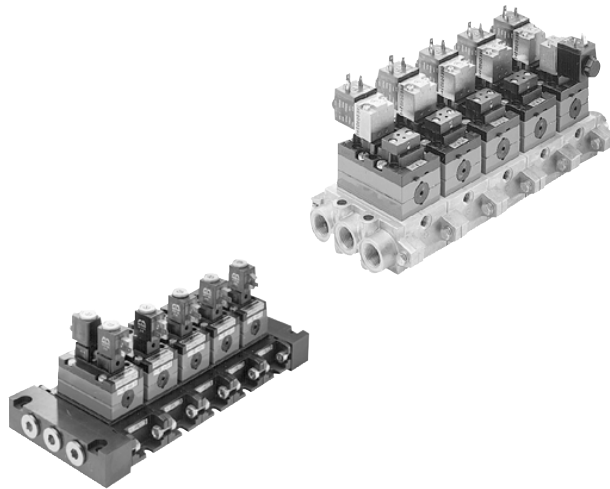


Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581

Brochure



Valve systems ▶ Standardized valve systems ISO 5599-1, size 1, series 581

Electrically operated



Valve system, Series 581, size 1
▶ Qn = 1100 l/min ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: without detent

8



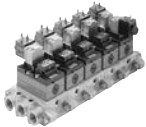
Valve system, Series 581, size 1
▶ Qn = 1100 l/min ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Electr. connection: Single wire connection, electronic connection module and multiple cable ▶ Manual override: without detent

12



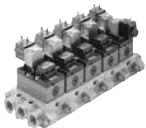
Valve system, Series 581, size 1
▶ Qn = 1100 l/min ▶ Pilot valve width: 22 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Electr. connection: Single wire connection, Electrical connector without standard (form B industry) ▶ Manual override: with detent

16



Valve system, Series 581, size 1
▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: with detent

20



Valve system, Series 581, size 1
▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: without detent, without

24

Pneumatically operated



Valve system, Series 581, size 1
▶ Qn = 1100 l/min ▶ Compressed air connection output: Base plate ISO 5599-1

28

Accessories

Single valves, electrically operated



ISO 5599-1, size 1, Series 581

on
line

Single valves, pneumatically operated



ISO 5599-1, size 1, Series 581

on
line

Soft-start valves



Soft-start valve
▶ Qn = 3300 l/min ▶ Pilot valve width: 15 mm ▶ Manual override: without detent

34














Valve systems ▶ Standardized valve systems
ISO 5599-1, size 1, series 581

	Soft-start valve ▶ Qn = 3300 l/min ▶ Pilot valve width: 22 mm ▶ Manual override: with detent	36
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Valve systems ▶ Standardized valve systems
ISO 5599-1, size 1, series 581

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	Electrical connector, Series CN1 ▶ 11 mm ▶ Industry standard	54
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Valve systems ▶ Standardized valve systems
ISO 5599-1, size 1, series 581

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Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581

Base and end plates, type H



Base plate, Ports 2 and 4 on side, 1, 2 and 4 also on bottom
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type H ▶ Compressed air connection output: G 1/4 ▶ Can be assembled into blocks

82



End plate left, End plate right
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type H ▶ Can be assembled into blocks

85

Base and end plates, type K



Base plate, ports 2 and 4 on bottom
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type K ▶ Compressed air connection output: G 1/8 - Ø 6 ▶ Can be assembled into blocks

89



Intermediate plate for separate air supply, ports 2 and 4 on bottom
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type K ▶ Compressed air connection output: G 1/8 - G 1/4 ▶ Can be assembled into blocks

91



End plate left, End plate right
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type K ▶ Can be assembled into blocks

93

Accessories



Blanking plate
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1

95



Blanking plate
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1

96



Throttle plate
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1

97



Pressure regulator for vertical stacking
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Controlled port: 1, 2, 4, 2, 4

98

Accessories, type G



Transition plate
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 - ISO 2 ▶ type G ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible

101



Supply plate
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Reversed pressure supply permissible

102











Accessories, type F



Transition plate
 ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 -> ISO 2 ▶ type F ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible

103

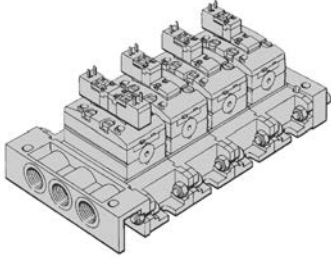
Valve systems ▶ Standardized valve systems
ISO 5599-1, size 1, series 581

	<p>Transition plate</p> <ul style="list-style-type: none"> ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 -> ISO 3 - ISO 2 -> ISO 3 ▶ type F ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible 	104
	<p>End plates for adapter plate</p> <ul style="list-style-type: none"> ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 - ISO 2 ▶ type F ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible 	106
	<p>Angle subplate</p> <ul style="list-style-type: none"> ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Compressed air connection output: G 1/4 	107
	<p>Supply plate</p> <ul style="list-style-type: none"> ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Reversed pressure supply permissible 	109
	<p>Blanking piece</p> <ul style="list-style-type: none"> ▶ type F ▶ Frame size:ISO 1 	110
	<p>Accessories, for intermediate plates</p> <ul style="list-style-type: none"> ▶ type F ▶ Frame size:ISO 1 	110
	<p>Blanking piece, Subbases ISO 5599-1</p> <ul style="list-style-type: none"> ▶ type F ▶ Frame size:ISO 1 - ISO 3 	111
Accessories, type H		
	<p>Supply plate</p> <ul style="list-style-type: none"> ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type H ▶ Can be assembled into blocks ▶ Plate principle 	112
	<p>Seal for supply plate</p> <ul style="list-style-type: none"> ▶ type H 	113
Accessories, type K		
	<p>Separator set</p> <ul style="list-style-type: none"> ▶ type K ▶ Frame size:ISO 1 	114

Valve system, Series 581, size 1

▶ $Q_n = 1100 \text{ l/min}$ ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1

▶ Manual override: without detent



P581_168

Standards	ISO 5599-1
Version	Single plug-in wiring
Blocking principle	Single base plate principle
Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-10 °C / +50 °C
Medium	Compressed air
Max. particle size	50 μm
Oil content of compressed air	0 mg/m^3 - 5 mg/m^3
Protection class with connection	IP65
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%

Materials:

Plug box	Polyamide, fiber-glass reinforced
Seal	Acrylonitrile Butadiene Rubber

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product



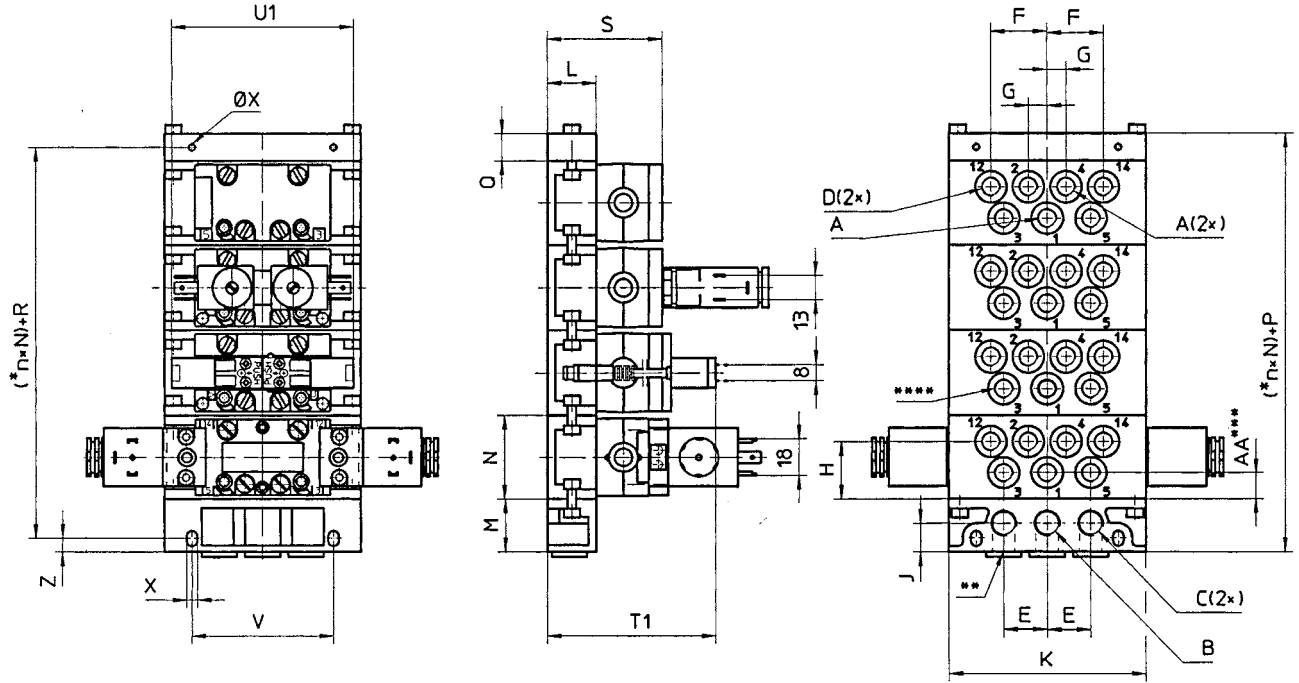
This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

- ▶ Qn = 1100 l/min ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Manual override: without detent

Dimensions, all ports on bottom



D581_231_15

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	C	D	E	F	G	H	J	K	L	M	N	P (=M+Q)
G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25	27	43	41
G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30	34	43	49
Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100	25	27	43	41
Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122	30	34	43	49

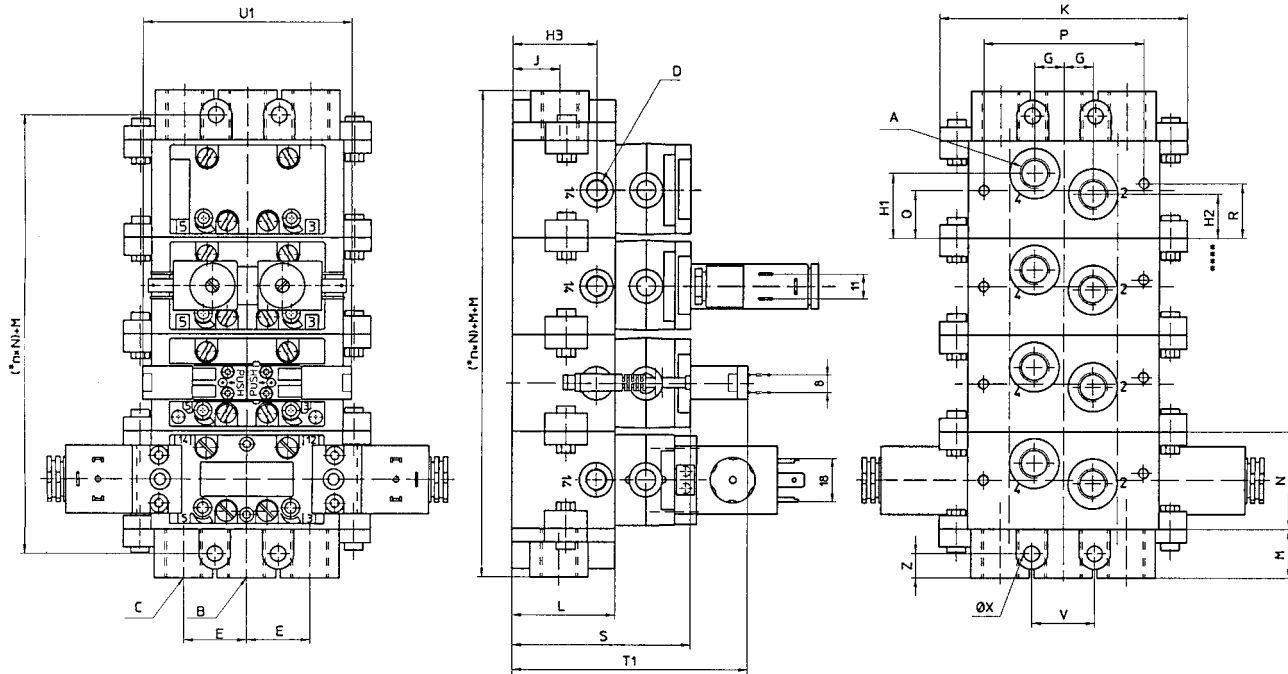
A	Q	R (=Q/2+M-Z)	S	V	X	Z	AA	T1	U1				
G 1/8	14	27.5	60	72	5.4	7	8	85	93				
G 1/4	15	34	65	94	6.4	8	10	92	93				
Ø 6	14	27.5	60	72	5.4	7	-	85	93				
Ø 8	15	34	65	94	6.4	8	-	92	93				

- A = ports 2 and 4 in the intermediate plate
- B = port 1 in the supply plate
- C = ports 3 and 5 in the supply plate
- D = ports 12 and 14 in the intermediate plate

Valve system, Series 581, size 1

- ▶ $Q_n = 1100 \text{ l/min}$ ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Manual override: without detent

Dimensions, ports 2 and 4 on bottom, Ports 12 and 14 on side



D581_232_15

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

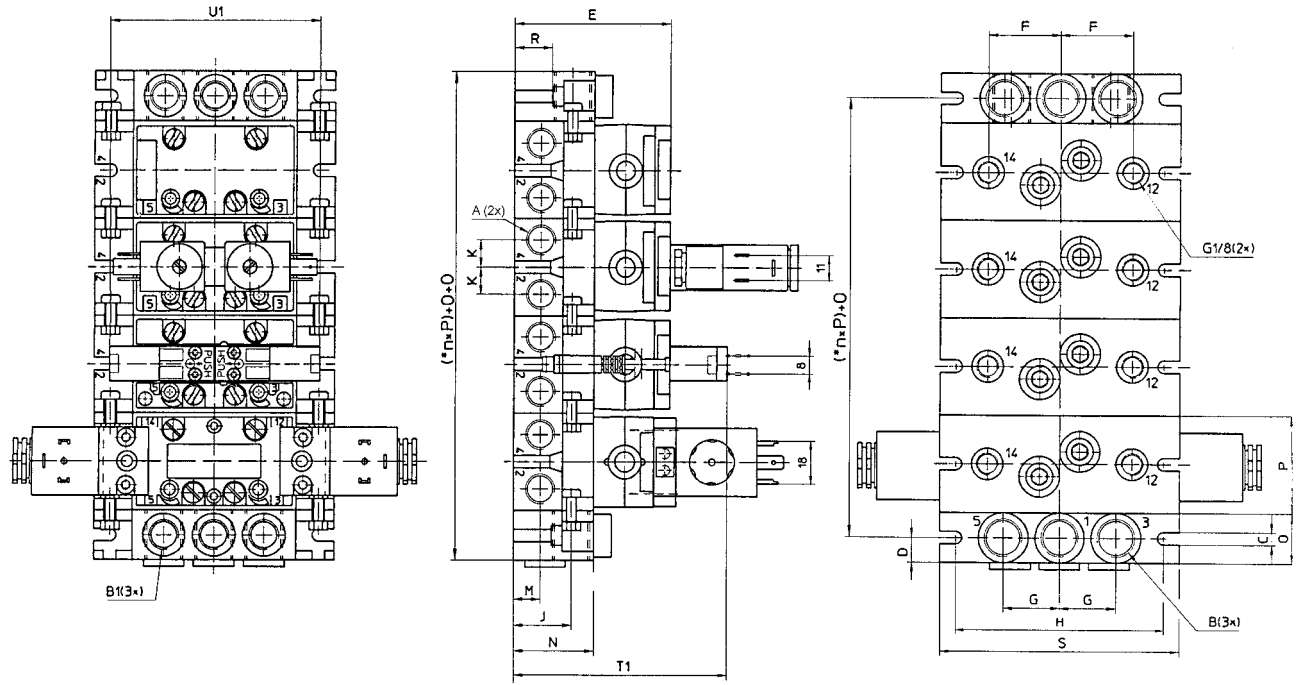
A	B	C	D	E	G	H1	H2	H3	J	K	L	M	N	P
G 1/4	G 3/8	G 3/8	G 1/8	28	13	29	20	39.5	22	110	46	22	43	71
A	Q	R	S	V	X	Z	T1	U1						
G 1/4	21.5	24.5	86	28	7	11	107	93						

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

- ▶ Qn = 1100 l/min ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Manual override: without detent

Dimensions, ports 2 and 4 on side, ports 12 and 14 on bottom



D581_233_15

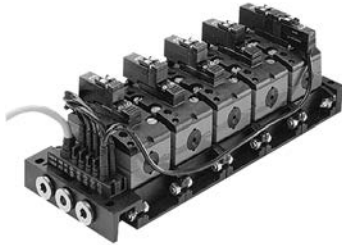
* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	B1	C	D	E	F	G	H	J	R	K	M	N	O
G 1/4	G 3/8	G 1/4	5.5	11	71	32	22	92	24	17	12	12	36	22
A	P	S	T1	U1										
G 1/4	43	106	96	93										

Valve system, Series 581, size 1

▶ $Q_n = 1100 \text{ l/min}$ ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Electr. connection: Single wire connection, electronic connection module and multiple cable ▶ Manual override: without detent



P581_136

Standards	ISO 5599-1
Version	Single plug-in wiring
Blocking principle	Single base plate principle
Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-10 °C / +50 °C
Medium	Compressed air
Max. particle size	50 μm
Oil content of compressed air	0 mg/m^3 - 5 mg/m^3
Protection class with connection	IP67
Number of solenoid coilsmax.	20
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%
cable connection	10 m

Materials:

Plug box	Polyamide, fiber-glass reinforced
Seal	Acrylonitrile Butadiene Rubber

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product



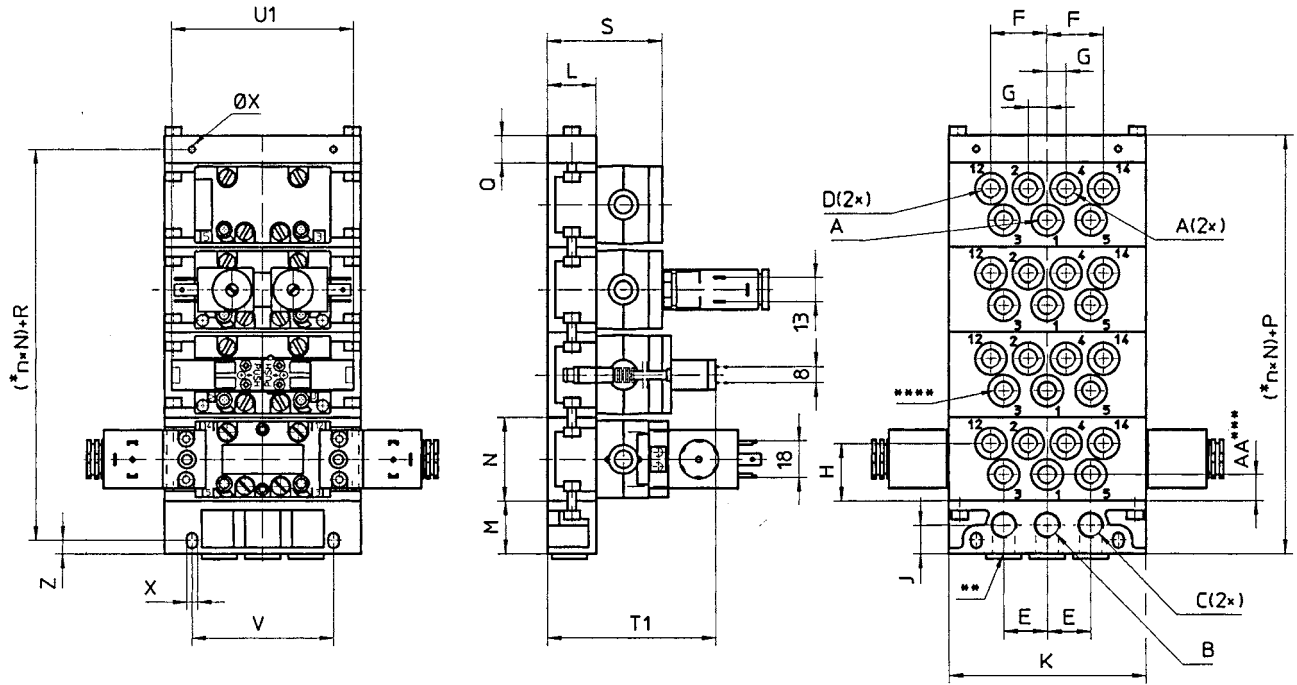
This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Electr. connection: Single wire connection, electronic connection module and multiple cable ▶ Manual override: without detent

Dimensions, all ports on bottom



D581_231_15

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	C	D	E	F	G	H	J	K	L	M	N	P (=M+Q)
G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25	27	43	41
G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30	34	43	49
Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100	25	27	43	41
Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122	30	34	43	49

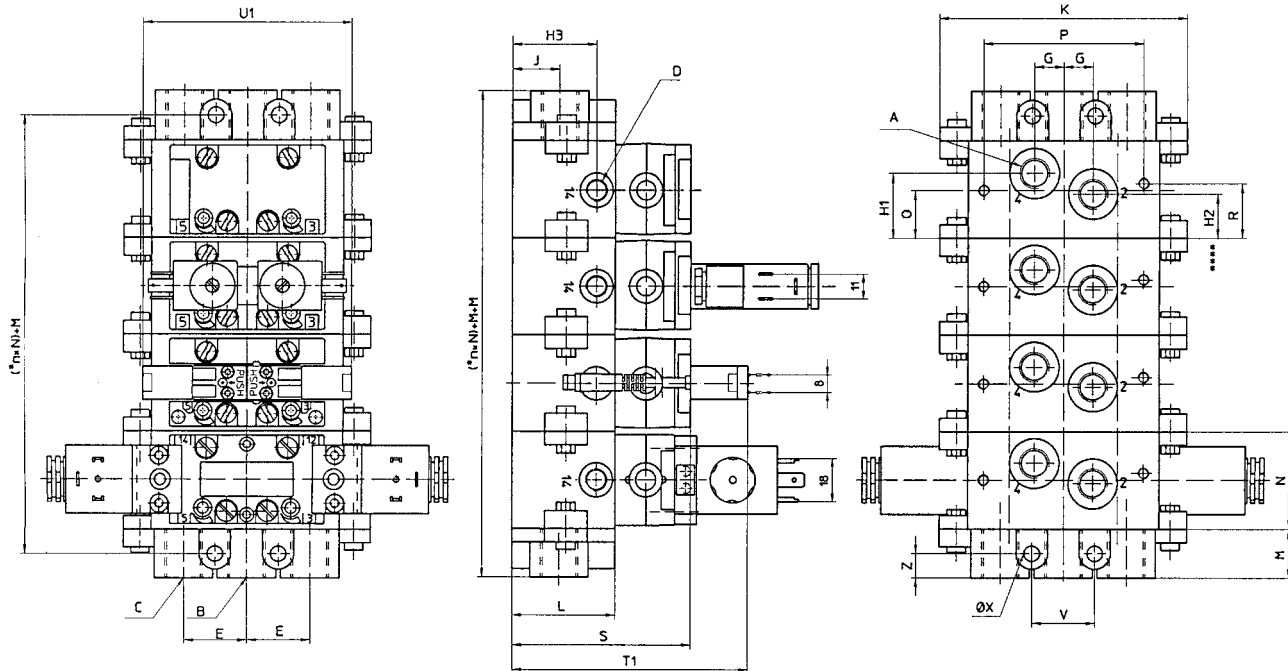
A	Q	R (=Q/2+M-Z)	S	V	X	Z	AA	T1	U1				
G 1/8	14	27.5	60	72	5.4	7	8	85	93				
G 1/4	15	34	65	94	6.4	8	10	92	93				
Ø 6	14	27.5	60	72	5.4	7	-	85	93				
Ø 8	15	34	65	94	6.4	8	-	92	93				

A = ports 2 and 4 in the intermediate plate
 B = port 1 in the supply plate
 C = ports 3 and 5 in the supply plate
 D = ports 12 and 14 in the intermediate plate

Valve system, Series 581, size 1

▶ $Q_n = 1100 \text{ l/min}$ ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Electr. connection: Single wire connection, electronic connection module and multiple cable ▶ Manual override: without detent

Dimensions, ports 2 and 4 on bottom, Ports 12 and 14 on side



D581_232_15

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

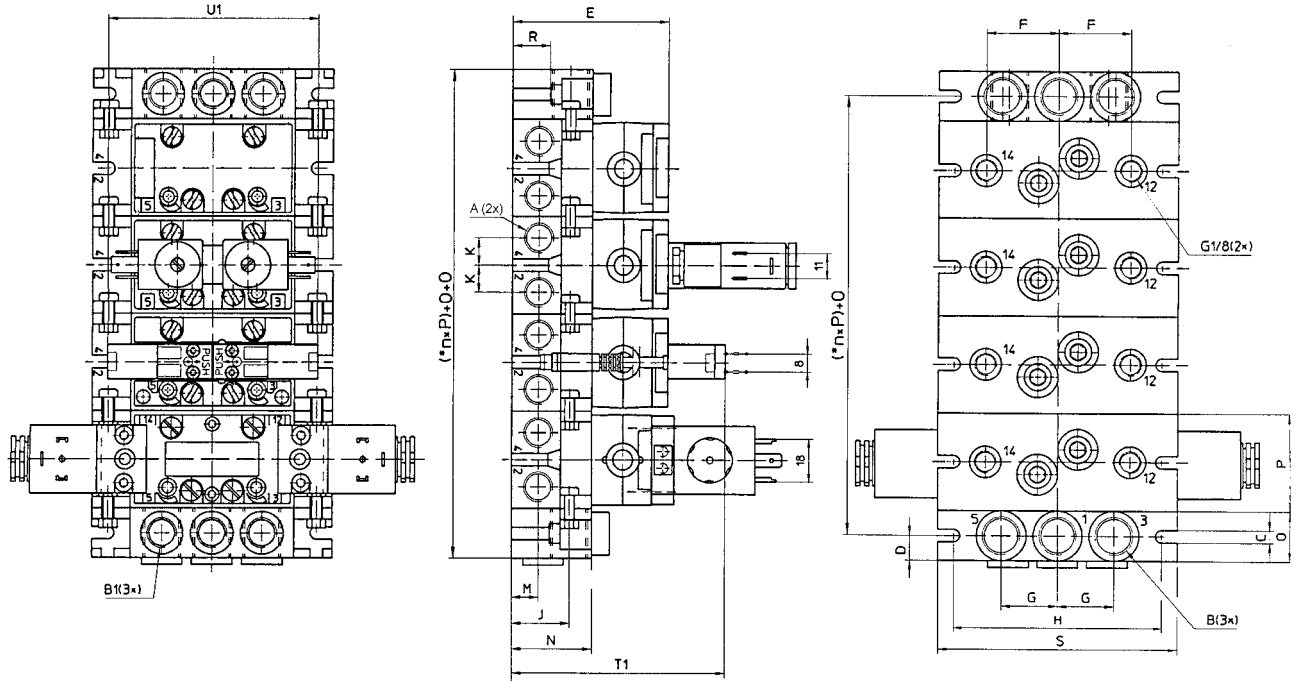
A	B	C	D	E	G	H1	H2	H3	J	K	L	M	N	P
G 1/4	G 3/8	G 3/8	G 1/8	28	13	29	20	39.5	22	110	46	22	43	71
A	Q	R	S	V	X	Z	T1	U1						
G 1/4	21.5	24.5	86	28	7	11	107	93						

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Pilot valve width: 15 mm ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Electr. connection: Single wire connection, electronic connection module and multiple cable ▶ Manual override: without detent

Dimensions, ports 2 and 4 on side, ports 12 and 14 on bottom



D581_233_15

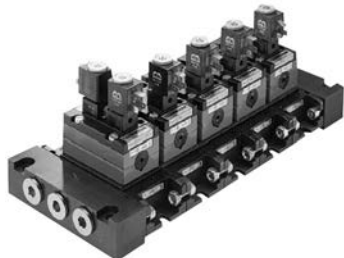
* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	B1	C	D	E	F	G	H	J	R	K	M	N	O
G 1/4	G 3/8	G 1/4	5.5	11	71	32	22	92	24	17	12	12	36	22
A	P	S	T1	U1										
G 1/4	43	106	96	93										

Valve system, Series 581, size 1

▶ **Qn = 1100 l/min** ▶ **Pilot valve width: 22 mm** ▶ **Compressed air connection output: Base plate ISO 5599-1**
 ▶ **Electr. connection: Single wire connection, Electrical connector without standard (form B industry)** ▶ **Manual override: with detent**



P581_137

Standards	ISO 5599-1
Version	Single plug-in wiring
Blocking principle	Single base plate principle
Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Protection class with connection	IP65
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%
Operational voltage AC at 50 Hz	230 V, 110 V, 24 V
Voltage tolerance AC 50 Hz	-10% / +10%

Materials:

