

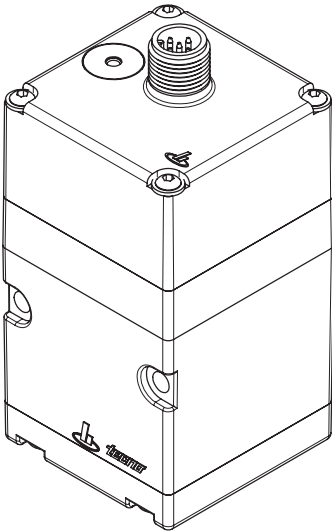
## TECNO PLUS

Piezo-controlled pneumatic pressure regulator,  
electronically controlled

Technical Data

EN MET

  
**HOERBIGER**



## GENERAL PROPERTIES

### Tecno Plus

#### GENERAL PROPERTIES

Type	PRE-U2 - Target value via voltage, PRE-I2 - Target value via current
Function	Proportional 3/2-way NC
Actuation type	Piezoelectric pilot
Constructive structure	Seat valve
Connection type	Flange <sup>1)</sup>
Weight	0.200 kg
Installation position	Any
Protection type	IP65, (16bar = IP54) (DIN EN 60529 A1: 2000) <sup>2)</sup>
Storage temperature	-20 °C to +60 °C
Ambient temperature	0 °C to +50 °C
Medium temperature	0 °C to +50 °C
Material housing	PA-GF
Materials in contact with media	Al anodized; CuZn; CuNi
Material seals	NBR; ECO
Behavior in case of energy failure	Port 2 venting
RoHS-Conformity	RoHS 2011/65/EU

Media <sup>3)</sup>	Compressed air and neutral gases
Media quality	According to ISO 8573-1:2010 (6:3:4)
Flow direction on	From 1 to 2
Flow direction off	From 2 to 3

<sup>1)</sup> Base plates for threaded connection see accessories

<sup>2)</sup> With mounted connector plug and exhaust ported at booster (3) and pilot (13)

<sup>3)</sup> Other media only after approval by the manufacturer

# PNEUMATIC PROPERTIES

## Tecno Plus

PNEUMATIC PROPERTIES								
TECNO PLUS	0–2 BAR	0–6 BAR	0–10 BAR	0–16 BAR	-1–1 BAR	-1–6 BAR	-1–10 BAR	FLEX
Input pressure min ( $p_{1_{min}}$ )	1.5 bar	1.5 bar	2 bar	2.5 bar	1.5 bar	1.5 bar	1.5 bar	1.5 bar
Input pressure max ( $p_{1_{max}}$ )	7 bar	10 bar	12 bar	17 bar	2.5 bar	10 bar	12 bar	12 bar
Output pressure min ( $p_{2_{min}}$ )	0 bar	0 bar	0 bar	0 bar	-1 bar	-1 bar	-1 bar	-1 bar <sup>6)</sup>
Output pressure max ( $p_{2_{max}}$ ) <sup>1)</sup>	2 bar	6 bar	10 bar	16 bar	1 bar	6 bar	10 bar	10 bar <sup>6)</sup>
Nominal flow rate 1 to 2 ( $Q_N$ ) <sup>2)</sup>	1000 l/min	1000 l/min	1000 l/min	600 l/min	1000 l/min	1000 l/min	1000 l/min	1000 l/min
Max. flow rate 1 to 2 ( $Q_{max}$ ) <sup>3)</sup>	1100 l/min	1600 l/min	1600 l/min	2400 l/min	600 l/min	1600 l/min	1600 l/min	1600 l/min
Hysteresis <sup>4)</sup>	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	- <sup>6)</sup>
Repeatability <sup>4)</sup>	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	- <sup>6)</sup>
Responsiveness <sup>4)</sup>	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	- <sup>6)</sup>
Linearity <sup>4)</sup>	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	- <sup>6)</sup>
Leakage <sup>3)</sup>	≤ 2.5 l/min	≤ 2.5 l/min	≤ 2.5 l/min	≤ 3 l/min	≤ 2.5 l/min	≤ 2.5 l/min	≤ 2.5 l/min	≤ 2.5 l/min
Own air consumption <sup>5)</sup>	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min

