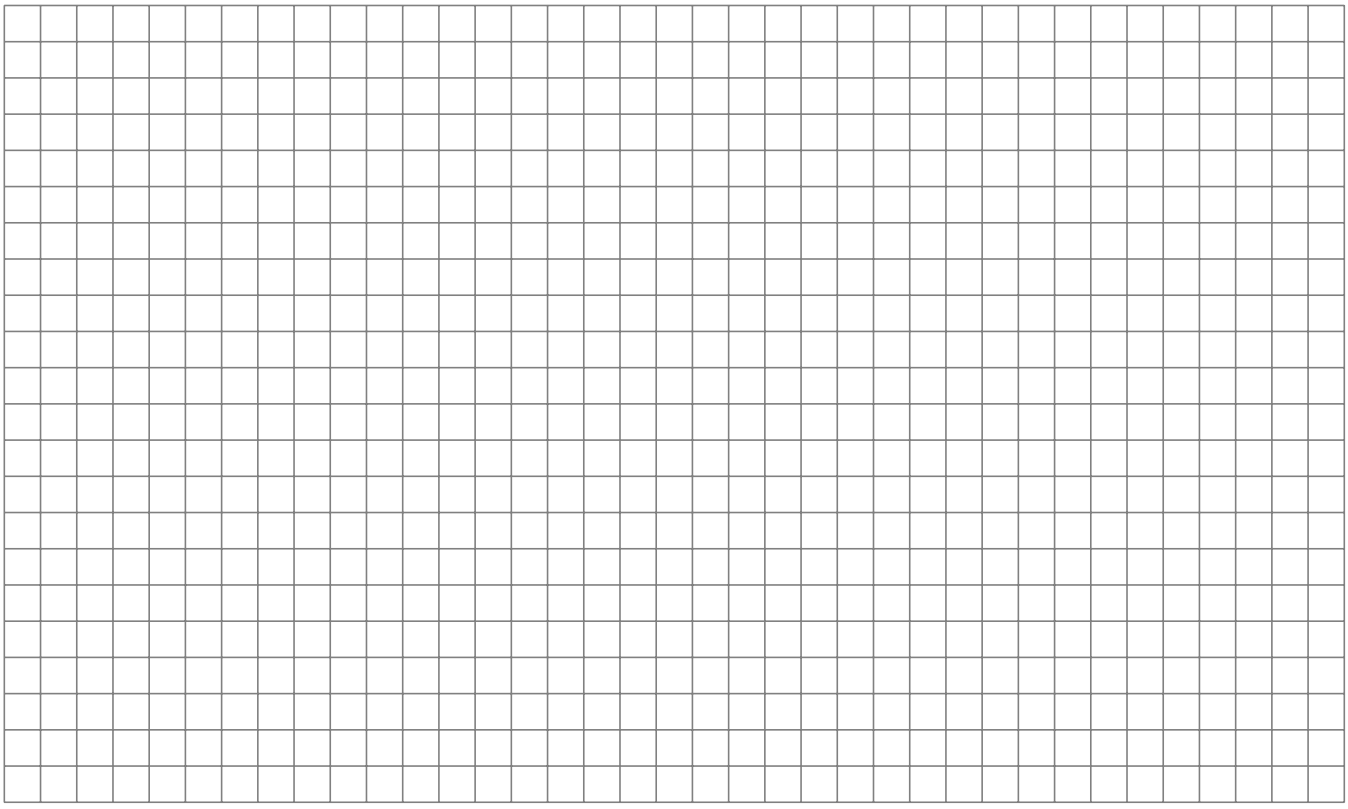
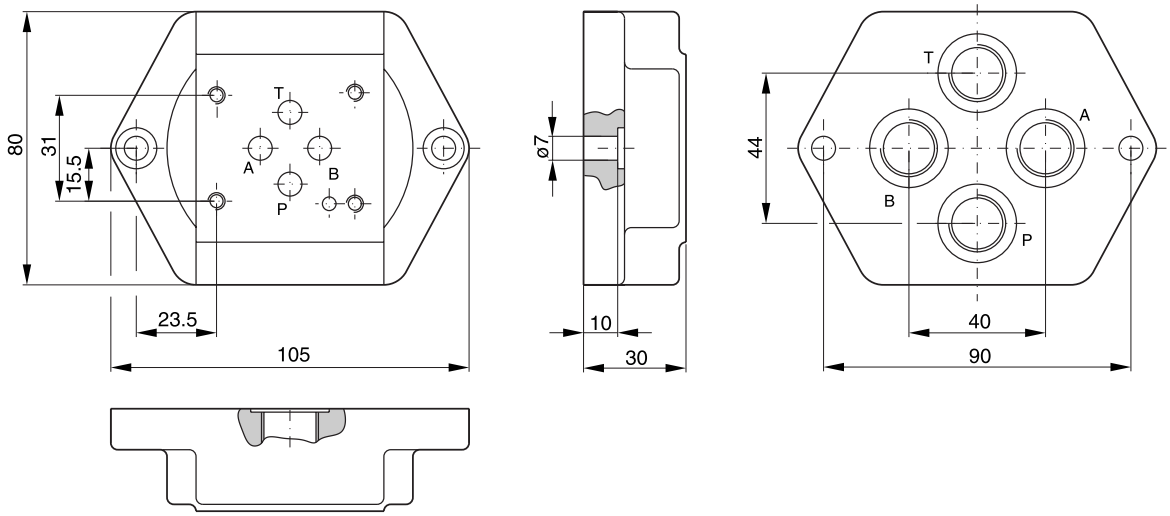
12

Notes

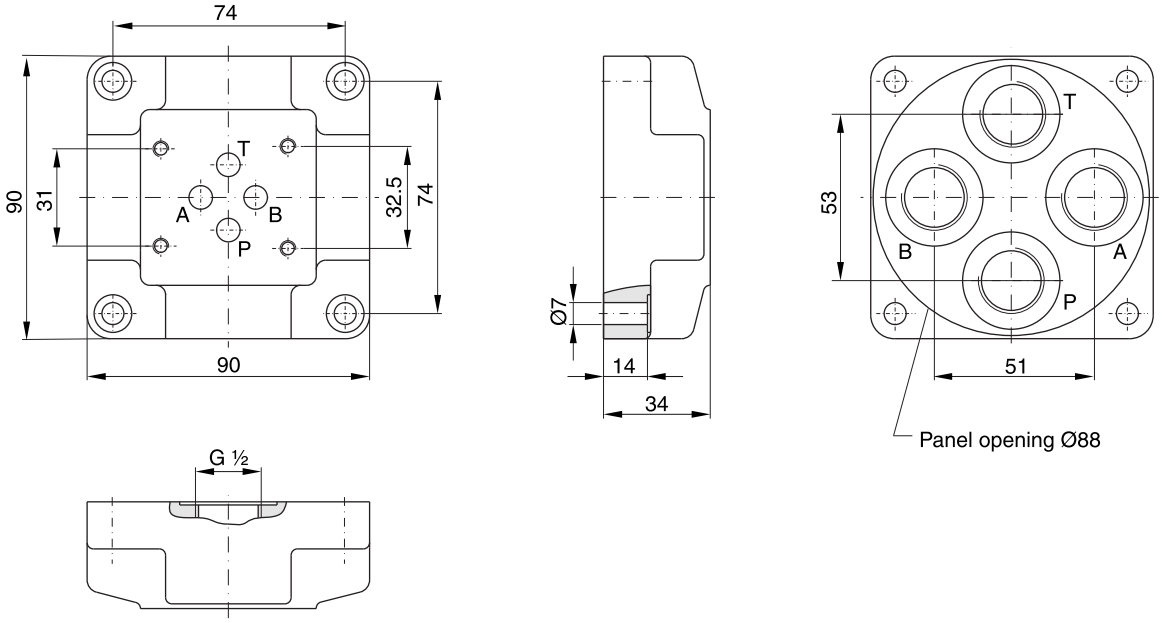


Valve size DIN NG06, CETOP 03, NFPA D03



Ordering code	
SPD 22 B 910	P, A, B, and T = G 1/4
SPD 23 B 910	P, A, B, and T = G 3/8

Valve size DIN NG06, CETOP 03, NFPA D03



Ordering code	
SPD 24 B 910	P, A, B, and T = G 1/2

Bold letters =
Short-term availability

SPD_UK.INDD RH

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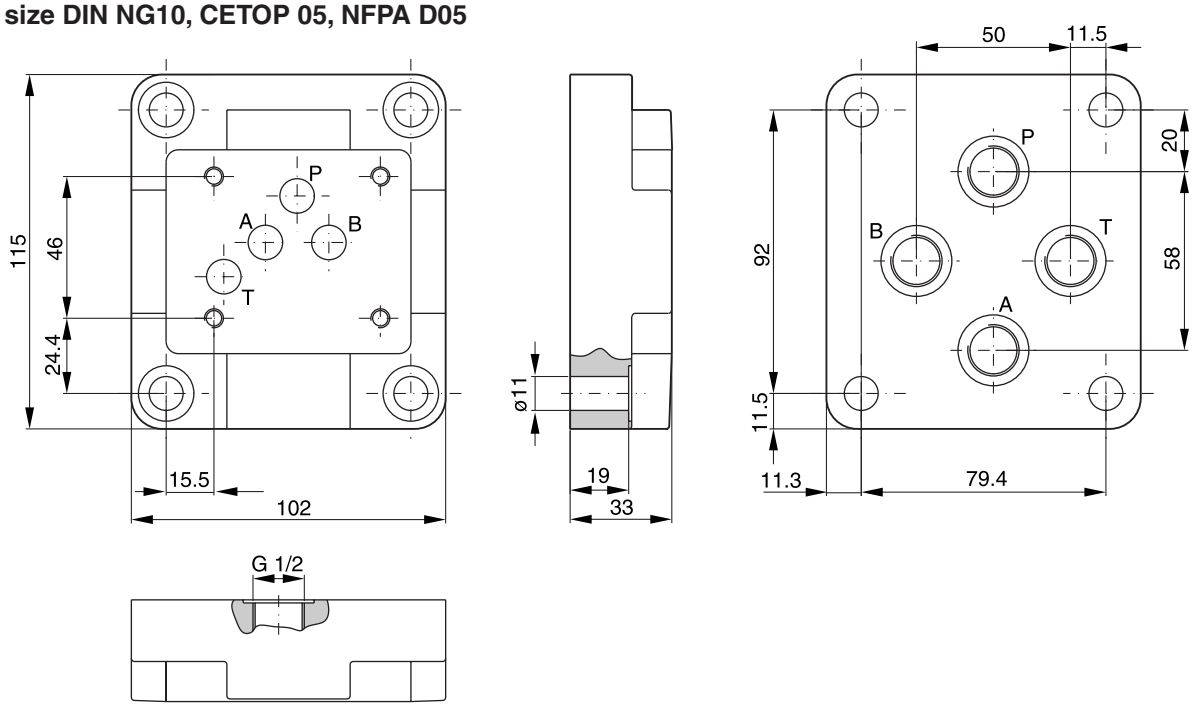
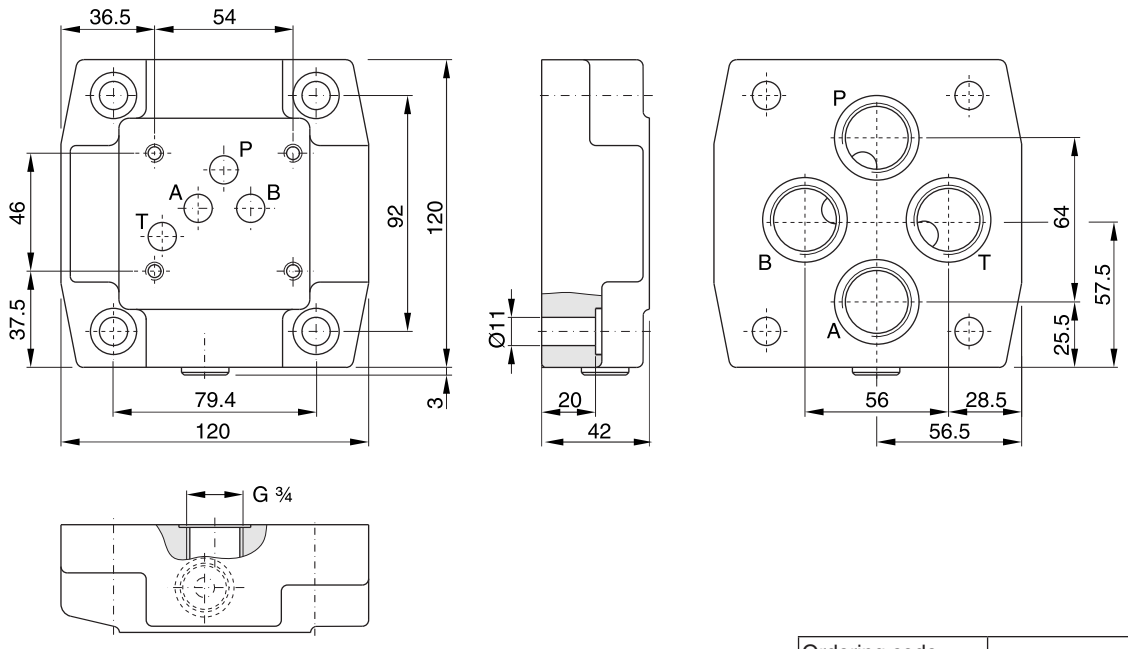
Kaarst, Germany

Valve size DIN NG10, CETOP 05, NFPA D05



Ordering code	
SPD 34 B 920	P, A, B, and T = G 1/2

Valve size DIN NG10, CETOP 05, NFPA D05

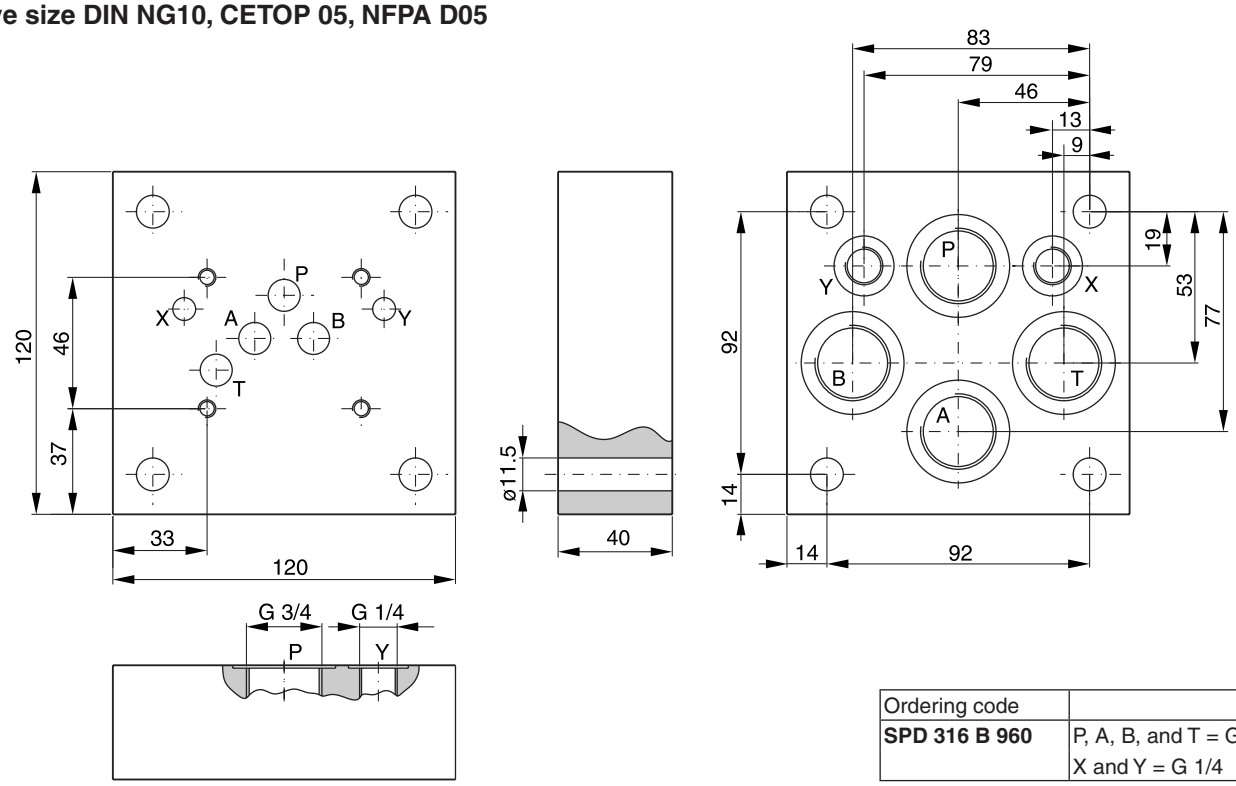


Ordering code	
SPD 36 B 920	P, A, B, and T = G 3/4

Bold letters =
Short-term availability

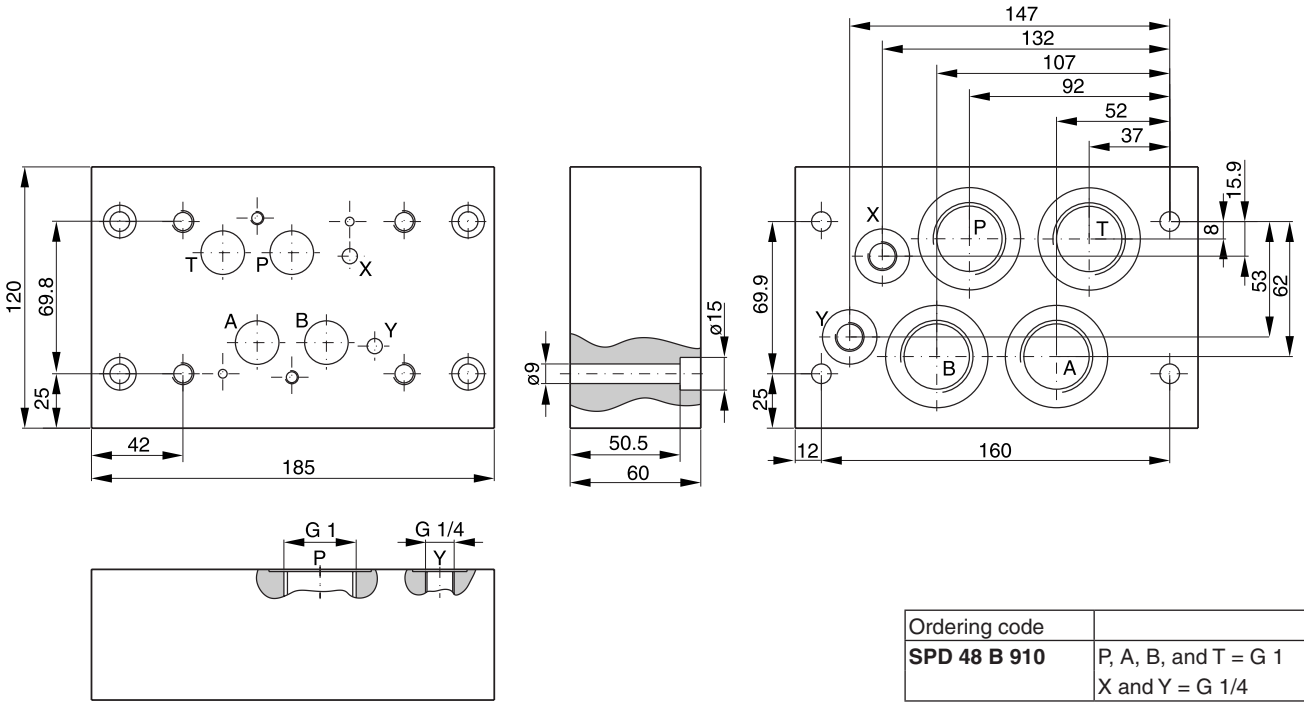
12

Valve size DIN NG10, CETOP 05, NFPA D05



Ordering code	
SPD 316 B 960	P, A, B, and T = G 3/4 X and Y = G 1/4

Valve size DIN NG16, CETOP 07, NFPA D07



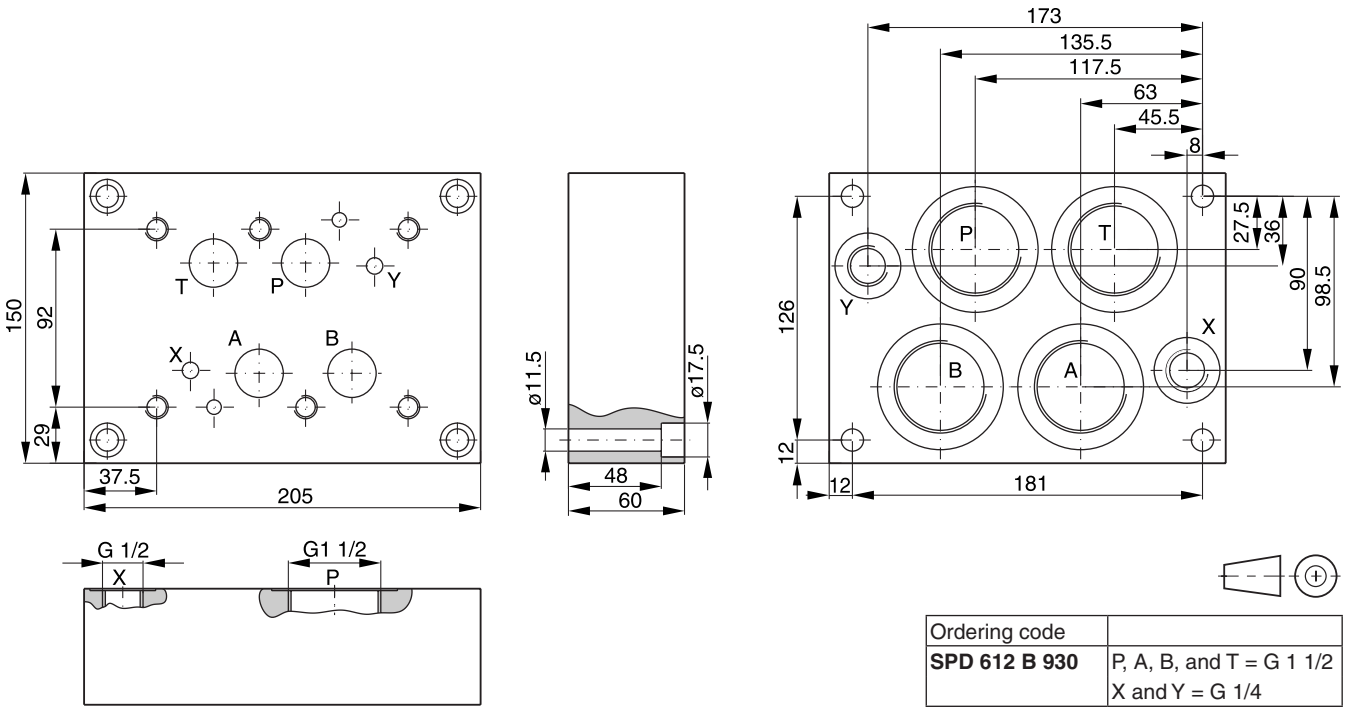
Ordering code	
SPD 48 B 910	P, A, B, and T = G 1 X and Y = G 1/4

Bold letters =
Short-term availability

SPD_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Valve size DIN NG25, CETOP 08, NFPA D08

