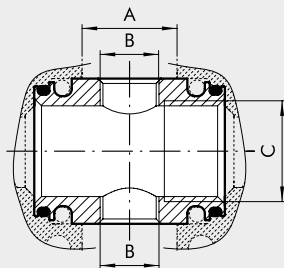


The air take-off is a connecting element that is mounted between two Syntesi® modules. The 2-way version, made of metal and having restrained dimensions, has a threaded port upwards and one downwards. The 4-way version, in technopolymer, has a threaded port on each side. This gives or four additional air outlets for use as required. All Syntesi® modules come with two threaded ports, one on the front and one on the back, for use as air take-off.



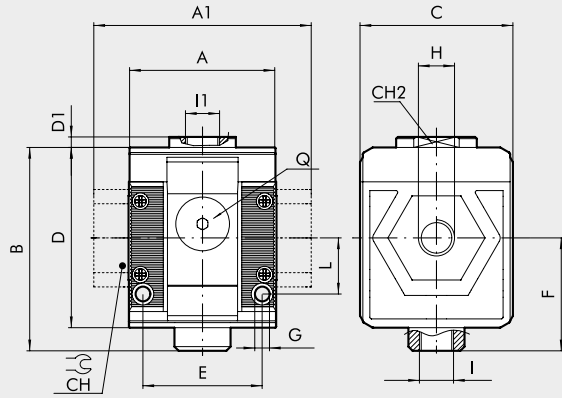
TECHNICAL DATA	AIR TAKE-OFF, SY1		AIR TAKE-OFF, SY2	
	PA 2-way	PA 4-way	PA 2-way	PA 4-way
Version	1550	500 - 2000	7000	1500 - 4500
Flow rate of the air take-off at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi) NI/min	55	18 - 71	248	53 - 160
Maximum pressure	15		13	
	1.5		1.3	
Min/Max temperature at 10 bar; 1 MPa; 145 psi	217		188	
	From -10 to 50		From -10 to 50	
Weight	62	100	75	306
Fluid	Compressed air or other inert gases			

DIMENSIONS AND ORDERING CODES OF THE 2-WAY VERSION



Code	Description	A	B	C
5610P100	PA SY1	15.5	1/8"	3/8"
5620P100	PA SY2	27	3/8"	1/2"

DIMENSIONS 4 WAY-VERSION



	SIZE 1			SIZE 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A		42				60.5	
A1	-	-	44	-	-	95	95
B		58				81	
C		44				61	
CH		-		-	-	32	36
CH2		19				-	
D		51.5				70.5	
D1		3				-	
E		33.5				47.5	
F		32.2				42.7	
G		Hole for M4 screws			Hole for M5 screws		
I		1/8"				1/4"	
I1		1/4"				3/8"	
L		16				22.5	
Q (no. 2 add. air takes-off)		1/8"				1/4"	

KEY TO CODE FOR 4-WAY VERSION

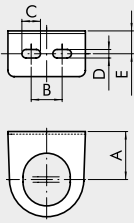
56	1	1	P	20	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1 2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	P Air take-off	20 4-way	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE CODES

Code	Description	Code	Description	NOTE
AIR INTAKE, 2-way version		AIR INTAKE, 4-way version		NOTE Anti-corrosion version 5X_ _ _ _ _ Example 5X11P201 PA 4-way SY1 1/8 anti-corrosion
5610P100	PA SY1	5610P200	PA 4-way SY1 without bushing	
5620P100	PA SY2	5611P201	PA 4-way SY1 1/8	
		5612P202	PA 4-way SY1 1/4	
		5613P203	PA 4-way SY1 3/8	
		5620P200	PA 4-way SY2 without bushing	
		5623P203	PA 4-way SY2 3/8	
		5624P204	PA 4-way SY2 1/2	
		5625P205	PA 4-way SY2 3/4	
		5626P206	PA 4-way SY2 1	

