

Serie ECD

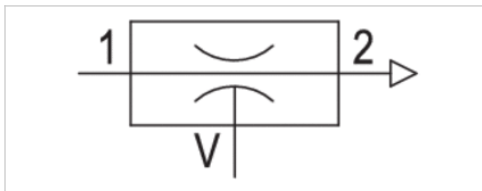


AVENTICS™ Serie ECD



compact ejector, Series ECD-BV

- with release valve
- with silencer
- with non-return valve



Activation	Electrically
Working pressure min./max.	2 ... 6 bar
Working pressure p.opt.	4 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
Protection class With valve plug connector	IP40
Duty cycle according to DIN VDE 0580 standard	100 %
Max. vacuum level at p.opt	81.5 %
DC operating voltage	24 V
Voltage tolerance DC	- 5% / +10%
Power consumption Solenoid valve	1.3 W
Weight	0.195 kg

Technical data

Part No.	Type	Nozzle Ø	Max. suction capacity	Air consumption at p.opt.
R412010601	ECD-BV-EC-10-NO	1 mm	35.4 l/min	46.2 l/min
R412010602	ECD-BV-EC-10-NC	1 mm	35.4 l/min	46.2 l/min
R412010603	ECD-BV-EC-15-NO	1.5 mm	64.3 l/min	98.9 l/min
R412010604	ECD-BV-EC-15-NC	1.5 mm	64.3 l/min	98.9 l/min

Part No.	Sound pressure level intake effect	Sound pressure level intake effect
R412010601	63 dB	76 dB
R412010602	63 dB	76 dB
R412010603	68 dB	79 dB
R412010604	68 dB	79 dB

p.opt. = optimum working pressure

Technical information

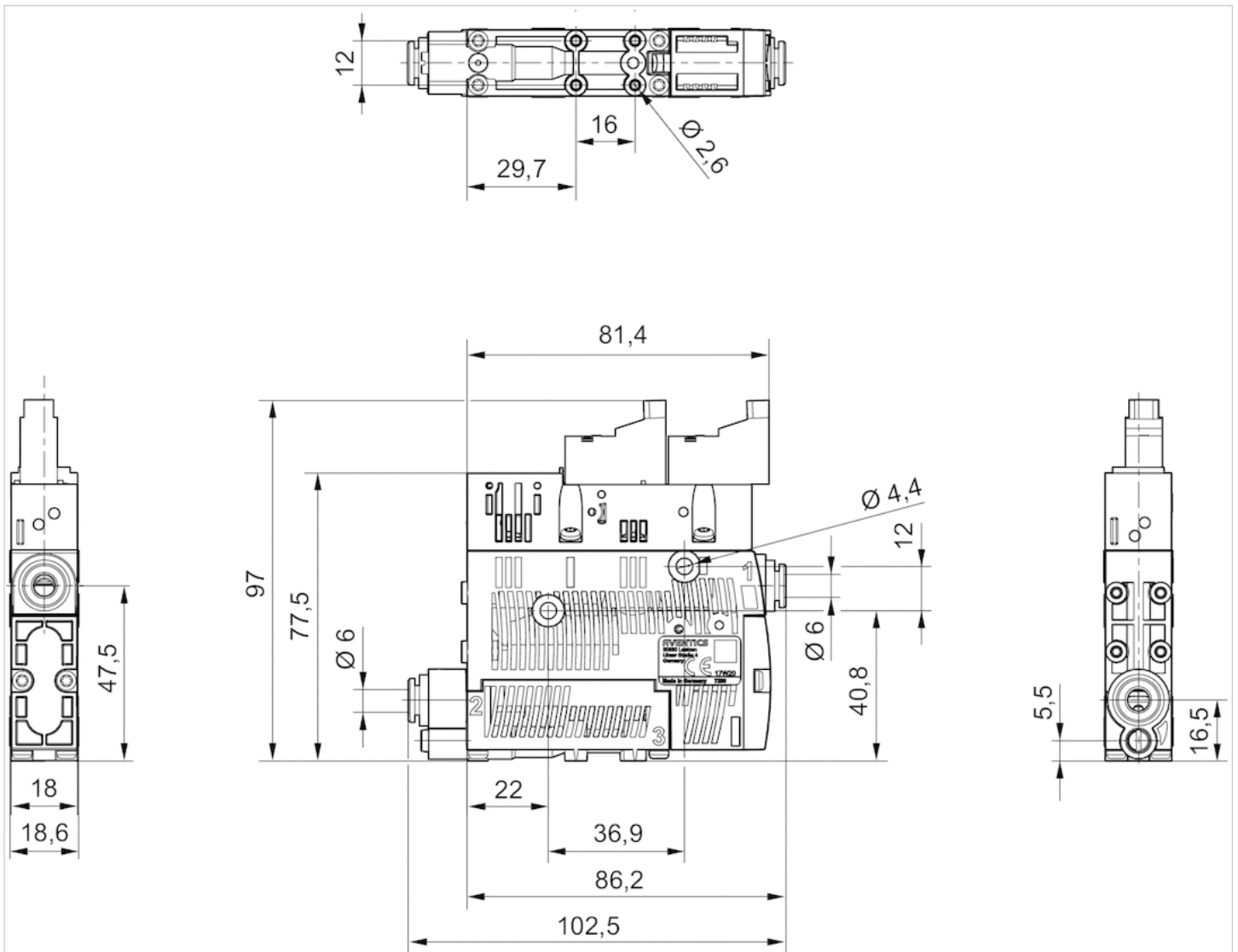
Note: All data refers to an ambient pressure of 1.013 bar and an ambient temperature of 20 °C .

Technical information

Material	
Housing	Polyamide
Seal	Acrylonitrile butadiene rubber
Nozzle	Brass
Silencer	Polyethylene

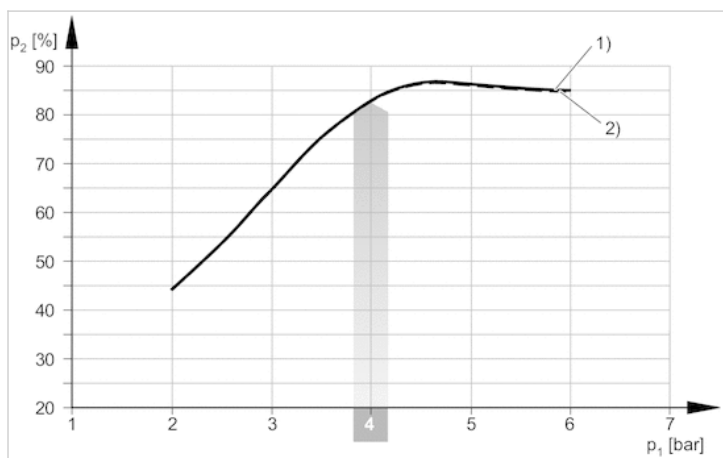
Dimensions

Dimensions



Diagrams

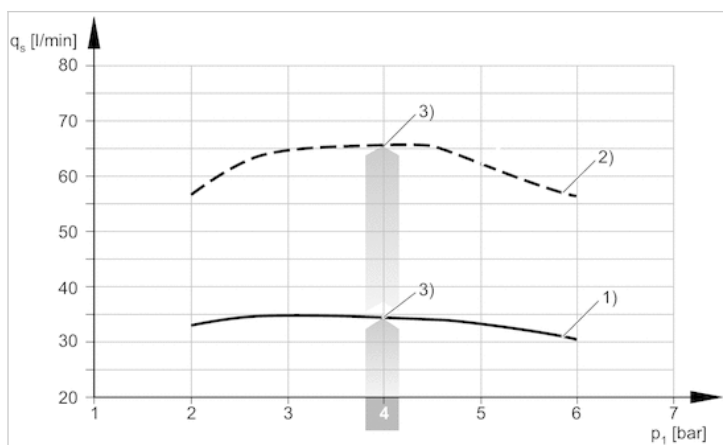
Vacuum p_2 depending on working pressure p_1



1) \varnothing nozzle 1.0 mm

2) \varnothing nozzle 1.5 mm

Suction capacity q_s depending on working pressure p_1

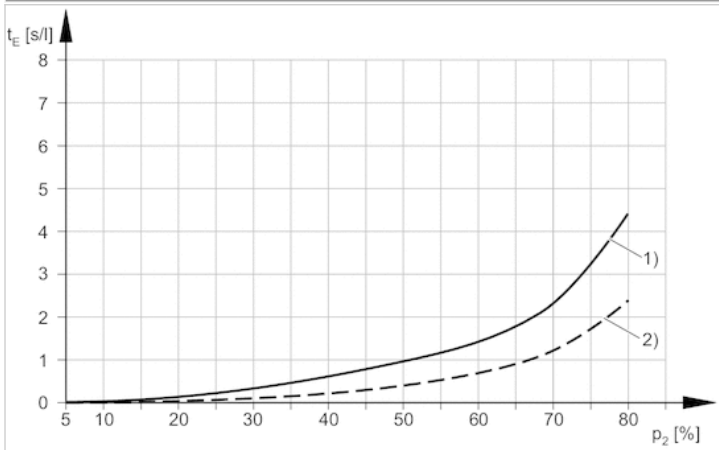


1) \varnothing nozzle 1.0 mm

2) \varnothing nozzle 1.5 mm

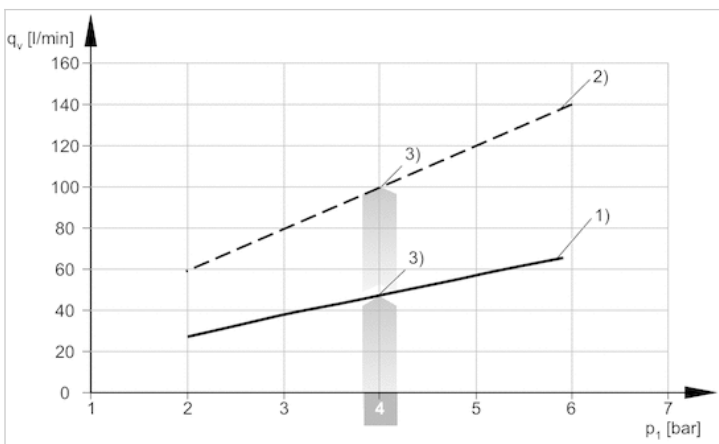
3) optimum working pressure

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



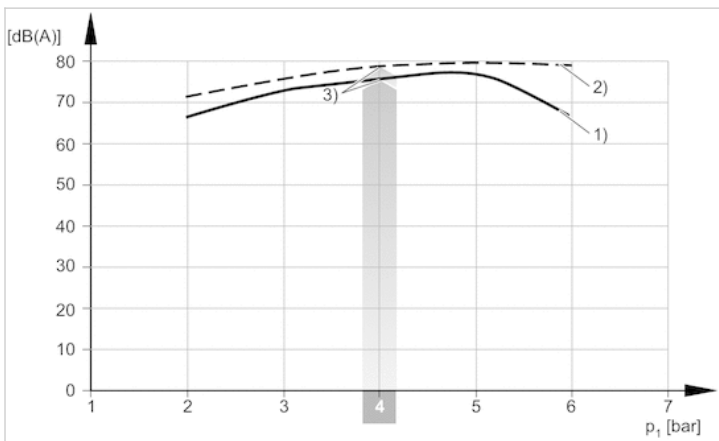
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm

Air consumption q_v depending on working pressure p_1



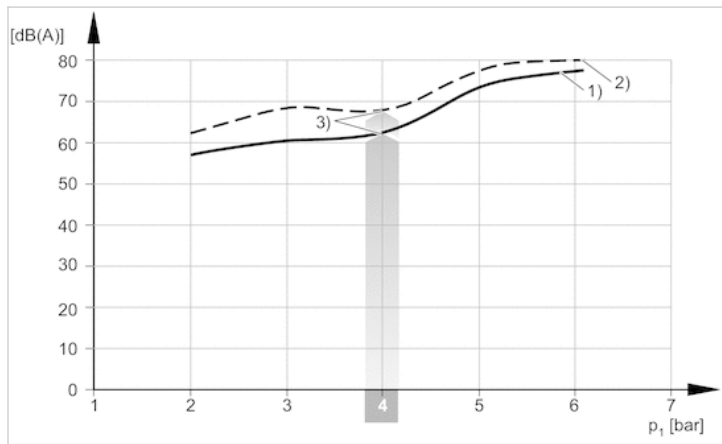
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