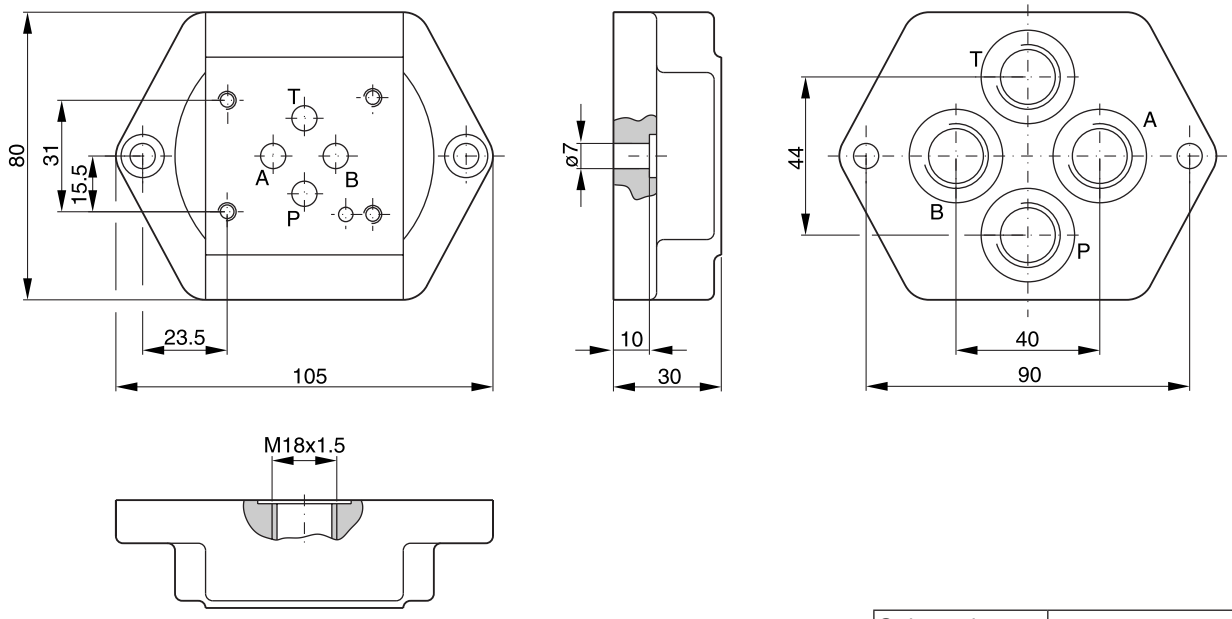


Ordering code	
SPD 612 B 930	P, A, B, and T = G 1 1/2 X and Y = G 1/4

Bold letters =
Short-term availability

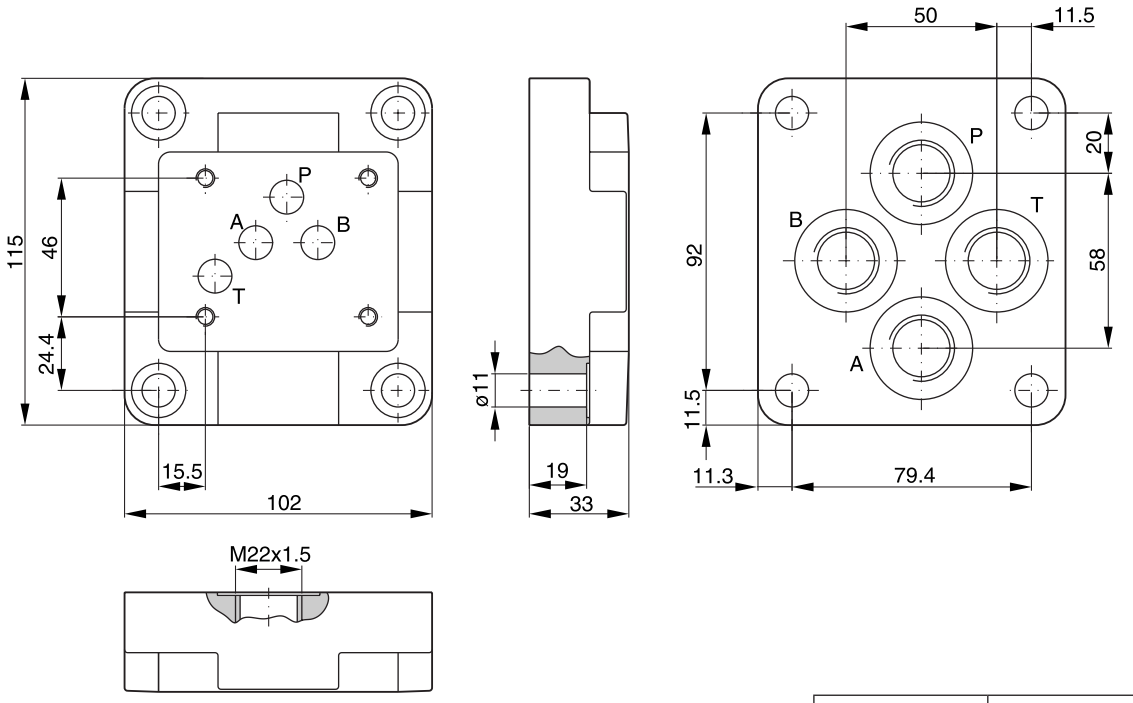
12

Valve size DIN NG06, CETOP 03, NFPA D03



Order. code	
A 064 M	P, A, B, and T = M18x1.5 as per ISO 6149

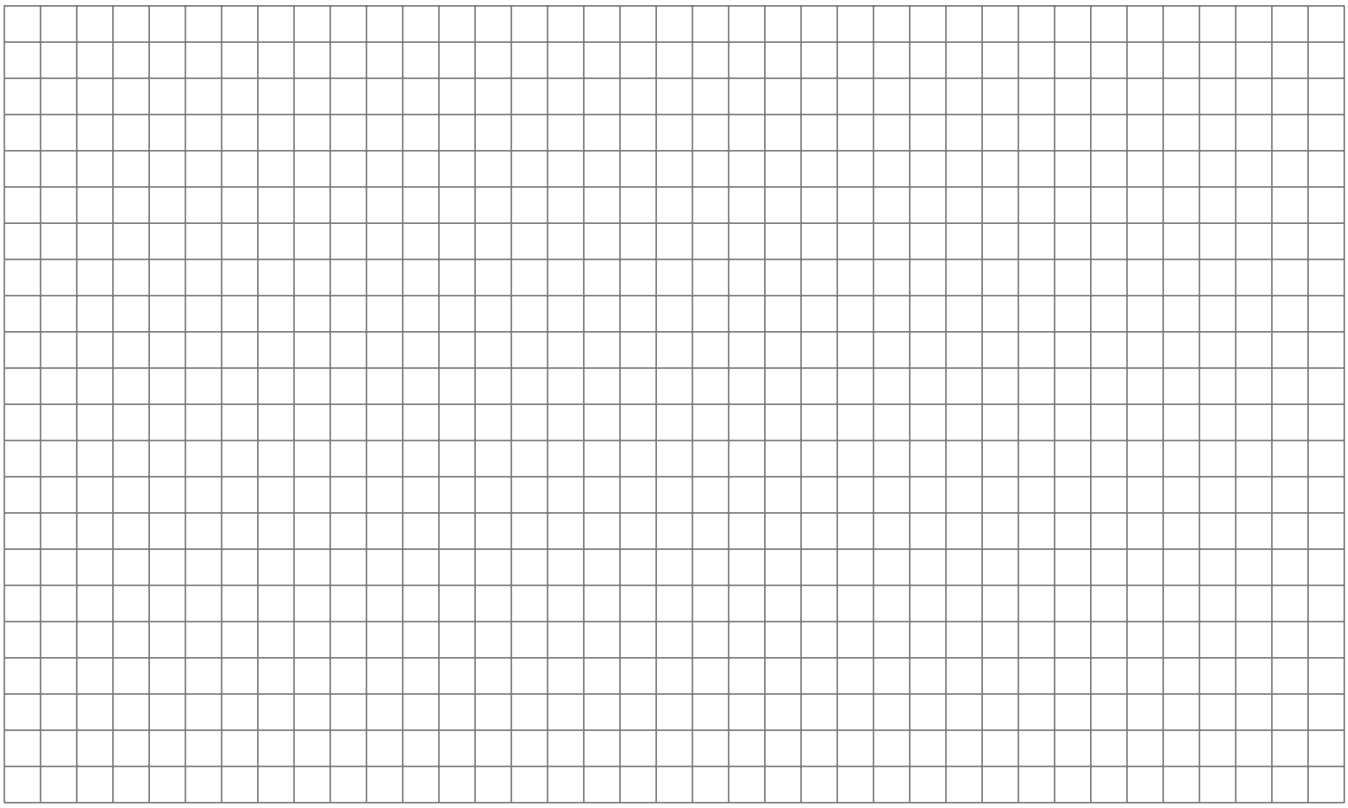
Valve size DIN NG10, CETOP 05, NFPA D05



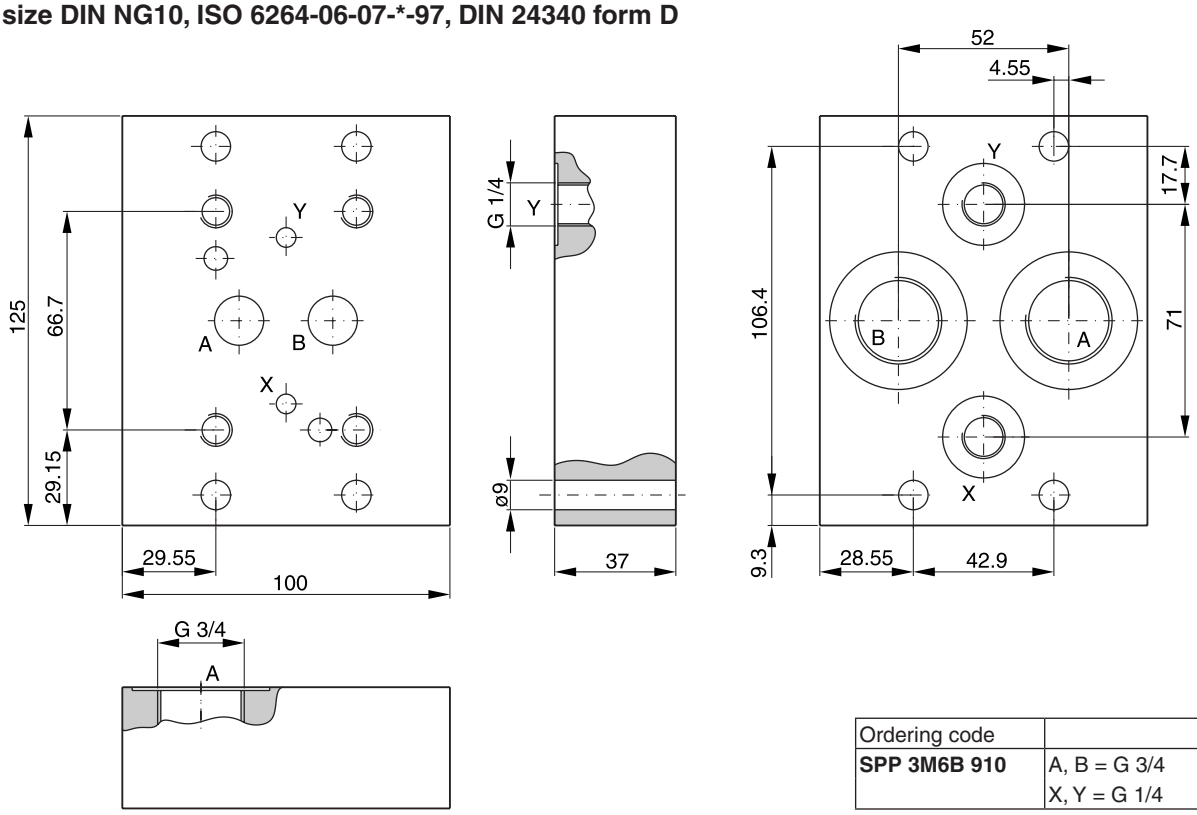
Order. code	
A 104 M	P, A, B, and T = M22x1.5 as per ISO 6149

Bold letters =
Short-term availability

Notes

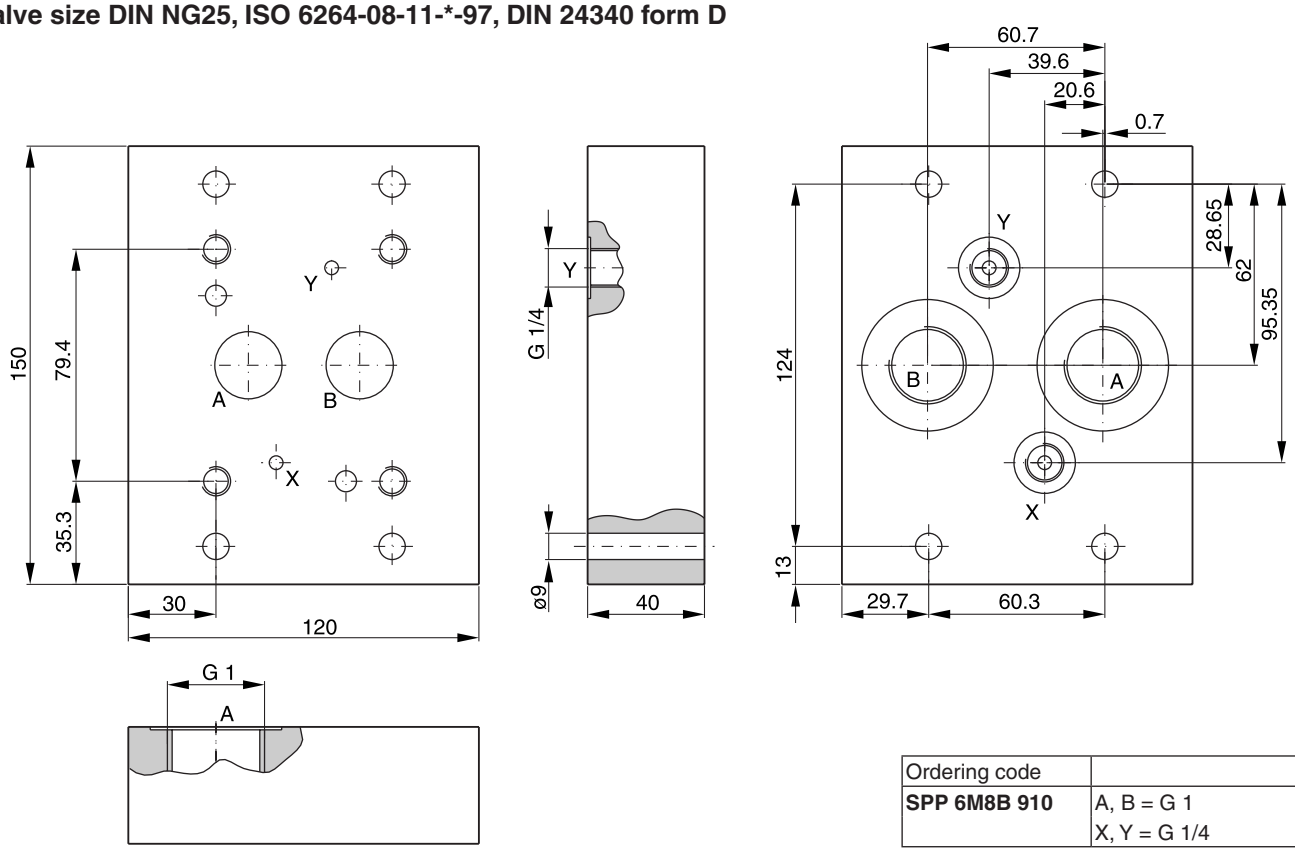


Valve size DIN NG10, ISO 6264-06-07-*-97, DIN 24340 form D



Ordering code	
SPP 3M6B 910	A, B = G 3/4 X, Y = G 1/4

Valve size DIN NG25, ISO 6264-08-11-*-97, DIN 24340 form D



Ordering code	
SPP 6M8B 910	A, B = G 1 X, Y = G 1/4

Bold letters =
Short-term availability

SPP_UK.INDD RH

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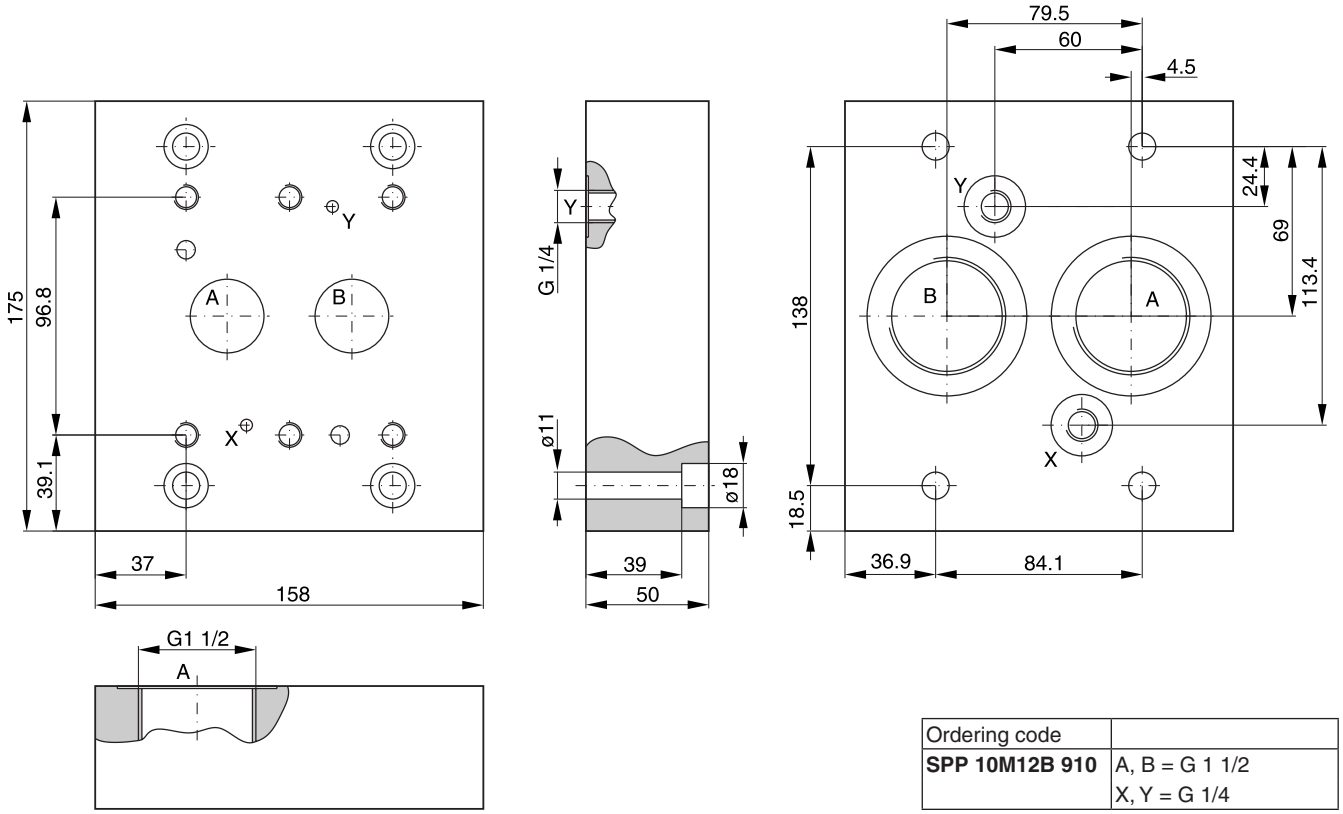
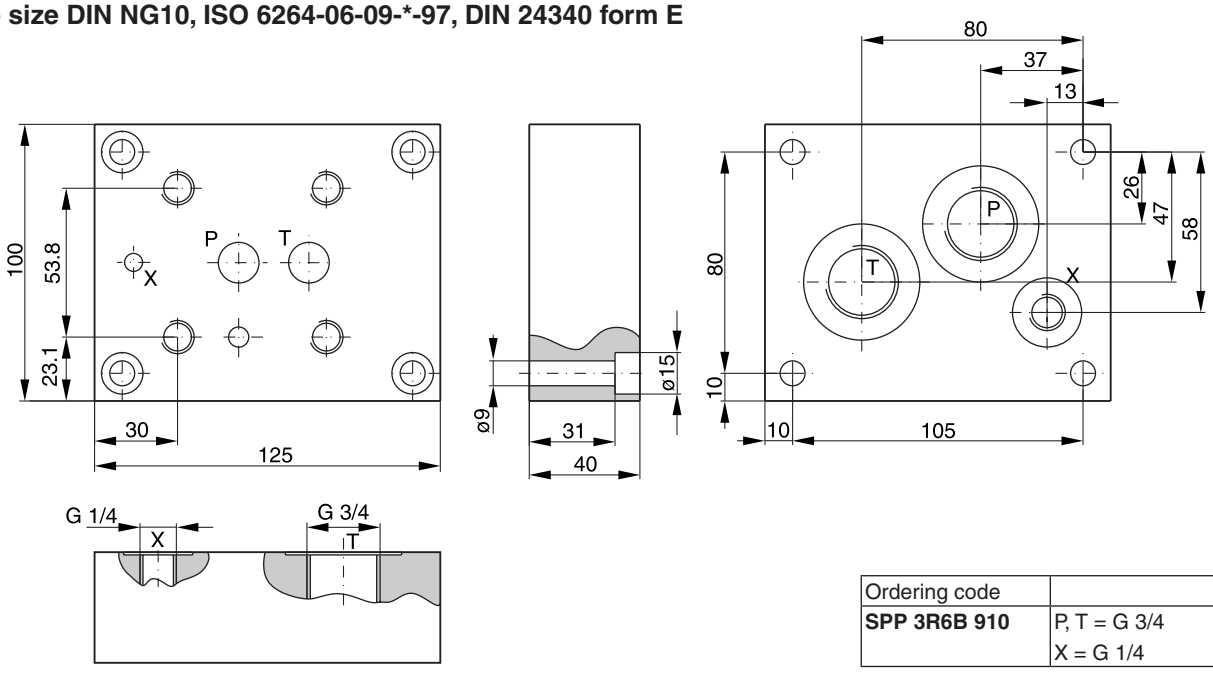
Hydraulic Controls Division
Kaarst, Germany

Valve size DIN NG32, ISO 6264-10-15-*-97, DIN 24340 form D



Ordering code	
SPP 10M12B 910	A, B = G 1 1/2 X, Y = G 1/4

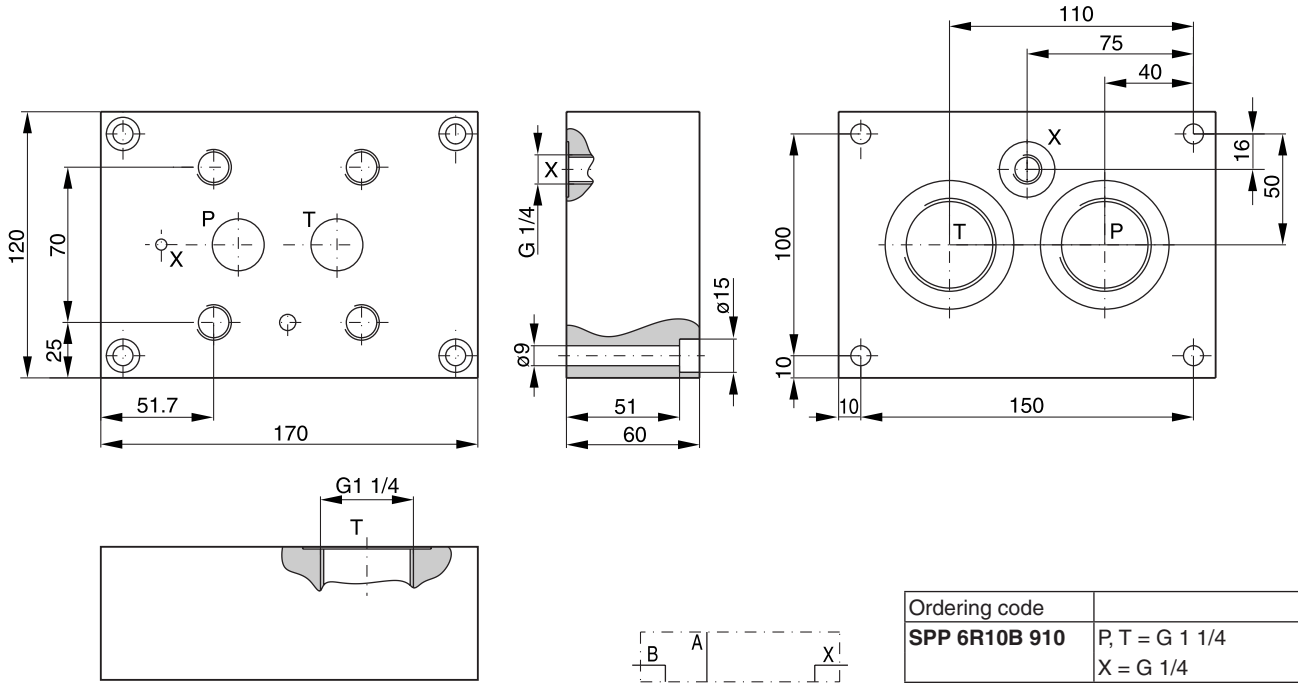
Valve size DIN NG10, ISO 6264-06-09-*-97, DIN 24340 form E