<sup>1)</sup> Other pressure ranges on request

<sup>2)</sup> Measured at  $p_1$  = nominal pressure and pressure drop 1 bar

<sup>3)</sup> Measured at  $p_{1_{max}}$  and  $p_2 = 0$  bar

<sup>4)</sup> Related to final value  $p_{2_{max}}$

<sup>5)</sup> Only with target value > 0

<sup>6)</sup> Depending on the sensor used

## ELECTRICAL PROPERTIES

### Tecno Plus

#### ELECTRICAL PROPERTIES

Type	PRE-U2	PRE-I2
Electromagnetic compatibility (EMC)		
Immunity to interference <sup>1)</sup>	EN 61000-6-2	EN 61000-6-2
Emitted interference <sup>1)</sup>	EN 61000-6-4	EN 61000-6-4
Electrical connection	M12x1; 5-Pin	M12x1; 5-Pin
Supply		
Nominal voltage ( $U_N$ )	24 V DC $\pm$ 10%	24 V DC $\pm$ 10%
Max. residual ripple ( $U_N$ )	10%	10%
Current consumption ( $I_{Bmax}$ )	30 mA	30 mA
Nominal power ( $P_N$ )	0.8 W	0.8 W
Target value input		
Target value setting (W) all pressure ranges	0 bis 10 V DC	4 bis 20 mA
Input resistance ( $R_e$ )	> 55 kOhm	500 Ohm
Actual value output		
Output voltage ( $U_x$ )	0 bis 10 V	0 bis 10 V
Accuracy ( $p2_{max}$ )	<1.5 %	<1.5 %
Output current max ( $I_{max}$ )	1 mA	1 mA

#### RESOLUTION    0–2 BAR    0–6 BAR    0–10 BAR    0–16 BAR    -1–1 BAR    -1–6 BAR    -1–10 BAR    FLEX

Target value input								
Resolution ( $W/p_2$ ) PRE-U2	5 V/bar	1.667 V/bar	1 V/bar	0.625 V/bar	5 V/bar	1.429 V/bar	1 V/bar	– <sup>2)</sup>
Resolution ( $W/p_2$ ) PRE-I2	8 mA/bar	2.667 mA/bar	1.6 mA/bar	1 mA/bar	8 mA/bar	2.286 mA/bar	1.6 mA/bar	– <sup>2)</sup>
Actual value output								
Resolution ( $X/p_2$ )	5 V/bar	1.667 V/bar	1 V/bar	0.625 V/bar	5 V/bar	1.429 V/bar	1 V/bar	

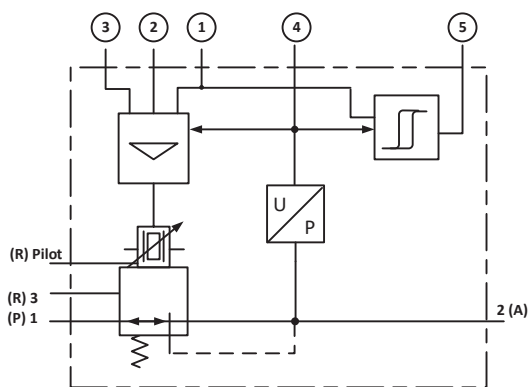
<sup>1)</sup> When using shielded connection cables