Noise level at free suctioning



- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

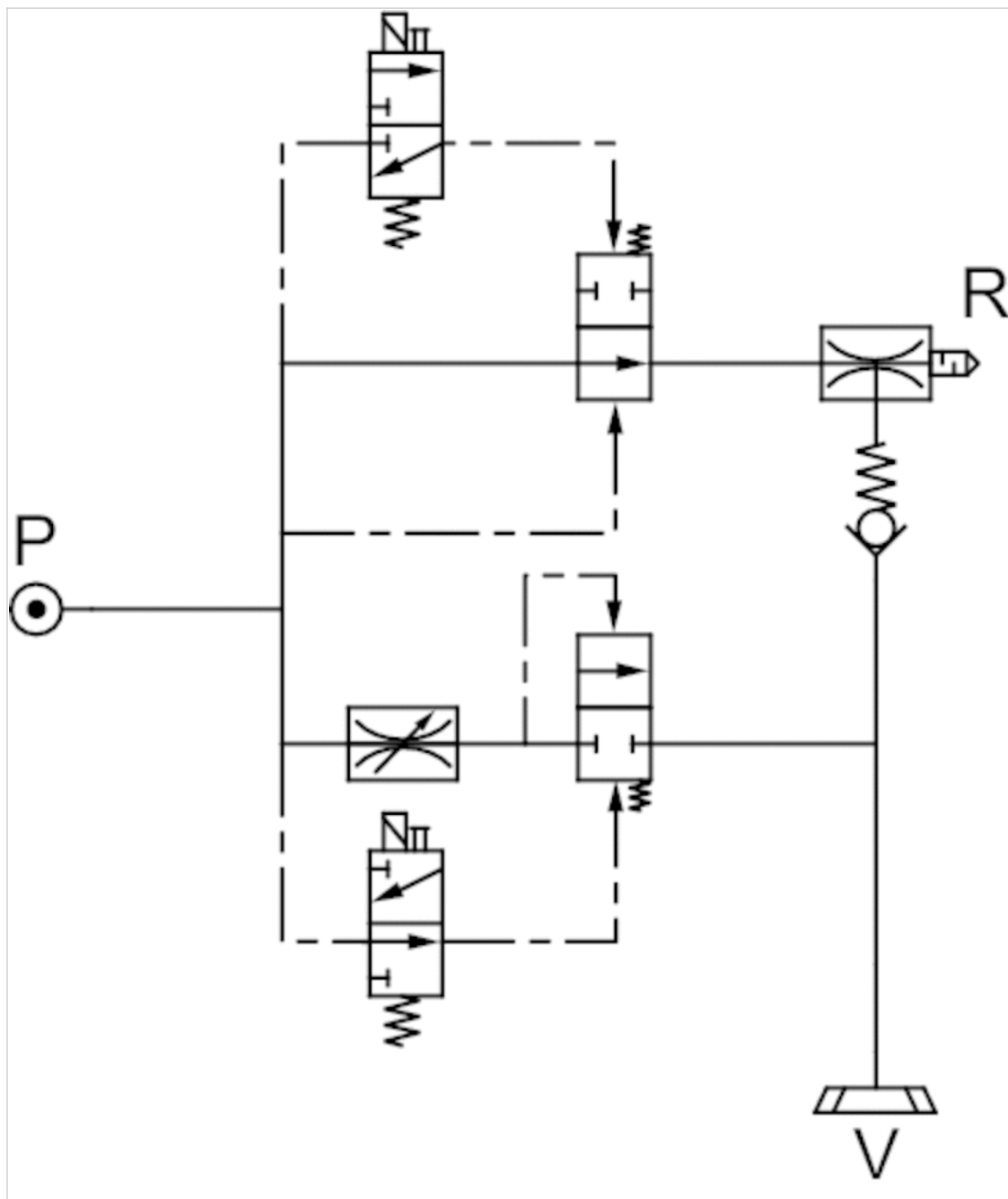
Noise level, suctioned



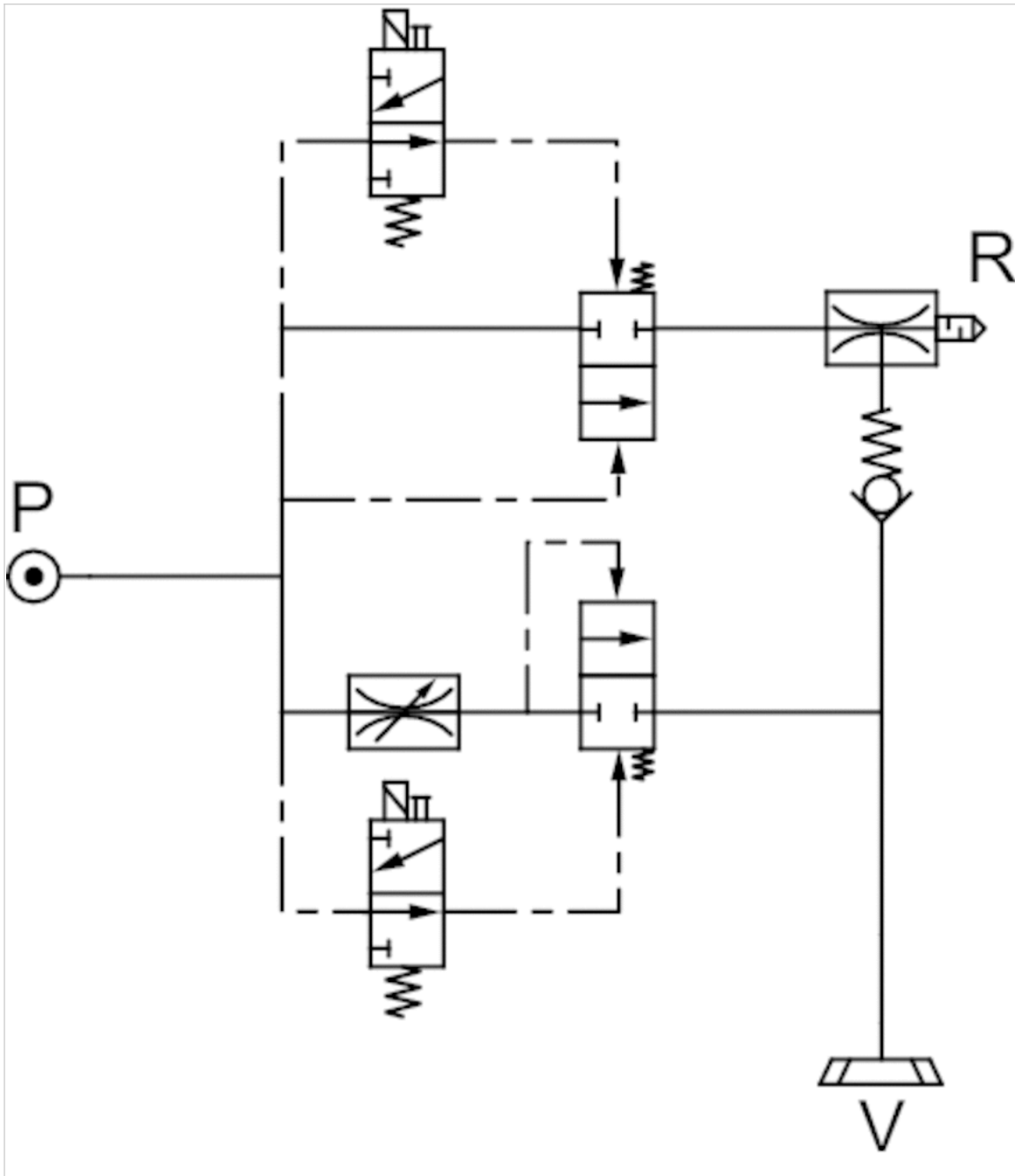
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

Circuit diagram

Circuit diagram, ECD-BV-...NO

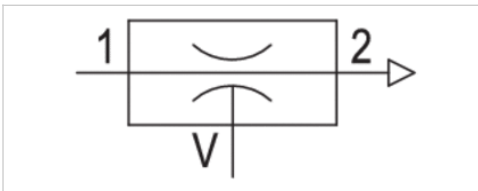


Circuit diagram, ECD-BV-...NC



compact ejector, Series ECD-SV

- with release valve
- with silencer
- with non-return valve
- vacuum switch electronic
- with air economizer



Activation	Electrically
vacuum switch	electronic
Working pressure min./max.	2 ... 6 bar
Working pressure p.opt.	4 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
Protection class With valve plug connector	IP65
Duty cycle according to DIN VDE 0580 standard	100 %
Max. vacuum level at p.opt	81.5 %
Hysteresis	adjustable
Repeatability (% of full scale value)	± 1 %
DC operating voltage	24 V
Voltage tolerance DC	-20% / +10%
Switch output current Max.	125 mA
Power consumption Solenoid valve	1.3 W
Weight	0.195 kg

Technical data

Part No.	Type	Nozzle Ø	Max. suction capacity	Air consumption at p.opt.
R412010607	ECD-SV-EC-10-NO	1 mm	35.4 l/min	46.2 l/min
R412010608	ECD-SV-EC-10-NC	1 mm	35.4 l/min	46.2 l/min
R412010609	ECD-SV-EC-15-NO	1.5 mm	64.3 l/min	98.9 l/min
R412010610	ECD-SV-EC-15-NC	1.5 mm	64.3 l/min	98.9 l/min

Part No.	Sound pressure level intake effect	Sound pressure level intake effect
R412010607	63 dB	76 dB
R412010608	63 dB	76 dB
R412010609	68 dB	79 dB
R412010610	68 dB	79 dB

Part No.	Protection against overpressure (max.)
R412010607	5 bar
R412010608	5 bar
R412010609	5 bar

Part No.	Protection against overpressure (max.)
R412010610	5 bar

p.opt. = optimum working pressure

Technical information

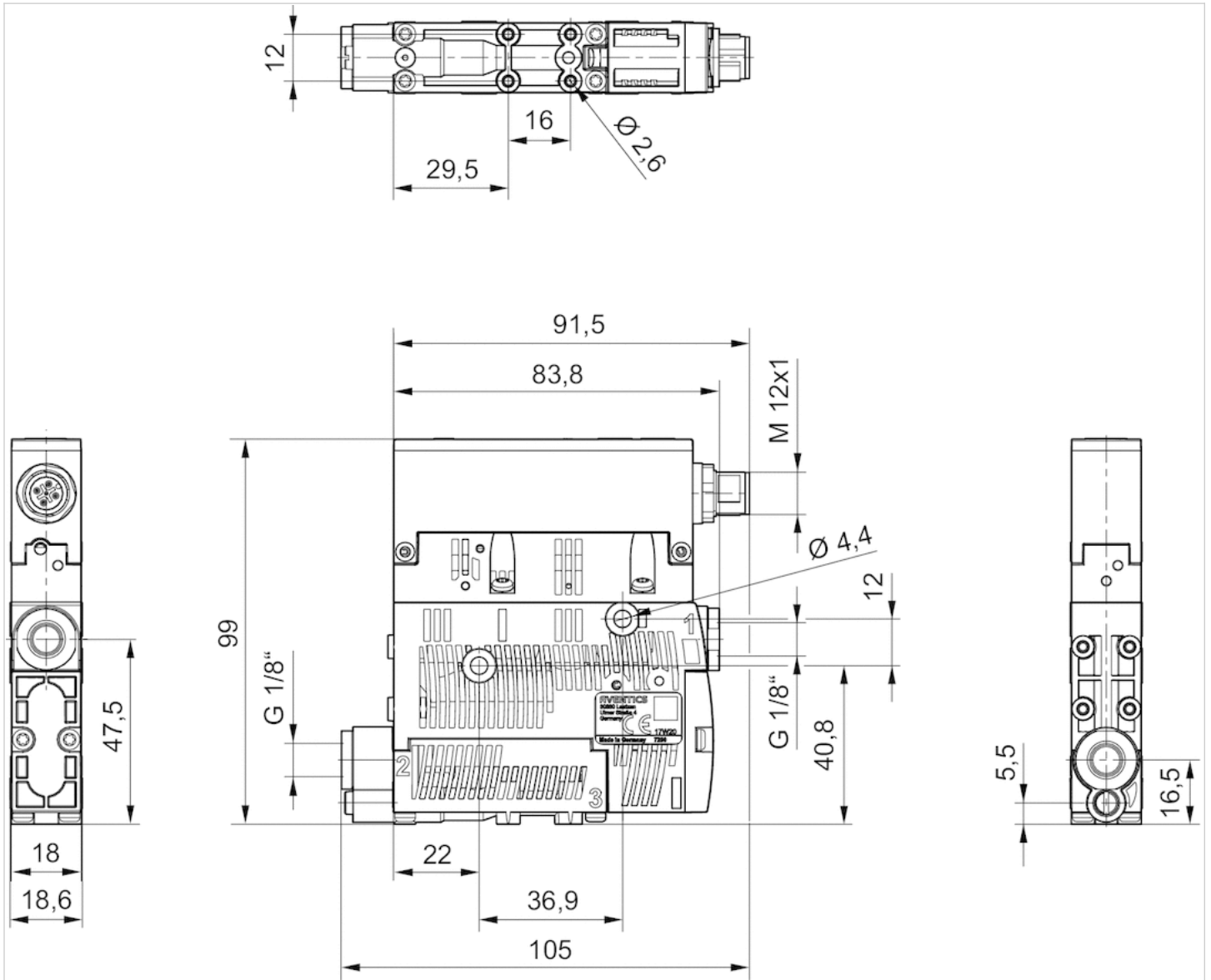
Note: All data refers to an ambient pressure of 1.013 bar and an ambient temperature of 20 °C .
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.