Ordering code	
SPP 3R6B 910	P, T = G 3/4 X = G 1/4

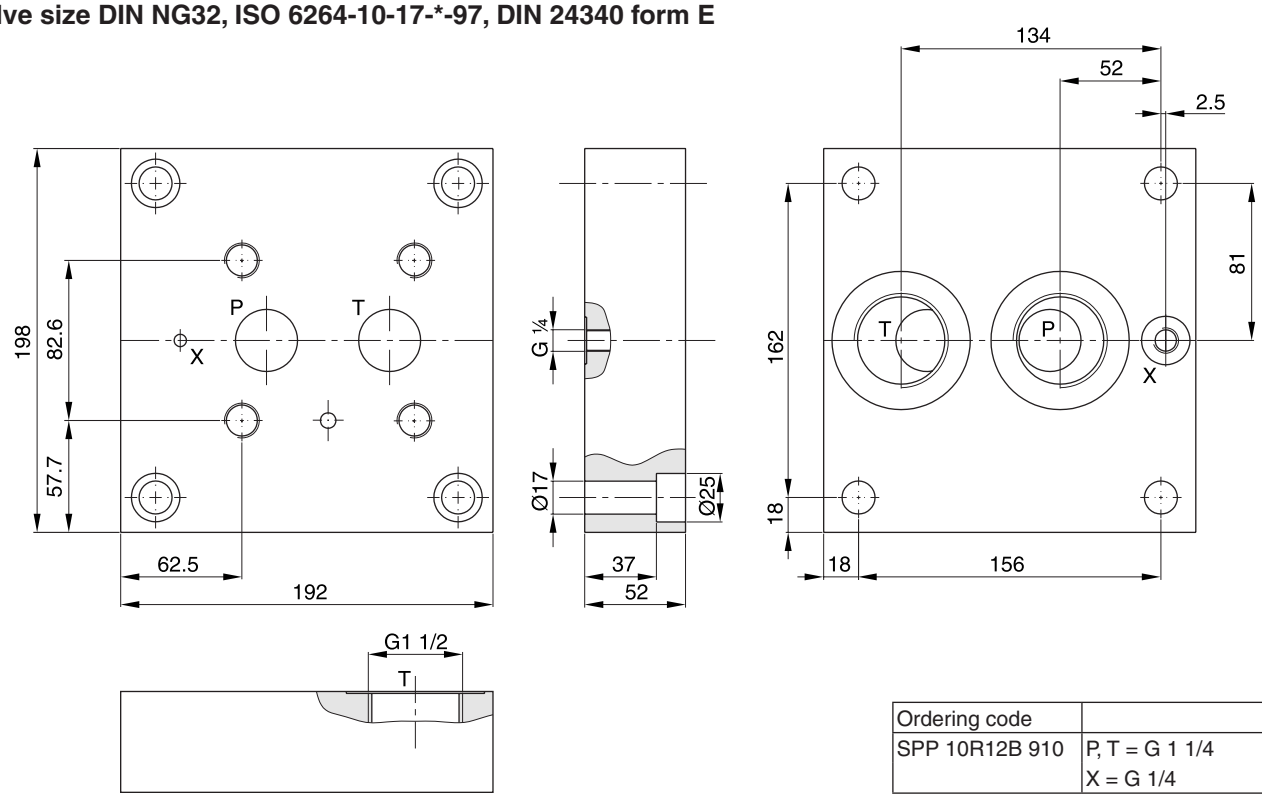
Bold letters =
Short-term availability

Valve size DIN NG25, ISO 6264-08-13-*-97, DIN 24340 form E



Ordering code	
SPP 6R10B 910	P, T = G 1 1/4 X = G 1/4

Valve size DIN NG32, ISO 6264-10-17-*-97, DIN 24340 form E



Ordering code	
SPP 10R12B 910	P, T = G 1 1/4 X = G 1/4

12

Bold letters =
Short-term availability

SPP_UK.INDD RH

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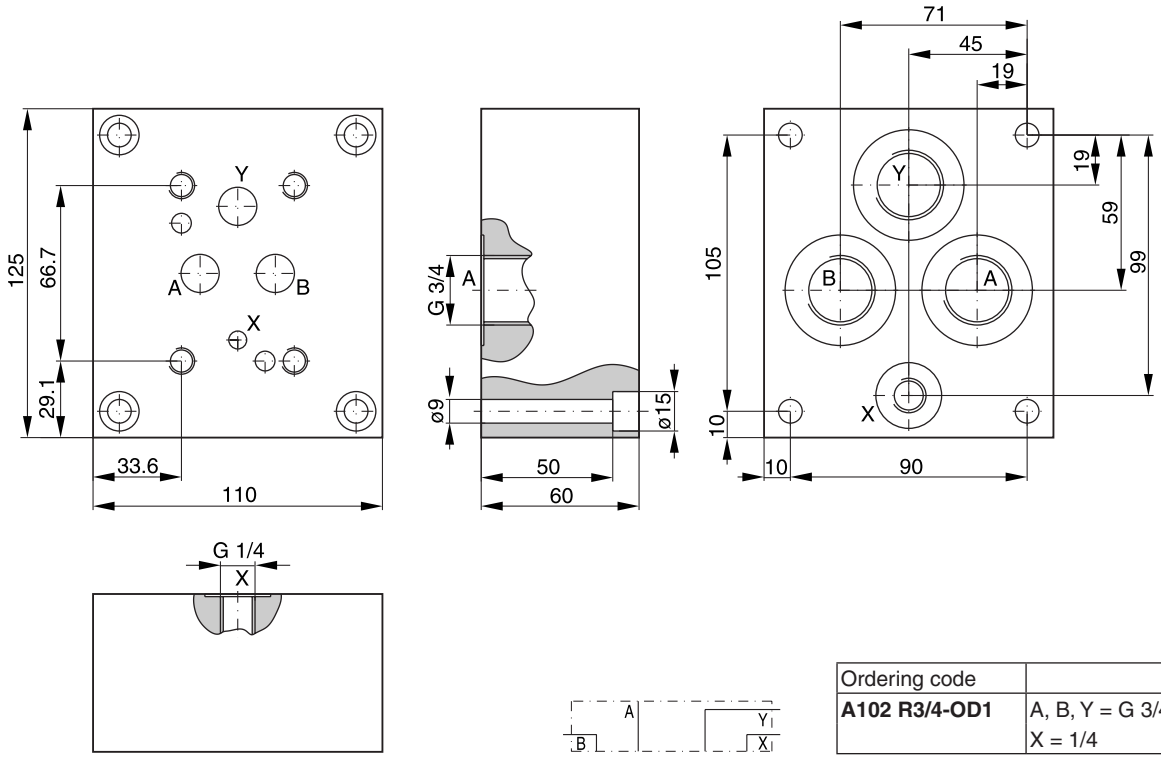
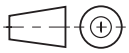
Hydraulic Controls Division
Kaarst, Germany

Valve size DIN NG10, for pressure valves VB and VM



Ordering code	
A102 R3/4-OD1	A, B, Y = G 3/4 X = 1/4

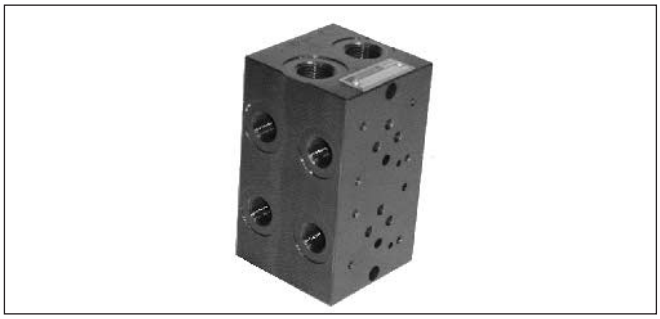
Bold letters =
Short-term availability

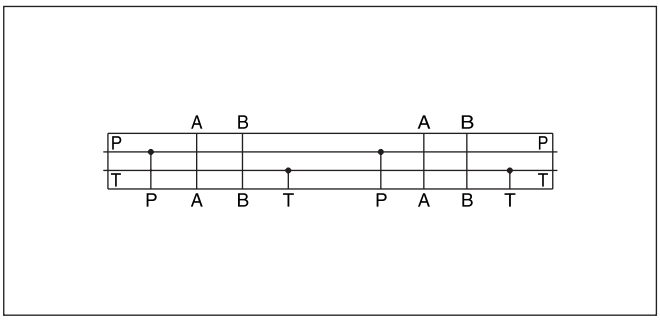


12

Manifolds are used to save space when connecting several directional control valves to a common pressure and return line.

Diverse switching arrangements are possible in combination with sandwich and directional control valves. Plugs without designations must not be removed.





Features

- Very low pressure drop due to large drilling parameters
- P- and T-ports on both faces
- All connection ports designated

Technical data

Interface		DIN 24340, Form A, CETOP, ISO
Mounting position		unrestricted (valve axis preferably horizontal)
Working pressure	[bar]	max. 350

Ordering code

MSP				B		9	
Multiple subplate, standard	Stations	Nominal size	Port size	BSPP Port thread	Port location	Metric fastening screws	Design series

Code	Stations
1	**1**
2	**2**
3	**3**
4	**4**
5	**5**
6	**6**
7	**7**
8	**8**

Code	Size
D2	**NG06 / CETOP 03**
D3	**NG10 / CETOP 05**

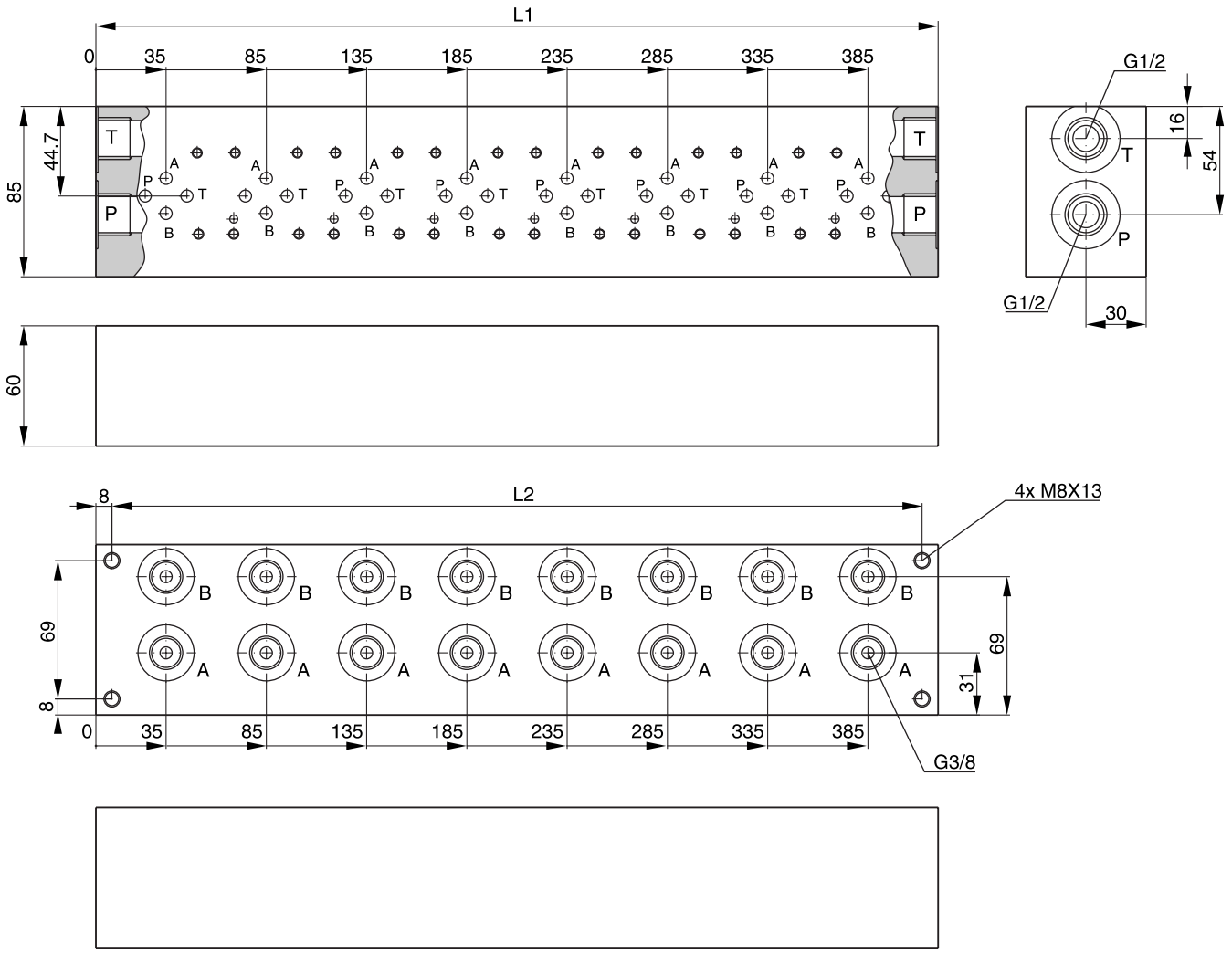
Code	Design series
10	**CETOP 03**
30	**CETOP 05**

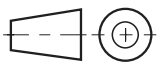
Code	Port location
-	**A + B rear**
A	**A + B side**

Code	Port size
3	**CETOP 03** **A + B = G 3/8"** **P + T = G 1/2"**
4	**CETOP 05** **A + B = G 1/2"** **P = G 3/4"** **T = G1"**

Bold letters =
Short-term availability

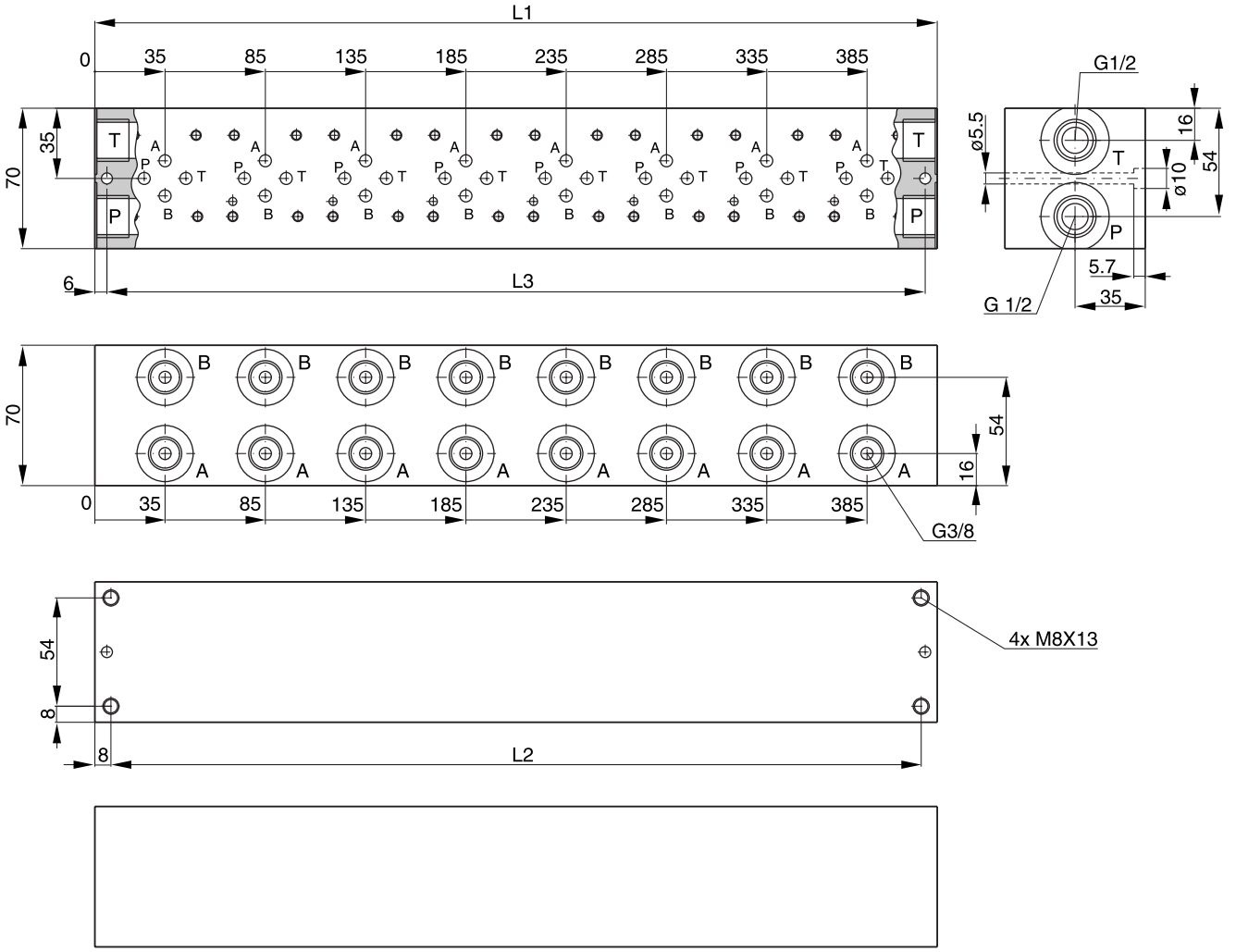
MSP*D23 B910





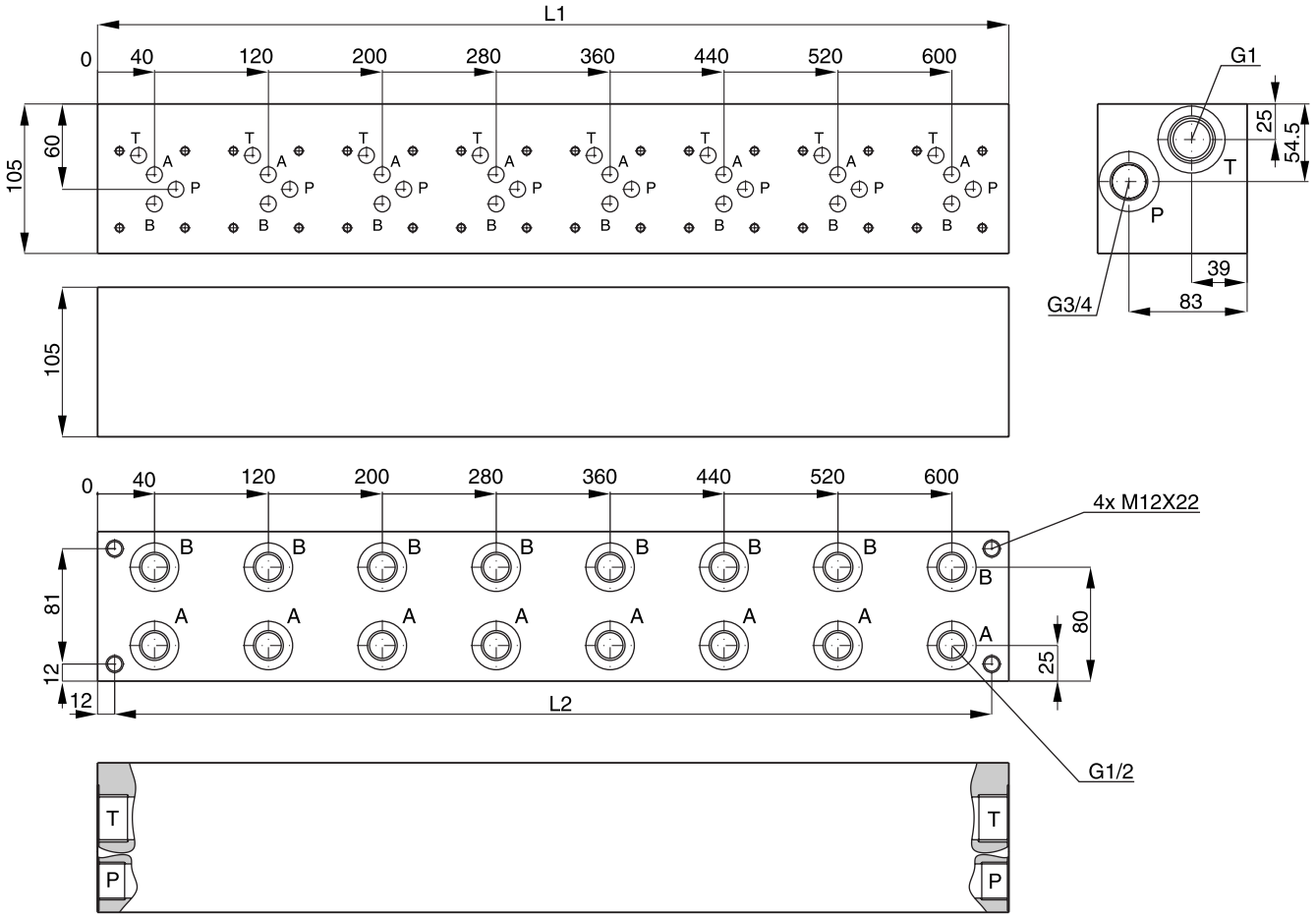
Code	Nominal size	Stations	L1 [mm]	L2 [mm]	Port		Test points	Weight [kg]
					P, T	A, B		
MSP1 D23 B910	NG06 CETOP 03	1	70	54	G1/2	G3/8	—	2.4
MSP2 D23 B910		2	120	104				4.0
MSP3 D23 B910		3	170	154				5.8
MSP4 D23 B910		4	220	204				7.5
MSP5 D23 B910		5	270	254				9.2
MSP6 D23 B910		6	320	304				10.9
MSP7 D23 B910		7	370	354				12.6
MSP8 D23 B910		8	420	404				14.3

MSP*D23 BA910



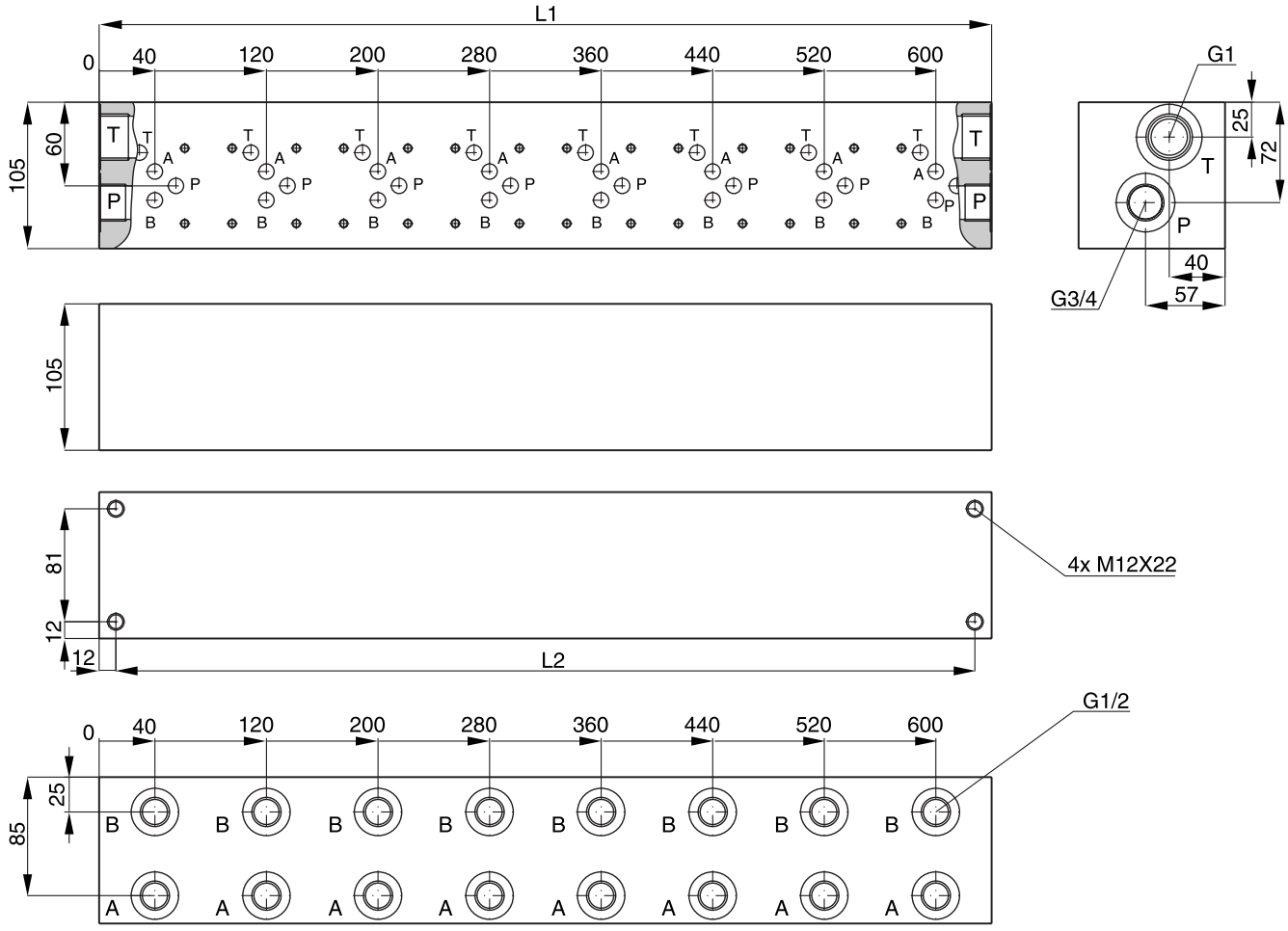
Code	Nominal size	Stations	L1 [mm]	L2 [mm]	L3 [mm]	Port		Test points	Weight [kg]
						P, T	A, B		
MSP1 D23 BA910	NG06 CETOP 3	1	70	54	58	G1/2	G3/8	—	2.3
MSP2 D23 BA910		2	120	104	108				3.9
MSP3 D23 BA910		3	170	154	158				5.5
MSP4 D23 BA910		4	220	204	208				7.2
MSP5 D23 BA910		5	270	254	258				8.8
MSP6 D23 BA910		6	320	304	308				10.5
MSP7 D23 BA910		7	370	354	358				12.1
MSP8 D23 BA910		8	420	404	408				13.7

