










<i>Supply of compressed air (1 or P)</i>	
<i>Exhaust (3, 5 or E, R)</i>	
<i>Silencer</i>	
<i>Filter with manual water drain</i>	
<i>Filter with automatic water drain</i>	
<i>Pressure regulator with secondary exhaust</i>	
<i>Lubricator</i>	
<i>FRL – filter/regulator/lubricator-assembly</i>	

Air preparation equipment

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Installation and operation

2

SMC's modular air treatment system enable significant advantages for warehousing, assembly and service.

Each unit is equipped with connection threads and therefore can also be used for single mounting (no extra adapters needed)

With only a small component stock, a machine can be equipped with both modular units and separate regulators, filter and lubricators. This also means benefits in exchange and repair.

The individual units are combined with spacers that also serve as mounting brackets. Replacement of an individual unit is easily done by releasing the components from the spacers. By using threaded adapters, you can replace units without having to unscrew them. Adapters for pressure switches, extra ports, shut-off valves etc. are available as accessories.

Note

Do not exceed stated maximum pressure and temperature values.

Connection threads

Size 10: M5

Size 20–60: G-thread to ISO 228/1. NPT and Rc on request.

Installation

Before the installation of air preparation unit, make sure that all debris, cutting oil, dust, etc., are removed from the piping.

Mounting position

Regulators: Optional

Filter/filter regulators/lubricators: Bowl facing down.

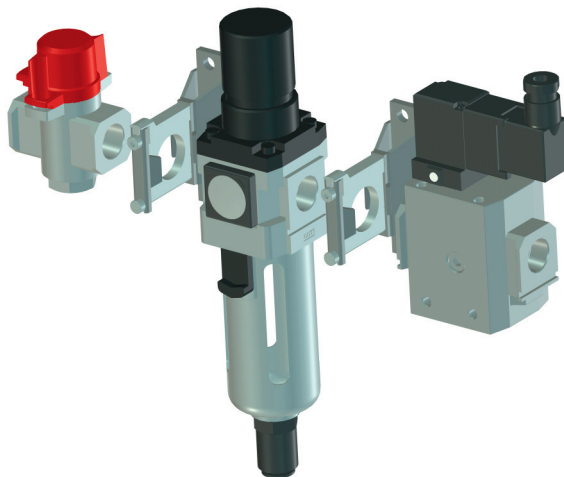
The units should be mounted following the arrow direction.

Bowl

Polycarbonate bowls must not be exposed to synthetic oils, thinner, trichlorethylene, kerosene or other aromatic hydrocarbons. For cleaning, use neutral detergent.

Automatic drain

Drain condensate with plastic pipe/tubing Ø6/4 with max. length of 5 m. The pipe is installed in a way that condensate is always free to be diverted.



Microfilters

The filter element should be replaced once a year or when the pressure drop over the filter reaches 0.1 Mpa.

Installation

The air is pre-filtered with an AF-filter before the micro-filter (AFM).

Pressure regulators

Pressure setting AR10–60

Pull the adjusting knob straight out. Turn to the desired pressure. Lock the set value by pressing the knob. For unhampered pressure setting, at least 60 mm clearance for the adjusting knob is required.

Maintenance

In case of malfunction, check that:

- A primary pressure is higher than the set output pressure.
 - B main valves seat is not clogged.
 - C membrane or spring have not been damaged.
- If unregulated air streams through the regulator, this is most likely due to diaphragm failure.

Filters

Operation

Open the blow-off valve to blow out the collected condensate; do not let the liquid level reach up to the whirl disc.

Maintenance

In case of malfunction, check if the flow direction is correct. If the flow drops, or if the pressure drop increases significantly, the filter element should be cleaned or replaced.

Sub-microfilters

To prolong the life of the filter element it is recommended to pre-filter with a microfilter. Replace the filter element when the pressure drop across the filter reaches 0.1 MPa, or at least once a year.

Lubricators

The minimum flow given in technical data provide proper function. As a reference for setting the oil flow, SMC indicates 5 drops/min.

Operation

Lubricators AL30–AL60 can be filled with oil under pressure. Remove the filler plug and add oil to the mark “Max. Oil Level”. The quantity of distributed oil is regulated by setting the needle valve.

Maintenance

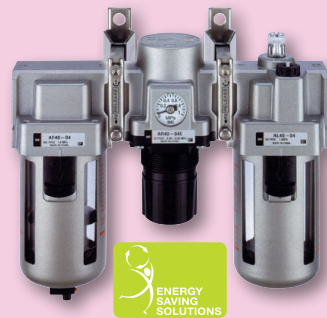
In case of malfunction, check that:

- A flow direction is correct.
- B oil level is between markings “Min. Oil Level” and “Max. Oil Level”.
- C needle valve is not clogged. Clean if necessary.

Air preparation – modular system

2

Medium	Compressed air					
Degree of filtration	Filter, filter regulator: 5 µm Microfilter: 0.3 µm; sub-microfilter: 0.01 µm					
Max. working pressure	1 MPa (10 bar)					
Min. working pressure	Lubricator: 0.05 MPa (0.5 bar); automatic drain: 0.15 MPa (1.5 bar)					
Operating temperature	-5 to 60 °C					
Series	10	20	30	40	50	60
Pressure gauge	1/16	1/8	1/8	1/4	1/4	1/4
Flow	See below					



- New adapters for simplified installation
- Regulator with improved sensitivity and built-in gauge
- Ozone-resistant HNBR seals

Filter AF

With manual drain

Part number	Connection	Flow
AF10-M5	M5	120 l _v /min
AF20-F01	G1/8	800 l _v /min
AF20-F02	G1/4	800 l _v /min
AF30-F02	G1/4	2000 l _v /min
AF30-F03	G3/8	2000 l _v /min
AF40-F03	G3/8	3500 l _v /min
AF40-F04	G1/2	3500 l _v /min
AF40-F06	G3/4	4000 l _v /min
AF50-F06	G3/4	7000 l _v /min
AF60-F10	G1	8000 l _v /min

Flow: 7 bar up to 0.3 bar (0.03 MPa) pressure drop.

Elements: We recommend replacement of elements once a year or at Δp 1 bar.

Filter AF

With automatic drain

Part number	Connection	Flow
AF10-M5C	M5	120 l _v /min
AF20-F01C	G1/8	800 l _v /min
AF20-F02C	G1/4	800 l _v /min
AF30-F02D	G1/4	2000 l _v /min
AF30-F03D	G3/8	2000 l _v /min
AF40-F03D	G3/8	3500 l _v /min
AF40-F04D	G1/2	3500 l _v /min
AF40-F06D	G3/4	4000 l _v /min
AF50-F06D	G3/4	7000 l _v /min
AF60-F10D	G1	8000 l _v /min



Filter AF



Regulator AR

Regulator AR

Without pressure gauge

Part number	Connection
AR10-M5	M5
AR20-F01	G1/8
AR20-F02	G1/4
AR25-F02	G1/4
AR30-F02	G1/4
AR30-F03	G3/8
AR40-F04	G1/2
AR40-F06	G3/4
AR50-F06	G3/4
AR60-F10	G1

With built-in pressure gauge

Part number	Connection
AR20-F01E	G1/8
AR20-F02E	G1/4
AR25-F02E	G1/4
AR30-F02E	G1/4
AR30-F03E	G3/8
AR40-F04E	G1/2
AR40-F06E	G3/4
AR50-F06E	G3/4
AR60-F10E	G1

Panel nut not included. For panel nut and bracket, see accessories.

Regulator AR – with back flow

Without pressure gauge

Part number	Connection
AR20K-F01	G1/8
AR20K-F02	G1/4
AR25K-F02	G1/4
AR30K-F02	G1/4
AR30K-F03	G3/8
AR40K-F04	G1/2
AR40K-F06	G3/4
AR50K-F06	G3/4
AR60K-F10	G1

With built-in pressure gauge

Part number	Connection
AR20K-F01E	G1/8
AR20K-F02E	G1/4
AR25K-F02E	G1/4
AR30K-F02E	G1/4
AR30K-F03E	G3/8
AR40K-F04E	G1/2
AR40K-F06E	G3/4
AR50K-F06E	G3/4
AR60K-F10E	G1

Panel nut not included. For panel nut and bracket, see accessories.