Technical information

Material	
Housing	Polyamide
Seal	Acrylonitrile butadiene rubber
Nozzle	Brass
Silencer	Polyethylene

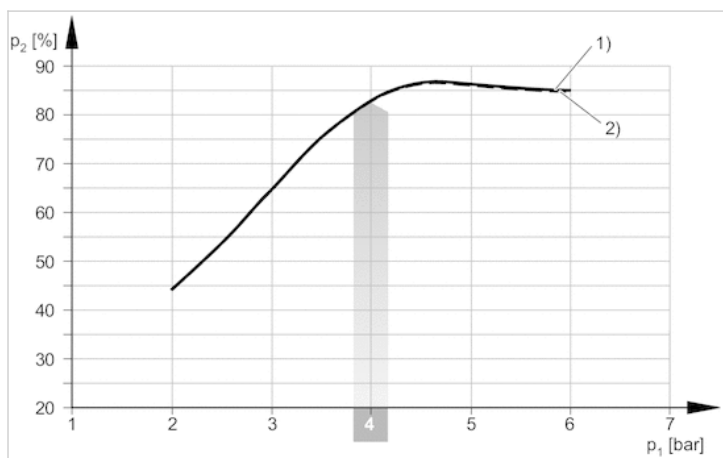
Dimensions

Dimensions



Diagrams

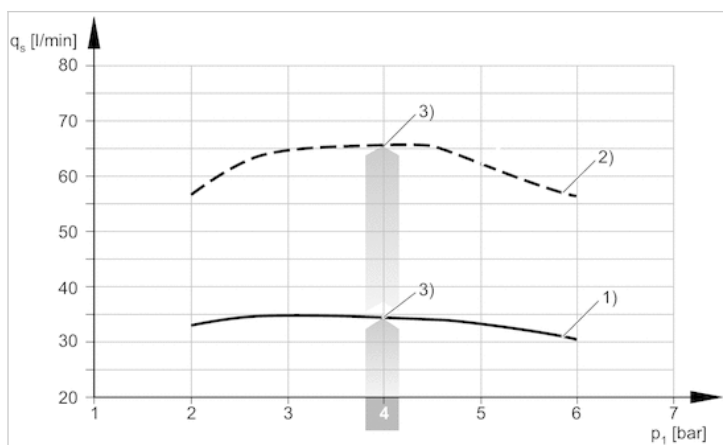
Vacuum p_2 depending on working pressure p_1



1) \varnothing nozzle 1.0 mm

2) \varnothing nozzle 1.5 mm

Suction capacity q_s depending on working pressure p_1

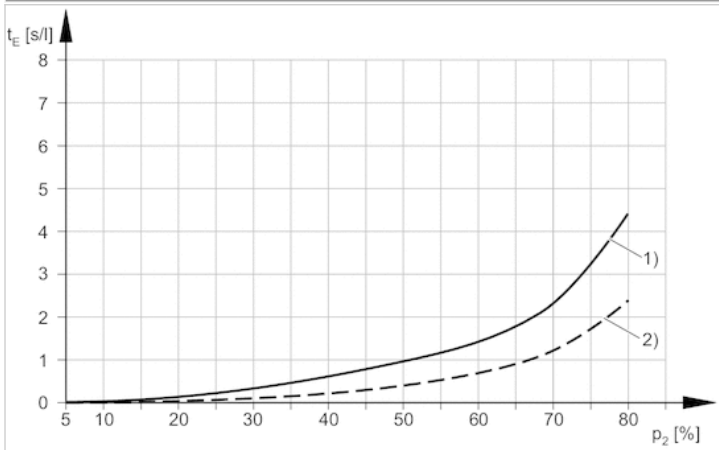


1) \varnothing nozzle 1.0 mm

2) \varnothing nozzle 1.5 mm

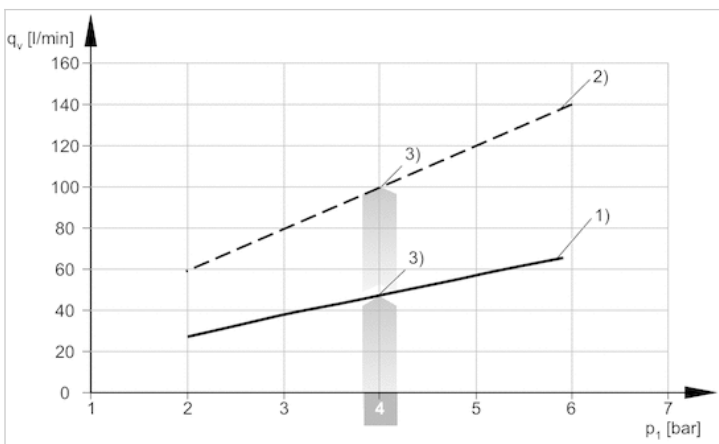
3) optimum working pressure

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



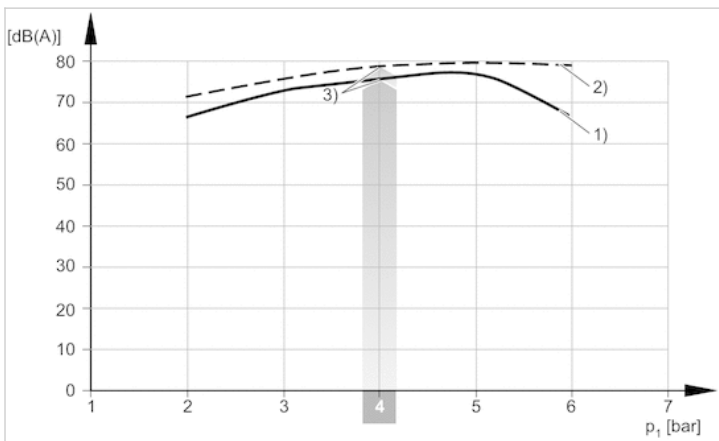
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm

Air consumption q_v depending on working pressure p_1



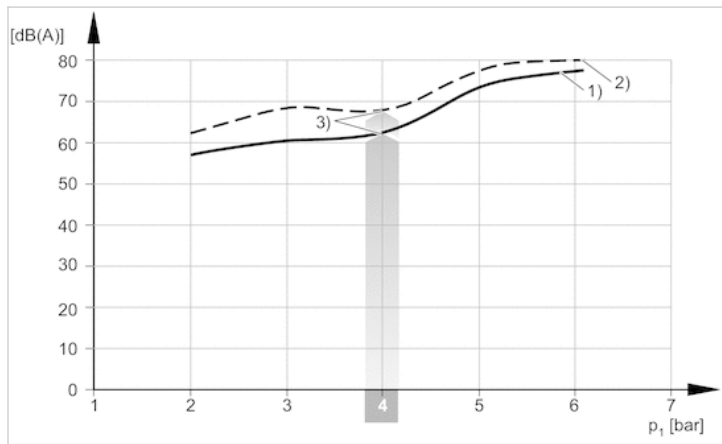
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