Plug box	Polyamide, fiber-glass reinforced
Seal	Acrylonitrile Butadiene Rubber

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product



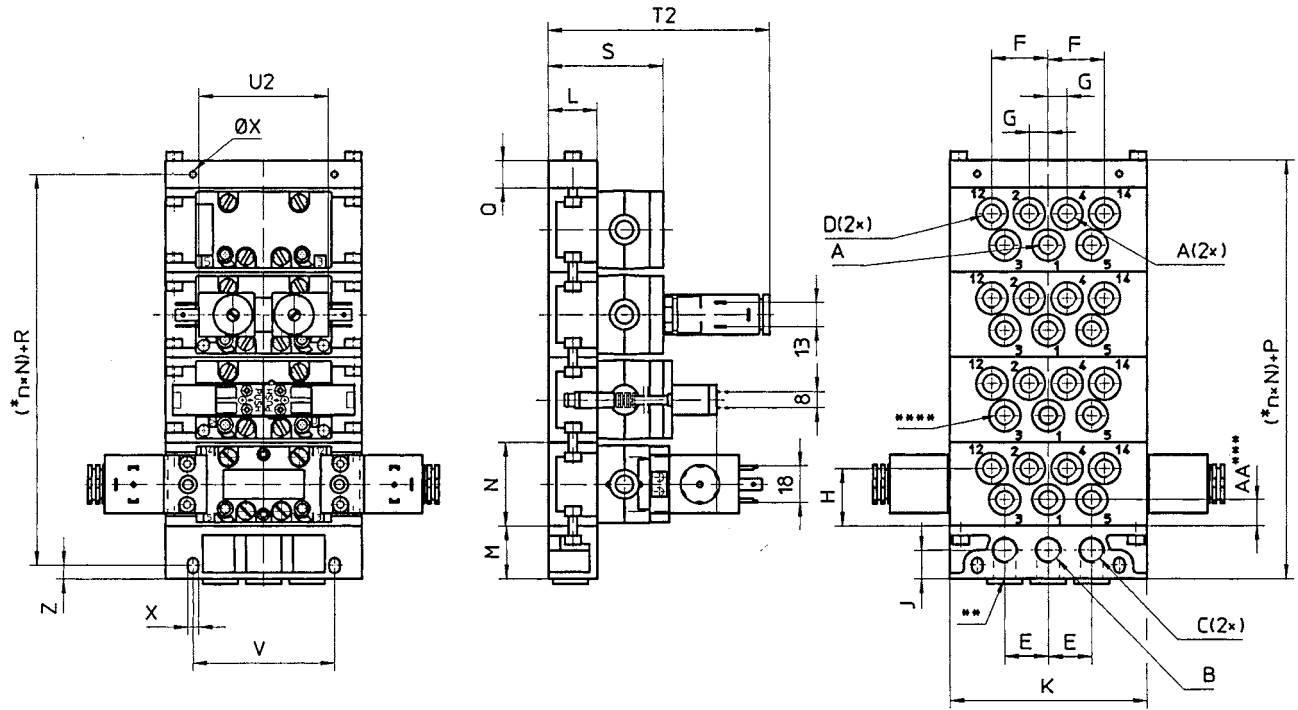
This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

- ▶ Qn = 1100 l/min ▶ Pilot valve width: 22 mm ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Electr. connection: Single wire connection, Electrical connector without standard (form B industry) ▶ Manual override: with detent

Dimensions, all ports on bottom



D581_231_22

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	C	D	E	F	G	H	J	K	L	M	N	P (=M+Q)
G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25	27	43	41
G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30	34	43	49
Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100	25	27	43	41
Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122	30	34	43	49

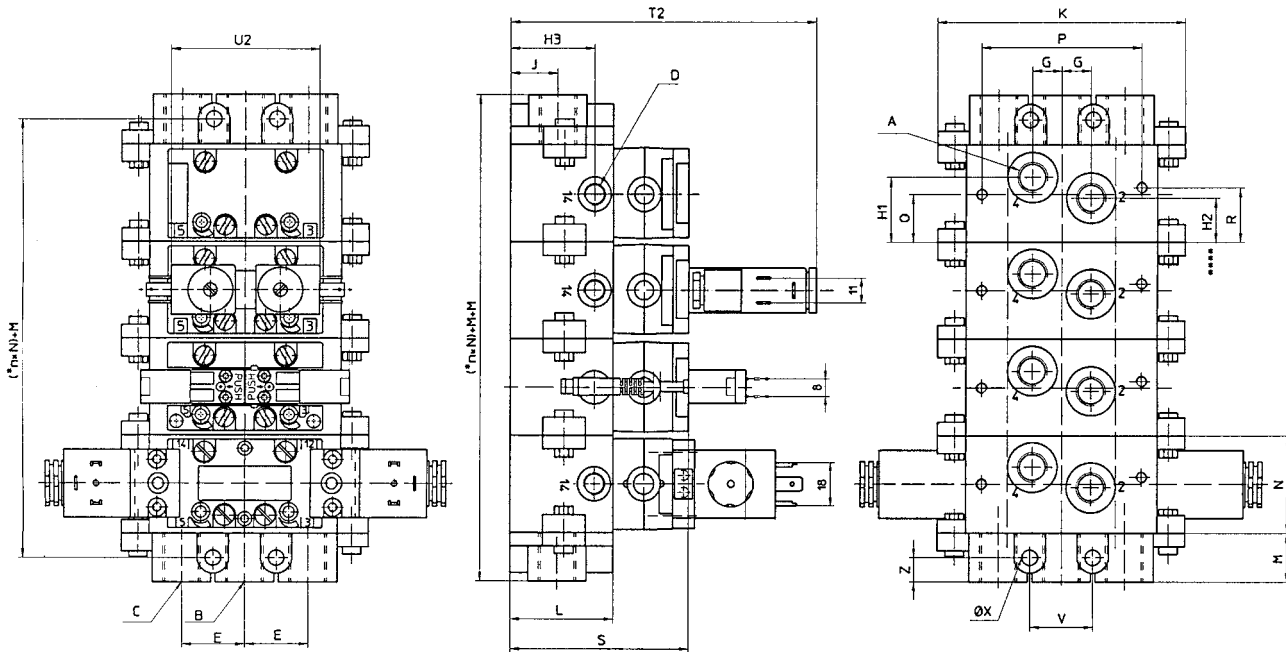
A	Q	R (=Q/2+M-Z)	S	V	X	Z	AA	T2	U2			
G 1/8	14	27.5	60	72	5.4	7	8	113	70			
G 1/4	15	34	65	94	6.4	8	10	119	70			
Ø 6	14	27.5	60	72	5.4	7	-	113	70			
Ø 8	15	34	65	94	6.4	8	-	119	70			

A = ports 2 and 4 in the intermediate plate
 B = port 1 in the supply plate
 C = ports 3 and 5 in the supply plate
 D = ports 12 and 14 in the intermediate plate

Valve system, Series 581, size 1

- ▶ $Q_n = 1100 \text{ l/min}$ ▶ Pilot valve width: 22 mm ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Electr. connection: Single wire connection, Electrical connector without standard (form B industry) ▶ Manual override: with detent

Dimensions, ports 2 and 4 on bottom, Ports 12 and 14 on side



D581_232_22

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

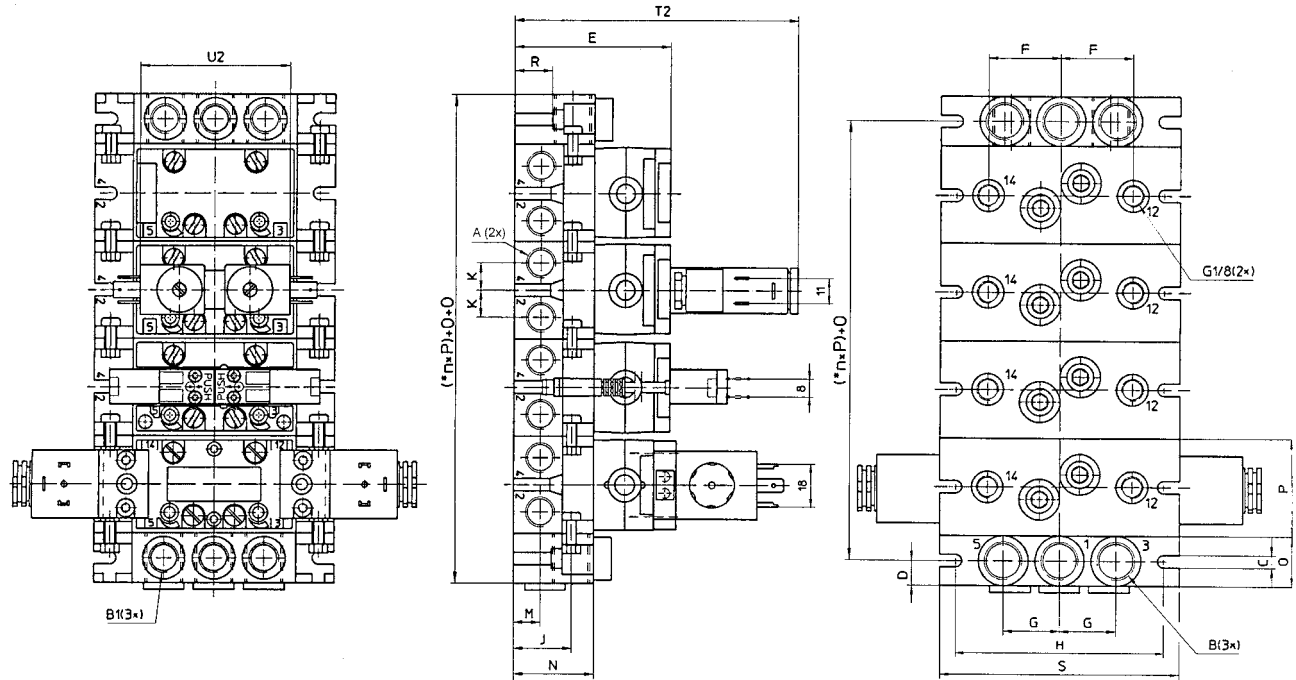
A	B	C	D	E	G	H1	H2	H3	J	K	L	M	N	P
G 1/4	G 3/8	G 3/8	G 1/8	28	13	29	20	39.5	22	110	46	22	43	71
A	Q	R	S	V	X	Z	T2	U2						
G 1/4	21.5	24.5	81	28	7	11	134	68						

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

- ▶ Qn = 1100 l/min ▶ Pilot valve width: 22 mm ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Electr. connection: Single wire connection, Electrical connector without standard (form B industry) ▶ Manual override: with detent

Dimensions, ports 2 and 4 on side, ports 12 and 14 on bottom



D581_233_22

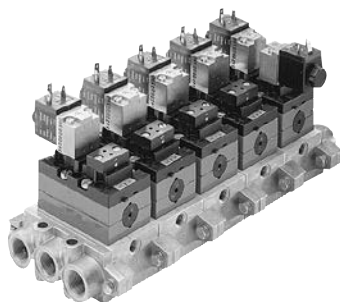
* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	B1	C	D	E	F	G	H	J	R	K	M	N	O
G 1/4	G 3/8	G 1/4	5.5	11	71	32	22	92	24	17	12	12	36	22
A	P	S	T2	U2										
G 1/4	43	106	124	70										

Valve system, Series 581, size 1

▶ $Q_n = 1100 \text{ l/min}$ ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: with detent



P581_138

Standards	ISO 5599-1
Version	Single plug-in wiring
Blocking principle	Single base plate principle
Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Max. particle size	50 μm
Oil content of compressed air	0 mg/m^3 - 5 mg/m^3
Protection class with connection	IP65
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%
Operational voltage AC at 50 Hz	230 V
Voltage tolerance AC 50 Hz	-10% / +10%

Materials:

Plug box	Polyamide, fiber-glass reinforced
Seal	Acrylonitrile Butadiene Rubber

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product



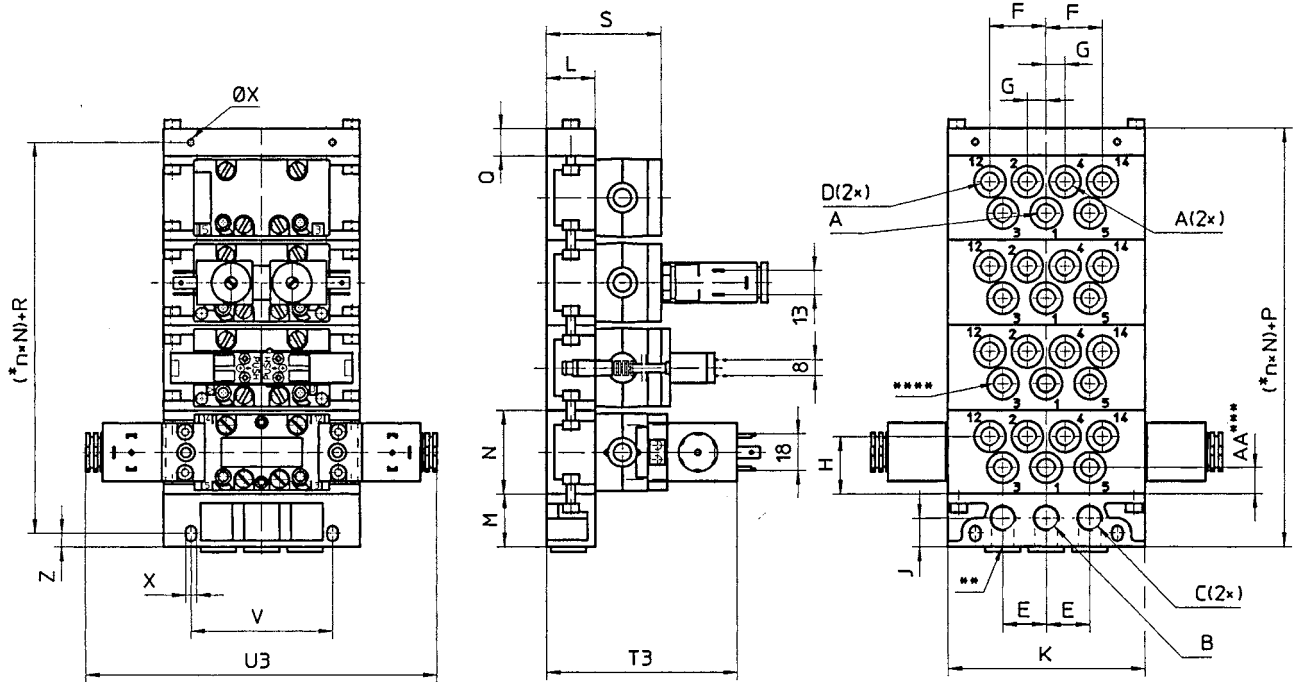
This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: with detent

Dimensions, all ports on bottom



D581_231_30

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	C	D	E	F	G	H	J	K	L	M	N	P (=M+Q)
G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25	27	43	41
G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30	34	43	49
Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100	25	27	43	41
Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122	30	34	43	49

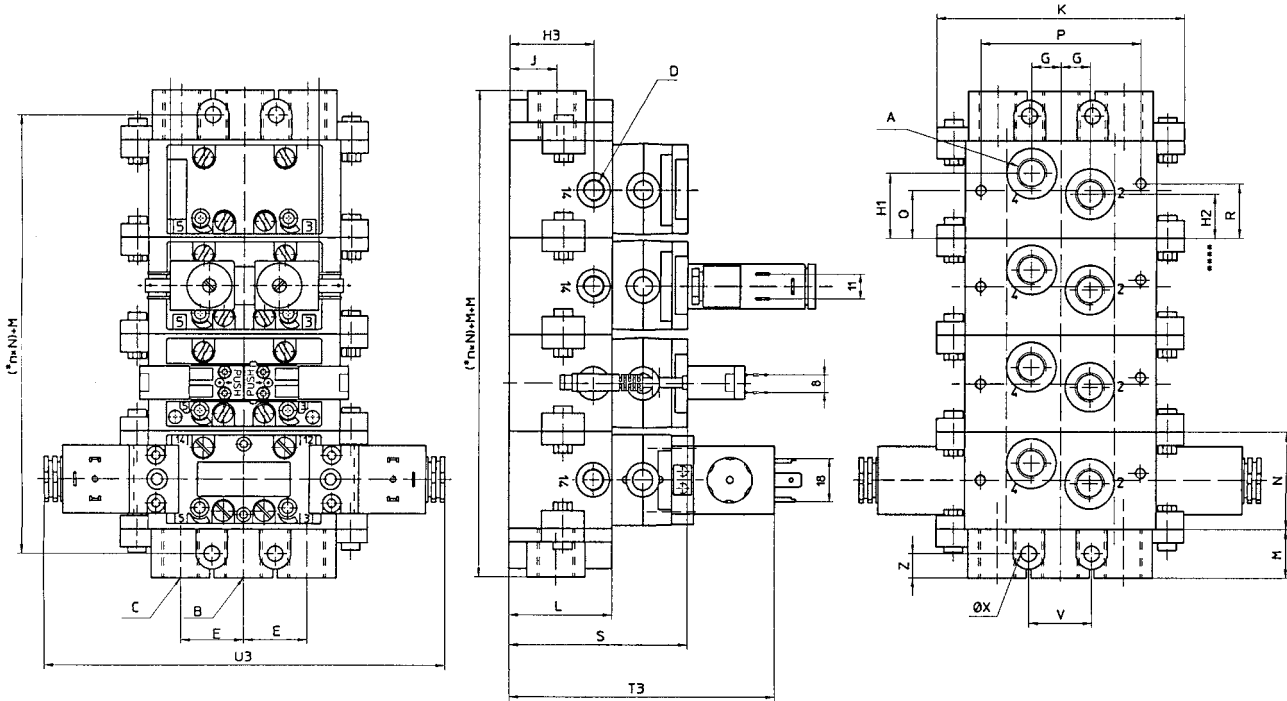
A	Q	R (=Q/2+M-Z)	S	V	X	Z	AA	T3	U3				
G 1/8	14	27.5	60	72	5.4	7	8	100	174				
G 1/4	15	34	64	94	6.4	8	10	101	174				
Ø 6	14	27.5	60	72	5.4	7	-	100	174				
Ø 8	15	34	64	94	6.4	8	-	101	174				

A = ports 2 and 4 in the intermediate plate
 B = port 1 in the supply plate
 C = ports 3 and 5 in the supply plate
 D = ports 12 and 14 in the intermediate plate

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: with detent

Dimensions, ports 2 and 4 on bottom, Ports 12 and 14 on side



D581_232_30

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

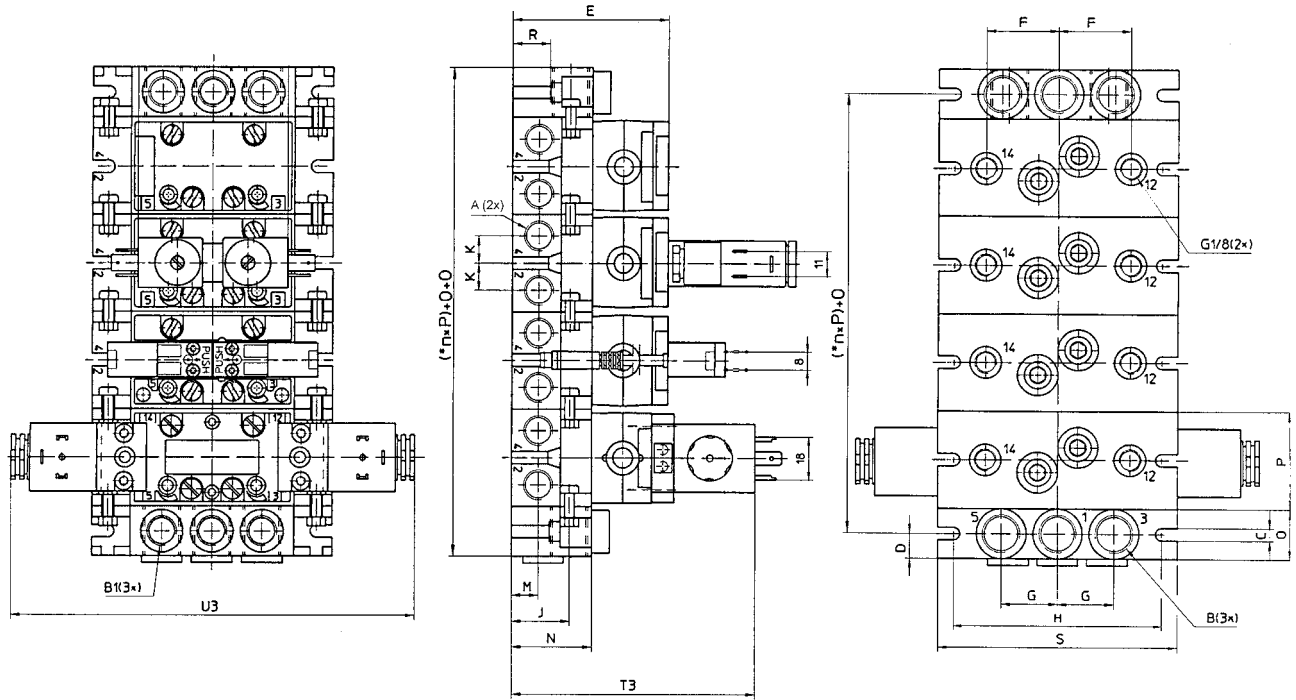
A	B	C	D	E	G	H1	H2	H3	J	K	L	M	N	P
G 1/4	G 3/8	G 3/8	G 1/8	28	13	29	20	39.5	22	110	46	22	43	71
A	Q	R	S	V	X	Z	T3	U3						
G 1/4	21.5	24.5	81	28	7	11	121	174						

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

- ▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: with detent

Dimensions, ports 2 and 4 on side, ports 12 and 14 on bottom



D581_233_30

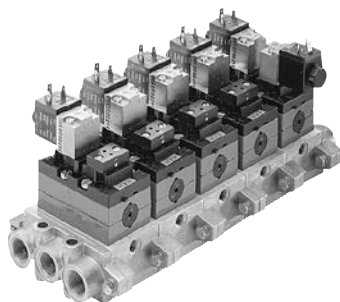
* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	B1	C	D	E	F	G	H	J	R	K	M	N	O
G 1/4	G 3/8	G 1/4	5.5	11	71	32	22	92	24	17	12	12	36	22
A	P	S	T3	U3										
G 1/4	43	106	111	174										

Valve system, Series 581, size 1

▶ $Q_n = 1100$ l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: without detent, without



P581_138

Standards	ISO 5599-1
Version	Single plug-in wiring
Blocking principle	Single base plate principle
Working pressure min./max.	-0.95 bar / 16 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Protection class with connection	IP65
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%
Operational voltage AC at 50 Hz	230 V, 42 V
Voltage tolerance AC 50 Hz	-10% / +10%

Materials:

Plug box	Polyamide, fiber-glass reinforced
Seal	Acrylonitrile Butadiene Rubber

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product

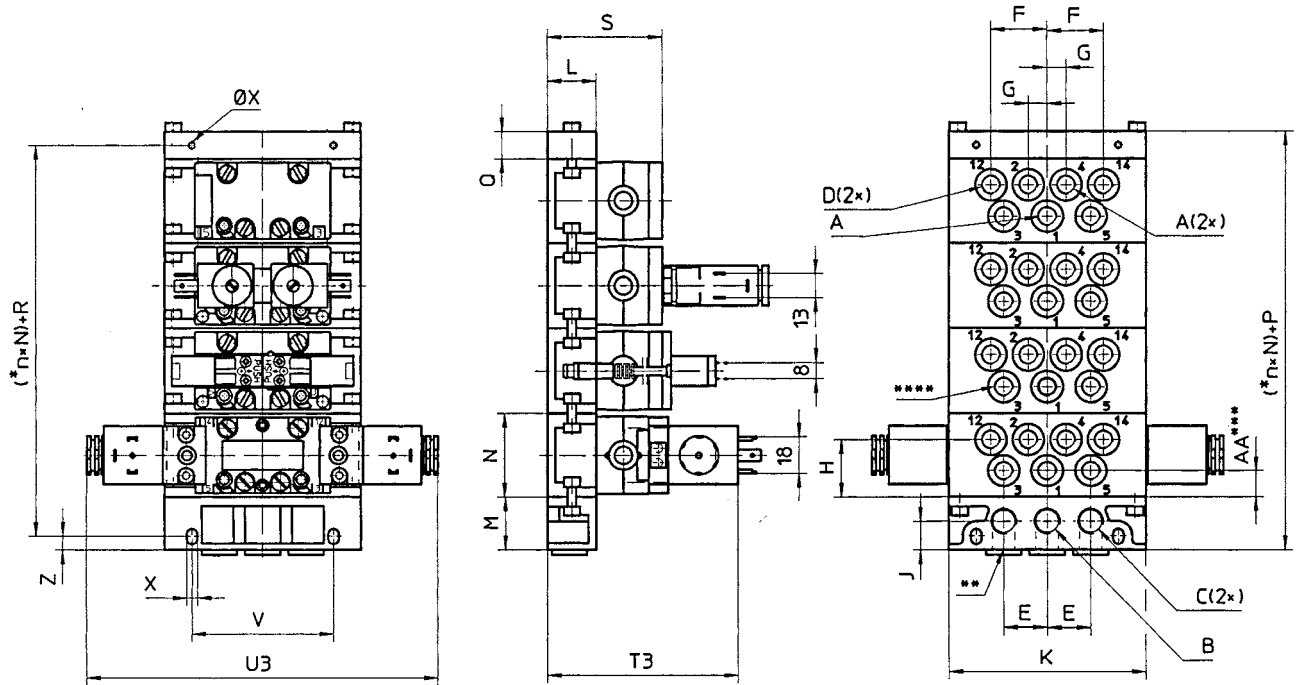


This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

- ▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1
- ▶ Manual override: without detent, without

Dimensions, all ports on bottom


D581_231_30

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	C	D	E	F	G	H	J	K	L	M	N	P (=M+Q)
G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25	27	43	41
G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30	34	43	49
Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100	25	27	43	41
Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122	30	34	43	49

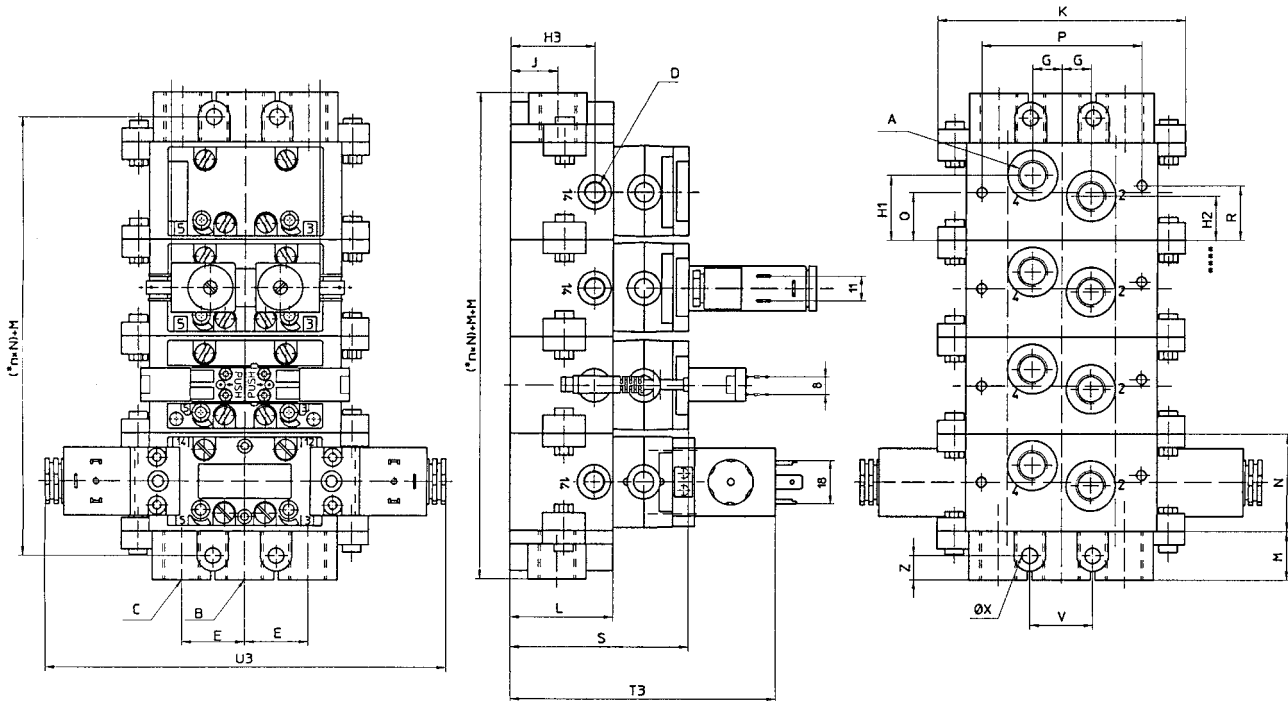
A	Q	R (=Q/2+M-Z)	S	V	X	Z	AA	T3	U3			
G 1/8	14	27.5	60	72	5.4	7	8	100	174			
G 1/4	15	34	64	94	6.4	8	10	101	174			
Ø 6	14	27.5	60	72	5.4	7	-	100	174			
Ø 8	15	34	64	94	6.4	8	-	101	174			

A = ports 2 and 4 in the intermediate plate
 B = port 1 in the supply plate
 C = ports 3 and 5 in the supply plate
 D = ports 12 and 14 in the intermediate plate