Please contact SMC for converting adapter R1/16 to R1/8 AR10 gauge connection.

Air preparation – modular system

Filter regulator AW – with manual drain

Without pressure gauge

Part number	Connection
AW10-M5	M5
AW20-F01	G1/8
AW20-F02	G1/4
AW30-F02	G1/4
AW30-F03	G3/8
AW40-F04	G1/2
AW40-F06	G3/4
AW60-F06	G3/4
AW60-F10	G1

With built-in pressure gauge

Part number	Connection
AW20-F01E	G1/8
AW20-F02E	G1/4
AW30-F02E	G1/4
AW30-F03E	G3/8
AW40-F04E	G1/2
AW40-F06E	G3/4
AW60-F06E	G3/4
AW60-F10E	G1

Panel nut not included. For panel nut and bracket, see accessories.

Filter regulator AW – with automatic drain

Without pressure gauge

Part number	Connection
AW10-M5C	M5
AW20-F01C	G1/8
AW20-F02C	G1/4
AW30-F02D	G1/4
AW30-F03D	G3/8
AW40-F04D	G1/2
AW40-F06D	G3/4
AW60-F06D	G3/4
AW60-F10D	G1

With built-in pressure gauge

Part number	Connection
AW20-F01CE	G1/8
AW20-F02CE	G1/4
AW30-F02DE	G1/4
AW30-F03DE	G3/8
AW40-F04DE	G1/2
AW40-F06DE	G3/4
AW60-F06DE	G3/4
AW60-F10DE	G1

Panel nut not included. For panel nut and bracket, see accessories.

Filter regulator AW

– with back flow and manual drain

Without pressure gauge

Part number	Connection
AW10-M5	M5
AW20K-F01	G1/8
AW20K-F02	G1/4
AW30K-F02	G1/4
AW30K-F03	G3/8
AW40K-F04	G1/2
AW40K-F06	G3/4
AW60K-F06	G3/4
AW60K-F10	G1

With built-in pressure gauge

Part number	Connection
AW20K-F01E	G1/8
AW20K-F02E	G1/4
AW30K-F02E	G1/4
AW30K-F03E	G3/8
AW40K-F04E	G1/2
AW40K-F06E	G3/4
AW60K-F06E	G3/4
AW60K-F10E	G1

Panel nut not included. For panel nut and bracket, see accessories.

Filter regulator AW

– with back flow and automatic drain

Without pressure gauge

Part number	Connection
AW10-M5C	M5
AW20K-F01C	G1/8
AW20K-F02C	G1/4
AW30K-F02D	G1/4
AW30K-F03D	G3/8
AW40K-F04D	G1/2
AW40K-F06D	G3/4
AW60K-F06D	G3/4
AW60K-F10D	G1

With built-in pressure gauge

Part number	Connection
AW20K-F01CE	G1/8
AW20K-F02CE	G1/4
AW30K-F02DE	G1/4
AW30K-F03DE	G3/8
AW40K-F04DE	G1/2
AW40K-F06DE	G3/4
AW60K-F06DE	G3/4
AW60K-F10DE	G1

Panel nut not included. For panel nut and bracket, see accessories.



Filter regulator AW
– manual drain



Filter regulator AW
– automatic drain

Air preparation – modular system

2

Regulator ARG – with pressure gauge in handle

Part number	Connection
ARG20K-F02G1	G1/4
ARG30K-F03G1	G3/8
ARG40K-F04G1	G1/2

Filter regulator AWG – with pressure gauge in handle

Part number	Connection
AWG20K-F02G1	G1/4
AWG30K-F03G1	G3/8
AWG40K-F04G1	G1/2

Panel nut ordered separately. Pressure gauge placement can be rotated.

Panel nut – for ARG and AWG

Part number
ARG20P-260S
ARG30P-260S
ARG40P-260S

Bracket – with panel nut, for ARG and AWG

Part number
ARG20P-270AS
ARG30P-270AS
ARG40P-270AS



Regulator ARG
– with pressure gauge
in handle



Filter regulator AWG
– with pressure gauge in
handle

Lubricator AL

Part number	Connection
AL10-M5	M5
AL20-F01	G1/8
AL20-F02	G1/4
AL30-F03	G3/8
AL40-F04	G1/2
AL50-F06	G3/4
AL60-F10	G1

Lubricating oil – ISO VG32

Part number	Amount
AL-OLIE	20 liters



Lubricator AL



Microfilter AFM



Sub-microfilter AFD

Microfilter AFM – (filtration 0.3 µm)

Part number	Connection
AFM20-F01	G1/8
AFM20-F02	G1/4
AFM30-F03	G3/8
AFM40-F04	G1/2

Sub-microfilter AFD – (filtration 0.01 µm)

Part number	Connection
AFD20-F01	G1/8
AFD20-F02	G1/4
AFD30-F03	G3/8
AFD40-F04	G1/2

Shut-off valve VHS

Part number	Series	Conn.	Exhaust
VHS20-F01	20	G1/8	G1/8
VHS20-F02	20	G1/4	G1/8
VHS30-F02	25, 30	G1/4	G1/4
VHS30-F03	25, 30	G3/8	G1/4
VHS40-F02	40	G1/4	G3/8
VHS40-F03	40	G3/8	G3/8
VHS40-F04	40	G1/2	G3/8
VHS40-F06	40	G3/4	G1/2
VHS50-F06	50, 60	G3/4	G1/2
VHS50-F10	50, 60	G1	G1/2

Silencer AN – for VHS

Part number	Connection
AN10-01	R1/8
AN20-02	R1/4
AN30-03	R3/8
AN40-04	R1/2



Shut-off valve
VHS



Silencer AN

Air preparation – modular system

Pressure switch IS10M – pressure range: 0.1–0.6 MPa
(max. working pressure: 0.7 MPa)

Part number	Series
IS10M-20-6L	20
IS10M-30-6L	25.30
IS10M-40-6L	40
IS10M-60-6L	50, 55, 60

Pressure switch IS10E – with threaded connection (adapter), pressure range: 0.1–0.6 MPa (max. working pressure: 0.7 MPa)

Part number	Series	Connection
IS10E-20F02-6L	20	G1/4
IS10E-30F03-6L	25.30	G3/8
IS10E-40F04-6L	40	G1/2



Pressure switch IS10M



Pressure switch IS10E

Pressure gauge GP46,
with pressure switch



Pressure gauge G□

Part number	Connection	Series	Pressure
G27-10-R1	R1/16	10	0–1.0 MPa
G36-2-01	R1/8	20, 30	0–0.2 MPa
G36-4-01	R1/8	20, 30	0–0.4 MPa
G36-10-01	R1/8	20, 30	0–1.0 MPa
G36-10-01-L	R1/8	20, 30	0–1.0 MPa
G46-2-02	R1/4	40, 50, 60	0–0.2 MPa
G46-4-02	R1/4	40, 50, 60	0–0.4 MPa
G46-10-02	R1/4	40, 50, 60	0–1.0 MPa
G46-10-02-L	R1/4	40, 50, 60	0–1.0 MPa

Panel mounted pressure gauge G46

Part number	Connection	Port diam.	Pressure
G46-10-01M-C	R1/8 + female M5	48.5 mm	0–1.0 MPa



Pressure gauge G□



Pressure gauge G□-L

Please contact SMC for converting adapter R1/16 to R1/8 AR10 gauge connection.

