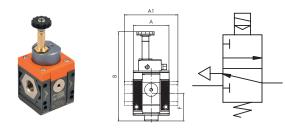


Blocking valve

»SYNTESI« series

PLUS

Art. No. 144874 Type No. 5612V702



Exemplary illustration

This device separates the compressed air circuit from the main air supply. It is a three-way valve that relieves the downstream system in the closed position. This makes it useful for maintenance operations or when the air supply to a machine or piece of equipment needs to be shut off. Available in manual, pneumatic or electro-pneumatic versions. On request also available as assisted electro-pneumatic version (for applications where the inlet pressure is outside the electro-pneumatic valve operating range).

The version with manual control can be locked with up to two (size 1) and up to three (size 2) padlocks when the valve is in the closed position. Alternatively, a version with a Ø 7 mm hole for a single lock is available on request. On the front and back there is a port (G 1/8 for size 1 and G 1/4 for size 2) that can be used with pressure gauges, pressure switches or as an additional air outlet.

A silencer is not included in the delivery for manual and pneumatic actuated shut-off valves. The coil, plug and silencer are not included in the delivery for electric actuated shut-off valves.



Technical data

Series	Syntesi
	-
Size	1
Min. input pressure	3 bar
Max. input pressure	10 bar
Temperature range	-10 to 50 °C
Input	G 1/4
Output	G 1/4
Exhaust air	G 1/8
Flow rate measurement 1	$P_2 = 6,3$ bar and pressure drop $\Delta_p = 0,5$ bar
Flow rate 1	1000 NI/min
Flow rate measurement 2	$P_2 = 6,3$ bar and pressure drop $\Delta_p = 1$ bar
Flow rate 2	1500 NI/min
Exhaust flow rate at 6.3 bar	500 Nl/min
Medium	Compressed air or other neutral gases
Housing	Technopolymer
Max. temperature range	50 °C
Input pressure	3 - 10 bar
A	42.0 mm
A1	- mm
В	104.0 mm
F	32.2 mm

Commercial data

Customs tariff number	84812090
Country of origin	IT
eCl@ss 5.1.4	27291501
eCl@ss 9.0	27291390
UNSPSC_Code_v190501	40141603
UNSPSC_CodeDesc_v190501	Pneumatic valves



SUNTESI. SHUT-OFF VALVE

This device separates the compressed air circuit from the main air supply. It is a three-way valve that relieves the downstream system in the closed position. This makes it useful for maintenance operations or when the air supply to a machine or piece of equipment needs to be shut off. Manual, pneumatic, electro-pneumatic and assisted electro-pneumatic control versions are available. The last version must be used if the inlet pressure is outside the electro-pneumatic valve operating range, so for particularly low or high pressures.

The version with manual control can be locked and you can enter up to two padlocks on size 1 and up to three on size 2 when the valve is in the closed position. As an alternative, a version with a single Ø7 hole is available for a single padlock. On the front and back there is a port (1/8" for size 1 and 1/4" size 2) that can be used with pressure gauges, pressure switches or as an additional air intake.



TECHNICAL DATA			V3V SY1		V3V SY2				
Threaded port		1/8″	1/4″	3/8″	3/8″	1/2″	3/4″	T	1″
Threaded discharge port			1/8″			1/	'4"		
Type of control		Manual - pne	umatic - Elpn - El	pn pilot-assisted	Manual - Pneu	matic - Cnomo el	pn - Cnomo e	lpn pilot-	assisted
Max inlet pressure for pneumatic and solenoid pilot-assisted versions	bar		15			1	3		
	MPa		1.5			1.			
	psi		217				38		
Inlet pressure for solenoid version	bar		3 - 10			3 -			
	MPa		0.3 - 1			0.3			
	psi		43 - 145			43 -			
Pilot pressure for pneumatic and solenoid pilot-assisted versions	bar		3 - 10			3 -			
	MPa		0.3 - 1			0.3			
	psi		43 - 145			43 -			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ∆P 0.5 bar (0.05 MPa; 7 psi)	Nl/min	800	1000	1100	2800	3000		3000	
	scfm	28	35	39	99	106		106	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ∆P 1 bar (0.1 MPa; 14 psi)	Nl/min	1100	1500	1600	3600	4000		4000	
	scfm	39	53	57	127	141.5		141.5	
Exhaust flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min		500			20			
	scfm		18			7			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50				From -1	0 to +50		
Padlockable knob					Included				
Weight	g	197	192	183	476	449	445	4	433
Fluid		Compressed air or other inert gases							
Mounting position					In any position				
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear				
Additional air take-off flow rate at 6.3 bar	Nl/min				1500				
(0.63 MPa; 91 psi) ∆P 1 bar (0.1 MPa; 14 psi) scfm					53				
Wall fixing screws		No. 2 M4 screws No. 2 M5 screws							
Bobbin capacity for electro-pneumatic version		12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA Bistable: horizontal = OFF. vertical = ON							
Hand operator of electro-pneumatic versions				Bistable: hor	izontal = OFF, v	vertical = ON			