<sup>2)</sup> Depending on the sensor used

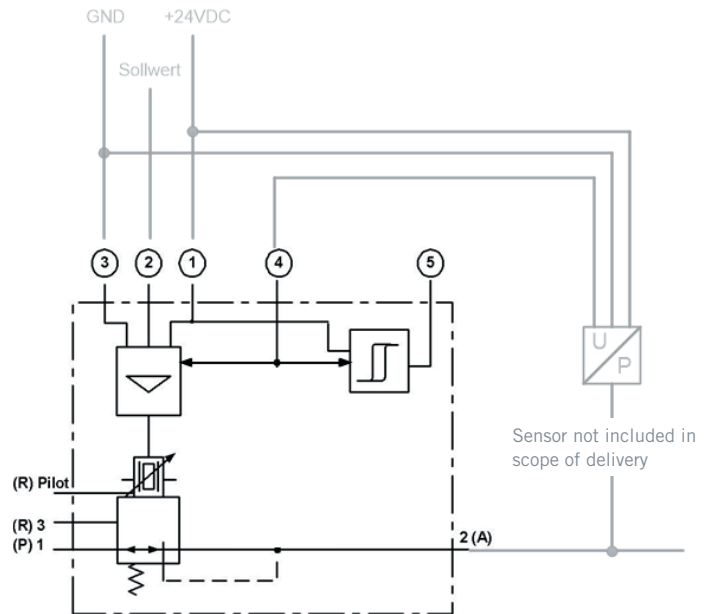
# INTERFACES

## Tecno Plus

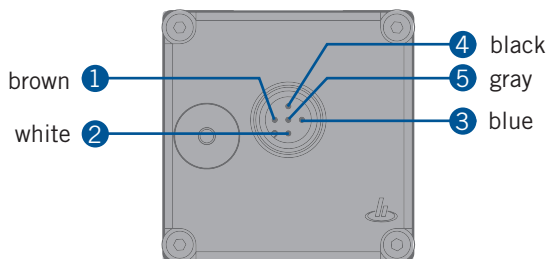
PRE-U2, PRE-I2



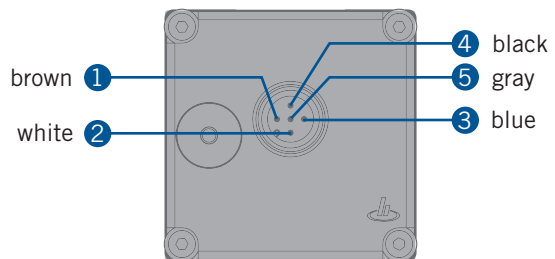
PRE-U2, PRE-I2 FLEX



Plug pin no.



Plug pin no.



### Connection diagram

1	24 V Supply
2	Target value input
3	Ground / GND
4	Actual value output analog (voltage)
5	Actual value output digital

### Connection diagram

1	24 V Supply
2	Target value input
3	Ground / GND
4	Sensor input analog
5	Actual value output digital