Pressure gauge GP46 – with pressure switch, 0.1–0.8 MPa

Part number	Connection	Pressure
GP46-10-01-Q	R1/8	0–1.0 MPa
GP46-10-02-Q	R1/4	0–1.0 MPa

Panel mounting kit – for GP46

Part number
1305104-4A

Pressure gauge GC3 – square, for panel mounting

Part number	Connection	Series	Pressure
GC3-10AS	Integrated mounting	20, 30, 40, 50, 60	0–1.0 MPa
GC3-2AS	Integrated mounting	20, 30, 40, 50, 60	0–0.2 MPa

Digital pressure switch ISE35

– integrated, including 2 meter cable

Part number ¹	Connection	Series	Pressure
ISE35-N-65-LA	Integrated mounting	20, 30, 40, 50, 60	0–1.0 MPa
ISE35-R-65-LA	Integrated mounting	20, 30, 40, 50, 60	0–1.0 MPa

1. ISE35-N = bottom-mounted cable, ISE35-R = top-mounted cable.



ISE35-N



ISE35-R

Digital pressure switch ISE35,
mounted on
AR regulator



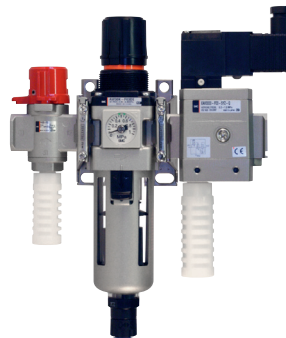
FR combination – shut-off valve VHS,
filter regulator AW and soft start-up AV

With automatic drain, without pressure gauge

Part number	Connection	Series
AC20XSE-F02C-1000	G1/4	20
AC30XSE-F03D-1001	G3/8	30
AC40XSE-F04D-1002	G1/2	40
AC50XSE-F06D-1003	G3/4	50, 60
AC50XSE-F10D-1004	G1	50, 60

With automatic drain and built-in pressure gauge

Part number	Connection	Series
AC20XSE-F02CE-1005	G1/4	20
AC30XSE-F03DE-1006	G3/8	30
AC40XSE-F04DE-1007	G1/2	40
AC50XSE-F06DE-1008	G3/4	50, 60
AC50XSE-F10DE-1009	G1	50, 60



FR combination

Air preparation – modular system

Accessories and spare parts

2

Connection block

Part number	Series	Connection
E100-M5	10	M5
E200-F01	20	G1/8
E200-F02	20	G1/4
E200-F03	20	G3/8
E300-F03	25, 30	G3/8
E300-F04	25, 30	G1/2
E400-F02	40	G1/4
E400-F03	40	G3/8
E400-F04	40	G1/2
E400-F06	40	G3/4
E600-F06	50, 55, 60	G3/4
E600-F10	50, 55, 60	G1

Output with check valve

– prevents back flow of lubricated air

Part number	Series	Connection
AKM2000-F02	20	G1/4
AKM3000-F02	25, 30	G1/4
AKM4000-F03	40	G3/8

Similar to older 1000–6000 series.

Distribution unit – the main connections are not threaded

Part number	Series	Connection
Y14-M5	10	M5
Y24-F01	20	G1/8
Y24-F02	20	G1/4
Y34-F01	25, 30	G1/8
Y34-F02	25, 30	G1/4
Y44-F02	40	G1/4
Y44-F03	40	G3/8



Connection block



Output with check valve



Distribution unit

Output

Part number	Series	Connection
Y110-M5	10	M5
Y210-F01	20	G1/8
Y210-F02	20	G1/4
Y310-F01	25, 30	G1/8
Y310-F02	25, 30	G1/4
Y410-F02	40	G1/4
Y410-F03	40	G3/8
Y610-F03	50, 55, 60	G3/8
Y610-F04	50, 55, 60	G1/2

Mounting adapter

Part no	Series
Y100	10
Y200	20
Y300	25, 30
Y400	40
Y500	40-06 ¹
Y600	50, 55, 60

Mounting adapter – with T-bracket

Part no	Series
Y100T	10
Y200T	20
Y300T	25, 30
Y400T	40
Y500T	40-06 ¹
Y600T	50, 55, 60

1. Y500 series does not fit the size 50 but is designed for size 40 with 3/4" thread (F06).



Output



Mounting adapter



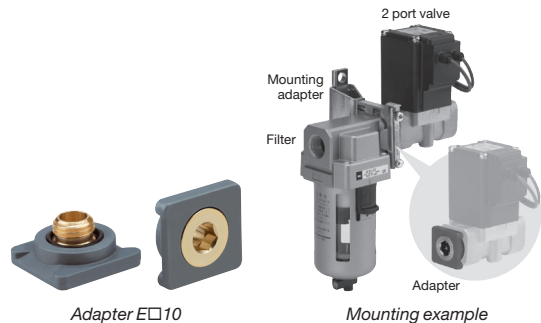
Mounting adapter with T-bracket

Adapter – FRL

Part number	Connection	Fits mounting adapter
E210-U01	1/8	Y200 & Y200T
E210-U02	1/4	Y200 & Y200T
E310-U02	1/4	Y300 & Y300T
E310-U03	3/8	Y300 & Y300T
E410-U02	1/4	Y400 & Y400T
E410-U03	3/8	Y400 & Y400T
E410-U04	1/2	Y400 & Y400T

Plug – FRL

Part number	Fits mounting adapter
E210-P	Y200 & Y200T
E310-P	Y300 & Y300T
E410-P	Y400 & Y400T



Adapter E10

Mounting example

Angle adapter – FRL, female taper thread

Part number	Connection	Fits mounting adapter
E300P-070S-02	Rc1/4	Y300 & Y300T
E300P-070S-03	Rc3/8	Y300 & Y300T
E400P-070S-03	Rc3/8	Y400 & Y400T
E400P-070S-04	Rc1/2	Y400 & Y400T

Air preparation – modular system

Knob cover – only fits new series. Lock not included.

Part number	Fits
AR20P-580AS	AR20, AW20
AR25P-580AS	AR25, AW25
AR30P-580AS	AR30, AW30
AR40P-580AS	AR40, AW40

Lock brace – for up to 6 padlocks

Part number
NVHS-OG-80



Knob cover AR



Lock brace

Panel nut

Part number	Fits
AR10P-260S	AR10, AW10
AR20P-260S	AR20, AW20
AR25P-260S	AR25
AR30P-260S	AR30, AW30
AR40P-260S	AR40, AW40
AR50P-260S	AR50, AW50, AW60

Mounting bracket – panel nut included

Part number	Fits
AR10P-270AS	AR10, AW10
AR20P-270AS	AR20
AW20P-270AS	AW20
AR25P-270AS	AR25
AR30P-270AS	AR30, AW30
AR40P-270AS	AR40, AW40
AR50P-270AS	AR50, AR60, AW60
AF20P-050AS	AF20, AFM20, AFD20, AL20
AF30P-050AS	AF30, AFM30, AFD30, AL30
AF40P-050AS	AF40, AFM40, AFD40, AL40
AF50P-050AS	AF50, AR60 AL50, AL60

Filter element

Part number	Fits
AF10P-060S	AF, AW10
AF20P-060S	AF, AW20
AF30P-060S	AF, AW30
AF40P-060S	AF, AW40
AF50P-060S	AF, AW50
AF60P-060S	AF60
AW60P-060S	AW60
AFM20P-060AS	AFM20
AFM30P-060AS	AFM30
AFM40P-060AS	AFM40
AFD20P-060AS	AFD20
AFD30P-060AS	AFD30
AFD40P-060AS	AFD40

Filter bowl

Part number	Fits	Materials
C1SF	AF, AW10	Polycarbonate
C2SF	AF, AW20	Polycarbonate
C3SF	AF, AW30	Polycarbonate
C4SF	AF, AW40, 50, 60	Polycarbonate
C1SF-6	AF, AW10	Nylon
C2SF-6	AF, AW20	Nylon
C3SF-6	AF, AW30	Nylon
C4SF-6	AF, AW40, 50, 60	Nylon
C1SF-2	AF, AW10	Metal
C2SF-2	AF, AW20	Metal
C3SF-2	AF, AW30	Metal
C4SF-2	AF, AW40, 50, 60	Metal

Filter bowl – polycarbonate, with automatic drain

Part number	Fits	Flow direction
AD17	AF, AW10	Normally closed
AD27	AF, AW20	Normally closed
AD38	AF, AW30	Normally open
AD48	AF, AW40, 50, 60	Normally open
AD37	AF, AW30	Normally closed
AD47	AF, AW40, 50, 60	Normally closed

Lubricator bowl – polycarbonate

Part number	Fits
C1SL	AL10
C2SL	AL20
C3SL	AL30
C4SL	AL40
AL10P-080AS	Sight glass AL10
AL20P-080AS	Sight glass AL20, 30, 40