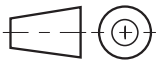
MSP*D34 B930



Code	Nominal size	Stations	L1 [mm]	L2 [mm]	Port			Test points	Weight [kg]
					P	T	A, B		
MSP1 D34 B930	NG10 CETOP 5	1	80	56	G3/4	G1	G1/2	—	5.9
MSP2 D34 B930		2	160	136					11.8
MSP3 D34 B930		3	240	216					17.7
MSP4 D34 B930		4	320	296					23.5
MSP5 D34 B930		5	400	376					29.4
MSP6 D34 B930		6	480	456					35.3
MSP7 D34 B930		7	560	536					41.2
MSP8 D34 B930		8	640	616					47.1

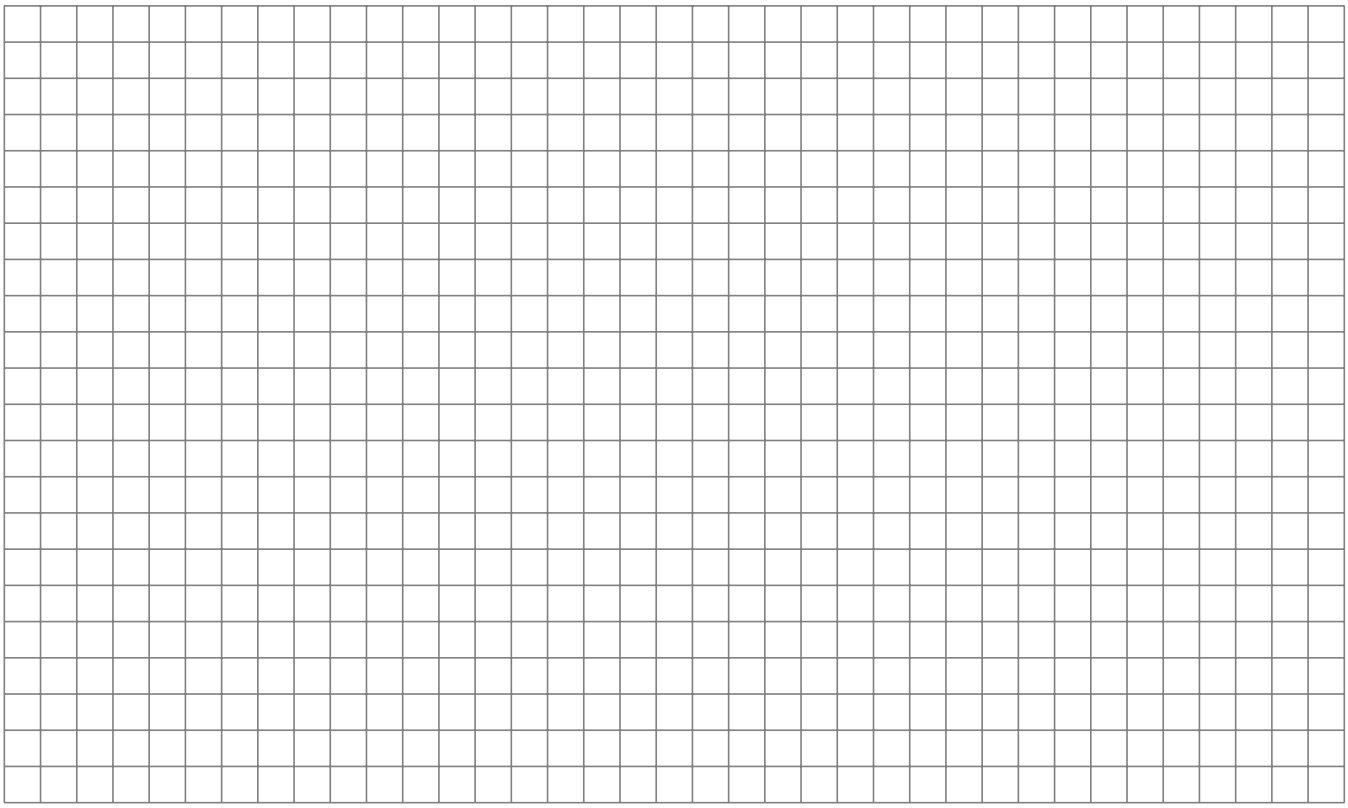
MSP*D34 BA930





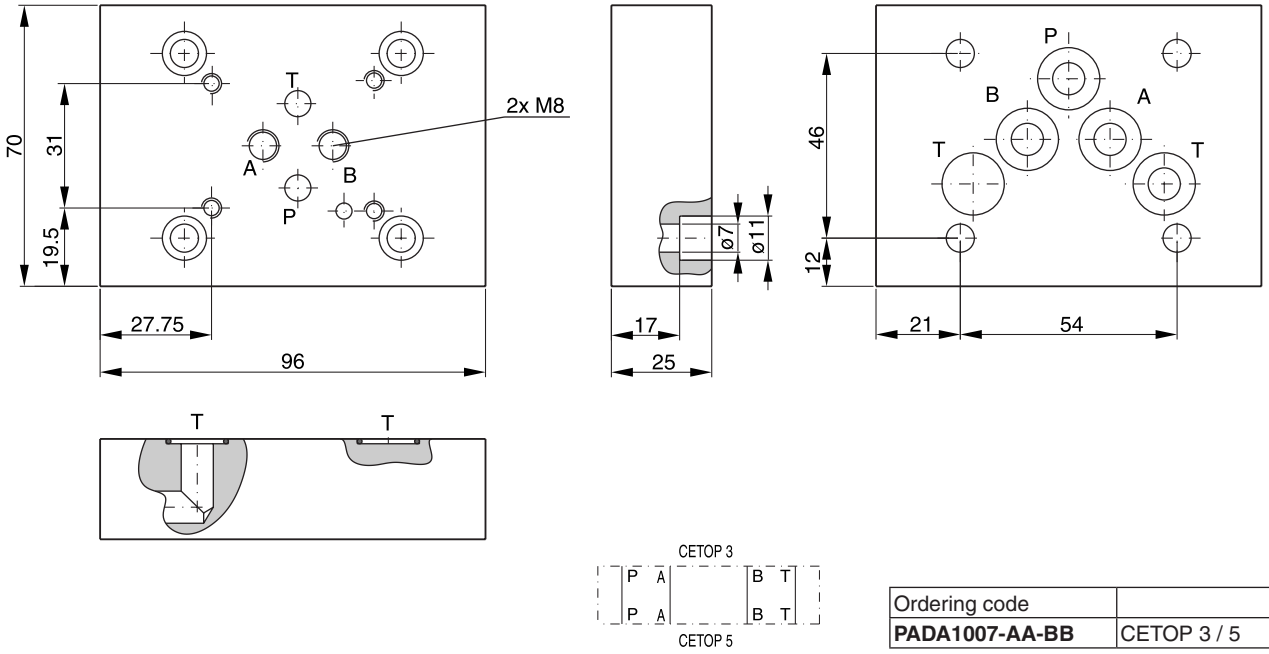
Code	Nominal size	Stations	L1 [mm]	L2 [mm]	Port			Test points	Weight [kg]
					P	T	A, B		
MSP1 D34 BA930	NG10 CETOP 5	1	80	56	G3/4	G1	G1/2	—	5.9
MSP2 D34 BA930		2	160	136					11.8
MSP3 D34 BA930		3	240	216					17.7
MSP4 D34 BA930		4	320	296					23.5
MSP5 D34 BA930		5	400	376					29.4
MSP6 D34 BA930		6	480	456					35.3
MSP7 D34 BA930		7	560	536					41.2
MSP8 D34 BA930		8	640	616					47.1

Notes



PADA

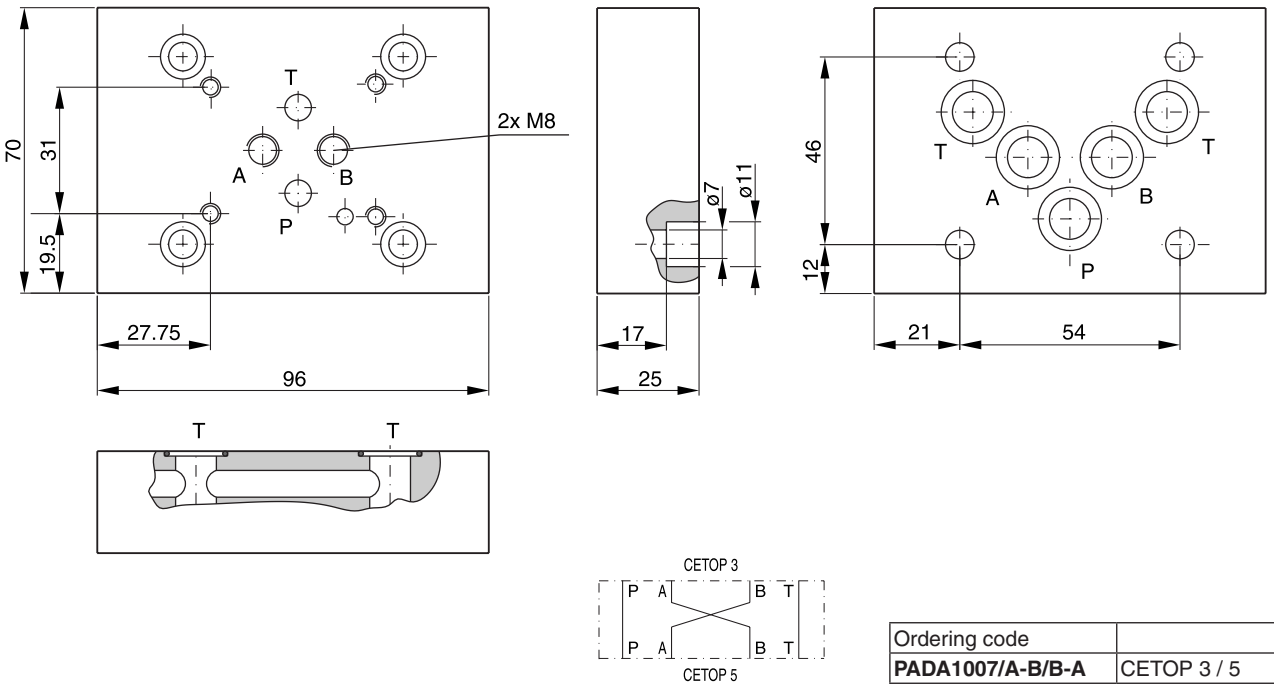
Adaptor plate PADA 1007-AA-BB, CETOP 3/5



Ordering code	
PADA1007-AA-BB	CETOP 3 / 5

O-rings included in delivery.

Adaptor plate PADA 1007/A-B/B-A, CETOP 3/5



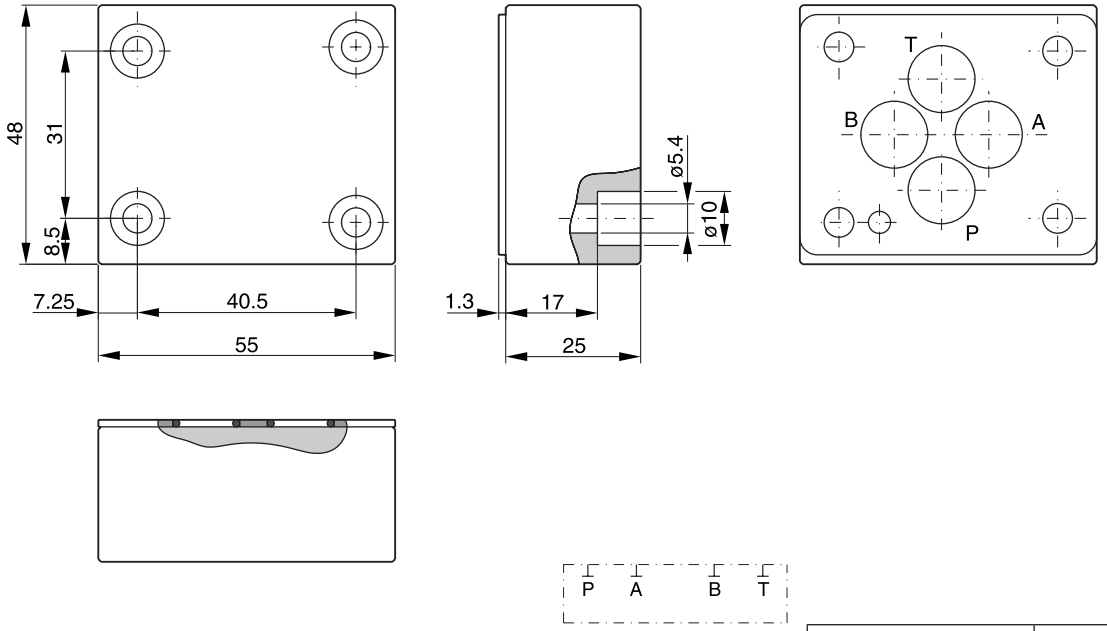
Ordering code	
PADA1007/A-B/B-A	CETOP 3 / 5

O-rings included in delivery.

Bold letters =
Short-term availability

D51

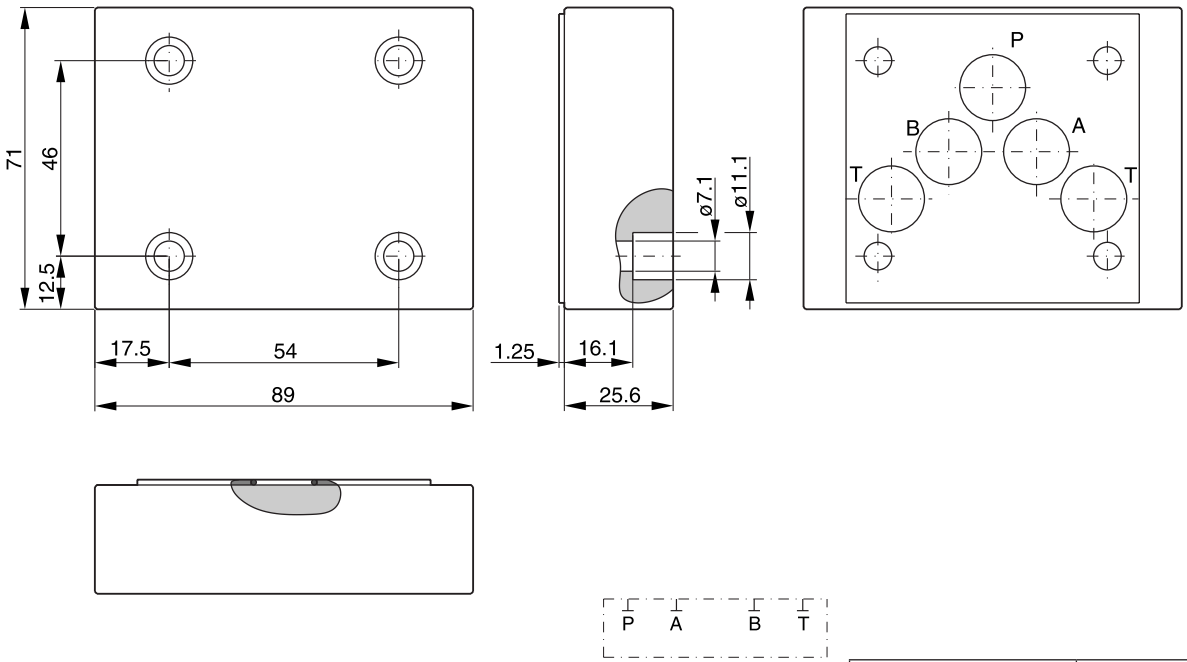
Cover plate D51VP071C, CETOP 3



Ordering code	
D51VP071C	CETOP 3

O-rings and O-ring plate included in delivery.

Cover plate D51VP101D, CETOP 5



Ordering code	
D51VP101D	CETOP 5

O-rings and O-ring plate included in delivery.

Bold letters =
Short-term availability

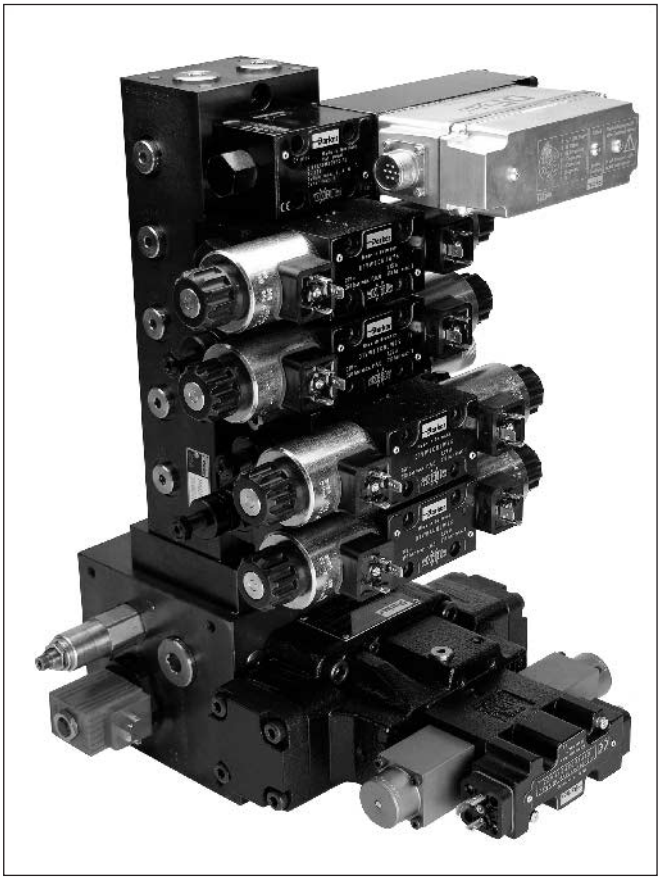
Due to the modular system, multi-station manifolds enable the hydraulic specialists to set up equipment in a very comfortable way.

These manifolds can be combined to up to thirteen stations of CETOP 3.

The multi-station manifold can be connected to any type of manifold by the adaptor AP06SA.

Features

- Very low pressure drop due to large drilling parameters
- P- and T-ports on both faces
- All connection ports designated

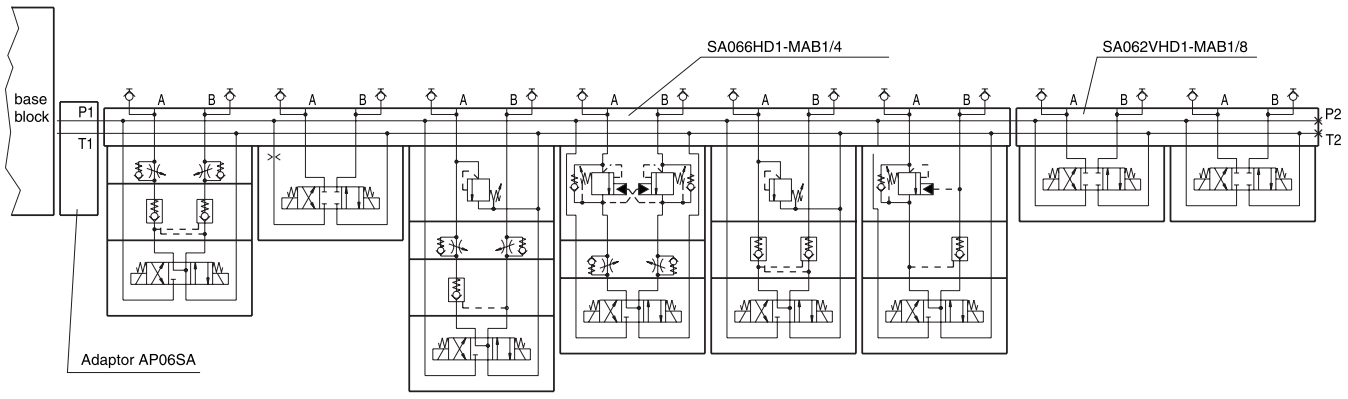


Exemplary arrangement of multi-station manifolds and valve equipment

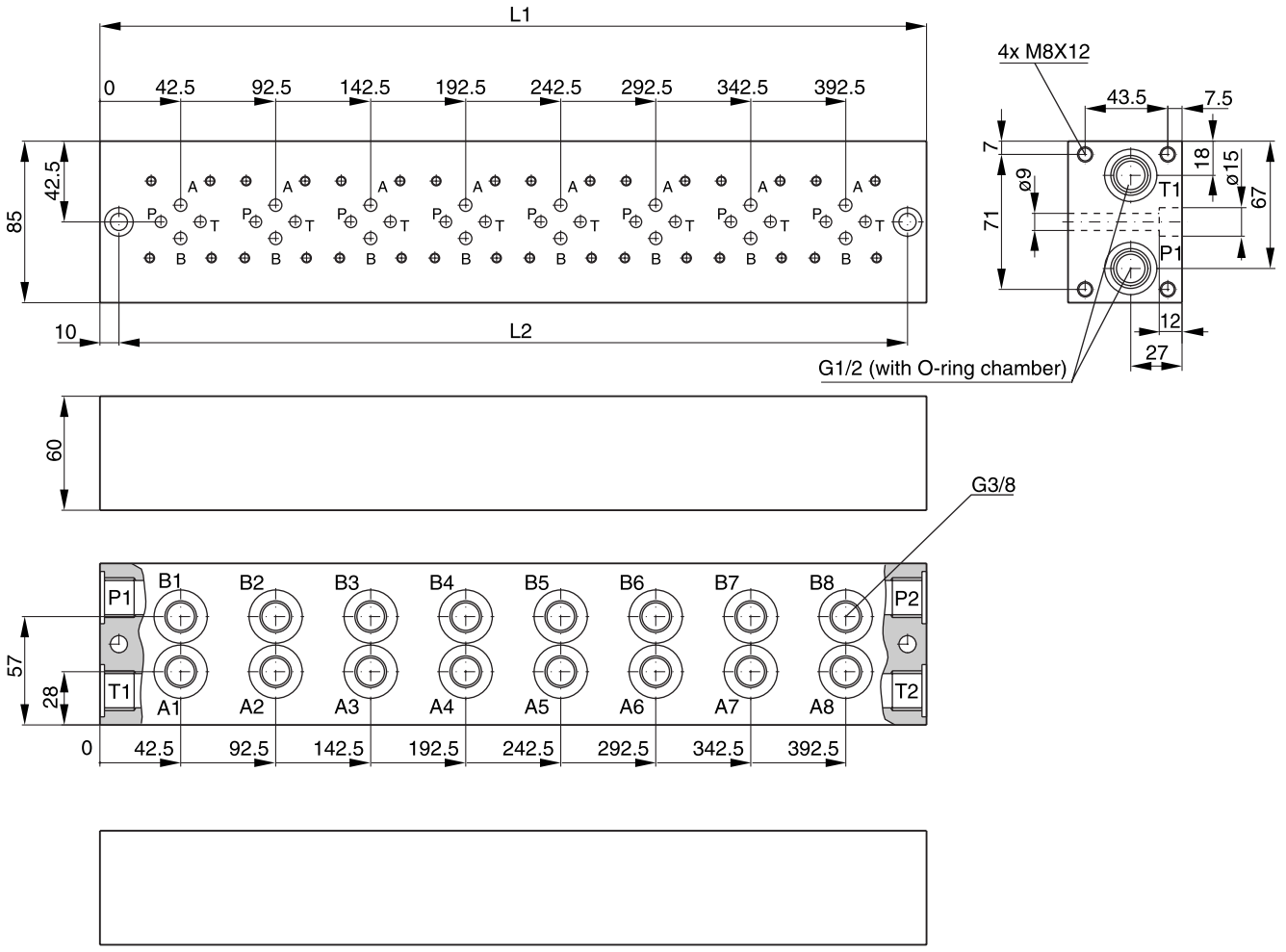
Technical data

Interface		DIN 24340, Form A, CETOP, ISO
Mounting position		unrestricted (valve axis preferably horizontal)
Working pressure	[bar]	max. 350