MOUNTING BRACKET FOR REG. AND FR KNOB



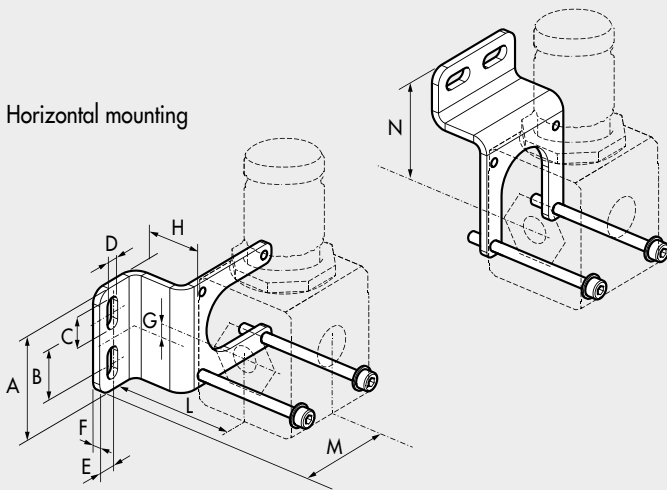
Code	Description
9200701	SF100 - BIT-ND 1/4 - SY1
9400701	SF200 - ND-3/8 1/2 - SY2

Code	A	B	C	D	E
9200701	32	20	12	5.5	14.2
9400701	42	40	12	5.5	15

MOUNTING BRACKET

Vertical mounting

Horizontal mounting

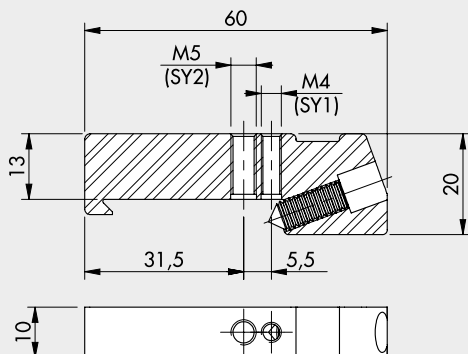


Code	Description
9200716X	Mounting bracket SY1
9200717X	Mounting bracket SY2

Note: Supplie complete with screws and washers.
Max torque 0.8 Nm for SY1 - Max torque 2.0 Nm for SY2
Codes to be used for units in the standard and the anti-corrosion version

Code	A	B	C	D	E	F	G	H	L	M	N
9200716X	41.5	20	12.7	5.5	7	3	0.8	25	43.8	46.5	47
9200717X	60	40	12.7	5.5	8	3	1.3	30	57.5	58.3	59.5

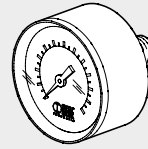
CONNECTION BRACKETS ON THE BAR (DIN EN50022)



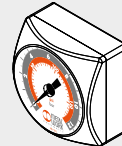
Code	Description
9200718X	Connection brackets on DIN bar, SY1 - SY2

Note: 2 pieces per pack complete with screws and washers.
Max torque 0.8 Nm for SY1 - Max torque 2.0 Nm for SY2
Codes to be used for units in the standard and the anti-corrosion version

PRESSURE GAUGES

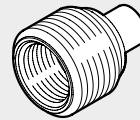


Code	Description
9700101	M 40 1/8 012
9700102	M 40 1/8 04
9800101	M 50 1/8 012
9800102	M 50 1/8 04
9900101	M 63 1/4 012



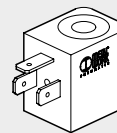
9700109	M 40x40 1/8 04
9700110	M 40x40 1/8 012

ADAPTERS FOR PRESSURE GAUGES (SY2)



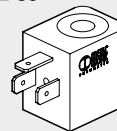
Code	Description
9210005	1/4 adapter for 1/8 pressure gauge

COIL 22 mm FOR APR AND V3V ELPN



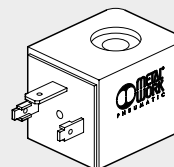
Code	Description
W0215000151	Coil 22 Ø 8 BA 2W-12VDC
W0215000101	Coil 22 Ø 8 BA 2W-24VDC
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC

"UL" AND "CSA" COILS 22 mm



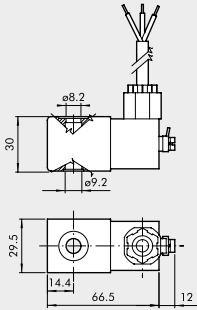
Code	Description
W0215000251	Coil 22 Ø 8 BA 2W-12VDC UR
W0215000201	Coil 22 Ø 8 BA 2W-24VDC UR
W0215000211	Coil 22 Ø 8 BA 3.5VA-24VAC UR
W0215000221	Coil 22 Ø 8 BA 3.5VA-110VAC UR
W0215000231	Coil 22 Ø 8 BA 3.5VA-220VAC UR