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: without detent, without

Dimensions, ports 2 and 4 on bottom, Ports 12 and 14 on side



D581_232_30

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

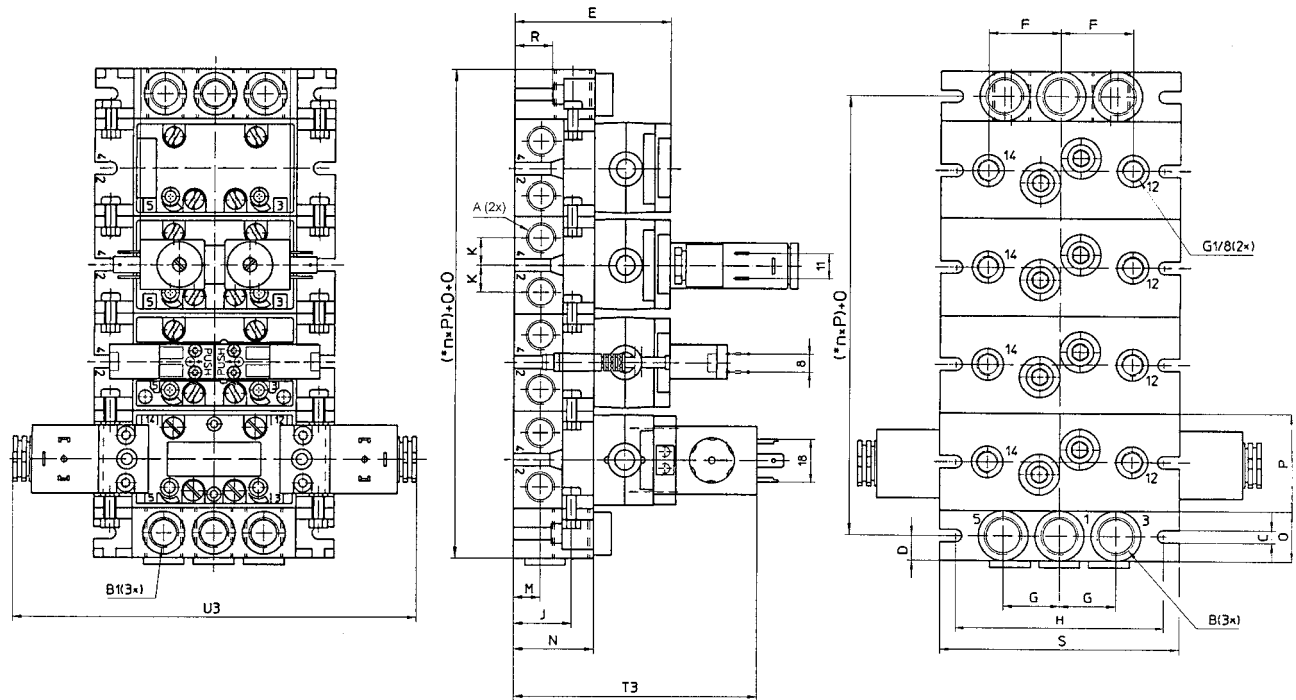
A	B	C	D	E	G	H1	H2	H3	J	K	L	M	N	P
G 1/4	G 3/8	G 3/8	G 1/8	28	13	29	20	39.5	22	110	46	22	43	71
A	Q	R	S	V	X	Z	T3	U3						
G 1/4	21.5	24.5	81	28	7	11	121	174						

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

▶ $Q_n = 1100$ l/min ▶ Pilot valve width: 30 mm CNOMO ▶ Compressed air connection output: Base plate ISO 5599-1 ▶ Manual override: without detent, without

Dimensions, ports 2 and 4 on side, ports 12 and 14 on bottom



D581_233_30

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	B1	C	D	E	F	G	H	J	R	K	M	N	O
G 1/4	G 3/8	G 1/4	5.5	11	71	32	22	92	24	17	12	12	36	22
A	P	S	T3	U3										
G 1/4	43	106	111	174										

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Compressed air connection output: Base plate ISO 5599-1



P581_134

Standards	ISO 5599-1
Version	pneumatically controlled
Blocking principle	Single base plate principle
Working pressure min./max.	-0.95 bar / 16 bar
Ambient temperature min./max.	-20 °C / +70 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³

Materials:

Plug box	Polyamide, fiber-glass reinforced
Seal	Acrylonitrile Butadiene Rubber

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product

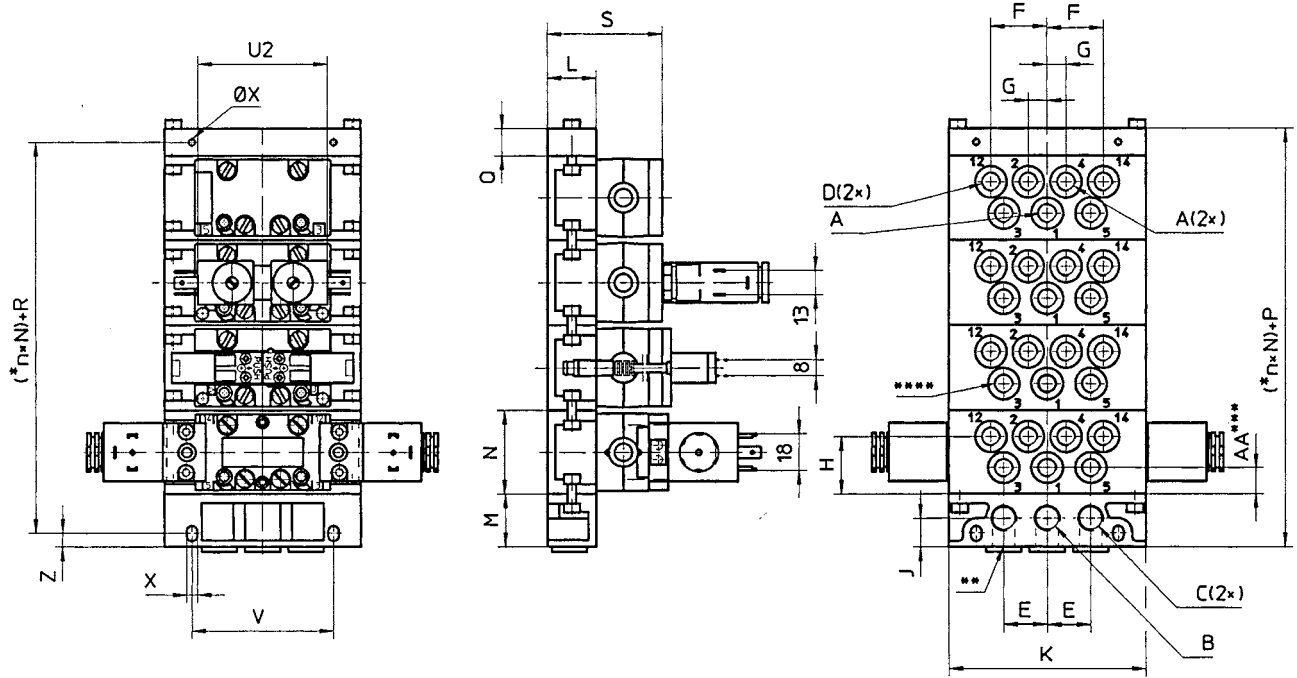
 This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Compressed air connection output: Base plate ISO 5599-1

Dimensions, all ports on bottom



D581_231_pn

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	C	D	E	F	G	H	J	K	L	M	N	P (=M+Q)
G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25	27	43	41
G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30	34	43	49
Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100	25	27	43	41
Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122	30	34	43	49

A	Q	R (=Q/2+M-Z)	S	V	X	Z	AA	U2					
G 1/8	14	27.5	60	72	5.4	7	8	70					
G 1/4	15	34	65	94	6.4	8	10	70					
Ø 6	14	27.5	60	72	5.4	7	-	70					
Ø 8	15	34	65	94	6.4	8	-	70					

A = ports 2 and 4 in the intermediate plate

B = port 1 in the supply plate

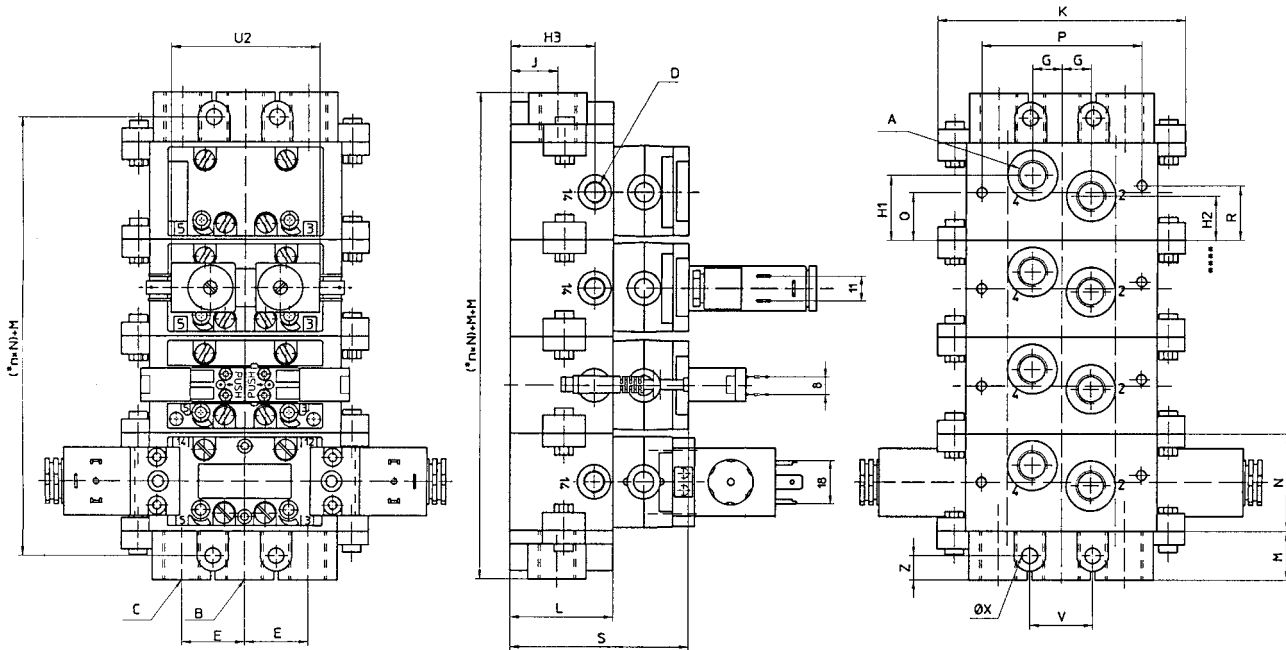
C = ports 3 and 5 in the supply plate

D = ports 12 and 14 in the intermediate plate

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Compressed air connection output: Base plate ISO 5599-1

Dimensions, ports 2 and 4 on bottom, Ports 12 and 14 on side



D581_232_pn

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

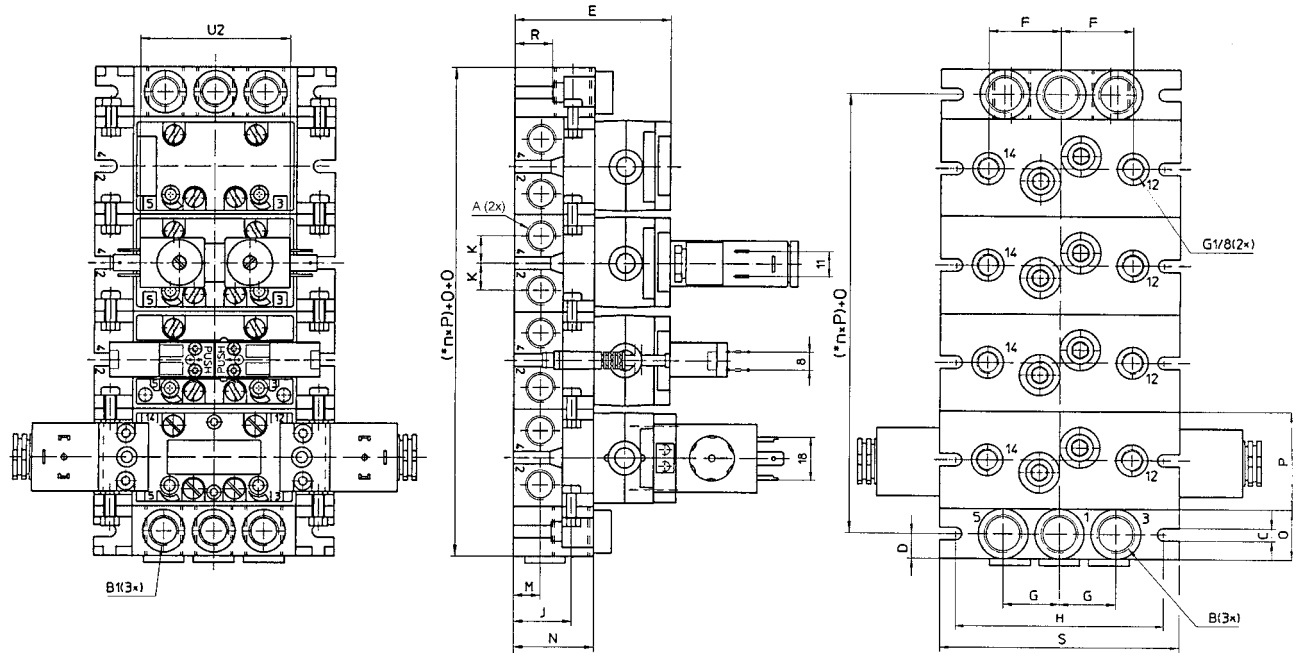
A	B	C	D	E	G	H1	H2	H3	J	K	L	M	N	P
G 1/4	G 3/8	G 3/8	G 1/8	28	13	29	20	39.5	22	110	46	22	43	71
A	Q	R	S	V	X	Z	U2							
G 1/4	21.5	24.5	81	28	7	11	70							

Valve systems ▶ Standardized valve systems

Valve system, Series 581, size 1

▶ Qn = 1100 l/min ▶ Compressed air connection output: Base plate ISO 5599-1

Dimensions, ports 2 and 4 on side, ports 12 and 14 on bottom



D581_233_pn

* n = Number of subbases

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

A	B	B1	C	D	E	F	G	H	J	R	K	M	N	O
G 1/4	G 3/8	G 1/4	5.5	11	71	32	22	92	24	17	12	12	36	22
A	P	S	U2											
G 1/4	43	106	70											

ISO 5599-1, size 1, Series 581
Accessories

Series 581
Accessories

ISO 5599-1, size 1, Series 581

Accessories

Soft-start valve

▶ Qn = 3300 l/min ▶ Pilot valve width: 15 mm ▶ Manual override: without detent



00130324

Version	Spool valve
Working pressure min./max.	3 bar / 10 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 1 mg/m³
Nominal flow Qn	3300 l/min
Protection class with connection	IP65
Duty cycle	100 %
Typ. switch-off time	60 ms
Weight	0.39 kg
Materials:	
Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

Operational voltage			Voltage tolerance			Power consumption	Switch-on power		Holding power	
DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	AC 60 Hz	AC 50 Hz	AC 60 Hz
						W	VA	VA	VA	VA
-	24 V	-	-	-10% / +10%	-	-	10	-	8	-
24 V	-	-	-10% / +10%	-	-	2	-	-	-	-
-	-	110 V	-	-	-10% / +10%	-	-	10	-	8
-	230 V	-	-	-10% / +10%	-	-	10	-	8	-

	MO	Operating voltage			Power consumption	Holding power	Holding power	Switch-on power	Switch-on power	Part No.	
		DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	AC 60 Hz	AC 50 Hz	AC 60 Hz		
					[W]	[VA]	[VA]	[VA]	[VA]		
		-	24 V	-	-	8	-	10	-	5835901200	
		24 V	-	-	2	-	-	-	-	5835900100	
		24 V	-	-	2	-	-	-	-	5835901100	
		24 V	-	-	2	-	-	-	-	5835902100	
		-	-	110 V	-	-	-	8	-	10	5835901300
		-	230 V	-	-	-	8	-	10	-	5835901400

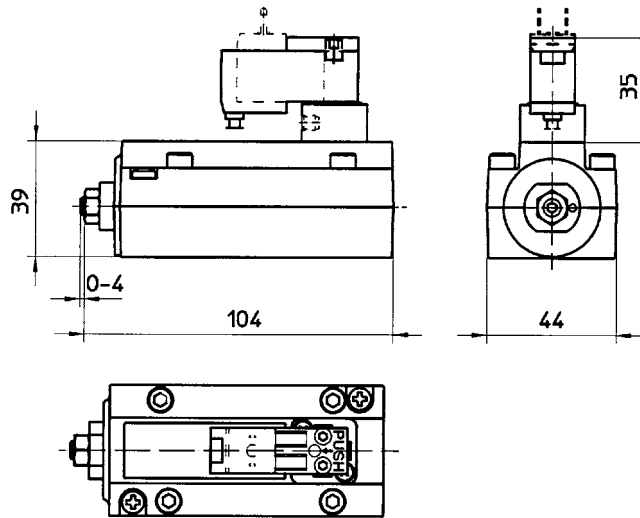
Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Part No.	Flow conductance	Note
	C	
	[l/(s*bar)]	
5835901200	11.3	1)
5835900100		1)
5835901100		4)
5835902100		2); 3)
5835901300		4)
5835901400		4)

MO = Manual override
 1) with encapsulated cable
 2) electrical connector form C, ISO 15217
 3) pin spacing 8 mm
 4) pin spacing 9.4 mm

Dimensions



D583_018

ISO 5599-1, size 1, Series 581

Accessories

Soft-start valve

▶ Qn = 3300 l/min ▶ Pilot valve width: 22 mm ▶ Manual override: with detent



00130322

Version	Spool valve
Working pressure min./max.	3 bar / 10 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Nominal flow Qn	3300 l/min
Protection class with connection	IP65
Duty cycle	100 %
Typ. switch-off time	60 ms
Weight	0.39 kg
Materials:	
Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

Operational voltage			Voltage tolerance			Power consumption	Switch-on power		Holding power	
DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	AC 60 Hz	AC 50 Hz	AC 60 Hz
						W	VA	VA	VA	VA
-	24 V	-	-	-10% / +10%	-	-	10	-	8	-
24 V	-	-	-10% / +10%	-	-	2	-	-	-	-
24 V	-	-	-10% / +10%	-	-	5	-	-	-	-
-	-	110 V	-	-	-10% / +10%	-	-	10	-	8
-	230 V	-	-	-10% / +10%	-	-	10	-	8	-

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
 Accessories

	MO	Operating voltage			Power consumption	Holding power	Holding power	Switch-on power	Switch-on power	Part No.	
		DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	AC 60 Hz	AC 50 Hz	AC 60 Hz		
					[W]	[VA]	[VA]	[VA]	[VA]		
		-	24 V	-	-	8	-	10	-	5832111200	
		-	24 V	-	-	8	-	10	-	5832115200	
		24 V	-	-	2	-	-	-	-	5832151100	
		24 V	-	-	2	-	-	-	-	5832155100	
		24 V	-	-	5	-	-	-	-	5832111100	
		24 V	-	-	5	-	-	-	-	5832115100	
		-	-	110 V	-	-	-	8	-	10	5832111300
		-	-	110 V	-	-	-	8	-	10	5832115300
		-	230 V	-	-	8	-	10	-	5832111400	
		-	230 V	-	-	8	-	10	-	5832115400	
		-	-	-	-	-	-	-	-	5832111000	
		-	-	-	-	-	-	-	-	5832115000	

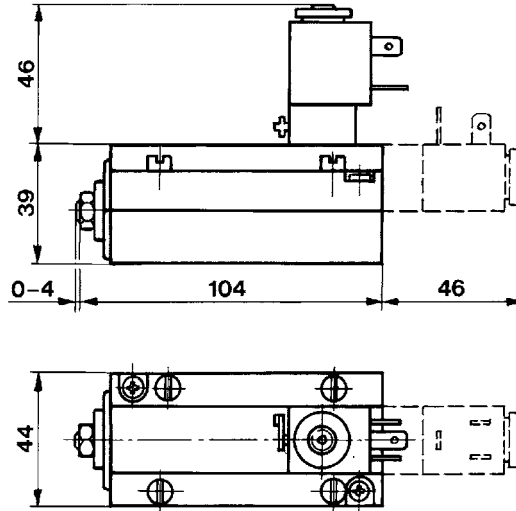
Part No.	Flow conductance	Note
	C	
	[l/(s*bar)]	
5832111200	11.3	2)
5832115200		1)
5832151100		2); 3)
5832155100		1); 3)
5832111100		2)
5832115100		1)
5832111300		2)
5832115300		1)
5832111400		2)
5832115400		1)
5832111000	11.3	2)
5832115000		1)

MO = Manual override
 1) Pilot valve on side
 2) Pilot valve on top
 3) Low power consumption

ISO 5599-1, size 1, Series 581

Accessories

Dimensions



D583_004

Soft-start valve

▶ $Q_n = 3300$ l/min ▶ Pilot valve width: 30 mm ▶ Manual override: without detent, with detent, without



00130323

Version	Spool valve
Working pressure min./max.	3 bar / 10 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Nominal flow Q_n	3300 l/min
Protection class with connection	IP65
Duty cycle	100 %
Typ. switch-off time	60 ms
Weight	0.39 kg
Materials:	
Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

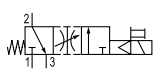

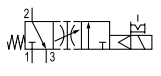

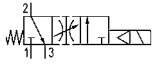
Technical Remarks

- 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, see chapter „Technical information“.

Valve systems ▶ Standardized valve systems

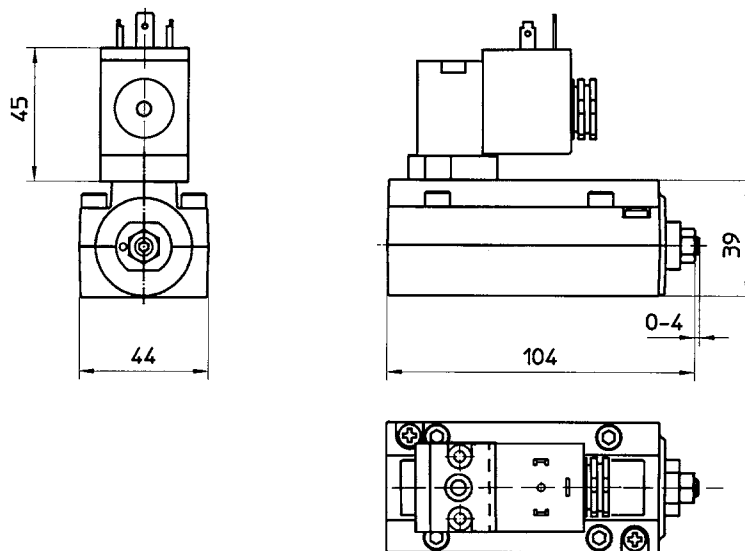
ISO 5599-1, size 1, Series 581
Accessories

Operational voltage		Voltage tolerance		Power consumption	Switch-on power	Holding power
DC	AC 50 Hz	DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz
				W	VA	VA
24 V	-	-10% / +10%	-	6.7	-	-
-	230 V	-	-10% / +10%	-	10	8
24 V	-	-10% / +10%	-	2	-	-

	MO	Operating voltage		Power consumption	Holding power	Switch-on power	Flow conductance	Note	Part No.
		DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz	C		
				[W]	[VA]	[VA]	[l/(s*bar)]		
		24 V	-	6.7	-	-	11.3	-	5832171540
		-	230 V	-	8	10			5832171440
		24 V	-	2	-	-	11.3	1)	5832171650
		-	230 V	-	8	10		-	5832171450
	-	24 V	-	6.7	-	-	11.3	-	5832171530
		-	230 V	-	8	10			5832171430

MO = Manual override
1) Low power consumption

Dimensions



D583_019

ISO 5599-1, size 1, Series 581

Accessories

Single subbase, for soft-start valve

▶ Compressed air connection output: G 1/2



P583_007

Ambient temperature min./max.	-20 °C / +70 °C
Medium temperature min./max.	-20 °C / +70 °C
Medium	Compressed air
Working pressure min./max.	-1 bar / 16 bar
Number of valve positions	1
Exhaust (3,5)	uncollected exhaust
	Ports separated

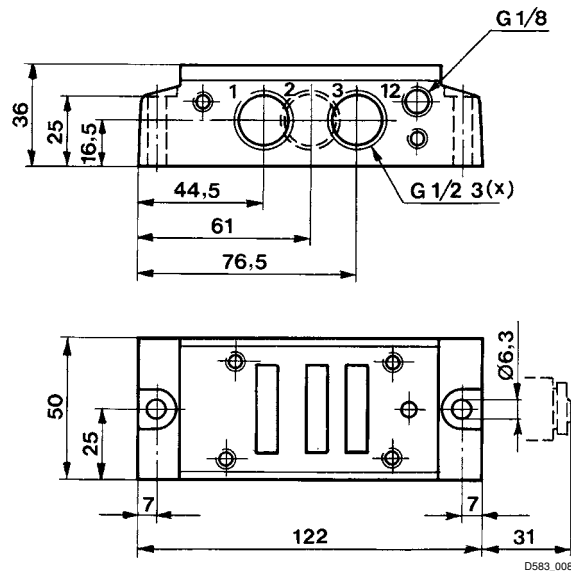
Materials:	
Base plate	Die-cast aluminum, black painted

Technical Remarks

- 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, see chapter „Technical information“.

Input	Output	Compressed air connection		Weight	Part No.
		Exhaust	Pilot connection		
[1]	[2 / 4]	[3 / 5]	[14]	[kg]	
G 1/2	G 1/2	G 1/2	G 1/8	0.34	5834710000

Dimensions



D583_008

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581 Accessories

Pilot valve

▶ 581, Modular system ▶ Pilot valve width: 22 mm ▶ Manual override: with detent



P581_178

Working pressure min./max.	0 bar / 10 bar
Ambient temperature min./max.	-15 °C / +50 °C
Medium	Compressed air
Protection class with connection	IP65
Duty cycle	100 %
Weight	See table below

Technical Remarks

- 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, see chapter „Technical information“.

	Operational voltage		Power consumption
	DC	AC 50 Hz	DC
			W
	24 V	230 V	5
	24 V	-	2

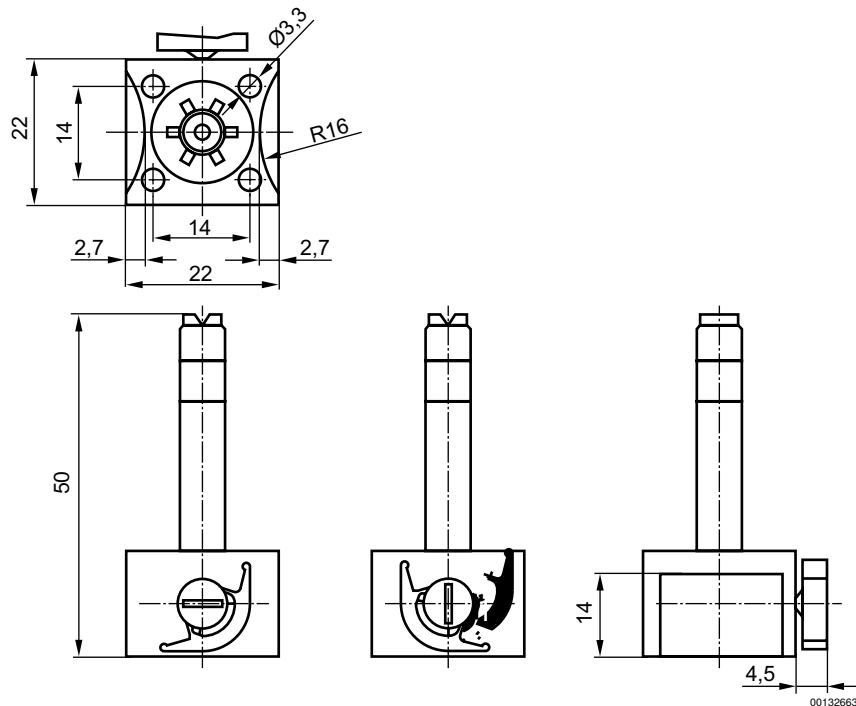
	Operating voltage			Power consumption	Weight	Note	Part No.
	DC	AC 50 Hz	AC 60 Hz	DC	[kg]		
				[W]			
	24 V	230 V	110 V	5	0.031	-	0493818805
		-	-	2	0.03	1)	0493818902

1) Low power consumption

ISO 5599-1, size 1, Series 581

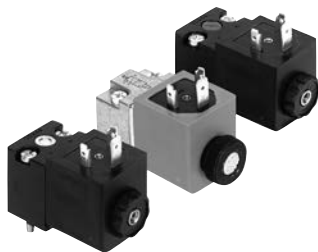
Accessories

Dimensions



Pilot valve

▶ 581, Modular system ▶ Pilot valve width: 30 mm



P581_160

Standards

Working pressure min./max.
Ambient temperature min./max.
Medium

Protection class with connection
Duty cycle

Weight

CNOMO / NFE 49-003-1

See table below
-10 °C / +50 °C
Compressed air

IP65
100 %

See table below

Technical Remarks

- 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, see chapter „Technical information“.