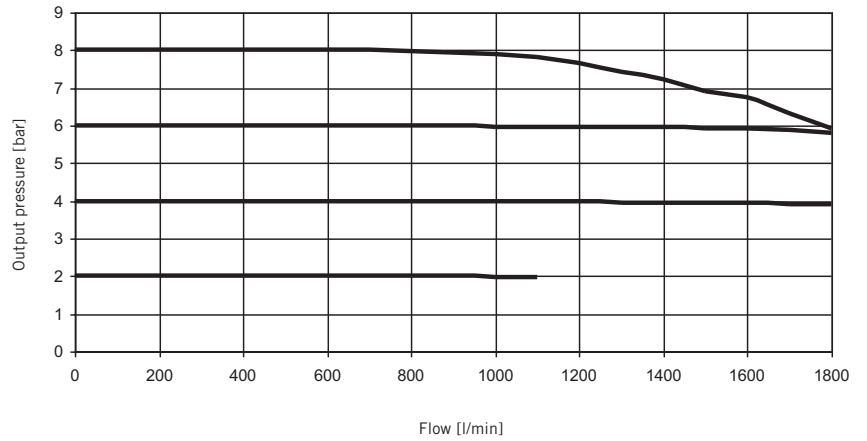
# FLOW CURVES

## Tecno Plus

### FLOW FROM 1 TO 2

Input pressure 10 bar

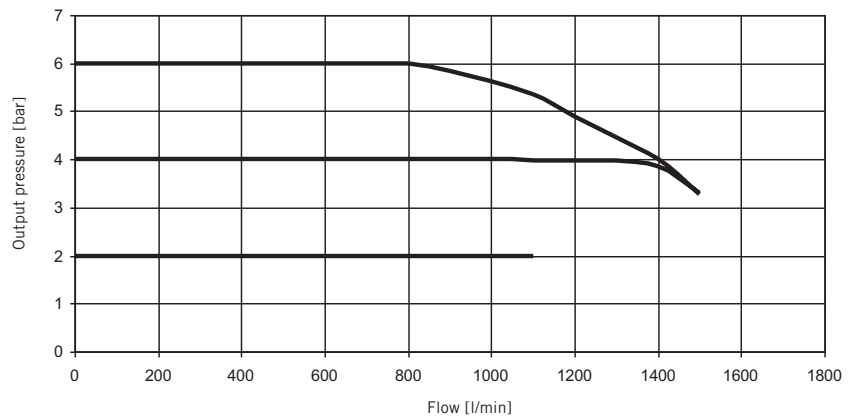
For valves with pressure range  
0 – 10 bar



### FLOW FROM 1 TO 2

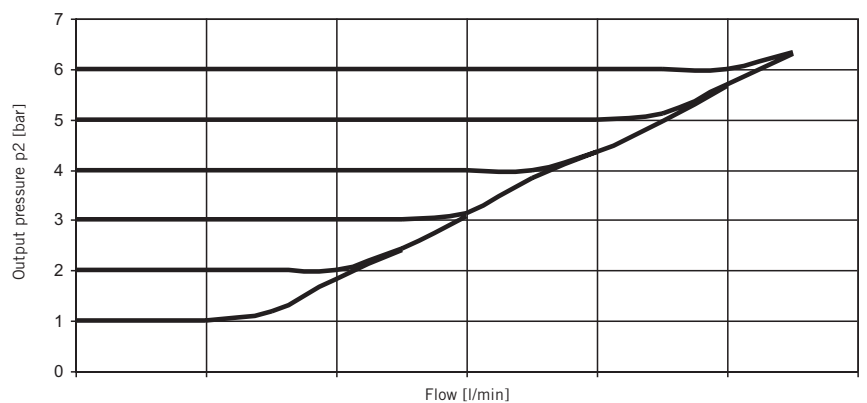
Input pressure 7 bar

For valves with pressure range  
0 – 2 bar and 0 – 6 bar



### FLOW FROM 2 TO 3, EXHAUST

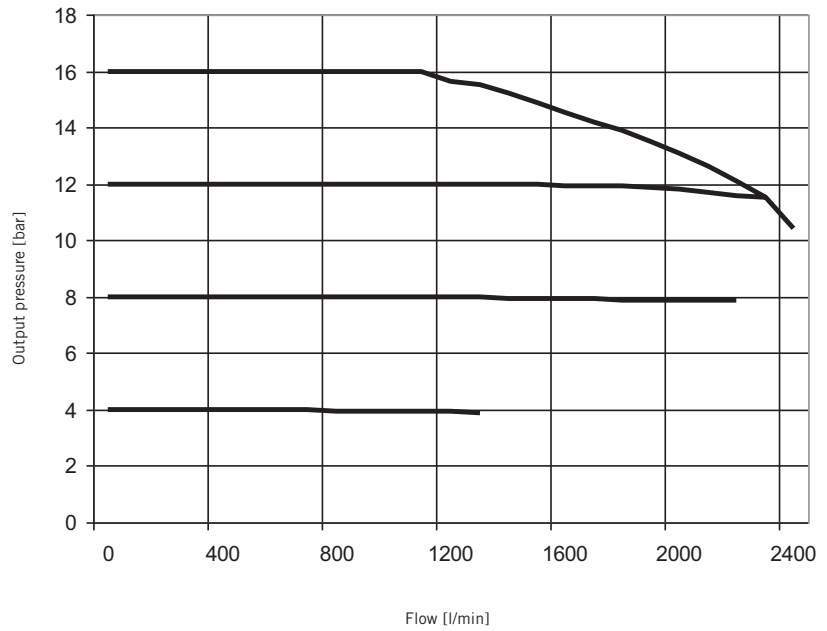
For valves with pressure range  
0 – 2 bar, 0 – 6 bar  
and 0 – 10 bar