COIL 30 mm FOR APR AND V3V ELPN



Code	Description
W0210010100	Coil 30 Ø 8 2W-24VDC
W0210011100	Coil 30 Ø 8 3.5VA-24VAC 50/60 HZ
W0210012100	Coil 30 Ø 8 3.5VA-110VAC 50/60 HZ
W0210013100	Coil 30 Ø 8 3.5VA-220VAC 50/60 HZ

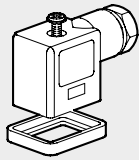
KIT FOR COIL EEXM



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 3m
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 5m
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 3m
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 5m
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 3m
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 5m
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 3m
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 5m

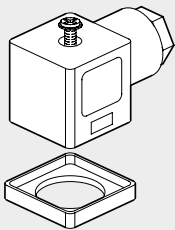
According to Atex 2014/34/EU rule,
 Ⓢ II 2G Ex mb IIC T4/T5 Gb
 Ⓢ II 2D Ex tb IIIC T130/T95 °C IP66 Db
N.B.: Supplied complete with adapter for Ø8 mm sleeve

ELECTRIC CONNECTOR 22 mm FOR APR AND V3V ELPN



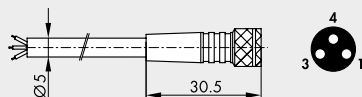
Code	Description
W0970510011	Connector standard
W0970510012	Connector 22 LED 24V
W0970510013	Connector 22 LED 110V
W0970510014	Connector 22 LED 220V
W0970510015	Connector 22 LED VDR 24V
W0970510016	Connector 22 LED VDR 110V
W0970510017	Connector 22 LED VDR 220V
W0970510070	Connector 22 II 2 GD ATEX

ELECTRIC CONNECTOR 30 mm FOR APR AND V3V ELPN



Code	Description
W0970520033	Connector 30 STD
W0970520034	Connector 30 LED 24V
W0970520035	Connector 30 LED 110V
W0970520036	Connector 30 LED 220V
W0970520037	Connector 30 LED VDR 24V
W0970520038	Connector 30 LED VDR 110V
W0970520039	Connector 30 LED VDR 220V

M8 STRAIGHT CONNECTOR WITH CABLE FOR PRESSURE SWITCHES



Pin	Cable color
1	Brown
3	Blue
4	Black

Code	Description
02400A0100	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 1 m
02400A0250	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 2.5 m
02400A0500	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 5 m
02400A1000	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 10 m

Mobile laying cable, class 6 according to IEC 60228

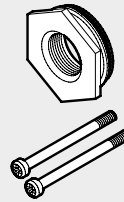
KIT COIL SIDE 22 IP65



Code	Description
0222100100	Kit for coils 22 - IP65

Improved IP65 protection, even after prolonged exposure to atmospheric agents.

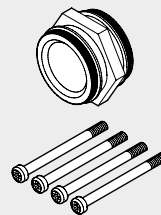
THREADED PORT



Code	Description
9210001	Kit IN OUT 1/8 SY1
9210002	Kit IN OUT 1/4 SY1
9210003	Kit IN OUT 3/8 SY1
9210011	Kit IN OUT 3/8 SY2
9210012	Kit IN OUT 1/2 SY2
9210013	Kit IN OUT 3/4 SY2
9210014	Kit IN OUT 1 SY2
9210001X	Kit IN OUT 1/8 SY1 anti-corrosion
9210002X	Kit IN OUT 1/4 SY1 anti-corrosion
9210003X	Kit IN OUT 3/8 SY1 anti-corrosion
9210011X	Kit IN OUT 3/8 SY2 anti-corrosion
9210012X	Kit IN OUT 1/2 SY2 anti-corrosion
9210013X	Kit IN OUT 3/4 SY2 anti-corrosion
9210014X	Kit IN OUT 1 SY2 anti-corrosion

Max torque 0.4 Nm for SY1
 Max torque 2.5 Nm for SY2

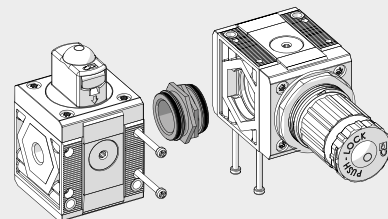
CONNECTING NIPPLE KIT



Code	Description
9210000	Connecting nipple kit SY1
9210010	Connecting nipple kit SY2
9210000X	Connecting nipple kit SY1 anti-corrosion
9210010X	Connecting nipple kit SY2 anti-corrosion