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Operational voltage		Voltage tolerance		Power consumption		Switch-on power		Holding power	
DC	AC 50 Hz	DC	AC 50 Hz	DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz	
						W	VA	VA	
-	230 V	-	-20% / +10%	-	-	-	10	8	
24 V	-	-10% / +10%	-	2	-	-	-	-	
24 V	-	-10% / +10%	-	6.7	-	-	-	-	
12 V	-	-10% / +10%	-	2	-	-	-	-	
48 V	-	-10% / +10%	-	2	-	-	-	-	
110 V	-	-10% / +10%	-	2	-	-	-	-	
220 V	-	-10% / +10%	-	2	-	-	-	-	
-	24 V	-	-20% / +10%	-	-	-	10	8	
-	48 V	-	-20% / +10%	-	-	-	10	8	
-	110 V	-	-20% / +10%	-	-	-	10	8	

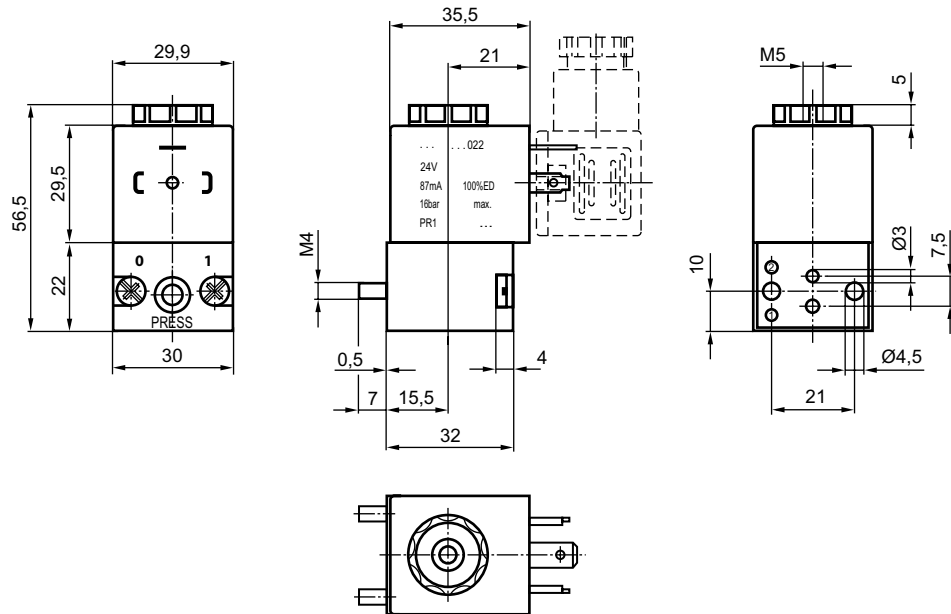
	MO	Operating voltage		Power consumption		Holding power		Switch-on power		Working pressure min./max.	Note	Part No.	
		DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz	AC 50 Hz						
				[W]	[VA]	[VA]	[VA]						
		-	230 V	-	8	10	-	-	0 / 10	0.17	1)	5428110080	
		24 V	-	2	-	-	-	-	-	0.206	1); 2)	5420890020	
	-	24 V	-	6.7	-	-	-	-	0 / 16	0.162	1)	5420850020	
		-	230 V	-	8	10	-	-	-	-	-	1)	5428150080
		12 V	-	2	-	-	-	-	-	-	1); 2)	5420890010	
		48 V	-	2	-	-	-	-	-	-	1); 2)	5420890030	
		110 V	-	2	-	-	-	-	-	-	1); 2)	5420890070	
		220 V	-	2	-	-	-	-	0 / 10	0.17	1); 2)	5420890080	
		-	24 V	-	8	10	-	-	-	-	-	1)	5428110020
		-	48 V	-	8	10	-	-	-	-	-	1)	5428110040
-	110 V	-	8	10	-	-	-	-	-	1)	5428110070		

MO = Manual override
 1) pilot valve 30x22 mm with CNOMO porting configuration
 2) Low power consumption

ISO 5599-1, size 1, Series 581

Accessories

Dimensions



00132665

3/2-directional valve

▶ Manual override: without detent



00121338

Working pressure min./max.	0 bar / 16 bar
Ambient temperature min./max.	-10 °C / +50 °C
Medium	Compressed air
Nominal flow Qn	Compressed air
Weight	0.15 kg

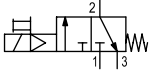
Technical Remarks

- 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, see chapter „Technical information“.

Valve systems ▶ Standardized valve systems

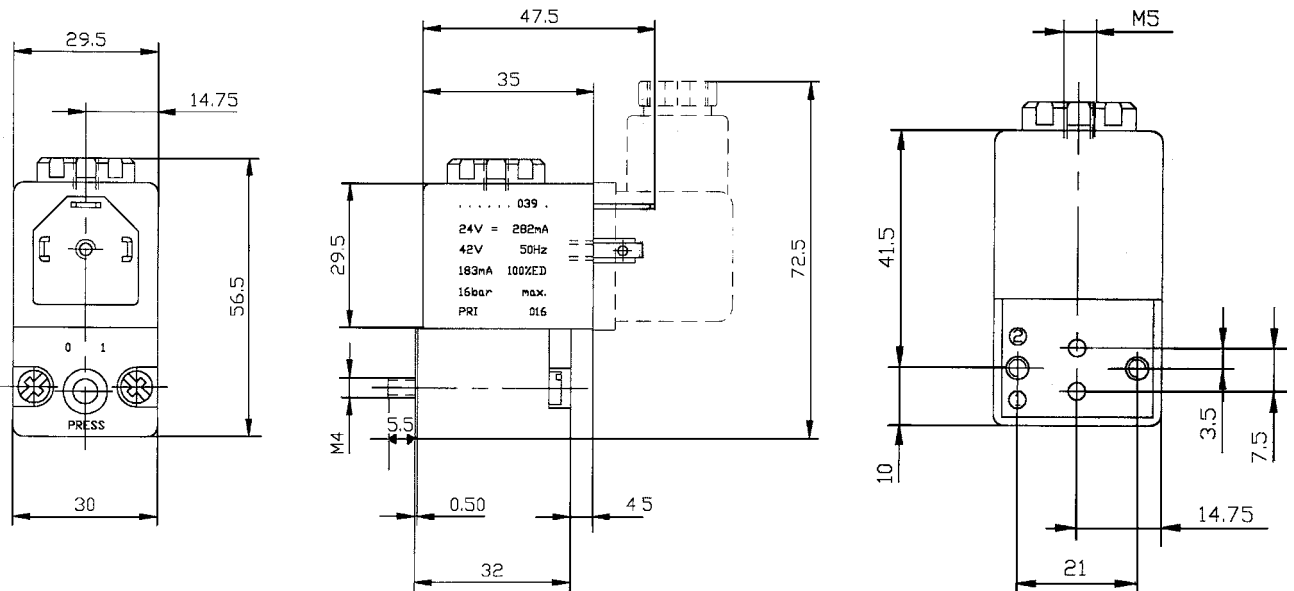
ISO 5599-1, size 1, Series 581
Accessories

Operational voltage		Voltage tolerance		Power consumption	Switch-on power	Holding power
DC	AC 50 Hz	DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz
				W	VA	VA
24 V	42 V	-10% / +10%	-20% / +10%	6.7	-	-
-	230 V	-	-20% / +10%	-	10	8
-	110 V	-	-20% / +10%	-	10	8

	Operating voltage		Power consumption	Holding power	Switch-on power	Part No.
	DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz	
			[W]	[VA]	[VA]	
	24 V	42 V	6.7	-	-	5420800390
	-	230 V	-	8	10	5428200380
	-	110 V	-	8	10	5428200370

Nominal flow Qn with secondary pressure 6 bar at Δp = 1 bar

Dimensions



D535_207

ISO 5599-1, size 1, Series 581

Accessories

Coil, Series CO1

▶ Form B, industry ▶ Coil width 22 mm



P581_172

Connector standard
electrical connections
Ambient temperature min./max.
Protection class with electrical connector/plug
Duty cycle ED

ISO 6952
Plug, Form B, industry
-- / +50°C
IP65
100 %

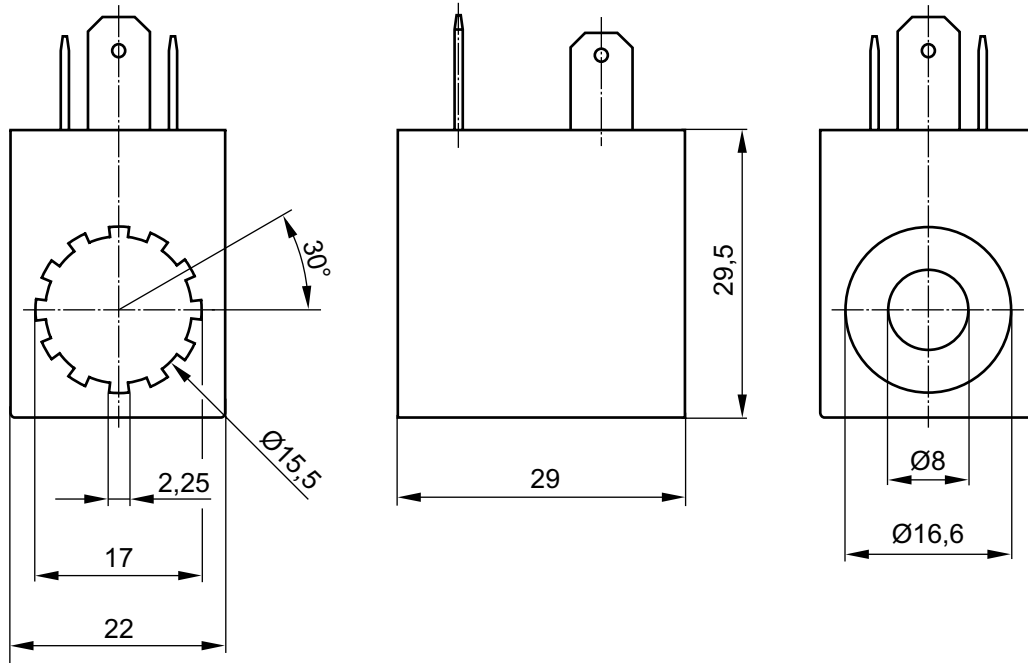
Operational voltage		Voltage tolerance		Power consumption	Switch-on power	Holding power
DC	AC 50 Hz	DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz
				W	VA	VA
220 V	-	-10% / +10%	-	5	-	-
110 V	-	-10% / +10%	-	5	-	-
-	48 V	-	-10% / +10%	-	10	8
24 V	-	-10% / +10%	-	2	-	-
24 V	-	-10% / +10%	-	5	-	-
-	110 V	-	-10% / +10%	-	10	8
-	230 V	-	-10% / +10%	-	10	8
-	24 V	-	-10% / +10%	-	10	8
48 V	-	-	-	5	-	-
12 V	-	-	-	5	-	-

Operational voltage		Weight	Note	Part No.
AC 50 Hz	DC	[kg]		
-	220 V	0.054	-	0498317804
-	110 V	0.054	-	0498317707
48 V	-	0.054	-	0498317006
-	24 V	0.051	1)	0498318800
-	-	-	-	0498317502
110 V	-	0.051	-	0498317103
230 V	-	0.054	-	0498322506
24 V	-	0.054	-	0498316905
-	48 V	0.054	-	0498317618
-	12 V	-	-	0498317405

1) Low power consumption

ISO 5599-1, size 1, Series 581 Accessories

Dimensions



00132664

Coil, Series CO1

▶ Cable with connector ▶ Coil width 30 mm ▶ ATEX certified



00115846

ATEX

Ambient temperature min./max.

Protection class

Duty cycle ED

Compatibility index CI

II 2G Ex mb IIC T4 Gb

II 2D Ex mb tb IIIC T 130°C Db IP65

-20°C / +50°C

IP65

100 %

14

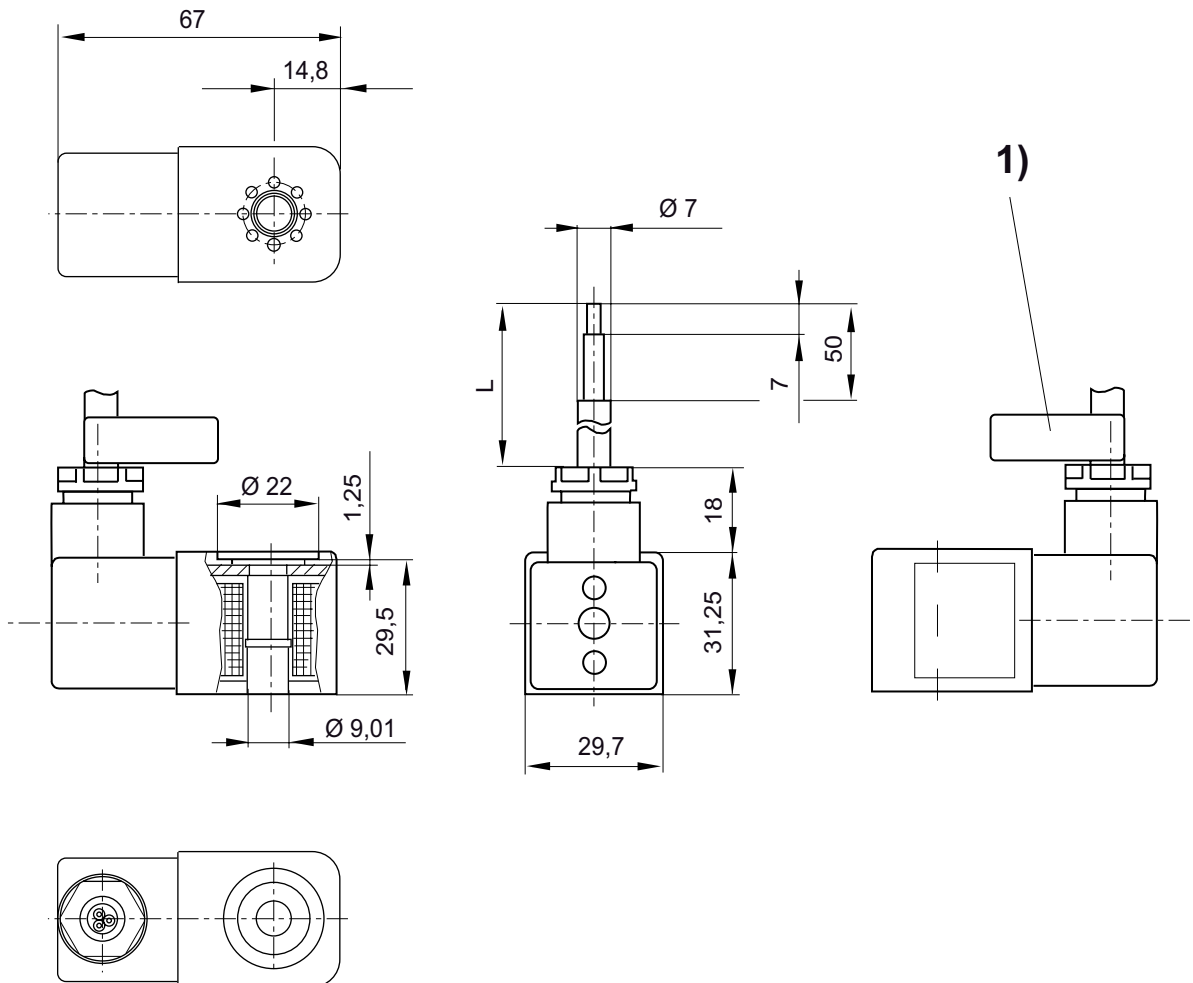
Operational voltage			Voltage tolerance		Power consumption	Switch-on power	Holding power
DC	AC 50 Hz	AC 60 Hz	DC	AC 50 Hz	DC	AC 50 Hz	AC 50 Hz
					W	VA	VA
-	230 V	230 V	-	-10% / +10%	-	3.1	3
-	110 V	110 V	-	-10% / +10%	-	3	2.9
-	24 V	24 V	-	-10% / +10%	-	3	2.9
24 V	-	-	-10% / +10%	-	3.25	-	-

ISO 5599-1, size 1, Series 581

Accessories

	Operational voltage			Cable length L	Weight	Part No.
	AC 50 Hz	DC	AC 60 Hz			
				[m]	[kg]	
	230 V	-	230 V	3	0.38	1827414297
	230 V	-	230 V	10	0.91	1827414298
	110 V	-	110 V	3	0.38	1827414299
	24 V	-	24 V	3	0.38	1827414301
	24 V	-	24 V	10	0.91	1827414302
	-	24 V	-	3	0.38	1827414303
	-	24 V	-	10	0.91	1827414304
	110 V	-	110 V	10	0.38	1827414300

Dimensions



L = cable length

1) Cable ID band with serial number

00129906

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581 Accessories

Electrical connector, Series CN1 ▶ 18 mm ▶ ISO 4400 ▶ form A

Ambient temperature min./max.
Protection class
Mounting screw tightening torque

-40°C / +90°C
IP65
0.4 Nm



00110264_a

Technical Remarks

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

	Cable fitting	Operational voltage		Max. current [A]	Contact assignment	Cable exit	Protective circuit	Part No.
		AC [V]	DC [V]					
	M20x1,5	230	-	-	2+E	angled 90°	Varistor	8941016112
	M16x1,5	-	300	10	2+E	angled 90°	-	1834484048
	M16x1,5	-	300	10	3+E	angled 90°	-	1834484059
	M16x1,5	24	24	-	2+E	angled 90°	Z-diode	1834484101
	M16x1,5	110 230	110 230	-	2+E	angled 90°	Varistor	1834484102 1834484103
	M20x1,5	-	24	8	3+E	angled 90°	-	8941012462

Part No.	suitable cable-Ø min./max	number of plug options 1	Status display	LED status display	Housing color	Weight	Note
	[mm]					[kg]	
8941016112	8 / 10	4 positions each 90°	1 LED	Green	Transparent	0.025	2); 4); 4); 5)

- 1) electrical connector with status display (2 LED) for pressure sensor
- 2) Profile seal
- 3) Flat gasket
- 4) Housing: Polyamide
- 5) Seal: caoutchouc/butadiene caoutchouc
- 6) Seal: Silicone caoutchouc

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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ISO 5599-1, size 1, Series 581

Accessories

Part No.	suitable cable-Ø min./ max	number of plug options ¹	Status display	LED status display	Housing color	Weight	Note
	[mm]					[kg]	
1834484048	6 / 8	4 positions each 90°	-	-	Black	0.03	2); 5)
1834484059	6 / 8	4 positions each 90°	-	-	Black	0.03	2); 5)
1834484101	6 / 8	4 positions each 90°	1 LED	Yellow	Transparent	0.03	3); 6)
1834484102 1834484103	6 / 8	4 positions each 90°	2 LED	Red	Transparent	0.03	2); 5); 5) 2); 6)
8941012462	4.5 / 11	1 position	2 LED	green/red	Transparent	0.03	1); 2); 4); 5)

1) electrical connector with status display (2 LED) for pressure sensor

2) Profile seal

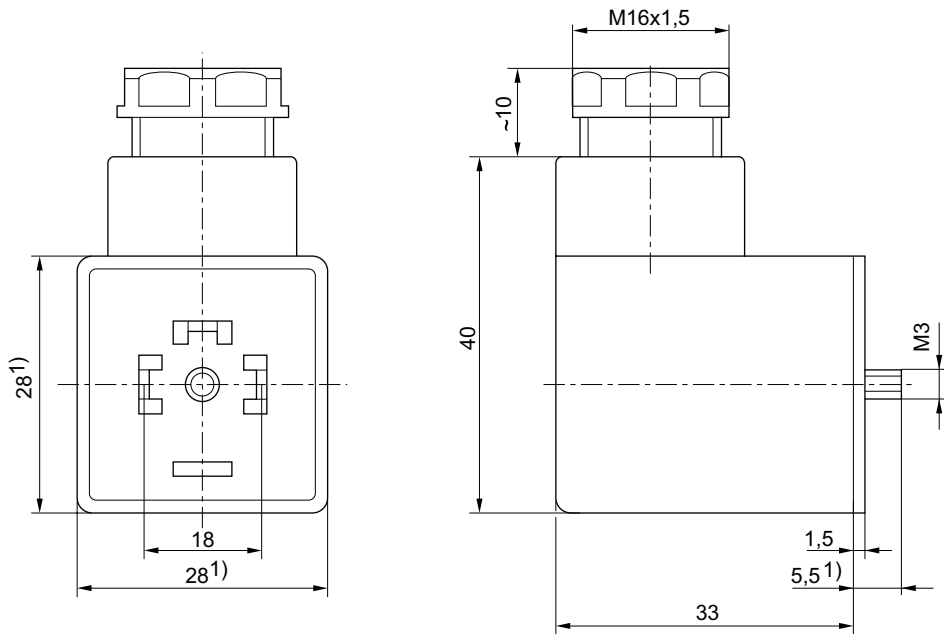
3) Flat gasket

4) Housing: Polyamide

5) Seal: caoutchouc/butadiene caoutchouc

6) Seal: Silicone caoutchouc

Dimensions



00110274

1) Max.

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
 Accessories

Connector with cable, Series CN1

▶ form A ▶ 18 mm

Ambient temperature min./max.

-20°C / +80°C

Protection class

IP67

Tightening torque for mounting screws

0.4 Nm



00110292_b

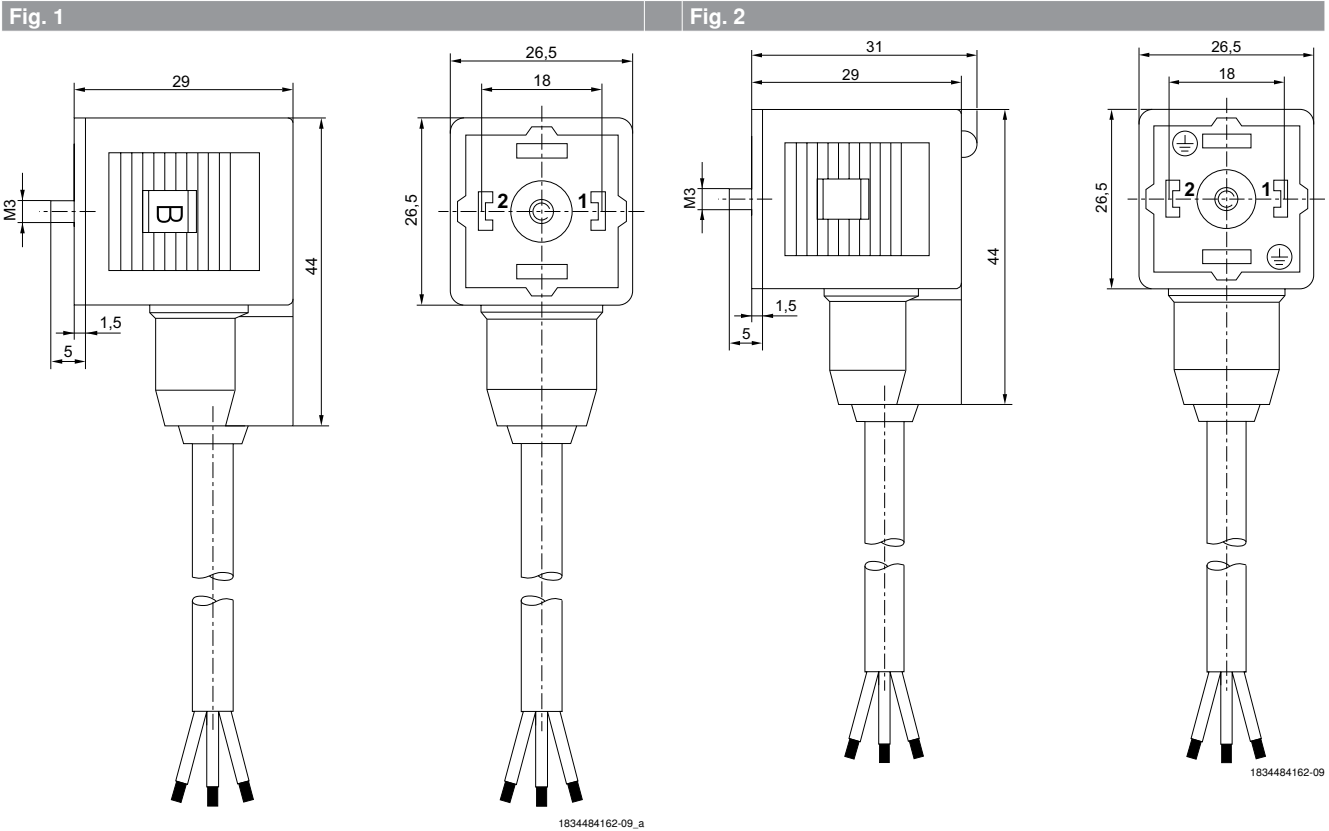
Technical Remarks

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

	Operational voltage max.		Protective circuit	Contact assignment	LED status display	Wire cross-section [mm ²]	Cable length L [m]	Weight [kg]	Part No.
	[V AC]	[V DC]							
	230	230	-	2+E	-	0.75	3	0.2	1834484160
	24	24	Z-diode	2+E	Yellow	0.75	3 5	0.2 0.31	1834484162 1834484163
	230	230	Varistor	2+E	Red	0.75	3 5	0.2 0.31	1834484164 1834484165

Part No.	Fig.	Note
1834484160	Fig. 1	1)
1834484162 1834484163	Fig. 2	-
1834484164 1834484165	Fig. 2	-

1) Scope of delivery incl. flat gasket

ISO 5599-1, size 1, Series 581
Accessories

Connector with cable, Series CN1
▶ Form B, industry ▶ 11 mm


00110292_a

Ambient temperature min./max.
 Protection class
 Cable exit
 Wire cross-section
 Tightening torque for mounting screws

-20 °C / +80 °C
 IP67
 angled 90°
 0.75 mm²
 0.4 Nm

Materials:
 Cable sheath

Polyvinyl chloride

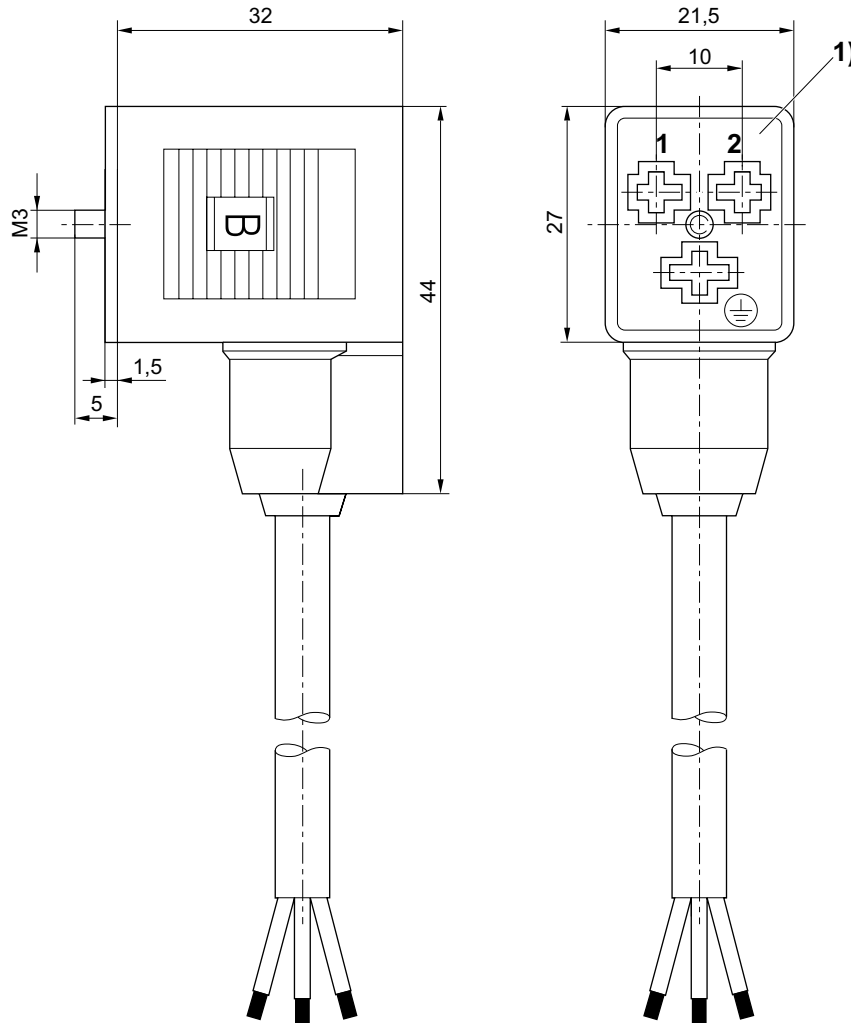
Technical Remarks

- For security reasons, the electrical connector must be plugged properly and centrally.
- The specified protection class is only valid in assembled and tested state.

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
 Accessories

	Max. current [A]	Contact assignment	Cable length L [m]	Weight [kg]	Part No.
	4	2+E	3	0.02	8946201912

Dimensions


1) 0° female insert

1834484162-10_b

ISO 5599-1, size 1, Series 581

Accessories

Electrical connector, Series CN1

▶ 11 mm ▶ Industry standard



00110264_c

Ambient temperature min./max.	-25°C / +50°C
Protection class	IP65
Cable fitting	M16x1,5
Mounting screw tightening torque	0.4 Nm

Materials:	
Housing	Polyamide

Technical Remarks

- For security reasons, the electrical connector must be plugged properly and centrally.
- The specified protection class is only valid in assembled and tested state.

