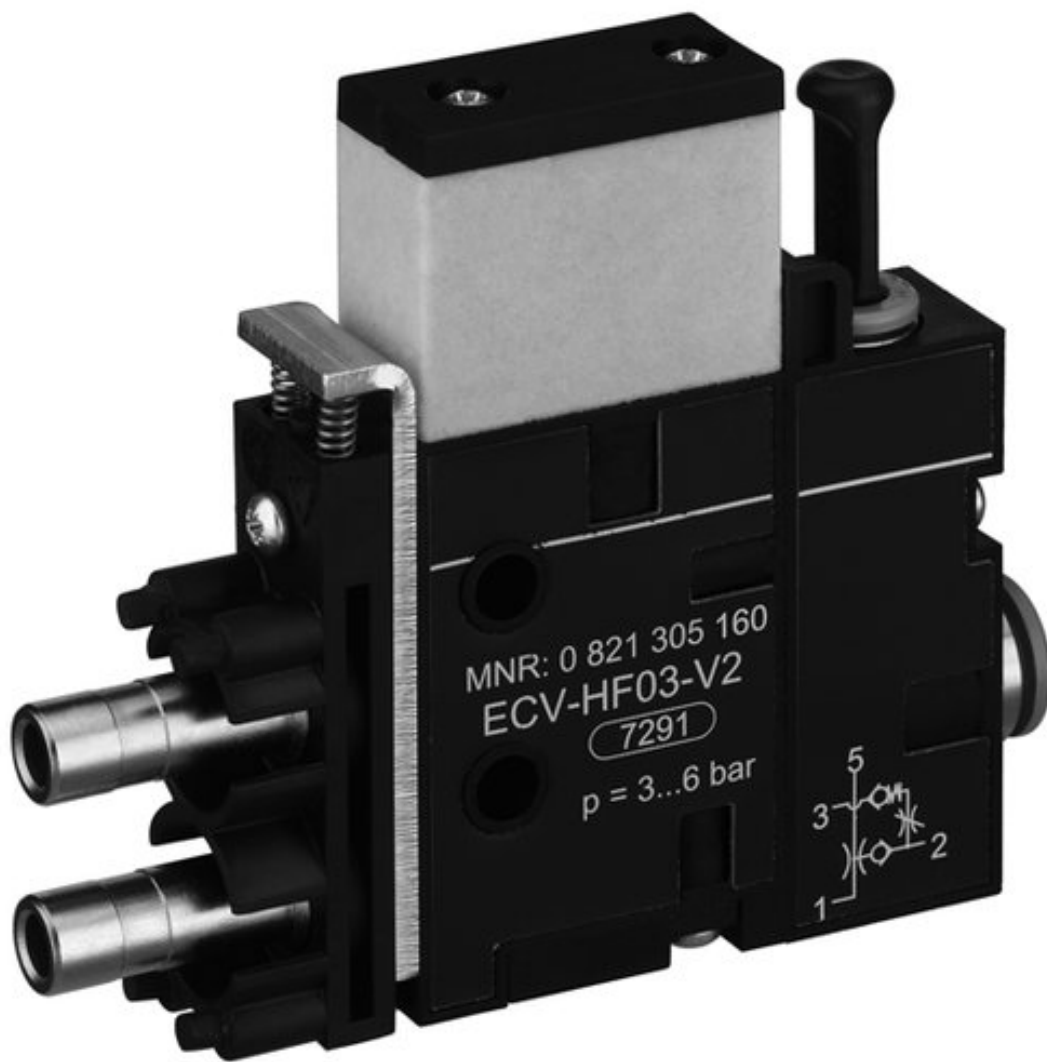


Series ECV



AVENTICS™ Series ECV

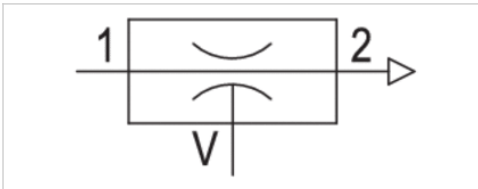

EMERSON

compact ejector, Series ECV

- For HF03 valve system



Activation	Electrically
Working pressure min./max.	3 ... 6 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m ³
Nozzle Ø	1.5 mm
Max. suction capacity	63 l/min
Air consumption at p.opt.	116 l/min
Weight	0.11 kg



Technical data

Part No.	Type	Compressed air connection	Vacuum connection+	Port exhaust
0821305160	ECV-PC-15-NN	Ø 8	Ø 8	Ø 8
0821305161	ECV-PC-15-NN	Ø 8	Ø 8	-
0821305164	ECV-PC-15-NN	G 1/8	G 1/8	G 1/8
0821305165	ECV-PC-15-NN	G 1/8	G 1/8	-

Part No.	Sound pressure level intake effect	Sound pressure level intake effect	Silencer
0821305160	-	-	-
0821305161	67 dB	73 dB	with silencer
0821305164	-	-	-
0821305165	67 dB	73 dB	with silencer

Part No.	Ventilation port	Fig.
0821305160	With ventilation port	Fig. 1, Fig. 5, Fig. 6
0821305161	-	Fig. 2, Fig. 7, Fig. 8
0821305164	With ventilation port	Fig. 3, Fig. 5, Fig. 6
0821305165	-	Fig. 4, Fig. 7, Fig. 8