Max torque 0.4 Nm for SY1
 Max torque 2.5 Nm for SY2

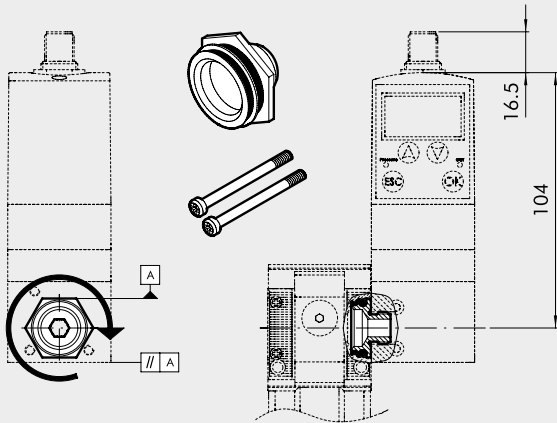
90° CONNECTING ELEMENT KIT



Code	Description
9210009	90° SY1 connection element kit
9210019	90° SY2 connection element kit
9210009X	90° anti-corrosion SY1 connection element kit
9210019X	90° anti-corrosion SY2 connection element kit

Max torque 0.4 Nm for SY1
 Max torque 2.5 Nm for SY2

KIT CONNECTING REGTRONIC 1/4 (PAGE C6.10) AND GS REGULATOR (PAGE C6.2)



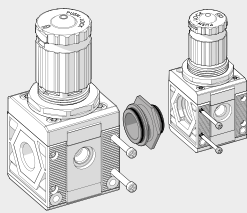
Code	Description
9210004	Adapter for regtronic 1/4 SY1

Max torque for screw, 0.4 Nm

Instructions:

- 1) Screw the connecting bushing onto the REGTRONIC 1/4 as far as it will go. Use sealant on the G1/4 thread to provide a further seal.
- 2) Unscrew the bushing slightly until two surfaces of the hexagon are parallel to the body of REGTRONIC 1/4 (see diagram).
- 3) Insert the bushing into the Syntesi® unit.
- 4) Tighten the two self-tapping screws in the Syntesi® unit to a torque of 0.4 Nm max.

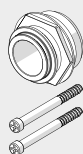
SY1 - SY2 SIZE ADAPTER



Code	Description
9210006	SY1 - SY2 size adapter
9210006X	SY1 - SY2 size adapter anti-corrosion

Max torque for screw, 0.4 Nm for SY1
Max torque for screw, 2.5 Nm for SY2

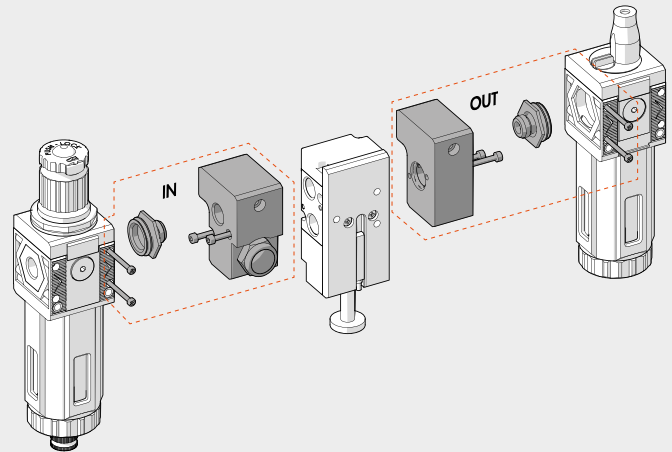
SY1 - SY2 KIT FOR CONNECTION TO FLUX 1 - 2



Code	Description
900099A002	Adapter FLUX 1 - SY1
900099A003	Adapter FLUX 2 - SY2

Max torque for screw, 0.4 Nm for SY1
Max torque for screw, 2.5 Nm for SY2
See page C6.33 for the assembly diagram.

SY1 - SY2 KIT FOR CONNECTION TO SERIE 70 SAFE AIR® VALVES

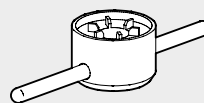


Code	Description
9210015	IN 1/4 SY1 block accessory
9210016	OUT 1/4 SY1 block accessory
9210022	IN 3/8 SY1 block accessory
9210023	OUT 3/8 SY1 block accessory
9210017	IN 3/8 SY2 block accessory
9210018	OUT 3/8 SY2 block accessory
9210020	IN 1/2 SY2 block accessory
9210021	OUT 1/2 SY2 block accessory

Max torque for screw, 0.4 Nm for SY1
Max torque for screw, 2.5 Nm for SY2

See page B1.151 for the assembly diagram.