Lubricating oil – ISO VG32

Part number	Amount
AL-OLIE	20 liters

EAV – soft start-up valve

2

Medium	Air, lubricated or not lubricated
Degree of filtration	5 µm
Max. working pressure	1 MPa (10 bar)
Min. working pressure	0.2 MPa (2 bar)
Operating temperature	0 to 60 °C
Pressure gauge	G1/8
Voltage	24 VDC (220 VAC and others on request)
Power requirements	1.8 W
Electrical connection	Connection DIN 43650BY (included in EAV)
Enclosure	IP65

- Easy to connect to air preparation unit
- Gives smaller dimensions
- Combinations can be customized and pre-assembled



Soft start-up valve – 24 VDC, with connection

Part number	Connection	Flow
EAV2000-F02-5YZ-Q	G1/4	1168 l _v /min
EAV3000-F03-5YZ-Q	G3/8	2160 l _v /min
EAV4000-F04-5YZ-Q	G1/2	3533 l _v /min
EAV5000-F06-5YZ-Q	G3/4	6160 l _v /min
EAV5000-F10-5YZ-Q	G1	6653 l _v /min

EAV pressurizes the system by adjustable throttle. When the EAV reached 50% of the set pressure, it opens to full flow. The EAV has quick exhaust in case of emergency. For 220 VAC, contact SMC.

Soft start-up valve – pneumatic

Part number	Connection	Flow
EAVA2000-F02	G1/4	1168 l _v /min
EAVA3000-F03	G3/8	2160 l _v /min
EAVA4000-F04	G1/2	3533 l _v /min

Pilot valve for EAV – spare part

Part number	Voltage
SF4-5YZ-80-Q	24 VDC
SF4-4YZ-80-Q	220 VAC

Silencer – for exhaust port

Part number	Silencing	Connection
AN20-02	30 dB	R1/4
AN30-03	30 dB	R3/8
AN40-04	30 dB	R1/2
AN500-06	30 dB	R3/4
AN600-10	30 dB	R1

Silencer ordered separately.

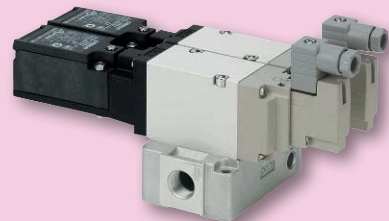
VP-X538 – valve for safety-related systems



Type	VP544/VP744	VP544R/VP744R
Medium	Air	
Working pressure	0.25–0.7 MPa (2.5–7 bar)	
Operation	Internal pilot type	External pilot type
Operating temperature	–10 to 50 °C (no freezing/no condensation)	
Voltage	24 VDC	
Electrical connection	DIN 43650C and M12 connector	
Enclosure	IP65	

Note! No less than 0.25 MPa external pilot pressure (as working pressure). Use external pilot type if supply pressure may drop or is choked on start-up. Valve must be combined with a relevant control system in order to comply with EN ISO 13849-1.

- Easy modular connection to air preparation unit
- Compact size
- For control systems in category 3 and 4 (EN ISO 13849-1)
- Redundant valves and mechanical feedback on control inputs



Valve

Part number	Connection	Flow
VP544-5YZ1-03F-M-X538	G3/8	1275 l _v /min
VP544R-5YZ1-03F-M-X538	G3/8	1275 l _v /min
VP744-5YZ1-04F-M-X538	G1/2	2258 l _v /min
VP744R-5YZ1-04F-M-X538	G1/2	2258 l _v /min

AMG – water separator; AM, AMD & AMH – mist and micro mist separators

2

Medium	Compressed air						
Degree of filtration	See below						
Max. working pressure	1.0 MPa (10 bar)						
Min. working pressure	0.05 MPa (0.5 bar); 0.15 MPa (1.5 bar) with automatic drain						
Operating temperature	5 to 60 °C						
Size	150	250	350	450	550	650	850
Connection	1/8	1/4	3/8	1/2	3/4	1	1 1/2
	1/4	3/8	1/2	3/4	1	1 1/2	2

- Water separator removes 99% of the condensed water (AMG)
- Micro and sub-microfilters
- Automatic drain



Water separator – with automatic drain

Part number	Connection	Flow ¹
AMG150C-F01D	G1/8	300 l _r /min
AMG250C-F02D	G1/4	750 l _r /min
AMG350C-F03D	G3/8	750 l _r /min
AMG350C-F03D	G3/8	1500 l _r /min
AMG450C-F04D	G1/2	2200 l _r /min
AMG550C-F06D	G3/4	3500 l _r /min
AMG650-F10D	G1	6000 l _r /min
AMG850-F14D	G1 1/2	12000 l _r /min

Microfilter – with automatic drain (filtration 0.3 µm)

Part number	Connection	Flow ¹
AM250C-F02D	G1/4	750 l _r /min
AM350C-F03D	G3/8	1500 l _r /min
AM450C-F04D	G1/2	2200 l _r /min
AM550C-F06D	G3/4	3500 l _r /min
AM650-F10D-T	G1	6000 l _r /min
AM850-F14D-T	G1 1/2	12000 l _r /min

Sub-microfilter – (filtration 0.01 µm)

Part number	Connection	Flow ¹
AMD250C-F02-T	G1/4	500 l _r /min
AMD350C-F03-T	G3/8	1000 l _r /min
AMD450C-F04-T	G1/2	2000 l _r /min
AMD550C-F06-T	G3/4	3500 l _r /min
AMD650-F10-T	G1	6000 l _r /min
AMD850-F14-T	G1 1/2	12000 l _r /min

Combined micro- and sub-microfilter

– (filtration 0.01 µm)

Part number	Connection	Flow ¹
AMH250C-F02-T	G1/4	500 l _r /min
AMH350C-F03-T	G3/8	1000 l _r /min
AMH450C-F04-T	G1/2	2000 l _r /min
AMH550C-F06-T	G3/4	3500 l _r /min
AMH650-F10-T	G1	6000 l _r /min
AMH850-F14-T	G1 1/2	12000 l _r /min

1. Specified maximum flow is at 0.7 MPa (7 bar).

Filter element

Part number	Part number
AMG-EL150	AMD-EL250
AMG-EL250	AMD-EL350
AMG-EL350	AMD-EL450
AMG-EL450	AMD-EL550
AMG-EL550	AMD-EL650
AMG-EL650	AMD-EL850
AMG-EL850	AMH-EL250
AM-EL250	AMH-EL350
AM-EL350	AMH-EL450
AM-EL450	AMH-EL550
AM-EL550	AMH-EL650
AM-EL650	AMH-EL850
AM-EL850	

Brackets assembly – for AM series

Part number	Size
AM-BM101	150
AM-BM102	250
AM-BM103	350
AM-BM104	450
AM-BM105	550
BM56	650
BM57	850

Mounting adapter

Part number	Series
Y200	AM□150C
Y300	AM□250C
Y400	AM□350C
Y500	AM□450C
Y600	AM□550C

Mounting adapter with T-bracket can not be used. Use brackets for wall mounting. For series 650 or 850, use fittings (see chapter 10).