Technical information

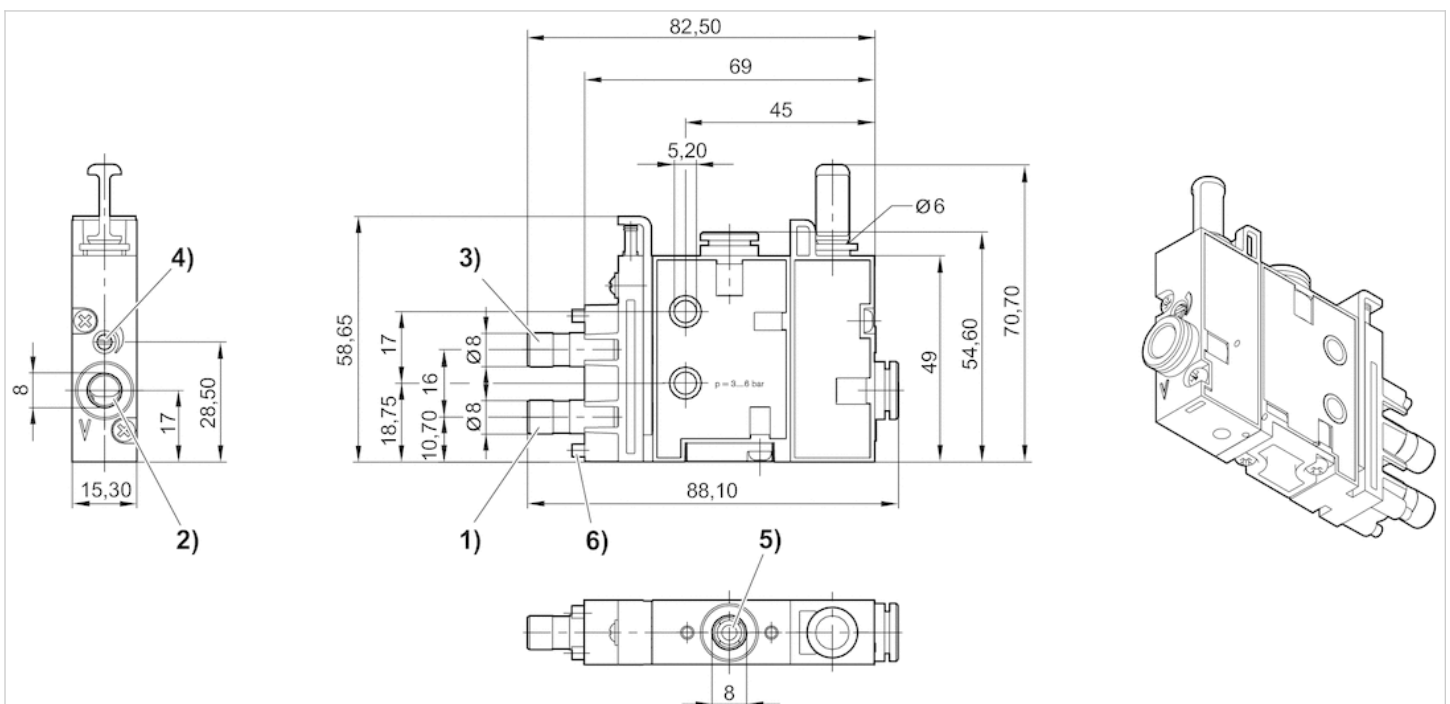
Note: All data refers to an ambient pressure of 1.013 bar and an ambient temperature of 20 °C .
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.
 p.opt. = optimum working pressure

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seal	Acrylonitrile butadiene rubber
Nozzle	Brass
Silencer	Polyethylene