## FLOW FROM 1 TO 2

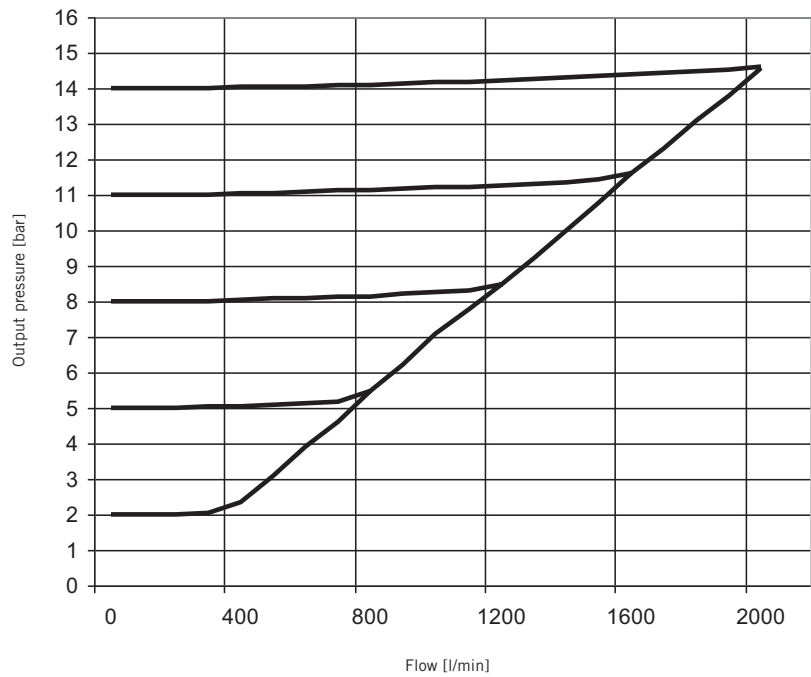
Input pressure 17 bar

For valves with pressure range  
