

Pneumatic Distributors

manually-mechanically operated



ISO 9001
BUREAU VERITAS
Certification



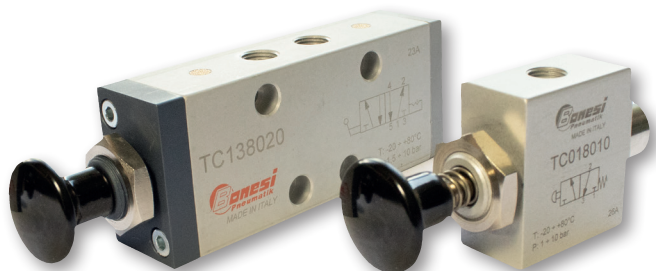
Bonesi
Pneumatik



Manual push-pull valves with spool - TC Series

Connections: 1/8" - 1/4"

TC SERIES



- Spool valves
- High mechanical strength
- Anodised aluminium body
Thermoplastic polymer or anodised aluminium bases
- 3/2 - 5/2 manual operation
- ATEX 2014/34/EU certificates available

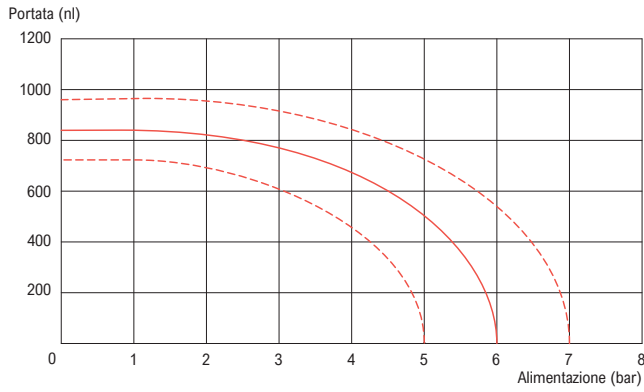
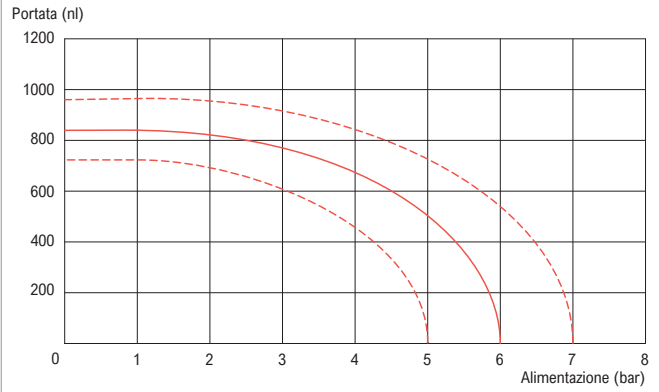
TECHNICAL FEATURES

Function	3/2 - 5/2	
Operation	Manual: Manual push-pull control - Monostable mechanical spring return, bistable	
Materials	Body and cover in anodised aluminium alloy, base in thermoplastic polymer (PBT), Internal components in steel - aluminium - brass - NBR gaskets	
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)	
Connections	Mini valve size A: 1/8" Gas Size A: 1/8" Gas (Available with 1/4" Gas connections)	
Threads	Cylindrical Gas (BSPP)	
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)	
Operating pressure	0 ÷ 10 bar	
Air flow rate		
Connection	Mini Valve Size A - 1/8"	Size A - 1/8", 1/4"
Nominal diameter	5 mm	5 mm
Supply pressure	5 bar 460 NI/min	460 NI/min
(with ΔP 1 bar)	6 bar 500 NI/min	500 NI/min
	7 bar 540 NI/min	540 NI/min
	See flow rate diagram p.3.6.05.2	
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]	
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)	

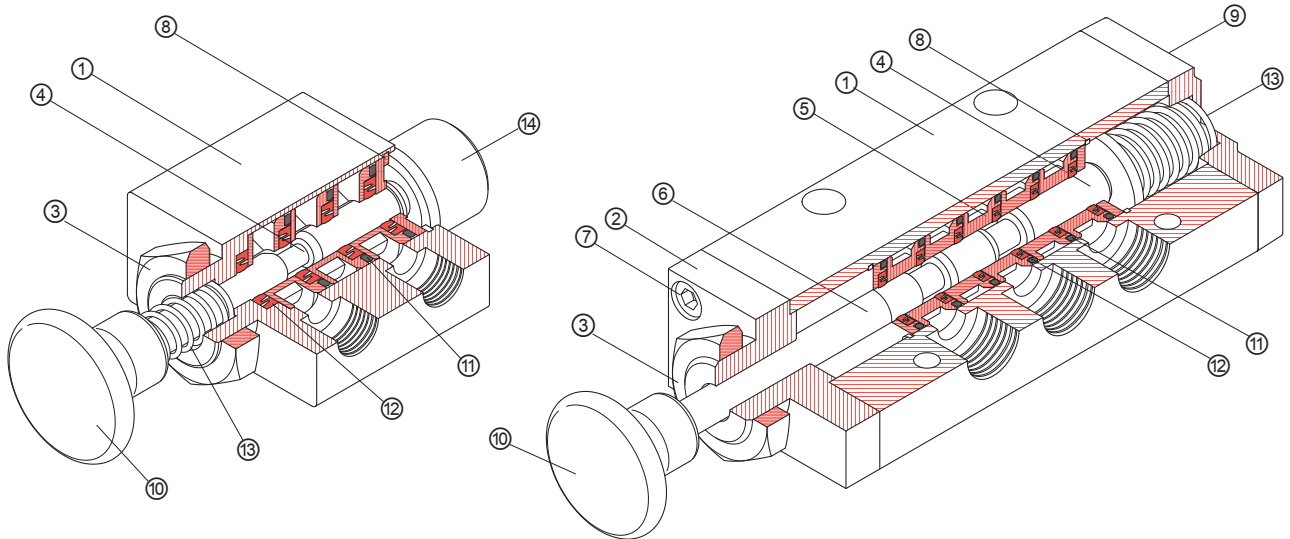
ATEX CERTIFICATION

Valve marking	CE II 2G Ex h IIC T6 Gb (Zone 1 and Zone 2) CE II 2D Ex h IIIC 85°C Db (Zone 21 and Zone 22)
Operating pressure in ATEX environment	0.5 ÷ 10 bar
ATEX ambient temperature	-20°C ≤ Ta ≤ +60°C
CE marking	In compliance with Directive 2014/34/EU (see declaration of conformity)