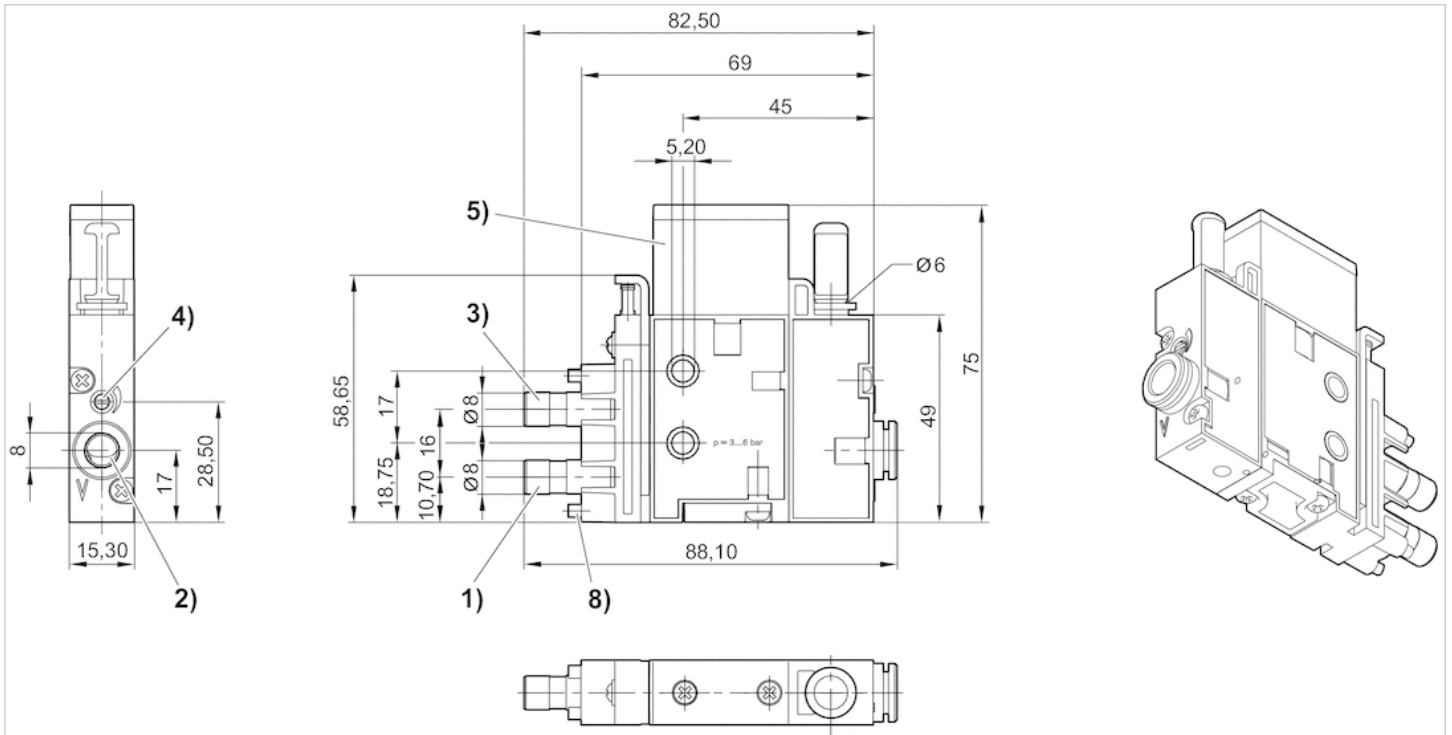
Dimensions

Fig. 1, ECV-PC-15-NN, With ventilation port



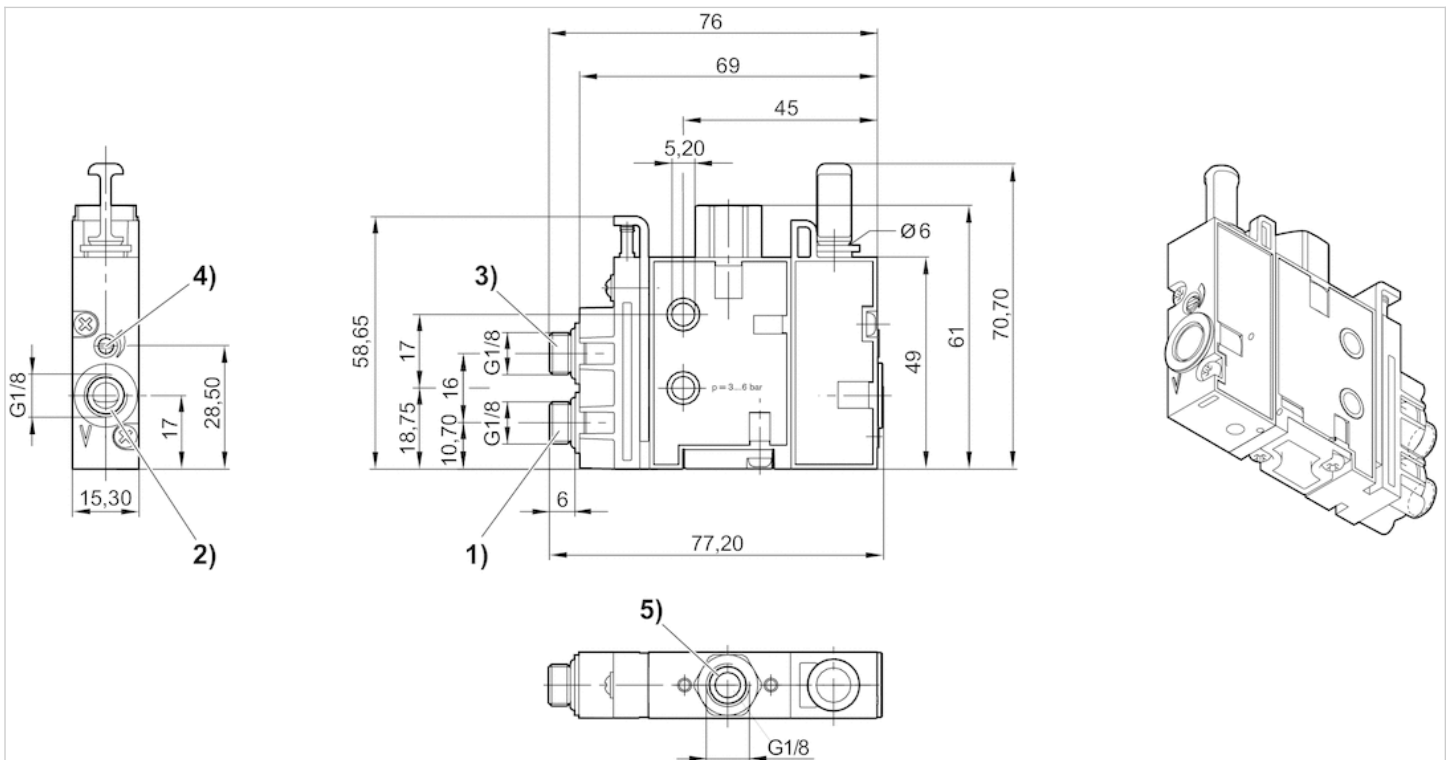
- 1) air connection (suction)
- 2) vacuum connection
- 3) release pulse connection
- 4) throttle for release pulse
- 5) ventilation port
- 6) Spacer

Fig. 2, ECV-PC-15-NN, with silencer



- 1) air connection (suction)
- 2) vacuum connection
- 3) release pulse connection
- 4) throttle for release pulse
- 5) silencer
- 6) Spacer

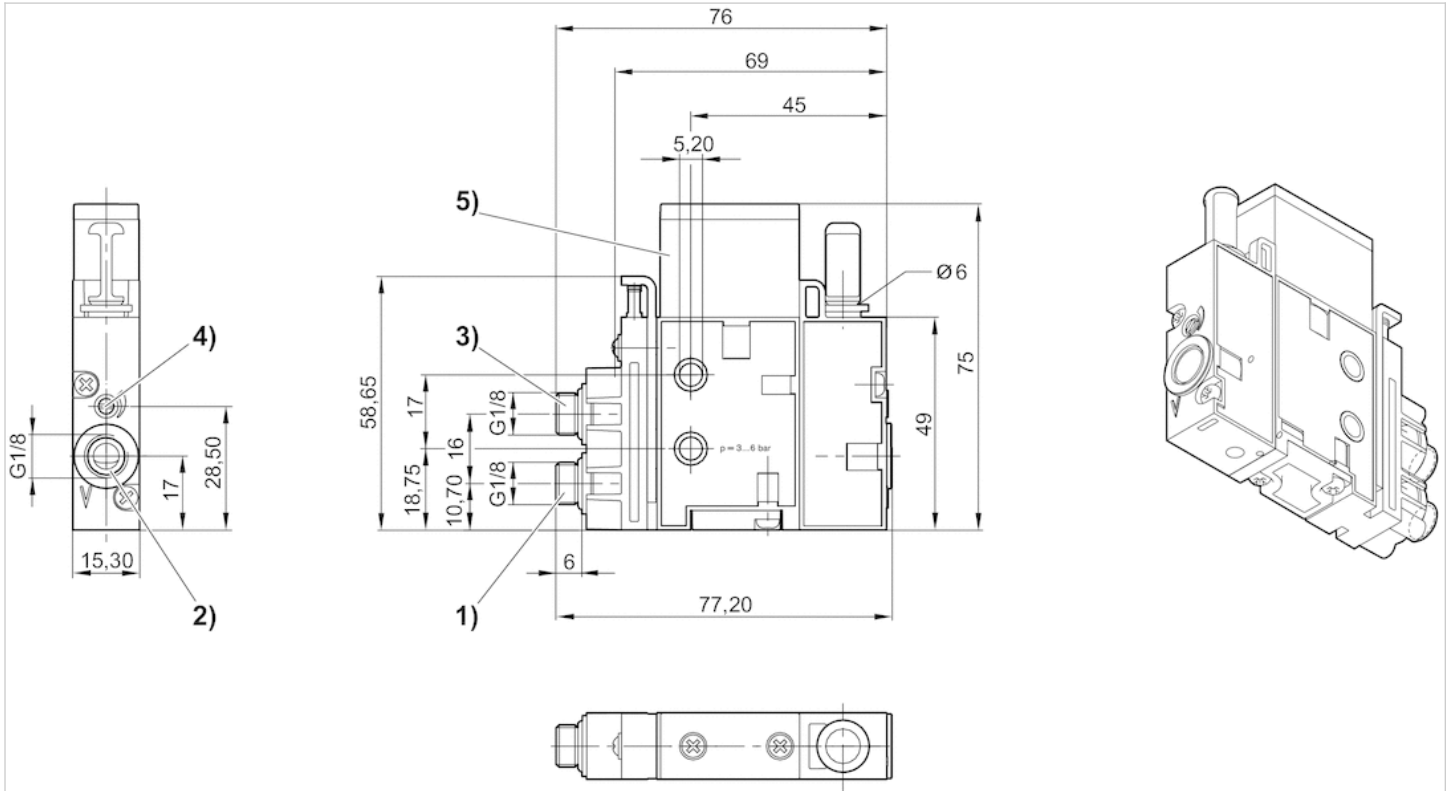
Fig. 3, ECV-PC-15-NN, with ventilation port



- 1) air connection (suction)
- 2) vacuum connection

- 3) release pulse connection
- 4) throttle for release pulse
- 5) ventilation port