Noise level at free suctioning



- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

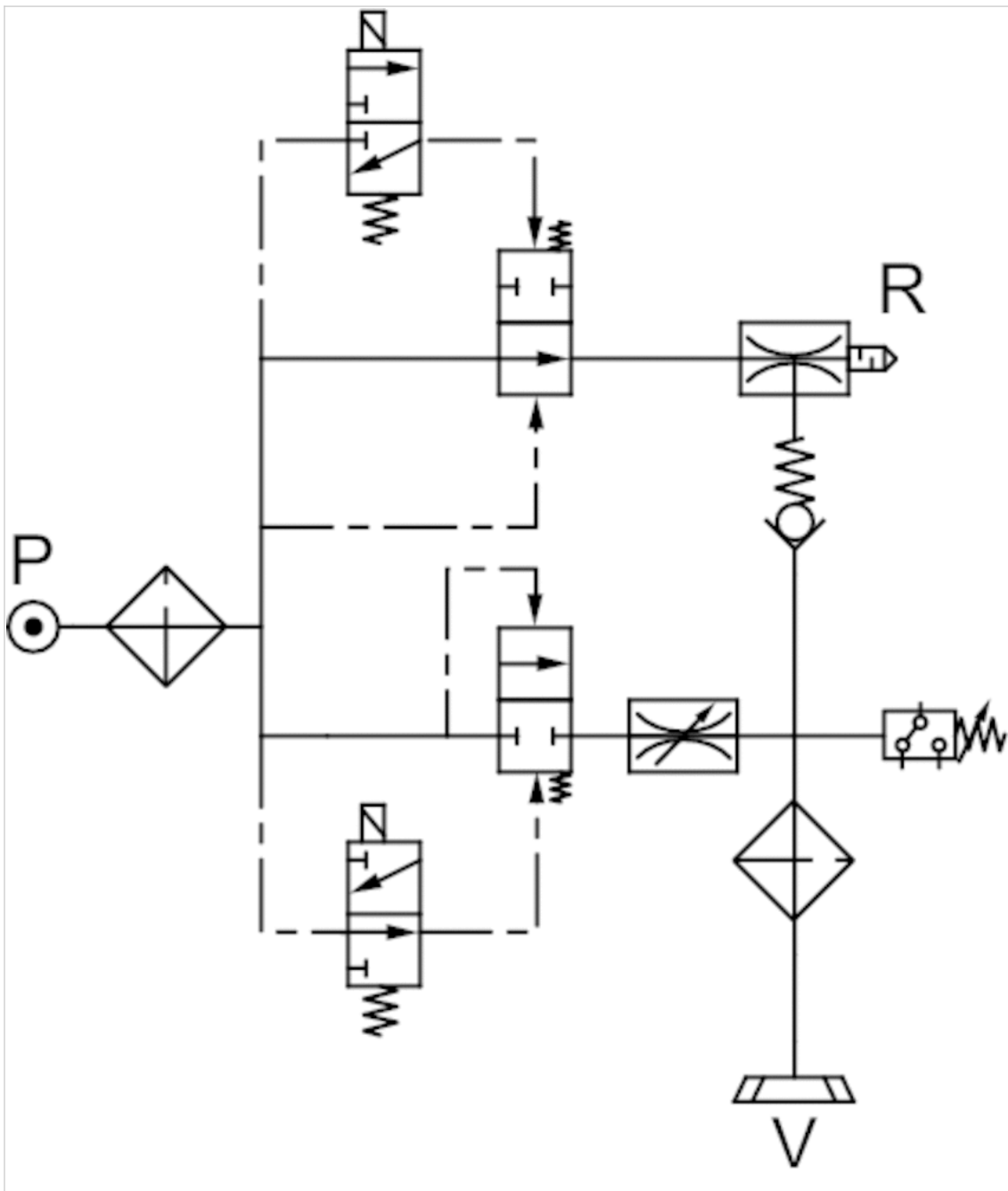
Noise level, suctioned



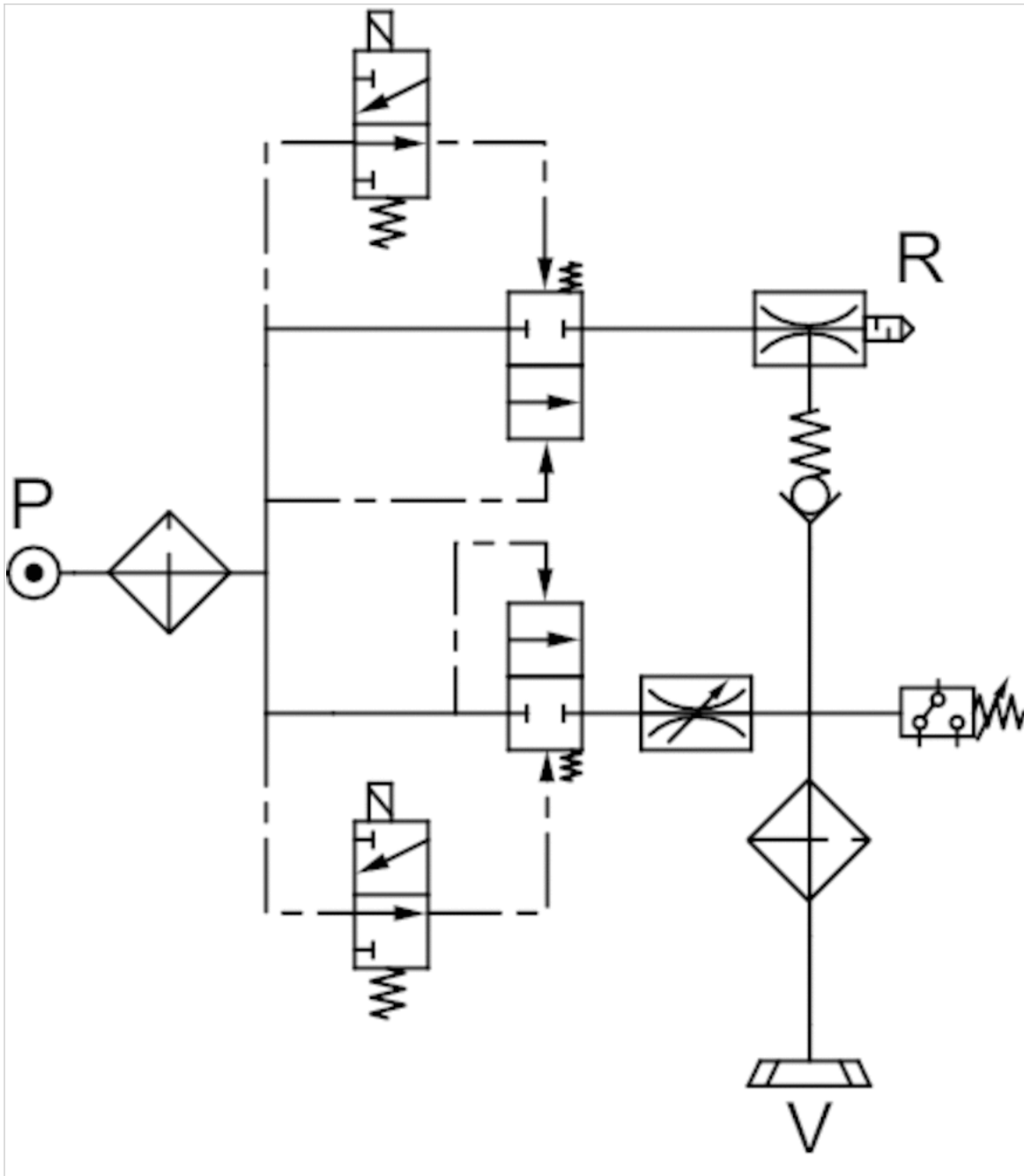
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

Circuit diagram

Circuit diagram, ECD-SV-...NO

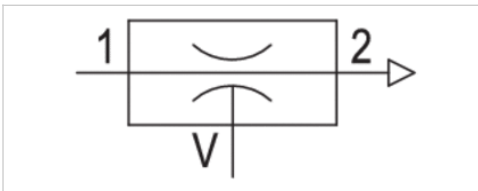


Circuit diagram, ECD-SV-...NC



compact ejector, Series ECD-IV

- IO-Link (function)
- with release valve
- with silencer
- with non-return valve
- vacuum switch electronic



Activation	Electrically
vacuum switch	electronic
Working pressure min./max.	2 ... 6 bar
Working pressure p.opt.	4 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
Protection class With valve plug connector	IP65
Duty cycle according to DIN VDE 0580 standard	100 %
Max. vacuum level at p.opt	81.5 %
Hysteresis	adjustable
Repeatability (% of full scale value)	± 1 %
DC operating voltage	24 V
Voltage tolerance DC	-20% / +10%
Switch output current Max.	180 mA
Power consumption Solenoid valve	1.3 W
Weight	0.195 kg

Technical data

Part No.	Type	Nozzle Ø	Max. suction capacity	Air consumption at p.opt.
R412010613	ECD-IV-EC-10-NO	1 mm	35.4 l/min	46.2 l/min
R412010614	ECD-IV-EC-10-NC	1 mm	35.4 l/min	46.2 l/min
R412010615	ECD-IV-EC-15-NO	1.5 mm	64.3 l/min	98.9 l/min
R412010616	ECD-IV-EC-15-NC	1.5 mm	64.3 l/min	98.9 l/min

Part No.	Sound pressure level intake effect	Sound pressure level intake effect
R412010613	63 dB	76 dB
R412010614	63 dB	76 dB
R412010615	68 dB	79 dB
R412010616	68 dB	79 dB

Part No.	Protection against overpressure (max.)
R412010613	5 bar
R412010614	5 bar
R412010615	5 bar

Part No.	Protection against overpressure (max.)
R412010616	5 bar

p.opt. = optimum working pressure

Technical information

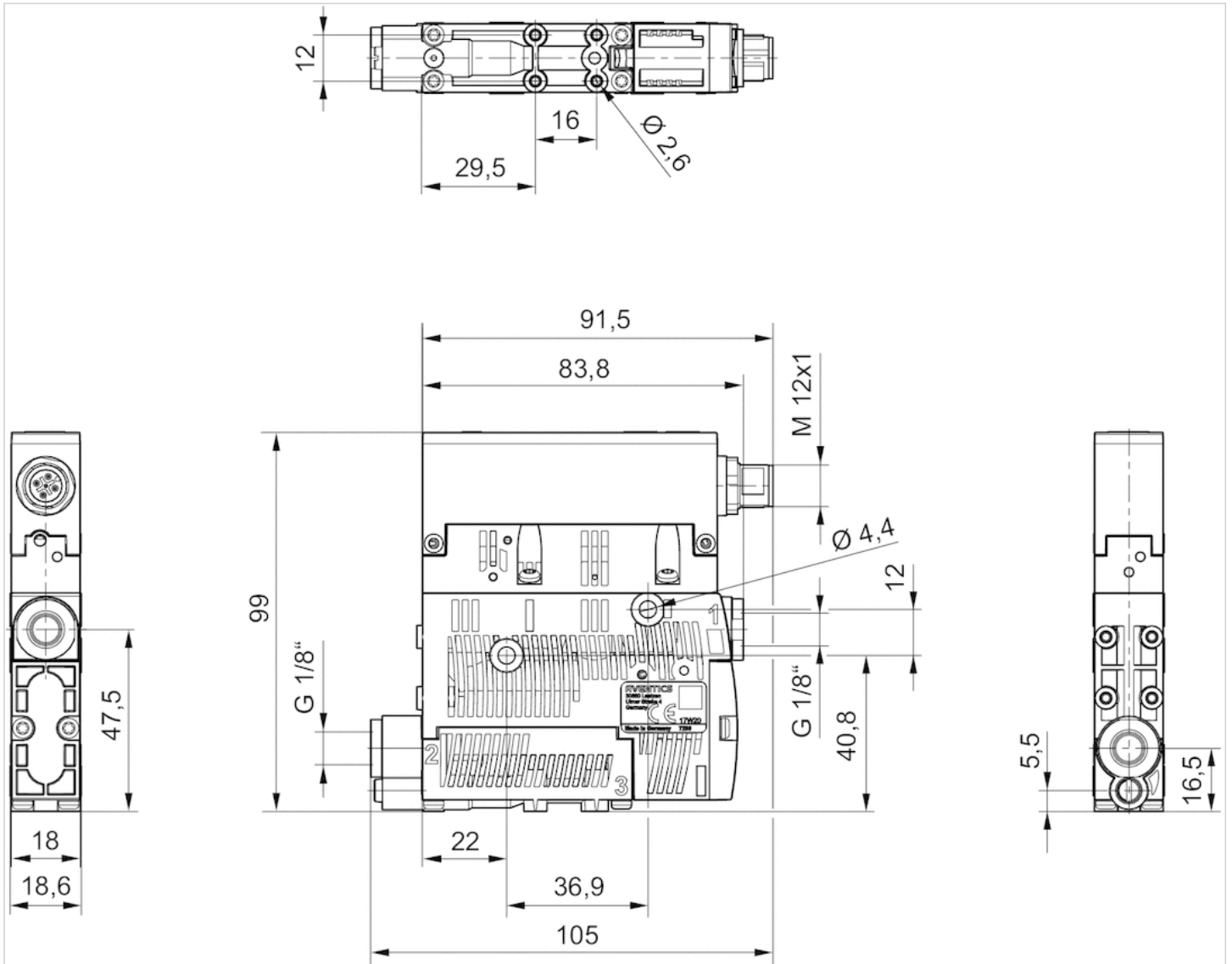
Note: All data refers to an ambient pressure of 1.013 bar and an ambient temperature of 20 °C .
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.
 The IO-Link device description (IODD) for the ECD compact ejector is available for download in the Media Center.

Technical information

Material	
Housing	Polyamide
Seal	Acrylonitrile butadiene rubber
Nozzle	Brass
Silencer	Polyethylene

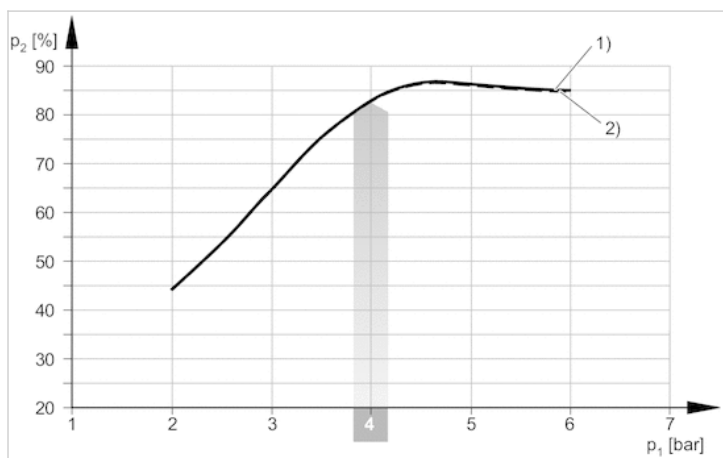
Dimensions

Dimensions



Diagrams

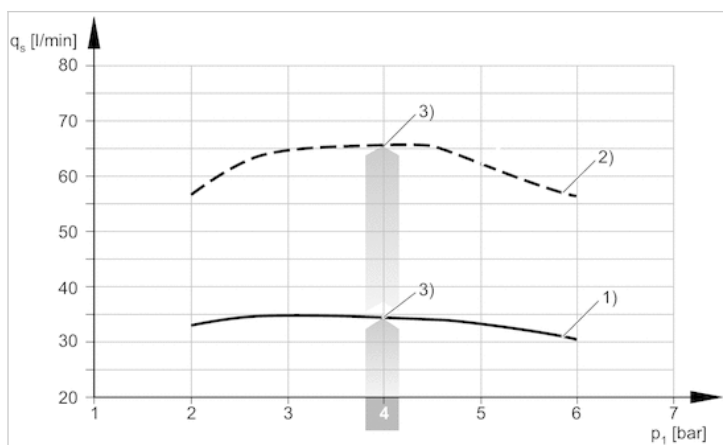
Vacuum p_2 depending on working pressure p_1