BOWL DISASSEMBLY SPANNER



Code	Description
9170601	CS TF - TL BIT/SY1
9210050	CS TF - TL SY2

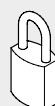
WALL-FIXING SCREW



Code	Description
9210030	M4 x 55 fixing screw SY1
9210031	M5 x 75 fixing screw SY2

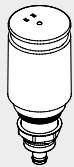
Max torque 0.8 Nm for SY1
Max torque 2.0 Nm for SY2

PADLOCK



Code	Description
9062401	Padlock

AUTOMATIC DRAIN (RA)



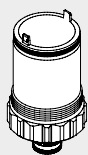
Code	Description
9000802	RA automatic drain spare part

AUTOMATIC DRAIN (SAC)



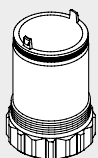
Code	Description
9000803	Spares SAC automatic drain

BOWL RMSA/RA/SAC



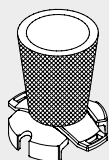
Code	Description
9210100	Bowl FIL FR DEP RMSA SY1
9210101	Bowl FIL FR RA SY1
9210102	Bowl FIL FR DEP SAC SY1
9210105	Bowl FIL FR DEP RMSA SY2
9210106	Bowl FIL FR RA SY2
9210107	Bowl FIL FR DEP SAC SY2

LUBRICATOR BOWL



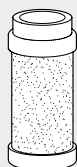
Code	Description
9210110	Bowl LUB SY1
9210115	Bowl LUB SY2

FILTERING ELEMENT



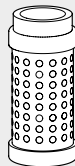
Code	Description
9210150	Filtering element 5µm (yellow) SY1
9210151	Filtering element 20µm (white) SY1
9210152	Filtering element 50µm (blue) SY1
9210155	Filtering element 5µm (yellow) SY2
9210156	Filtering element 20µm (white) SY2
9210157	Filtering element 50µm (blue) SY2

PURIFIER FILTERING ELEMENT



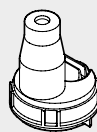
Code	Description
9210160	Cartridge 0.01µm DEP SY1
9210165	Cartridge 0.01µm DEP SY2
9210162	Cartridge 1µm DEP SY1
9210167	Cartridge 1µm DEP SY2

AC FILTERING ELEMENT (ACTIVE CARBON)



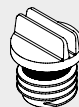
Code	Description
9210161	Cartridge AC SY1
9210166	Cartridge AC SY2

TRANSPARENT LUBRICATOR COVER



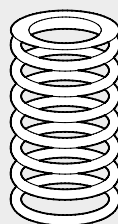
Code	Description
9210180	Transparent cover LUB SY1
9210185	Transparent cover LUB SY2

LUBRICATOR OIL-FILLING CAP



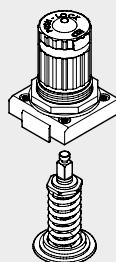
Code	Description
9210181	Oil-filling cap LUB SY1
9210186	Oil-filling cap LUB SY2

SPRINGS FOR REGULATORS AND FR



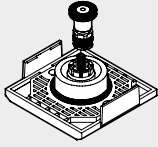
Code	Description
9210190	Spares MO 02 SY1
9210191	Spares MO 04 SY1/SY1 anti-corrosion
9210192	Spares MO 08 SY1
9210193	Spares MO 012 SY1
9210195	Spares MO 02 SY2
9210196	Spares MO 04 SY2
9210197	Spares MO 08 SY2
9210198	Spares MO 012 SY2
9210192X	Spares 08 SY1 anti-corrosion
9210193X	Spares 012 SY1 anti-corrosion
9210197X	Spares 08 SY2 anti-corrosion
9210198X	Spares 012 SY2 anti-corrosion

BELL FOR REG AND FR



Code	Description
9210200	Bell 02 SY1
9210201	Bell 04 SY1
9210202	Bell 08 SY1
9210203	Bell 012 SY1
9210220	Bell 02 SY2
9210221	Bell 04 SY2
9210222	Bell 08 SY2
9210223	Bell 012 SY2
9210202X	Bell 08 SY1 anti-corrosion
9210203X	Bell 012 SY1 anti-corrosion
9210222X	Bell 08 SY2 anti-corrosion
9210223X	Bell 012 SY2 anti-corrosion