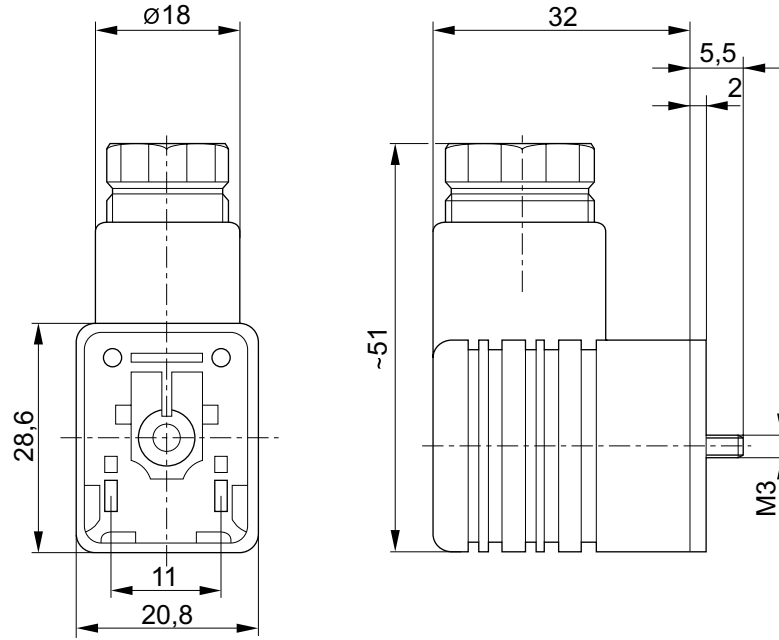
	Operational voltage		Max. current [A]	Contact assignment	Cable exit	Protective circuit	suitable cable-Ø min./max [mm]	Part No.
	AC	DC						
	[V]	[V]						
	-	300	10	2+E	angled 90°	-	4 / 8	1834484051
	24	24	-	2+E	angled 90°	Z-diode	6 / 8	1834484107
	110 230	-	-	2+E	angled 90°	Varistor	6 / 8 4 / 8	1834484108 1834484109

Part No.	number of plug options 1	Status display	LED status display	Housing color	Weight	Fig.	Note
					[kg]		
1834484051	2 positions each 180°	-	-	Black	0.02	Fig. 1	1); 3)
1834484107	2 positions each 180°	1 LED	Yellow	Transparent	0.02	Fig. 2	2); 4)
1834484108 1834484109	2 positions each 180°	1 LED	Red	Transparent	0.02	Fig. 2	1); 4) 2); 4)

- 1) Profile seal
- 2) Flat gasket
- 3) Seal: caoutchouc/butadiene caoutchouc
- 4) Seal: Silicone caoutchouc

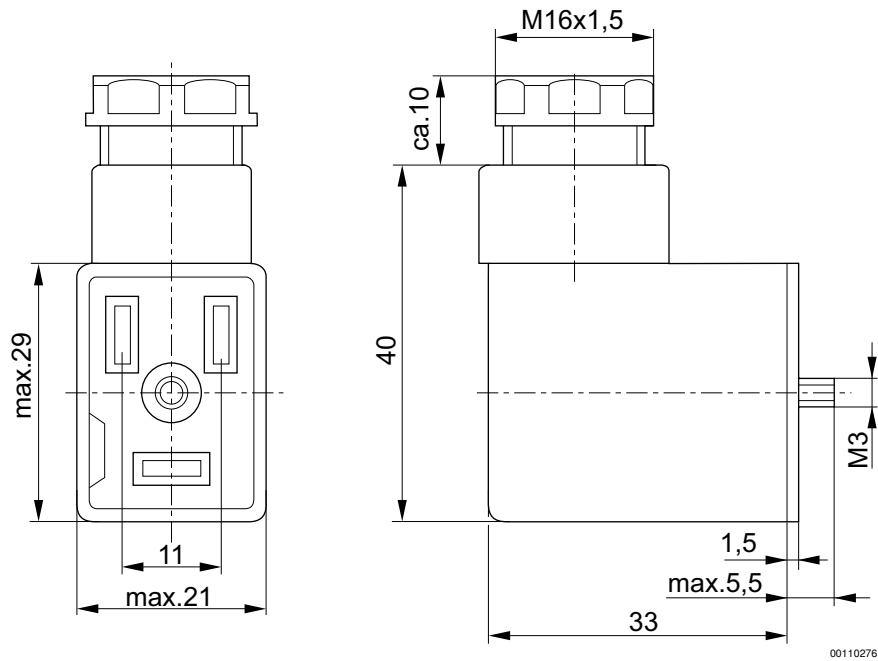
ISO 5599-1, size 1, Series 581
Accessories

Fig. 1



D440_037_b

Fig. 2



00110276

ISO 5599-1, size 1, Series 581

Accessories

Pilot valve

▶ 581, Modular system ▶ Pilot valve width: 15 mm ▶ Manual override: without detent



P581_205

Working pressure min./max.	0 bar / 10 bar
Ambient temperature min./max.	-10°C / +50°C
Medium	Compressed air
Protection class with connection	See table below
Status display LED	Green
Duty cycle	100 %
Weight	See table below

Technical Remarks

- 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, see chapter „Technical information“.

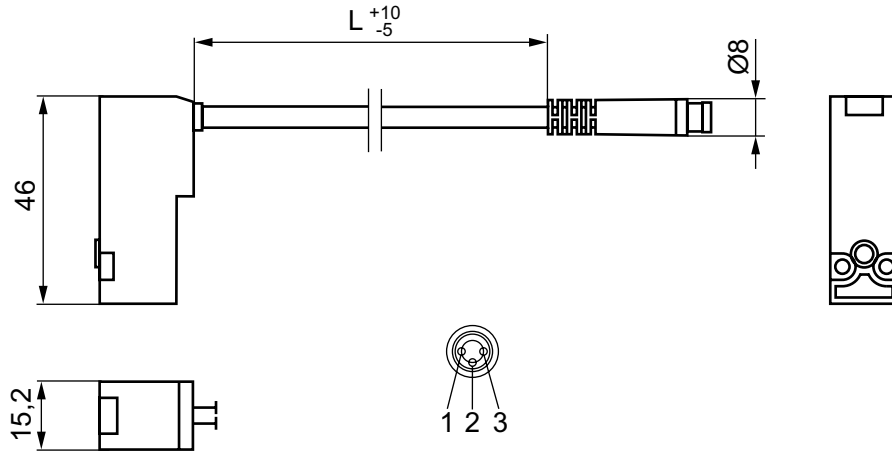
Operational voltage	Power consumption
	DC
	W
24 V	2.2
24 V	2

Operating voltage	Power consumption	Cable length	Protection class	Weight	Fig.	Note	Part No.
DC	DC						
	[W]	[m]		[kg]			
24 V	2.2	0.2	IP67	0.05	Fig. 1	-	0493833308
	2.2	0.35	IP67	0.056	Fig. 1	-	0493832506
	2.2	0.5	IP67	0.058	Fig. 1	-	0493833103
	2.2	5	IP67	0.1	Fig. 1	-	0493838601
	2	-	IP65	0.04	Fig. 2	1); 2)	0493833502

- 1) for electrical connector
2) Low power consumption

ISO 5599-1, size 1, Series 581
Accessories

Fig. 1

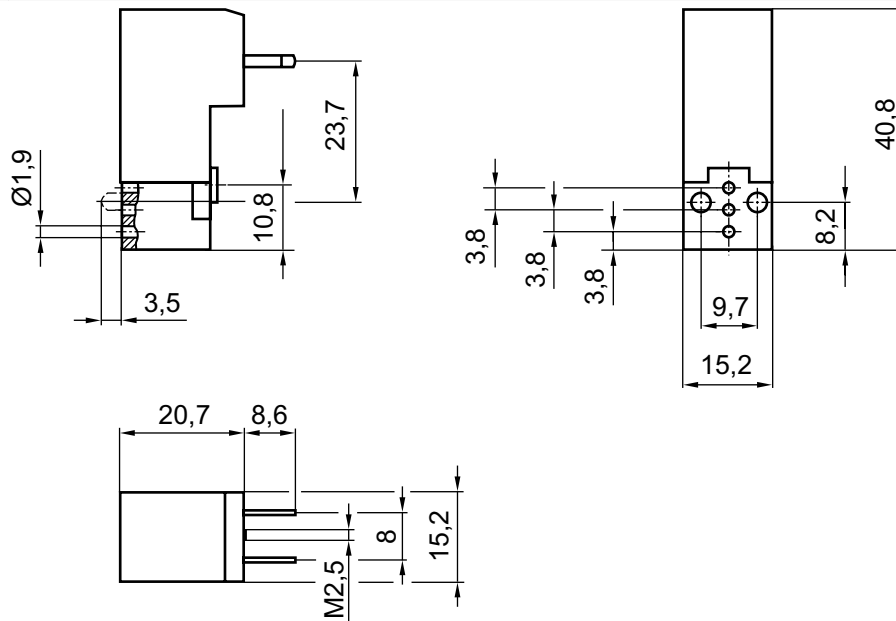


00132661

Pin assignment

- 1) +24 V
- 2) ground
- 3) 0 V

Fig. 2



00132662

ISO 5599-1, size 1, Series 581
Accessories
Electro module
▶ Plug, M8, 3-pin ▶ 581, Modular system


P590_006

Ambient temperature min./max.

-40°C / +90°C

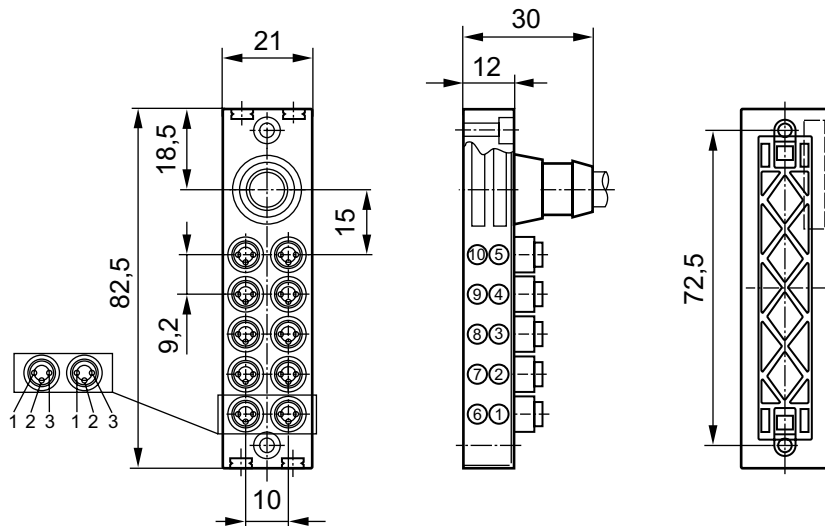
Protection class

IP67

Operating voltage DC, max.

48 V DC

Type	Max. current [A]	Cable length L [m]	Part No.
10 outputs	2.1	3	0493831909
		10	0493832018

Dimensions


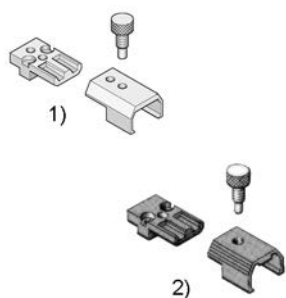
00133705

Pin assignment

- 1) +24 V
- 2) ground
- 3) 0 V

ISO 5599-1, size 1, Series 581
Accessories

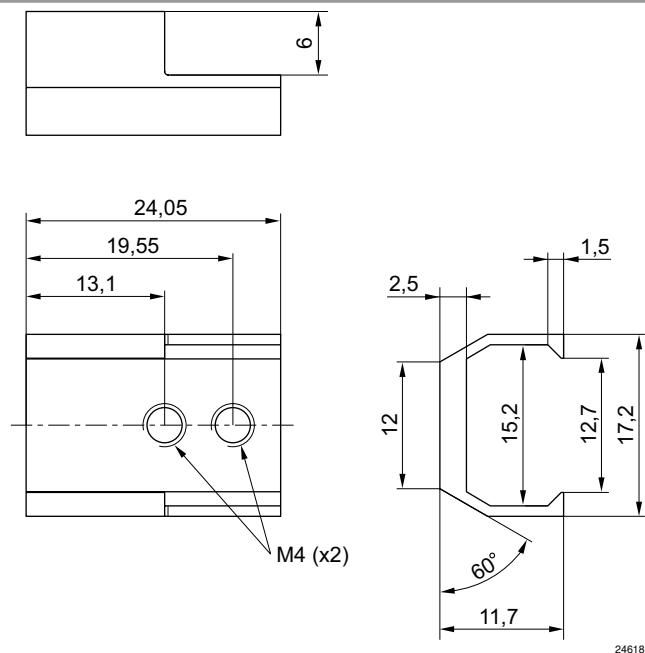
Control unit for manual override
▶ for 581



P590_043

Type	Weight [kg]	Note	Part No.
for double-sided electrically actuated valves, 15 pilot valve width	0.03	1)2)3)	0493835718
1) Version as of August 1, 2014, compatible with old applications 2) Version before August 1, 2014 3) 6 controls per set			

Dimensions



24618

ISO 5599-1, size 1, Series 581
Accessories
Blanking plug

▶ for 581



P590_074

 Ambient temperature
min./max.

-10°C / +50°C

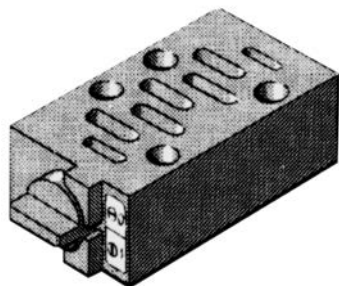
Type	Material	Weight [kg]	Note	Part No.
Blanking plug for outputs not used on the electro module	Polyamide	0.006	1)	0493833405
1) quantity delivered 10				

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
 Accessories

Maintenance plate to exchange valve

▶ for 581, size 1

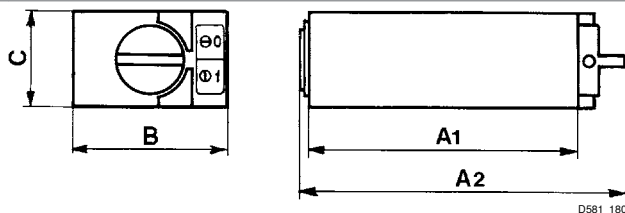


P581_179

standard
 Ambient temperature
 min./max.
 Medium
 Max. particle size
 Oil content of compressed air

ISO 5599-1
 -10°C / +50°C
 Compressed air
 50 μm
 40 mg/m³ - 400 mg/m³

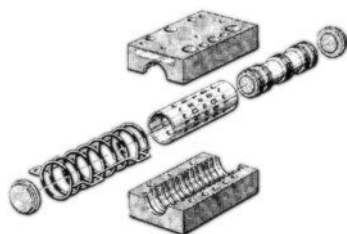
Working pressure min./max.	Material	Surface	Weight	Part No.
[bar]			[kg]	
-0.95 / 10	Aluminum	black anodized	0.2	5801590000

Dimensions


Part No.	A1	A2	B	C								
5801590000	70	85	40	25								

valve housing, without cover

▶ Aluminum ▶ for 581, size 1



P581_174

standard
 Ambient temperature
 min./max.
 Medium
 Max. particle size
 Oil content of compressed air

ISO 5599-1
 -20°C / +70°C
 Compressed air
 50 μm
 40 mg/m³ - 400 mg/m³

ISO 5599-1, size 1, Series 581

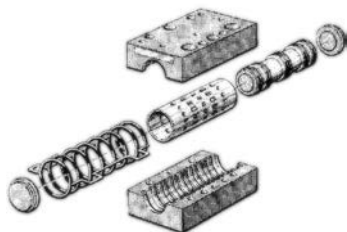
Accessories

Type	Material	Weight [kg]	Note	Part No.
5/2-directional valve, mono-stable	Aluminum	0.27	3)	5811100000
5/2-directional valve, double solenoid	Aluminum	0.27	3)	5811200000
5/2-directional valve, double solenoid, with manual override	Aluminum	0.27	3)1)	5811300000
5/3-directional valve, closed center	Aluminum	0.15	3)	5811400000
5/3-directional valve, exhausted center	Aluminum	0.2	3)	5811500000
5/2-way solenoid valve, with differential piston	Aluminum	0.2	3)2)	5811600000
5/3-directional valve, pressurized center	Aluminum	0.14	3)	5811700000
2x3/2-way solenoid valve	Aluminum	0.27	3)	5811800000

1) The valve can be changed to a single solenoid version with air return.
2) signal 14 has priority

valve housing, without cover

► Plastic ► for 581, size 1



P581_174

standard
Ambient temperature
min./max.
Medium
Max. particle size
Oil content of compressed air

ISO 5599-1
-20 °C / +70 °C

Compressed air
50 µm
40 mg/m³ - 400 mg/m³

Type	Material	Weight [kg]	Note	Part No.
2x3/2-way solenoid valve	Polyamide, fiber-glass reinforced	0.1	-	R402002299
5/2-directional valve, mono-stable	Polyamide, fiber-glass reinforced	0.09	-	R402002292
5/2-directional valve, double solenoid	Polyamide, fiber-glass reinforced	0.08	-	R402002293
5/2-directional valve, double solenoid, with manual override	Polyamide, fiber-glass reinforced	0.08	1)	R402002294
5/2-way solenoid valve, with differential piston	Polyamide, fiber-glass reinforced	0.14	2)	R402002297
5/3-directional valve, closed center	Polyamide, fiber-glass reinforced	0.09	-	R402002295
5/3-directional valve, pressurized center	Polyamide, fiber-glass reinforced	0.09	-	R402002298
5/3-directional valve, exhausted center	Polyamide, fiber-glass reinforced	0.09	-	R402002296

1) The valve can be changed to a single solenoid version with air return.
2) signal 14 has priority

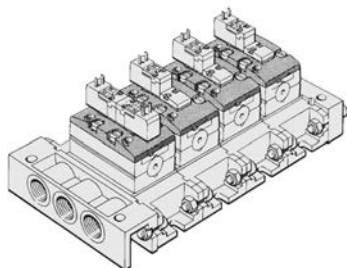
Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581

Accessories

valve cover, with or without pilot valve

▶ for 581, size 1



P581_163

standard
 Ambient temperature
 min./max.
 Medium
 Max. particle size
 Oil content of compressed air

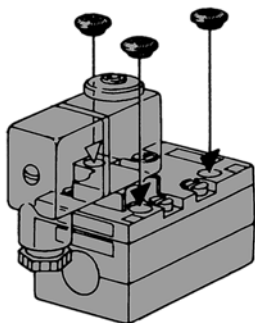
ISO 5599-1
 -20°C / +70°C
 Compressed air
 50 µm
 40 mg/m³ - 400 mg/m³

Type	Pilot valve width [mm]	Weight [kg]	Note	Part No.
5/2-directional valve, single solenoid	15 mm	0.057	1)	0493842501
2x3/2-, 5/2-, 5/3-directional valve	15 mm	0.054	1)	0493842609
5/2-directional valve, mono-stable	22 mm	0.13	2)4)	5811010000
2x3/2-, 5/2-, 5/3-directional valve	22 mm	0.15	2)4)	5811020000
5/2-directional valve, mono-stable	22 mm	0.13	2)3)	5811050000
2x3/2-, 5/2-, 5/3-directional valve	22 mm	0.15	2)3)	5811060000
all	30 mm	0.2	1)	5811080000

1) without pilot valve
 2) with pilot valve without coil
 3) For version 24 V DC, 2 W
 4) For version 12 V DC - 230 V AC, 5 W

Safety plugs for throttle insert

▶ for 581, size 1 - 4



P581_046

Type	Delivery quantity [Piece]	Weight [kg]	Part No.
ISO 1 - 4	10	0.005	4634210000

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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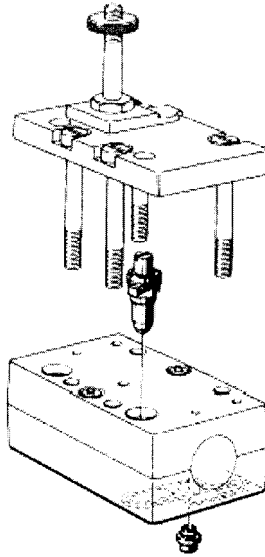
ISO 5599-1, size 1, Series 581
Accessories
throttle insert for flow control, Port 3/5

▶ for 581, size 1



P581_100

	Weight	Note	Part No.
	[kg]		
	0.014	1)	5811001000
1) delivered in pairs incl. plug set			

Dimensions


00133204

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

plug set for flow control screws
▶ for 581, size 1



P581_116

Material	Weight	Note	Part No.
	[kg]		
Polyamide	0.015	1)	5811000000
1) Delivered in pairs for modification of a valve from "with throttle set" to "without throttle set"			

Valve cover seal, Valve housing seal
▶ for 581, size 1



P581_173

Type	Material	Weight	Part No.
		[kg]	
Valve cover seal, electrically operated valves	Nitrile rubber	0.005	0490429808
Valve cover seal, pneumatically operated valves	Nitrile rubber	0.005	0490429905
Valve housing seal, between housing and base plate	Nitrile rubber	0.001	0486715103

ISO 5599-1, size 1, Series 581

Accessories

Mecproof, cabinet mounting

▶ for 581, size 1



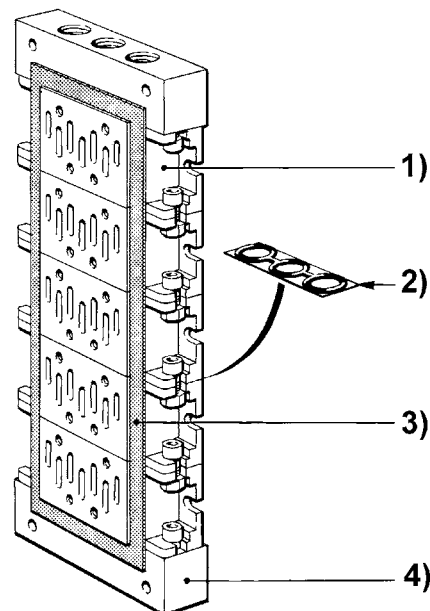
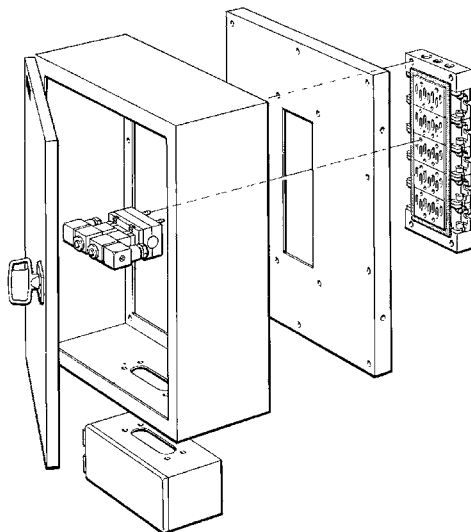
P581_255

standard
 Ambient temperature
 min./max.
 Medium
 Max. particle size
 Oil content of compressed air

ISO 5599-1
 -10°C / +50°C
 Compressed air
 50 µm
 40 mg/m³ - 400 mg/m³

Port	Type	Delivery quantity [Piece]	Weight [kg]	Note	Part No.
G 1/2	Intermediate plate for soft-start valve series 583	-	0.63	-	5802960000
-	Intermediate plate sealing	-	0.03	-	5802970000
-	Sealing strip incl. assembly instructions	10	0.02	3)	5802980000
G 3/8	End plate	-	0.34	-	5802950000

- 1) 5 connection thread on bottom
 2) 2 connection thread on bottom
 3) for max. 10 intermediate plates



T581_287

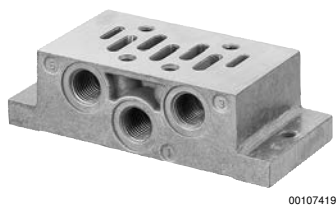
- 1) intermediate plate
 2) intermediate plate gasket
 3) sealing strip
 4) end plate

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Single subbase, thread connections on the side

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Compressed air connection output: G 1/4 ▶ Reversed pressure supply permissible



Standards	ISO 5599-1
Ambient temperature min./max.	-25°C / +70°C
Medium temperature min./max.	-25°C / +70°C
Medium	Compressed air
Working pressure min./max.	-0.95 bar / 16 bar
Number of valve positions	1
Direction of pneumatic port (1)	On the side
Direction of pneumatic port (3,5)	On the side
Direction of pneumatic port (2,4)	On the side
Direction of pneumatic port (12)	On the side
Direction of pneumatic port (14)	On the side
Exhaust (3,5)	With directional exhaust (3/5) Ports separated
Materials:	
Base plate	Die-cast aluminum

Technical Remarks

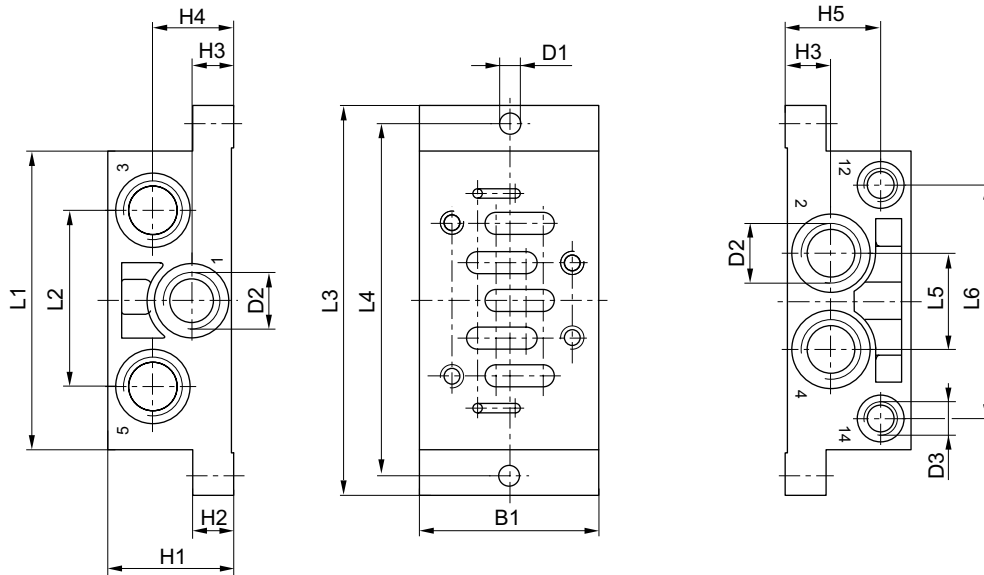
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- For use with HV series valves, the ambient temperature is -25°C to +200°C and the medium temperature is -25°C to +120°C.
- Reversed pressure supply is not permitted for HV series valves.

Frame size	Compressed air connection					Grid dimension	Part No.
	Input	Output	Exhaust	Pilot control exhaust	Pilot connection		
	[1]	[2 / 4]	[3 / 5]	[12]	[14]		
ISO 1	G 1/4	G 1/4	G 1/4	G 1/8	G 1/8	48	1825503143
Part No.							Weight
							[kg]
1825503143							0.17

ISO 5599-1, size 1, Series 581

Accessories

Dimensions



D581_140

Part No.	B1	H1	H2	H3	H4	H5	D1	D2 *)	D3 *)	L1	L2	L3
1825503143	48	32	10	11,5	21,5	23,5	5,5	G 1/4	G 1/8	84	43	110

Part No.	L4	L5	L6	Weight kg								
1825503143	98	24	58	0.17								

*) Ports

Single subbase, thread connections on the bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Compressed air connection output: G 1/4 ▶ Reversed pressure supply permissible



5746-121

Standards

Ambient temperature min./max.

Medium temperature min./max.

Medium

Working pressure min./max.

Number of valve positions

Direction of pneumatic port (1)

Direction of pneumatic port (3,5)

Direction of pneumatic port (2,4)

Direction of pneumatic port (12)

Direction of pneumatic port (14)

Exhaust (3,5)

ISO 5599-1

-25 °C / +70 °C

-25 °C / +70 °C

Compressed air

-0.95 bar / --

1

Down

Down

Down

Down

Down

With directional exhaust (3/5)

Ports separated

Materials:

Base plate

Die-cast aluminum

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Valve systems ▶ Standardized valve systems

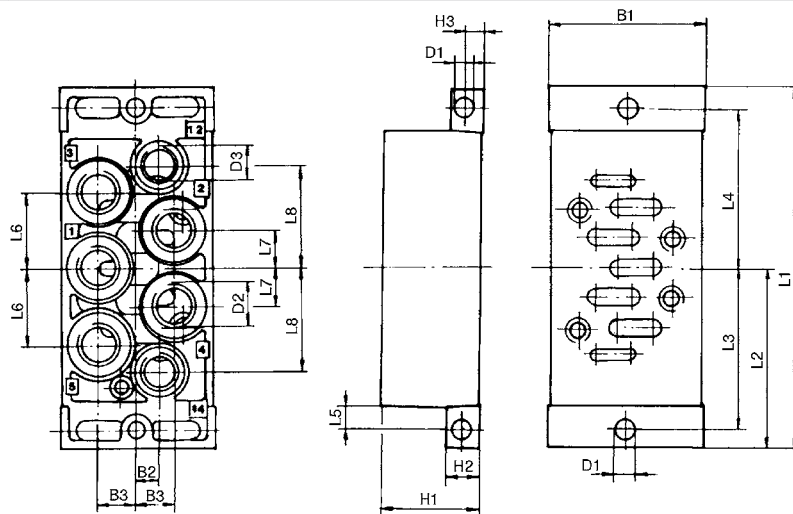
ISO 5599-1, size 1, Series 581 Accessories

Technical Remarks

- 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, see chapter „Technical information“.
- For use with HV series valves, the ambient temperature is -25°C to +200°C and the medium temperature is -25°C to +120°C.
- Reversed pressure supply is not permitted for HV series valves.