FLOW RATE DIAGRAMS - MANUAL PUSH-PULL VALVES
MINI VALVE SIZE "A" - 1/8"

SIZE "A" - 1/8", 1/4"

MATERIALS - MANUAL PUSH-PULL VALVES

POS.	DESCRIPTION	MATERIALS	POS.	DESCRIPTION	MATERIALS
①	Body	Anodised drawn aluminium	⑧	Seeger ring	C75 steel
②	Cover	Anodised aluminium	⑨	Base	Polybutylene terephthalate PBT / Anodised aluminium
③	Ring nut	Nickel-plated OT58 brass	⑩	Grip	Phenolic-based duroplast (PF)
④	Spool	Nickel-plated aluminium	⑪	O-ring	Nitrile rubber (NBR)
⑤	Spacers	OT58 brass	⑫	Sealing gasket	Nitrile rubber (NBR)
⑥	Extension	Galvanised steel	⑬	Spring	AISI 302 steel (X10CrNi18-09)
⑦	Screw	Galvanised steel	⑭	Cover	Nickel-plated OT58 brass



CODING KEY - MANUAL PUSH-PULL VALVES

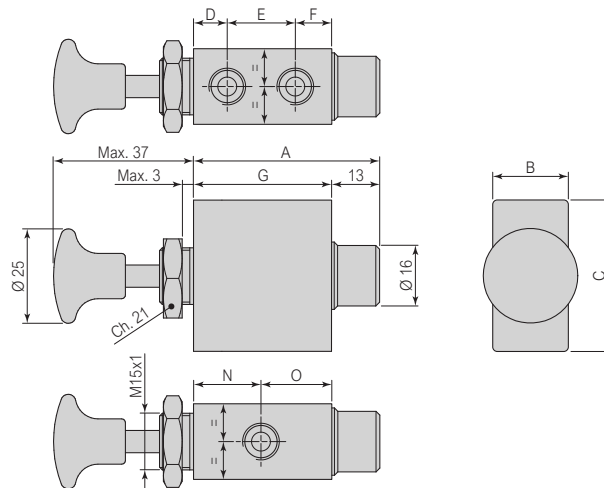
Operation	Function	Size	Version	Pneumatic connections	Certifications
TC	01	80	1	0	<input type="checkbox"/>
TC = Push-pull manual		80 = Size A - Standard 1/8" Gas	1 = 3/2 Monostable (Mini valve) Mechanical spring return	0 = Standard 0/4 = 1/4" Gas	
	01 = Mini valve 3/2 Normally closed		1 = Monostable Pneumatic spring return	NULL = None EX = For compressed air in potentially explosive atmosphere (ATEX)	
	33 = 3/2 Normally closed		2 = Bistable		
	13 = 5/2 Monostable 5/2 Bistable		4 = Monostable Mechanical spring return		

POSSIBLE CONFIGURATIONS

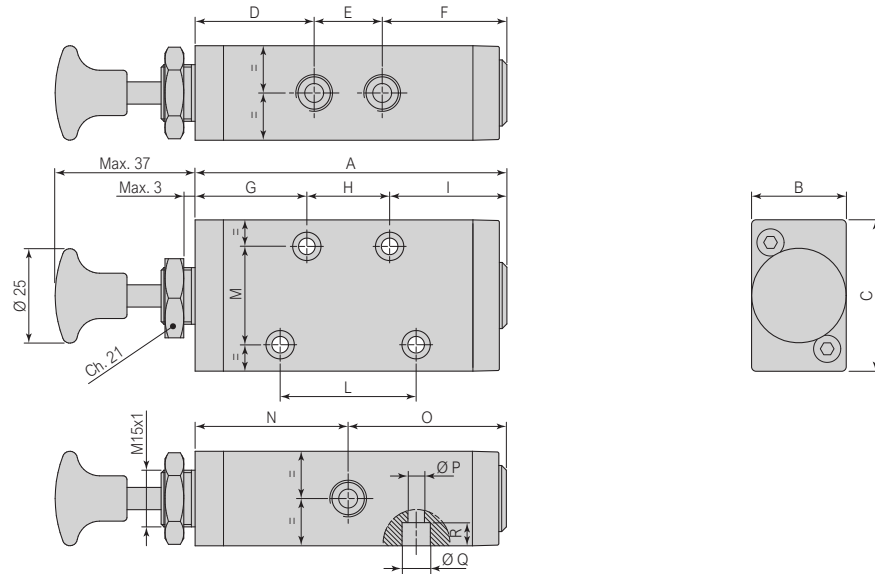
Operation	Function	Size	Version	Pneumatic connections	Certifications
TC Push-pull manual	01 Mini valve 3/2 Normally closed	80 Size A Standard 1/8" Gas	1 Monostable Mechanical return	0 1/8" Gas	<input type="checkbox"/> None
			2 Bistable		
	33 3/2 Normally closed	80 Size A Standard 1/8" Gas	1 Monostable Pneumatic return	0 1/8" Gas	<input type="checkbox"/> None <input checked="" type="checkbox"/> EX ATEX
			2 Bistable		
			13 5/2 Monostable 5/2 Bistable	0/4 1/4" Gas	
				4 Monostable Mechanical return	

