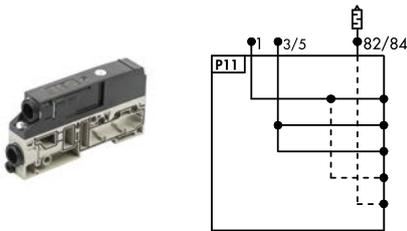


## Compressed air supply

Art. No. 151072

Type No. 02282P11Z10



Exemplary illustration

The EB 80 modules "Compressed Air Supply – P" power the valve base and collect exhaust air from the relief ports. They are available in various versions with different pipe fitting diameters.

Pilot air can either be internal or external (recommended). Switching between internal and external pilot air modes is possible by repositioning the orange gasket located between the upper and lower parts of the module. The configuration is indicated by a tab at the rear of the module.

Relief ports 3 and 5 can either be connected with a silencer or push-in fitting.

A version with separate ports 3 and 5 is also available. This is particularly useful in configurations with external pilot air, allowing the valves to be supplied with different pressures (from vacuum up to 8 bar).

A module version without pneumatic connections is also available, specifically designed for configuring a fieldbus island with signal modules only – without any pneumatic section.

### Technical data

Module type	P
Module description	compressed air supply
Version	with conveyed relief
Pilot air supply	internal
Port 1	Ø 8 mm
Port 3+5	1x Ø 8 mm
Medium	filtered, unlubricated compressed air
Required purity class in accordance w. ISO 8573-1	4.7.3
Op. pressure min. 5/2-, 5/3-way valves with int. pilot air	3 bar
Op. pressure min. 2/2-, 3/2-way valves with int. pilot air	3,5 bar
Operating pressure max. with int. pilot air	8 bar
Operating pressure min. with external pilot air	-0,99 bar

## Technical data

Operating pressure max. with external pilot air	10 bar
Pilot pressure min. 5/2- and 5/3-way valves	3 bar
Pilot pressure min. 2/2- and 3/2-way valves	3-5 bar, dep. on operating pressure (see Metal Work data sheet)
Max. pilot pressure	8 bar
Flow rate measurement 1	Air supply via port 1, at 6.3 bar $\Delta p$ 1 bar
Flow rate 1	1800 NI/min
Flow rate measurement 2	Air supply via port 3/5, at 6.3 bar $\Delta p$ 1 bar
Flow rate 2	2000 NI/min
Min. ambient temperature	-10 °C
Max. ambient temperature	50 °C
Housing	technopolymer
Sealant	NBR
Protection IP	IP 65
Series	EB 80

## Commercial data

eCl@ss 5.1.4	27291501
eCl@ss 9.0	27291390
UNSPSC_Code_v190501	40141603
UNSPSC_CodeDesc_v190501	Pneumatic valves

B2

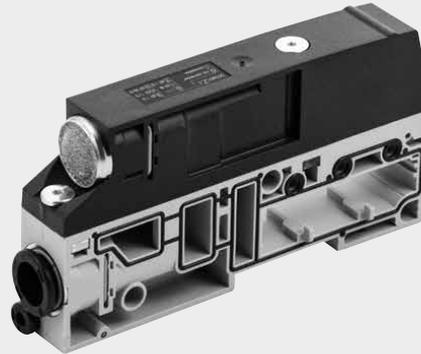
# EB 80 COMPRESSED-AIR SUPPLY - P

VALVES

EB 80 - COMPRESSED-AIR SUPPLY - P

The Compressed air supply - P modules power the valve base and collect the air coming from the relief ports. Various versions are available, with pipe fittings of different diameter. The product code also identifies whether the module is set to supply the pilots without servo-assistance, in which case you only need to connect compressed air to the supply fitting; or with servo-assistance (recommended), in which case you only need to connect the compressed air to the Ø 4 pilot fitting. Switching from servo to non-servo operation or vice versa is possible, however, by changing the position of the orange gasket situated between the lower and the upper part of the module; the configuration is identified by a tab protruding at the back.

Relief ports 3 and 5 can be either connected using a silencer or conveyed via a fitting. A version with separate ports 3 and 5 is also available. This feature is useful in versions with pilot servo-assistance to power the valves from ports 3 and 5, at different pressures from vacuum to 8 bar at different pressures from vacuum to 8 bar, including the version to configure a fieldbus island with signal modules only, without the pneumatic part.

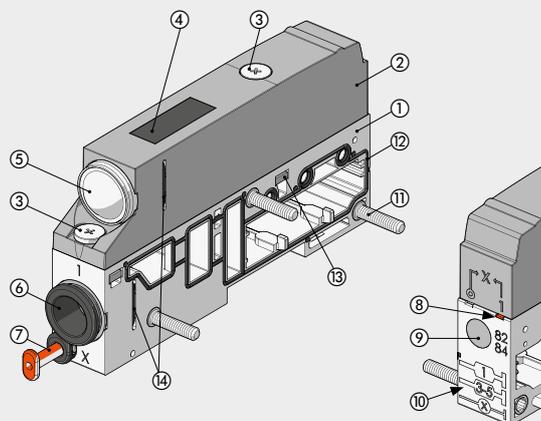


## TECHNICAL DATA

Operating pressure						
Non-servo versions and solenoid pilot servo pressure		<b>5/2 and 5/3</b>		<b>2/2 and 3/2</b>		
	bar	3 to 8		min. (see graph on page B2.57) / max. 8		
	MPa	0.3 to 0.8		min. (see graph on page B2.57) / max. 0.8		
	psi	43 to 116		min. (see graph on page B2.57) / max. 116		
Assisted valves		Vacuum to 10				
	bar	Vacuum to 1				
	MPa	Vacuum to 145				
	psi	-10 to + 50				
Ambient temperature		14 to 122				
	°C					
	°F					
Flow rate at 6.3 bar ΔP 1 bar		<b>Ø 8 (5/16")</b>	<b>Ø 10</b>	<b>Ø 12</b>	<b>Ø 1 1/2"</b>	
Feeding (port 1)		Nl/min	1800	2800	3500	3500
Exhaust with fitting (ports 3 and 5)		Nl/min	2000	3200	4400	4400
Separate exhausts Ø 8 (N.B.: Pmax 8 bar)		Nl/min	1800 x 2	-	-	-
Flow rate at 6.3 bar free exhaust						
Exhaust with fitting (ports 3 and 5)		Nl/min	2700	3900	6100	6100
Silenced exhaust		Nl/min	3600			
Exhaust with fitting Ø12 and silencer W0970530086		Nl/min	6000			
Separate exhausts Ø 8 (N.B.: Pmax 8 bar)		Nl/min	2700 x 2	-	-	-
Fluid		Unlubricated air				
Versions		Silenced relief or conveyed relief, fittings for pipes Ø 8, 10, 12, 1 1/2"				
Degree of protection		IP65				
Weight		g	140	130	125	125