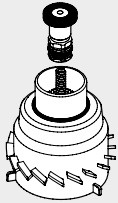
POPPET FOR REG



Code	Description
9210210	Poppet REG SY1
9210230	Poppet REG SY2
9210210X	Poppet REG SY1 anti-corrosion
9210230X	Poppet REG SY2 anti-corrosion

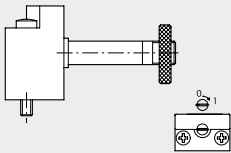
NOTES

POPPET FOR FR



Code	Description
9210211	Poppet FR 5µm SY1
9210212	Poppet FR 20µm SY1
9210213	Poppet FR 50µm SY1
9210231	Poppet FR 5µm SY2
9210232	Poppet FR 20µm SY2
9210233	Poppet FR 50µm SY2

CNOMO CONTROL FOR V3V AND APR SY2



Code	Description
9453922	Elpn Cnomo control kit, manual bistable

NOTES

Syntesi® is an important milestone achieved by Metal Work, the result of thirty years' experience producing air-treatment units. It has been studied in minute detail to obtain the best possible performance in a reduced space and with limited weight. The capacity is much higher than that of other units of the same size.

This modular unit features a very simple yet effective system that requires no brackets, stay bolts or yoke for assembling the elements.

The basic version of Syntesi® incorporates numerous functions that are not provided or are only optional with traditional units. Examples are padlockable knobs, additional pneumatic ports on the front and back, flow options from left to right or vice versa, regulators with compensation system - which are accurate even when the upstream pressure changes, with rapid downstream pressure relief - full indelible marking, automatic condensate drain even in size 1, and 360° visual inspection of oil and condensate levels. The basic materials, technopolymer and nickel-plated brass have excellent corrosion resistance. An anti-corrosion version is available with stainless steel components (screws, plates) or Geomet®-treated ones (regulator springs).



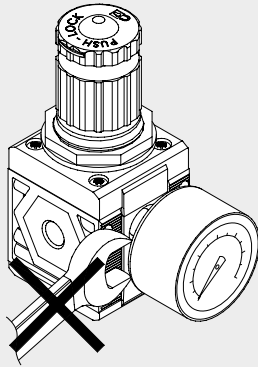
TECHNICAL DATA	SIZE 1			SIZE 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Max. input pressure	bar		15	13			
	MPa		1.5	1.3			
	psi		217	188			
Flow rate				See catalogue of the various elements			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			from -10 to +50		from -10 to +50	
Padlockable knob	The knobs of the regulators, filter regulators and standard sectioning valves can all be padlocked						
Fluid	Compressed air or other inert gases						
Mounting position	See catalogue of the various elements						
Direction of flow	Flow options right to left or vice versa						
Additional air take-off, for pressure gauges or fittings	1/8", front and rear, on all modules			1/4", front and rear, on all modules			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Certification for potentially explosive atmosphere according to Atex 2014/34/EU rule	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> </div> <div> II 3G Ex h IIC T5 Gc -10°C < Ta < 50°C II 3D Ex h IIIC T100 °C Dc </div> </div>						

ANTI-CORROSION VERSION

Differences compared to the standard version:

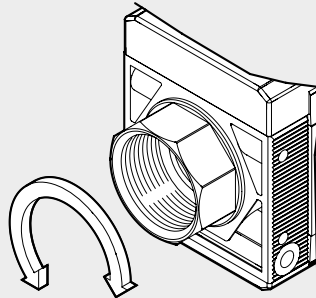
- stainless steel screws
- stainless steel plate for R, FR, V3V knobs
- Geomet®-treated regulator spring and filter-regulator

FIXING TO FRONT PORTS



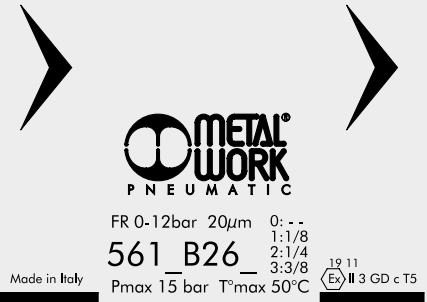
Do not use a spanner for fixing taper threaded elements to the front ports. Mount by hand and apply a liquid sealant (not teflon®).

ROTARY BUSHINGS



3/4" and 1" bushings in Size 2 rotate freely to facilitate assembly operations.