COMPONENTS

- Technopolymer knob

- Technopolymer knob
 Technopolymer body
 NBR o-ring gasket
 IN/OUT bushing made of OT58 nickel-plated brass or persident during in the 2 / 4"...1" or passivated aluminium for 3/4'' - 1''OT58 brass valve with NBR vulcanized gasket
 - Stainless steel valve spring
- 6 7 8 Technopolymer plug OT58 brass threaded insert
- Ő
- Ŏ Zinc-plated steel plate for knob locking (stainless steel for anti-corrosion version)
- (1) Stainless steel spring stem recovery ① OT58 brass stem

RIEGLER & Co. KG Schützenstraße 27 72574 Bad Urach Tel. +49 7125 9497-642 technik@riegler.de

Page 3 of 11

V10 - Steel plate with Ø3.5 holes for locking with 2 padlocks (SY1) or 3 padlocks (SY2).

V11 - Steel plate with a single Ø7 hole for docking with a single padlock (compatible with most of the padlocks available from the trade with a Ø5mm arch).

SY2

SY1

12

UNITS Syntesi
® SHUT-OFF VALVE

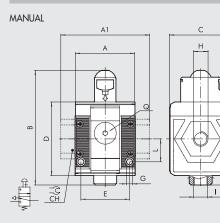
C1

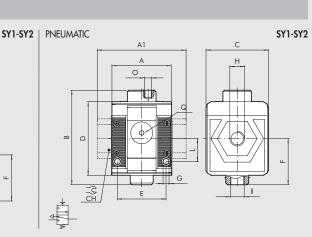


C1

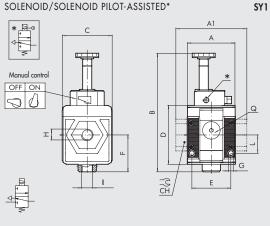


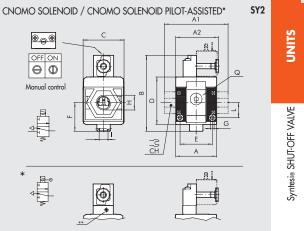
DIMENSIONS





SOLENOID/SOLENOID PILOT-ASSISTED*





N.B.: Before assembling other Syntesi elements after the V3V, remember to mount the coil on the V3V itself.

		MANUAL	PI	NEUMATIC	SOLENOID/SOLENOID PILOT-ASSISTED	CNOMO SOLENOID/CNOMO SOLENOID PILOT-ASSISTED		
	SIZE 1	SIZE 2	SIZE 1 SIZE 2		SIZE 1	SIZE 2		
H (threaded port)	1/8" 1/4" 3/8"	3/8" 1/2" 3/4" 1"	1/8" 1/4" 3/8"	3/8" 1/2" 3/4" 1"	1/8" 1/4" 3/8"	3/8" 1/2" 3/4" 1"		
A	42	60.5	42	60.5	42	60.5		
A1	44	95 95	44	95 95	44	95 95		
A2	-	-	-	-	-	65		
В	80	109	66	94	104	-		
Cnomo		-		-		113		
Cnomo pilot ass.		-		-		126		
с	44	61	44	61	44	61		
СН		32 36	-	32 36	-	32 36		
D	51.5	70.5	51.5	70.5	51.5	70.5		
E	33.5	47.5	33.5	47.5	33.5	47.5		
F	32.2	42.7	32.2	42.7	32.2	42.7		
G	Hole for M4 screws	Hole for M5 screws	Hole for M4 screws	Hole for M5 screws	Hole for M4 screws	Hole for M5 screws		
I (exhaust)	1/8″	1/4″	1/8″	1/4″	1/4″ 1/8″			
L	16	22.5	16	22.5	16	22.5		
O (pilot)		-	M5	1/8″	-			
Q (no. 2 additional	1/8″	1/4″	1/8″	1/4″	1/8″	1/4″		
air takes-off)								
** Pilot					M5	M5		