## COMPONENTS

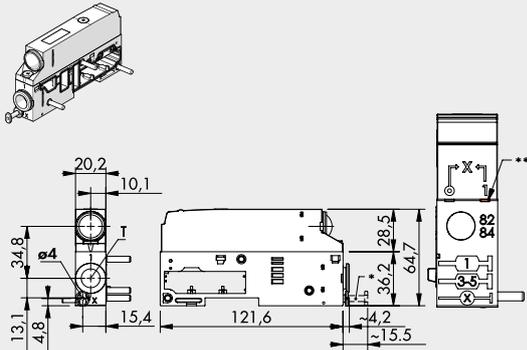
- ① LOWER PART BODY: technopolymer
- ② UPPER PART BODY: technopolymer
- ③ SCREWS securing the island bodies: zinc-plated steel  
(Tightening torque: 1.2 Nm)
- ④ TAG: with laser etched wording - technopolymer
- ⑤ RELIEF: silencer or pipe fitting
- ⑥ POWER SUPPLY: pipe fitting
- ⑦ PILOTING (X): Ø 4 pipe fitting
- ⑧ INDICATOR: indicates whether pilot power supply is separate or not
- ⑨ PILOT RELIEF: HDPE silencer
- ⑩ PICTOGRAM: showing compressed air system layout
- ⑪ TIE ROD: zinc-plated steel
- ⑫ GASKET: NBR
- ⑬ THREADED PLATE: zinc-plated steel
- ⑭ CARTRIDGE FIXING CLIP: stainless steel



B2.50

**DIMENSIONS - ORDERING CODES**

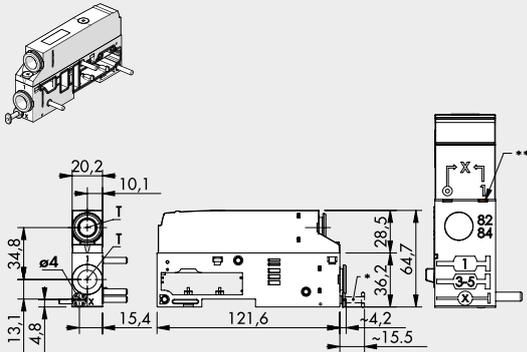
**COMPRESSED AIR SUPPLY - SILENCED RELIEF**



\* R9 plug for NON-SERVO-ASSISTED versions  
 \*\* Orange tab in SERVO-ASSISTED (⊙) or NON-SERVO-ASSISTED (1) position

Symbol	T - Pipe fitting	Code	Weight [g]
	Ø 8 (5/16")	02282P1XZ00	140
	Ø 10	02282P2XZ00	140
	Ø 12	02282P3XZ00	130
	Ø 1/2"	02282P5XZ00	130
	Ø 8 (5/16")	02282P11Z00	140
	Ø 10	02282P21Z00	140
	Ø 12	02282P31Z00	130
	Ø 1/2"	02282P51Z00	130

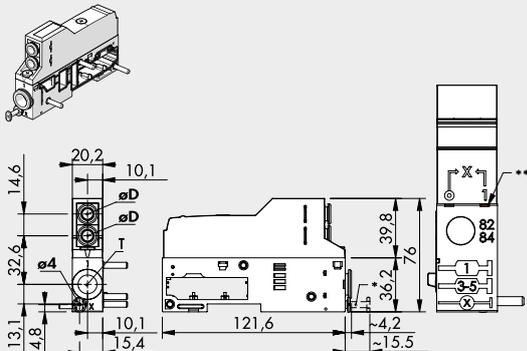
**COMPRESSED AIR SUPPLY - CONVEYED RELIEF**



\* R9 plug for NON-SERVO-ASSISTED versions  
 \*\* Orange tab in SERVO-ASSISTED (⊙) or NON-SERVO-ASSISTED (1) position

Symbol	T - Pipe fitting	Code	Weight [g]
	Ø 8 (5/16")	02282P1XZ10	140
	Ø 10	02282P2XZ20	140
	Ø 12	02282P3XZ30	130
	Ø 1/2"	02282P5XZ50	130
	Ø 8 (5/16")	02282P11Z10	140
	Ø 10	02282P21Z20	140
	Ø 12	02282P31Z30	130
	Ø 1/2"	02282P51Z50	130

**COMPRESSED AIR SUPPLY - SEPARATE RELIEFS**



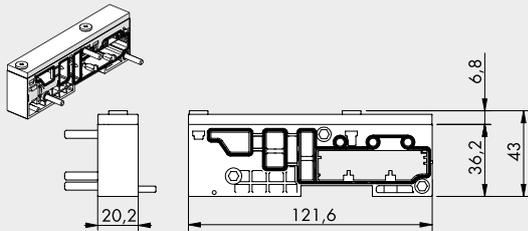
\* R9 plug for NON-SERVO-ASSISTED versions  
 \*\* Orange tab in SERVO-ASSISTED (⊙) or NON-SERVO-ASSISTED (1) position

Symbol	T - Pipe fitting	Code	Weight [g]
	Ø 8 (5/16")	02282P1XZ_0	150
	Ø 10	02282P2XZ_0	150
	Ø 12	02282P3XZ_0	140
	Ø 1/2"	02282P5XZ_0	140
_ = To complete the code enter: 6: øD = 8 mm; 7: øD = 6 mm; 8: øD = 4 mm <b>N.B.:</b> Maximum pressure in the ports 3 and 5: 8 bar			
	Ø 8 (5/16")	02282P11Z_0	150
	Ø 10	02282P21Z_0	150
	Ø 12	02282P31Z_0	140
	Ø 1/2"	02282P51Z_0	140
_ = To complete the code enter: 6: øD = 8 mm; 7: øD = 6 mm; 8: øD = 4 mm <b>N.B.:</b> Maximum pressure in the ports 3 and 5: 8 bar			

VALVES

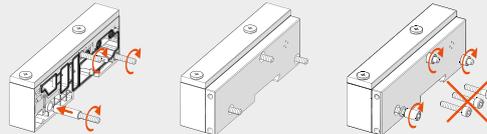
EB 80 - COMPRESSED-AIR SUPPLY - P

MODULE FOR ELECTRIC VERSION ONLY



Code	Description	Weight [g]
02282P91Z90	Module for electric version only	120

N.B.: Version used to make up an EB 80 island without pneumatic part, but only with "S" signal modules and fieldbus or additional electrical connection "E". Bases and valves cannot be added.