DIMENSIONS - 3/2 MANUAL PUSH-PULL MINI VALVE

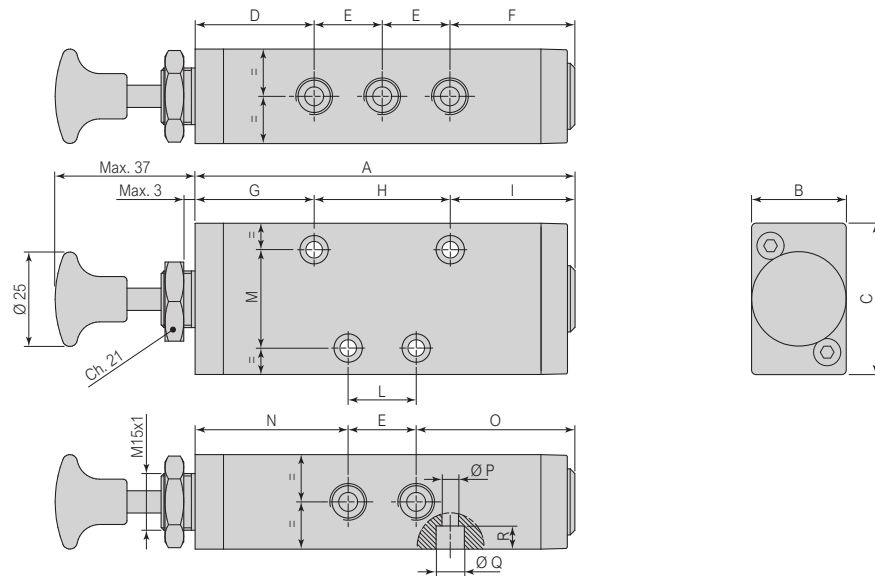
MANUAL PUSH-PULL OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE



Symbol	Size	Connections	Code	A	B	C	D	E	F	G	N	O
	A	Gas 1/8"	TC018010	85	20	40	9	18	9.5	36.5	18	19
	A	Gas 1/8"	TC018020	85	20	40	9	18	9.5	36.5	18	19

DIMENSIONS - 3/2 MANUAL PUSH-PULL VALVES
MANUAL PUSH-PULL OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE


Symbol	Size	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	Ø P	Ø Q	R
	A	Gas 1/8"	TC338010	82.5	25	40	31.5	18	33	29.5	22	31	36	26	40.5	42	4.5	7.5	6
		Gas 1/4"	TC338010/4	82.5	25	40	31.5	18	33	29.5	22	31	40	26	40.5	42	4.5	7.5	6
	A	Gas 1/8"	TC338020	82.5	25	40	31.5	18	33	29.5	22	31	36	26	40.5	42	4.5	7.5	6
		Gas 1/4"	TC338020/4	82.5	25	40	31.5	18	33	29.5	22	31	40	26	40.5	42	4.5	7.5	6
	A	Gas 1/8"	TC338040	82.5	25	40	31.5	18	33	29.5	22	31	36	26	40.5	42	4.5	7.5	6
		Gas 1/4"	TC338040/4	82.5	25	40	31.5	18	33	29.5	22	31	40	26	40.5	42	4.5	7.5	6

DIMENSIONS - 5/2 MANUALLY OPERATED PUSH-PULL VALVES
MANUAL PUSH-PULL OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE


Symbol	Size	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	Ø P	Ø Q	R
	A	Gas 1/8"	TC138010	100.5	25	40	31.5	18	33	31.5	36	33	18	26	40.5	42	4.5	7.5	6
		Gas 1/4"	TC138010/4	100.5	25	40	31.5	18	33	29.5	40	31	57	26	40.5	42	4.5	7.5	6
	A	Gas 1/8"	TC138020	100.5	25	40	31.5	18	33	31.5	36	33	18	26	40.5	42	4.5	7.5	6
		Gas 1/4"	TC138020/4	100.5	25	40	31.5	18	33	29.5	40	31	57	26	40.5	42	4.5	7.5	6
	A	Gas 1/8"	TC138010	100.5	25	40	31.5	18	33	31.5	36	33	18	26	40.5	42	4.5	7.5	6
		Gas 1/4"	TC138010/4	100.5	25	40	31.5	18	33	29.5	40	31	57	26	40.5	42	4.5	7.5	6

Manual lever valves with spool - MC Series

Connections: 1/8" - 1/4" - 3/8"

MC SERIES



Spool valves

High mechanical strength

Anodised aluminium body
Thermoplastic polymer or anodised aluminium bases

3/2 - 5/2 - 5/3 manual operation

ATEX 2014/34/EU certificates available

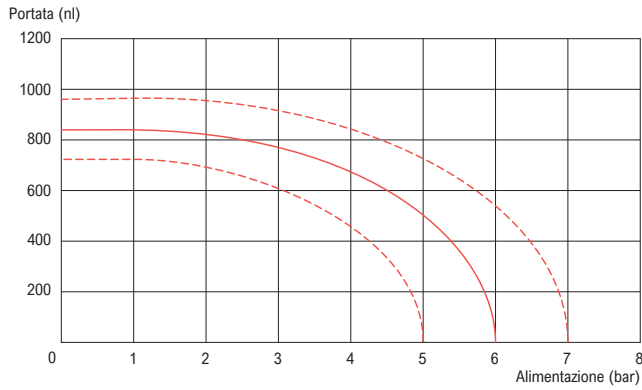
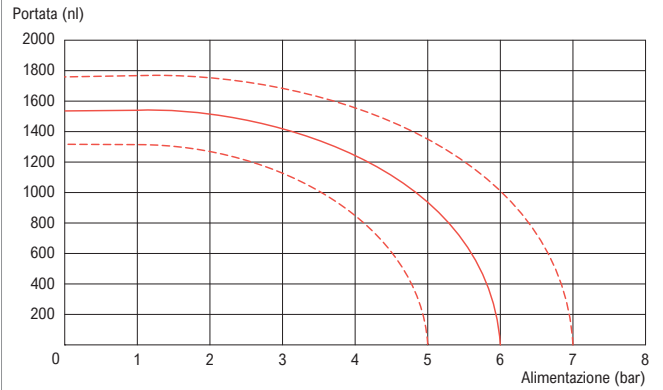
TECHNICAL FEATURES

Function	3/2 - 5/2 - 5/3	
Operation	Manual: Manual control - Monostable mechanical spring return, bistable, three positions	
Materials	Body and cover in anodised aluminium alloy, base in thermoplastic polymer (PBT), Internal components in steel - aluminium - brass - NBR gaskets	
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)	
Connections	Size A: 1/8" Gas (Available with 1/4" Gas connections) Size B: 1/4" Gas (Available with 3/8" Gas connections)	
Threads	Cylindrical Gas (BSPP)	
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)	
Operating pressure	0 ÷ 10 bar	
Air flow rate		
Connection	Size A - 1/8", 1/4"	Size B - 1/4", 3/8"
Nominal diameter	5 mm	8 mm
Supply pressure	5 bar 460 NI/min	840 NI/min
(with ΔP 1 bar)	6 bar 500 NI/min	930 NI/min
	7 bar 540 NI/min	1020 NI/min
	See flow rate diagram page 3.6.05.6	
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]	
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)	