1) \varnothing nozzle 1.0 mm

2) \varnothing nozzle 1.5 mm

Suction capacity q_s depending on working pressure p_1

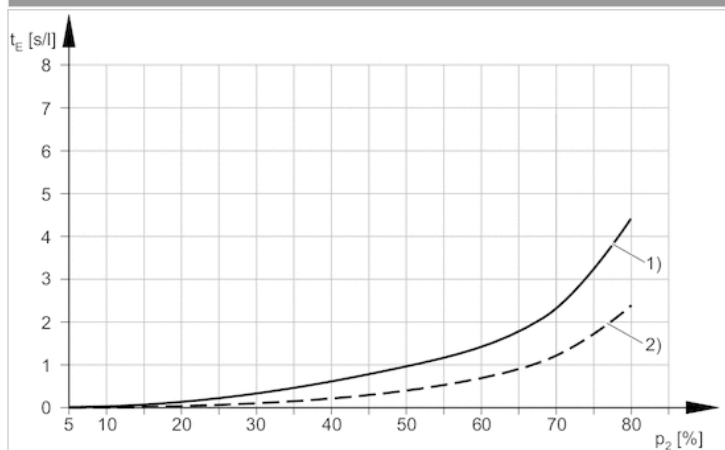


1) \varnothing nozzle 1.0 mm

2) \varnothing nozzle 1.5 mm

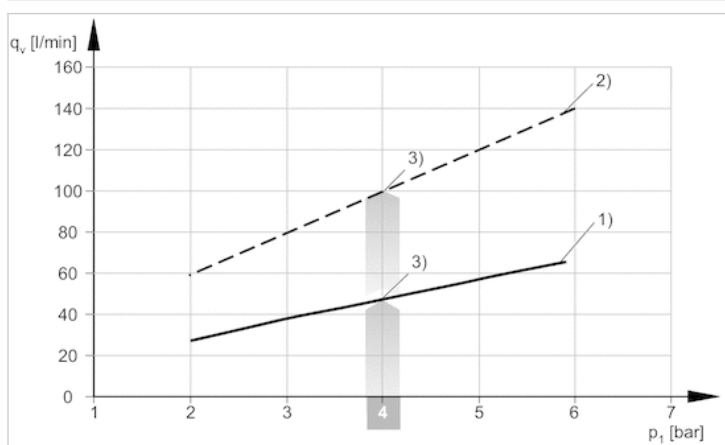
3) optimum working pressure

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



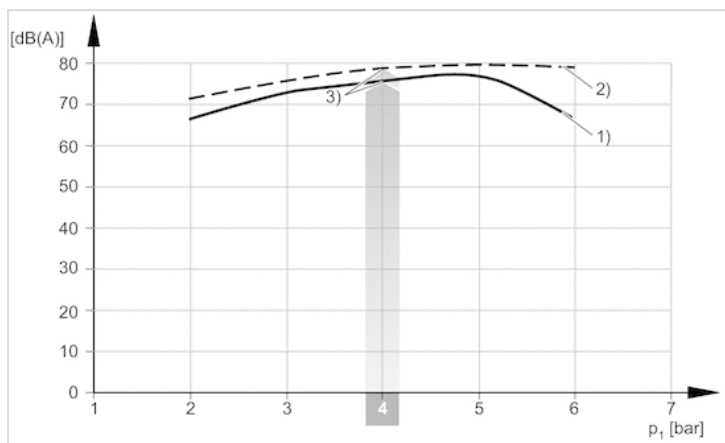
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm

Air consumption q_v depending on working pressure p_1



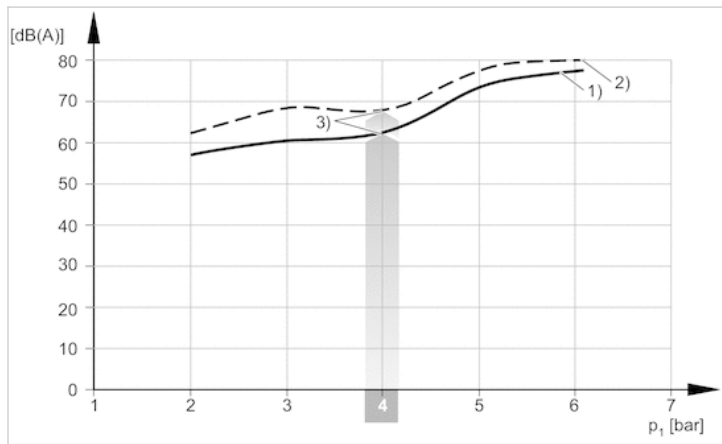
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

Noise level at free suctioning



- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

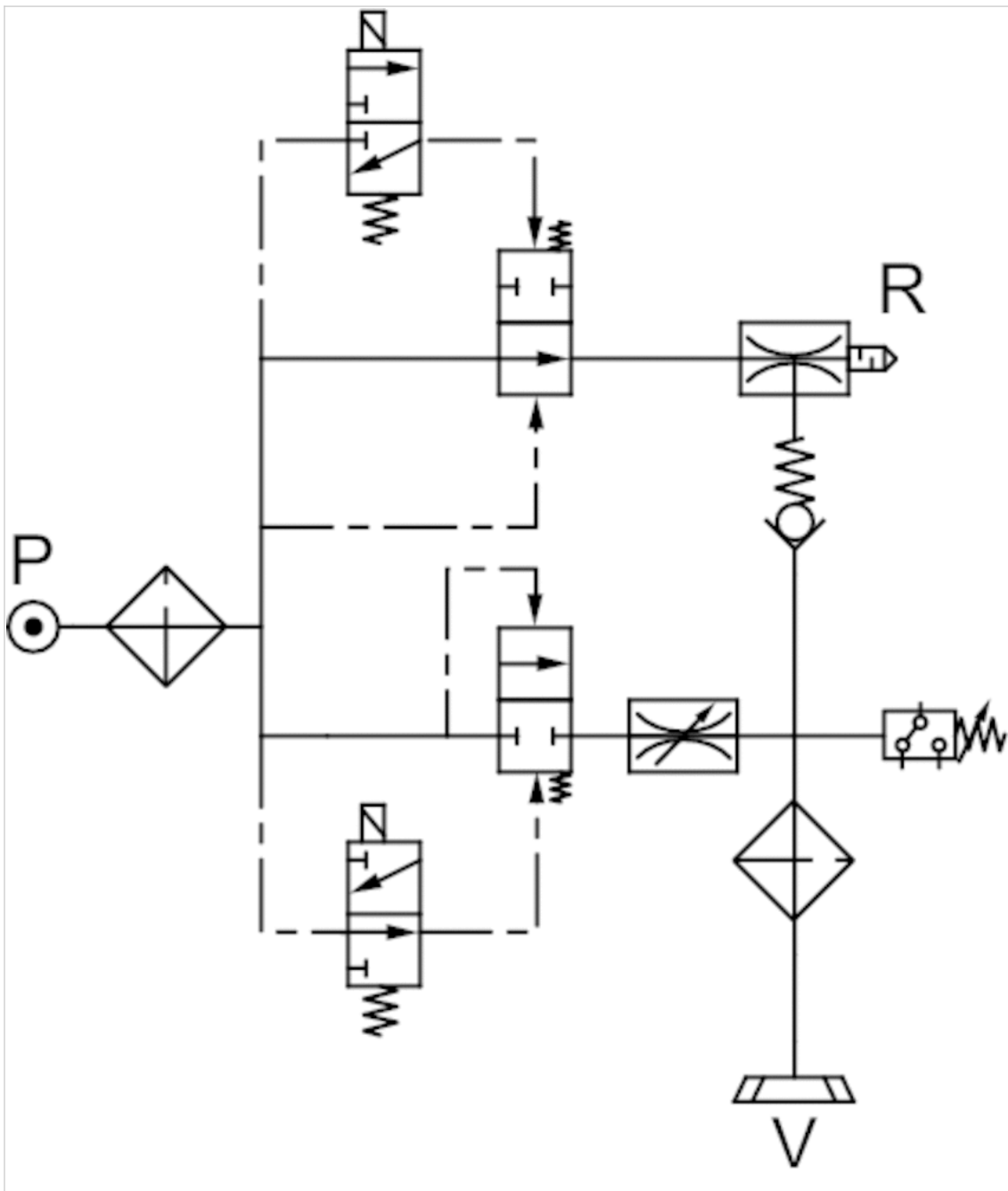
Noise level, suctioned



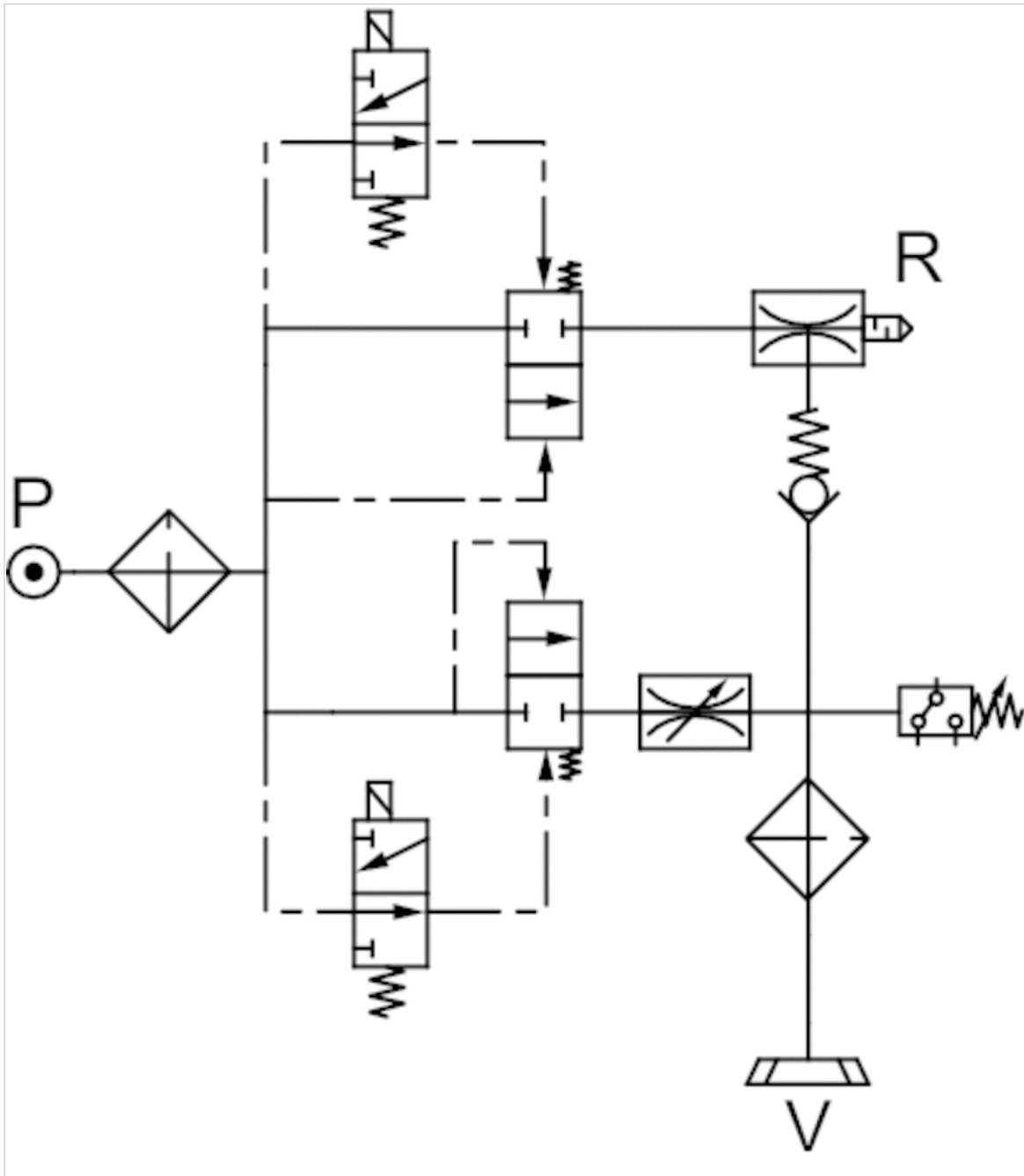
- 1) \varnothing nozzle 1.0 mm
- 2) \varnothing nozzle 1.5 mm
- 3) optimum working pressure

Circuit diagram

Circuit diagram, ECD-IV...NO

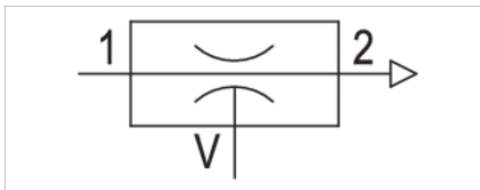


Circuit diagram, ECD-IV-...NC



compact ejector, Series ECD-LV

- IO-Link (function)
- with release valve
- with silencer
- with non-return valve
- vacuum switch electronic
- with air economizer



Activation	Electrically
vacuum switch	electronic
Working pressure min./max.	4 ... 7 bar
Working pressure p.opt.	5 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
Protection class With valve plug connector	IP65
Duty cycle according to DIN VDE 0580 standard	100 %
Hysteresis	adjustable
Repeatability (% of full scale value)	± 1 %
DC operating voltage	24 V
Voltage tolerance DC	- 5% / +10%
Switch output current Max.	180 mA
Power consumption Solenoid valve	2.5 W
Weight	0.56 kg

Technical data

Part No.	Type	Nozzle Ø	Max. vacuum level at p.opt	Max. suction capacity
R412026115	ECD-LV-EC-20-NO	2 mm	82 %	117 l/min
R412026116	ECD-LV-EC-20-NC	2 mm	83 %	117 l/min
R412026117	ECD-LV-EC-25-NO	2.5 mm	87 %	170 l/min
R412026118	ECD-LV-EC-25-NC	2.5 mm	87 %	170 l/min

Part No.	Air consumption at p.opt.	Sound pressure level intake effect
R412026115	207 l/min	76 dB
R412026116	207 l/min	76 dB
R412026117	308 l/min	74 dB
R412026118	308 l/min	74 dB

Part No.	Sound pressure level intake effect	Protection against overpressure (max.)
R412026115	80 dB	5 bar
R412026116	80 dB	5 bar
R412026117	84 dB	5 bar