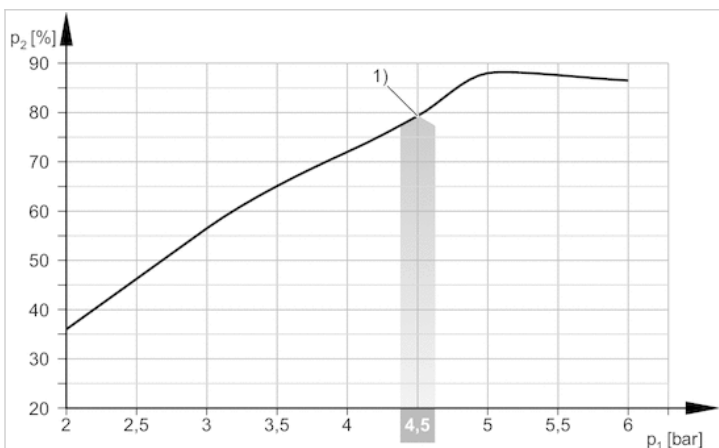
Fig. 4, ECV-PC-15-NN, with silencer



- 1) air connection (suction)
- 2) vacuum connection
- 3) release pulse connection
- 4) throttle for release pulse
- 5) silencer

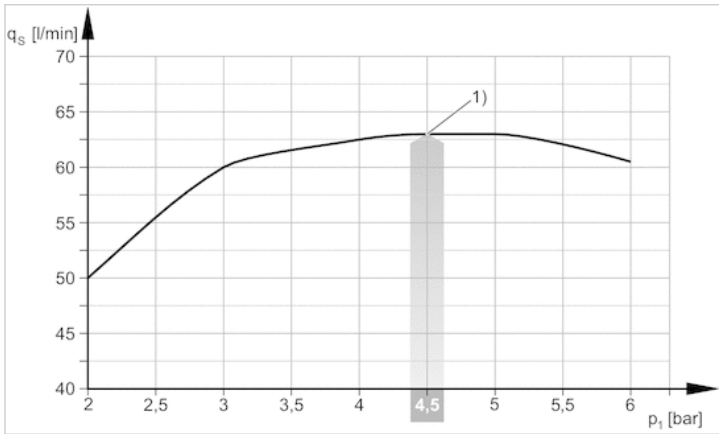
Diagrams

Vacuum p_2 depending on working pressure p_1



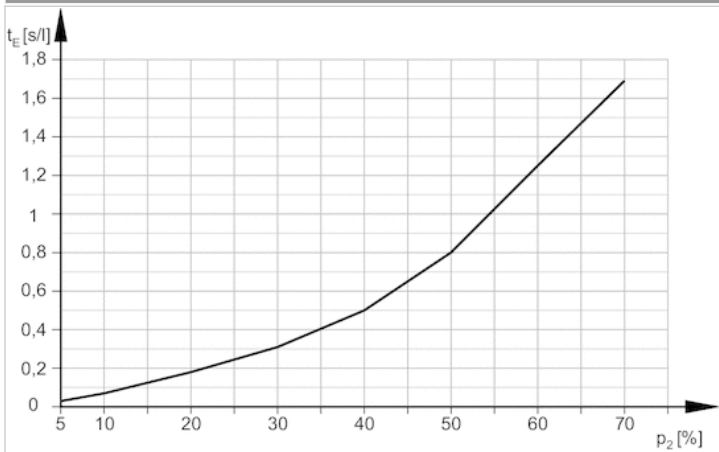
- 1) optimum working pressure

Suction capacity q_s depending on working pressure p_1

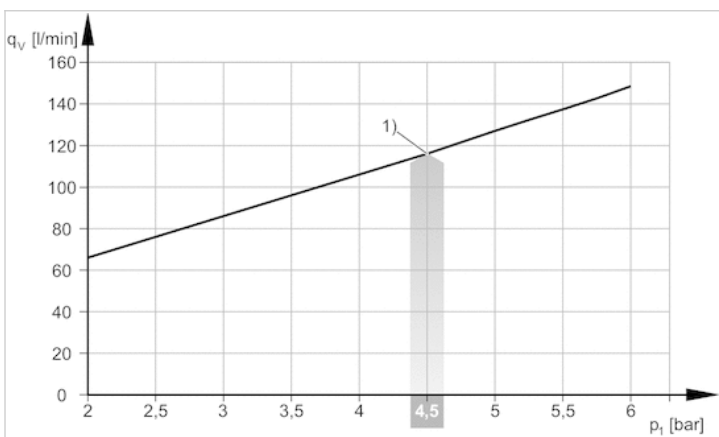


1) optimum working pressure

Evacuation time t_E depending on vacuum p_2 for 1 l volume (with optimal operating pressure p_{1opt})



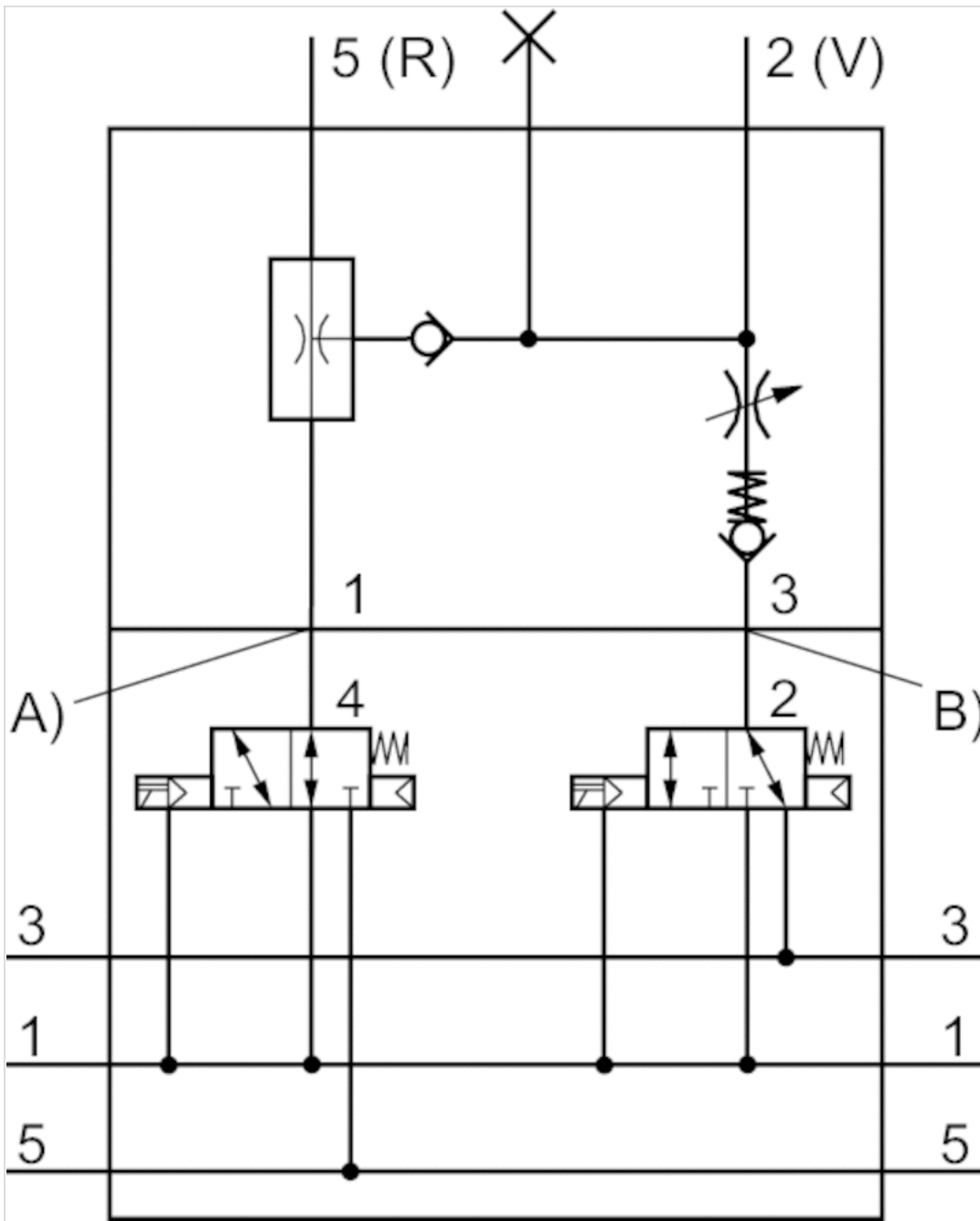
Air consumption q_v depending on working pressure p_1