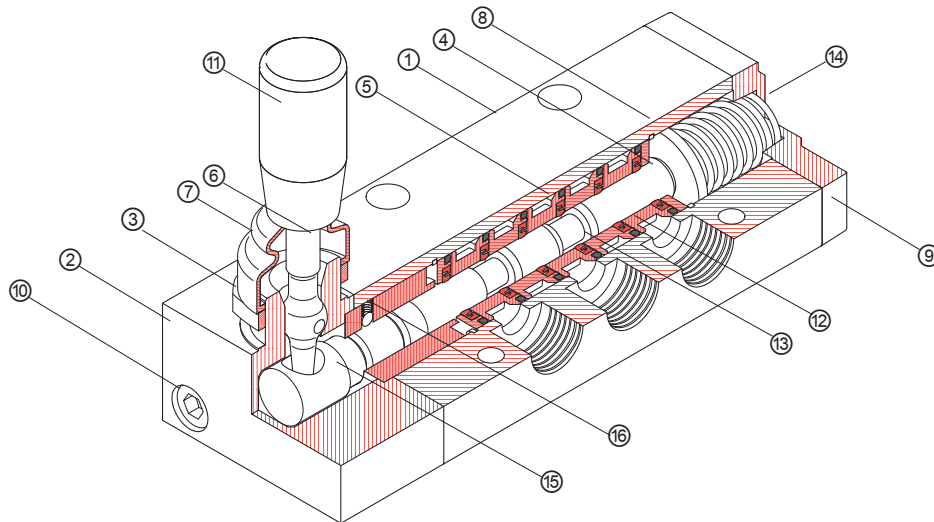
ATEX CERTIFICATION

Valve marking	CE II 2G Ex h IIC T6 Gb (Zone 1 and Zone 2) CE II 2D Ex h IIIC 85°C Db (Zone 21 and Zone 22)
Operating pressure in ATEX environment	0.5 ÷ 10 bar
ATEX ambient temperature	-20°C ≤ Ta ≤ +60°C
CE marking	In compliance with Directive 2014/34/EU (see declaration of conformity)



FLOW DIAGRAMS - MANUAL VALVES
FLOW RATE DIAGRAM - SIZE "A" - 1/8", 1/4"

FLOW RATE DIAGRAM - SIZE "B" - 1/4", 3/8"

MATERIALS - MANUAL LEVER VALVES

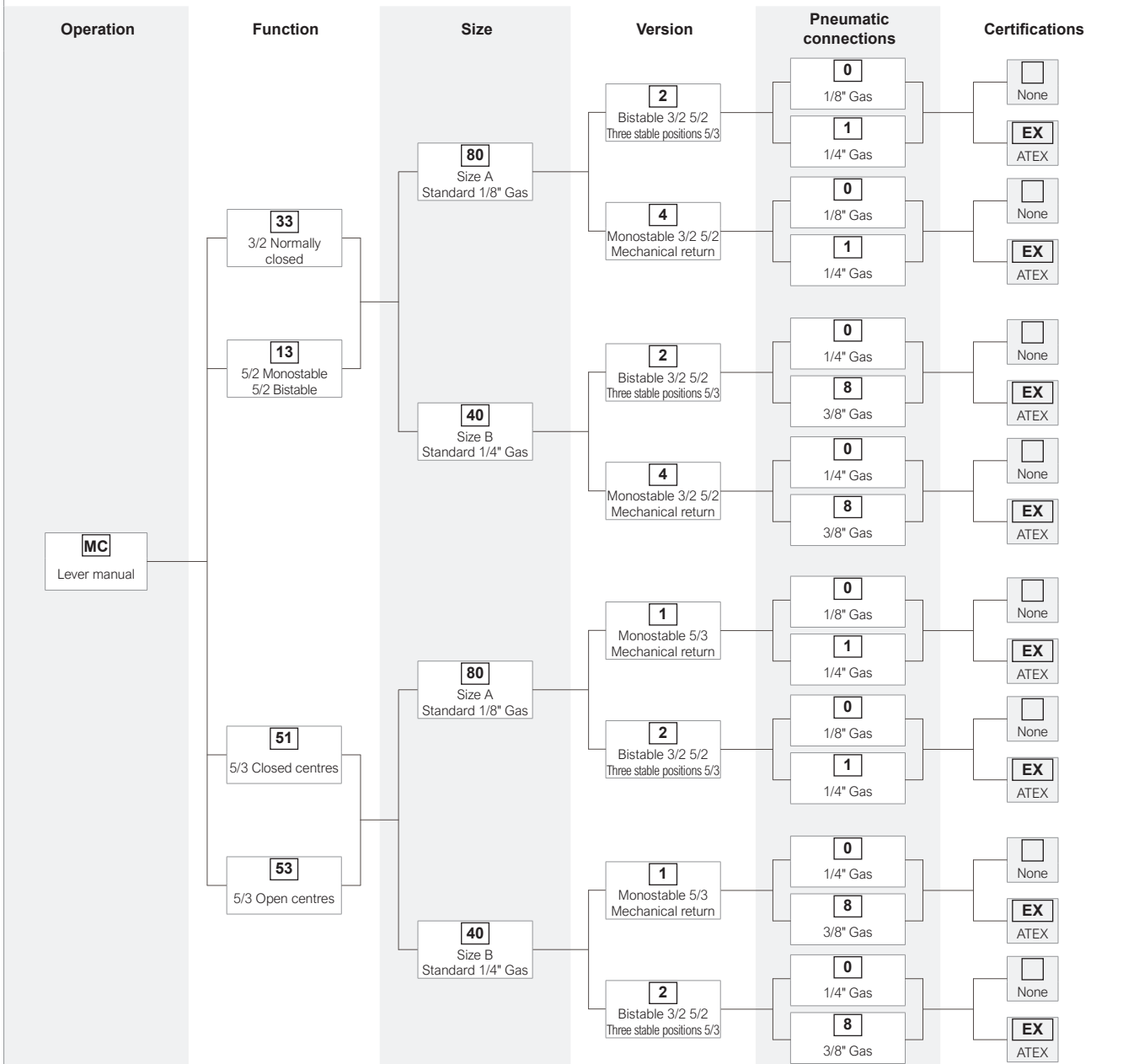
POS.	DESCRIPTION	MATERIALS	POS.	DESCRIPTION	MATERIALS
①	Body	Anodised drawn aluminium	⑨	Base	Polybutylene terephthalate PBT
②	Cover	Anodised aluminium	⑩	Screw	Galvanised steel
③	Ring nut	Nickel-plated OT58 brass	⑪	Grip	Phenolic-based duroplast (PF)
④	Spool	Nickel-plated aluminium	⑫	O-ring	Nitrile rubber (NBR)
⑤	Spacers	OT58 brass	⑬	Sealing gasket	Nitrile rubber (NBR)
⑥	Rod	Nickel-plated steel	⑭	Spring	AISI 302 steel (X10CrNi18-09)
⑦	Bellows	Nitrile rubber (NBR)	⑮	Extension	Galvanised steel
⑧	Seeger ring	C75 steel	⑯	Ball	Hardened steel