Part No.	Sound pressure level intake effect	Protection against overpressure (max.)
R412026118	84 dB	5 bar

p.opt. = optimum working pressure

Technical information

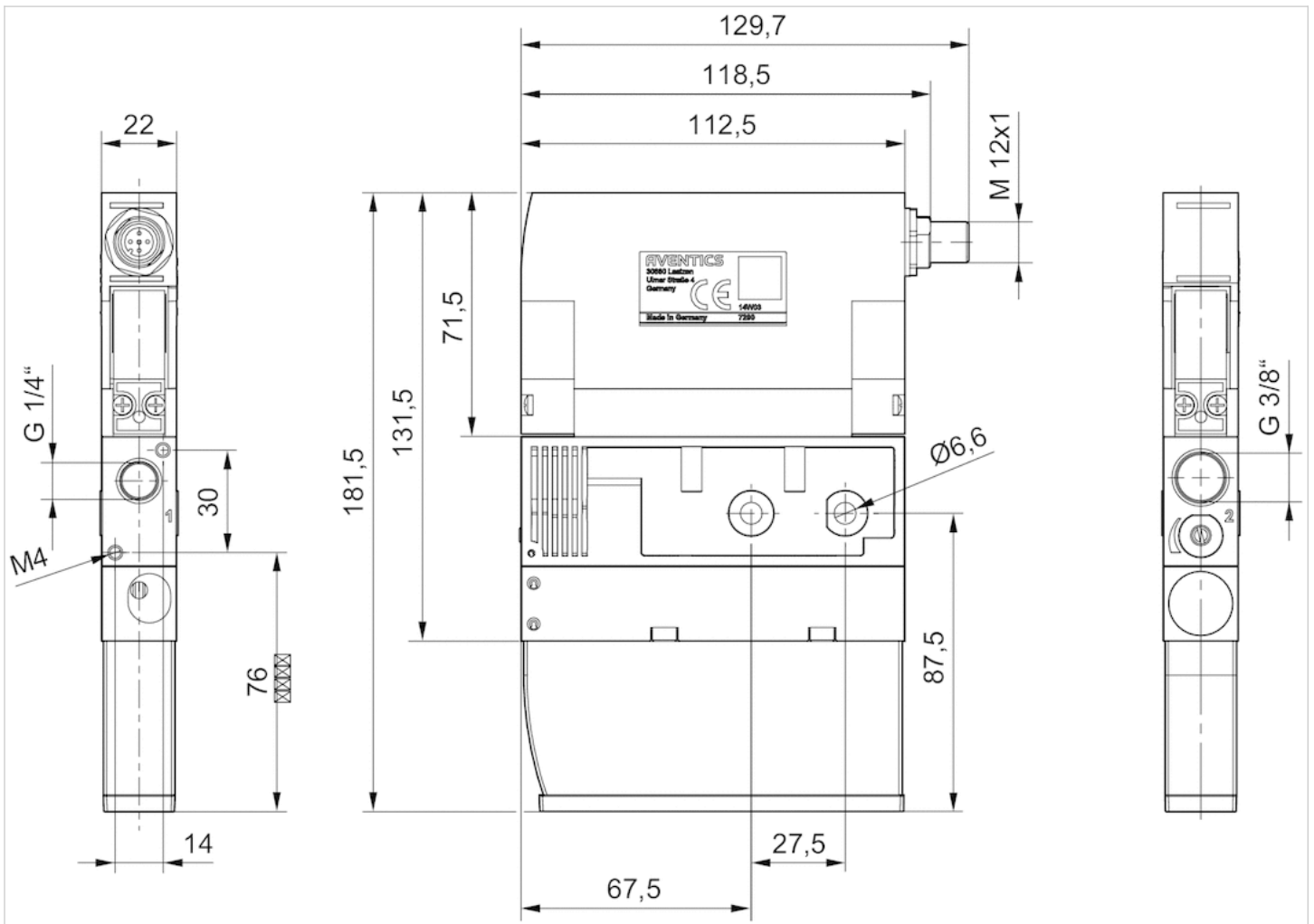
Note: All data refers to an ambient pressure of 1.013 bar and an ambient temperature of 20 °C .
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.
 The IO-Link device description (IODD) for the ECD compact ejector is available for download in the Media Center.

Technical information

Material	
Housing	Polyamide
Seal	Acrylonitrile butadiene rubber
Nozzle	Aluminum
Silencer	Polyethylene

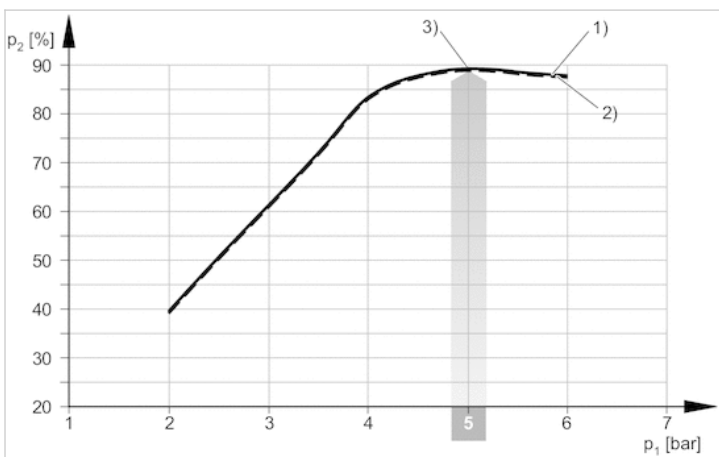
Dimensions

Dimensions



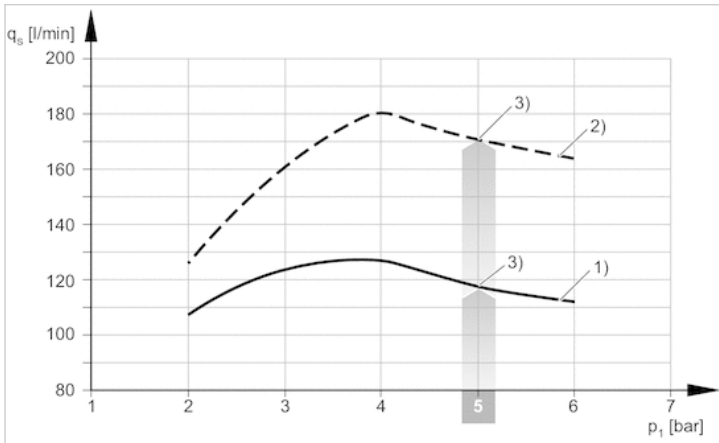
Diagrams

Vacuum p₂ depending on working pressure p₁



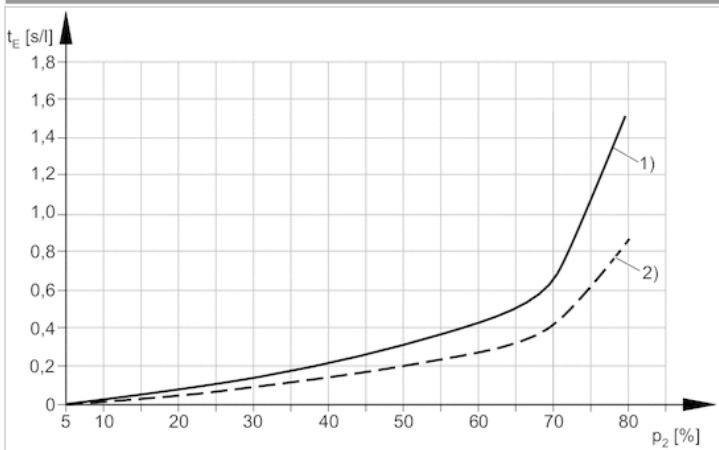
- 1) Ø nozzle 2.0 mm
- 2) Ø nozzle 2.5 mm
- 3) optimum working pressure

Suction capacity q_s depending on working pressure p_1



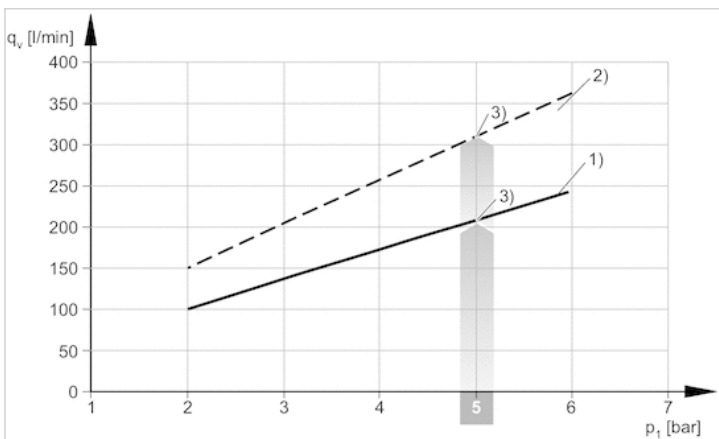
- 1) \varnothing nozzle 2.0 mm
- 2) \varnothing nozzle 2.5 mm
- 3) optimum working pressure

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



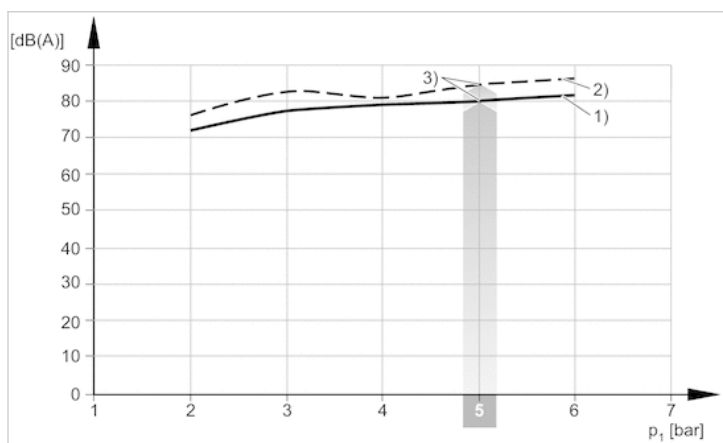
- 1) \varnothing nozzle 2.0 mm
- 2) \varnothing nozzle 2.5 mm

Air consumption q_v depending on working pressure p_1



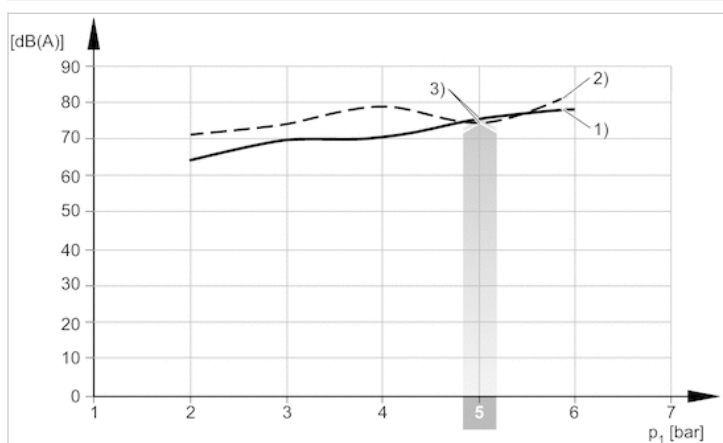
- 1) \varnothing nozzle 2.0 mm
- 2) \varnothing nozzle 2.5 mm

Noise level at free suctioning



- 1) \varnothing nozzle 2.0 mm
- 2) \varnothing nozzle 2.5 mm
- 3) optimum working pressure