0 – 16 bar



## FLOW FROM 2 TO 3, EXHAUST

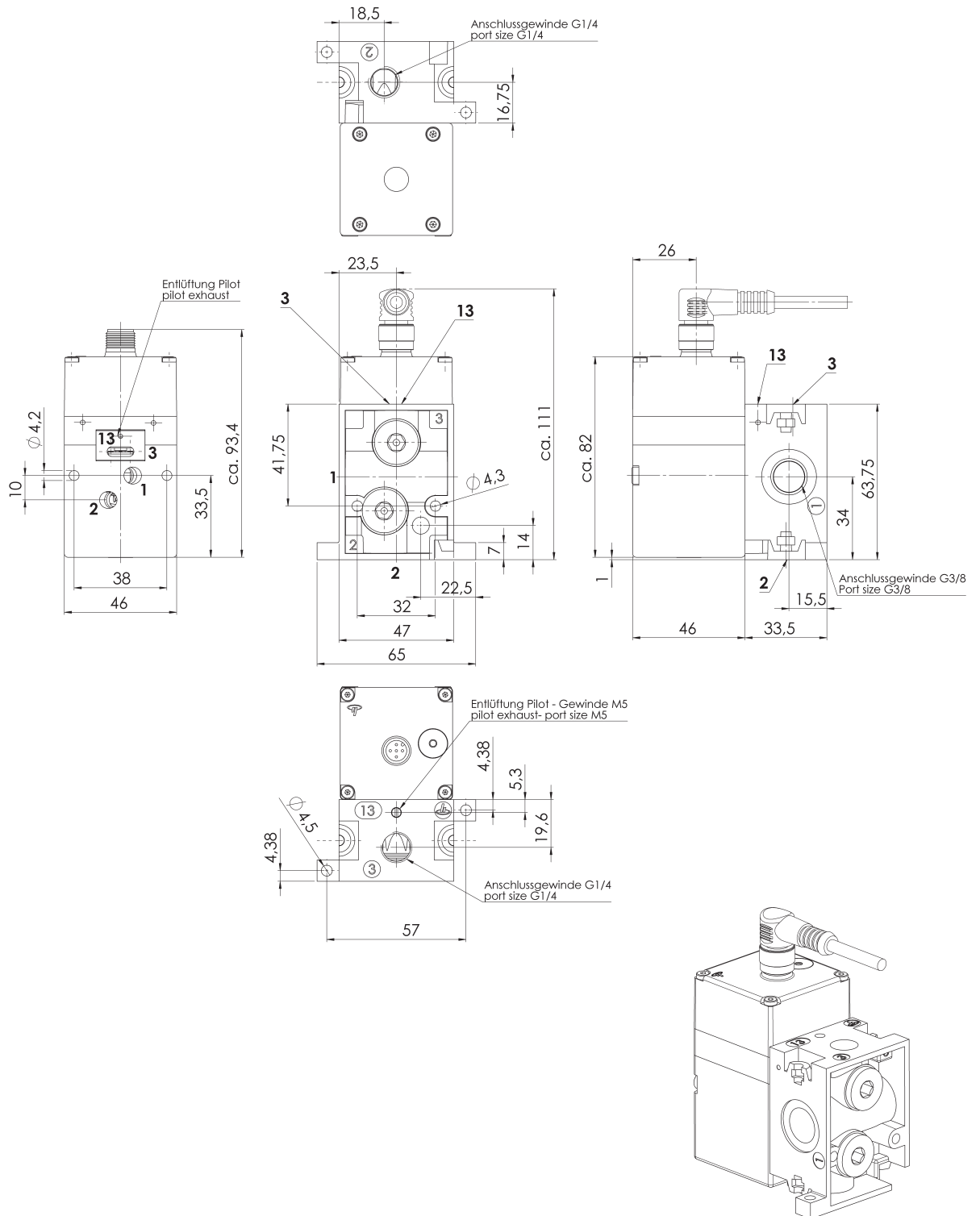
For valves with pressure range  
0 – 16 bar