1) optimum working pressure

Circuit diagram

Fig. 5, ECV-HF03-...with NO activation



- A) Air connection suction
- B) release pulse air connection

Fig. 6, ECV-HF03...with NC activation

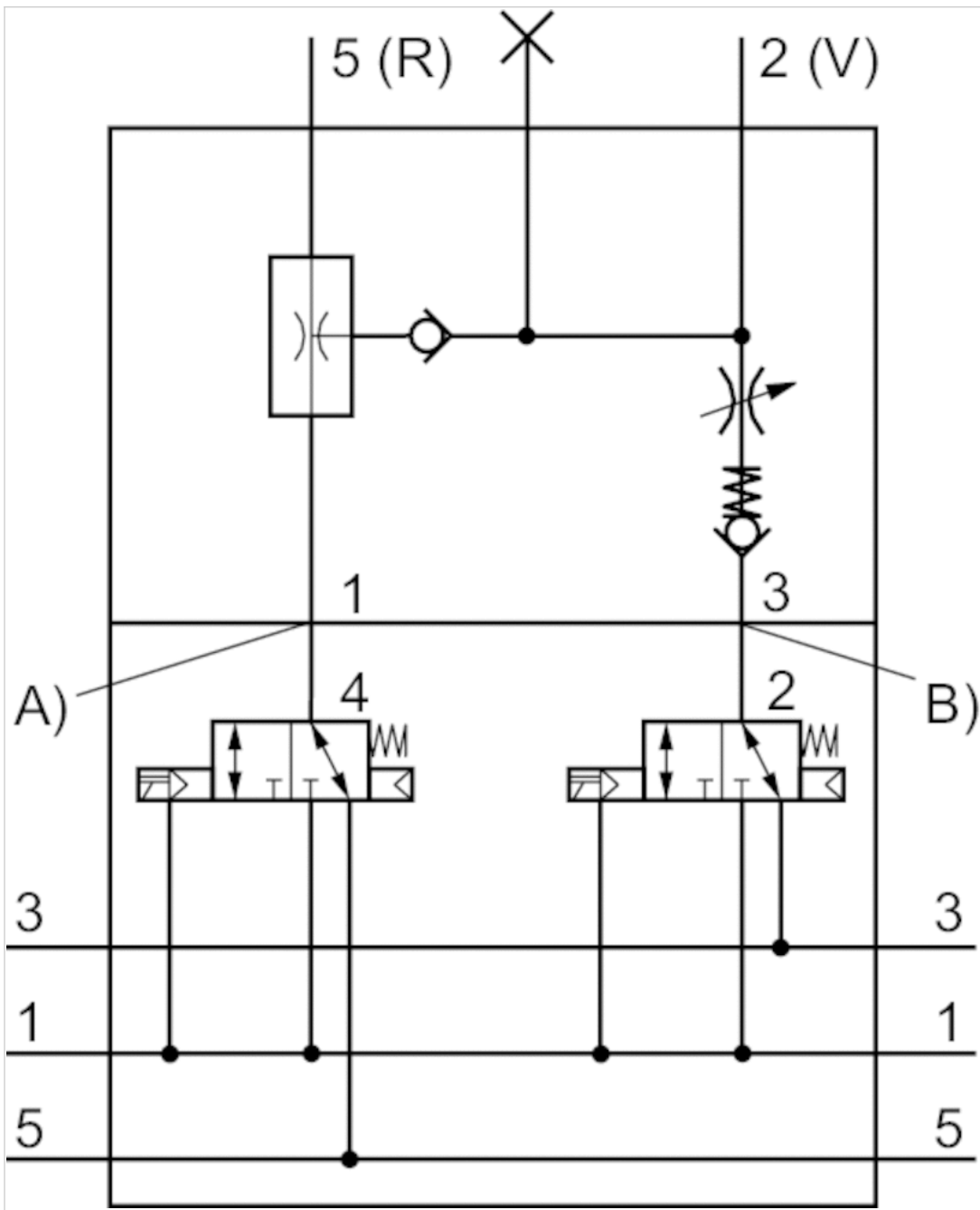
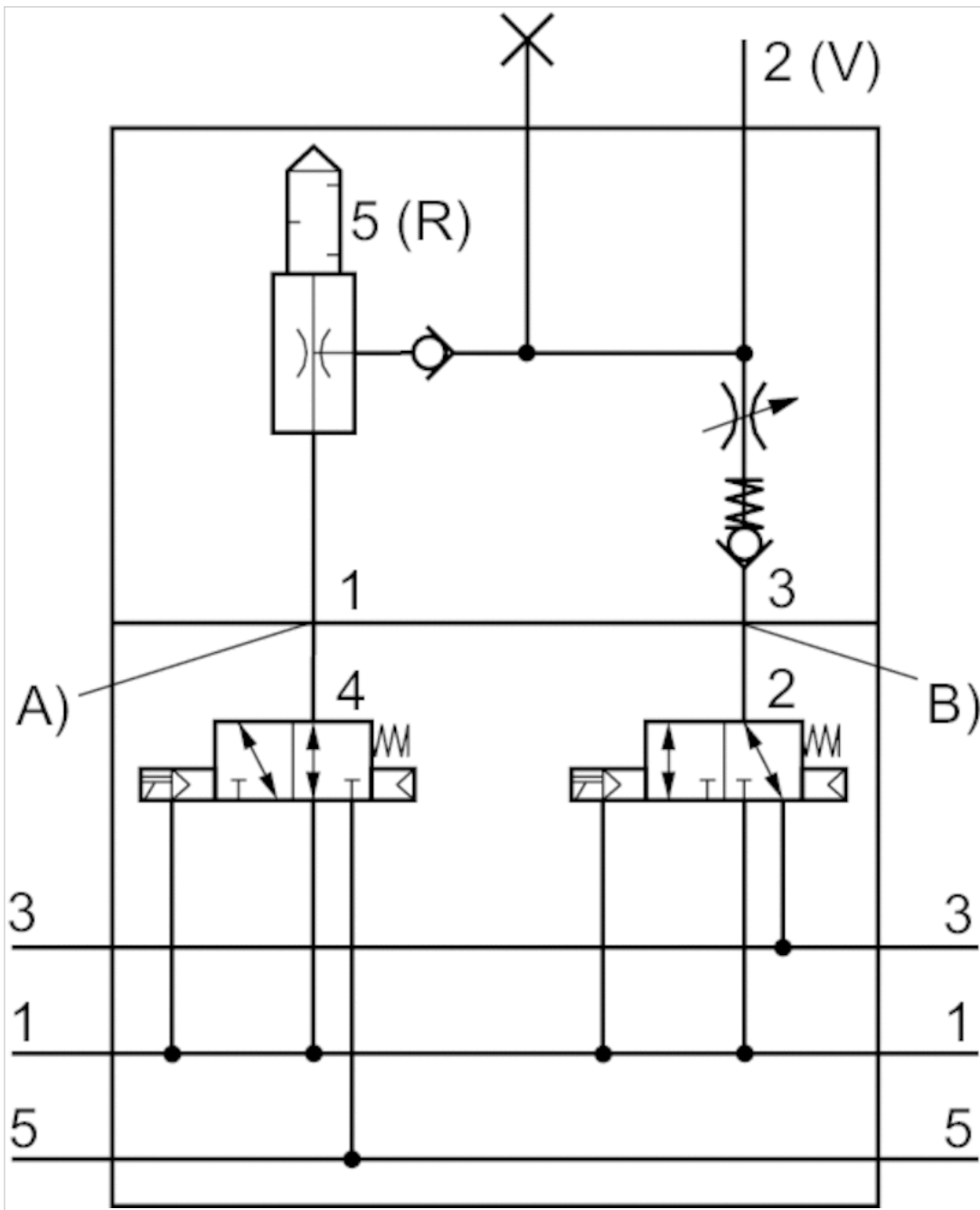
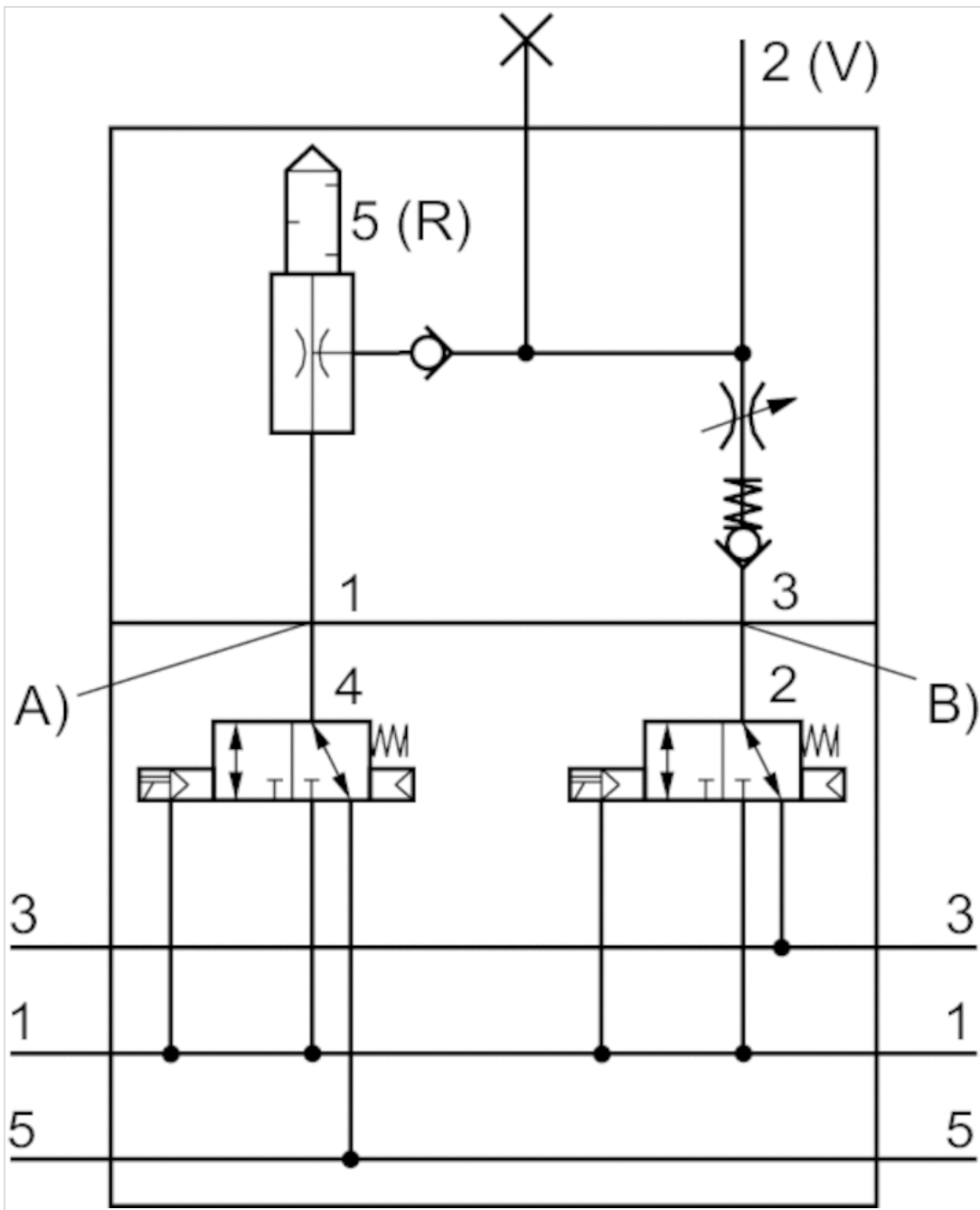


Fig. 7, ECV-HF03...with NO activation



- A) Air connection suction
- B) release pulse air connection

Fig. 8, ECV-HF03...with NC activation







2x3/2-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 2x3/2
- Qn = 850 l/min
- Pilot valve width : 16 mm
- NC/NC NO/NO NC/NO NO/NC
- Plate connection
- Manual override : with detent
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	16 ms
Typ. switch-off time	25 ms
mounting screws	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.	MO	Operational voltage	Voltage tolerance	
			DC	DC
0820055101		24 V	-15% / +20%	
0820055201		24 V	-15% / +20%	
0820055301		24 V	-15% / +20%	
0820055311		24 V	-15% / +20%	

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055101	0.35 W	0.22	2.97 l/(s*bar)
0820055201	0.35 W	0.22	2.97 l/(s*bar)
0820055301	0.35 W	0.22	2.97 l/(s*bar)

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055311	0.35 W	0.22	2.97 l/(s*bar)

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, MO = Manual override

Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve system.