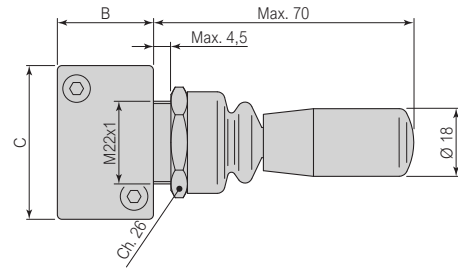
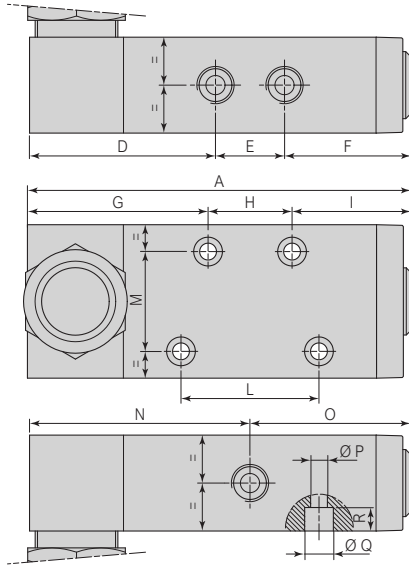


CODING KEY - MANUAL LEVER VALVES

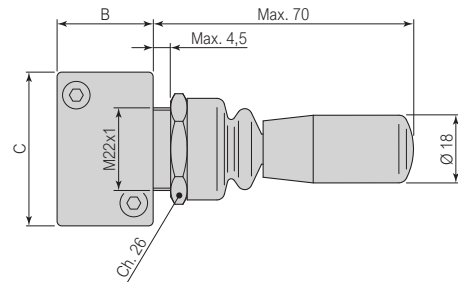
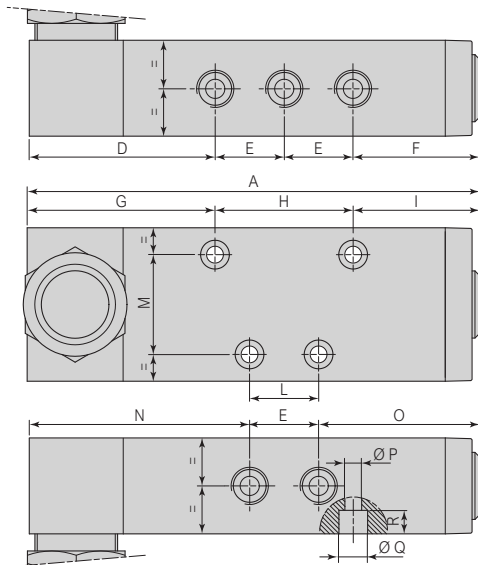
Operation	Function	Size	Version	Pneumatic connections	Certifications
MC	33	80	1	0	<input type="checkbox"/>
MC = Lever manual		80 = Size A - Standard 1/8" Gas 40 = Size B - Standard 1/4" Gas	1 = Monostable 5/3 Mechanical spring return	0 = Standard 1 = 1/4" Gas 8 = 3/8" Gas	<input type="checkbox"/>
	33 = 3/2 Normally closed 		4 = Monostable 3/2, 5/2 Mechanical spring return 		NULL = None EX = For compressed air in potentially explosive atmosphere (ATEX)
	13 = 5/2 Monostable 5/2 Bistable 		2 = Bistable 3/2, 5/2 Three stable positions 5/3 		
	51 = 5/3 Closed centres 				
	53 = 5/3 Open centres 				

POSSIBLE CONFIGURATIONS



DIMENSIONS - 3/2 MANUAL LEVER VALVES
MANUAL LEVER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE


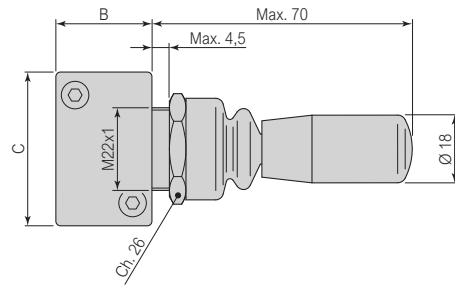
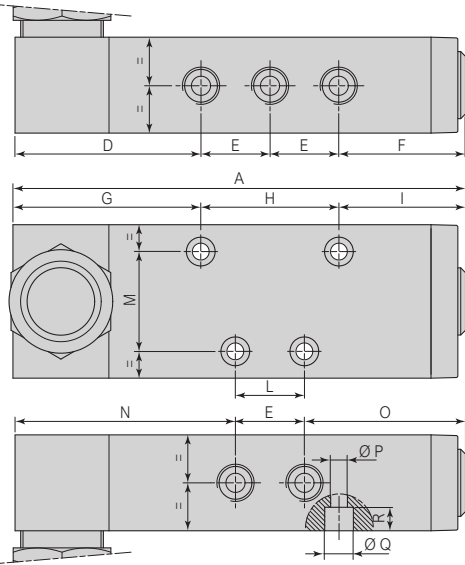
Symbol	Size	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	Ø P	Ø Q	R
	A	Gas 1/8"	MC338040	100	25	40	49	18	33	47	22	31	36	26	58	42	4.5	7.5	6
		Gas 1/4"	MC338041	100	25	40	49	18	33	47	22	31	40	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC334040	127	30	52	62.75	22	42.25	58.75	30	38.25	50	40	73.75	53.25	5.5	9	7
Gas 3/8"		MC334048	127	30	52	62.75	22	42.25	58.75	30	38.25	50	40	73.75	53.25	5.5	9	7	
	A	Gas 1/8"	MC338020	100	25	40	49	18	33	47	22	31	36	26	58	42	4.5	7.5	6
		Gas 1/4"	MC338021	100	25	40	49	18	33	47	22	31	40	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC334020	127	30	52	62.75	22	42.25	58.75	30	38.25	50	40	73.75	53.25	5.5	9	7
Gas 3/8"		MC334028	127	30	52	62.75	22	42.25	58.75	30	38.25	50	40	73.75	53.25	5.5	9	7	