# DIMENSIONS

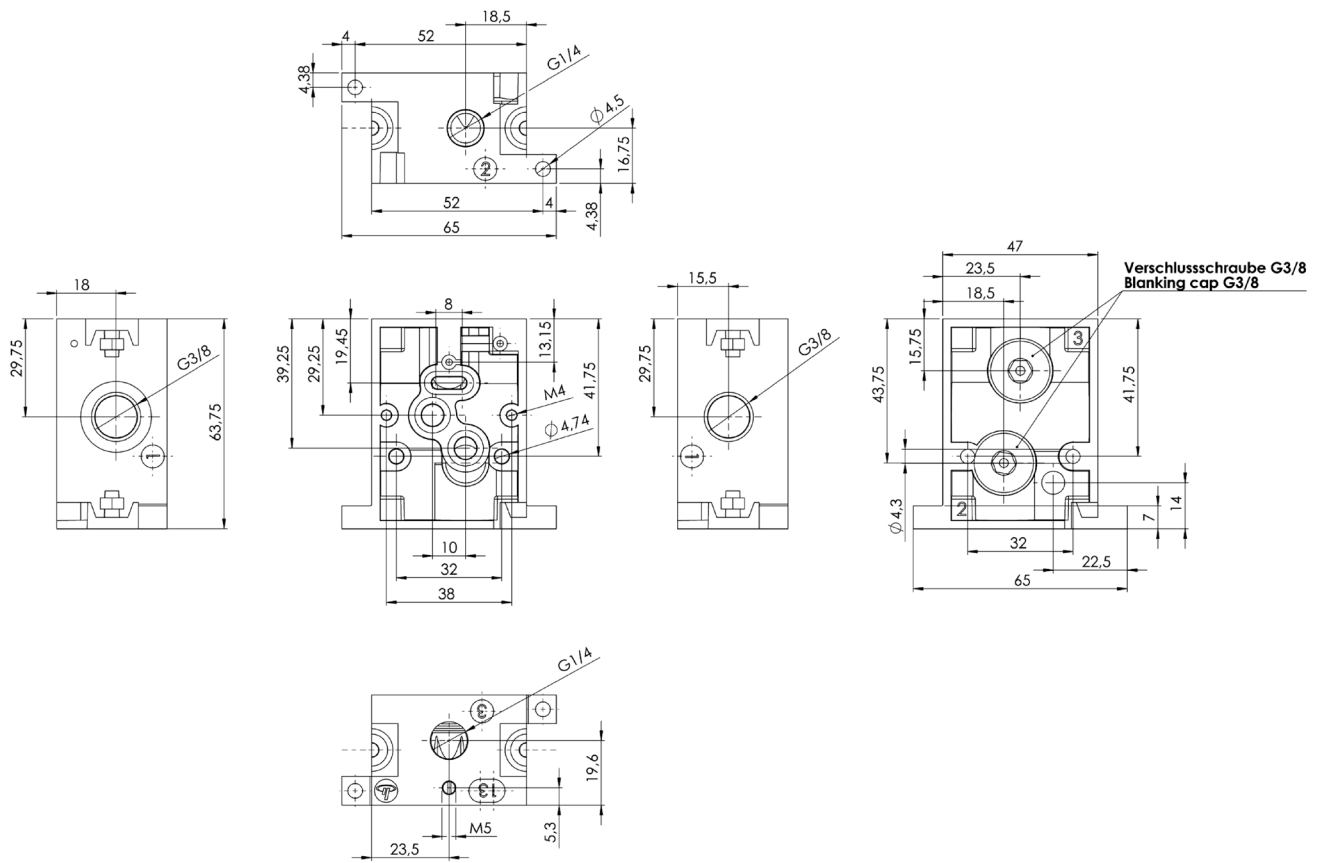
## Teco Plus

WITH BASE PLATE STRAIGHT/LATERAL AND PLUG CONNECTOR ANGLED

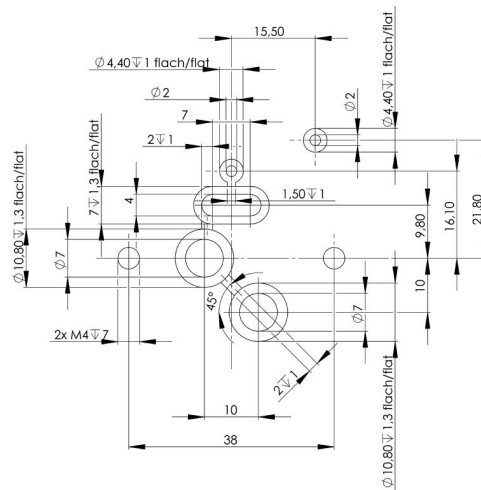




## BASE PLATE PS12486-A-01 WITH FLANGE CONNECTION



## DETAIL FLANGE CONNECTION



## ACCESSORIES

Tecno Plus

ACCESSORIES		ORDER NO.
	Base plate 1-fold for mounting one valve, straight/lateral, stackable \ G3/8", G1/4"	PS12486-A-01
	Base plate 1-fold for mounting one valve, straight/lateral, stackable \ G3/8", G1/4", integrated strainer 100µm in air supply P1, flow rate reduction ca. 37% (port 1 to 2) (individual strainer available on request)	PS12657
	Base plate 1-fold for mounting one valve, straight/lateral, stackable \ G3/8", G1/4", integrated strainer 100µm in air supply P1 and work port P2, flow rate reduction ca. 50% (port 1 to 2) (individual strainer available on request)	PS12658
	Coupling kit for connection of 2 base plates	PS12643
	Blanking cap G 3/8 to close base plate port 1	KW0428
	Blanking cap G 1/4 to close base plate port 2	KW0427
	Blanking cap G 1/4x8 to close base plate port 2	PS12522
	Connecting cable straight with plug connector straight \ M12; 5-pole \ 5 m	PS12315
	Connecting cable angled with plug connector angled \ M12; 5-pole \ 5 m	PS12316
	Connecting cable with Status LED with plug connector angled; 1 x LED green = „power on“; 1 x LED yellow = „Pressure reached“ \ M12; 5-pole \ 5 m	PS12317
	Programming set / tool for adjusting the valve control parameters	PS12424

# ORDER KEY

Tecno Plus

## ID NUMBER KEY

		1	2		3		4	5	6
<b>ID NUMBER</b>	<b>PS 1 2</b>	<b>0 1</b>	<b>x x</b>	<b>-</b>	<b>x x x</b>	<b>-</b>	<b>0</b>	<b>x</b>	<b>x</b>
	PS 1 2	0 1	0 1	-	0 6 0	-	0	1	5

### 1 Device type

<b>01</b>	Standard - with integrated pressure sensor
<b>07</b>	Flex - without integrated pressure sensor