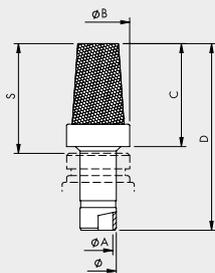
KEY TO CODES

02282 FAMILY	P SUBSYSTEM	3 PORT FITTING 1	1 PILOT SERVO-ASSISTED	Z UPPER PART	3 PORTS 3 AND 5 FITTING	0 SPECIALTY
02282 EB 80	P Compressed air supply	1 Pipe fitting Ø 8 (5/16") 2 Pipe fitting Ø 10 3 Pipe fitting Ø 12 5 Pipe fitting Ø 1/2"	1 Non-servo-assisted X Servo-assisted	Z The upper part is present	0 Silencer ▲ 1 Pipe fitting Ø 8 (5/16") ▲ 2 Pipe fitting Ø 10 ▲ 3 Pipe fitting Ø 12 ▲ 5 Pipe fitting Ø 1/2" 6 2 pipes fitting Ø 8 (5/16") (one for port 3, one for port 5) 7 2 pipes fitting Ø 6 (one for port 3, one for port 5) 8 2 pipes fitting Ø 4 (5/32") (one for port 3, one for port 5) 9 Without connection	0 Standard
			9 Module for electric version only	1 Non-servo-assisted		

▲ For ports 3 and 5 use the same pipe Ø of port 1.

ACCESSORIES

SILENCER FOR FITTING



Ø	ØA	ØB	C	D	S
8	6.5	14	23	42	24.5
12	10	18.8	29	51.5	31.5

Code	Description	Flow rate at 6.3 bar [NI/min]	Weight [g]
W0970530084	Silencer for fitting, Ø 8	2400	15
W0970530086	Silencer for fitting, Ø 12	6000	24

SPARE PARTS

CARTRIDGE



Code	Description	Ø
02282R2110	EB 80 silencer cartridge kit	silencer
02282R2113	EB 80 Ø 8 power supply round cartridge kit	8 (5/16")
02282R2114	EB 80 Ø 10 power supply round cartridge kit	10
02282R2115	EB 80 Ø 12 power supply round cartridge kit	12
02282R2118	EB 80 Ø 1/2 power supply round cartridge kit	1/2"

Comes in 10-pc. packs

BASE INTERFACE GASKET



Code	Description
02282R1000	EB 80 base interface gasket kit

Comes in 10-pc. packs

LOWER /UPPER BODY GASKET



Code	Description
02282R1001	EB 80 lower/upper body gasket kit

Comes in 10-pc. packs

# EB 80 ELECTRO-PNEUMATIC SYSTEM

EB 80 is defined as an electro-pneumatic system as it would be simplistic to use the term "solenoid valve island". In effect, a single assembly can combine solenoid valves of all types, multi-position bases, pneumatic and electric supplies arranged as desired in a system, digital or analogue input or output signal control modules and much more besides.

The EB 80 system is protected by numerous patents and utility models, which enhance the most innovative design solutions.

The possible combinations are endless, but the most amazing thing is that they can be obtained using a small number of basic components.

In order to achieve this objective, a single size of small yet high-performance valves to cover the vast majority of applications was conceived.

A single electronic control unit is provided when supplying 12VDC or 24VDC valves with multi-pole cables or with a field bus for each protocol.

All EB 80 versions come with an efficient diagnostic system.

The EB 80 catalogue consists of a first overall introductory chapter followed by a chapter for each subsystem.

NSF H1-certified grease is used to lubricate the valve spool and seals.



VALVES

EB 80 ELECTRO-PNEUMATIC SYSTEM

TECHNICAL DATA									
Supply voltage range	VDC	12 -10% 24 +30%							
Minimum operating voltage	VDC	10.8 *							
Maximum operating voltage	VDC	31.2							
Maximum admissible voltage	VDC	32 ***							
Power for each controlled pilot	W	3 for 15 ms, then holding 0.3							
Drive (for multi-pole)		PNP or NPN							
Solenoid rating		100% ED							
Solenoid valve supply power		See chapter "Electrical connection - E"							
Signal module supply power		See chapter "Signal module - S"							
Protection		Overload and short-circuit protected solenoid pilot Output							
Diagnostics		See chapter "Electrical connection - E"							
Maximum number of solenoid pilots		21 or 38 multi-pole connection; field bus 128							
Ambient temperature	°C	-10 to +50 (at 8 bar)							
	°F	14 to 122 (at 8 bar)							
Operating pressure		5/2 and 5/3		2/2 and 3/2					
Non-assisted valves	bar	3 to 8		3.5 to 8					
	MPa	0.3 to 0.8		0.35 to 0.8					
	psi	43 to 116		51 to 116					
Assisted valves	bar	Vacuum to 10							
	MPa	Vacuum to 1							
	psi	Vacuum to 145							
Servo pressure	bar	3 to 8		min. (see graph on page B2.57) / max. 8					
	MPa	0.3 to 0.8		min. (see graph on page B2.57) / max. 0.8					
	psi	43 to 116		min. (see graph on page B2.57) / max. 116					
Valve flow rate, at 6.3 bar ΔP 1 bar		Ø 4 (5/32")	Ø 6	Ø 8 (5/16")	Ø 1/4"	Ø 10 **	Ø 3/8" **		
	valve 2/2 NI/min	350	430	500	430	-	-		
	valve 3/2 NI/min	350	600	700	600	1250	1250		
	valve 5/2 NI/min	350	650	800	650	1250 - 1400	1250 - 1400		
	valve 5/3 NI/min	350	460	500	460	1000 - 1250	1000 - 1250		
	valve V3V (R) NI/min	-	-	-	-	1000	1000		
Actuation response time (TRA) / reset response time (TRR) at 6 bar									
	TRA/TRR valve 2/2 and 3/2 ms			14 / 28					
	TRA/TRR valves 5/2 monostable and shut-off valve ms			12 / 45					
	TRA/TRR valve 5/2 bistable ms			12 / 14					
	TRA/TRR valve 5/3 ms			15 / 45					
	TRA/TRR valve 3/2 high flow ms			13 / 36					
Fluid				Unlubricated air					
Air quality required				ISO 8573-1 class 4-7-3					
Degree of protection				IP65 (with connectors connected or plugged if not used)					
Category ATEX				Ⓜ II 3G Ex ec IIC T5 Gc X -10°C<Ta<-50°C					
				Ⓜ II 3D Ex tc IIIC T100°C Dc X					
Certifications									

