

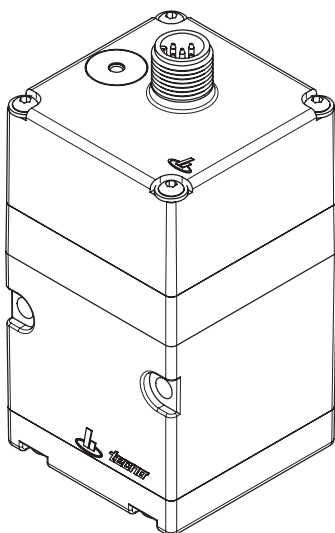
TECNO PLUS

Piezo-controlled pneumatic pressure regulator,
electronically controlled

Technical Data

EN MET


HOERBIGER



GENERAL PROPERTIES

Tecno Plus

GENERAL PROPERTIES

Type	Target value via voltage, Target value via current
Function	Proportional 3/2-way NC
Actuation type	Piezoelectric pilot
Constructive structure	Seat valve
Connection type	Flange ¹⁾
Weight	0.200 kg
Installation position	Any
Protection type	IP65, (16bar = IP54) (DIN EN 60529 A1: 2000) ²⁾
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 ³⁾	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

¹⁾ Base plates for threaded connection see accessories

²⁾ With mounted connector plug and exhaust ported at booster (3) and pilot (13)

³⁾ 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 ⁶⁾
Output pressure max ($p_{2\max}$) ¹⁾	2 bar	6 bar	10 bar	16 bar	1 bar	6 bar	10 bar	10 bar ⁶⁾
Nominal flow rate 1 to 2 (Q_N) ²⁾	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 ($Q_{\max}$) ³⁾	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 ⁴⁾	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	– ⁶⁾
Repeatability ⁴⁾	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	– ⁶⁾
Responsiveness ⁴⁾	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %	– ⁶⁾
Linearity ⁴⁾	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	< 0.5 %	– ⁶⁾
Leakage ³⁾	≤ 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 ⁵⁾	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min	≤ 1 l/min

¹⁾ Other pressure ranges on request

²⁾ Measured at p_1 = nominal pressure and pressure drop 1 bar

³⁾ Measured at $p_{1\max}$ and $p_2 = 0$ bar

⁴⁾ Related to final value $p_{2\max}$

⁵⁾ Only with target value > 0

⁶⁾ Depending on the sensor used

ELECTRICAL PROPERTIES

Tecno Plus

ELECTRICAL PROPERTIES

Type	Target value via voltage	Target value via current
Electromagnetic compatibility (EMC)		
Immunity to interference ¹⁾	EN 61000-6-2	EN 61000-6-2
Emitted interference ¹⁾	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	– ²⁾
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	– ²⁾
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	

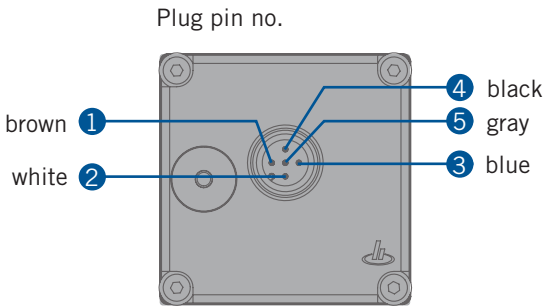
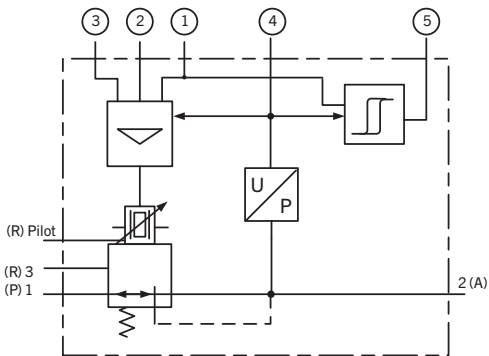
¹⁾ When using shielded connection cables