Frame size	Compressed air connection					Weight	Part No.
	Input	Output	Exhaust	Pilot control exhaust	Pilot connection		
	[1]	[2 / 4]	[3 / 5]	[12]	[14]	[kg]	
ISO 1	G 1/4	G 1/4	G 1/4	G 1/8	G 1/8	0.196	1825503201

Dimensions



D898_111

Part No.	B1	B2	B3	D1	D2 *)	D3 *)	H1	H2	H3	L1	L2	L3
1825503201	46	7	11.5	5.5	G 1/4	G 1/8	30	10	5	110	55	49

Part No.	L4	L5	L6	L7	L8	Weight kg						
1825503201	49	7	23	11.5	31	0.196						

*) Ports

ISO 5599-1, size 1, Series 581 Accessories

Single subbase, ports on side

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Compressed air connection output: G 1/8 - Ø 8



5810-491

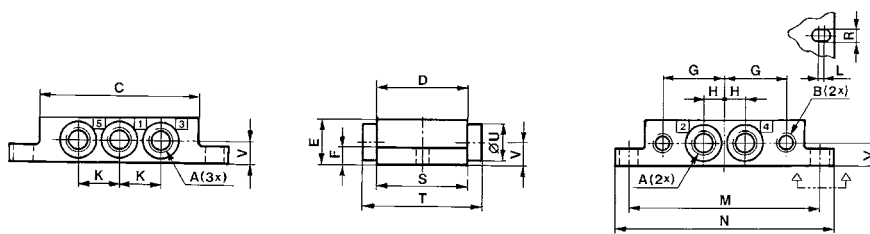
Standards	ISO 5599-1
Ambient temperature min./max.	-20°C / +70°C
Medium temperature min./max.	-20°C / +70°C
Medium	Compressed air
Working pressure min./max.	-1 bar / 16 bar
Number of valve positions	1
Surface	painted
Direction of pneumatic port (1)	On the side
Direction of pneumatic port (3,5)	On the side
Direction of pneumatic port (2,4)	On the side
Direction of pneumatic port (14)	On the side
Exhaust (3,5)	With directional exhaust (3/5) Ports separated
Materials:	
Base plate	Die-cast aluminum, black painted

Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection					Weight	Part No.
	Input	Output	Exhaust	Pilot connection			
	[1]	[2 / 4]	[3 / 5]	[14]	[kg]		
ISO 1	G 1/8	G 1/8	G 1/8	G 1/8	0.11	5801710000	
	G 1/4	G 1/4	G 1/4	G 1/8	0.17	5801740000	
	Ø 6	Ø 6	Ø 6	Ø 4	0.13	5801810000	
	Ø 8	Ø 8	Ø 8	Ø 6	0.22	5801770000	

Dimensions



D581_029

Part No.		A *)	B *)	C	D	E	F	G	H	K	L	M
5801710000	ISO 1	G 1/8	G 1/8	70	40	20	8	26.5	9	18	2	84
5801740000	ISO 1	G 1/4	G 1/8	70	40	23	11	31.5	11.5	23	2	96
5801810000	ISO 1	Ø 6	Ø 4	70	40	20	8	26.5	9	18	2	84
5801770000	ISO 1	Ø 8	Ø 6	70	40	23	10	31.5	11.5	23	2	96

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
 Accessories

Part No.	N	R	S	T	U	V	Weight kg					
5801710000	96	5.4	40	-	-	10	0.11					
5801740000	110	5.4	46	64	21	12	0.17					
5801810000	96	5.4	40	-	-	10	0.13					
5801770000	110	5.4	46	64	21	12	0.22					

*) Ports

Single subbase, ports on bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Compressed air connection output: G 1/8 - Ø 6



5810-481

Standards

Ambient temperature min./max.

Medium temperature min./max.

Medium

Working pressure min./max.

Number of valve positions

Surface

Direction of pneumatic port (1)

Direction of pneumatic port (3,5)

Direction of pneumatic port (2,4)

Direction of pneumatic port (14)

Exhaust (3,5)

ISO 5599-1

-20 °C / +70 °C

-20 °C / +70 °C

Compressed air

-1 bar / 16 bar

1

painted

Down

Down

Down

Down

uncollected exhaust

Ports separated

Materials:

Base plate

Die-cast aluminum, black painted

Technical Remarks

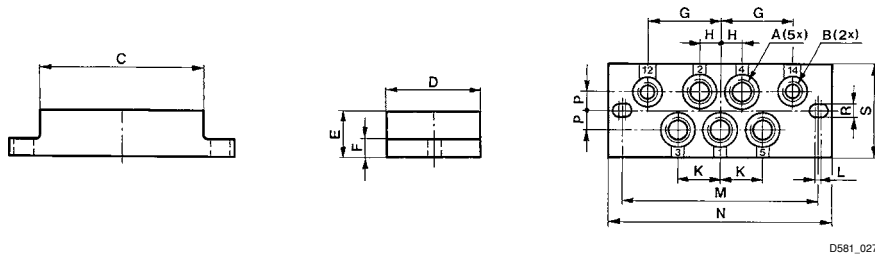
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size	Compressed air connection				Weight [kg]	Part No.
	Input	Output	Exhaust	Pilot connection		
	[1]	[2 / 4]	[3 / 5]	[14]		
ISO 1	G 1/8	G 1/8	G 1/8	G 1/8	0.11	5801700000
	Ø 6	Ø 6	Ø 6	Ø 4	0.13	5801800000

ISO 5599-1, size 1, Series 581

Accessories

Dimensions



D581_027

Part No.		A *)	B *)	C	D	E	F	G	H	K	L	M
5801700000	ISO 1	G1/8	G1/8	70	40	20	8	26.5	9	18	2	84
5801800000	ISO 1	Ø 6	Ø 4	70	40	20	8	26.5	9	18	2	84

Part No.	N	P	R	S	Weight kg							
5801700000	96	8	5.4	40	0.11							
5801800000	96	8	5.4	40	0.13							

*) Ports

Subbase, for direct mounting of ISO valves on cylinders

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Compressed air connection output: G 1/8



P523_014

Standards

Ambient temperature min./max.

Medium temperature min./max.

Medium

Working pressure min./max.

Surface

ISO 5599-1

-20 °C / +70 °C

-20 °C / +70 °C

Compressed air

-1 bar / 16 bar

black anodized

Materials:

Base plate

Seals

Aluminum, black anodized

Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

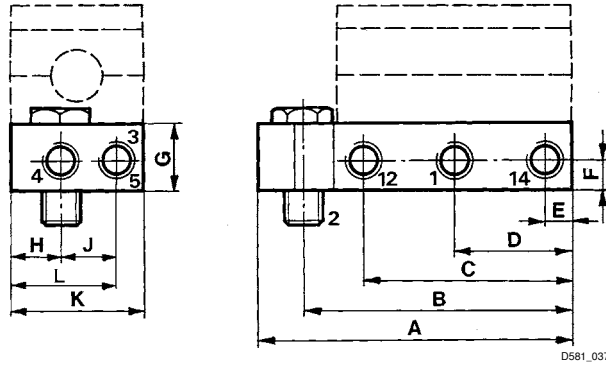
Frame size	Compressed air connection				Weight	Note	Part No.
	Input	Output	Exhaust	Pilot connection			
	[1]	[2 / 4]	[3 / 5]	[14]	[kg]		
ISO 1	G 1/8	G 1/8	G 1/8	G 1/8	0.175	1)	5801690000

1) Ø 32 - 125 mm
2) Ø 63 - 125 mm
Scope of delivery incl. mounting screws

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Dimensions



Part No.		1, 4, 3, (5)	2*	12, 14	A	B	C	D	E	F	G
5801690000	ISO 1	G 1/8	G 1/8, G 1/4	G 1/8	93.5	80	62	35	8	9	20
Part No.	H	J	K	L	Weight kg						
5801690000	15	17	40	32	0.175						

* Two different threaded banjo bolts are supplied with 5801690000 to be used with different cylinders.

ISO 5599-1, size 1, Series 581

Accessories

Base plate, ports 2 and 4 on bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Compressed air connection output: G 1/4 ▶ Can be assembled into blocks ▶ Single base plate principle ▶ Reversed pressure supply permissible ▶ With collective pilot air exhaust



00107662

Standards	ISO 5599-1, ISO 4
Ambient temperature min./max.	-25 °C / +70 °C
Medium temperature min./max.	-25 °C / +70 °C
Medium	Compressed air
Number of valve positions	1
Grid dimension	82 mm
Direction of pneumatic port (1)	On the side
Direction of pneumatic port (3,5)	On the side
Direction of pneumatic port (2,4)	Down
Direction of pneumatic port (12)	On the side
Direction of pneumatic port (14)	On the side
Exhaust (3,5)	With directional exhaust (3/5) Ports separated
Compressed air connection	according to ISO 5599-1
Materials:	
Base plate	Die-cast aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

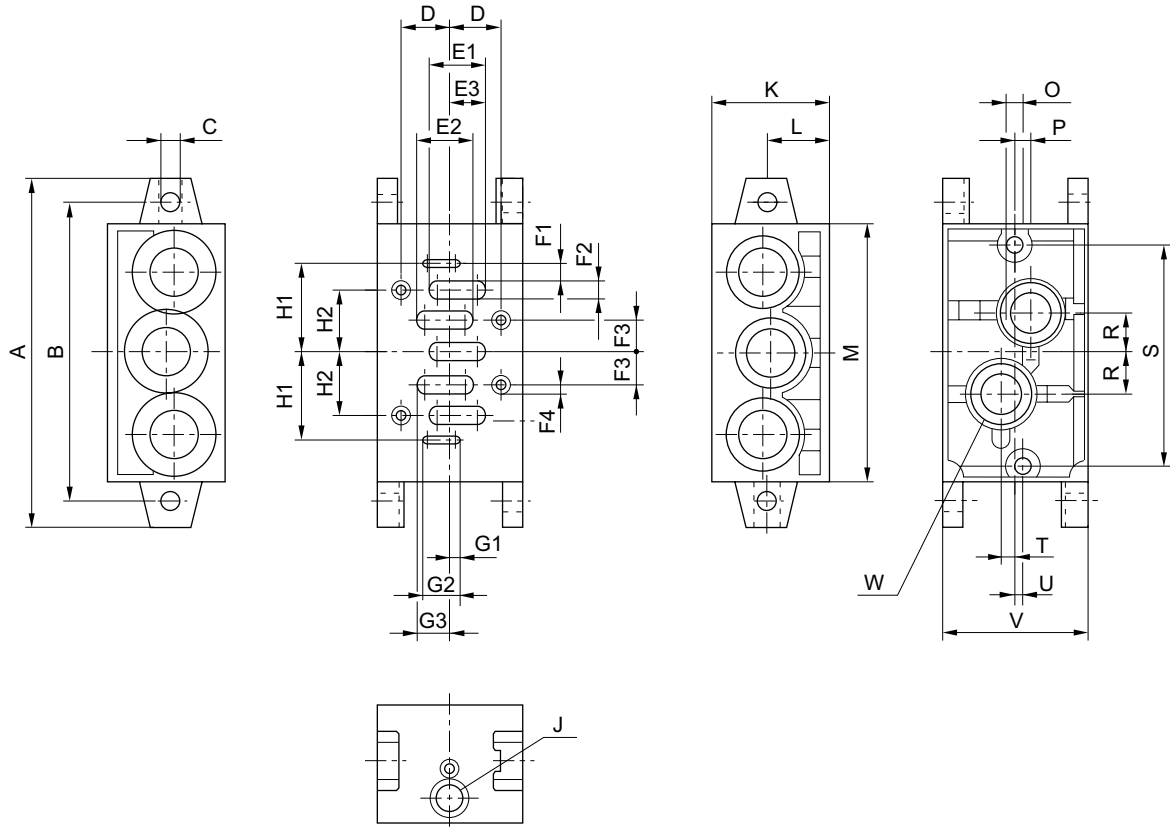
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size	Compressed air connection			Working pressure min./max.	Weight	Part No.
	Output	Pilot control exhaust	Pilot connection			
	[2 / 4]	[12]	[14]		[kg]	
ISO 1	G 1/4	G 1/8	G 1/8	0 / 16	0.246	1825503144

Scope of delivery incl. seal and mounting screws

ISO 5599-1, size 1, Series 581 Accessories

Dimensions



00107666_a

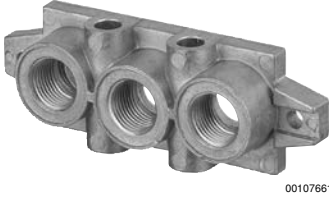
Part No.	A	B	C	D	E1	E2	E3	F1	F2	F3	F4	G1
1825503144	110	95	5,5	14	16,5	16,5	11,25	3	4,5	9	M5	3
Part No.	G2	G3	H1	H2	J	K	L	M	O	P	R	S
1825503144	13,5	11,25	26,5	18	G 1/8	44	22	85	M5	7,5	13	71
Part No.	T	U	V	W	Weight							
1825503144	1,5	3	43	G 1/4	0.246							

ISO 5599-1, size 1, Series 581

Accessories

End plate left, End plate right

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Can be assembled into blocks ▶ Base plate principle, multiple ▶ Reversed pressure supply permissible



Standards

Ambient temperature min./max.
Medium temperature min./max.
Medium
Working pressure min./max.
Direction of pneumatic port (1)
Direction of pneumatic port (3,5)
Exhaust (3,5)

Compressed air connection

Materials:

Base plate
Seals

ISO 5599-1, ISO 4

-25 °C / +70 °C
-25 °C / +70 °C
Compressed air
0 bar / 16 bar
On the side
On the side
With directional exhaust (3/5)
Ports separated
according to ISO 5599-1

Die-cast aluminum

Acrylonitrile Butadiene Rubber

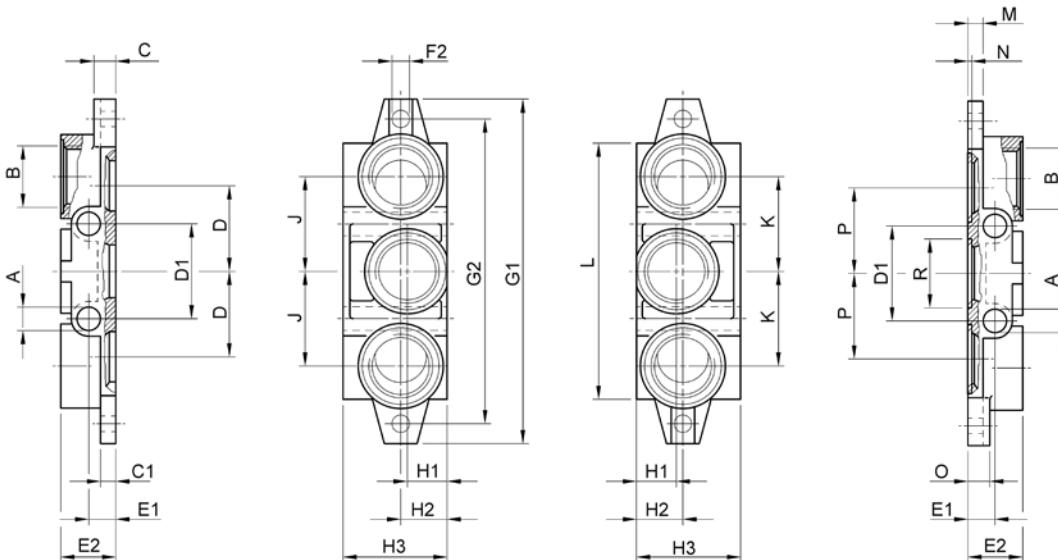
Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection		Weight	Part No.
	Input	Exhaust		
	[1]	[3 / 5]	[kg]	
ISO 1	G 3/8	G 3/8	0.208	1825503145

Scope of delivery: 2 end plates including seal and mounting screws

Dimensions



00107701_a

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2016-10-28, ©AVENTICS S.à r.l., subject to change

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Part No.	A	B	C	C1	D	D1	E1	E2	F2	G1	G2	H1
1825503145	7	G 3/8	8	6	24	28	11	22	Ø 5,5	110	95	22

Part No.	H2	H3	J	K	L	M	N	O	P	R	Weight kg
1825503145	22	46	28	28	85	6	2	8	24	Ø 22,1	0.208

ISO 5599-1, size 1, series 581

Accessories

Base plate, Ports 2 and 4 side or bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type G ▶ Compressed air connection output: G 1/4 ▶ Can be assembled into blocks



5811_092_a

Standards

Ambient temperature min./max.

Medium temperature min./max.

Medium

Working pressure min./max.

Number of valve positions

Direction of pneumatic port (2,4)

Direction of pneumatic port (14)

Exhaust (3,5)

ISO 5599-1

-20 °C / +70 °C

-20 °C / +70 °C

Compressed air

-1 bar / 16 bar

1

Both directions possible

Down

uncollected exhaust

Ports separated

Materials:

Base plate

Seals

Die-cast aluminum

Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

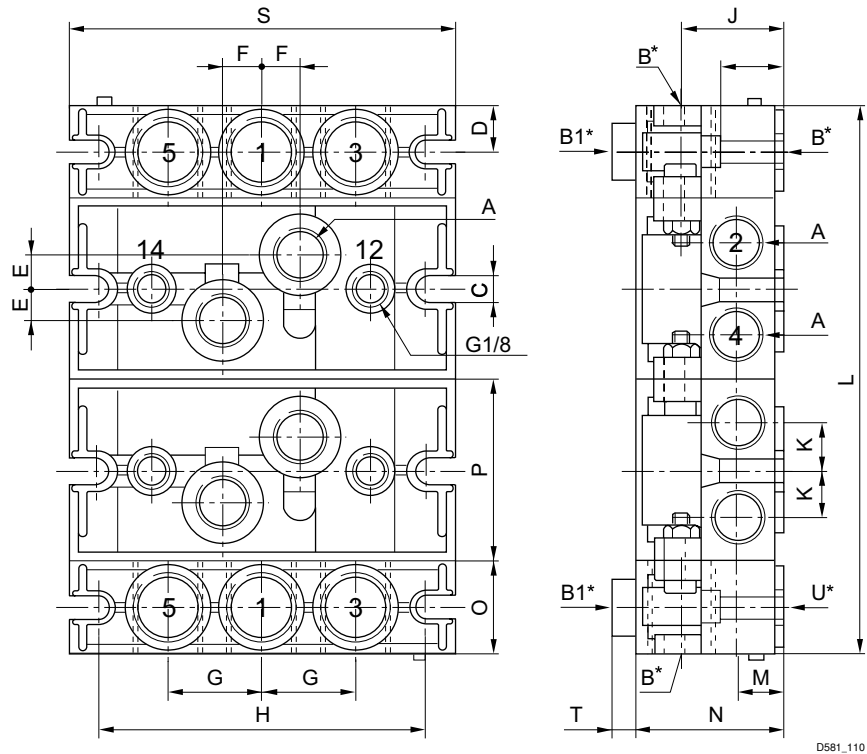
Frame size	Compressed air connection			Weight	Part No.
	Input	Output	Pilot connection		
	[1]	[2 / 4]	[14]	[kg]	
ISO 1	G 1/4	G 1/4	G 1/8	0.23	5801500000

Scope of delivery incl. seal and mounting screws

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581
Accessories

Dimensions



D581_110

Part No.		A	B	B1	C	D	E	F	G	H	J
5801500000	ISO 1	2 x G 1/4	3 x G 3/8	3 x G 1/4	5.5	11	5.5	9	22	92	24
Part No.	K	L	M	N	O	P	R	S	T	Weight kg	
5801500000	12	n x 43 + 44	12	36	22	45.7	17	106	8	0.23	

n = number of subbases

ISO 5599-1, size 1, series 581

Accessories

End plate left, End plate right

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type G ▶ Can be assembled into blocks ▶ Base plate principle, multiple ▶ Reversed pressure supply permissible



5811_092_b

Standards	ISO 5599-1
Ambient temperature min./max.	-20 °C / +70 °C
Medium temperature min./max.	-20 °C / +70 °C
Medium	Compressed air
Working pressure min./max.	-1 bar / 16 bar
Direction of pneumatic port (1)	Both directions possible
Direction of pneumatic port (3,5)	Both directions possible
Exhaust (3,5)	uncollected exhaust
	Ports separated
Compressed air connection	according to ISO 5599-1
Materials:	
Base plate	Die-cast aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

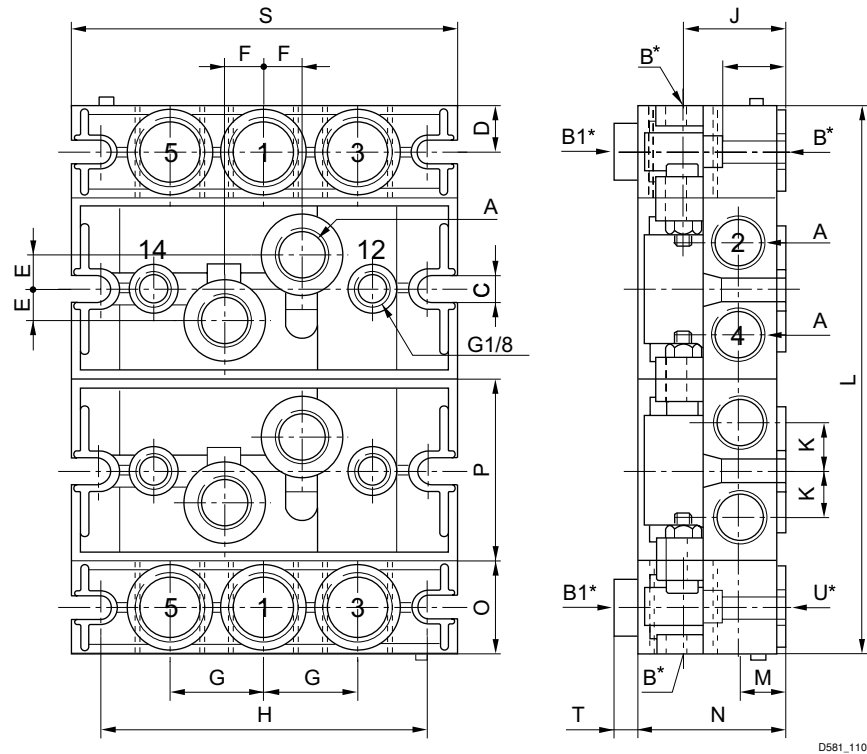
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size	Compressed air connection		Weight	Part No.
	Input	Exhaust		
	[1]	[3 / 5]	[kg]	
ISO 1	G 3/8	G 3/8	0.26	5801510000

Delivered in pairs with all ports closed. Porting can be in end, top, or bottom (both ends). Porting is selected by drilling through dimensions B*, B1*, or U* on drawing below.
Scope of delivery incl. seal and mounting screws

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581
 Accessories

Dimensions


D581_110

Part No.		A	B*	B1*	C	D	E	F	G	H	J	
5801510000	ISO 1	2 x G 1/4	3 x G 3/8	3 x G 1/4	5.5	11	5.5	9	22	92	24	
Part No.		K	L	M	N	O	P	R	S	T	U*	Weight kg
5801510000		12	n x 43 + 44	12	36	22	45.7	17	106	8	3 x G 3/8	0.26

n = number of subbases

*Dimensions B, B1, and U are prepared with threaded connections but must be drilled through as required for the desired porting configuration.

ISO 5599-1, size 1, series 581

Accessories

Base plate, Ports 2 and 4 on side, 1,2 and 4 also on bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type H ▶ Compressed air connection output: G 1/4 ▶ Can be assembled into blocks



00107432

Standards	ISO 5599-1, ISO 1
Ambient temperature min./max.	-15 °C / +70 °C
Medium temperature min./max.	-15 °C / +80 °C
Medium	Compressed air
Working pressure min./max.	0 bar / 16 bar
Grid dimension	43 mm
Mounting screw	with hexagon socket
	Ports separated

Materials:	
Housing	Die-cast aluminum
Base plate	Die-cast aluminum
Seals	Acrylonitrile Butadiene Rubber

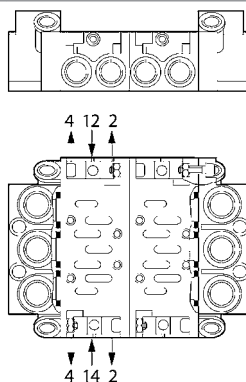
Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection				Weight	Fig.	Note	Part No.
	Input	Output	Pilot control exhaust	Pilot connection				
	[1]	[2 / 4]	[12]	[14]	[kg]			
ISO 1	-	-	-	-	0.24	Fig. 1	1)	1825503286
	-	-	-	-	0.24	Fig. 2	2)	1825503288
	G 1/4	G 1/4	M5	M5	0.27	Fig. 3	3)	1825503290
	G 1/4	-	-	-	0.27	Fig. 4	4)	1825503292

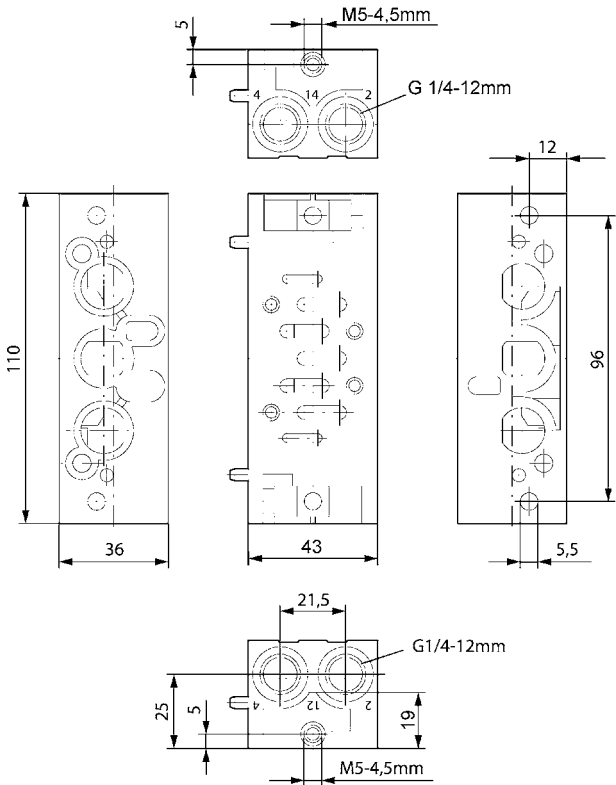
- 1) Ports 2 and 4 on side, control pressure connection 12 and 14: single connection
 2) Ports 2 and 4 on side, control pressure connection 12 and 14: central manifold
 3) Ports 2 and 4 on side, 1,2 and 4 also on bottom, control pressure connection 12 and 14: single connection
 4) Ports 2 and 4 on side, 1,2 and 4 also on bottom, control pressure connection 12 and 14: central manifold
 Scope of delivery incl. seal and mounting screws

Fig. 1, ports 2 and 4 on side, Control pressure connection 12+14: single connection



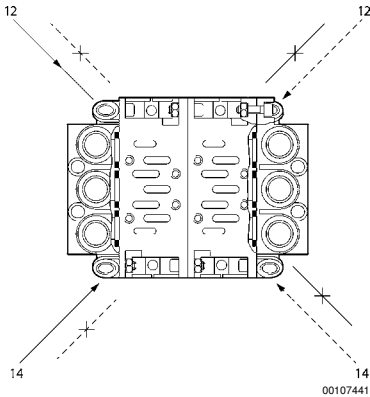
00107438

ISO 5599-1, size 1, series 581
Accessories



00107444_a

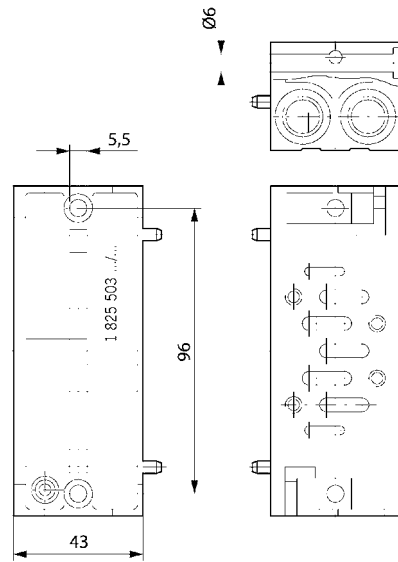
Fig. 2, ports 2 and 4 on side, Control pressure connection 12+14: central manifold



00107441

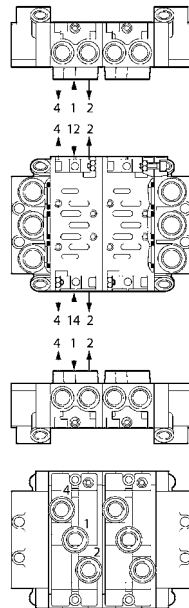
ISO 5599-1, size 1, series 581

Accessories



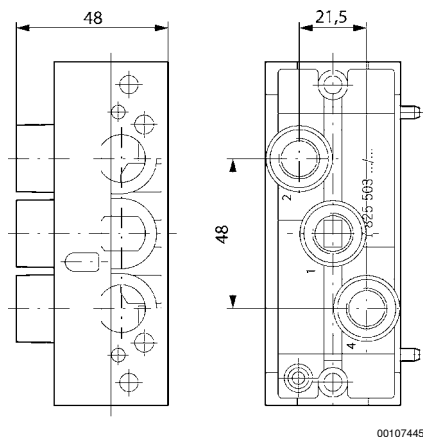
00107444_b

Fig. 3, Ports 2 and 4 on side, 1,2 and 4 also on bottom, Control pressure connection 12+14: single connection