\* Minimum voltage 10.8VDC required at solenoid pilots. Check the minimum voltage at the power supply output using the calculations shown on page B2.28

\*\* Using high-flow valves or connected valves - see pages B2.58

\*\*\* IMPORTANT! Voltage greater than 32VDC will damage the system irreparably.

N.B.: Refer to the chapter of each EB 80 sub-assembly for specific technical data.

**CERTIFICATIONS**

The **UL** certification for the part concerning only CSA (Canadian market) is bound to the following conditions of use:

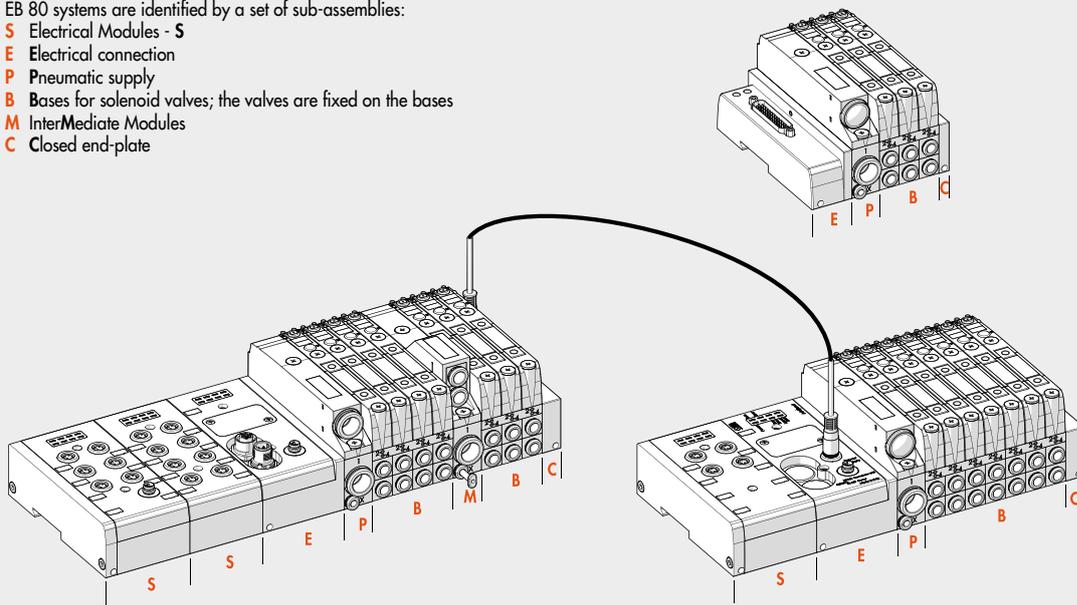
- environment temperature: max 45°C
- ED max 70%

If non-adjoining valves are used, ED max can reach 100% (environment temperature max 45°C)

**COMPONENTS**

EB 80 systems are identified by a set of sub-assemblies:

- S** Electrical Modules - **S**
- E** Electrical connection
- P** Pneumatic supply
- B** Bases for solenoid valves; the valves are fixed on the bases
- M** InterMediate Modules
- C** Closed end-plate

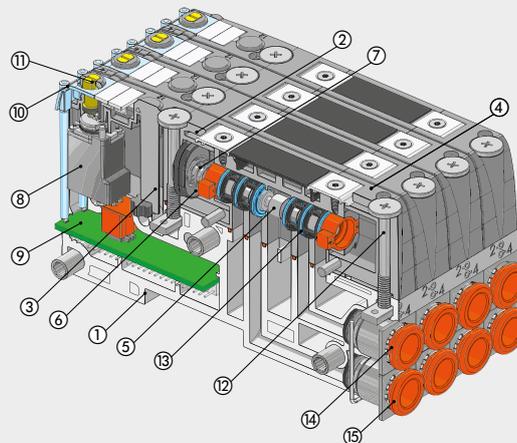


VALVES

EB 80 ELECTRO-PNEUMATIC SYSTEM

**COMPONENTS – SOLENOID VALVE AND BASE**

- ① BASE: technopolymer
- ② VALVE BODY: technopolymer
- ③ CONTROL: technopolymer
- ④ BASE: technopolymer
- ⑤ SPOOL: chemically nickel-plated aluminium
- ⑥ CONTROL PISTON: Stainless steel and NBR
- ⑦ SPRING: Oteva® steel and Dacromet treatment
- ⑧ SOLENOID VALVE
- ⑨ ELECTRONIC BOARD
- ⑩ LED light display: technopolymer
- ⑪ MANUAL CONTROL: nickel-plated brass
- ⑫ SCREW SECURING VALVE TO THE BASE: zinc-plated steel
- ⑬ SPOOL GASKET: NBR
- ⑭ Push-in fitting CARTRIDGE for port 2
- ⑮ Push-in fitting CARTRIDGE for port 4



THE EB 80 WORLD

**ELECTRICAL CONNECTION - E**

E025	E044	EOEN	EOEC	EOPN	EOCN	EOPB	EOPL	EOIO	EOLK	EOCC	EOAD
25 PIN	44 PIN	EtherNet/IP	EtherCAT	Profinet IO	CANopen	Profibus-DP	Ethernet POWERLINK	IO-Link 32 IN/32 OUT	IO-Link 64 OUT	CC-Link IE Field Basic	Additional
page B2.30	page B2.30	page B2.43	page B2.43	page B2.43	page B2.43	page B2.43	page B2.43	page B2.43	page B2.43	page B2.43	page B2.48