DIMENSIONS - 5/2 MANUAL LEVER VALVES
MANUAL LEVER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE


Symbol	Size	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	Ø P	Ø Q	R
	A	Gas 1/8"	MC138040	118	25	40	49	18	33	49	36	33	18	26	58	42	4.5	7.5	6
		Gas 1/4"	MC138041	118	25	40	49	18	33	47	40	31	57	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC134040	149	30	52	62.75	22	42.25	54.75	60	34.25	22	40	73.75	53.25	5.5	9	7
Gas 3/8"		MC134048	149	30	52	62.75	22	42.25	59.75	50	39.25	70	40	73.75	53.25	5.5	9	7	
	A	Gas 1/8"	MC138020	118	25	40	49	18	33	49	36	33	18	26	58	42	4.5	7.5	6
		Gas 1/4"	MC138021	118	25	40	49	18	33	47	40	31	57	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC134020	149	30	52	62.75	22	42.25	54.75	60	34.25	22	40	73.75	53.25	5.5	9	7
Gas 3/8"		MC134028	149	30	52	62.75	22	42.25	59.75	50	39.25	70	40	73.75	53.25	5.5	9	7	

DIMENSIONS - 5/3 MANUAL LEVER VALVES

MANUAL LEVER OPERATION - CLOSED CENTRES - OPEN CENTRES - THREE MONOSTABLE POSITIONS - THREE STABLE POSITIONS



Symbol	Size	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	Ø P	Ø Q	R
	A	Gas 1/8"	MC518010	118	25	40	49	18	33	49	36	33	18	26	58	42	4.5	7.5	6
		Gas 1/4"	MC518011	118	25	40	49	18	33	47	40	31	57	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC514010	149	30	52	62.75	22	42.25	54.75	60	34.25	22	40	73.75	53.25	5.5	9	7
		Gas 3/8"	MC514018	149	30	52	62.75	22	42.25	59.75	50	39.25	70	40	73.75	53.25	5.5	9	7
	A	Gas 1/8"	MC518020	118	25	40	49	18	33	49	36	33	18	26	58	42	4.5	7.5	6
		Gas 1/4"	MC518021	118	25	40	49	18	33	47	40	31	57	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC514020	149	30	52	62.75	22	42.25	54.75	60	34.25	22	40	73.75	53.25	5.5	9	7
		Gas 3/8"	MC514028	149	30	52	62.75	22	42.25	59.75	50	39.25	70	40	73.75	53.25	5.5	9	7
	A	Gas 1/8"	MC538010	118	25	40	49	18	33	49	36	33	18	26	58	42	4.5	7.5	6
		Gas 1/4"	MC538011	118	25	40	49	18	33	47	40	31	57	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC534010	149	30	52	62.75	22	42.25	54.75	60	34.25	22	40	73.75	53.25	5.5	9	7
		Gas 3/8"	MC534018	149	30	52	62.75	22	42.25	59.75	50	39.25	70	40	73.75	53.25	5.5	9	7
	A	Gas 1/8"	MC538020	118	25	40	49	18	33	49	36	33	18	26	58	42	4.5	7.5	6
		Gas 1/4"	MC538021	118	25	40	49	18	33	47	40	31	57	26	58	42	4.5	7.5	6
	B	Gas 1/4"	MC534020	149	30	52	62.75	22	42.25	54.75	60	34.25	22	40	73.75	53.25	5.5	9	7
		Gas 3/8"	MC534028	149	30	52	62.75	22	42.25	59.75	50	39.25	70	40	73.75	53.25	5.5	9	7

Manual poppet valves - 340 Series

Connections: 1/8"

340 SERIES



Poppet valves

High mechanical strength

 Zinc and aluminium alloy body
 Other metal components

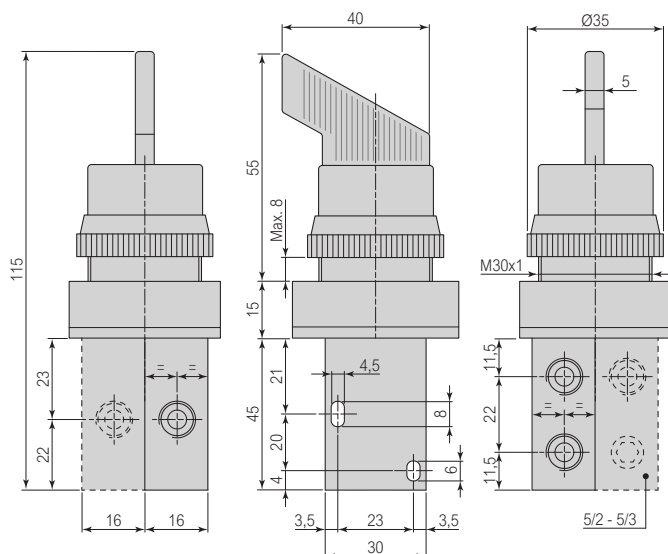
2/2 - 3/2 - 5/2 - 5/3 manual operation

TECHNICAL FEATURES

Function	2/2 - 3/2 - 5/2 - 5/3
Operation	Manual - Monostable mechanical spring return, bistable, three positions
Materials	Body in painted zinc and aluminium alloy, other components in metal or plastic polymers Internal components in steel - aluminium - brass - NBR gaskets
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	Size A: 1/8" Gas
Threads	Cylindrical Gas (BSPP)
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)
Operating pressure	0 ÷ 10 bar
Air flow rate	
Connection	Size A - 1/8"
Nominal diameter	6 mm
Supply pressure	5 bar 355 NI/min
(with ΔP 1 bar)	6 bar 420 NI/min
	7 bar 480 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)