Typical example of a multi-station manifold modular system

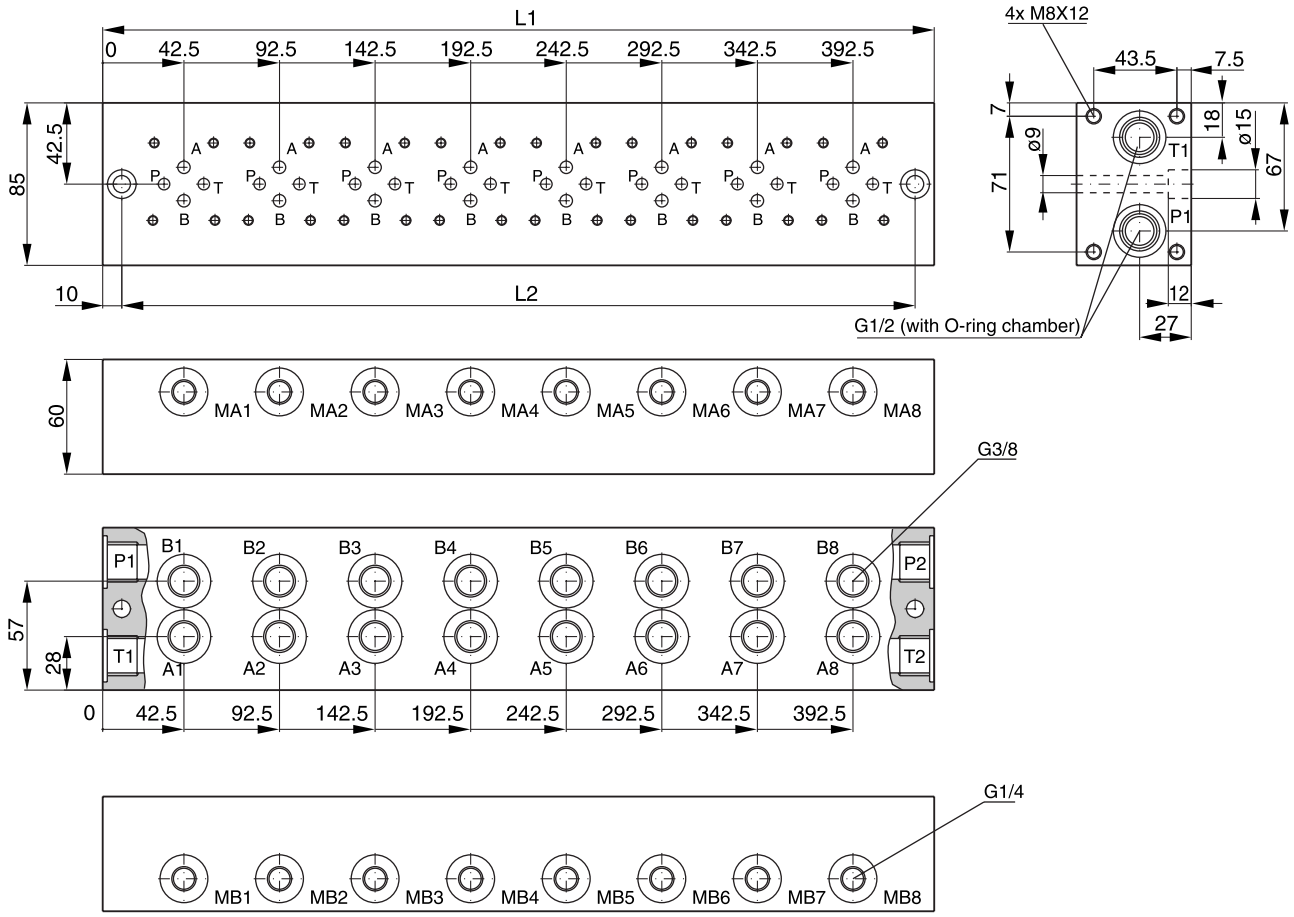


SA 06* HD1



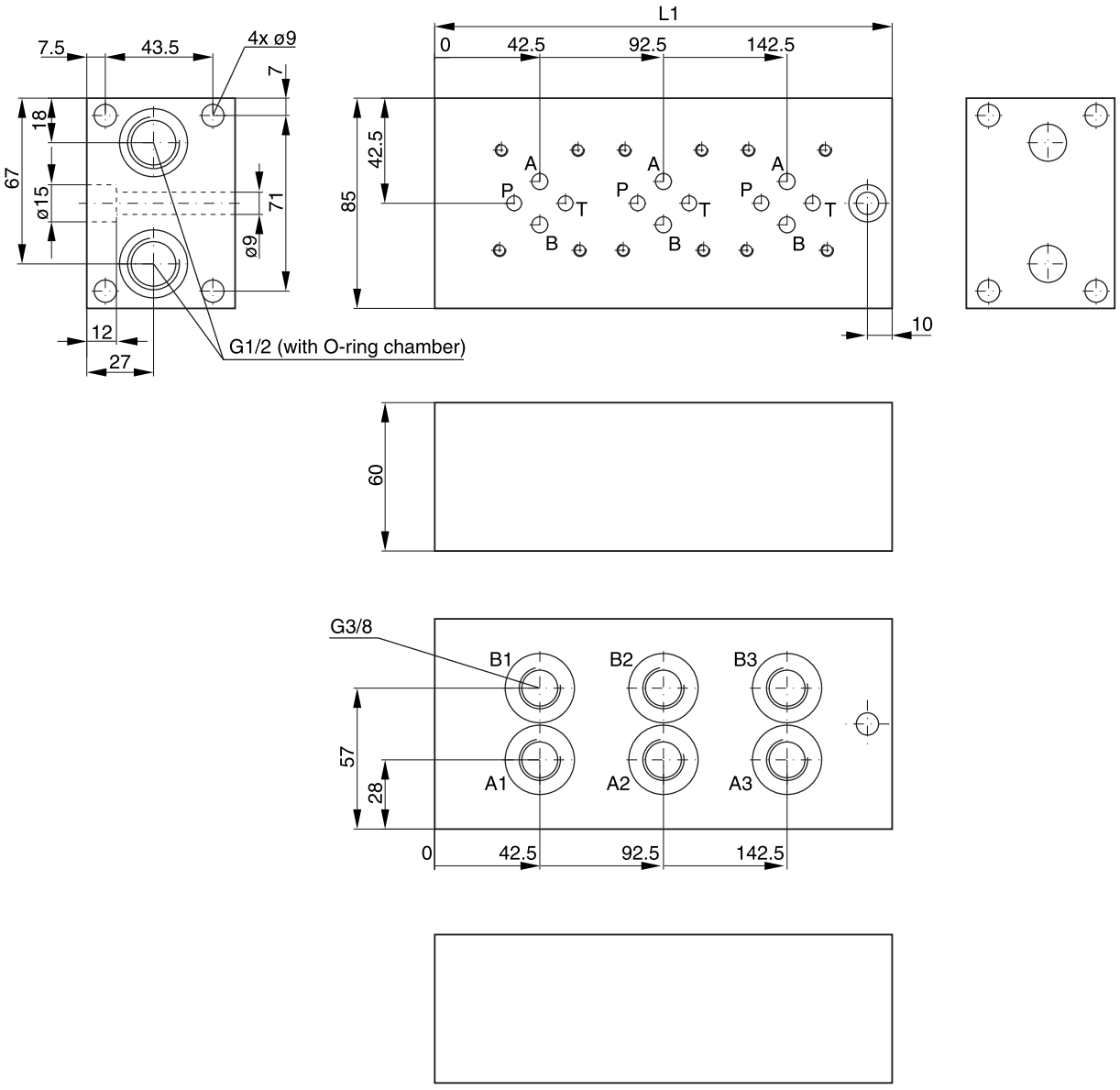
Ordering code	Nominal size	Stations	L1 [mm]	L2 [mm]	Port		Test points	Weight [kg]
					P, T	A, B		
SA 062 HD1	NG06 CETOP 3	2	135	115	G1/2	G3/8	—	4.6
SA 063 HD1		3	185	165				6.3
SA 064 HD1		4	235	215				8.0
SA 065 HD1		5	285	265				9.7
SA 066 HD1		6	335	315				11.4
SA 067 HD1		7	385	365				13.1
SA 068 HD1		8	435	415				14.8
SA 069 HD1		9	485	465				16.5
SA 0610 HD1		10	535	515				18.2

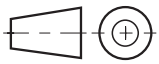
SA 06* HD1-MAB1/4



Ordering code	Nominal size	Stations	L1 [mm]	L2 [mm]	Port		Test points	Weight [kg]
					P, T	A, B		
SA 062 HD1-MAB¼	NG06 CETOP 3	2	135	115	G1/2	G3/8	G1/4	4.6
SA 063 HD1-MAB¼		3	185	165				6.3
SA 064 HD1-MAB¼		4	235	215				8.0
SA 065 HD1-MAB¼		5	285	265				9.7
SA 066 HD1-MAB¼		6	335	315				11.4
SA 067 HD1-MAB¼		7	385	365				13.1
SA 068 HD1-MAB¼		8	435	415				14.8
SA 069 HD1-MAB¼		9	485	465				16.5
SA 0610 HD1-MAB¼		10	535	515				18.2

SA 06* VHD1





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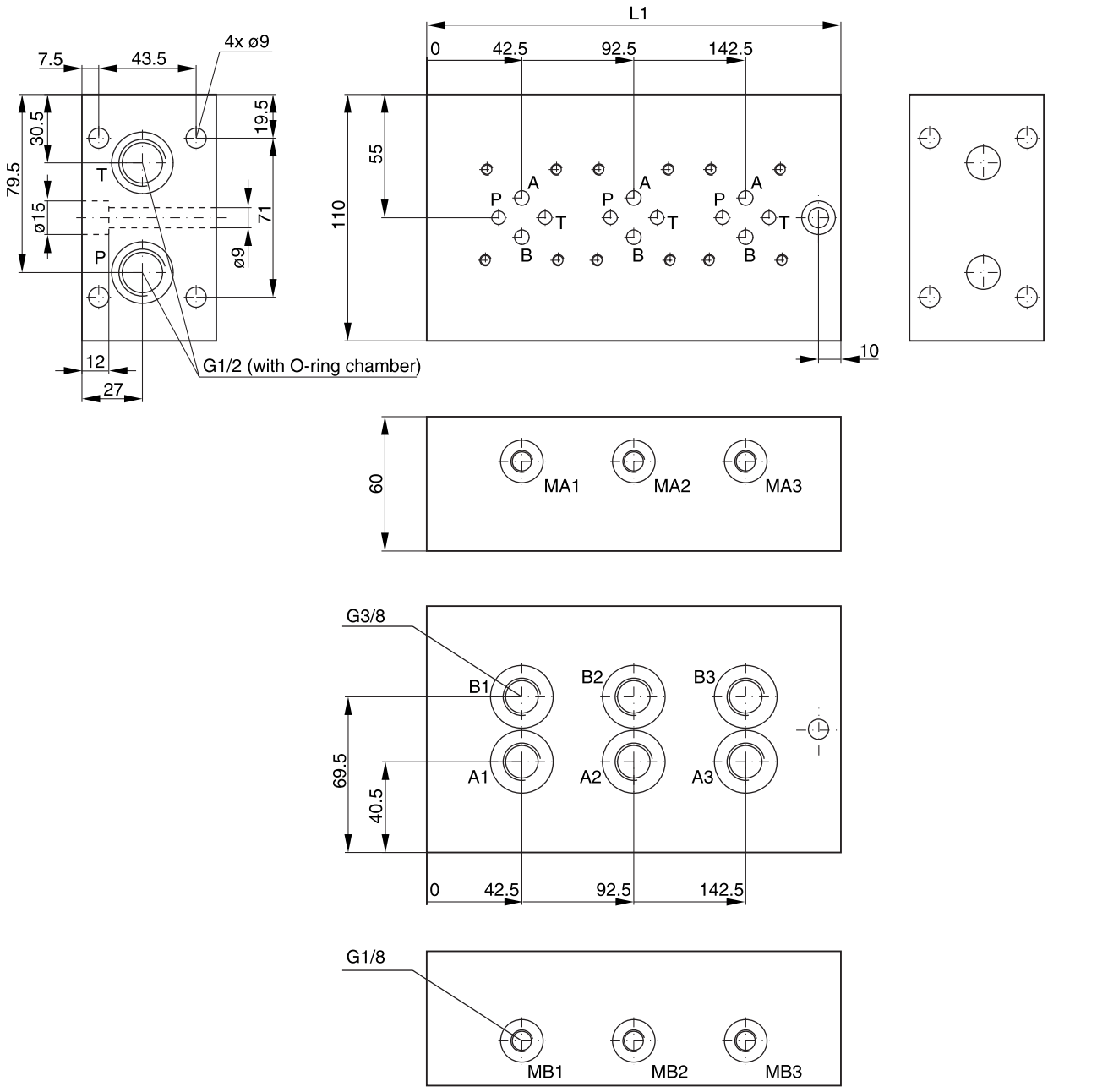
Ordering code	Nominal size	Stations	L1 [mm]	Port		Test points	Weight [kg]
				P, T	A, B		
SA 061 VHD1	NG06 CETOP 3	1	85	G1/2	G3/8	–	3.4
SA 062 VHD1		2	135				5.4
SA 063 VHD1		3	185				7.4

4 fastening screws M8 and 2 O-rings included in delivery.

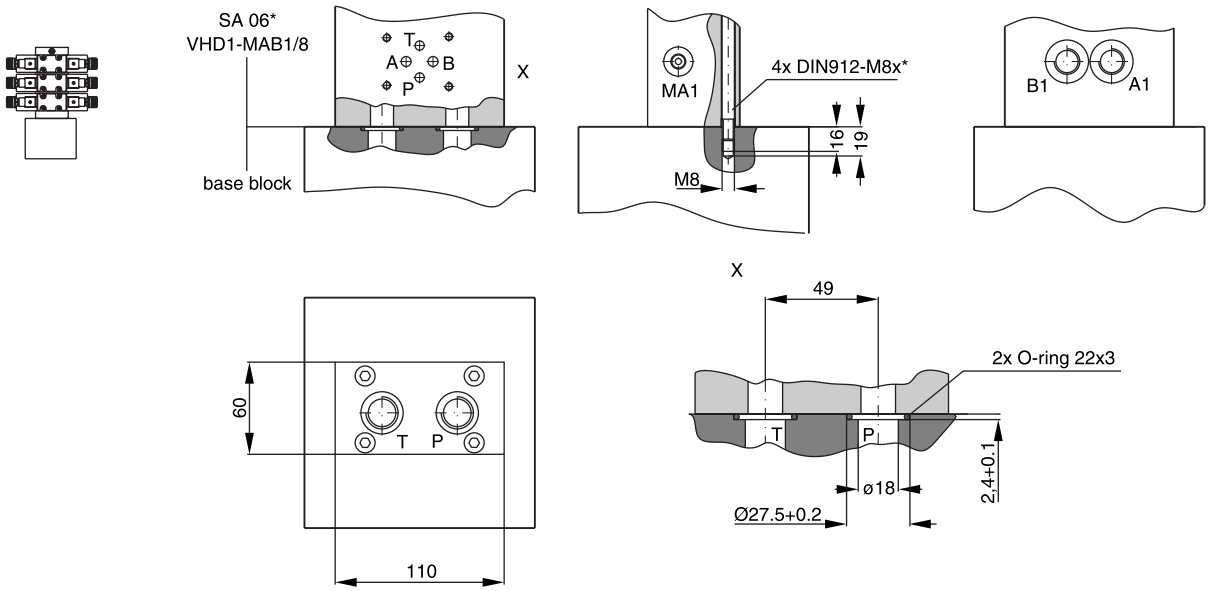
SA 06* VHD1-MAB1/8



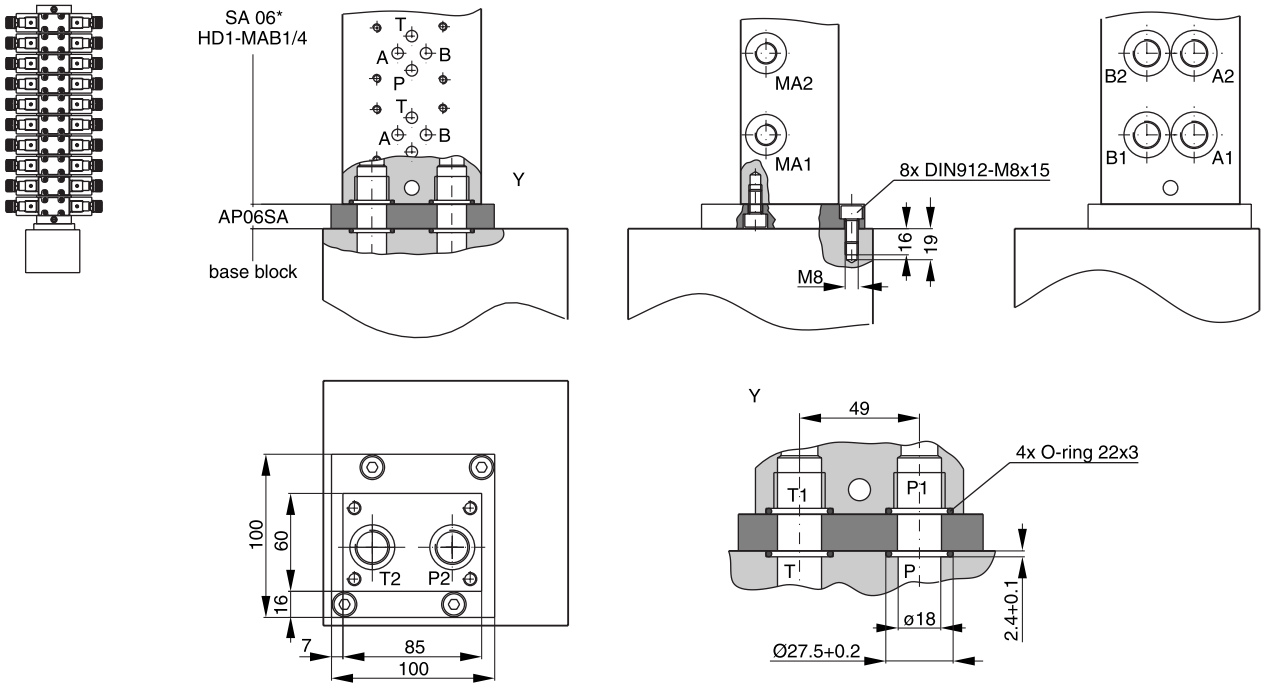
Ordering code	Nominal size	Stations	L1 [mm]	Port		Test points	Weight [kg]
				P, T	A, B		
SA061 VHD1-MAB1/8	NG06 CETOP 3	1	85	G1/2	G3/8	G1/8	4.4
SA062 VHD1-MAB1/8		2	135				6.9
SA063 VHD1-MAB1/8		3	185				9.6

4 fastening screws M8 and 2 O-rings included in delivery.

Direct stacking possible, max. 3 positions



Stacking possible with adaptor AP06SA, 2 - 10 positions



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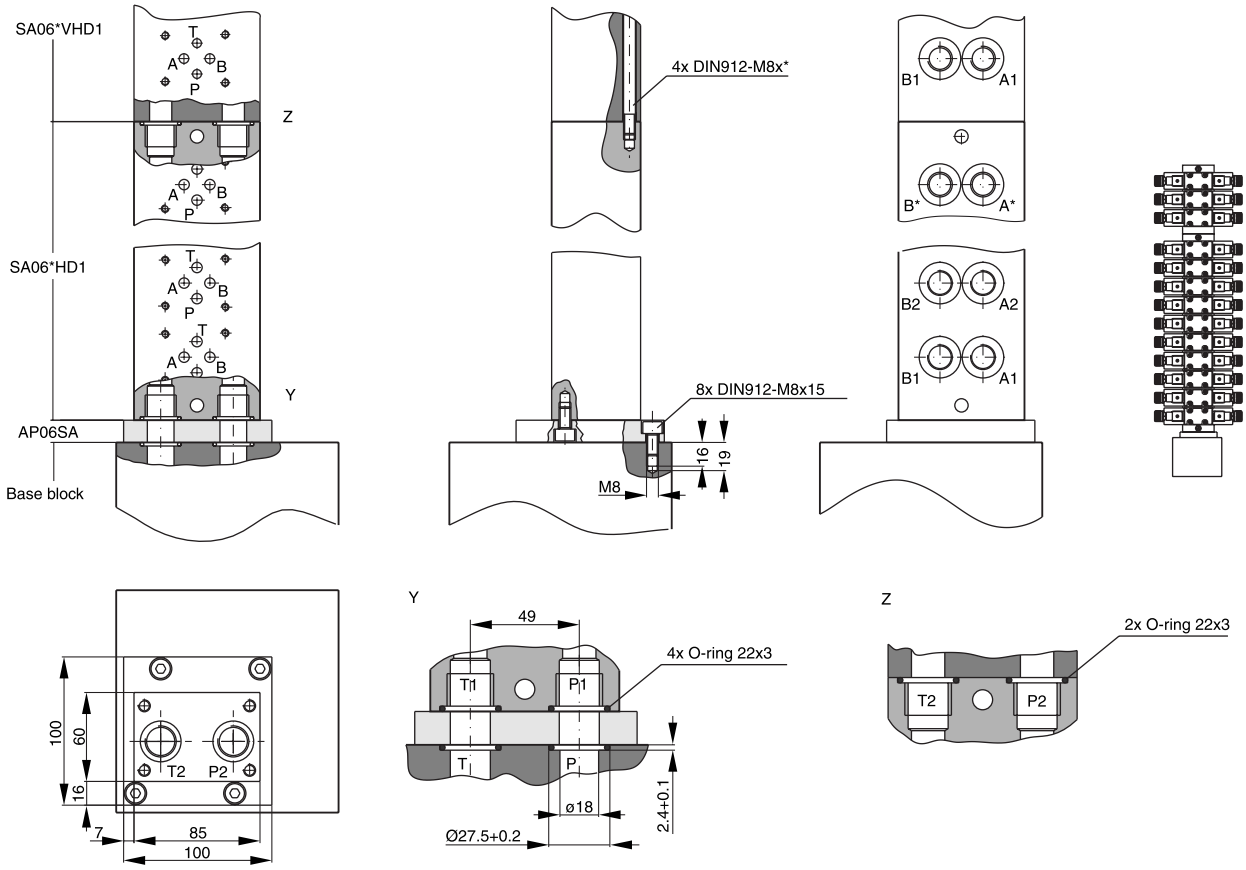
SA_UK.INDD RH

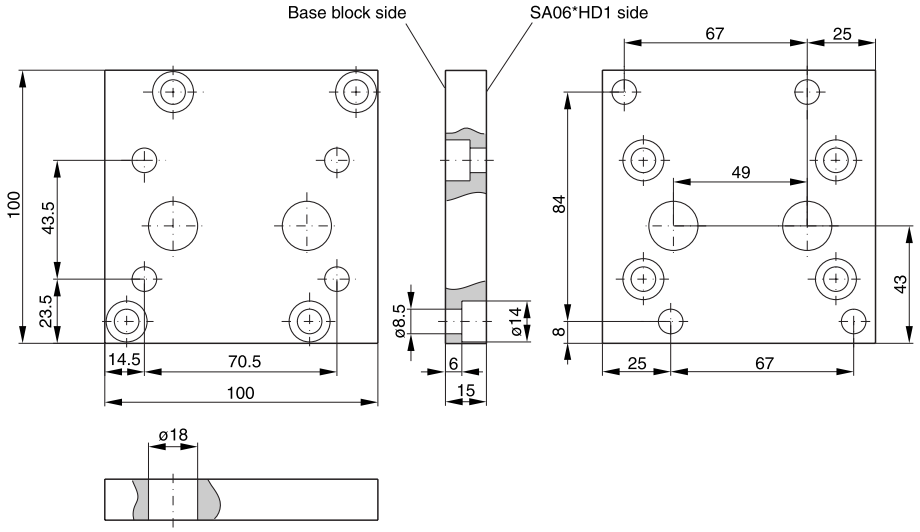
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Stacking possible with adaptor AP06SA, 2 - 10 positions, extendable by 1 - 3 positions



Adaptor AP06SA

Must be placed on base block when installing manifold SA06*HD1 with up to 10 valve positions



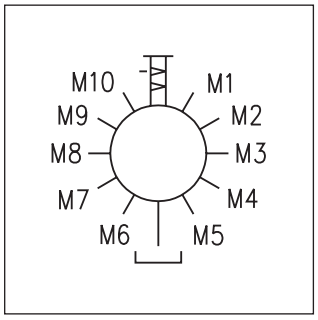
Ordering Code	AP06SA

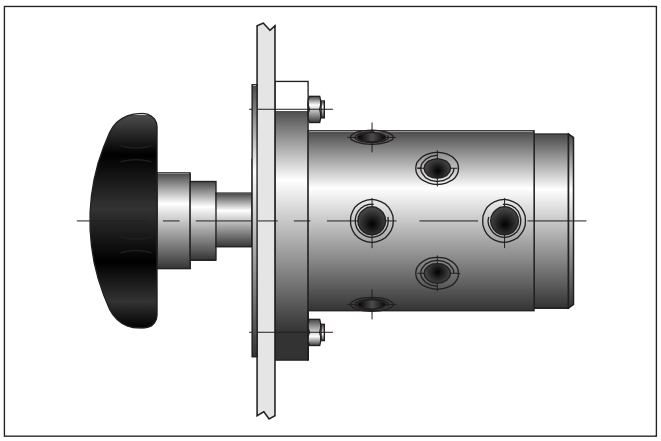
8 fastening screws M8 and 4 O-rings included in delivery.