_

56							
		1	1	V		10	1
SYNTE	SI	SIZE	THREADED INP CONNECTION			ТҮРЕ	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corro	sion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port		*11	Manual with Ø3.5 hole for padlocks Manual with Ø7 hole for padlock	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
		2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1"port		• 30	Preumatic Solenoid pilot-assisted Solenoid	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port
		of the padlocks available fi ti-corrosion version.	om the trade with a &	ð5mm arch.			
PURCHASE	ORDER CO	DDES HAVING A MOR	E FREQUENT USE				
				at your will according to the key	to codes.	NOTE	
Code Syntesi₀ SY1 Sł	Description		Code Syntesia SY2	Description SHUT-OFF VALVE		NOTE Anti-corrosion version	
5610V100		ve anual without bushings	5620V100	V3V SY2 manual without bushin	as	5X	
5611V101	V3V SY1 1/		5623V103	V3V SY2 3/8 manual	93	Example	
5612V102	V3V SY1 1/		5624V104	V3V SY2 1/2 manual			1/8 anti-corrosion
5613V102	V3V SY1 3/		5625V105	V3V SY2 3/4 manual		97111101 107011	., o ann corrosion
30137103	1010113/	o manour	5626V105	V3V SY2 1 manual			
5610V200	V3V SV1 pr	eumatic without bushings	30201100	V 3V 312 1 manual			
5611V201			54001/000	1/2// CV2	l.t		
		8 pneumatic	5620V200	V3V SY2 pneumatic without bus	hings		
5612V202		4 pneumatic	5623V203	V3V SY2 3/8 pneumatic			
5613V203	V3V SY1 3/	8 pneumatic	5624V204	V3V SY2 1/2 pneumatic			
			5625V205	V3V SY2 3/4 pneumatic			
5610V300	V3V SY1 elp	n pilot-assisted without bushings	5626V206	V3V SY2 1 pneumatic			
5611V301	V3V SY1 1/	8 elpn pilot-assisted					
5612V302	V3V SY1 1/	4 elpn pilot-assisted	5620V300	V3V SY2 elpn pilot-assisted Cnomo w	vithout bushings		
5613V303	V3V SY1 3/	8 elpn pilot-assisted	5623V303	V3V SY2 3/8 elpn pilot-assisted	Cnomo		
			5624V304	V3V SY2 1/2 elpn pilot-assisted	Cnomo		
5610V700	V3V SY1 els	on without bushings	5625V305	V3V SY2 3/4 elpn pilot-assisted			
5611V701	V3V SY1 1/		5626V306	V3V SY2 1 elpn pilot-assisted Cr			
5612V702	V3V SY1 1/						
5613V703	V3V SY1 3/		5620V700	V3V SY2 elpn without bushings			
	, 0, 0, 1, 0/	r-"	5623V703	V3V SY2 3/8 elpn			
			5624V703	V3V SY2 1/2 elpn			
			5625V705	V3V SY2 3/4 elpn			
			5626V705	V3V SY2 1 elpn			
			30204700	¥3¥ 512 T eipii			
NOTES							

C1.38



GENERAL TECHNICAL DATA SUNTESI.

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 levels. The basic materials, technopolymer and nickelplated brass have excellent corrosion resistance. An anti-corrosion version is available with stainless steel components (screws, plates) or Geomet[®]reated ones (regulator springs).