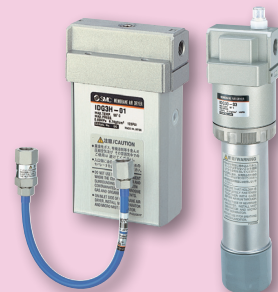
Mounting adapter

Water separator
AMGMicrofilter and
sub-microfilter AM,
AMD and AMH

IDG – membrane air dryer

2

Type	1	5	10	20	30	50	60	75	100
Medium	Air								
Pressure range	0.3–0.85 MPa (3–8.5 bar)				0.3–1.0 MPa (3–10 bar)				
Operating temperature	–5 to 55 °C				–5 to 50 °C				
Dew point	–20 °C	–20, –15 °C	–20, –15, –40 °C						
Dew point indicator	–	Req.	Standard						



- No power supply required
- Compact and lightweight design
- Can be combined with SMC's modular regulators and filters
- Dew point –60 °C on request

Membrane air dryer – standard, dew point –20 °C, discharge 20%

Part number	Flow, OUT	Connection
IDG1-F02	10 l _v /min	1/4
IDG5-F01	50 l _v /min	1/8
IDG5-F02	50 l _v /min	1/4
IDG10-F02	100 l _v /min	1/4
IDG10-F03	100 l _v /min	3/8
IDG20-F02	200 l _v /min	1/4
IDG20-F03	200 l _v /min	3/8
IDG30A-F02	300 l _v /min	1/4
IDG30A-F03	300 l _v /min	3/8
IDG50A-F02	500 l _v /min	1/4
IDG50A-F03	500 l _v /min	3/8
IDG60-F03	600 l _v /min	3/8
IDG60-F04	601 l _v /min	1/2
IDG75-F04	750 l _v /min	1/2
IDG100-F04	1000 l _v /min	1/2

Membrane air dryer – low discharge, dew point –15 °C, discharge 10%

Part number	Flow, OUT	Connection
IDG5H-F01	50 l _v /min	1/8
IDG5H-F02	50 l _v /min	1/4
IDG10H-F02	100 l _v /min	1/4
IDG10H-F03	100 l _v /min	3/8
IDG20H-F02	200 l _v /min	1/4
IDG20H-F03	200 l _v /min	3/8
IDG30HA-F02	300 l _v /min	1/4
IDG30HA-F03	300 l _v /min	3/8
IDG50HA-F02	500 l _v /min	1/4
IDG50HA-F03	500 l _v /min	3/8
IDG60H-F03	600 l _v /min	3/8
IDG60H-F04	601 l _v /min	1/2
IDG75H-F04	750 l _v /min	1/2
IDG100H-F04	1000 l _v /min	1/2

Membrane air dryer – low dew point, dew point –40 °C, discharge 25%

Part number	Flow, OUT	Connection
IDG30LA-F02	75 l _v /min	1/4
IDG30LA-F03	75 l _v /min	3/8
IDG50LA-F02	110 l _v /min	1/4
IDG50LA-F03	110 l _v /min	3/8
IDG60L-F03	170 l _v /min	3/8
IDG60L-F04	170 l _v /min	1/2
IDG75L-F04	240 l _v /min	1/2
IDG100L-F04	300 l _v /min	1/2

Membrane air dryer – standard with connection for discharge flow, dew point –20 °C, discharge 20%

Part number	Flow, OUT	Connection
IDG1-F02-P	10 l _v /min	1/4
IDG5-F01-P	50 l _v /min	1/8
IDG5-F02-P	50 l _v /min	1/4
IDG10-F02-P	100 l _v /min	1/4
IDG10-F03-P	100 l _v /min	3/8
IDG20-F02-P	200 l _v /min	1/4
IDG20-F03-P	200 l _v /min	3/8
IDG30A-F02-P	300 l _v /min	1/4
IDG30A-F03-P	300 l _v /min	3/8
IDG50A-F02-P	500 l _v /min	1/4
IDG50A-F03-P	500 l _v /min	3/8
IDG60-F03-P	600 l _v /min	3/8
IDG60-F04-P	601 l _v /min	1/2
IDG75-F04-P	750 l _v /min	1/2
IDG100-F04-P	1000 l _v /min	1/2

For connection between old and current series of SMC's modular FRL, please contact SMC.

Facts

Dew Point: Atmospheric dew point.

Flow, OUT: Flow at standard operating conditions.

Discharge: Relationship between flow rate of leakage flow and flow rate of supply at standard operating conditions. Contact SMC for details.

IDFA – dryer

Supply pressure	0.15–1 MPa (1.5–10 bar); K versions: 0.15–1.6 MPa (1.5–16 bar)
Incoming air temperature	5 to 50 °C
Ambient air temperature	2 to 40 °C (relative humidity 85 % or less)
Voltage	230 V, 50 Hz

- Modern design ensures a constant stable pressure dew point and low power consumption
- Heat exchangers in stainless steel gives long life combined with low pressure drop



Flow capacity

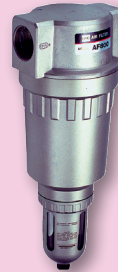
Type	ISO8573.1 class 4 3 °C dew point	ISO8573.1 class 5 7 °C dew point	ISO8573.1 class 6 10 °C dew point
IDFA3E-23	12 m ³ /h	15 m ³ /h	17 m ³ /h
IDFA4E-23	24 m ³ /h	31 m ³ /h	34 m ³ /h
IDFA6E-23-K	36 m ³ /h	46 m ³ /h	50 m ³ /h
IDFA8E-23-K	65 m ³ /h	83 m ³ /h	91 m ³ /h
IDFA11E-23-K	80 m ³ /h	101 m ³ /h	112 m ³ /h
IDFA15E-23-K	120 m ³ /h	152 m ³ /h	168 m ³ /h
IDFA22E-22-K	182 m ³ /h	231 m ³ /h	254 m ³ /h
IDFA37E-37-K	273 m ³ /h	347 m ³ /h	382 m ³ /h
IDFA55E-23	390 m ³ /h	432 m ³ /h	510 m ³ /h
IDFA75E-23	600 m ³ /h	720 m ³ /h	822 m ³ /h

AF – high flow air filter

Medium	Compressed air	
Degree of filtration	5 µm	
Max. working pressure	1 MPa (10 bar)	
Min. working pressure	0.1 MPa (1 bar)	
Operating temperature	5 to 60 °C	
Size	800	900
Connection	G1 1/2	G2
Flow¹	10000 l _v /min	15000 l _v /min

1. Flow at 7 bar and ΔP 0.02.

- High flow
- Degree of filtration 5 µm
- Ideal filter for supply lines



Air filter – with automatic drain

Part number	Connection
AF811-F14	G1 1/2
AF911-F20	G2

Filter element

Part number	For filter
11345-5B	AF811
11352-5B	AF911

Bowl – with automatic drain (spare part)

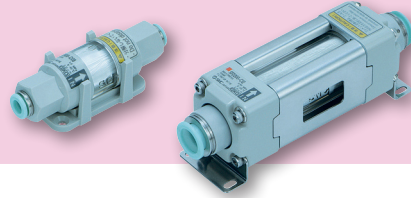
Part number
EAD34F

SFD – clean air filter, in-line

2

Medium	Air/nitrogen
Degree of filtration	0.01 µm
Working pressure	1.0 MPa (10 bar)
Operating temperature	5 to 45 °C

- Suitable for sensitive air blow applications



Clean air filter

Part number	Description	Flow
SFD100-C06	Filter in-line 0.01 µm	80 l _v /min
SFD200-C08	Filter in-line 0.01 µm	300 l _v /min
SFD100-F02	Filter in-line 0.01 µm	100 l _v /min
SFD200-F02	Filter in-line 0.01 µm	500 l _v /min

Note! Fixing brackets not included.

AMC – filter silencer

Medium	Compressed air, lubricated or not lubricated				
Degree of filtration	0.3 µm (99% oil removal)				
Max. working pressure	1 MPa (10 bar)				
Operating temperature	2 to 60 °C				
Size	310	510	610	810	910
Connection	R3/8	R3/4	R1	R1 1/2	R2
Recommended max. flow	300 l _v /min	1000 l _v /min	3000 l _v /min	6000 l _v /min	10000 l _v /min

- Provides better working environment
- Silencer and oil separator



Filter silencer

Part number	Connection
AMC310-03	R3/8
AMC510-06	R3/4
AMC610-10	R1
AMC810-14	R1 1/2
AMC910-20	R2

Filter element

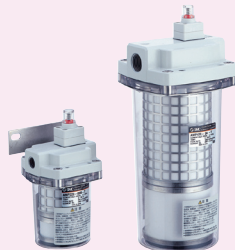
Part number	For filter
AMC-EL3	AMC310
AMC-EL5	AMC510
AMC-EL6	AMC610
AMC-EL8	AMC810
AMC-EL9	AMC910

Bracket

Part number	For filter
BE30	AMC310
BE50	AMC510
BE60	AMC610

For AMC810 and -910 there is no bracket.

For cleanroom versions, contact SMC.