SA_UK.INDD RH

Notes

By using the pressure gauge selector valve in hydraulic systems, up to 5 or 10 measuring points can be connected to one pressure gauge. When measuring is completed, the gauge is pressure-relieved to prevent it from being damaged by pressure surges. The accuracy and life of the pressure gauge are thus increased considerably.





Design
Pressure gauge selector valve with locking, pressure-relieving piston. Measuring point selection by marked rotary handle and graduated dial.

Function
To select one of the measuring points from 1 to 5 or 1 to 10, the rotary handle is pulled out fully, and turned to the left or right. When the measuring point is selected by means of the handle marking and the dial, the handle is pushed in and the pressure gauge loaded with the pressure present. The piston is locked in the measuring position by a catch. When measuring is completed, the handle is pulled out, to relieve the pressure gauge via the drain line.

Features
- 5 or 10 measuring positions optional
- Extends the service life of the manometer by unloading the pressure.

Technical data

Mounting position		unrestricted
Mounting		panel mounted
Connections		G1/8
Operation		by hand
Seals		fluorocarbon
Measuring position selection		by turning handle
Weight	[kg]	1.8
Max. operating pressure	[bar]	315
Viscosity range	[mm²/s]	12...230
Max. pressure in drain port Le	[bar]	1.0

Ordering code

WM		A	
Pressure gauge selector valve	**Measuring points**	**Design**	**Design series**

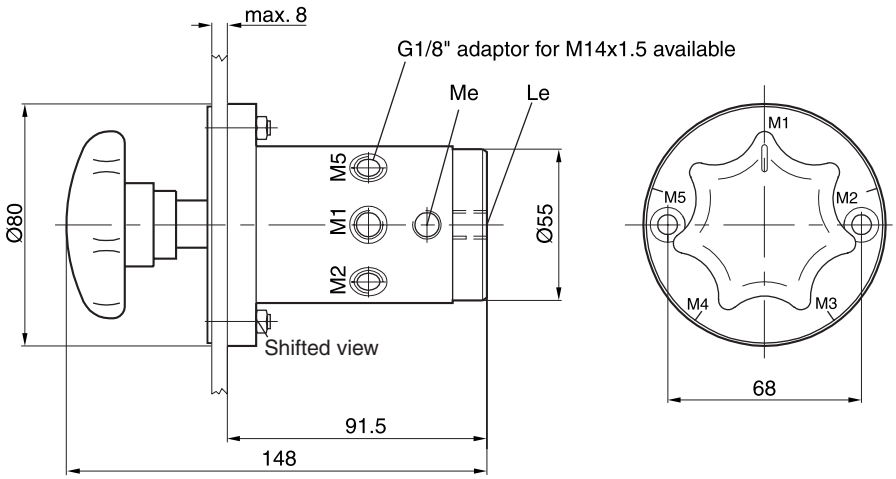
Code	Measuring pos.
5	**5 points**
10	**10 points**

Bold letters =
Short-term availability

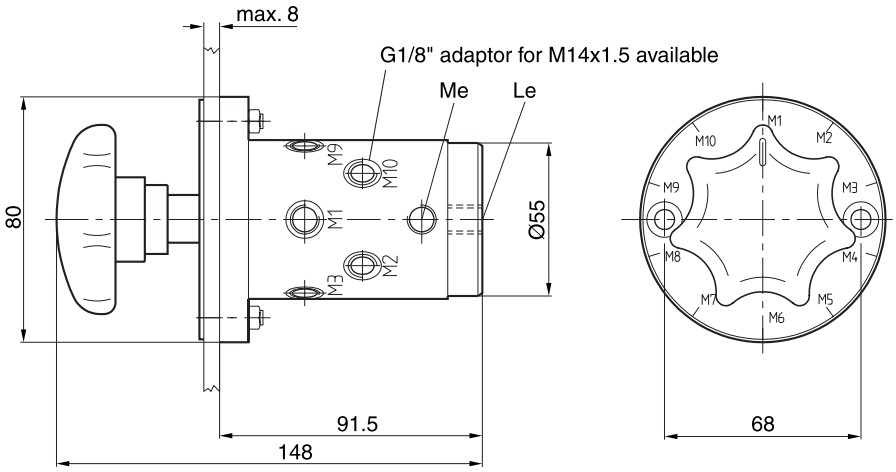
WM_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

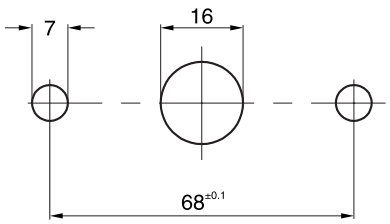
WM 5 A *



WM 10 A *



Mounting opening



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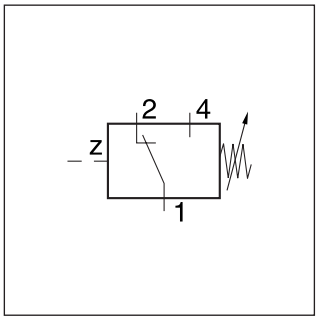
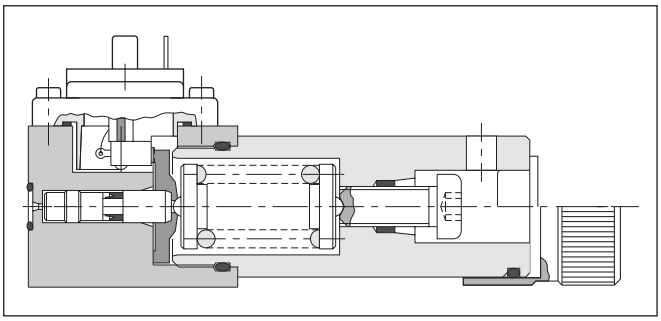
The electro-hydraulic pressure switch provides an electric signal when the sensed pressure goes above or below the selected setting.





Function

The spring loaded piston is hydraulically dampened. The PSB provides a very accurate hysteresis between the switching points (see diagram).

The required operating pressure is adjusted by the set-screw. Unauthorised adjustments can be prevented by the optional cylinder lock. The electric element is a micro switch with snap-action contact. Three terminals permit application as "On", "Off" or "Changeover" switch.

The electrical connection is made with a 3-pole plug-in connector to EN 175301-803 with ground.

Note

For inductive DC loads a spark discharger should be used to increase service life.

Features

- Flange or pipe mounting
- 4 pressure ranges
- Can be used as opener or closer
- Cylinder lock optional

Technical data

Symbol		DIN 24340	
Design		plunger type switch	
Mounting		PSB*F1*	flange (front face)
		PSB*V1	pipe mounting
Mounting position		as desired	
Weight	[kg]	1.0	
Operating pressure	[bar]	to 315	
Actuating pressure difference		see diagram	
Duty cycle		max. 1/s	
Pressure fluid		mineral oil (HL, HLP) as per DIN 51524, other pressure fluid on request	
Temperature range	[°C]	0...80	
Viscosity range	[mm²/s]	12...400	
Electrical connection		plug-in connector to EN 175301-803	
Insulation		IP65 as per DIN 40050	
Contact load carrying capacity		5A at 250VAC; 1A at 50VDC; 0.2A at 250VDC	

PSB					4	
Pressure switch with manual switching point adjustment	**Switching pressure range**	**Adjustment**	**Connection**	**Seal**	**Design series**	**Lock**

Code	Switching pressure range
040	**3 to 40 bar**
100	**10 to 100 bar**
160	**10 to 160 bar**
250	**20 to 250 bar**

Code	Adjustment
A	**Hexagon socket**
S	Knob with scale

Code	Connection
F1	**Flange (front face)**
V1	**Fitting (front face, tube Ø6)**

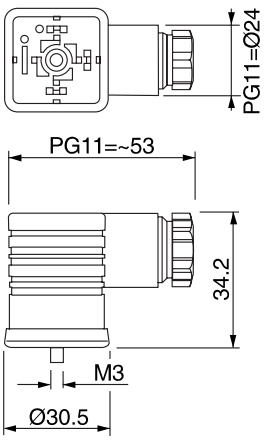
Code	Lock
–	**without lock**
Z	Cylinder lock (not for scale knob)

Code	Seal
A	**NBR**
1	FPM

Bold letters =
Short-term availability

Plug EN 175301-803

Description	Threaded cable joint	Ordering code
Plug EN 175301-803, design type AF, protection class IP 65	PG11	**HR 21500157**



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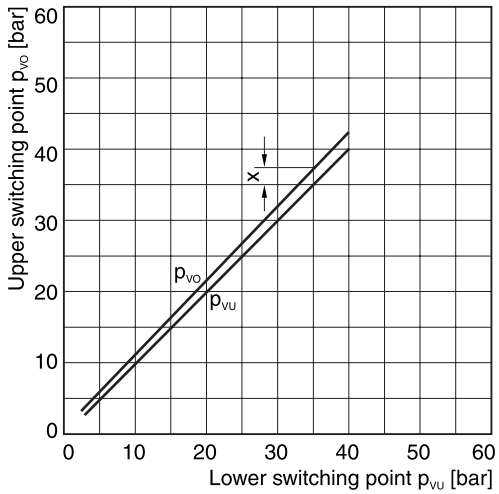
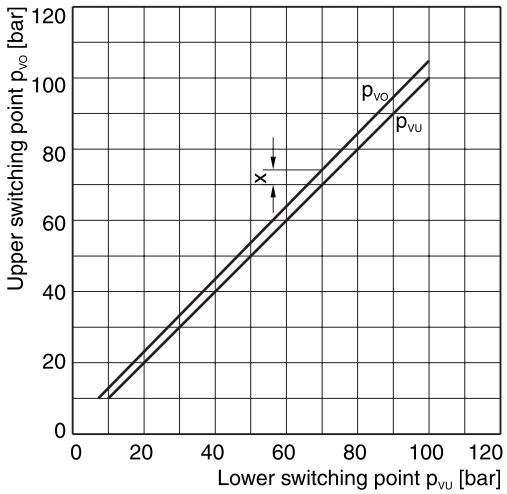
Switching pressure difference

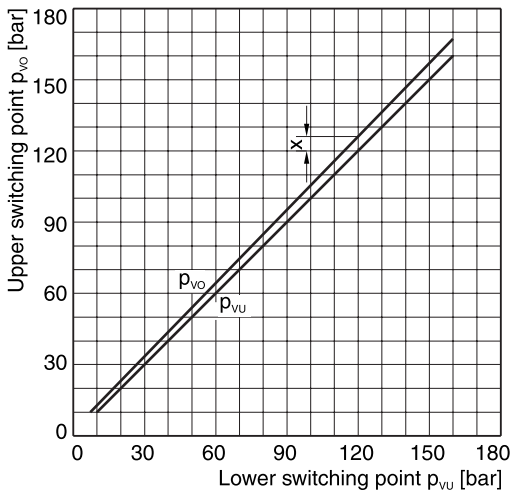
PSB040



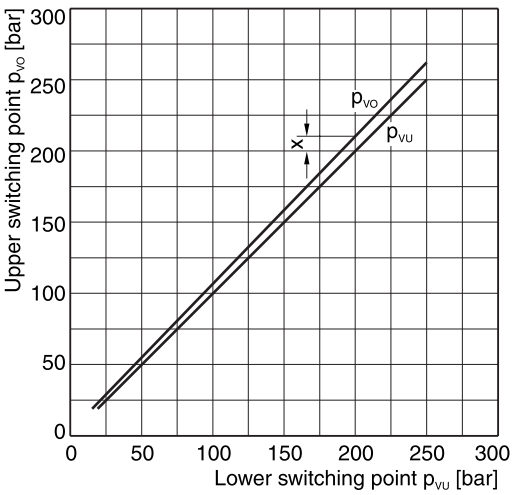
PSB100



PSB160

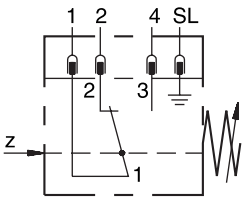


PSB250



X = switching differential

Electrical connections



Electrical connection EN175301-803

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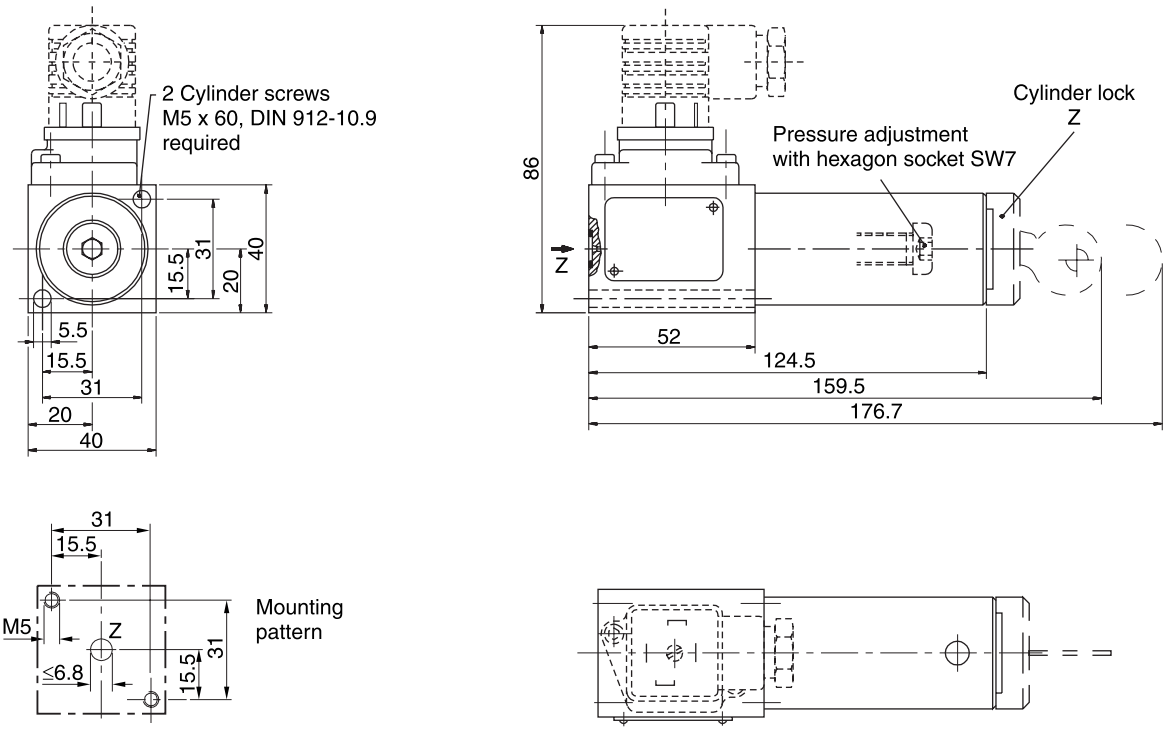
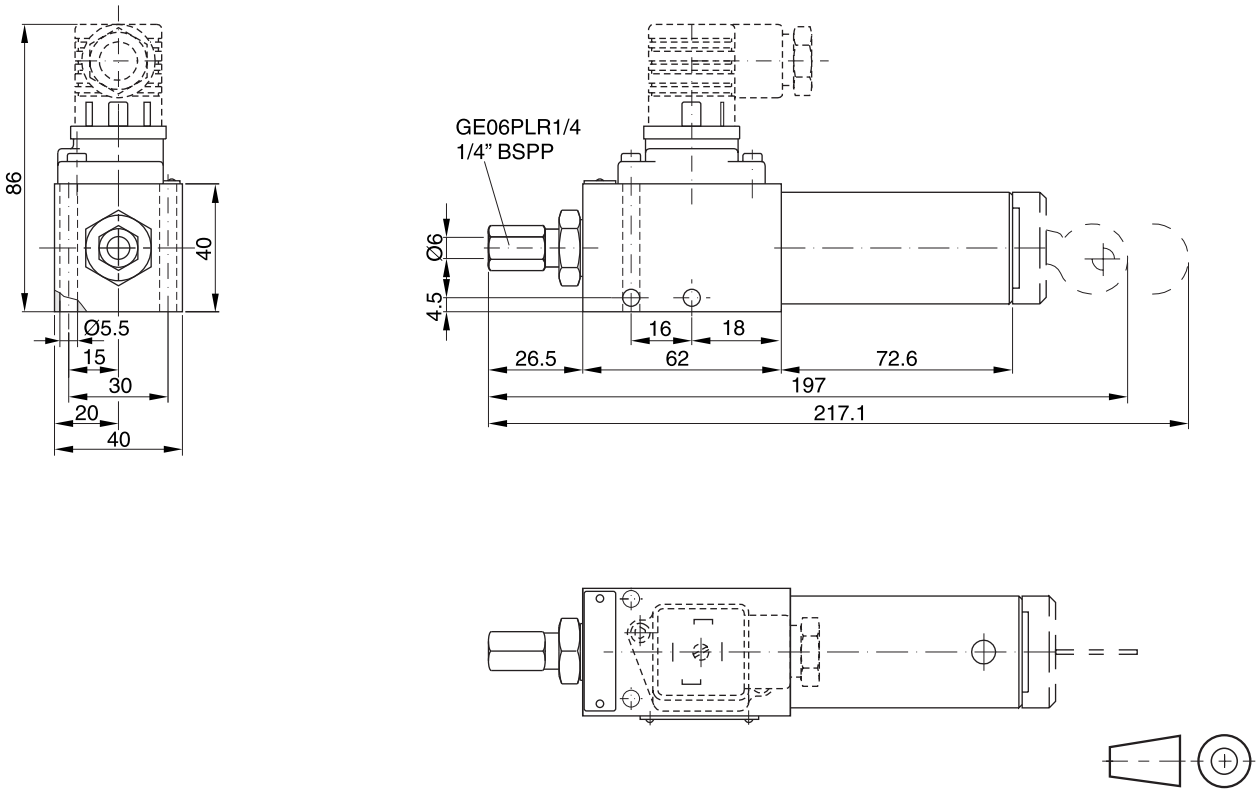
Type PSB*F1*



Type PSB*V1*



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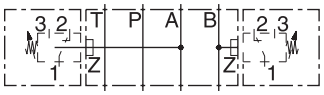
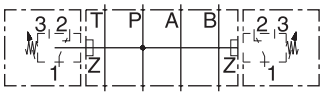
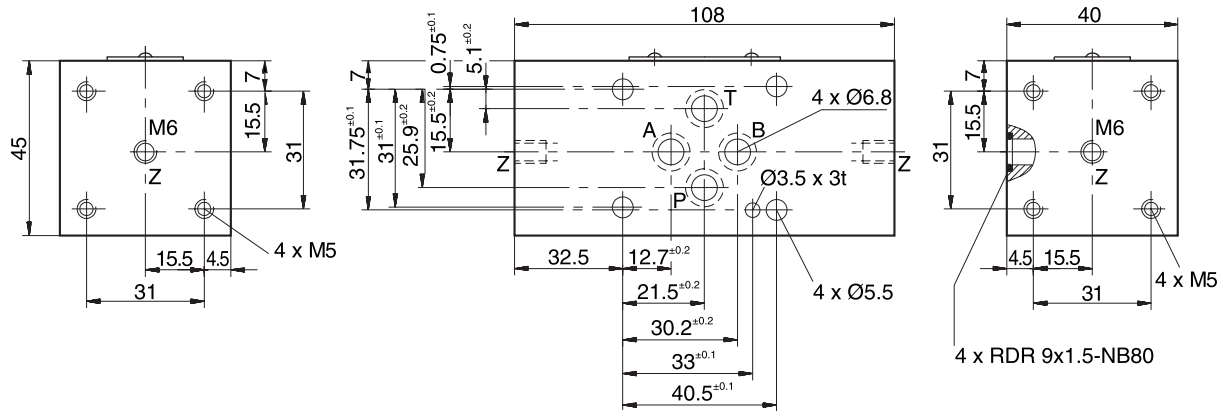
Technical Data

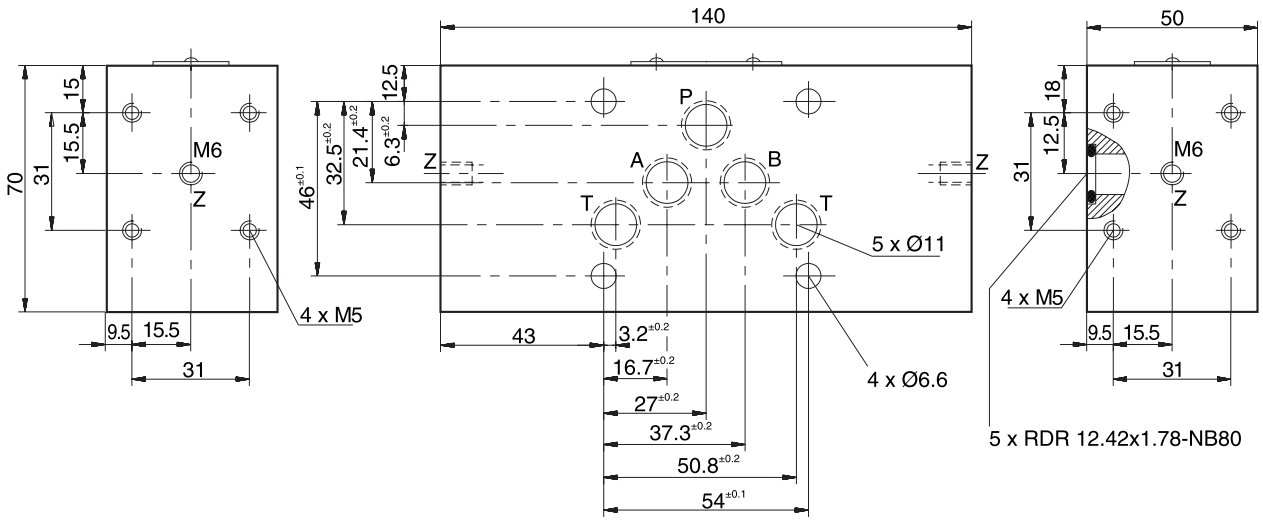
Switch code	Ordering code	Nominal size	Function
	**H06PSB-994**	**06**	**Pressure switch connection to A or B or A and B: Connections not used are closed by plug.**
	H10PSB-996	**10**	
	H06PSB-993	06	Pressure switch connection to P (left or right mounting is possible). Connection not used is closed by plug.
	H10PSB-995	10	