LASER MARKING

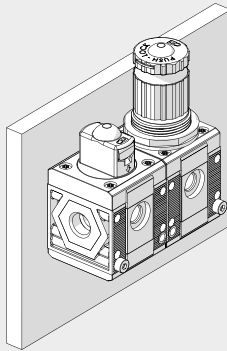


The following is marked indelibly on the body:

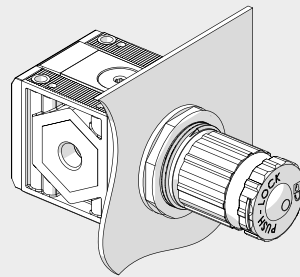
- Metal Work trademark
- Code
- Maximum pressure and temperature
- Degree of filtration or pressure range, where relevant
- Week and year of manufacture
- Atex category
- Made in Italy

MOUNTING OPTIONS

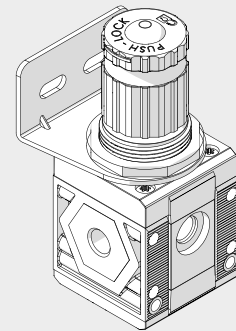
On the wall, using two screws



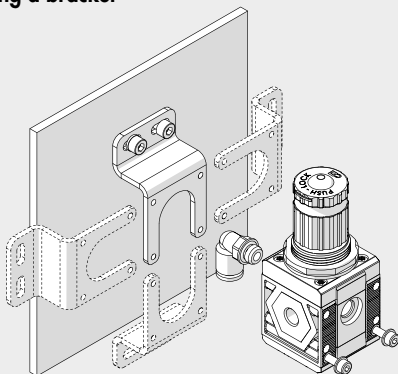
On a panel



Using knob bracket

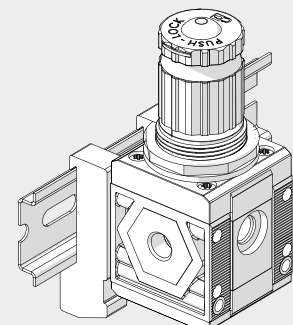


Using a bracket



The bracket can be secured in any position, and the fittings can be mounted on the pressure gauge air intake at the back of the unit.

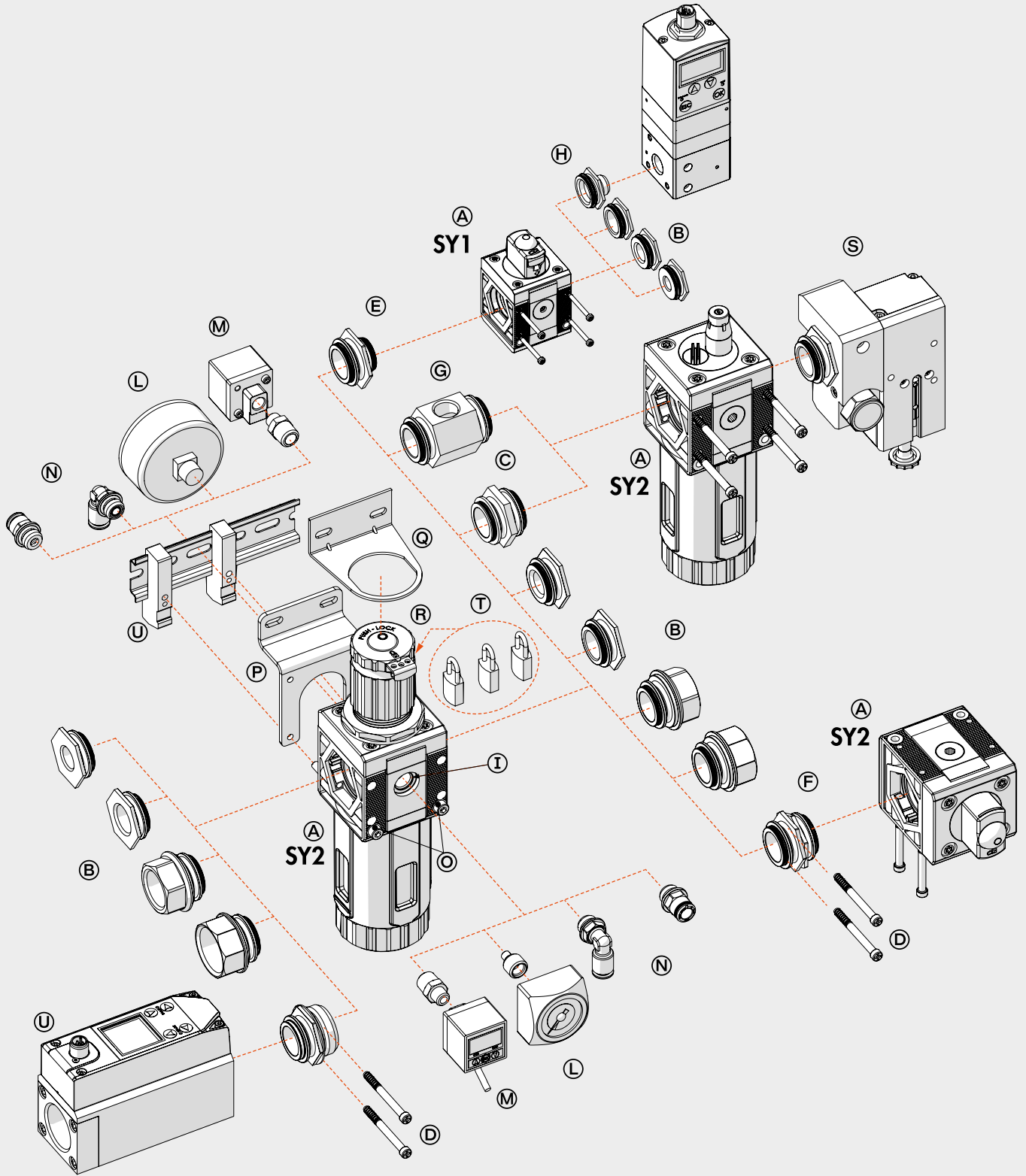
On a DIN EN50022 bar with the apposite adaptor