²⁾ Depending on the sensor used

INTERFACES

Tecno Plus

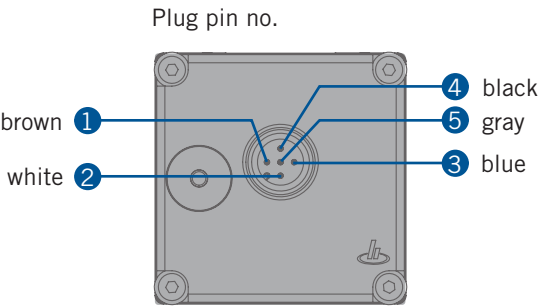
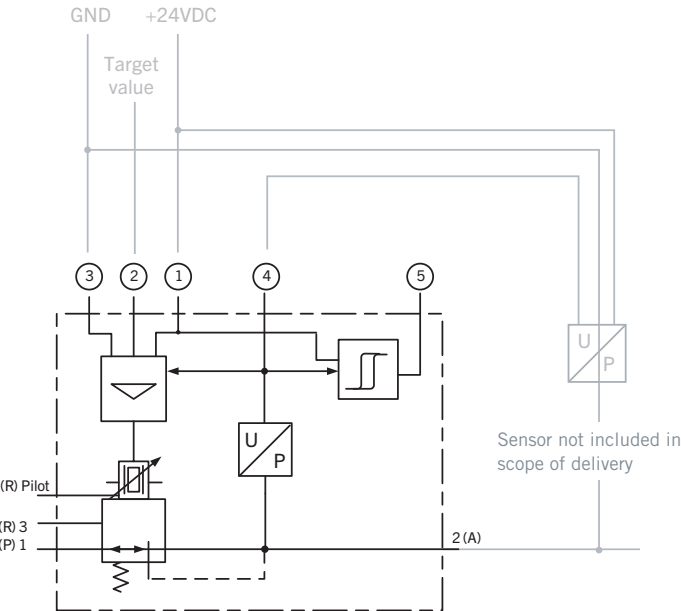
WITH ACTUAL VALUE OUTPUT



Connection diagram

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

WITH INPUT FOR EXTERNAL SENSOR



Connection diagram

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

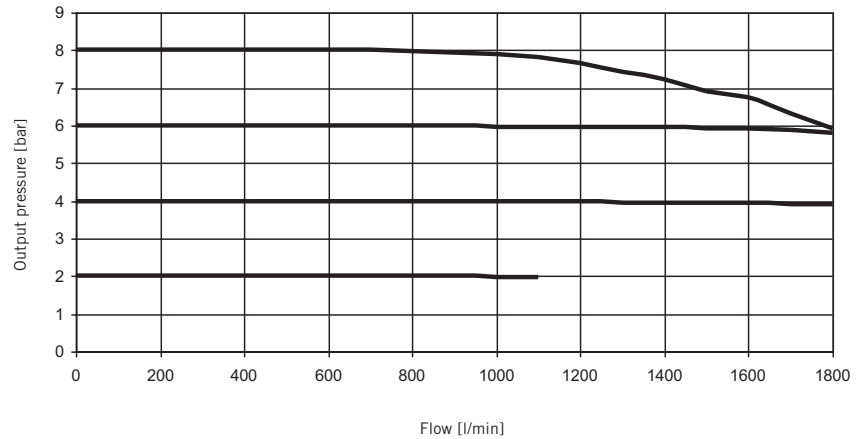
FLOW CURVES

Tecno Plus

FLOW FROM 1 TO 2

Input pressure 10 bar

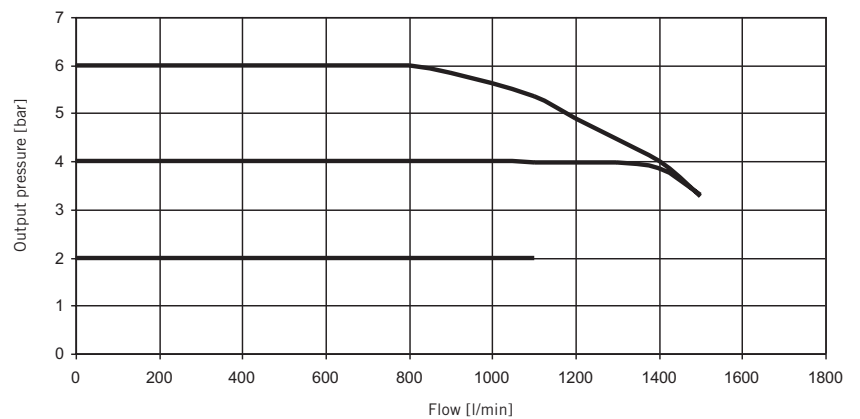
For valves with pressure range
0 – 10 bar