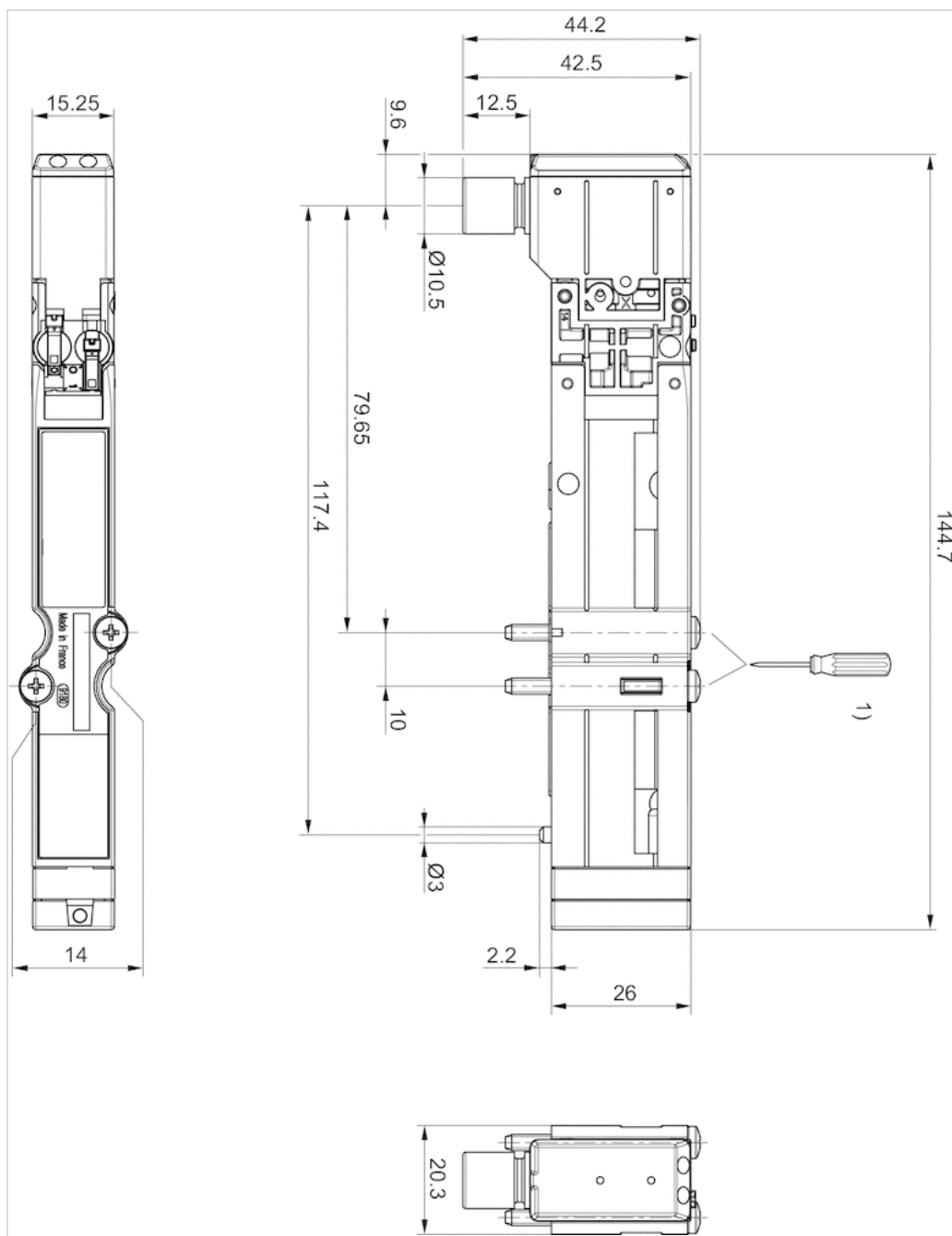
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

Dimensions



1) =1.1Nm 800tr/min. max.









2x3/2-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 2x3/2
- Qn = 850 l/min
- Pilot valve width : 16 mm
- NC/NC NO/NO NC/NO NO/NC
- Plate connection
- Manual override : without detent
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	16 ms
Typ. switch-off time	25 ms
mounting screws	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.		MO		Operational voltage		Voltage tolerance	
				DC	DC	DC	DC
0820055102			NC/NC	24 V		-15% / +20%	
0820055202			NO/NO	24 V		-15% / +20%	
0820055302			NC/NO	24 V		-15% / +20%	
0820055312			NO/NC	24 V		-15% / +20%	

Part No.	Power consumption		Flow conductance	
	DC		b	C-value
0820055102	0.35 W		0.22	2.97 l/(s*bar)
0820055202	0.35 W		0.22	2.97 l/(s*bar)

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055302	0.35 W	0.22	2.97 l/(s*bar)
0820055312	0.35 W	0.22	2.97 l/(s*bar)

Nominal flow Q_n at 6 bar and Δp = 1 bar, MO = Manual override

Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve system.