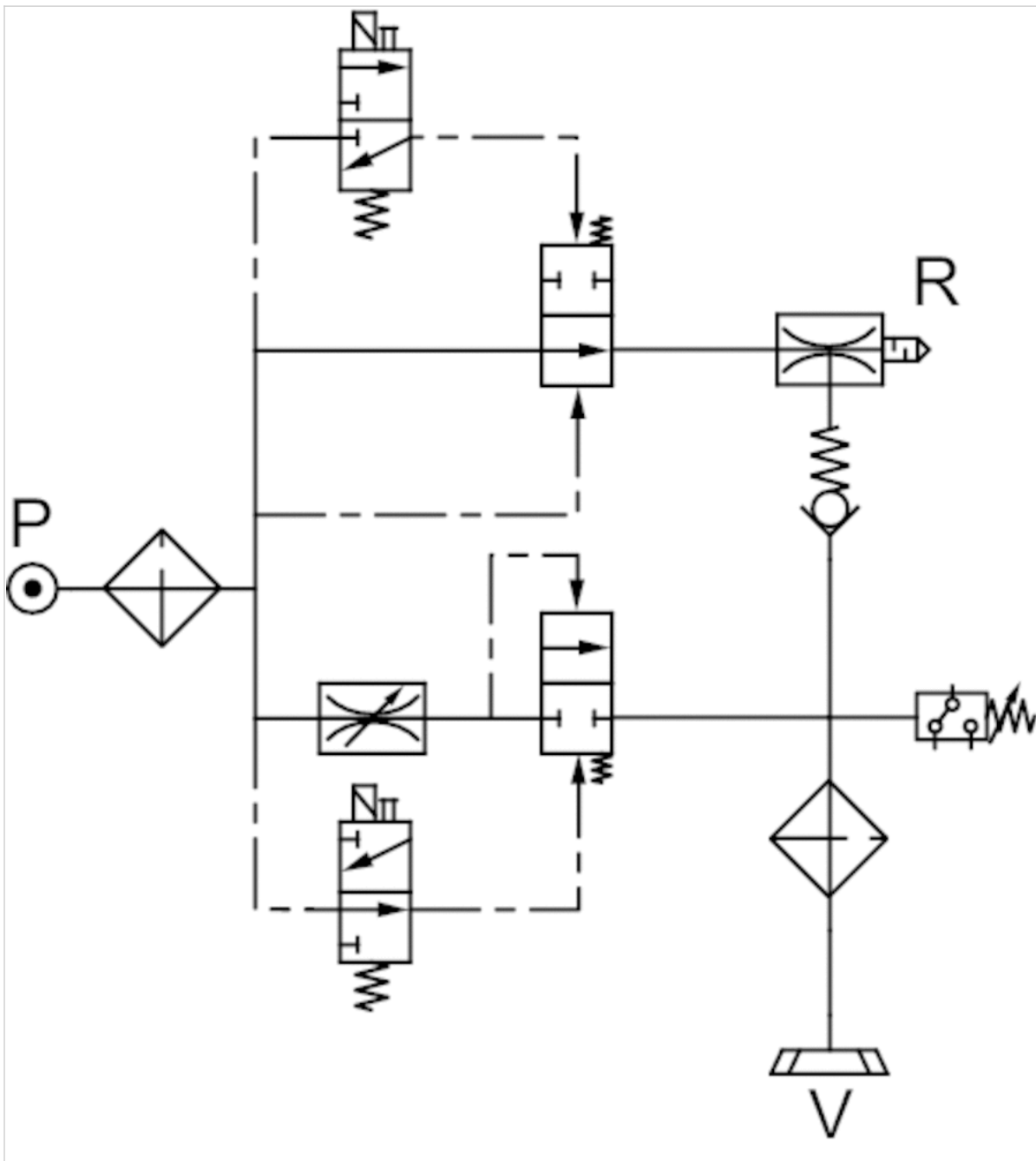
Noise level, suctioned



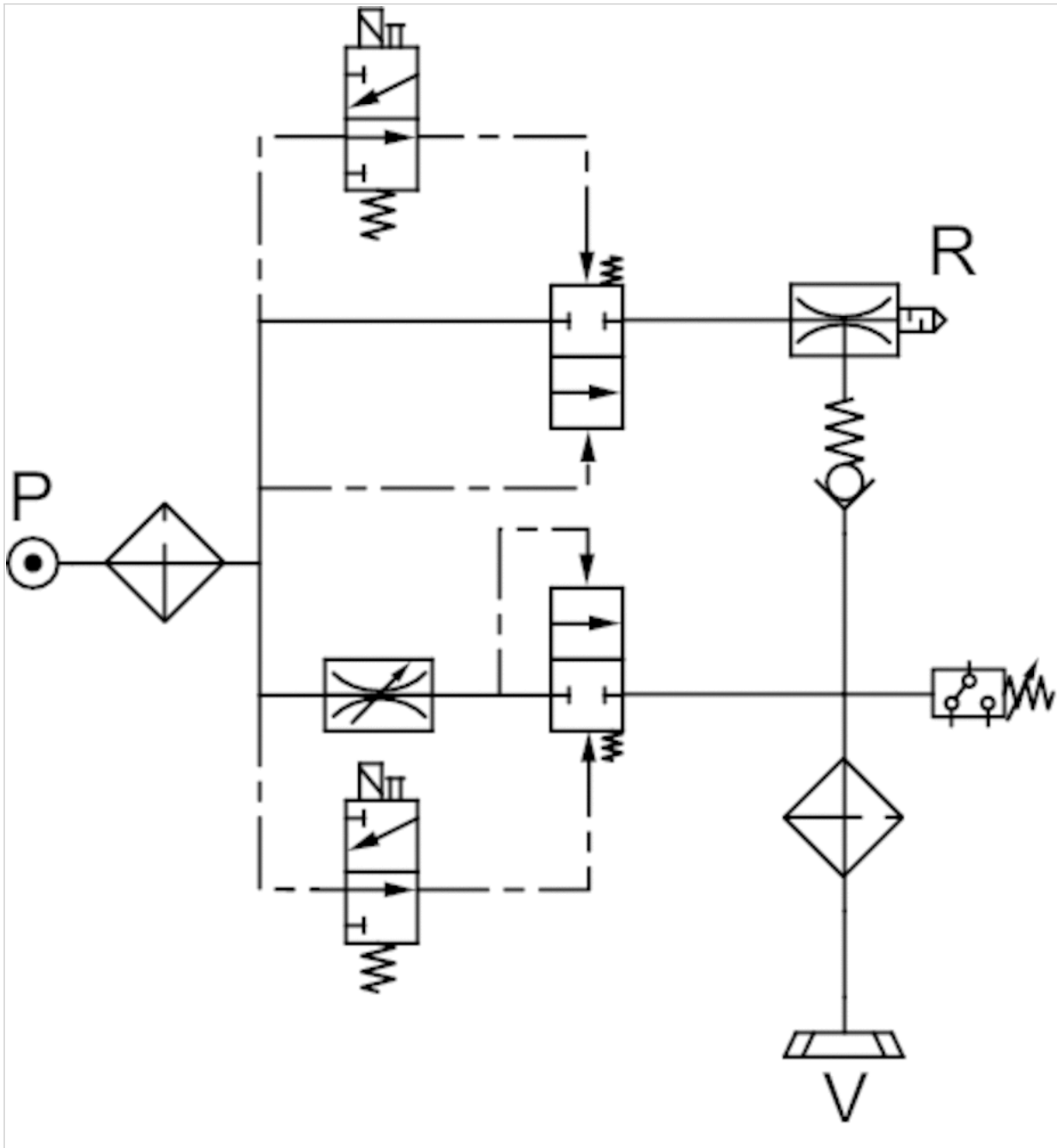
- 1) \varnothing nozzle 2.0 mm
- 2) \varnothing nozzle 2.5 mm
- 3) optimum working pressure

Circuit diagram

Circuit diagram, ECD-LV-...NO



Circuit diagram, ECD-LV-...NC

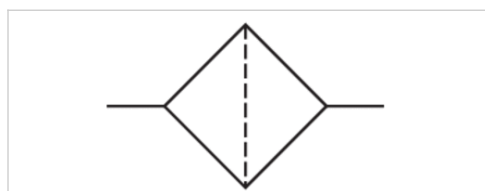


Vacuum filter Inline, Series VFI

- filter porosity 50 µm



Version	Vacuum filter
Ambient temperature min./max.	0 ... 50 °C
Medium	Compressed air
Filter element	exchangeable
filter porosity	50 µm
Mounting	installing in piping
max. overpressure at 25° C	7 bar
max. overpressure at 50°C	5 bar
Max. vacuum level at p.opt	99 %
Weight	See table below



Technical data

Part No.	Type	External Ø	Internal Ø	Flow Qn	Weight
R412010112	VFI-6/4	6 mm	4 mm	32 l/min	0.007 kg
R412010113	VFI-8/6	8 mm	6 mm	66 l/min	0.012 kg

Nominal flow at $\Delta p = 40$ mbar

Technical information

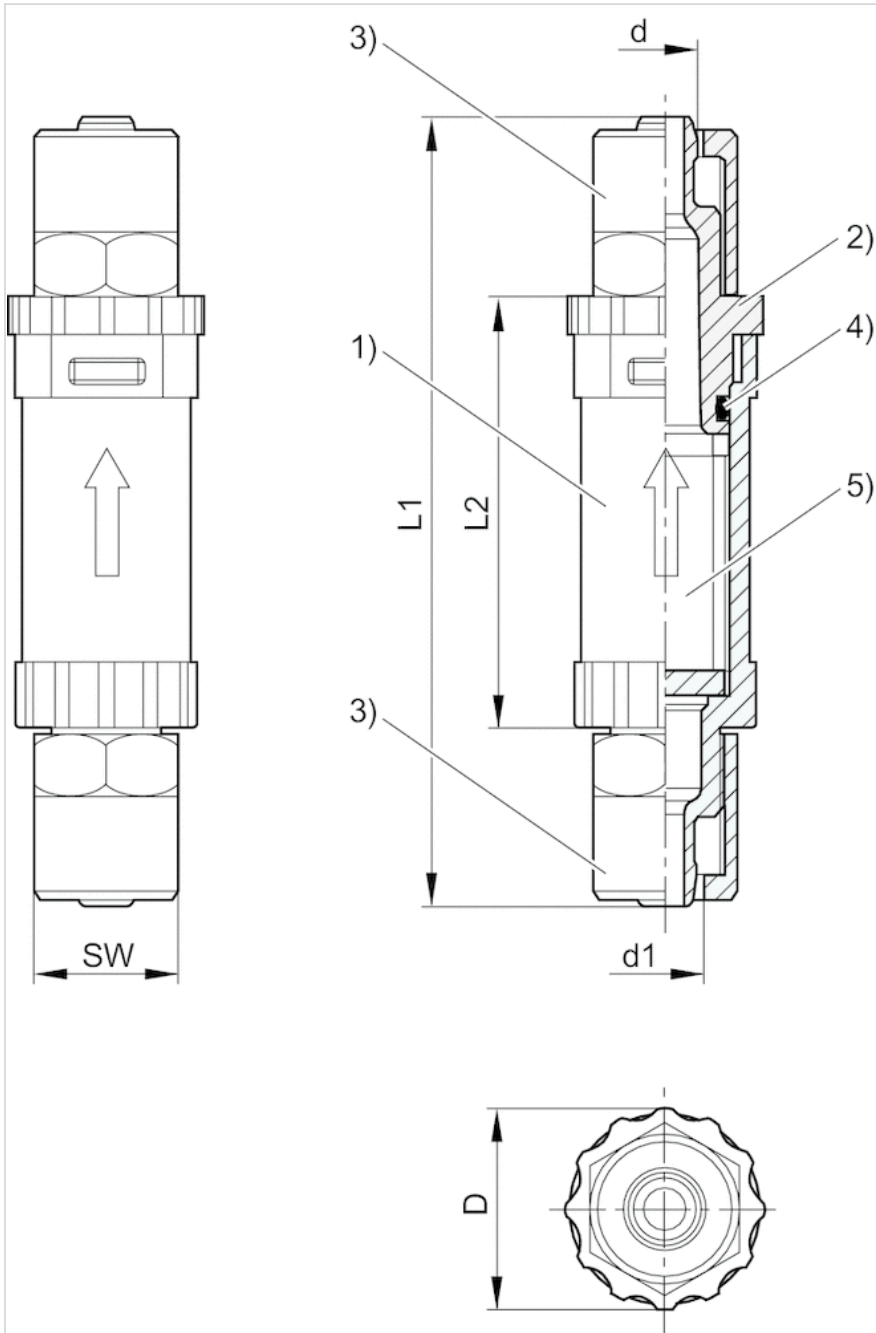
suitable connections: plastic tubing made of polyurethane and polyethylene

Technical information

Material	
Housing	Polyamide
Seals	Acrylonitrile butadiene rubber
Filter insert	Polypropylene Polyamide

Dimensions

Dimensions



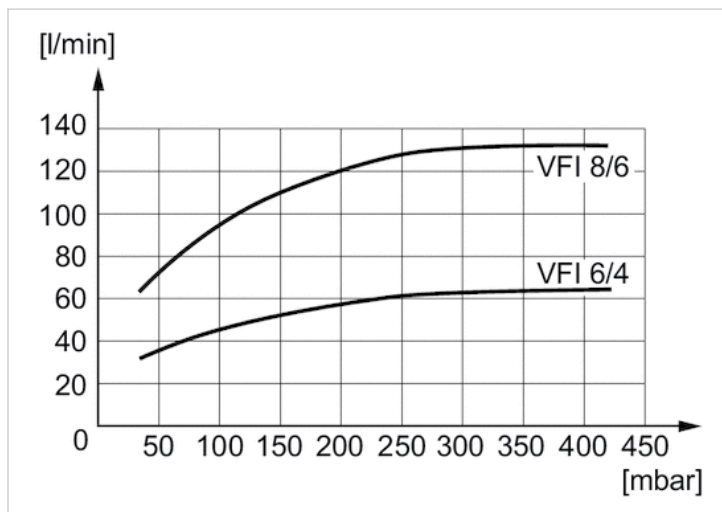
- 1) "transparent inline filter housing "
- 2) filter cover with bayonet catch
- 3) tube nut
- 4) O-ring
- 5) Filter