FLOW FROM 1 TO 2

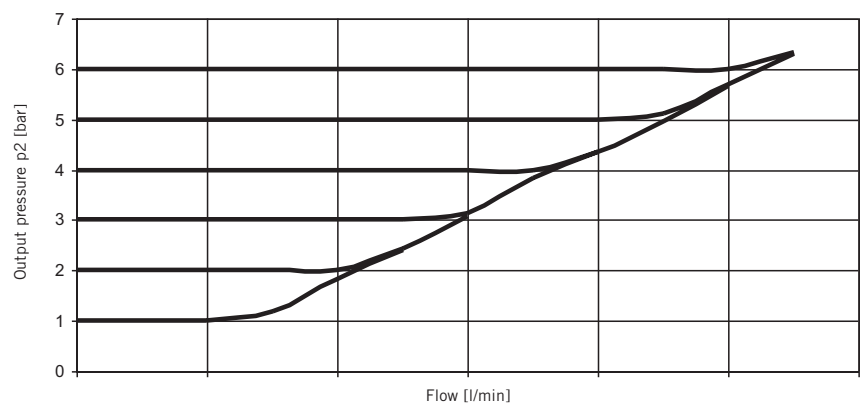
Input pressure 7 bar

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



FLOW FROM 2 TO 3, EXHAUST

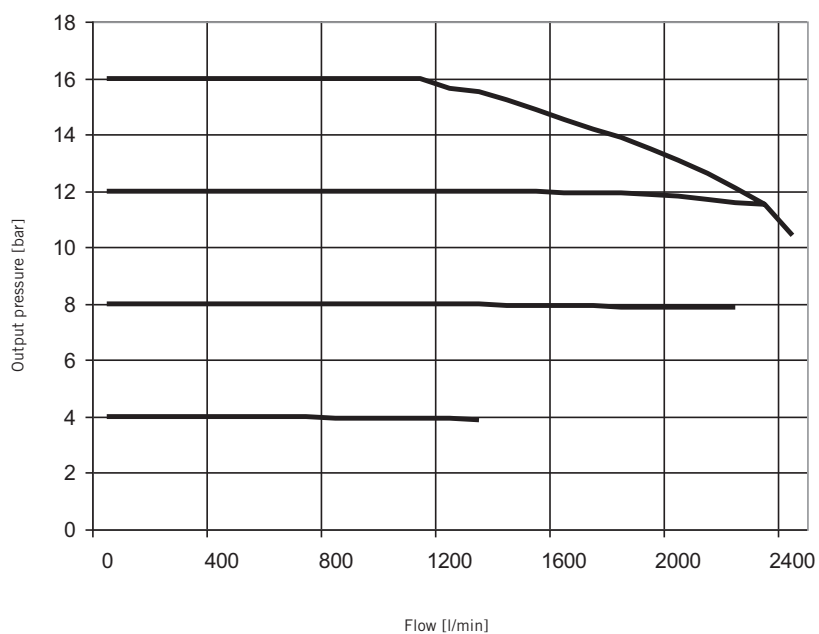
For valves with pressure range
0 – 2 bar, 0 – 6 bar
and 0 – 10 bar