MANUAL LEVER VALVES

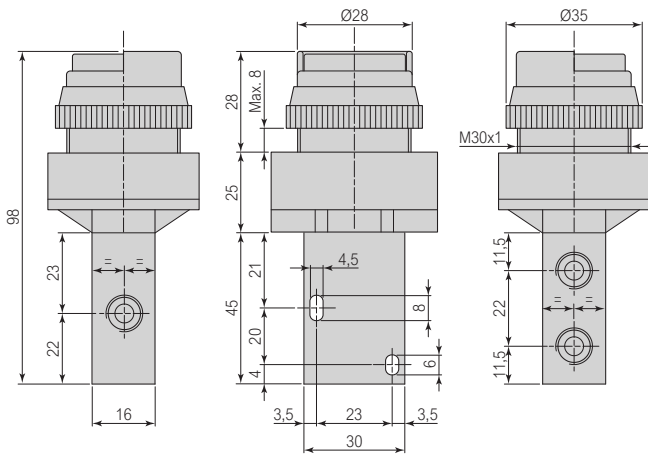
MANUAL LEVER OPERATION - BISTABLE - THREE POSITIONS



Symbol	Way	Size	Connections	Colour	Code
	2/2 NC	A	Gas 1/8"	Red	34118R
				Black	34118N
	3/2 NC	A	Gas 1/8"	Red	34318R
				Black	34318N
	5/2	A	Gas 1/8"	Red	34518R
				Black	34518N
	5/3 CA	A	Gas 1/8"	Red	34121R
				Black	34121N

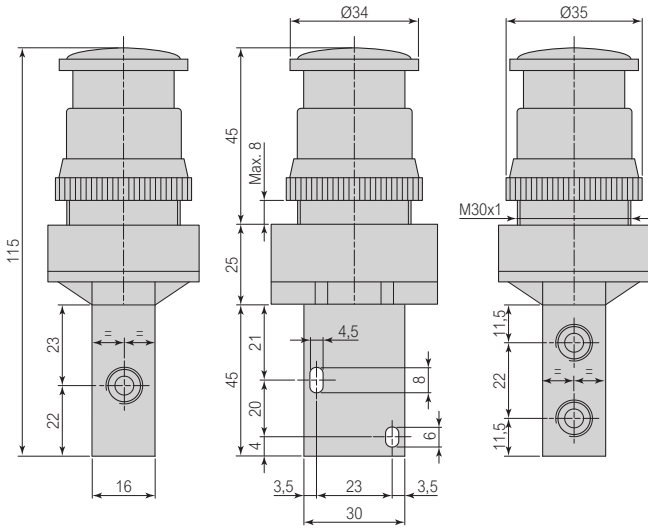
MANUAL BUTTON VALVES

MANUAL OPERATION WITH FLUSH BUTTON - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Way	Size	Connections	Colour	Code
	2/2 NC	A	Gas 1/8"	Red	34111R
				Black	34111N
	2/2 NA	A	Gas 1/8"	Red	34211R
				Black	34211N
	3/2 NC	A	Gas 1/8"	Red	34311R
				Black	34311N
	3/2 NA	A	Gas 1/8"	Red	34411R
				Black	34411N

MANUAL BUTTON OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Way	Size	Connections	Colour	Code
	2/2 NC	A	Gas 1/8"	Red	34113R
				Black	34113N
	2/2 NA	A	Gas 1/8"	Red	34213R
				Black	34213N
	3/2 NC	A	Gas 1/8"	Red	34313R
				Black	34313N
	3/2 NA	A	Gas 1/8"	Red	34413R
				Black	34413N

Mechanical poppet valves - 330 Series

Connections: 1/8" - 1/4" - 1/2"

330 SERIES



Poppet valves

High mechanical strength

Zinc and aluminium alloy body
Other metal components

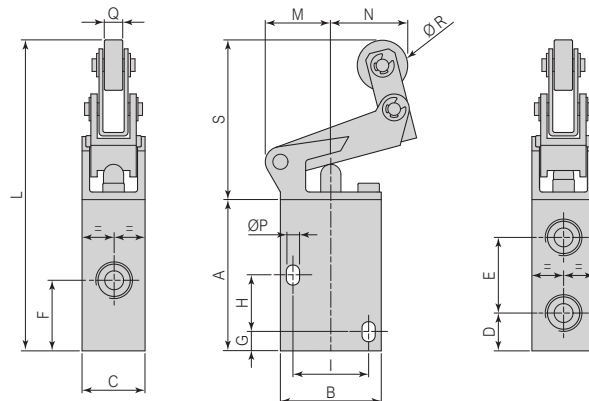
2/2 - 3/2 - 5/2 mechanical operation

TECHNICAL FEATURES

Function	2/2 - 3/2 - 5/2		
Operation	Mechanical - Monostable mechanical spring return		
Materials	Body in painted zinc and aluminium alloy, other components in metal or plastic polymers Internal components in steel - aluminium - brass - NBR gaskets		
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)		
Connections	Size A: 1/8" Gas		
Threads	Cylindrical Gas (BSPP)		
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)		
Operating pressure	0 ÷ 10 bar		
Air flow rate			
Connection	Size A - 1/8"	Size B - 1/4"	Size C - 1/2"
Nominal diameter	6 mm	8 mm	12 mm
Supply pressure	5 bar 355 NI/min	1100 NI/min	1520 NI/min
(with ΔP 1 bar)	6 bar 420 NI/min	1300 NI/min	1800 NI/min
	7 bar 480 NI/min	1480 NI/min	2050 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]		
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)		