ARM5, -10 & -11 – compact manifold regulator

2

Medium	Air
Max. working pressure	1.0 MPa (10 bar)
Secondary pressure	0.05–0.7 MPa (0.5–7.0 bar)
Operating temperature	5 to 60 °C
Flow	ARM5: 200 l _v /min; ARM10 & -11: 300 l _v /min



- Flexible design allows numerous combinations
- Ideal in applications with centralized pressure regulation for different functions

Regulator – single mounting

Part number	Handle position	Tube connect.
ARM5SA-06-A	Front-mounted handle	4 mm
ARM5SA-08-A	Front-mounted handle	6 mm ¹
ARM10-08BG	Top-mounted handle	6 mm ¹
ARM10F1-08GPC	Front-mounted handle	6 mm ¹

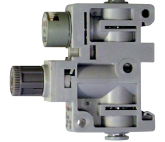
1. Tube connection can easily be changed to 4 mm.



ARM10, top-mounted handle



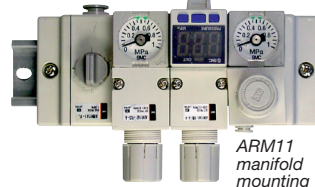
ARM5, front-mounted handle



Tillbehör

Part number	Type
136134	Mounting bracket ¹ ARM10
136133	Panel nut ¹ ARM10
GC3-10A-X2101	Pressure gauge ARM10 (0–1 MPa)
G14-8-JA	Pressure gauge ARM5 (0–0.8 MPa)

1. Panel nut required for bracket.



ARM11 manifold mounting

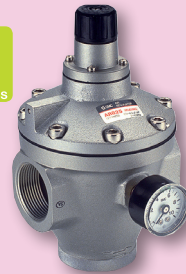


ARM5, manifold mounting

For block-mounted regulators with individual, or common supply a complete catalog is needed to determine version. Contact SMC.

AR & XT13 – high flow regulator

Type	AR425/ XT13-253	AR625/ XT13-207	AR825/ XT13-202	AR925/ XT13-283
Medium	Compressed air, lubricated or not lubricated			
Degree of filtration	10 μm			
Max. working pressure	1 MPa (10 bar)			
Secondary pressure	0.05–0.85 MPa (0.5–8.5 bar)			
Operating temperature	5 to 60 °C			
Connection	G1/2	G1	G1 1/2	G2
Max. flow	6000 l _v /min	10000 l _v /min	16000 l _v /min	18000 l _v /min



- Internal pilot regulator provides accuracy
- Ideal for supply lines

Pressure regulator

Part number	Connection
EAR425-F04	G1/2
EAR625-F06	G 3/4
EAR625-F10	G1
EAR825-F14	G1 1/2
EAR925-F20	G2

Pilot operated pressure regulator

Part number	Connection	Pilot port
XT13-253-F04	G1/2	1/4
XT13-207-F10	G1	1/4
XT13-202-F14	G1 1/2	1/4
XT13-283-F20	G2	1/4

Mounting bracket

Part number	For regulator
B24P	AR425/XT13-253
B25P	AR625/XT13-207

Pressure gauge

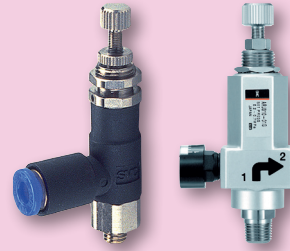
Part number	For regulator
G46-10-02	AR425/625/825/925 XT13-253/207/202/283

ARJ – miniature regulator

2

Type	ARJ1020	ARJ210	ARJ310
Medium	Compressed air, lubricated or not lubricated		
Degree of filtration	5 µm		
Max. working pressure	0.8 MPa (8 bar)		
Secondary pressure	0.1–0.7 MPa (1–7 bar)	0.2–0.7 MPa (2–7 bar)	0.2–0.7 MPa (2–7 bar)
Operating temperature	5 to 60 °C		
Max. flow	200 l _v /min	200 l _v /min	500 l _v /min

- Compact
- Integrated push-in fitting (ARJ1020)



Miniature regulator

Part number	Connection IN	Connection OUT
ARJ1020F-M5-04	M5	Ø4
ARJ1020F-M5-06	M5	Ø6
ARJ210-M5	External R1/8, internal M5	M5
ARJ310F-01-04	External R1/8, internal M5	Ø4
ARJ310F-01-06	External R1/8, internal M5	Ø6
ARJ310-01	External R1/8, internal M5	1/8

Mounting bracket

Part number	Series
134856	ARJ310

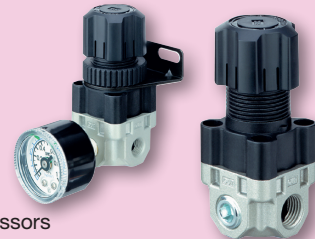
Pressure gauge

Part number	Series
G27-10-M5-X201	ARJ210
G15-10-01	ARJ310

ARX – high pressure regulator

Type	ARX20	ARX21
Medium	Compressed air	
Max. working pressure	2.0 MPa (20 bar)	
Secondary pressure	0.05–0.85 MPa (0.5–8.5 bar)	0.05–0.3 MPa (0.5–3 bar)
Operating temperature	–5 to 60 °C	
Max. flow	1000 l _v /min	400 l _v /min

- Supply pressure up to 2 MPa (20 bar)
- Very compact
- Three alternative output ports
- Suitable regulator for small compressors



Pressure regulator

Part number	Connection
ARX20-F01	G1/8
ARX20-F02	G1/4
ARX20-F01P	G1/8
ARX20-F02P	G1/4
ARX21-F01	G1/8
ARX21-F02	G1/4
ARX21-F02P	G1/4

Suffix P means that nut for panel mounting is included.

Pressure gauge

Part number	Connection
G36-10-01	R1/8
G46-10-02	R1/4

Mounting bracket

Part number
1348112

Panel nut

Part number
1348110A

ARP – precision regulator

Type	ARP20	ARP30	ARP40
Medium	Air		
Degree of filtration	0.3 μm (microfilter) recommended		
Working pressure	0.7 MPa (7 bar)		
Operating temperature	-5 to 60 °C		
Flow	300 l _v /min	600 l _v /min	900 l _v /min
Sensitivity	0.2% F.S.		



- Fits SMC's modular adapters
- Small leakage (less than 1 l_v/min at 0.4 MPa)
- Back-flow and digital pressure switch as accessories

Precision regulator – back-flow

Part number	Secondary pressure	Connection
ARP20K-F02	0.005–0.4 MPa (0.05–4 bar)	G1/4
ARP30K-F03	0.005–0.4 MPa (0.05–4 bar)	G3/8
ARP40K-F04	0.005–0.4 MPa (0.05–4 bar)	G1/2
ARP20K-F02-3	0.008–0.6 MPa (0.05–6 bar)	G1/4
ARP30K-F03-3	0.008–0.6 MPa (0.05–6 bar)	G3/8
ARP40K-F04-3	0.008–0.6 MPa (0.05–6 bar)	G1/2

Pressure gauge

Part number	Type	Pressure
G36-4-01	Round	0.4 MPa (4 bar)
G36-7-01	Round	0.7 MPa (7 bar)
GC3-4AS	Built-in	0.4 MPa (4 bar)
GC3-7AS	Built-in	0.7 MPa (7 bar)

Mounting bracket – bracket with nut

Part number	For regulator
ARP20P-270AS	ARP20
ARP30P-270AS	ARP30
ARP40P-270AS	ARP40

Panel nut

Part number	For regulator
ARP20P-260S	ARP20
ARP30P-260S	ARP30
ARP40P-260S	ARP40

Digital pressure switch

Part number	Cable connection
ISE35-N-65-LA	Down
ISE35-R-65-LA	Up



ISE35-N



ISE35-R

IR1000, -2000 & -3000 – precision regulator

2

Type	IR1000/1010/1020	IR2000/2010/2020	IR3000/3010/3020
Medium	Compressed air, not lubricated		
Degree of filtration	0.3 μm (microfilter)		
Max. inlet pressure	1.0 MPa (10 bar)		
Operating temperature	–5 to 60 °C		
Max. flow	150/250/400 l _v /min	550/600/900 l _v /min	3000/4000/5000 l _v /min
Sensitivity	0.2% F.S.		