TECHNICAL DATA		SIZE 1			SIZE 2				
Threaded port		1/8″	1/4″	3/8	3″	3/8″	1/2″	3/4″	1″
Max. input pressure	bar		15					3	
	MPa		1.5					.3	
	psi		217					88	
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 r				l sectioning valves	can all be padlo	cked
Fluid		Compressed air or other inert gases							
Mounting position						ogue of the variou			
Direction of flow					low optio	ons right to left or			
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		(€x) 3G Ex h C T5 Gc -10°C < Ta < 50°C 3D Ex h C T100 °C Dc							
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

C1

C1.4



C1









C1.6

RIEGLER & Co. KG Schützenstraße 27 72574 Bad Urach Tel. +49 7125 9497-642 technik@riegler.de



C1

UNITS

GENERAL TECHNICAL DATA Syntesi®



The various elements of Syntesis 🙆 can be connected to the air feed and delivery circuit using pneumatic nickel brass or passivated aluminium ports 🕲 and can be fixed together using nipples ©.

- The nipples and ports are easy to remove by unscrewing the two front screws D. 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 © joins two elements of the same size together.
- Size adaptor () can be used to connect an element in the Syntesi® 2 series with one in the Syntesi® 1 series.
- The 90° adaptor (E) 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 (i) is a simple and cost-effective system which, besides connecting two elements together, has 2 opposing threaded air intakes. - The adaptor for Regtronic (B) can be used to fix the Regtronic 1/4" proportional valve to a Syntesie size 1 element. Additional ports (D). On the front and back of ALL Syntesie elements there is a port (1/8" for size 1, 1/4" for size 2) that can be used for pressure

gauges (D, pressure switches (D) or, given the high flow rate, as additional air take-off (D). 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 © are needed. No bulky brackets or additional flanges are required. The bracket © 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 (0). Regulator fixing bracket (a). Regulators and filter-regulators can also be fixed using a steel bracket (a) that embraces the bell.

Padlockable knob ®. 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 T 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 (s). The unit can incorporate a series 70 SAFE AIR® safety valve.

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



C1 SUNTESI. KEY TO CODES





Accessories

	Art. No.	Type No.
Mounting bracket, size 1, standard and anti-corr.	145658	9200716X
Adapter for DIN rail, size 1 and size 2	145660	9200718X
Connecting nipple kit, size 1	144695	9210000
Connecting element 90°,, size 1	145502	9210009
Size adapter, size 1 - size 2, incl. 4 screws	145504	9210006
Fastening screw, size 1	145507	9210030
Solenoid, 30 mm x Ø 8 mm, 24 V DC, 4 W	145478	W0210010100
Solenoid, 30 mm x Ø 8 mm, 24 V AC, 50/60 Hz	145479	W0210011100
Solenoid, 30 mm x Ø 8 mm, 110 V AC, 50/60 Hz	145480	W0210012100
Solenoid, 30 mm x Ø 8 mm, 230 V AC, 50/60 Hz	145481	W0210013100
Plug connector, 30 mm, type A	145490	W0970520033
Plug connector LED, 24 V, 30 mm, type A	145491	W0970520034
Plug connector LED, 110 V, 30 mm, type A	145492	W0970520035
Plug connector LED, 230 V, 30 mm, type A	145493	W0970520036
Plug connector LED, varistor 24 V, 30 mm, type A	145494	W0970520037
Plug connector LED, varistor 110 V, 30 mm, type A	145495	W0970520038
Plug connector LED, varistor 230 V, 30 mm, type A	145496	W0970520039
Knurled nut, for coil 22 mm, IP 65	145501	0222100100
Solenoid kit 30 mm, 24 V DC, ATEX II 2 GD	145482	0227606913
Solenoid kit 30 mm, 24 V DC, ATEX II 2 GD	145483	0227606915
Solenoid kit 30 mm, 24 V AC, ATEX II 2 GD	145484	0227608013
Solenoid kit 30 mm, 24 V AC, ATEX II 2 GD	145485	0227608015
Solenoid kit 30 mm, 110 V AC, ATEX II 2 GD	145486	0227608023
Solenoid kit 30 mm, 110 V AC, ATEX II 2 GD	145487	0227608025
Solenoid kit 30 mm, 230 V AC, ATEX II 2 GD	145488	0227608033
Solenoid kit 30 mm, 230 V AC, ATEX II 2 GD	145489	0227608035

Spareparts

	Art. No.	Туре No.
Threaded port bushing, size 1, G 1/4,	144689	9210002