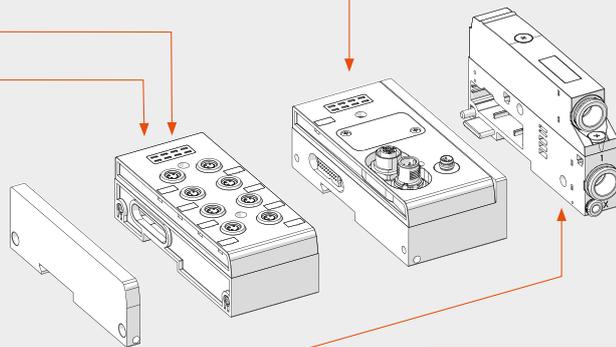
**SIGNAL MODULE - S**

S01	S02	S03	S04	S05	S06	S07	S08	S21
8 M8 digital inputs	8 M8 digital outputs	6 M8 digital outputs + electrical supply	4 M8 analogue inputs	4 M8 analogue outputs	16 digital terminal block inputs	16 digital terminal block outputs	4 M8 analogue inputs for temperature measurement	16 M8 configurable digital inputs/outputs
page B2.18	page B2.18	page B2.19	page B2.19	page B2.20	page B2.20	page B2.21	page B2.21	page B2.22

**WIRELESS MODULE - S**

S20
Wireless connection module
page B2.16

Part included in the ELECTRICAL CONNECTION - E with Fieldbus



**COMPRESSED-AIR SUPPLY - P**

P_Z00	P_Z	P_Z0	P91Z90
Silenced relief	Conveyed relief	Separate reliefs	Module for electric version only
page B2.51	page B2.51	page B2.51	page B2.52

**PROPORTIONAL PRESSURE REGULATOR - A**

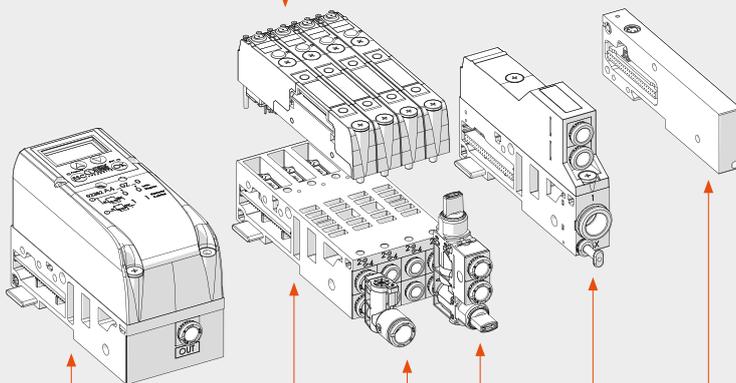
A40_Z0	A41_Z0
Base port 1 pass-through local outlet	Base port 1 sectioned in-series regulation
page B2.65	page B2.65

VALVES											
Z_ ▲	I_ ▲	W_ ▲	L_ ▲	V_	K_ ▲	O_ ▲	G_	J_	R_ +	N0	Y8
2 valves 2/2 NC	2 valves 3/2 NC (valid as 5/3 OC)	2 valves 3/2 NO (valid as 5/3 PC)	3/2 NC + 3/2 NO	monostable 5/2	bistable 5/2	5/3 CC	3/2 NC high flow	3/2 NO high flow	Shut-off valve	Dummy valve	Bypass
page B2.57	page B2.57	page B2.57	page B2.57	page B2.57	page B2.57	page B2.57	page B2.58	page B2.58	page B2.59	page B2.60	page B2.60

▲ Can only be used with 6 or 8 control bases.  
+ Requires inlet port X slave synchronisation.

VALVES

EB 80 ELECTRO-PNEUMATIC SYSTEM



CLOSED END-PLATE - C		
C1	C2	C3
For islands with multi-pole connector	For islands with fieldbus	For electrical connection of islands with fieldbus to additional islands
page B2.74	page B2.74	page B2.74

**BASES FOR VALVES - B**

B3_ _ _ 0	B4_ _ _ _
3-position base for valves	4-position base for valves
page B2.54	page B2.54

**Y-FITTING**

R2
Y-fitting
page B2.61

**MULTI-FUNCTION MODULE**

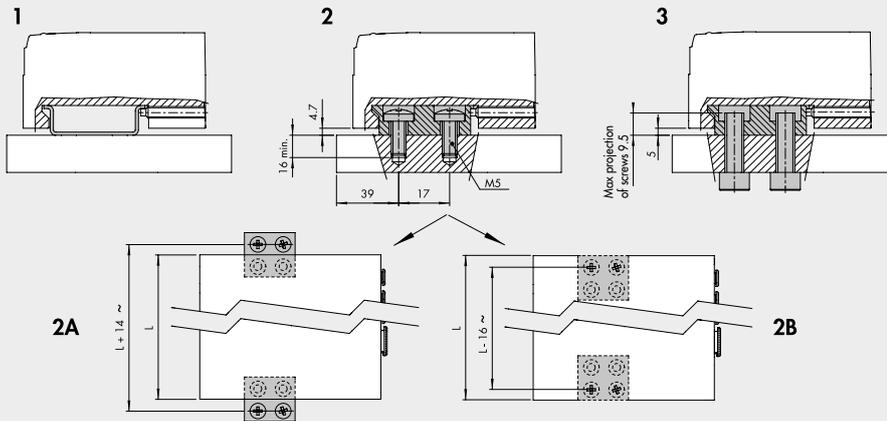
Fittings with pneumatic functions
page B2.92

**INTERMEDIATE SUPPORT - M**

M_ _ Z0	M_ _ Z_	M_ _ Z_
Silenced relief	Conveyed relief	Separate relief
page B2.69	page B2.70	page B2.71

**FIXING OPTIONS**

- 1 - **Fixing on a DIN bar:** tighten the grub screws into modules E (electrical connection) and C (closed end-plate).  
For islands with more than 40 valves or 5 modules, also use the additional plate code 02282R4001.
  - 2 - **Fixing on a flat surface:** use the pair of brackets code 02282R4000 and the M5x20 screws supplied.  
You can choose where to position the brackets in relation to the island:
    - 2A - **Protruding brackets:** can be used to install the island + brackets unit from above. First secure the brackets to the modules E and C using the grub screws, then secure everything with M5x20 screws.
    - 2B - **Concealed brackets:** the overall dimensions of the island are reduced. First secure the brackets to the flat top with M5x20 screws, then place the island onto the brackets and lock the two grub screws provided in the modules E and C.
  - 3 - **Fixing through a wall:** use the brackets code 02282R4000. The brackets come with M6 threaded holes and can be fixed with M6 screws (not included in the supply) passing through the wall. The brackets can be fixed either protruded or concealed.
- N.B.:** Planar surfaces are required to ensure correct fixing. Avoid twisting or bending the valve units.