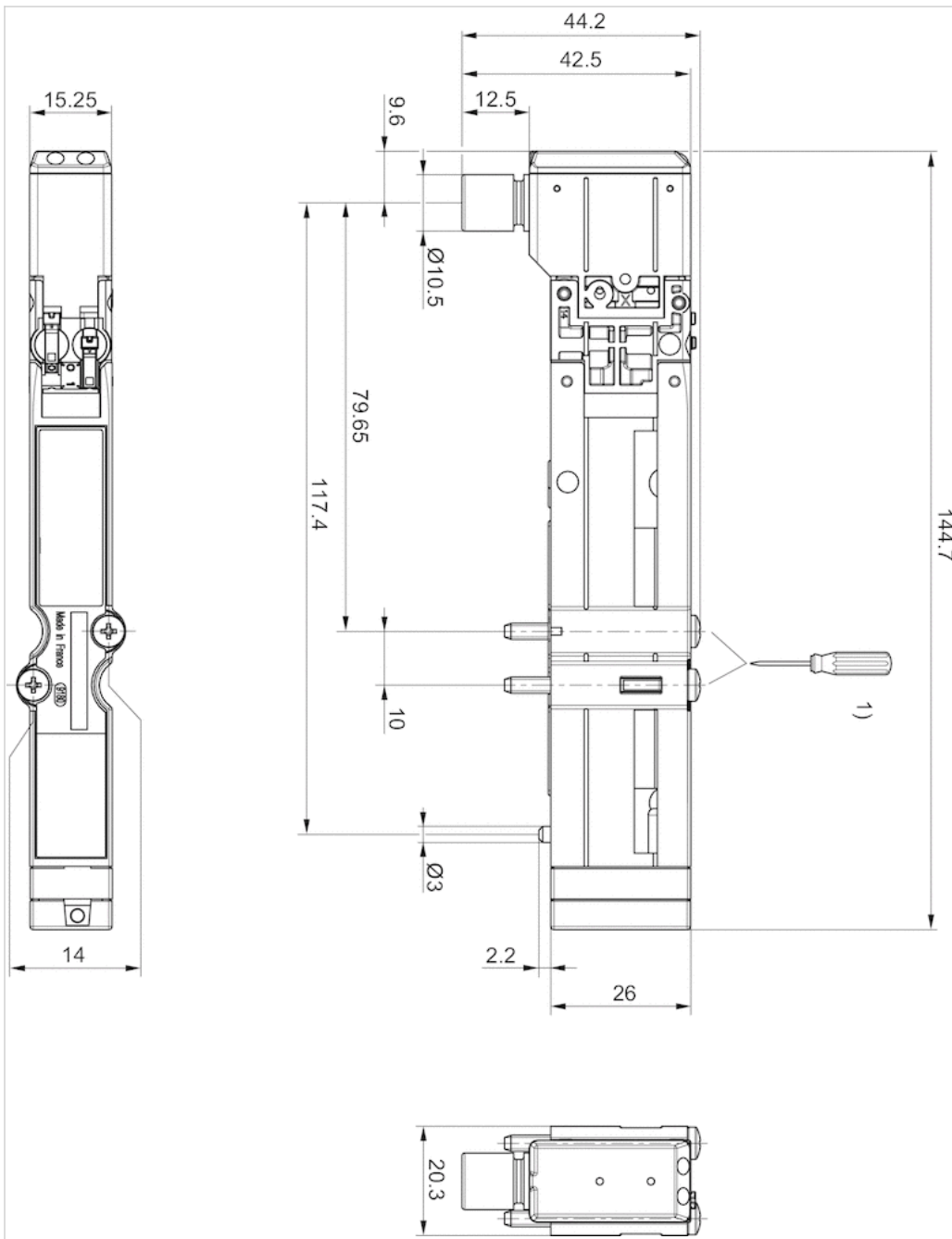
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

Dimensions



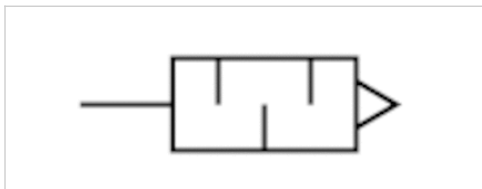
1) =1.1Nm 800tr/min. max.

Silencers, Series ECV

- Polyethylene



Working pressure min./max.	0 ... 6 bar
Ambient temperature min./max.	0 ... 50 °C
Medium	Compressed air
Weight	0.005 kg



Technical data

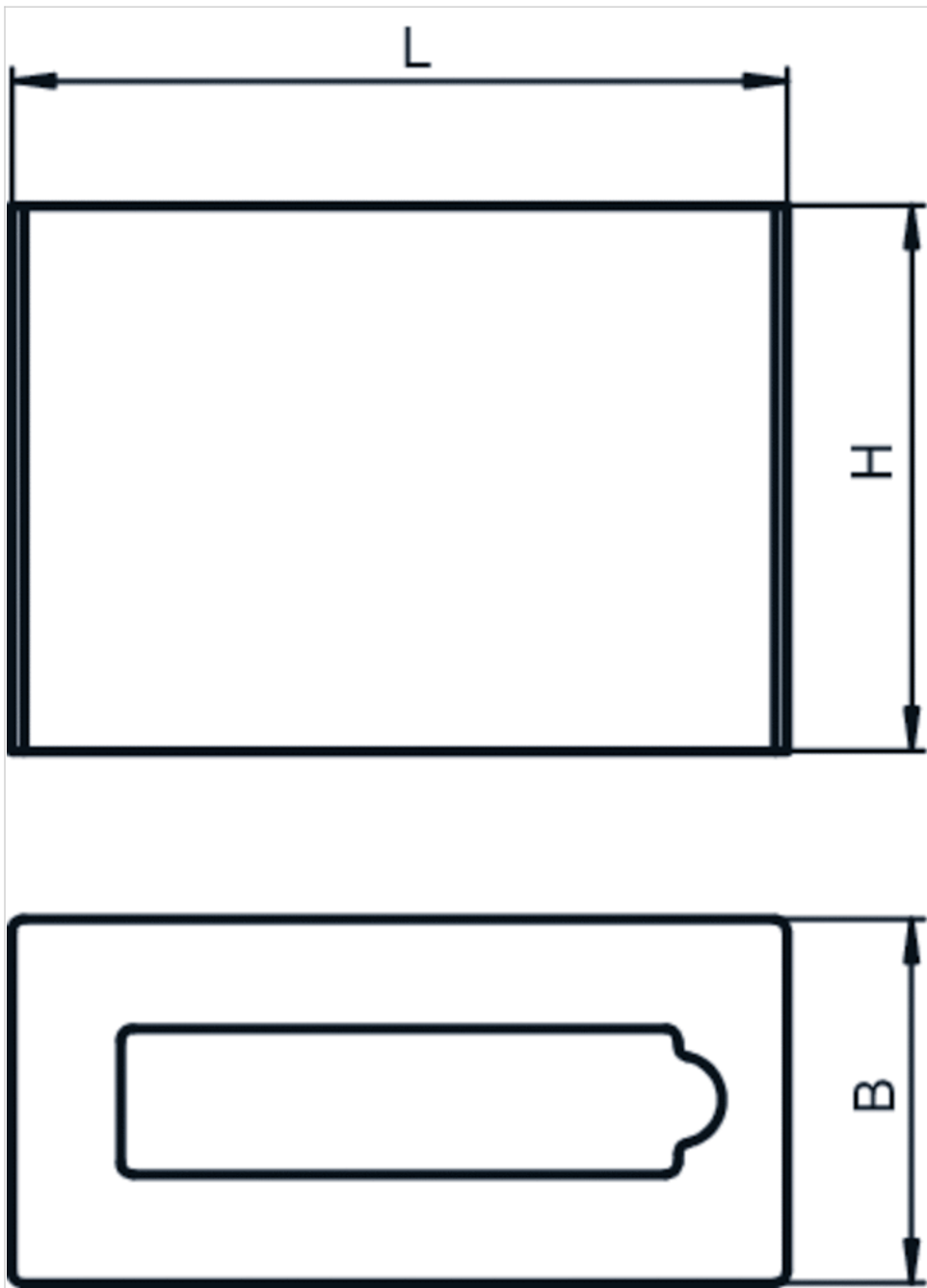
Part No.	Delivery unit
R412010100	2 piece

Technical information

Material	
Silencer	Polyethylene

Dimensions

Dimensions



Dimensions

Part No.	B	H	L
R412010100	15	22,5	32

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