FLOW FROM 1 TO 2

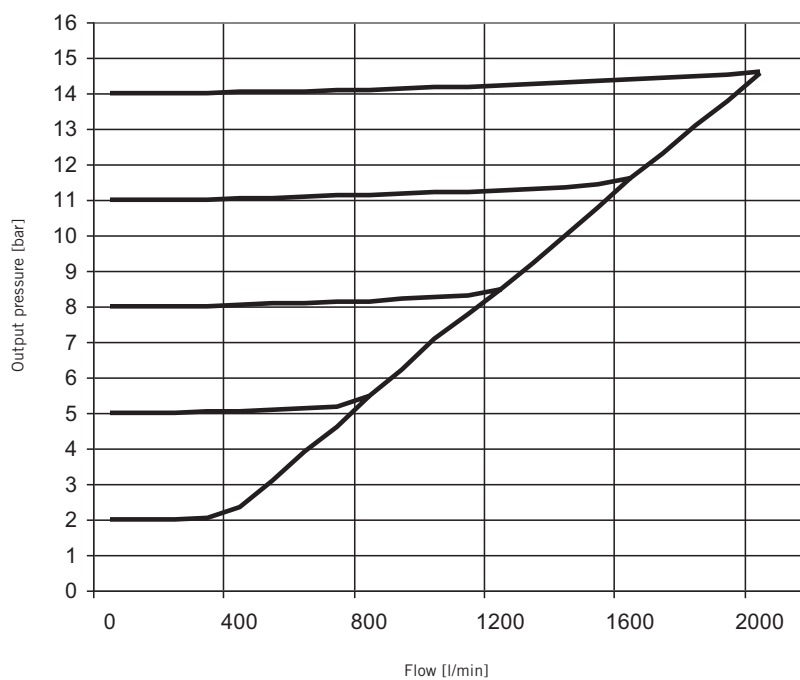
Input pressure 17 bar

For valves with pressure range
0 – 16 bar



FLOW FROM 2 TO 3, EXHAUST

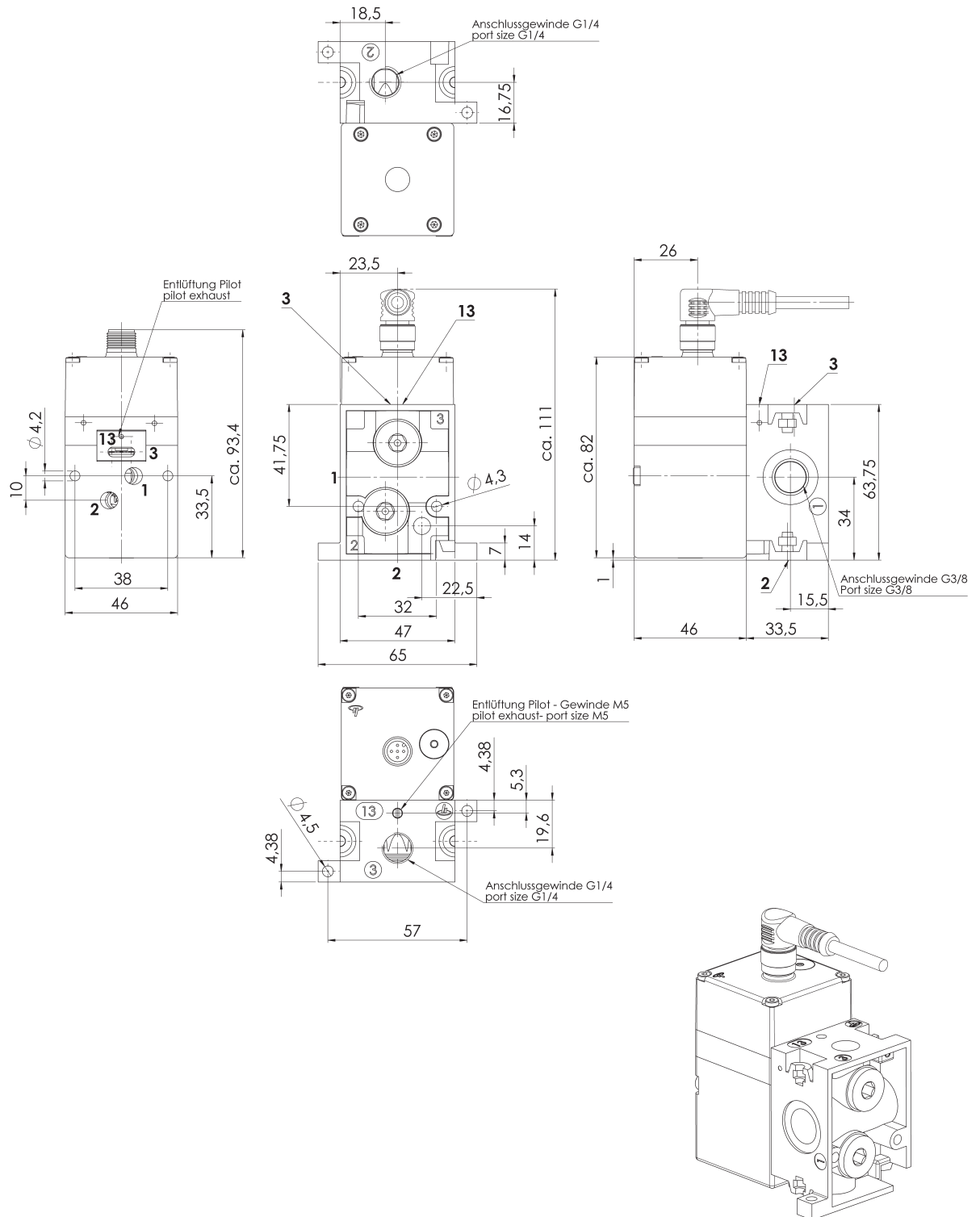
For valves with pressure range
0 – 16 bar