Bold letters =
Short-term availability

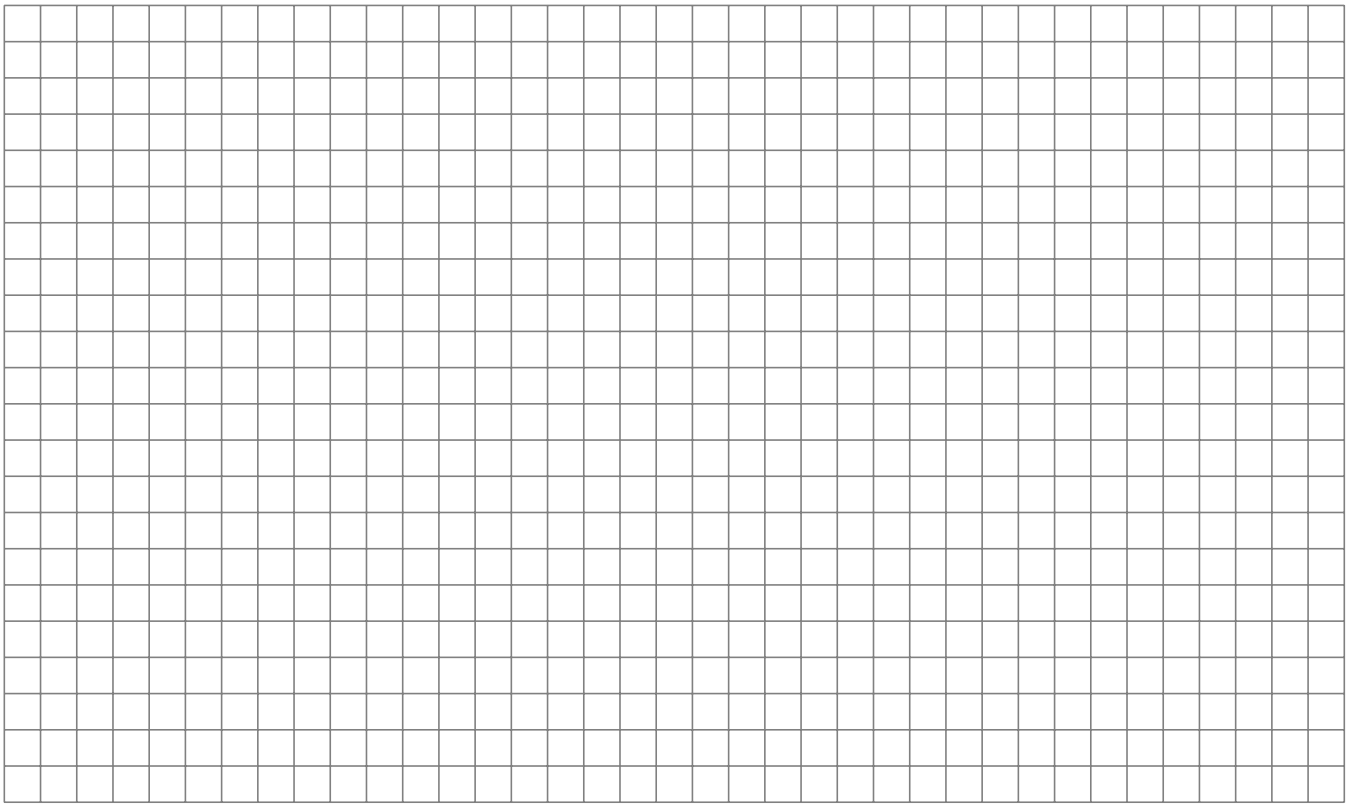
Dimensions NG06



Dimensions NG10



Notes



- Compact
- Rugged
- Reliable
- Easy operation
- Long-term stability
- Excellent interference resistance
- Metal housing
- High protection class
- Many variants
- Rotatable
- Analogue output
- Password
- MPa, bar, psi

The Pressure Controller combines the functions of a pressure switch, a pressure sensor and a display instrument:

- Pressure display (manometer)
- Switching outputs
- Analogue signal

Simple operation, compact design and high reliability are the most important features of the SCPSD. The Pressure Controller offers excellent technical performance and optimum pressure management. It is ideal for permanent use in industrial applications.

Easy to operate

Parameter setting is carried out via the keys or with a programming module.

High functionality

Every switching output can be set individually:

- Normally closed/normally open contacts
- On and off switching pressures
- Delay times
- Hysteresis/window function
- Damping

Intelligent settings which are not possible with a mechanical switch can be achieved with these convenient switch functions. Several switches can be replaced by a single controller.

The analogue output is individually settable

- 0/4…20 mA switchable
- Settable initial pressure
- Settable final pressure

Reliable/safe

Pressure is captured by a measuring cell with long-term stability. Any functional error is monitored and can be processed in accordance with DESINA. Thanks to a password, unauthorised change of parameters is prevented.

Rugged

The housing is made of metal and is resistant to humidity, shock and vibrations. The electronics are protected from reverse polarity, overvoltage and short circuits.

Everything within view

The large illuminated display is readable even from a considerable distance. Pressures are shown in MPa, bar or psi.

Optimum installation possibilities

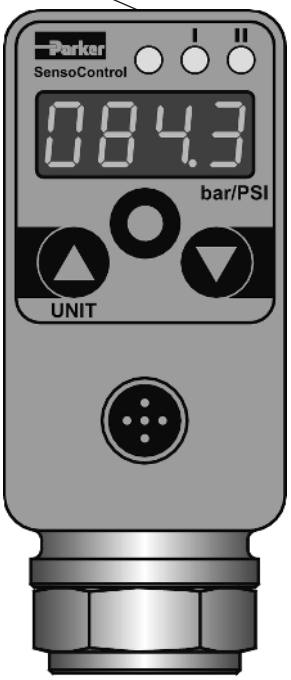
With its compact design and excellent interference resistance the SCPSD is suitable for installation under critical conditions.

With its directionally settable housing, the display can always be read very easily.

Universal

Many versions are available to suit a wide variety of applications.

- Optical interface
- Switch status display



Everything in view
- Chamfered display
- Digital display
- Large
- Luminescent
- Display
- psi/bar/Mpa
- Actual pressure
- Minimum pressure
- Maximum pressure
- Switching points

Easy to operate
- 3 large keys
- Display of units

Pressure connection
- Stainless steel
- Measuring cell stable long-term
- Wide media tolerance

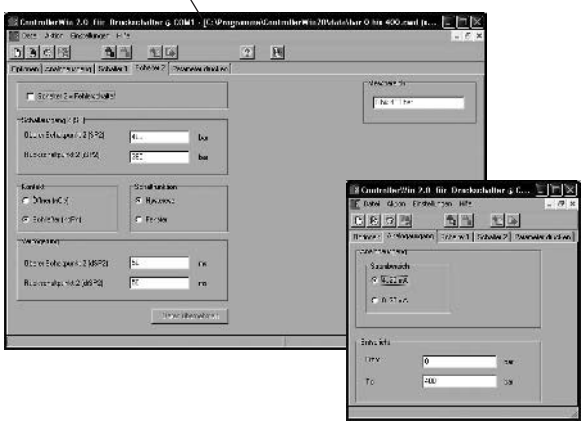
Rugged
- Metal housing
- Watertight
- High interference resistance
- Vibration resistant
- Shockproof

Flexible installation
- Compact
- Rotatable 290°

Thread
- Internal thread
- External thread

Tube clamp
- Safe mounting with a rugged SCSD-S27 clamp

Programming module
- Can be set with ControllerWIN software



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SCPSD	004	010	016	060	100	250	400	600
pressure range P_n (bar)	-1...4	-1…10	-1...16	0…60	0…100	0…250	0…400	0…600
overload pressure P_{max} (bar)	10	20	40	120	200	500	800	1200
burst pressure P_{burst} (bar)	12	25	50	550	800	1200	1700	2200
measuring element	ceramic low pressure			DMS thin film high pressure				

Input quantities	
reversing cycles	≥ 100 Mio.
scanning rate	≥ 5 ms
connecting thread	G1/4 BSPP; ED soft seal NBR [1] (DIN 3852 T2, form X); ED (DIN3852 T11, form E)
torque	35 Nm
parts in contact with media	low pressure: 1.4404 stainless steel; AL2O3 ceramic; NBR high pressure: stainless steels 1.4404; 1.4542
temperature range of medium	-20 …+85 °C
weight	approx. 300 g
Output quantities	
accuracy	± 0,5 % FS typ.; ± 1 % FS max.
temperature drift	± 0,02 % FS/°K typ. (at -20…+85 °C) ± 0,03 % FS/°K max.
long-term stability	± 0,2 % FS/a
repeat accuracy	± 0,25 % FS
switching point accuracy	± 0,5 % FS typ.; ± 1 % FS max.
display accuracy	± 0,5 % FS typ. ± 1 Digit ± 1 % FS max. ± 1 Digit
Response speed	
switching output	≤ 10 ms
analogue output	≤ 10 ms
Electrical connection	
power supply	15…30 VDC nominal 24 VDC; protection class 3
electrical connection	M12x1; 4-pole; 5-pole with gold-plated contacts. appliance inlet connector DIN EN 175301-803 form A (formerly DIN43650)
short circuit protection	yes
reverse polarity protection	yes
overload protection	yes
current consumption	< 100 mA

Housing	
	directionally adjustable up to 290°
material	pressure die-casting Z 410; painted
foil material	polyester
display	4-figure 7-segment LED; red; digit height 9 mm
protection class	IP67 DIN EN 60529; IP65 with plug-in connector DIN EN 175301-803 form A (formerly DIN43650)
Environmental conditions	
environmental temperature range	-20…+85 °C
storage temperature range	-40…+100 °C
vibration resistance	20 g; 10…500 Hz IEC60068-2-6 [2]
shock resistance	50 g; 11 ms IEC60068-2-29 [2]
EM compatibility	
interference emissions	EN 61000-6-3
interference resistance	EN 61000-6-2
Outputs	
switching outputs	2 MOSFET high side switches (PNP)
contact functions	normally open/normally closed; window/hysteresis; freely settable function
switching voltage	power supply - 1,5 VDC
switching current max.	0,5 A per switch
short circuit current	2,4 A per switch
analogue output	0/4…20 mA; programmable; freely scalable; RL ≤ (power supply - 8 V)/ 20 mA (≤ 500 Ω)

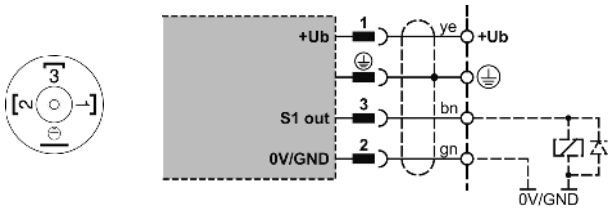
[1] other sealing materials (FKM, EPDM etc.) on request

[2] Does not apply to DIN EN 175301-803 form A (formerly DIN43650) version

Connection designation

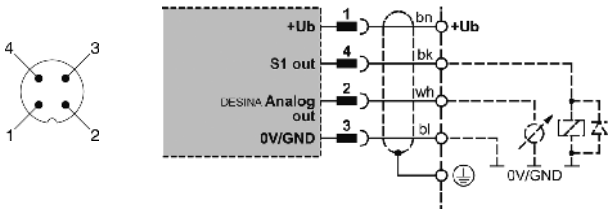
SCPSD-xxx-04-x6

1 switching output;
DIN EN 175301-803 form A (formerly DIN43650)



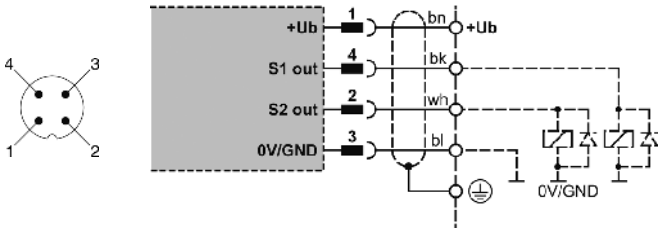
SCPSD-xxx-04-x7

2 switching outputs;
M12x1; 4-pole



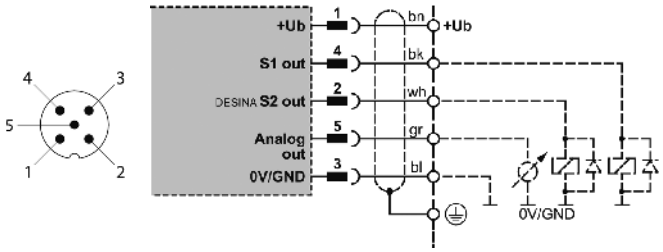
SCPSD-xxx-14-x7

1 switching output;
1 analogue output;
M12x1; 4-pole



SCPSD-xxx-14-x5

2 switching outputs;
1 analogue output;
M12x1; 5-pole



ye = yellow gn = green wh = white gr = grey
bn = brown bk = black bl = blue

Measurement range (bar)	Display resolution increment (bar)	Smallest reverse switch value RSP	Greatest switch value SP	Smallest settable difference between SP and RSP (SP-RSP)
-1…4	0,01	-1	4	0,08
-1…10	0,01	-1	10	0,05
-1…16	0,01	-1	16	0,09
0…60	0,1	0	60	0,3
0…100	0,1	0	100	0,6
0…250	1	0	250	2
0…400	1	0	400	3
0…600	1	0	600	3

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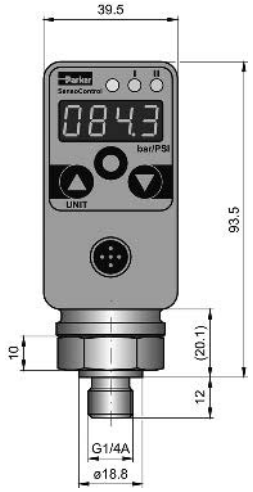
Pressure range selection

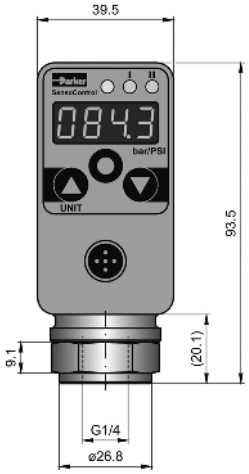
With pressure switches the settable pressure is very relevant.
Because a 400 bar pressure switch shows the same resolution (1 bar) as a 600 bar pressure switch (also 1 bar), a 600 bar pressure switch can be deployed even at a smaller nominal pressure (eg. 315 bar).
The positive effects of this are the same accuracy with higher safety and fewer product variants.

External thread
SCPSD-xxx-x4-1x

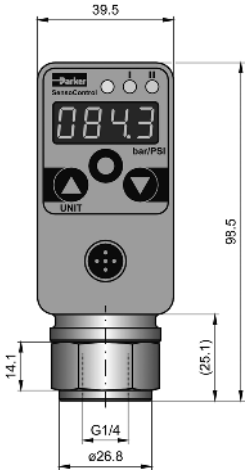


High and low pressure
DMS/ceramic

Internal thread
SCPSD-xxx-x4-2x

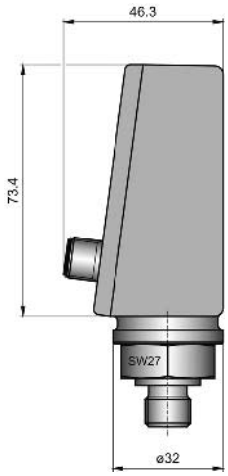


High pressure (from 60 bar)
DMS

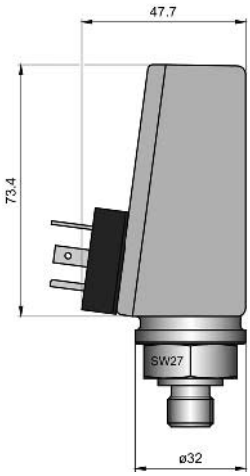


Low pressure (up to 16 bar)
Ceramic

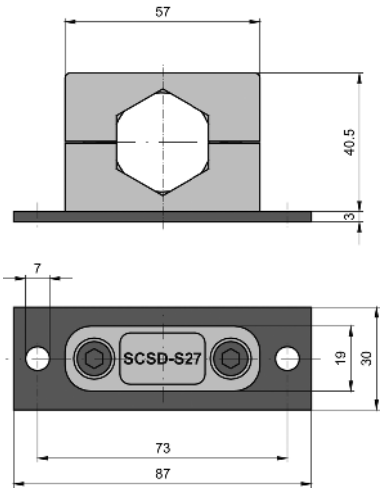
M12 plug-in connector
SCPSD-xxx-x4-x5



DIN EN 175301-803 form A
(formerly DIN43650))
SCPSD-xxx-04-x6



Accessories
Clamp



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SCPSD digital pressure switch

Pressure range 004; 010; 016; 060; 100; 160, 400; 600 bar		
1 switching output; without analogue output DIN EN 175301-803 form A (formerly DIN 43650) plug-in connector	SCPSD - xxx - 04 - x	6
2 switching outputs; without analogue output M12x1 plug-in connector; 4-pole	SCPSD - xxx - 04 - x	7
1 switching output; with analogue output M12x1 plug-in connector; 4-pole	SCPSD - xxx - 14 - x	7
2 switching outputs; with analogue output M12x1 plug-in connector; 5-pole	SCPSD - xxx - 14 - x	5
Type G1/4 BSPP external thread = 1 G1/4 BSPP internal thread = 2		

Ordering examples

SCPSD-100-04-27
Pressure range 100 bar
2 switching outputs
G1/4 BSPP internal thread
M12 plug-in connector

SCPSD-60-14-27
Pressure range 60 bar
1 switching output
1 analogue output
G1/4 BSPP internal thread
M12 plug-in connector

SCPSD-004-14-17
Pressure range 4 bar
2 switching outputs
1 analogue output
G1/4 BSPP external thread
M12 plug-in connector

Accessories

PC programming kit	SCSD-PRG-KIT
Fixing clamp	SCSD-S27
Reducing adaptor M22x1,5	SCA-1/4-M22x1.5-ED
Reducing adaptor G1/2 BSPP	SCA-1/4-ED-1/2-ED
Damping adaptor	SCA-1/X-EDX-1/X-D
Flange adaptor for mechanical pressure switch	SCAF-1/4-40

Connecting cable and separate plugs

Connecting cable, ready-made SCK-400-xx-xx
(open cable end)

Cable length in m
02 2 m
05 5 m
10 10 m

Plug-in connector
45 M12 cable socket; straight
55 M12 cable socket; 90° angled
56 DIN EN 175301-803 form A plug connector (formerly DIN 43650)

Separate plugs

M12 cable socket; straight	SCK-145
M12 cable socket; 90° angled	SCK-155
DIN EN 175301-803 Form A plug connector (formerly DIN 43650)	SCK-006

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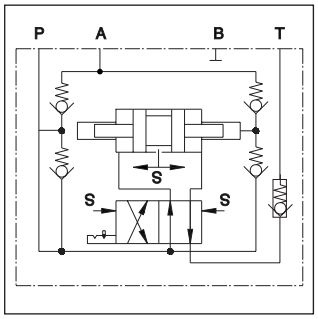
SCPSD_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Pressure intensifiers are used wherever a particular section of a hydraulic system has to be pressurised to a substantially higher pressure than the available primary pressure allows (clamping functions). With an intensification ratio of 1 : 4 (1 : 2) it enables a cost-effective system solution especially in clamping applications, with primary pressures up to 125 bar. A pilot operated check valve can be flanged underneath the pressure intensifier for quick filling and decompression of the high pressure section.



Design

Main functional parts of the pressure intensifier:
piston, rocker mechanism, slide valve with lock,
4 check valves which separate the high pressure section from the low pressure section,
check valve in the tank port to partition of the tank section from the primary pressure.

Features

- Mounting pattern NG6, DIN 24 340 Design A, CETOP, ISO
- Check valve attachable to bottom flange
- High pressure up to 500 bar
- Volume flow formed with low pulsation
- Compact design

Function

After the high pressure section is filled with oil, (e.g. extension of a clamping cylinder), the pressure intensifier begins operation: The low pressure moves the intensifier piston because of the surface ratio and compresses the oil column in the high pressure section.

At the end of the intensifier's piston stroke, the rocker mechanism switches the directional slide valve to the crossed switching position, and the intensifier piston pumps oil from the piston rod area into the high pressure section. The process repeats itself until the pressure ratio corresponding to the surface ratio has lead to a balance of force on the intensifier piston.

The pressure intensifier switches itself off and immediately on again when the high pressure (e.g. due to external leakage) begins to drop (pay attention to the flow characteristic). The switching speed of the slide valve is dependent on the operating speed of the intensifier piston.

Note

- To avoid exceeding the admissible maximum pressure, a pressure relief or pressure control valve must be fitted on the primary side (pressure setting, max. 125 bar / 1 : 4 or max. 250 bar / 1 : 2).
- There must be no pressure peak on the primary side when operating in the maximum pressure range.
- It is recommended to mount a 10µm filter on the primary side to ensure damage-free operation.

Technical data

General		
Symbol		DIN 24 300
Design		piston and poppet valve in body
Mounting type		NG6, DIN 24 340, design A, CETOP, ISO
Ports		subplate
Mounting position		as desired
Ambient temp.	[°C]	max. 50
Weight	[kg]	3.0 kg
Hydraulic		
Max. operating pressure		
Port A	[bar]	500,
Port P, B, T	[bar]	125 (ratio 1:4), 250 (ratio 1:2)
Press. fluid temp.	[°C]	+ 10°C...+70
Viscosity range	[mm²/s]	12....230
Flow		see performance curve
Intensification ratio		$p_P : p_A$ = 1 : 4, 1 : 2
Flow volume		$Q_P : Q_A$ = 4 : 1, 2: 1
Stroke volume	[cm³]	3 (per double stroke)
Operating		hydraulic-mechanic automatic control

SD	500		06	V	
Pressure intensifier	**Working pressure 500 bar (max. pressure)**	**Intensifi-cation ratio**	**Nominal size (pressure intensifier) Interface DIN 24 340 Design A, CETOP, ISO**	**Seals FPM**	**Design series** (not required for ordering)

Code	Intensification ratio
A	**1 : 4**
B	**1 : 2**

Accessories

Type	Description	Number
SD 500*06V	Seals	
	9.25 x 1.78	3
	10.82 x 1.78	1
	M5 x 75-12.9 DIN 912	4

Seals are included in delivery.
Mounting screws are not included in delivery.