Dimensions

Part No.	Type	External Ø	Internal Ø	d	d1	D	L1	L2	SW
R412010112	VFI-6/4	6 mm	4 mm	4	6.2	16	62	34	12
R412010113	VFI-8/6	8 mm	6 mm	6	8.2	23	70	41	14

Diagrams

characteristics (flow volume)

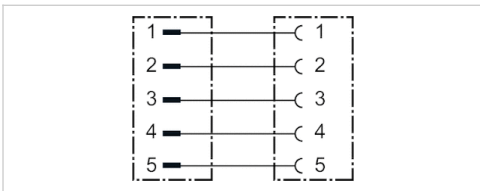


Round plug connector, Series CON-RD

- Socket M12x1 5-pin A-coded straight 180°
- Plug M12x1 5-pin A-coded straight 180°
- for DDL
- with cable
- shielded



Ambient temperature min./max.	-25 ... 80 °C
Operational voltage	30 / 36 V AC/DC
Protection class	IP67
Wire cross-section	0.34 mm ²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length	Weight
8946054662	4 A	5	45 mm	6 mm	0.3 m	0.051 kg
8946054672	4 A	5	45 mm	6 mm	0.5 m	0.051 kg
8946054682	4 A	5	45 mm	6 mm	1 m	0.088 kg
8946054692	4 A	5	45 mm	6 mm	2 m	0.139 kg
8946054702	4 A	5	45 mm	6 mm	5 m	0.289 kg
8946054712	4 A	5	45 mm	6 mm	10 m	0.536 kg

Technical information

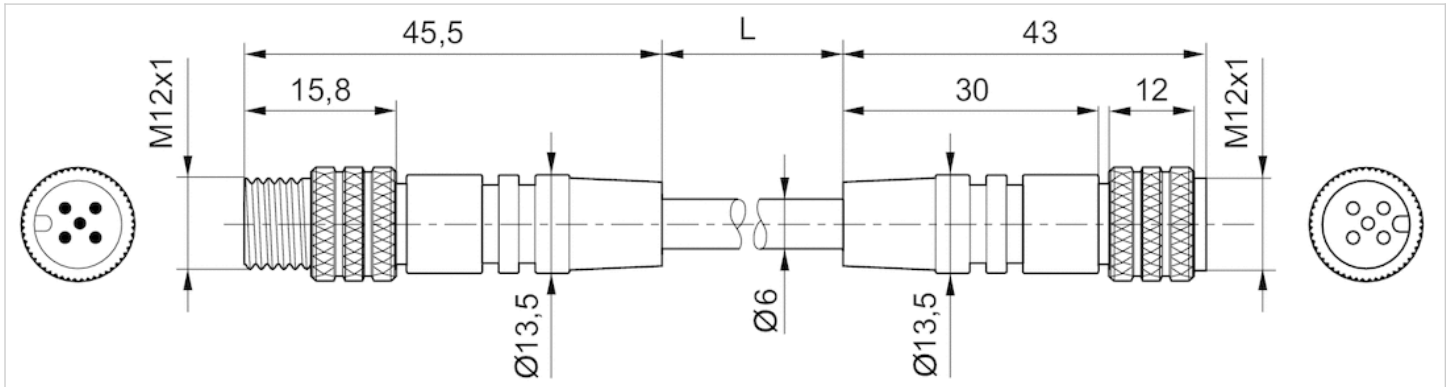
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Seals	Fluorocaoutchouc
Cable sheath	Polyurethane

Dimensions

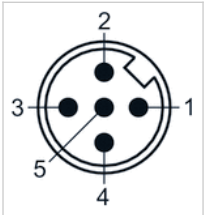
Dimensions



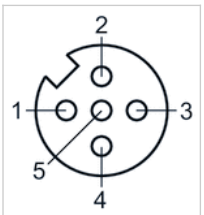
L = cable length

Pin assignments

Plug pin assignment



Pin assignment, socket



Valve plug connector, series CON-VP

- Socket Industrial plug connector 2-pin straight 180°
- open cable ends 2-pin
- with cable
- unshielded



Ambient temperature min./max.	-40 ... 80 °C
Operational voltage	48 V AC/DC
Protection class	IP40
Wire cross-section	0.25 mm ²
Weight	0.026 kg

Technical data

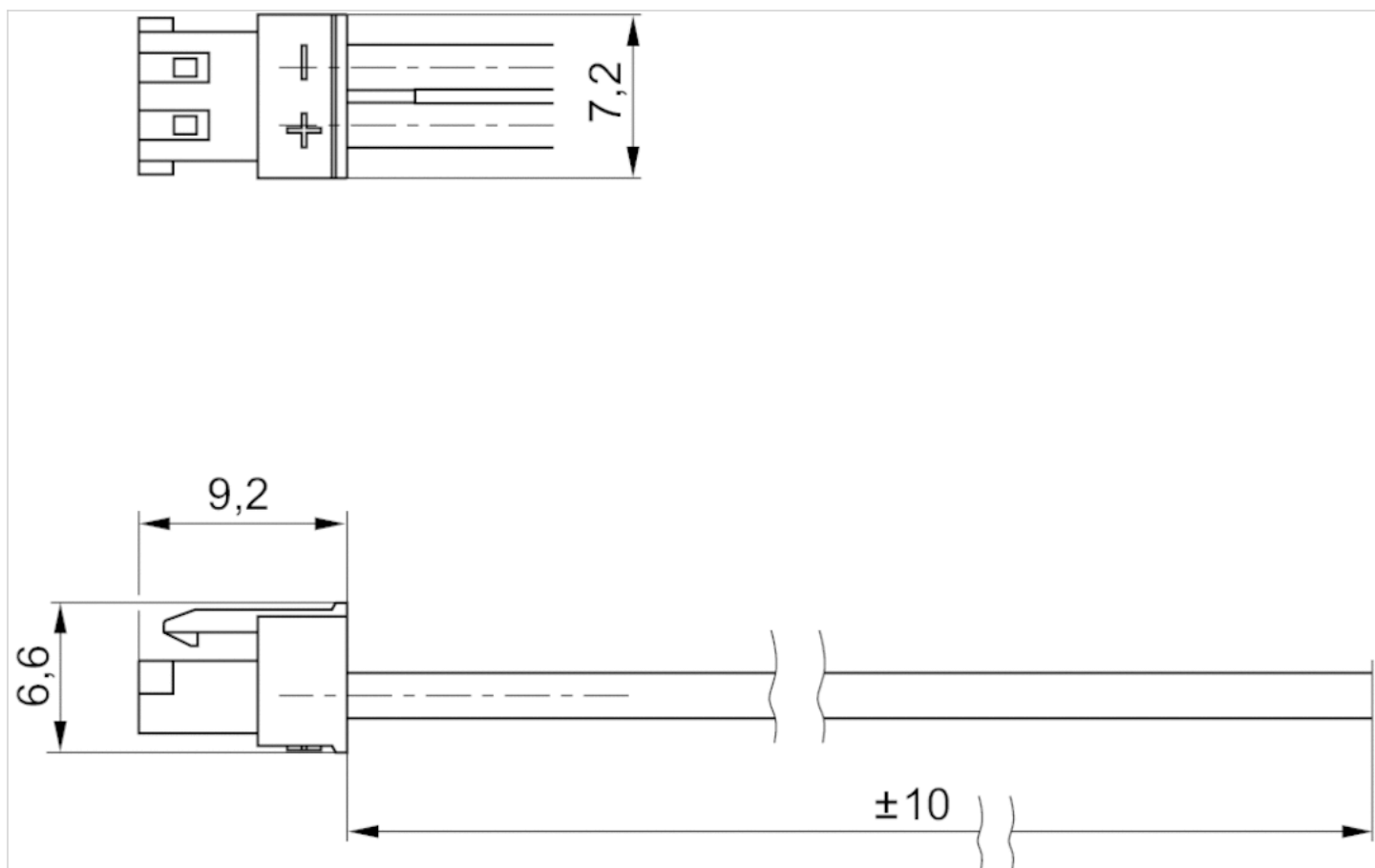
Part No.	Number of wires	Cable-Ø	Cable length	Delivery unit	Fig.
R422003278	2	1.5 mm	3 m	1 piece	Fig. 1

Technical information

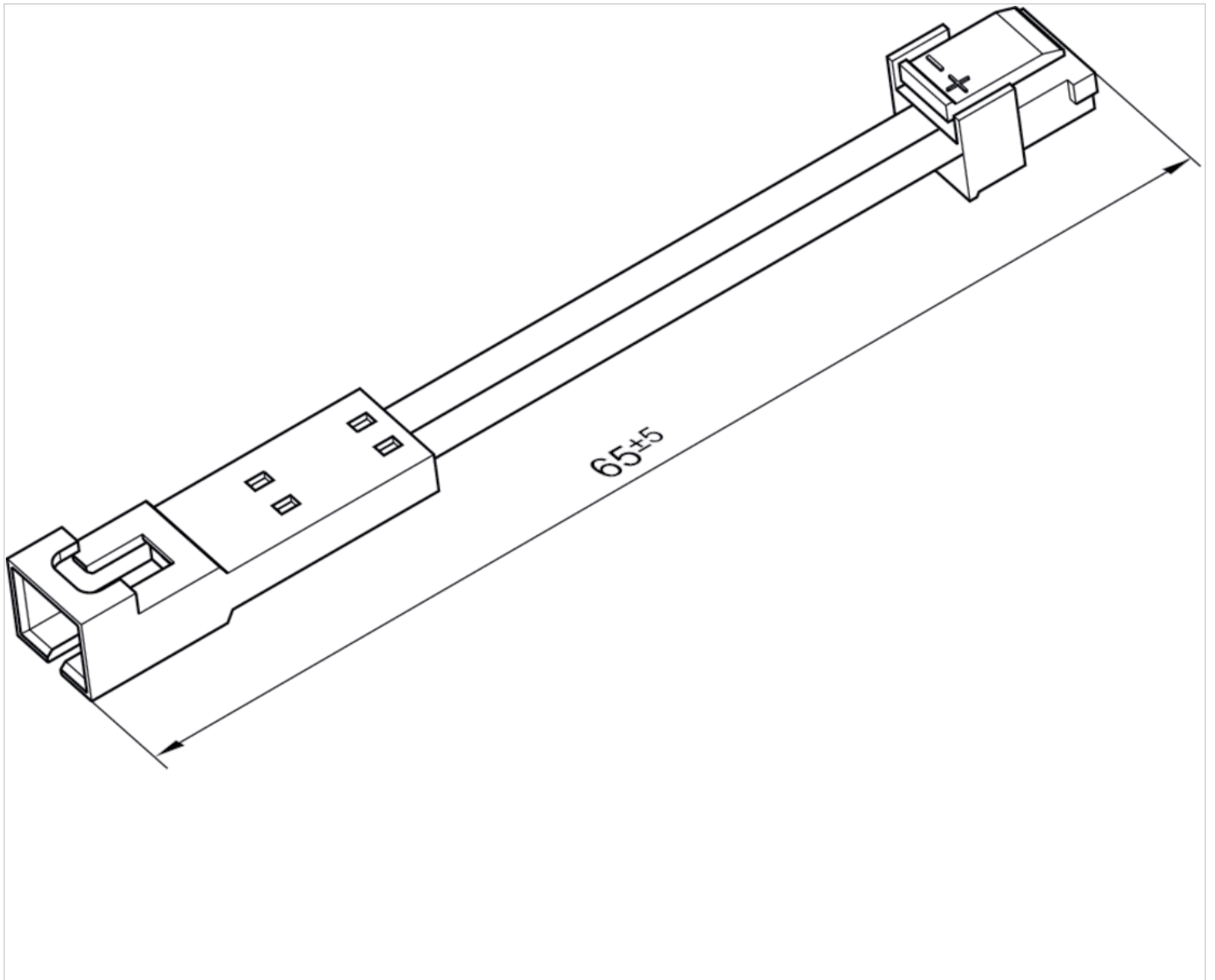
Material	
Cable sheath	Polyvinyl chloride

Dimensions

Dimensions, Fig. 1



Dimensions, Fig. 2



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2019-03



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