**LUBRICATION**

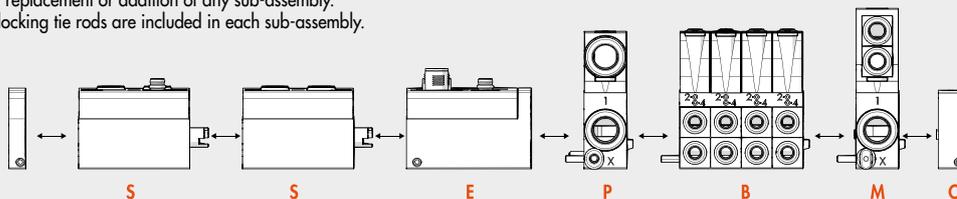


The EB 80 electro-pneumatic system is designed to run millions of cycles without the need for any lubrication. This is possible thanks to the optimisation of its components and the use of a special grease with excellent properties and NSF H1 certified. To avoid removing the grease, it is highly recommended not to lubricate the valve input and output ports and check the quality (to ISO 8573-1 class 4-7-3) of the compressed air used, which is often contaminated by particularly aggressive oils that are released by compressors and are not always compatible with the elastomers used in the valves.

**SOME CHARACTERISTICS OF EB 80 SYSTEMS**

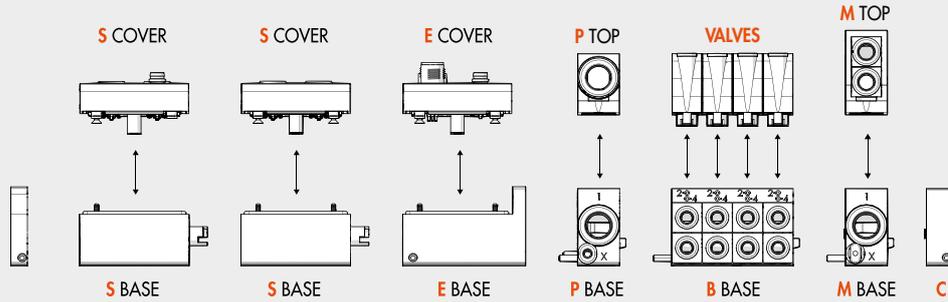
**HORIZONTAL MODULARITY**

- Easy replacement or addition of any sub-assembly.  
The locking tie rods are included in each sub-assembly.



**VERTICAL MODULARITY**

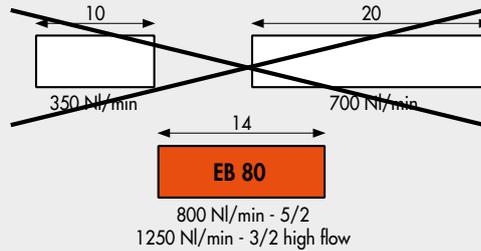
- Easy replacement – no need to disassemble the pack – of the valves on the Bases – B and also of the top part (cover) of subsystems S, E, P, M using a single Phillips-head screwdriver.
- N.B.:** All protocols can be mounted on the base for field buses and all input or output modules can be mounted on the same base for signals.



VALVES

**ONE SIZE FITS ALL**

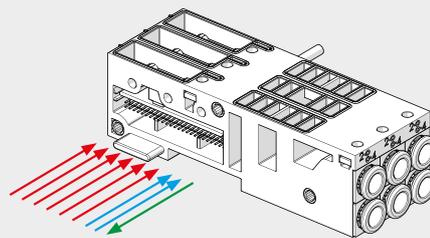
- Reduced dimensions
- High flow rate
- One warehouse and spares



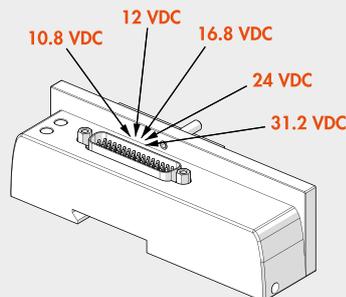
EB 80 ELECTRO-PNEUMATIC SYSTEM

**THE SAME BASE FITS BOTH MULTI-POLE CONNECTIONS AND FIELD BUSES**

- Controls from multi-pole connection
- Controls from field buses
- Diagnostics

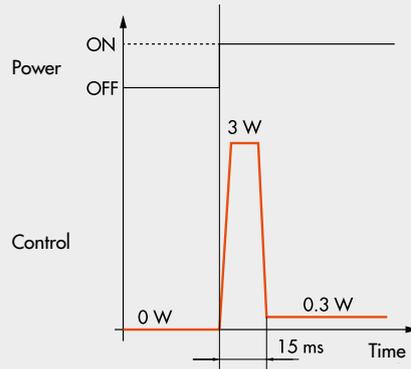


**THE SAME ISLAND CAN BE SUPPLIED 10.8 - 31.2 VDC**



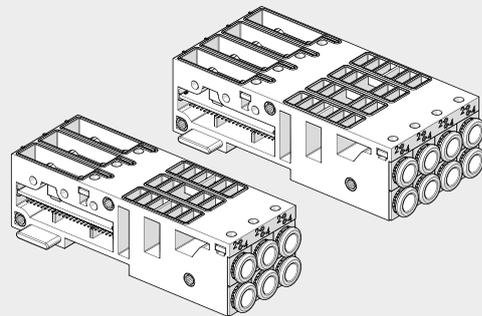
**ONLY 0.3 W FOR EACH SOLENOID VALVE**

- Speed-up solenoid valve control:
  - high power for a few milliseconds ensures high performance and rapid and safe switching;
  - reduced holding power resulting in reduced temperatures and energy saving.