- Very accurate
- Fits SMC's modular FRL series
- High exhaust capacity, good for balancing

Precision regulator IR1000

– with connection G1/8, fits FRL series 20

Part number	Secondary pressure
IR1000-F01	0.005–0.2 MPa (0.05–2 bar)
IR1010-F01	0.01–0.4 MPa (0.1–4 bar)
IR1020-F01	0.01–0.8 MPa (0.1–8 bar)

Precision regulator IR2000

– with connection G1/4, fits FRL series 30

Part number	Secondary pressure
IR2000-F02	0.005–0.2 MPa (0.05–2 bar)
IR2010-F02	0.01–0.4 MPa (0.1–4 bar)
IR2020-F02	0.01–0.8 MPa (0.1–8 bar)

Precision regulator IR3000

– with connection G1/2, fits FRL series 40

Part number	Secondary pressure
IR3000-F04	0.01–0.2 MPa (0.1–2 bar)
IR3010-F04	0.01–0.4 MPa (0.1–4 bar)
IR3020-F04	0.01–0.8 MPa (0.1–8 bar)

Mounting bracket

Part number	For regulator
P36201023	IR1000
P36202028	IR2000
P36203018	IR3000

Pressure gauge

Part number	Conn.	Series	Pressure
G33-2-01	1/8	IR1000	0–0.2 MPa
G33-4-01	1/8	IR1000	0–0.4 MPa
G33-10-01	1/8	IR1000	0–1.0 MPa
G36-2-01	1/8	IR2000, 3000	0–0.2 MPa
G36-4-01	1/8	IR2000, 3000	0–0.4 MPa
G36-10-01	1/8	IR2000, 3000	0–1.0 MPa

For connection between old and current series of SMC's modular FRL, please contact SMC.

ITV1000, -2000 & -3000 – E/P converter

2

Type	ITV1030	ITV2030	ITV3030	ITV1050	ITV2050	ITV3050
Medium	Oil-free compressed air					
Degree of filtration	5 µm (particle filter in combination with microfilter is recommended)					
Max. inlet pressure	1.0 MPa (10 bar)					
Min. inlet pressure	Set pressure +0.1 MPa (1 bar)					
Secondary pressure	See below					
Flow (l _n /min)	150 ¹	1000 ¹	3000 ¹	250 ²	1500 ²	5800 ²
Operating temperature	0 to 50 °C					
Connection	G1/4, G1/8	G3/8, G1/2	G1/2, G1/2	G1/4, G1/8	G3/8, G1/2	G1/2, G1/2
Monitor signal	0–5 V (4–20 mA or digital PNP/NPN on request)					

- At supply pressure 7 bar and secondary pressure 3 bar.
- At supply pressure 10 bar and secondary pressure 6 bar.

- Fast, accurate – ideal for process applications
- Ability to adjust the zero, span and sensitivity
- Analog or digital version



E/P converter ITV1000

Input 0–10 V, output 1–5 V

Part number	Secondary pressure
ITV1030-31F2N-Q	0.005 to 0.5 MPa
ITV1050-31F2N-Q	0.005 to 0.9 MPa

Input 4–20 mA, output 1–5 V

Part number	Secondary pressure
ITV1030-01F2N-Q	0.005 to 0.5 MPa
ITV1050-01F2N-Q	0.005 to 0.9 MPa

E/P converter ITV2000

Input 0–10 V, output 1–5 V

Part number	Secondary pressure
ITV2010-31F3N-Q	0.005 to 0.1 MPa
ITV2030-31F3N-Q	0.005 to 0.5 MPa
ITV2050-31F3N-Q	0.005 to 0.9 MPa

Input 4–20 mA, output 1–5 V

Part number	Secondary pressure
ITV2010-01F3N-Q	0.005 to 0.1 MPa
ITV2030-01F3N-Q	0.005 to 0.5 MPa
ITV2050-01F3N-Q	0.005 to 0.9 MPa

E/P converter ITV3000

Input 0–10 V, output 1–5 V

Part number	Secondary pressure
ITV3030-31F4N-Q	0.005 to 0.5 MPa
ITV3050-31F4N-Q	0.005 to 0.9 MPa

Input 4–20 mA, output 1–5 V

Part number	Secondary pressure
ITV3030-01F4N-Q	0.005 to 0.5 MPa
ITV3050-01F4N-Q	0.005 to 0.9 MPa

Connecting cable

Part number	Type
P398010-12	Straight 3 m cable
P398010-13	Angled 3 m cable
P398010-13-5	Angled 5 m cable
P398010-13-10	Angled 10 m cable

E/P converter

Input 0–10 V, output PNP

Part number	Secondary pressure
ITV1050-33F2N-Q	0.005 to 0.9 MPa
ITV2050-33F3N-Q	0.005 to 0.9 MPa
ITV3050-33F4N-Q	0.005 to 0.9 MPa

Input 4–20 mA, output PNP

Part number	Secondary pressure
ITV1050-03F2N-Q	0.005 to 0.9 MPa
ITV2050-03F3N-Q	0.005 to 0.9 MPa
ITV3050-03F4N-Q	0.005 to 0.9 MPa

E/P converter – digitally controlled

Part number	Secondary pressure
ITV1050-40F2N-Q	0.005 to 0.9 MPa
ITV2050-40F3N-Q	0.005 to 0.9 MPa
ITV3050-40F4N-Q	0.005 to 0.9 MPa

Four free programmable pressure levels can be chosen by two inputs.

E/P converter ITV2090 – for vacuum

Input 0–10 V, power supply 24 VDC

Part number	Secondary pressure
ITV2090-31F2N5-Q	–1.3 to –80 kPa

E/P converter ITV3000-X15 – for high pressure

Input 0–10 V, power supply 24 VDC, max. inlet pressure 1.2 MPa

Part number	Secondary pressure
ITV3050-31F4N-X15	0.05 to 1 MPa
ITV3050-33F4N-X15	0.05 to 1 MPa

Bracket

Part number	Type
P3020114	Foot bracket
INI-398-0-6	L-bracket

Bracket and cable are ordered separately.

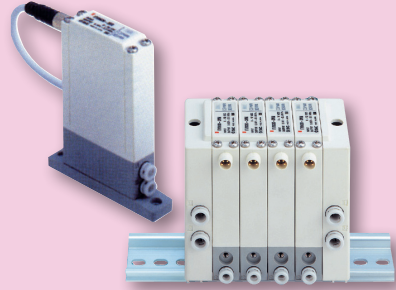
ITV0000 – E/P converter

2

Type	ITV0010	ITV0030	ITV0050
Medium	Air ¹ , degree of filtration min. 5 µm, oil-free air		
Max. inlet pressure	0.2 MPa (2 bar)	1.1 MPa (10 bar)	
Min. inlet pressure	Secondary pressure +0.1 MPa		
Max. flow	3.5 l _v /min	6 l _v /min	6 l _v /min
Operating temperature	0 to 50 °C		
Connection	Single unit 4 mm (ramp 6 mm and 4 mm)		
Monitor signal	Analog 1–5 V		
Vikt	100 g or less		

1. If the medium contains large amounts of water, oil aerosols or compressor oil it can cause malfunction. Contact SMC for selecting the appropriate filter.

■ Fast, accurate E/P converters suitable for applications requiring compact size and low flow rates



Manifold mounting

E/P converter – single mounting

Input 0–10 V, power supply 24 VDC

Part number	Secondary pressure
ITV0010-3N-Q	0.001 to 0.1 MPa
ITV0030-3N-Q	0.001 to 0.5 MPa
ITV0050-3N-Q	0.001 to 0.9 MPa

Input 4–20 mA, power supply 24 VDC

Part number	Secondary pressure
ITV0010-0N-Q	0.001 to 0.1 MPa
ITV0030-0N-Q	0.001 to 0.5 MPa
ITV0050-0N-Q	0.001 to 0.9 MPa

Input 0–5 V or 0–20 mA on request.