MODULARITY AND FLEXIBILITY

UNITS

GENERAL TECHNICAL DATA Syntesi®



The various elements of Syntesi® ④ can be connected to the air feed and delivery circuit using pneumatic nickel brass or passivated aluminium ports ⑤ and can be fixed together using nipples ⑥.

The nipples and ports are easy to remove by unscrewing the two front screws ⑦. This solution has numerous advantages:

- Reduced overall dimensions.
- Free composition of multiple elements, without the need for brackets, stay bolts or yoke.
- The threads for the fittings are metallic, allowing high tightening torques, also for tapered threads.
- Maximum flexibility: a unit can be transformed at any time by adding an element or replacing a port with another one, e.g. 1/4" instead of 1/8".
- The air intake port can be the same or different from the outlet port, as desired.

Standard Syntesi® ports are: 1/8", 1/4", 3/8" for size 1; 3/8", 1/2", 3/4", 1" for size 2.

It may be necessary to use a vice to insert the bushes into size 2.

The nipples have different functions:

- Nipple ⑥ joins two elements of the same size together.
- Size adaptor ⑧ can be used to connect an element in the Syntesi® 2 series with one in the Syntesi® 1 series.
- The 90° adaptor ⑨ can be used to connect two 90° angled elements. For example, it can help directing the regulator knob or the control knob of a sectioning valve towards the user.
- The two-way air intake ⑩ is a simple and cost-effective system which, besides connecting two elements together, has 2 opposing threaded air intakes.
- The adaptor for Regtronic ⑪ can be used to fix the Regtronic 1/4" proportional valve to a Syntesi® size 1 element.

Additional ports ⑫. On the front and back of ALL Syntesi® elements there is a port (1/8" for size 1, 1/4" for size 2) that can be used for pressure gauges ⑬, pressure switches ⑭ or, given the high flow rate, as additional air take-off ⑮. These ports are downstream of the element, so, for example, a regulator port can supply air at a set pressure or a filter port can supply filtered air (not valid for activated carbon filter and depurator).

Wall fixing. Only two through screws ⑯ are needed. No bulky brackets or additional flanges are required. The bracket ⑰ can be used to separate the unit from the fixing wall, e.g. to mount a fitting to the rear port.

Fixing on a DIN EN50022 bar. Can be done using the bracket kit ⑱.

Regulator fixing bracket ⑲. Regulators and filter-regulators can also be fixed using a steel bracket ⑲ that embraces the bell.

Padlockable knob ⑲. The knobs of regulators, filter-regulator and sectioning valves can all be padlocked. The steel plate is included in the supply. You can insert up to two 3 mm diameter padlocks ⑲ on size 1 and three padlocks on size 2. As an alternative, the sectioning valve can have a steel plate suitable for a single 6 mm diameter padlock.

Safety valve ⑳. The unit can incorporate a series 70 SAFE AIR® safety valve.

Flowmeter series FLUX 1-2 ㉑. The unit can incorporate a series FLUX 1 or FLUX 2 flow meter.