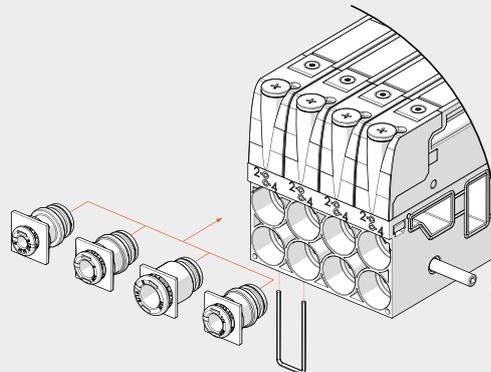
**3- OR 4-POSITION BASES FOR VALVES**

- Island layout options:
  - 3 1 base with 3 positions
  - 4 1 base with 4 positions
  - (5 2 bases with 3 positions and 1 dummy valve)
  - 6 2 bases with 3 positions
  - 7 1 base with 3 and 1 with 4 positions
  - 8 2 bases with 4 positions
  - ...
- Compared to single-base solutions, this configuration is advantageous because:
  - just a few bases are required for multiple positions;
  - the base is sturdy and rigid;
  - there is plenty of space to accommodate smart electronics



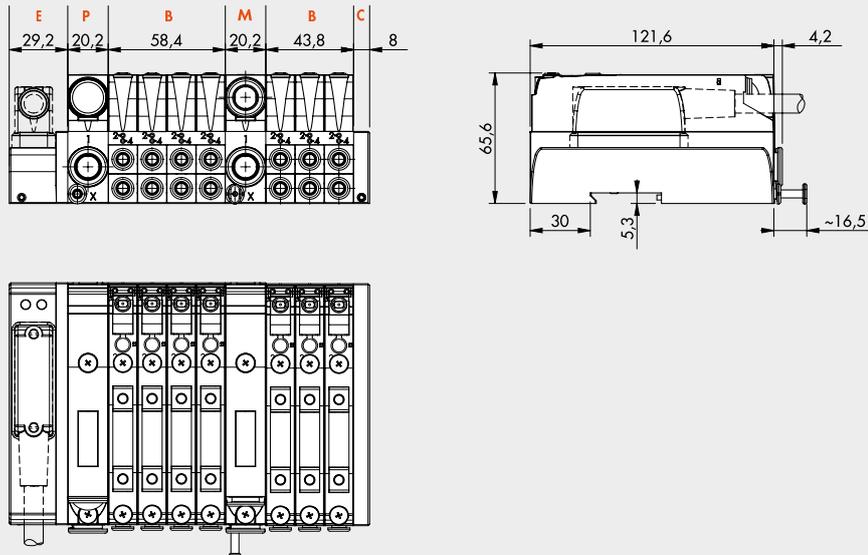
**INTERCHANGEABLE CARTRIDGE FITTINGS**

- For pipes  $\varnothing$  4 (5/32"), 6, 8 (5/16"), 1/4"

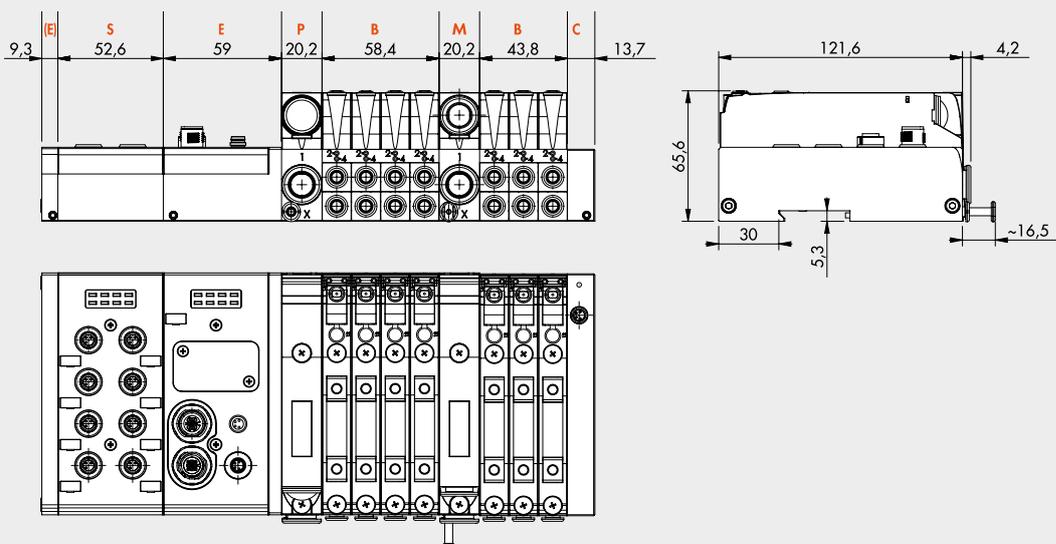


**DIMENSIONS**

**DIMENSION OF VERSIONS WITH MULTI-POLE CONNECTION**



**DIMENSION OF VERSIONS WITH FIELD BUS OR ADDITIONAL CONNECTION**



VALVES

EB 80 ELECTRO-PNEUMATIC SYSTEM



**EB 80 INDUSTRY 4.0**

The new advanced EB 80 diagnostic functions, known as EB 80 I4.0, provide a powerful analysis tool for traditional maintenance operations, ensuring the safe, reliable and lasting operation of production units.

They are available for all electrical connections with fieldbuses and bases marked I4.0, with advanced diagnostics integrated in accordance with Industry 4.0 philosophy.

These functions use the original EB 80 diagnostics, integrating them with the ability of the station itself to control IOs.

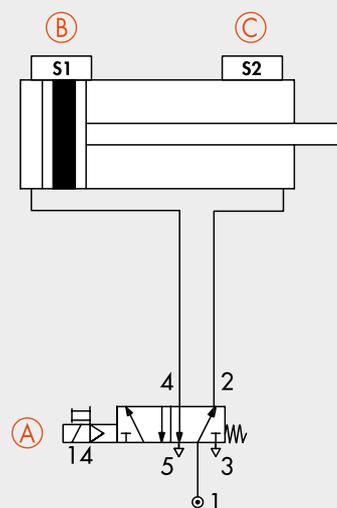
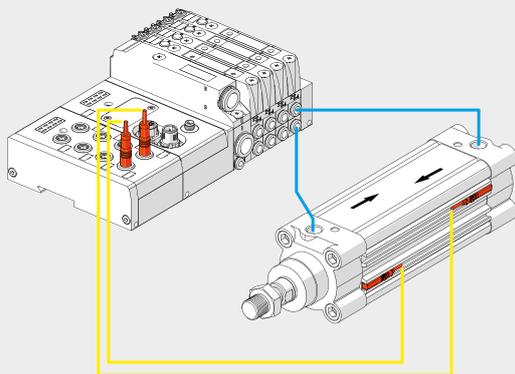
They re-organise and optimise maintenance management by developing predictive maintenance in order to:

- predict faults;
- intervene early to avoid system downtime;
- have all information on equipment operation available in real time;
- monitor component end-of-lifetime;
- optimise warehouse spare parts management.