E/P converter – manifold mounting, contact SMC

Connecting cable

Part number	Type
WX-84S-20	Straight
WX-84S-20	Angled

Foot bracket – single unit

Part number	Type
P39800022	Flat
P39800023	L-bracket

AN – silencer

Medium	Compressed air, lubricated or not lubricated
Max. working pressure	1.0 MPa (10 bar)
Operating temperature	5 to 60 °C

- Effective air silencing, 30 dB (A)
- Size 1/4" and larger has damping elements in polyacetal – no risk of accidents



Silencer

Sintered bronze

Part number	Silencing	Conn.	Flow
AN120-M3	11 dB (A)	M3	0.07 m ³ /min
AN120-M5	18 dB (A)	M5	0.27 m ³ /min
AN101-01	13 dB (A)	R1/8	0.5 m ³ /min
AN110-01	21 dB (A)	R1/8	0.5 m ³ /min

Standard

Part number	Silencing	Conn.	Flow
AN10-01	30 dB (A)	R1/8	0.8 m ³ /min
AN20-02	30 dB (A)	R1/4	3 m ³ /min
AN30-03	30 dB (A)	R3/8	5 m ³ /min
AN40-04	30 dB (A)	R1/2	8 m ³ /min
AN500-06	30 dB (A)	R3/4	12 m ³ /min
AN600-10	30 dB (A)	R1	20 m ³ /min
AN700-12	30 dB (A)	R1 1/4	30 m ³ /min
AN800-14	30 dB (A)	R1 1/2	50 m ³ /min
AN900-20	30 dB (A)	R2	80 m ³ /min

Compact

Part number	Silencing	Conn.	Flow
AN10-01	25 dB (A)	R1/8	0.8 m ³ /min
AN15-02	25 dB (A)	R1/4	1 m ³ /min
AN30-03	25 dB (A)	R3/8	2 m ³ /min
AN40-04	25 dB (A)	R1/2	4 m ³ /min

The above stated flow refers to recommended flow at 0.5 MPa (5 bar).

Silencer

Push-in connection

Part number	Silencing	Conn.	Flow
AN10-C06	25 dB (A)	6 mm	0.8 m ³ /min
AN15-C08	25 dB (A)	8 mm	1 m ³ /min
AN15-C08	30 dB (A)	8 mm	3 m ³ /min
AN20-C10	30 dB (A)	10 mm	5 m ³ /min
AN30-C12	30 dB (A)	12 mm	5 m ³ /min

Large noise reduction effect

Part number	Silencing	Conn.	Flow
ANB1-01	38 dB (A)	R1/8	1.2 m ³ /min
ANB1-02	38 dB (A)	R1/4	2.7 m ³ /min
ANB1-03	38 dB (A)	R3/8	3.8 m ³ /min
ANB1-04	38 dB (A)	R1/2	7 m ³ /min
ANB1-06	38 dB (A)	R3/4	12 m ³ /min
ANB1-10	38 dB (A)	R1	20 m ³ /min
ANB1-12	38 dB (A)	R1 1/4	32 m ³ /min
ANB1-14	38 dB (A)	R1 1/2	45 m ³ /min
ANA1-01	40 dB (A)	R1/8	0.8 m ³ /min
ANA1-02	40 dB (A)	R1/4	1.2 m ³ /min
ANA1-03	40 dB (A)	R3/8	2.7 m ³ /min
ANA1-04	40 dB (A)	R1/2	4.5 m ³ /min
ANA1-06	40 dB (A)	R3/4	7 m ³ /min
ANA1-10	40 dB (A)	R1	12 m ³ /min
ANA1-12	40 dB (A)	R1 1/4	20 m ³ /min
ANA1-14	40 dB (A)	R1 1/2	32 m ³ /min
ANA1-20	40 dB (A)	R2	45 m ³ /min

Series 25 – silencer

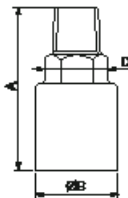
Medium	Air
Working pressure	1 MPa (10 bar)
Operating temperature	5 to 60 °C

- Exhaust only in one direction – prevents the spread of oil mist and noise
- Reduces the risk of clogging



Silencer series 25

Part number	Conn. port R	Recommended max. flow	Dimensions (mm)		
			A	B	D
2504-002	1/4	2200 l _v /min	62	30	24
2505-003	3/8	3000 l _v /min	64	30	24
2506-004	1/2	4000 l _v /min	68	30	24
2507-006	3/4	8000 l _v /min	88.5	48	35
2508-010	1	10000 l _v /min	97.5	60	41



For metering silencer ASN, see chapter 3.



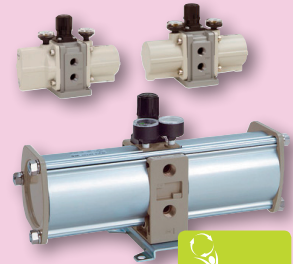
VBA – pressure booster

2

Modell	VBA10A	VBA11A	VBA20A	VBA40A	VBA43A
Medium	Compressed air, not lubricated ¹				
Degree of filtration	Microfilter 0.03 µm (SMC's AM or AFM series)				
Connection	G1/4		G3/8	G1/2	
Inlet pressure	0.1–1 MPa (1–10 bar)				
Secondary pressure	0.2–2 MPa (2–20 bar)		0.2–1 MPa (2–10 bar)		0.2–1.6 MPa (2–16 bar)
Max. pressure boost	2:1				4:1
Flow 1:1	400 l _n /min	100 l _n /min	1000 l _n /min	1900 l _n /min	2300 l _n /min

1. If components after the pressure booster require lubrication, lubricate after pressure booster.

- Raises main line pressure to the preset value
- Requires no wiring
- Ability to reduce the main line pressure



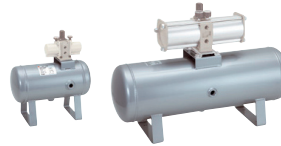
Pressure booster – including pressure gauge

Part number	Connection
VBA10A-F02GN	G1/4
VBA11A-F02GN	G1/4
VBA20A-F03GN	G3/8
VBA40A-F04GN	G1/2
VBA43A-F04GS	G1/2

Pressure tank – designed for booster VBA

Part number	Volume	Pressure
VBAT05AF-SV-Q	5 l	2 MPa (20 bar)
VBAT10AF-SV-Q	10 l	
VBAT20AF-RV-Q	20 l	
VBAT38AF-RV-Q	38 l	1 MPa (10 bar)

Pressure booster ordered separately.



Service set

Part number	Fits
KT-VBA10A-1	VBA10A
KT-VBA11A-20	VBA11A
KT-VBA20A-1	VBA20A
KT-VBA40A-1	VBA40A
KT-VBA43A-1	VBA43A

Pressure gauge – spare part

Part number	Fits
G27-20-01	VBA10A, VBA11A, VBA43A
G36-10-01	VBA20A, VBA40A

Function

Pressure booster VBA raises main line pressure to an adjustable value. A built-in pressure regulator ensures constant output pressure. The time for filling a tank with increased pressure can be reduced by parallel operation with non-return valve. Pressure booster is only activated when tank pressure does not corresponds to main line pressure.

Pilot operated and ATEX versions available on request.



IDK – moisture control tube

2

Type	IDK02	IDK04	IDK06
Medium	Compressed air		
Max. working pressure	0.7 MPa (7 bar)		
Operating temperature	0 till 40 °C		
Ambient	Indoors, 0 to 75% relative humidity		
Min. bending radius	10 mm	20 mm	40 mm
Accessories	4 inner sleeves (supplied fitted in the tube)		
Colour	Transparent (changing to brown over time)		
Suitable fittings	KQ2, KJ		
Materials	Fluoropolymer		

- Diffuses water vapour to the outside of tube (using grippers, cylinders and rotary actuators with small volumes increases the risk of condensation in the tubing)
- Fewer production stops ■ Increases life time



Moisture control tube – 2 per pack

Part number	Tube diameter		Length	
	Outer	Inner	Free	Total
IDK02-100	2 mm	1.2 mm	100 mm	120 mm
IDK02-200			200 mm	220 mm
IDK04-100	4 mm	2.5 mm	100 mm	140 mm
IDK04-200			200 mm	240 mm
IDK06-100	6 mm	4 mm	100 mm	140 mm
IDK06-200			200 mm	240 mm