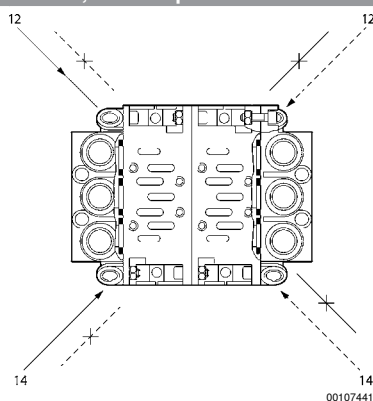
00107440

ISO 5599-1, size 1, series 581
Accessories



00107445

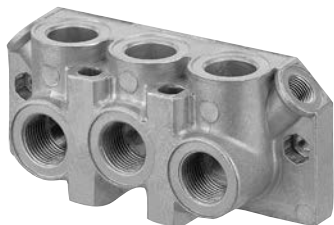
Fig. 4, Ports 2 and 4 on side, 1,2 and 4 also on bottom, Control pressure connection 12+14: central manifold



00107441

End plate left, End plate right

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type H ▶ Can be assembled into blocks



00107431

Standards
Ambient temperature min./max.
Medium temperature min./max.
Medium
Working pressure min./max.
Mounting screw
Exhaust (3,5)

Materials:
Base plate
Seals

ISO 5599-1, ISO 1
-15°C / +70°C
-15°C / +70°C
Compressed air
0 bar / 16 bar
with hexagon socket
With directional exhaust (3/5)
Ports separated

Die-cast aluminum
Acrylonitrile Butadiene Rubber

ISO 5599-1, size 1, series 581

Accessories

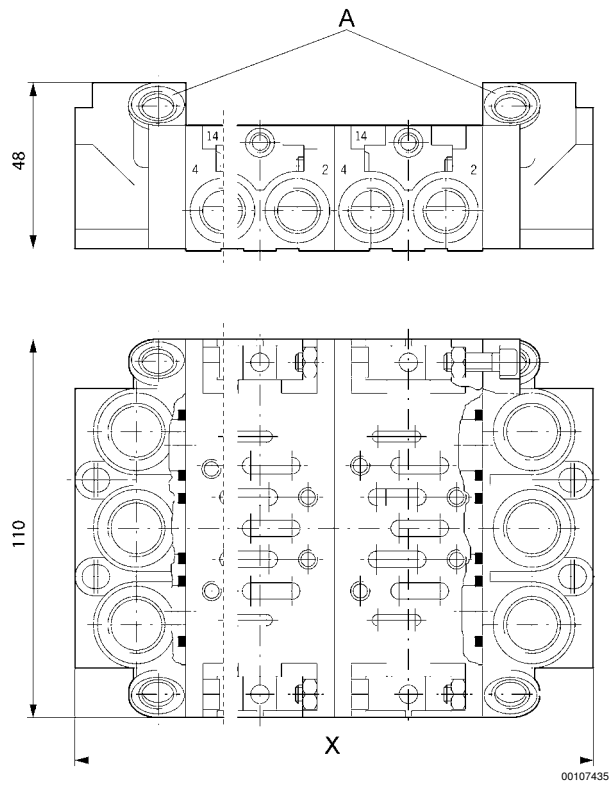
Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection				Weight	Fig.	Part No.
	Input	Exhaust	Pilot control exhaust	Pilot connection			
	[1]	[3 / 5]	[12]	[14]	[kg]		
ISO 1	G 3/8	G 3/8	G 1/8	G 1/8	0.404	Fig. 1	1825503294
					0.382	Fig. 2	1825503297

Scope of delivery incl. seal and mounting screws

Dimensions



A = left and right end plates in two versions

n	2	3	4	...	n								
X	150	193	236	...	$n \cdot 43 + 64$								

n = number of valve positions

ISO 5599-1, size 1, series 581
Accessories

Fig. 1, Thread connections 1, 3, and 5 axial

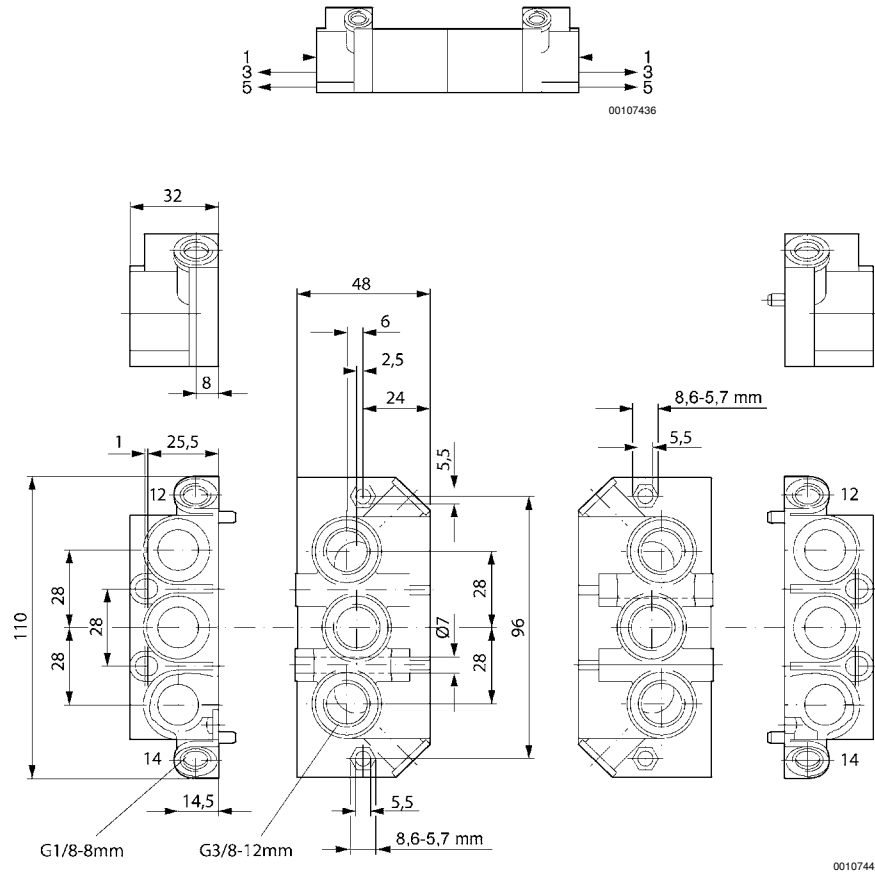
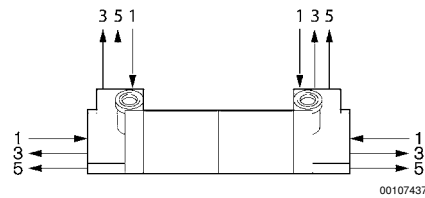
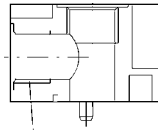
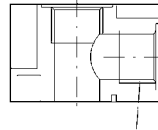


Fig. 2, Thread connections 1, 3, and 5 axial and from the top

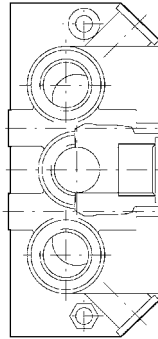
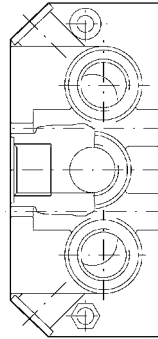


ISO 5599-1, size 1, series 581**Accessories**

G3/8-12mm



G3/8-12mm



00107443

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581

Accessories

Base plate, ports 2 and 4 on bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type K ▶ Compressed air connection output: G 1/8 - Ø 6 ▶ Can be assembled into blocks



5810_302_b

Standards	ISO 5599-1
Ambient temperature min./max.	-20°C / +70°C
Medium temperature min./max.	-20°C / +70°C
Medium	Compressed air
Working pressure min./max.	-1 bar / 16 bar
Number of valve positions	1
Surface	painted
Direction of pneumatic port (2,4)	Down
Exhaust (3,5)	uncollected exhaust Ports separated

Materials:

Base plate	Die-cast aluminum, black painted
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

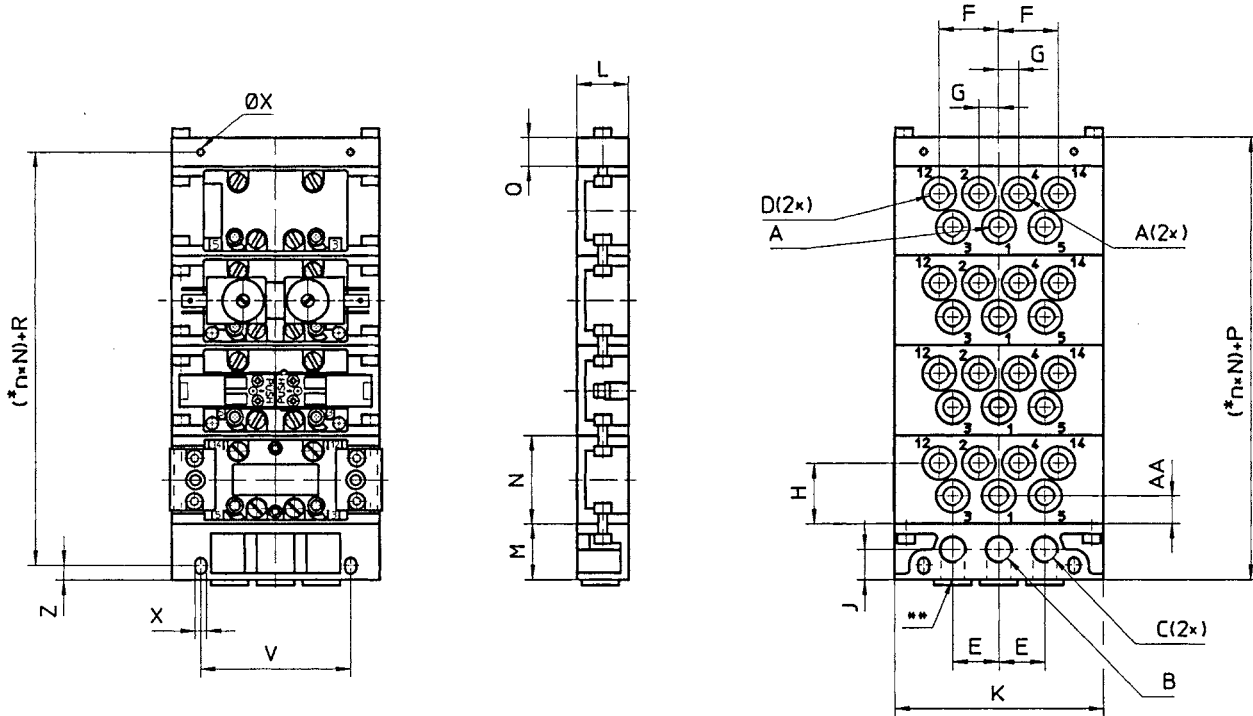
Frame size	Compressed air connection		Port	Weight	Part No.
	Output	Pilot connection			
	[2 / 4]	[14]			
ISO 1	G 1/8	G 1/8	-	0.14	5801720000
	G 1/4	G 1/8	G 1/4	0.27	5801750000
	Ø 8	Ø 6	-	0.3	5801780000
	Ø 6	Ø 4	-	0.16	5801820000

Scope of delivery incl. seal and mounting screws

ISO 5599-1, size 1, series 581

Accessories

Dimensions



D581_231_a

* n = Number of subbases.

** Alternative port openings, closed with plugs

Part No.	*		A	B	C	D	E	F	G	H	J	K
5801720000	a	ISO 1	G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100
5801750000	b	ISO 1	G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122
5801780000	b	ISO 1	Ø 8	G 3/8	G 3/8	Ø 6	27	40	12.5	26.5	20	122
5801820000	a	ISO 1	Ø 6	G 1/4	G 1/4	Ø 4	22	28.5	9.5	29.5	14.5	100

Part No.	L	M	N	P	Q	R	V	X	Z	AA	Weight kg
5801720000	25	27	43	41	14	27.5	72	5.4	7	8	0.14
5801750000	30	34	43	49	15	34	94	6.4	8	10	0.27
5801780000	30	34	43	49	15	34	94	6.4	8	10	0.3
5801820000	25	27	43	41	14	27.5	72	5.4	7	13.5	0.16

* Intermediate plates designated with the same letters (a-d) can be mounted together without a transition plate.

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581 Accessories

Intermediate plate for separate air supply, ports 2 and 4 on bottom

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type K ▶ Compressed air connection output: G 1/8 - G 1/4 ▶ Can be assembled into blocks



5810_302_b

Standards	ISO 5599-1
Ambient temperature min./max.	-20 °C / +70 °C
Medium temperature min./max.	-20 °C / +70 °C
Medium	Compressed air
Working pressure min./max.	-1 bar / 16 bar
Number of valve positions	1
Surface	painted
Direction of pneumatic port (1)	Down
Direction of pneumatic port (3,5)	Down
Direction of pneumatic port (2,4)	Down
Direction of pneumatic port (14)	Down
Exhaust (3,5)	uncollected exhaust Ports separated

Materials:

Base plate	Die-cast aluminum, black painted
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

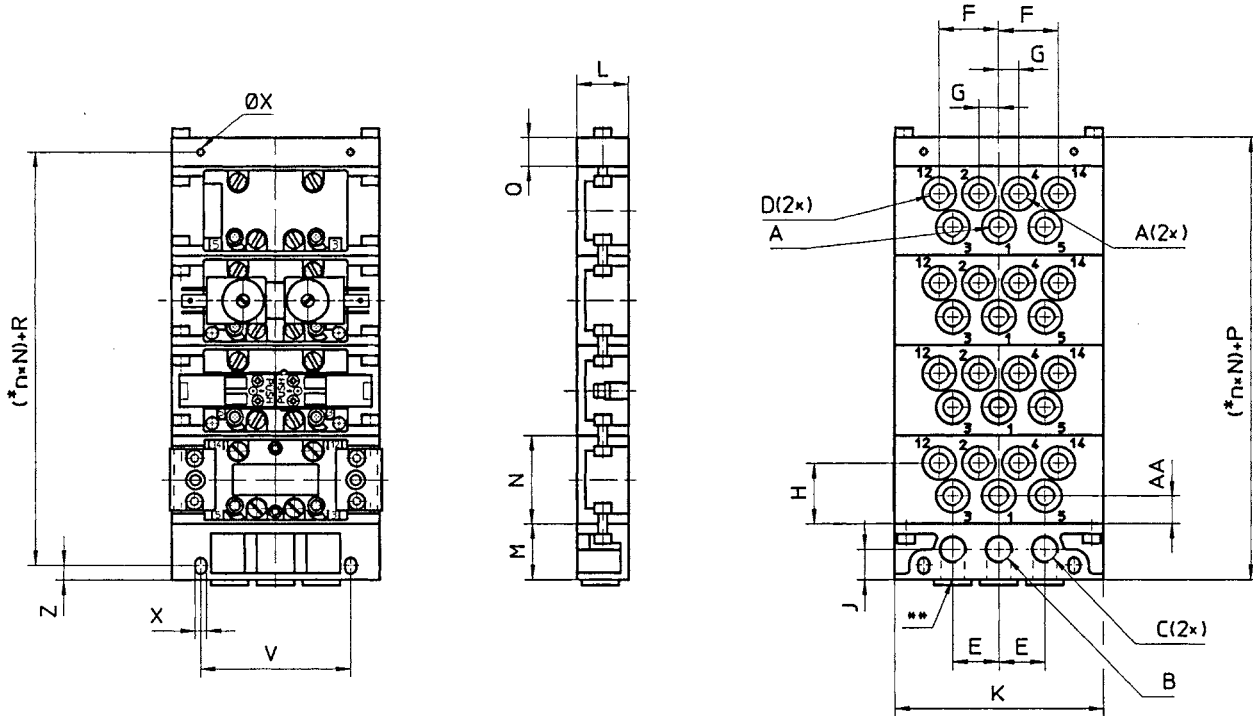
Type	Frame size	Compressed air connection			Port	Weight	Part No.
		Input	Output	Pilot connection			
		[1]	[2 / 4]	[14]		[kg]	
Intermediate plate for separate air supply	ISO 1	G 1/8	G 1/8		-	0.14	5801670000
		G 1/4	G 1/4	G 1/8	G 1/4	0.27	5801680000

Scope of delivery incl. seal and mounting screws

ISO 5599-1, size 1, series 581

Accessories

Dimensions



D581_231_a

* n = number of subbases.

** Alternative port openings, closed with plugs.

*** Only on subbases with separate intake.

**** Subbase 5801680000 can also be connected to port 3 and 5.

Part No.		A	B	C	D	E	F	G	H	J	K	L
5801670000	ISO 1	G 1/8	G 1/4	G 1/4	G 1/8	22	28.5	9.5	29.5	14.5	100	25
5801680000	ISO 1	G 1/4	G 3/8	G 3/8	G 1/8	27	40	12.5	26.5	20	122	30

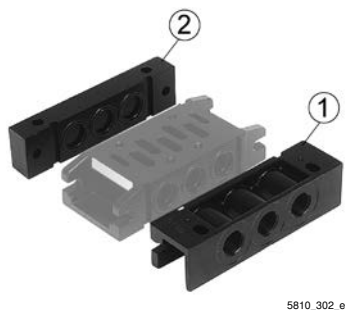
Part No.	M	N	P	Q	R	V	X	Z	AA	Weight kg		
5801670000	27	43	41	14	27.5	72	5.4	7	8	0.14		
5801680000	34	43	49	15	34	94	6.4	8	10	0.27		

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581
Accessories

End plate left, End plate right

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type K ▶ Can be assembled into blocks



Standards	ISO 5599-1
Ambient temperature min./max.	-20°C / +70°C
Medium temperature min./max.	-20°C / +70°C
Medium	Compressed air
Working pressure min./max.	-1 bar / 16 bar
Surface	painted
Exhaust (3,5)	uncollected exhaust
	Ports separated

Materials:	
Base plate	Die-cast aluminum, black painted
Seals	Acrylonitrile Butadiene Rubber

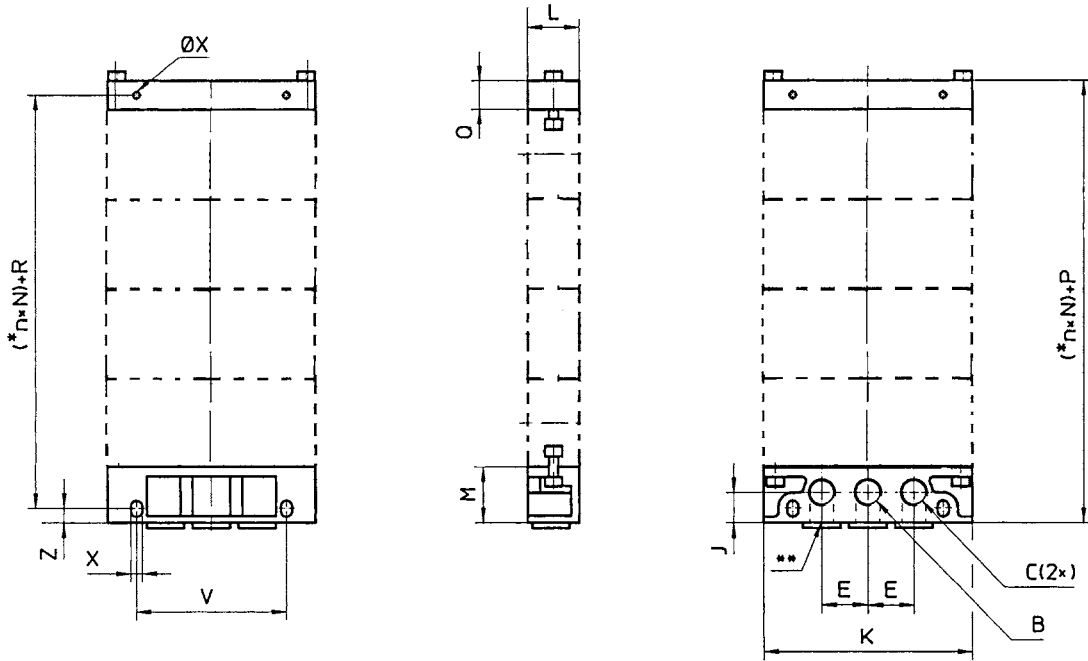
Technical Remarks	
■	The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■	The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■	The oil content of compressed air must remain constant during the life cycle.
■	Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size	Compressed air connection		Weight	Part No.
	Input	Exhaust		
	[1]	[3 / 5]	[kg]	
ISO 1	G 1/4	G 1/4	0.15	5801850000
	-	-	0.08	5801860000

ISO 5599-1, size 1, series 581

Accessories

Dimensions



D581_231_d

* n = Number of subbases.

** Alternative port openings, closed with plugs

Part No.		B	C	E	J	K	L	M	P	Q	R	V
5801850000	ISO 1	G 1/4	G 1/4	22	14.5	100	25	27	41	-	27.5	72
5801860000	ISO 1	-	-	-	-	100	25	-	41	14	27.5	72

Part No.	X	Z	Weight kg									
5801850000	5.4	7	0.15									
5801860000	5.4	-	0.08									

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Blanking plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1



5810-321

Standards

Ambient temperature min./max.
Medium temperature min./max.
Medium
Working pressure min./max.
Number of valve positions

ISO 5599-1

-20 °C / +70 °C
-20 °C / +70 °C
Compressed air
-1 bar / 16 bar
1

Materials:

Housing
Base plate
Seals

Die-cast aluminum, black painted
Die-cast aluminum
Acrylonitrile Butadiene Rubber

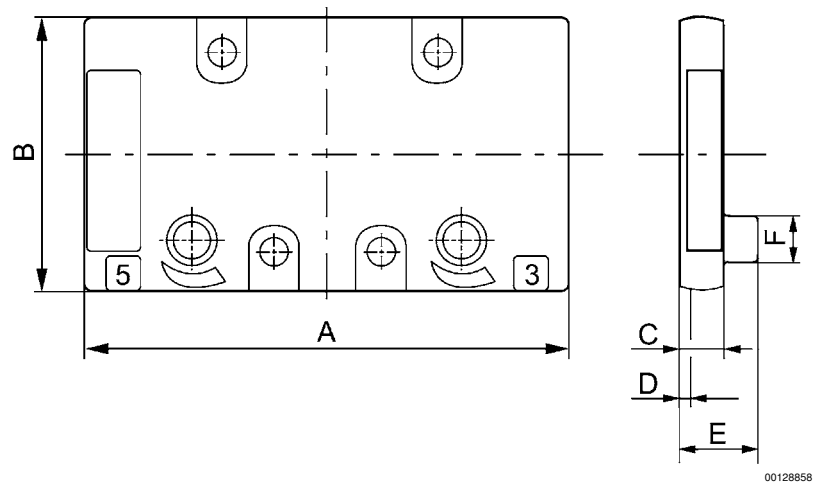
Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Weight [kg]	Part No.
ISO 1	0.055	5801870000

Scope of delivery incl. seal and mounting screws

Dimensions



00128858

Part No.	A	B	C	D	E	F	Weight kg
5801870000	69	39	7	2	-	-	0.055

ISO 5599-1, size 1, Series 581

Accessories

Blanking plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1



00104044

Standards

 Ambient temperature min./max.
 Medium temperature min./max.
 Medium
 Working pressure min./max.
 Mounting screw

ISO 5599-1

 +0 °C / +80 °C
 +0 °C / +80 °C
 Compressed air
 -0.9 bar / 16 bar
 with hexagon socket

Materials:

Seals

Acrylonitrile Butadiene Rubber

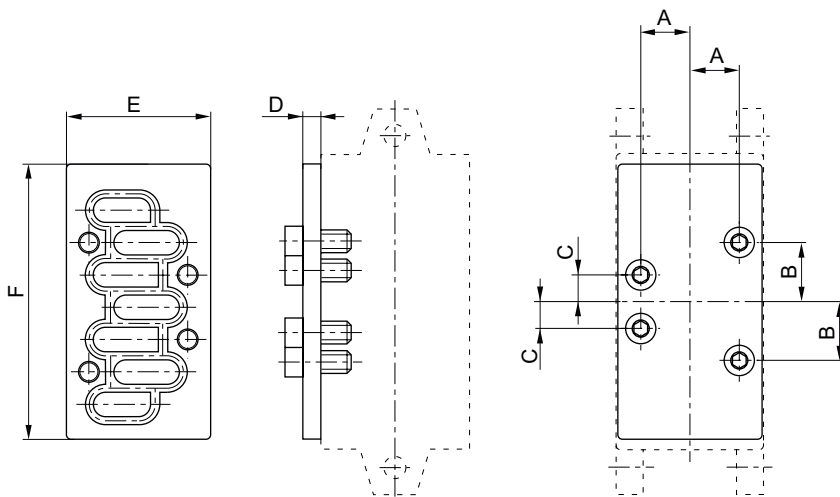
Technical Remarks

- 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, see chapter „Technical information“.

Type	Frame size	Weight [kg]	Part No.
Blanking plate	ISO 1	0.072	1825503282
Gasket ISO 1	-	-	1821015028

Scope of delivery incl. seal and mounting screws

Dimensions



IM0045542

Part No.	ISO 1	A	B	C	D	E	F					
1825503282	ISO 1	14	18	9	7	42	80					

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Throttle plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1



00107463

Standards

Ambient temperature min./max.
Medium temperature min./max.
Medium
Working pressure min./max.

ISO 5599-1

+0 °C / +80 °C
+0 °C / +80 °C
Compressed air
0 bar / 16 bar

Materials:


Base plate
Seals

Aluminum

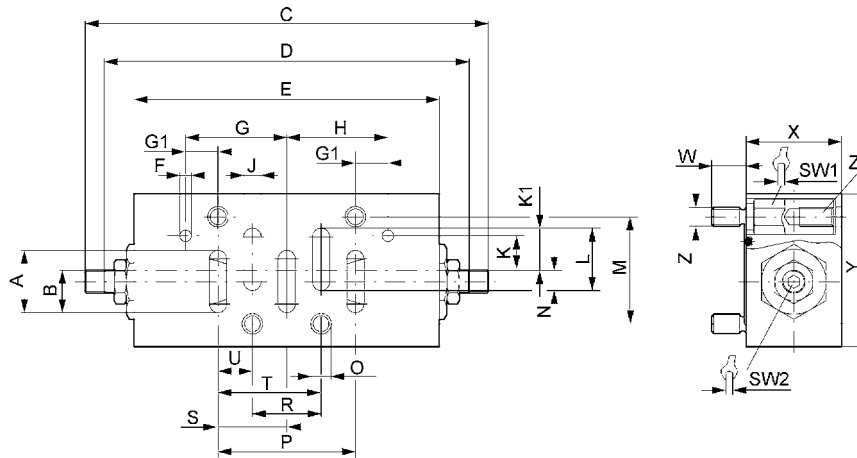
Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

	Frame size	Weight [kg]	Part No.
	ISO 1	0.255	0821201023
Scope of delivery incl. seal and mounting screws			

Dimensions



00107465_a

Part No.	A	B	C	D	E	F	G	G1	H	J	K	K1
0821201023	16.3	11,1	105.6	95.6	80	3	26,5	8.5	26.5	4.5	9	10.8

ISO 5599-1, size 1, Series 581

Accessories

Part No.	L	M	N	O	P	R	S	SW1	SW2	T	U	W
0821201023	16.3	28	5.5	5.2	36	18	18	8	3	27	9	9
Part No.	X	Y	Z	Z1	Weight kg							
0821201023	25	40	M5	M5-9	0.255							

Pressure regulator for vertical stacking

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ Controlled port: 1, 2, 4, 2, 4



00123548

Working pressure min./max.	-- / 16 bar
Ambient temperature min./max.	+5 °C / +50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³

Materials:	
Housing	Zinc
Seals	Butadiene rubber

The delivered product may vary from that in the illustration.

