061	0 - 250V, AC, DC	none	No	DZ	25

* Coils and connectors must be ordered separately. Please indicate the voltage. More available coil-types on request. (EX-coils, special voltage etc.)