### 2 Valve version-Target value

<b>00</b>	Voltage
<b>01</b>	Current 4 – 20 mA

### 3 Pressure range

<b>020</b>	2 bar
<b>060</b>	6 bar
<b>100</b>	10 bar
<b>160</b>	16 bar
<b>A20</b>	-1 – 1 bar
<b>A70</b>	-1 – 6 bar
<b>A110</b>	-1 – 10 bar <sup>1)</sup>

### 4 Device version

<b>0</b>	Standard
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### 5 Connection cable\*

<b>0</b>	Without cable and plug connector
<b>1</b>	Cable with plug connector straight (5 Pin)
<b>2</b>	Cable with plug connector angled (5 Pin)
<b>3</b>	Cable with plug connector angled + LED (5 Pin)

### 6 Flange\*

<b>0</b>	Without flange
<b>5</b>	Straight/lateral G1/4", stackable
<b>6</b>	Straight/lateral G1/4", stackable, strainer in P1
<b>7</b>	Straight/lateral G1/4", stackable, strainer in P1 and P2

\* See accessories

<sup>1)</sup> Device type Flex always with pressure range -1 – 10 bar

Other variations on request

## CONVERSION FACTORS

Tecno Plus

### CONVERSION FACTORS

VALUE	UNIT	CONVERSION UNIT	FACTOR
<b>Length</b>	mm	in	0.03934
	in	mm	25.4
	m	ft	3.28084
	ft	m	0.3048
<b>Weight</b>	kg	lb	2.204622
	lb	kg	0.453592
<b>Pressure</b>	bar	psi	14.5035
	psi	bar	0.06895
	MPa	psi	145.035
	psi	MPa	0.006895
	bar	MPa	0.1
MPa	bar	10	
<b>Temperature</b>	°C	°F	$1.8 \text{ }^{\circ}\text{C} + 32$
	°F	°C	$0.5556 \text{ }^{\circ}\text{F} - 32$
<b>Torque</b>	Nm	ft/lbs	0.7375
	ft/lbs	Nm	1.3558

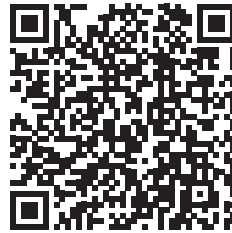
## ADDITIONAL DOCUMENTATION

Tecno Plus

[WWW.HOERBIGER.COM](http://WWW.HOERBIGER.COM)

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This data sheet and additional documentation is available in the download area of the company's website.



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[www.hoerbiger.com](http://www.hoerbiger.com)

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