This makes it possible to turn the data collected into concrete actions using standard EB 80 stations without needing additional modules.

**Description of EB 80 I4.0 functions:**

- System data:
  - EB 80 system startup counter;
  - supply alert counter.
- Valve data. Each valve base for each solenoid valve permanently stores the following information:
  - cycle counter;
  - counter for total solenoid valve excitation time;
  - activation of a flag to signal average lifetime exceeded;
  - short circuit alert counter;
  - open circuit alert counter.
- Electropneumatic system control functions (data updated with each cycle):
  - measurement of the delay between activating the solenoid valve "A" and actuator movement commencing via the signal of sensor "B", with delays that exceed the limit flagged;
  - measurement of actuator movement time using two linked sensors "B" and "C", with exceeded time limits flagged;
  - measurement of the delay between deactivating the solenoid valve "A" (or activating a second valve) and actuator return commencing via the signal of sensor "B", with exceeded time limits flagged;
  - measurement of actuator return time using two linked sensors "B" and "C", with exceeded time limits flagged;
  - counter for actuator range of motion.



**PLC-BASED DATA COLLECTION**

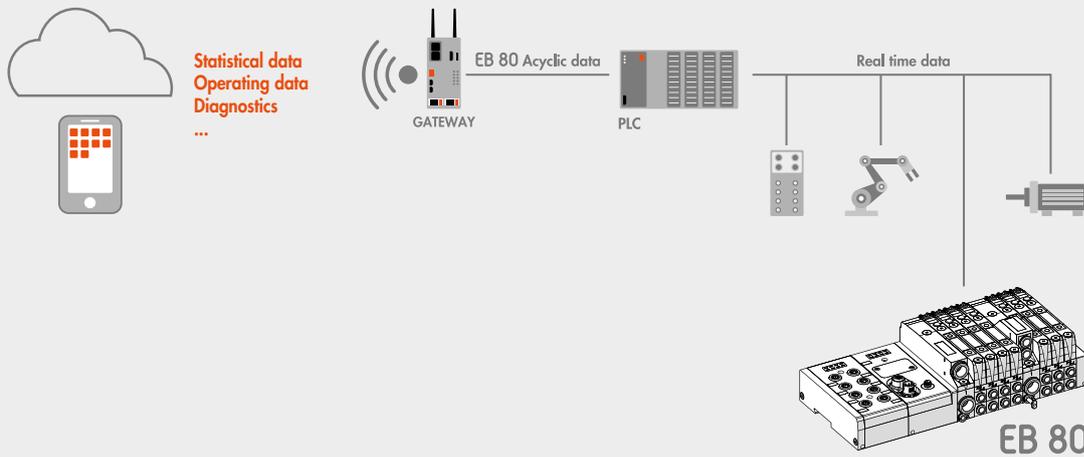
Electrical connection modules can be used to complement the EB 80 with the main field buses available in the market. In this way, the control system (generally a PLC) can handle in real time the behaviour of the solenoid valve island, including signal modules.

With the introduction of the I4.0 version, the field bus connection modules also send to the network the historical and diagnostic data relating to the behaviour of the island (such as the number of cycles for each solenoid pilot, total activation time and alarms) and the controlled pneumatic circuit (such as the delay times in sensor switching and actuator activation times).

This data is also sent to the control system and can be handled differently depending on the situation: in some cases, it can be used in real time, like in the case of fault alarms; in other cases, it can be sent to a storage local unit or one remotely controlled on a cloud server, and is analysed in a subsequent stage; in other cases, the alarms can be sent to a teleservice station that can monitor the state of the system remotely.

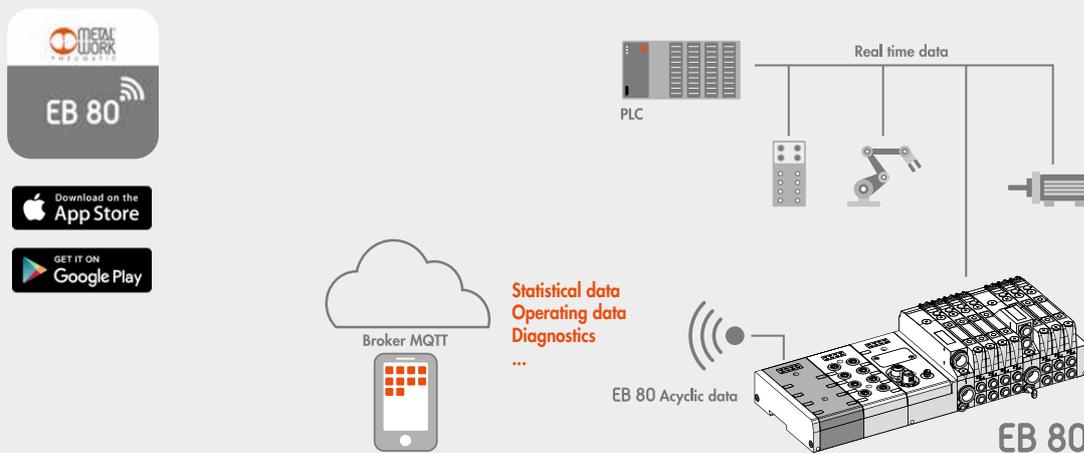
VALVES

EB 80 ELECTRO-PNEUMATIC SYSTEM



**EB 80 WIRELESS DATA COLLECTION**

Integrated into the EB 80, this module provides connection to Wi-Fi networks and Bluetooth® devices to display diagnostic and operating data. The APP specifically developed by Metal Work, called EB80Up, can connect Android and IOS devices for easy viewing of diagnostic and operating data plus the setting of network parameters.



## Accessories

	Art. No.	Type No.
Sintered bronze silencer with plug nipple, Ø 8 mm	153755	W0970530084

## Spareparts

	Art. No.	Type No.
EB 80 square cartridge with push-in fitting Ø 8 mm for compressed air supply and intermediate support, PU 10 pcs.	153917	02282R2113
EB 80 base interface gasket, PU 10 pcs.	153860	02282R1000
EB 80 gasket for compressed air supply and intermediate support, for sealing between upper and lower part, PU 10 pcs.	153908	02282R1001