Bold letters =
Short-term availability

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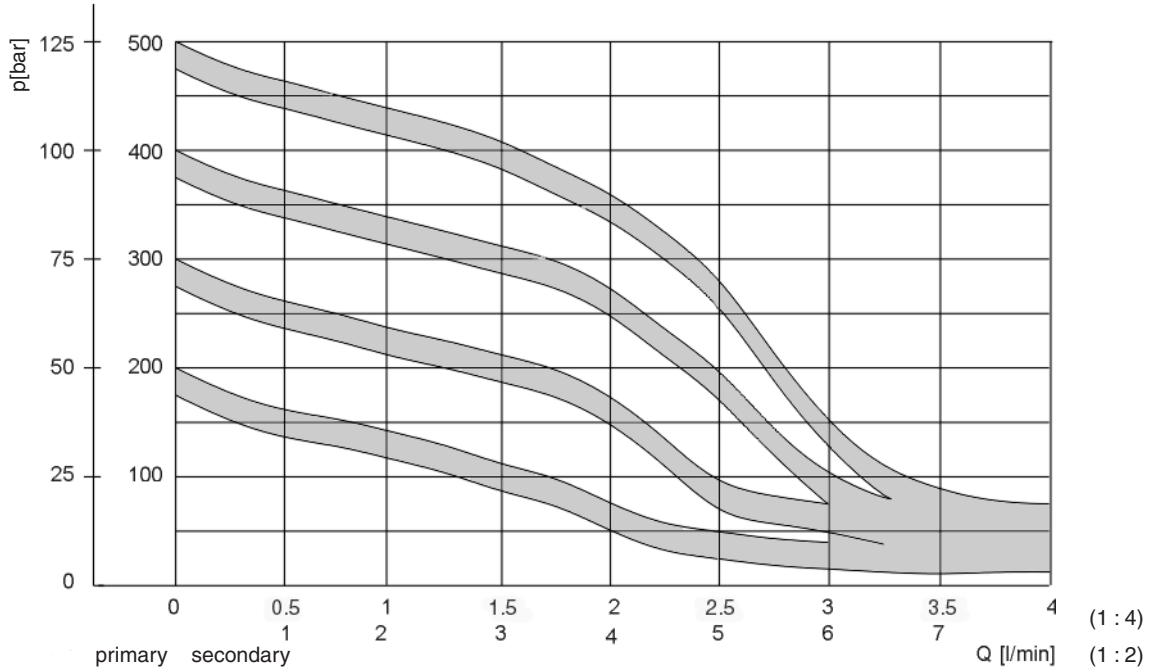
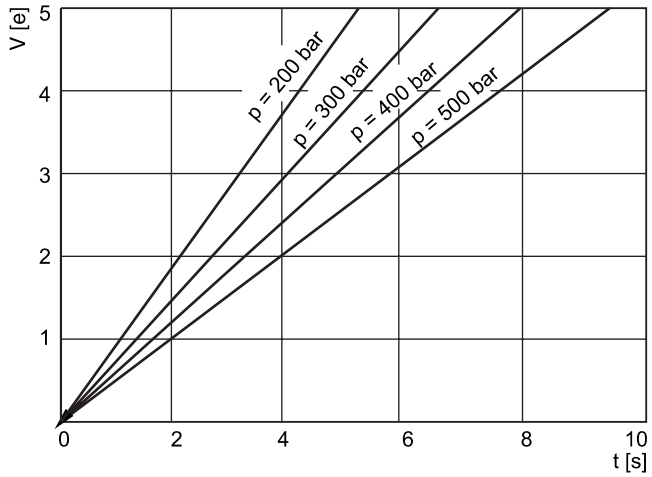
Surface finish	Kit		
R_{max}6.3 ⏥ 0.01/100	BK401	DIN 912 12.9	9.0 Nm

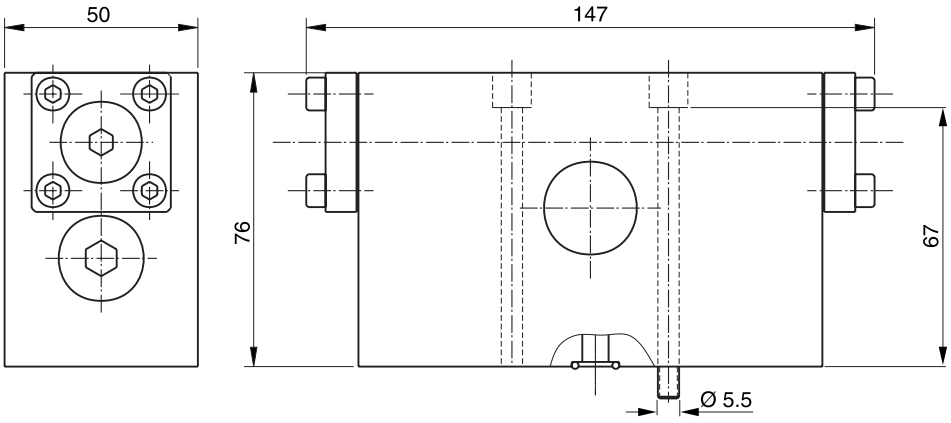
Flow characteristics



Approximate values of the compression time for compressing a filled volume to target pressure (1 : 4)



Dimensions



SD500_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Pilot operated check valve plate NG06

Description

Pilot operated check valve plates are flanged under the pressure intensifier for quick filling and decompression.

Design

The check valve plate is equipped with a hydraulic, pilot operated check valve.

Opening ratio: Main valve 2.5 : 1
Pilot ratio 10 : 1

Ordering code

H06 SDV

Bold letters =
Short-term availability

Accessories

Type	Description	Number
H06SDV	Seals	
	9.25 x 1.78	4
	M5 x 115-12.9 DIN 912	4

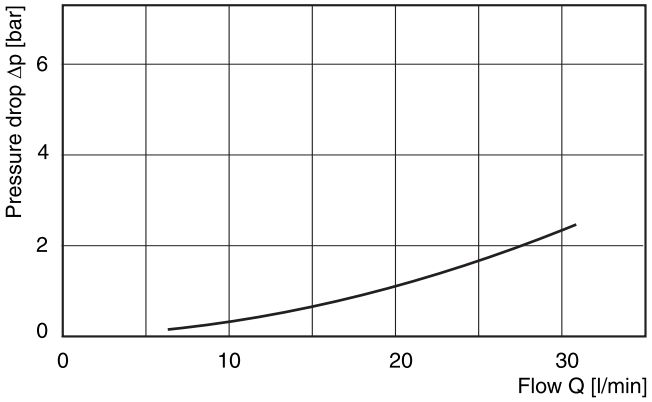
Seals are included in delivery.
Mounting screws are not included in delivery.

Technical data

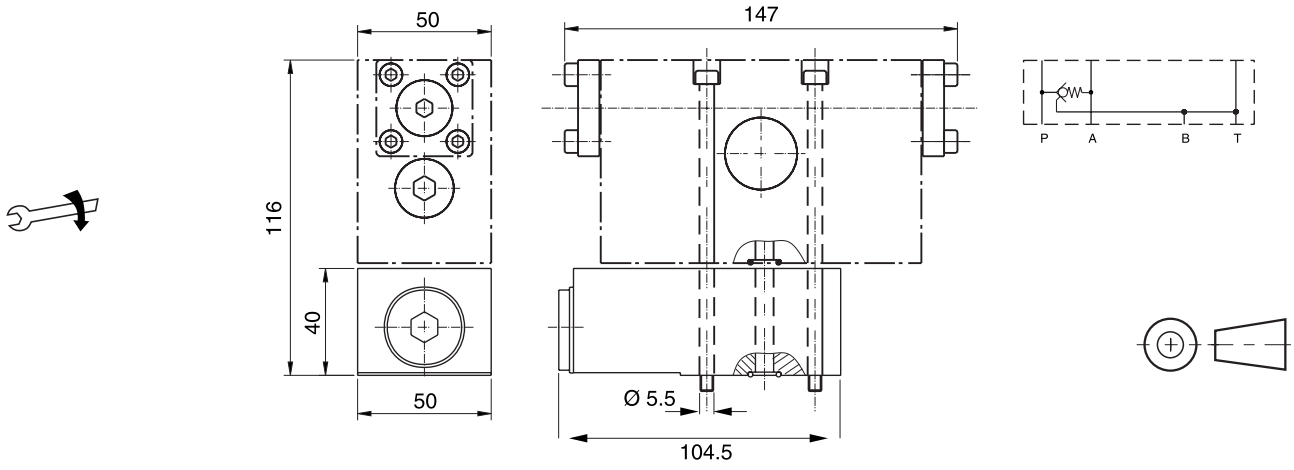
General		
Design		spring loaded ball seat valve
Mounting type		flange
Mounting position		any
Ambient temp.	[°C]	max. 50
Weight	[kg]	1.3
Hydraulic		
Operat. press. range		
Port A	[bar]	max. 500,
Port P, B, T		max. 125 / 1:4 and 250 / 1:2
Fluid temperature	[°C]	+ 10...+70
Viscosity range	[mm²/s]	12....230
Flow		see characteristic curve
Pilot ratio		main valve 2.5:1, pre-discharge 10:1
Opening pressure	[bar]	approx. 0.5

Characteristic Curve

Pilot operated check valve



Dimensions



Surface finish	Kit		
R_{max}6.3 0.01/100	BK401	DIN 912 12.9	9.0 Nm

SD500_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Pilot operated check valve plate NG10

Description

Pilot operated check valve plates are flanged under the pressure intensifier for quick filling and decompression.

Design

The check valve plate is equipped with a hydraulic, pilot operated check valve.

Opening ratio: Main valve 2.5 : 1
Pilot ratio 10 : 1

Ordering code

H10 SDV

Accessories

Type	Description	Number
H10SDV	Seals	
	12.24 x 1.78	4
	M5 x 75-12.9 DIN 912	4
	M6 x 50-12.9 DIN 912	4

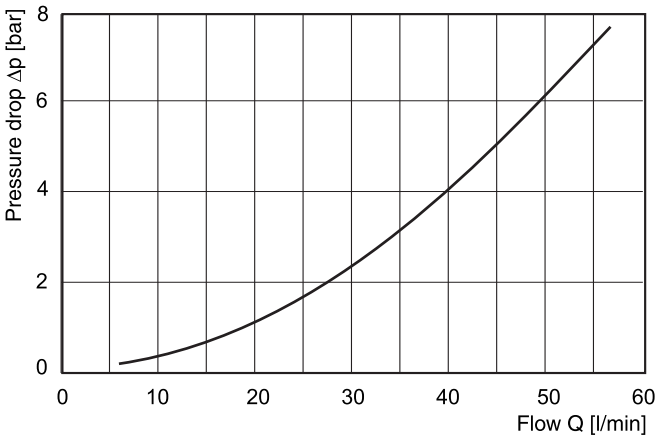
Seals are included in delivery.
Mounting screws are not included in delivery.

Technical data

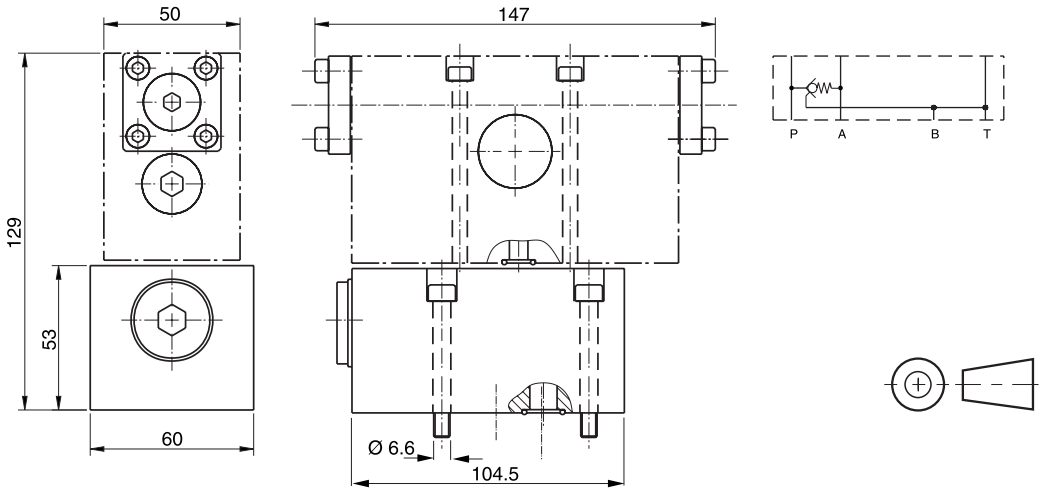
General		
Design		spring loaded ball seat valve
Mounting type		flange
Mounting position		any
Ambient temp.	[°C]	max. 50
Weight	[kg]	2.3
Hydraulic		
Operat. press. range		
Port A	[bar]	max. 500,
Port P, B, T		max. 125 / 1:4 and 250 / 1:2
Fluid temperature	[°C]	+ 10...+70
Viscosity range	[mm²/s]	12....230
Flow		see characteristic curve
Pilot ratio		main valve 2.5:1, pre-discharge 10:1
Opening pressure	[bar]	approx. 0.5

Characteristic curve

Pilot operated check valve



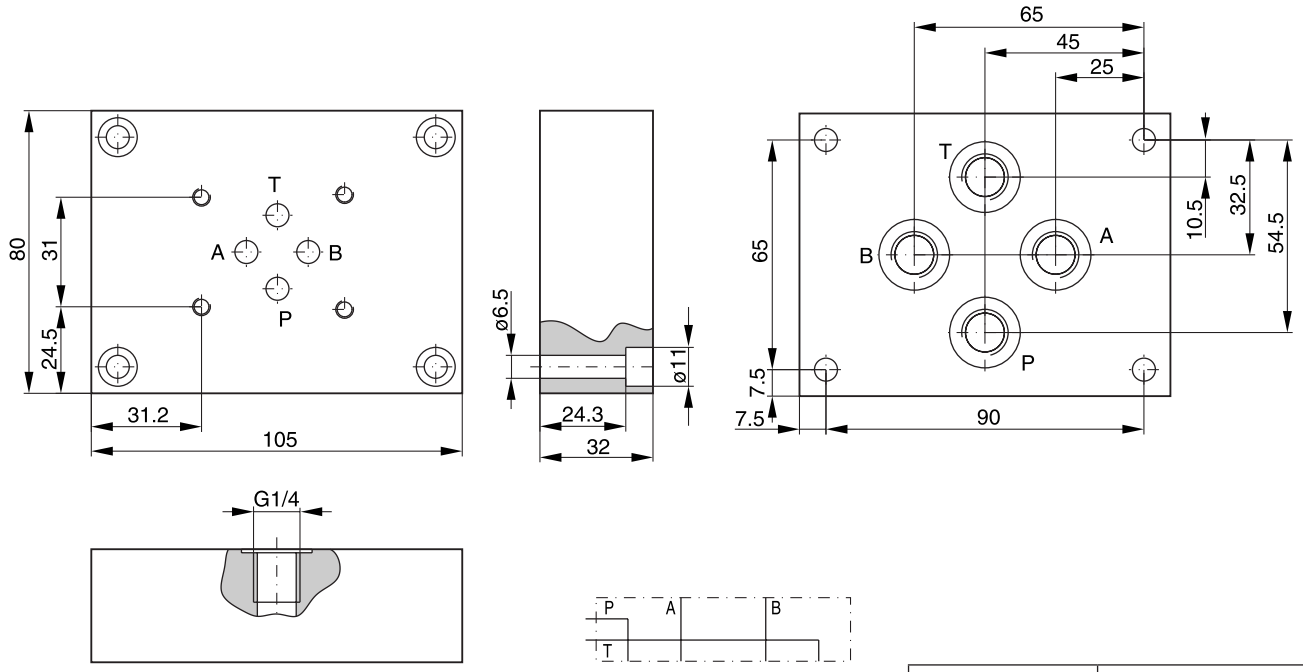
Dimensions



Surface finish	Kit		
$\sqrt{R_{max}6.3}$ ⏥ 0.01/100	BK490	DIN 912 12.9	9.0 Nm 18.0 Nm

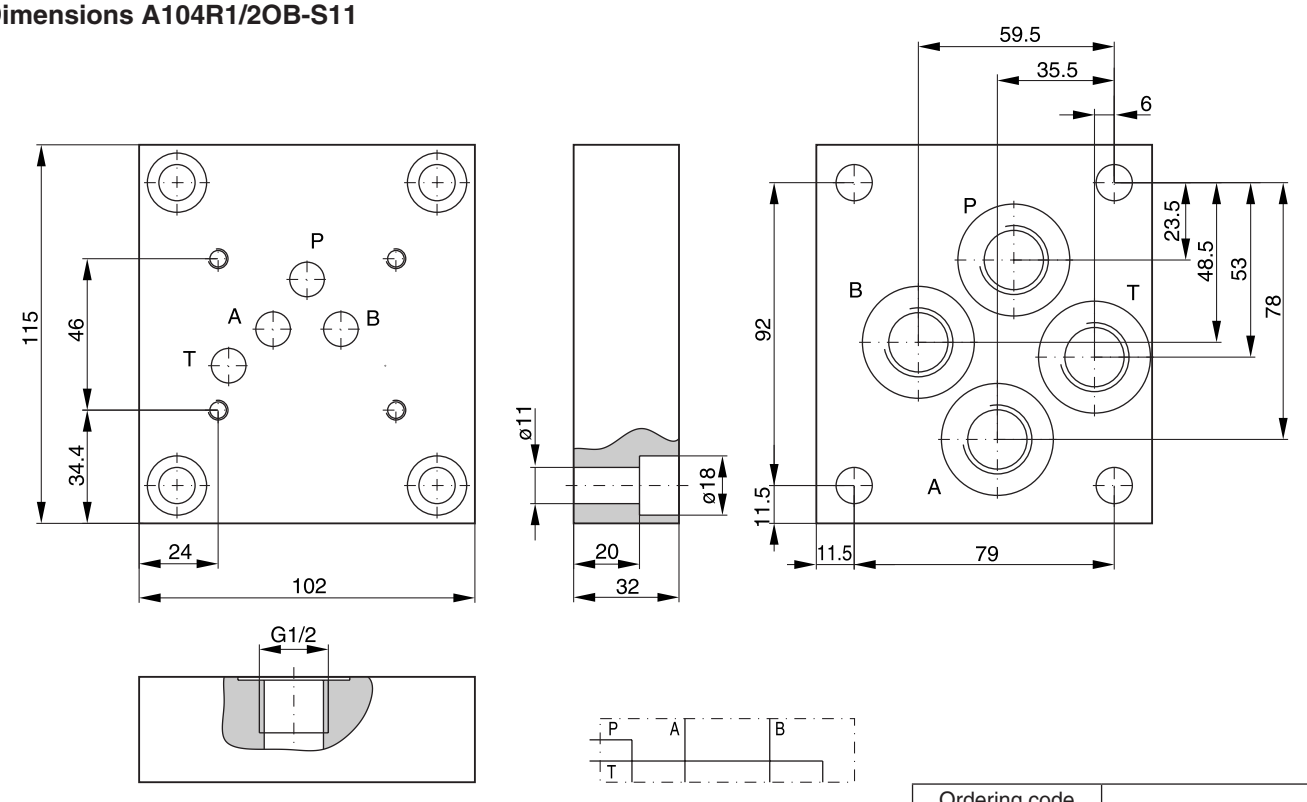
SD500_UK.INDD RH

Dimensions A064R1/4OB-S11



Ordering code	
A064R1/4OB-S11	NG06 - DIN 24340, form A

Dimensions A104R1/2OB-S11



Ordering code	
A104R1/2OB-S11	NG10 - DIN 24340, form A

Bold letters =
Short-term availability

BK bolt kits

Socket head cap screws as per DIN 912

Ordering code	Description	Material
BK 300	**Bolt kit M5x50**	**12.9**
BK 310	**Bolt kit M6x55**	**12.9**
BK 311	**Bolt kit M6x105**	**12.9**
BK 320	**Bolt kit M10x60 4 pcs. / M6x55 2 pcs.**	**12.9**
BK 360	**Bolt kit M12x75 6 pcs.**	**12.9**
BK 375	**Bolt kit M5x30**	**12.9**
BK 380	**Bolt kit M5x60**	**12.9**
BK 385	**Bolt kit M6x40**	**12.9**
BK 386	Bolt kit M20x90 6 pcs.	12.9
BK 388	**Bolt kit M10x40**	**12.9**
BK 389	**Bolt kit M10x50**	**12.9**
BK 390	**Bolt kit M10x50 6 pcs.**	**12.9**
BK 391	**Bolt kit M12x50**	**12.9**
BK 395	**Bolt kit M10x100**	**12.9**
BK 399	**Bolt kit M5x25**	**12.9**
BK 400	**Bolt kit M5x70**	**12.9**
BK 401	**Bolt kit M5x75**	**12.9**
BK 402	**Bolt kit M5x80**	**12.9**
BK 403	**Bolt kit M5x90**	**12.9**
BK 404	**Bolt kit M5x100**	**12.9**
BK 405	**Bolt kit M5x110**	**12.9**
BK 406	**Bolt kit M5x115**	**12.9**
BK 408	**Bolt kit M6x25**	**12.9**
BK 412	**Bolt kit M6x90**	**12.9**
BK 414	**Bolt kit M8x40**	**12.9**
BK 415	**Bolt kit M16x55**	**12.9**
BK 417	Bolt kit M20x75	12.9
BK 421	**Bolt kit M5x65**	**12.9**
BK 422	Bolt kit M6x75	12.9
BK 424	**Bolt kit M5x130**	**12.9**
BK 430	**Bolt kit M6x105**	**12.9**
BK 441	Bolt kit M8x50	12.9
BK 443	**Bolt kit M5x45**	**12.9**
BK 444	Bolt kit M5x85	12.9
BK 460	Bolt kit M12x145 6 pcs.	12.9
BK 463	**Bolt kit M5x60**	**12.9**
BK 466	Bolt kit M5x100 2 pcs.	12.9
BK 468	Bolt kit M5x95	12.9
BK 471	Bolt kit M5x85	12.9
BK 484	**Bolt kit M10x65**	**12.9**
BK 485	**Bolt kit M10x45**	**12.9**
BK 486	Bolt kit M12x70	12.9
BK 487	Bolt kit M16x110	12.9

If no other specification is indicated, 1 bolt kit contains 4 screws.

Threads length

Threads	M5	M6	M10	M12
Thread length	1.5 x Ø thread			

Note

The torque for bolt kits or tie rod kits is according to valve type/product. Consult product chapters.

Bold letters =
Short-term availability

TK tie rod kits

Tie rod kits as per DIN 835-10.9

Ordering code	Description
TK 1405	**Tie rod kit M5x140**
TK 1407	**Tie rod kit M5x220**
TK 1409	**Tie rod kit M5x160**
TK 1411	**Tie rod kit M5x170**
TK 1413	**Tie rod kit M5x230**
TK 1415	**Tie rod kit M5x190**
TK 1416	**Tie rod kit M5x200**
TK 1418	**Tie rod kit M6x110**
TK 1422	**Tie rod kit M6x150**
TK 1423	**Tie rod kit M6x170**
TK 1427	**Tie rod kit M6x200**
TK 1428	**Tie rod kit M6x220**
TK 1432	**Tie rod kit M6x250**
TK 1434	Tie rod kit M5x240
TK 1436	Tie rod kit M5x250
TK 1438	**Tie rod kit M5x260**
TK 1446	**Tie rod kit M5x110**
TK 1450	**Tie rod kit M5x150**
TK 1453	Tie rod kit M5x90
TK 1454	**Tie rod kit M5x180**
TK 1455	**Tie rod kit M5x70**
TK 1460	**Tie rod kit M6x230**
TK 1466	Tie rod kit 4 x M10x110 / 2 x M6x110
TK 1469	Tie rod kit 4 x M10x170 / 2 x M6x170
TK 1470	Tie rod kit 4 x M10x220 / 2 x M6x220
TK 1473	**Tie rod kit M5x120**
TK 1474	**Tie rod kit M5x130**
TK 1475	**Tie rod kit M5x210**
TK 1476	Tie rod kit M5x270
TK 1478	**Tie rod kit 4 x M10x190 / 2 x M6x190**
TK 1479	Tie rod kit 4 x M10x250 / 2 x M6x250
TK 1482	**Tie rod kit M5x80**
TK 1484	**Tie rod kit M5x100**
TK 1485	Tie rod kit M6x80
TK 1486	**Tie rod kit M6x90**
TK 1487	**Tie rod kit M6x100**
TK 1488	Tie rod kit M6x120
TK 1489	**Tie rod kit M6x130**
TK 1490	**Tie rod kit M6x140**
TK 1491	**Tie rod kit M6x160**
TK 1492	**Tie rod kit M6x180**
TK 1493	**Tie rod kit M6x190**
TK 1494	**Tie rod kit M6x210**
TK 1495	**Tie rod kit M6x240**
TK 1496	**Tie rod kit M6x260**
TK 1497	Tie rod kit M6x270
HR10048109	**Nut M5**
HR10048110	**Nut M6**
007634	**Nut M10**

If no other specification is indicated, 1 tie rod kit contains 4 bolts and 4 nuts.

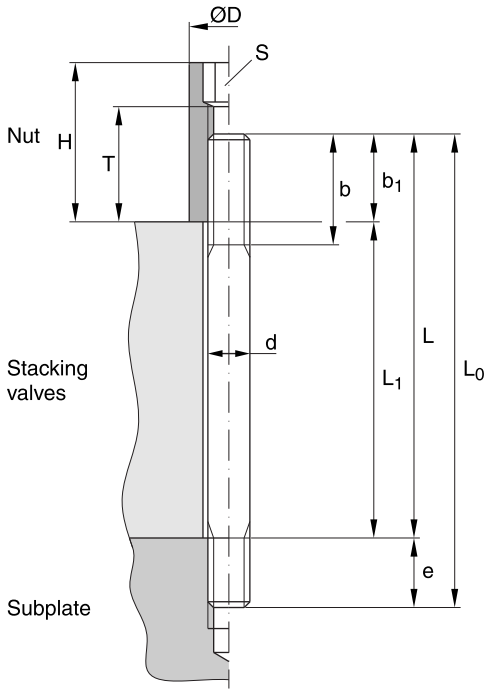
d	D	S	H	T	e	b [1]	b [2]	b [3]
M5	9	5	25	20	10	16	22	22
M6	10	6	25	20	12	18	24	24
M10	17	10	25	15	15	26	32	45

b [1] L ≤ 120 mm
b [2] 130 mm ≤ L ≤ 200 mm
b [3] 200 mm < L

Note

The torque for bolt kits or tie rod kits is according to valve type/product. Consult product chapters.

$1.5\ d \le b_1 \le T$



Example:

TK1411: M5 x 170 DIN835 =
nominal stud length L = 170mm,
stocking length L_1 = 160mm
total stud length L_0 = 180mm

Bold letters =
Short-term availability

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