	Frame size	Adjustment range min./max.	Controlled port	Weight	Fig.	Note	Part No.
		[bar]		[kg]			
	ISO 1	0.5 / 12	1	1.15	Fig. 1	1)	0821302048
				1.19		2)	0821302060
	ISO 1	0.5 / 12	2	1.15	Fig. 1	1)	0821302054
				1.19		2)	0821302062
	ISO 1	0.5 / 12	4	1.15	Fig. 1	1)	0821302057
				1.19		2)	0821302063
	ISO 1	0.5 / 12	2, 4	1.57	Fig. 2	1)	0821302051
				1.61		2)	0821302061

1) with pressure gauge

2) with pressure gauge and adapter

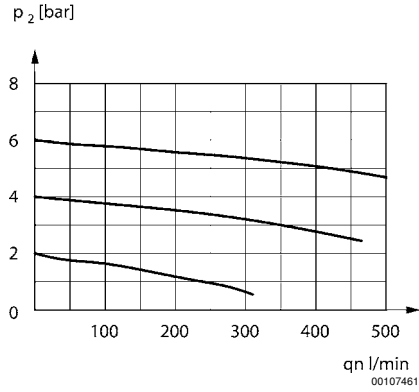
Scope of delivery incl. seal and mounting screws

pressure regulator without gauge adapter, cannot be combined with IS12 ISO valves

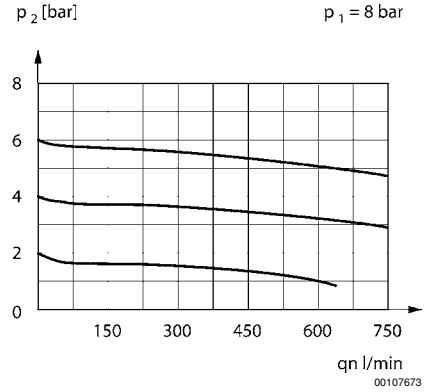
Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Flow rate characteristic

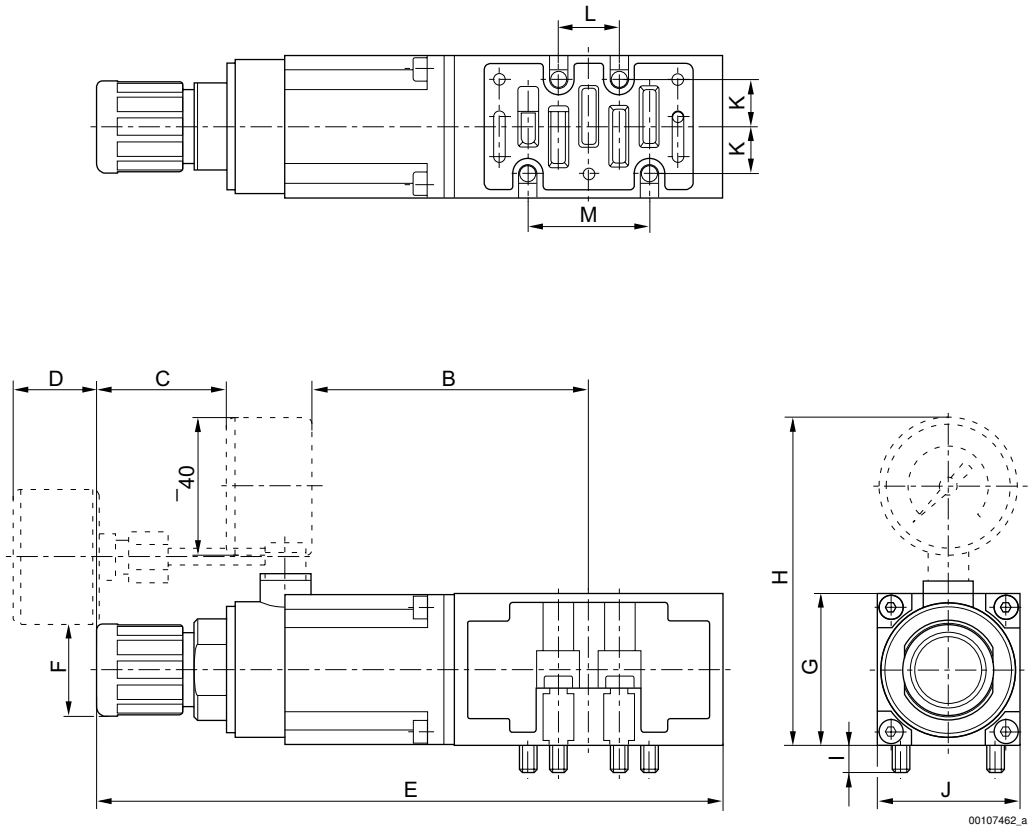


controlled connection 1
Controlled connection 2
Controlled connection 4



Controlled connection 2/4

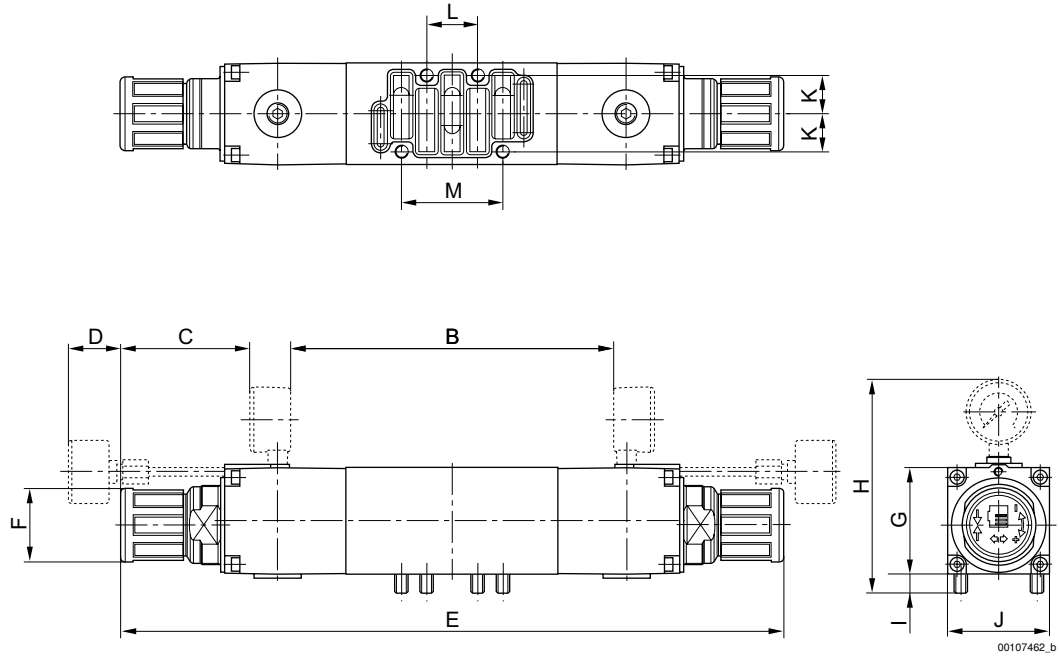
Fig. 1



Part No.	B±5	C±5	D±5	E±7	Ø F	G±5	H±5	I±2.5	J±5	K±2.5	L±2.5	M±5
0821302048	82	38,6	—	186	27	45	97,5	8	42,5	14	18	36
0821302060	—	—	25	186	27	45	97,5	8	42,5	14	18	36
0821302054	82	38,5	—	199	27	45	97,5	8	42,5	14	18	36
0821302062	—	—	25	199	27	45	97,5	8	42,5	14	18	36

ISO 5599-1, size 1, Series 581
Accessories

Fig. 2



Part No.	B±5	C±5	D±5	E±7	Ø F	G±5	H±5	I±2.5	J±5	K±2.5	L±2.5	M±5
0821302051	164	38,6	—	292	27	45	96,5	8	42,5	14	18	36
0821302061	—	—	25	292	27	45	—	8	42,5	14	18	36

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, series 581
Accessories

Transition plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 - ISO 2 ▶ type G ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible



5746-141

Standards

Ambient temperature min./max.
Medium temperature min./max.
Medium
Working pressure min./max.
Surface
Exhaust (3,5)

ISO 5599-1, ISO 1

-20 °C / +70 °C
-20 °C / +70 °C
Compressed air
-1 bar / 16 bar
painted
uncollected exhaust
Ports separated

Materials:

Base plate
Seals

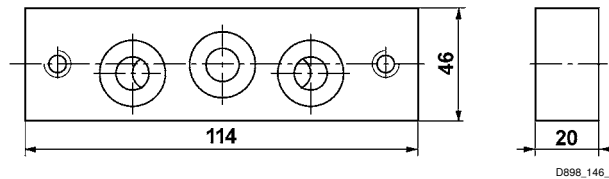
Die-cast aluminum, black painted
Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.
- The transition plate is used for combining subbases of different sizes in the same manifold.

Frame size	Weight	Part No.
	[kg]	
ISO 1, ISO 2	0.27	5802520000
Scope of delivery incl. seal and mounting screws		

Dimensions



ISO 5599-1, size 1, series 581

Accessories

Supply plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Reversed pressure supply permissible



5746-171

Standards

Ambient temperature min./max.

Medium temperature min./max.

Medium

Working pressure min./max.

Mounting screw

Direction of pneumatic port (1)

Direction of pneumatic port (3,5)

ISO 5599-1

-25°C / +70°C

-25°C / +70°C

Compressed air

-0.95 bar / 16 bar

hexagon head

Down

Down

Ports separated

Materials:

Base plate

Seals

Aluminum

Acrylonitrile Butadiene Rubber

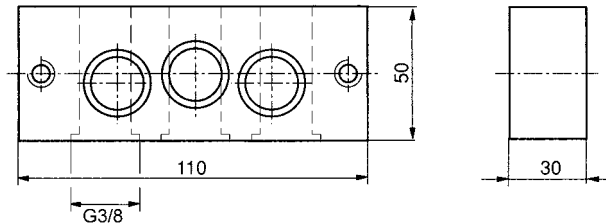
Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection		Weight	Part No.
	Input	Exhaust		
	[1]	[3 / 5]	[kg]	
ISO 1	G 3/8	G 3/8	0.395	8985041162

Scope of delivery incl. seal and mounting screws

Dimensions



D581_190

ISO 5599-1, size 1, Series 581
Accessories

Transition plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 -> ISO 2 ▶ type F ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible



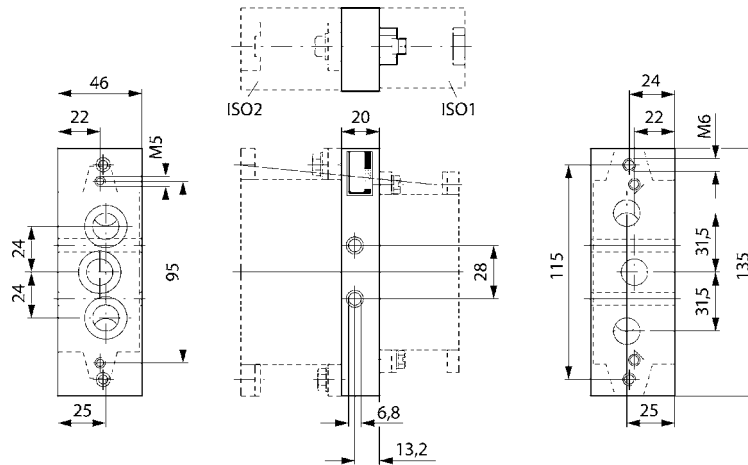
Standards	ISO 5599-1
Ambient temperature min./max.	-15°C / +70°C
Medium temperature min./max.	-15°C / +80°C
Medium	Compressed air
Working pressure min./max.	-0.95 bar / 16 bar
Mounting screw	hexagon head
Exhaust (3,5)	uncollected exhaust
	Ports separated

Materials:	
Housing	Aluminum
Base plate	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Weight [kg]	Part No.
ISO 1 -> ISO 2	0.295	1825503164



00107450

ISO 5599-1, size 1, Series 581

Accessories

Transition plate

- ▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 -> ISO 3 - ISO 2 -> ISO 3 ▶ type F ▶ Can be assembled into blocks
- ▶ Reversed pressure supply permissible



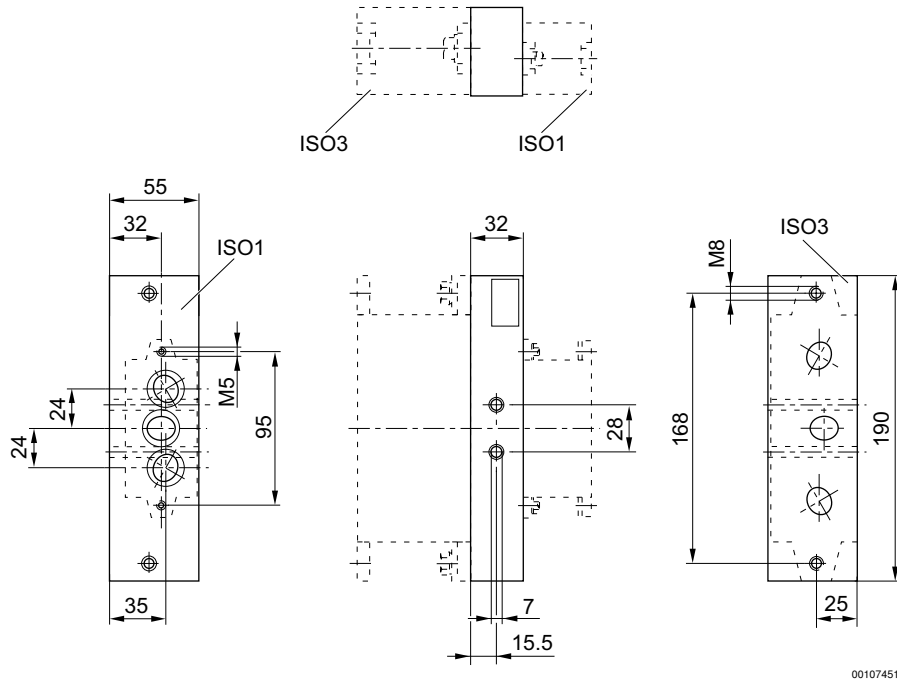
Standards	ISO 5599-1
Ambient temperature min./max.	-15 °C / +70 °C
Medium temperature min./max.	-15 °C / +80 °C
Medium	Compressed air
Working pressure min./max.	-0.95 bar / 16 bar
Mounting screw	hexagon head
Exhaust (3,5)	uncollected exhaust Ports separated
Materials:	
Housing	Aluminum
Base plate	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks
<ul style="list-style-type: none"> ■ 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, see chapter „Technical information“.

Frame size	Weight	Fig.	Part No.
	[kg]		
ISO 1 -> ISO 3	0.825	Fig. 1	1825503166
ISO 2 -> ISO 3	0.79	Fig. 2	1825503165

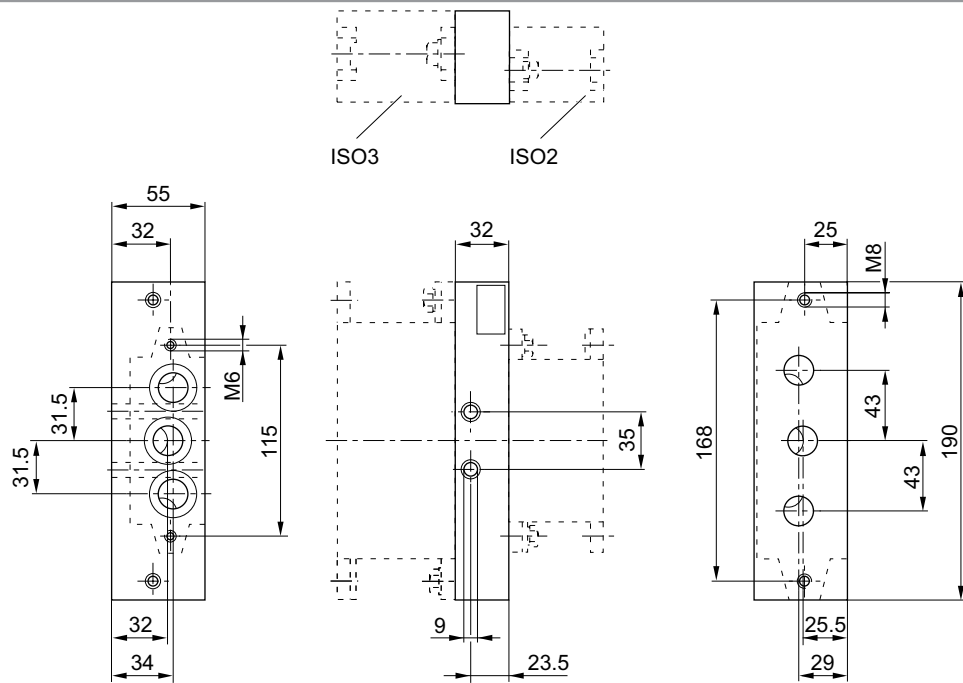
ISO 5599-1, size 1, Series 581
Accessories

Fig. 1



00107451

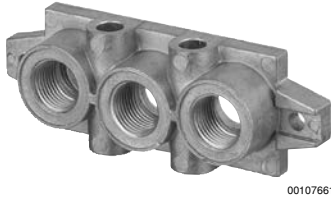
Fig. 2



00107452

ISO 5599-1, size 1, Series 581
Accessories
End plates for adapter plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 - ISO 2 ▶ type F ▶ Can be assembled into blocks ▶ Reversed pressure supply permissible


Standards

Ambient temperature min./max.

Medium temperature min./max.

Medium

Working pressure min./max.

Mounting screw

Direction of pneumatic port (1)

Direction of pneumatic port (3,5)

Exhaust (3,5)

ISO 5599-1

-15 °C / +70 °C

-15 °C / +80 °C

Compressed air

-0.95 bar / 16 bar

hexagon head

On the side

On the side

With directional exhaust (3/5)

Ports separated

Materials:

Base plate

Seals

Die-cast aluminum

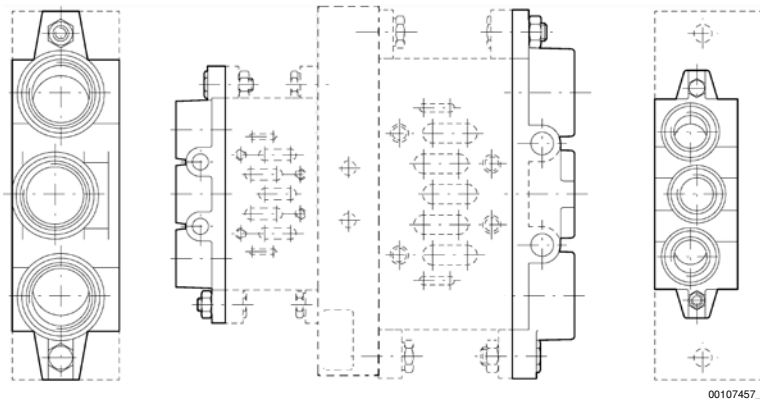
Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Weight	Part No.
	[kg]	
ISO 1, ISO 2	0.255	1825503244

Scope of delivery: 2 end plates of different sizes including seal and mounting screws

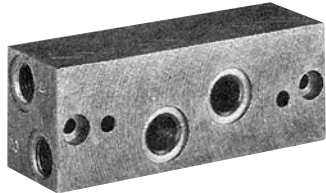


Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Angle subplate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Compressed air connection output: G 1/4



P581_185

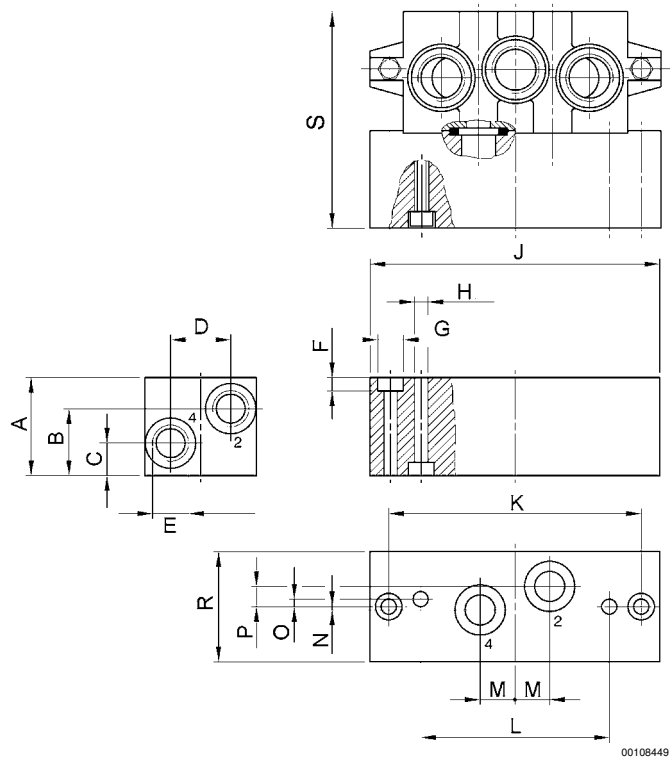
Standards	ISO 5599-1
Ambient temperature min./max.	-15°C / +80°C
Medium temperature min./max.	-15°C / +80°C
Medium	Compressed air
Working pressure min./max.	0 bar / 10 bar
Mounting screw	with hexagon socket
Direction of pneumatic port (2,4)	On the side
Materials:	
Base plate	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection	Weight	Note	Part No.
	Output			
	[2 / 4]	[kg]		
ISO 1	G 1/4	0.413	-	1825503170
		0.401	1)	1825503324

1) With thread connection for differential pressure sensor

ISO 5599-1, size 1, Series 581
Accessories
Dimensions


Part No.	A	B	C	D	E	F	G	H	J	K	L	M
1825503170	37	25	12	22	G 1/4	5,7	Ø 10	Ø 5,5	110	95	71	13
1825503324	37	25	12	22	G 1/4	5,7	Ø 10	Ø 5,5	110	95	71	13
Part No.	N	O	P	R	S	Weight kg						
1825503170	1,5	3	7,5	42	81	0.413						
1825503324	1,5	3	7,5	42	81	0.401						

Valve systems ▶ Standardized valve systems

ISO 5599-1, size 1, Series 581
Accessories

Supply plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type F ▶ Reversed pressure supply permissible



5746-171

Standards	ISO 5599-1
Ambient temperature min./max.	-25 °C / +70 °C
Medium temperature min./max.	-25 °C / +70 °C
Medium	Compressed air
Working pressure min./max.	-0.95 bar / 16 bar
Mounting screw	hexagon head
Direction of pneumatic port (1)	Down
Direction of pneumatic port (3,5)	Down
	Ports separated

Materials:	
Base plate	Aluminum
Seals	Acrylonitrile Butadiene Rubber

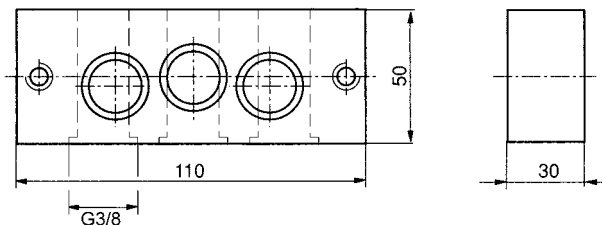
Technical Remarks

- 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, see chapter „Technical information“.

Frame size	Compressed air connection		Weight	Part No.
	Input [1]	Exhaust [3 / 5]		
ISO 1	G 3/8	G 3/8	0.395 [kg]	8985041162

Scope of delivery incl. seal and mounting screws

Dimensions



D581_190

ISO 5599-1, size 1, Series 581

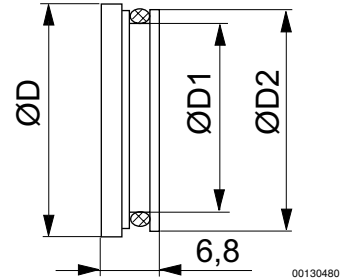
Accessories

Blanking piece

▶ type F ▶ Frame size:ISO 1



00106827



00130480

Part No.	Frame size	Type	Ø D	Ø D1	Ø D2
1820220021	ISO 1	Blanking piece, ISO 1	16.6	11.8	15.8

Part No.	Ambient temperature min./max.	Material	Material Seal	Weight [kg]			
1820220021	-15 / 80	Aluminum	Acrylonitrile Butadiene Rubber	0.008			

Accessories, for intermediate plates

▶ type F ▶ Frame size:ISO 1



00136404

Part No.	Frame size	Type	Delivery quantity [Piece]			
1827009767	ISO 1	Mounting screw	10			
R412000918	ISO 1	O-ring, Ø 17 mm, 12x2,62	50			

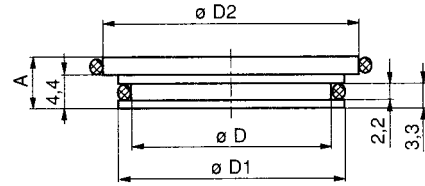
ISO 5599-1, size 1, Series 581
Accessories

Blanking piece, Subbases ISO 5599-1

▶ type F ▶ Frame size: ISO 1 - ISO 3



P581_191



D581_192

Part No.	Frame size	A	D	D1	D2	Ambient temperature min./max.
8985049012	ISO 1	6.2	12.2	14.8	16.5	-25 / 70
8985049022	ISO 2	6.2	15.7	18.3	23	-25 / 70
8985049032	ISO 3	6.9	25.1	27.7	30	-25 / 70

Part No.	Material	Material Seal							
8985049012	Brass	Acrylonitrile Butadiene Rubber							
8985049022	Brass	Acrylonitrile Butadiene Rubber							
8985049032	Brass	Acrylonitrile Butadiene Rubber							

according to VDMA 24 345, form C/D

ISO 5599-1, size 1, series 581

Accessories

Supply plate

▶ standard: ISO 5599-1 ▶ Frame size: ISO 1 ▶ type H ▶ Can be assembled into blocks ▶ Plate principle



00107433

Standards	ISO 5599-1, ISO 1
Medium	Compressed air
Working pressure min./max.	1 bar / 10 bar
Grid dimension	30 mm
Mounting screw	with hexagon socket
Direction of pneumatic port (1)	Up
Exhaust (3,5)	With directional exhaust (3/5)
Materials:	
Housing	Aluminum
Base plate	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

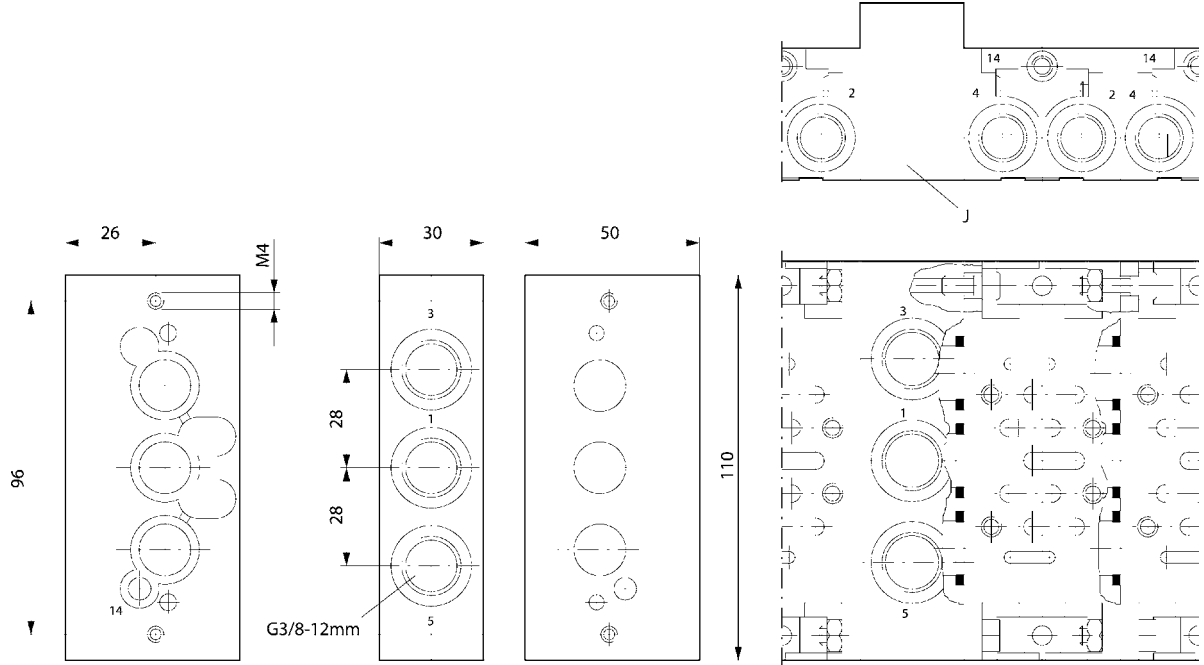
- | |
|--|
| <ul style="list-style-type: none"> ■ The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result! ■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C. ■ The oil content of compressed air must remain constant during the life cycle. ■ Use only the approved oils from AVENTICS, see chapter „Technical information“. |
|--|

Frame size	Compressed air connection		Weight	Part No.
	Input	Exhaust		
	[1]	[3 / 5]	[kg]	
ISO 1	G 3/8	G 3/8	0.22	1825503314

Scope of delivery incl. seal and mounting screws

ISO 5599-1, size 1, series 581
Accessories

Dimensions



00107446

Seal for supply plate
▶ type H



21486

Fig. 2

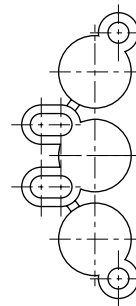
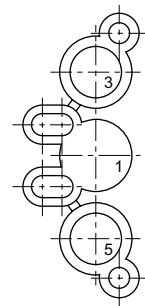


Fig. 1

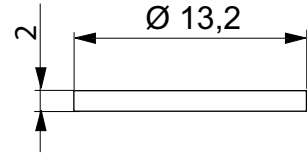


21281

Part No.	Type	Ambient temperature min./max.	Material Seal	Weight [kg]	Delivery quantity [Piece]	Fig.
1821015047	Molded seal, separate channel 1, connect channels 5 and 3	-20 / 70	Acrylonitrile Butadiene Rubber	0.004	1	Fig. 1
1821015043	Molded seal, separate channels 1, 3 and 5	-20 / 70	Acrylonitrile Butadiene Rubber	0.01	1	Fig. 2

ISO 5599-1, size 1, series 581
Accessories
Separator set

▶ type K ▶ Frame size:ISO 1



Part No.	Frame size	*	Ambient temperature min./max.	Material	Weight [kg]
5801880000	ISO 1	a	-20 / 70	Brass	0.012

Delivery as 3-piece set

*Separators labeled with the letters a-d can be assembled immediately on both sides of the intermediate plate that is labeled with the same letter.

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28-10-2016

An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration. Subject to change. © AVENTICS S.à r.l.

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