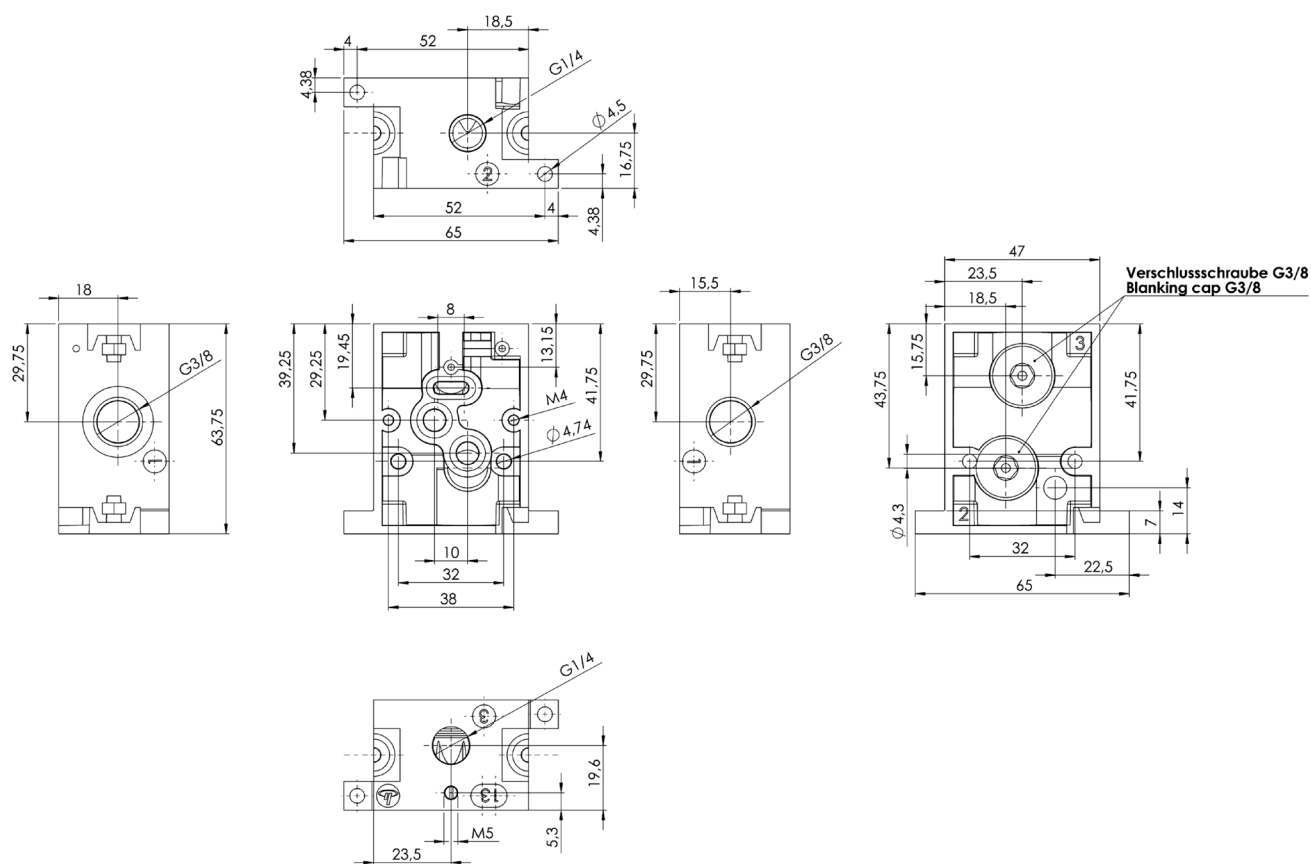
DIMENSIONS

Tecno Plus

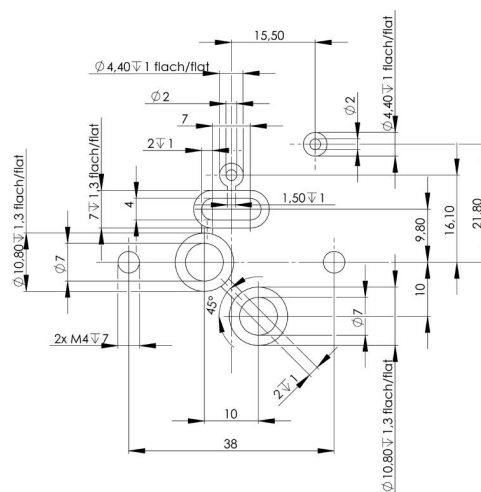
WITH BASE PLATE STRAIGHT/LATERAL AND PLUG CONNECTOR ANGLED



BASE PLATE 1016-5512-00 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"	TEP-ANG-A001
	Base plate 1-fold for mounting one valve, straight/lateral, stackable \ G3/8", G1/4", integrated strainer 100 µm in air supply P1, flow rate reduction approx. 37% (port 1 to 2) (individual strainer available on request)	TEP-FIL-A001
	Base plate 1-fold for mounting one valve, straight/lateral, stackable \ G3/8", G1/4", integrated strainer 100 µm in air supply P1 and work port P2, flow rate reduction approx. 50% (port 1 to 2) (individual strainer available on request)	TEP-FIL-A002
	Coupling kit for connection of 2 base plates	TEP-STR-C001
	Blanking cap G 3/8 to close base plate port 1	G3/8"X15
	Blanking cap G 1/4 to close base plate port 2	G1/4"X15
	Connecting cable straight with plug connector straight \ M12; 5-pole \ 5 m	TEP-STR-K055
	Connecting cable angled with plug connector angled \ M12; 5-pole \ 5 m	TEP-ANG-K055
	Connecting cable with Status LED with plug connector angled; 1xLEDgreen=„poweron“; 1xLEDyellow=„Pressure reached“ \ M12; 5-pole \ 5 m	TEP-ANL-K034
	Programming set / tool for adjusting the valve control parameters	TEP-000-P024

ORDER KEY

Tecno Plus

TYPE NUMBER KEY

TYPE NUMBER	T E P	1	2	-	3	-	x	4	5
		x x	x x		x x x			x	x
Example	T E P	0 1	0 1	-	0 6 0	-	0	1	5

1 Device type

01	tecno plus – analog
07	tecno plus flex – analog

2 Valve version-Target value

00	Voltage
01	Current 4 – 20 mA

3 Pressure range

020	2 bar
060	6 bar
100	10 bar
160	16 bar
A20	-1 – 1 bar
A70	-1 – 6 bar
A11	-1 – 10 bar ¹⁾

¹⁾ Device type Flex always with pressure range -1 – 10 bar

4 Connection cable*

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

5 Base plate*

0	Without base plate
5	Straight/lateral G1/4", stackable
6	Straight/lateral G1/4", stackable, strainer in P1
7	Straight/lateral G1/4", stackable, strainer in P1 and P2

*See accessories

Other variations on request

CONVERSION FACTORS

Tecno Plus

CONVERSION FACTORS

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

ADDITIONAL DOCUMENTATION

Tecno Plus

WWW.HOERBIGER.COM

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



www.hoerbiger.com

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