MECHANICAL VALVES

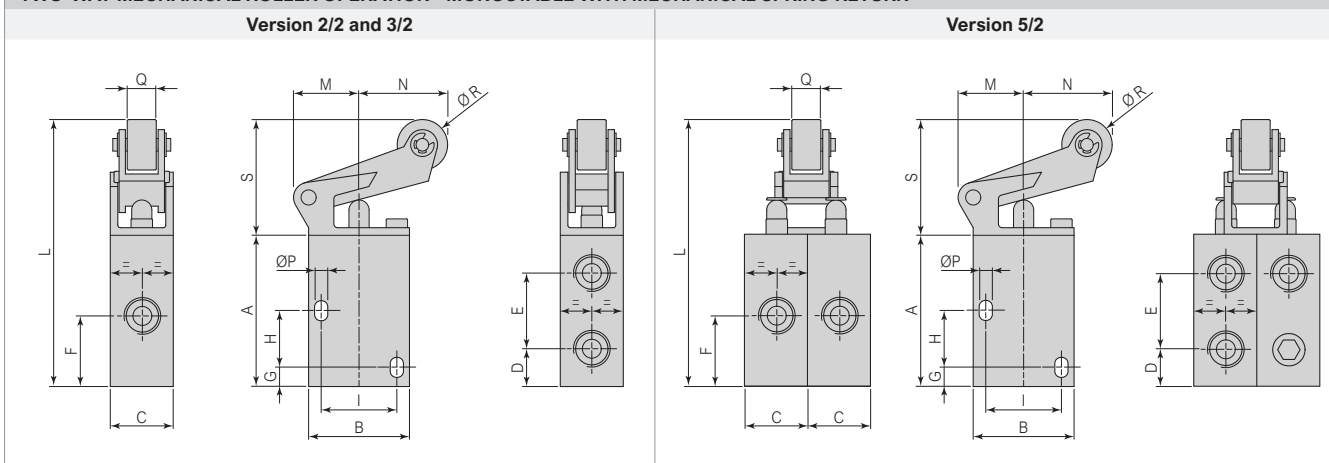
ONE-WAY MECHANICAL ROLLER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Size	Connections	Way	Code	Roller stroke	A	B	C	D	E	F	G	H	I	L	M	N	ØP	Q	ØR
	A	Gas 1/8"	2/2 NC	32111	5 ÷ 9	45	30	16	11.5	22	21.5	4	20	23	93	20	27	4.5	3	15
	A	Gas 1/8"	3/2 NC	32311	5 ÷ 9	45	30	16	11.5	22	21.5	4	20	23	93	20	27	4.5	3	15

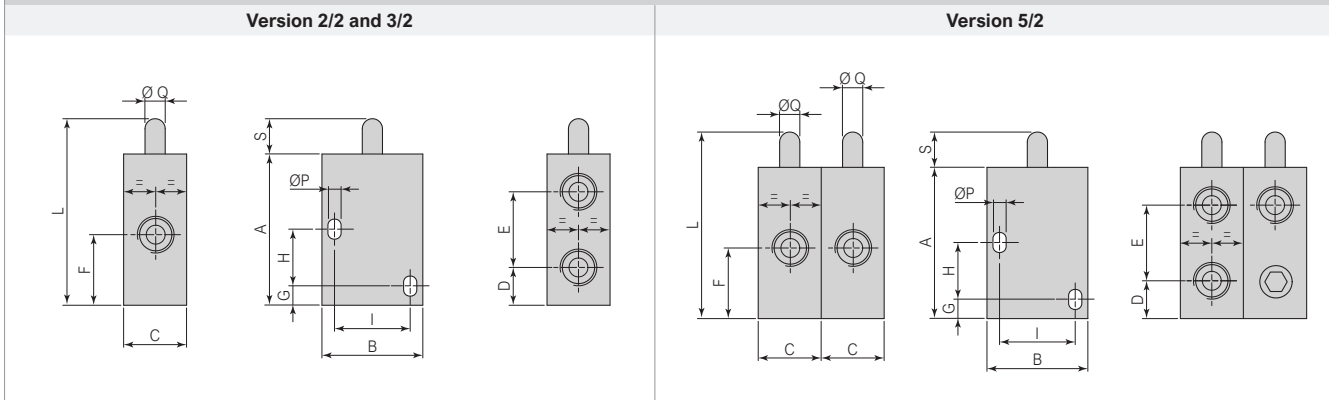
MECHANICAL VALVES

TWO-WAY MECHANICAL ROLLER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Size	Connections	Way	Code	Roller stroke	A	B	C	D	E	F	G	H	I	L	M	N	Ø P	Q	Ø R
	A	Gas 1/8"	2/2 NC	33131	6.5 ÷ 9.5	45	30	16	11.5	22	21.5	4	20	23	83	20	24	4.5	6	20
	A	Gas 1/8"	3/2 NC	33331	6.5 ÷ 9.5	45	30	16	11.5	22	21.5	4	20	23	83	20	24	4.5	6	20
	B	Gas 1/4"	3/2 NC	33333	10.5 ÷ 13.5	60	40	25	15	30	28	5	25	30	105	26	32	5	11.5	20
	A	Gas 1/8"	3/2 NA	33431	6.5 ÷ 9.5	45	30	16	11.5	22	21.5	4	20	23	83	20	24	4.5	6	20
	A	Gas 1/8"	5/2	33731	6.5 ÷ 9.5	45	30	16	11.5	22	21.5	4	20	23	83	20	24	4.5	6	20
	B	Gas 1/4"	5/2	33733	10.5 ÷ 13.5	60	40	25	15	30	28	5	25	30	105	26	32	5	11.5	20

MECHANICAL OPERATION WITH FEELER - MONOSTABLE WITH MECHANICAL SPRING RETURN

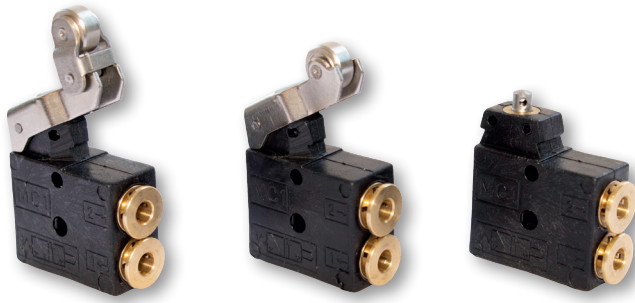


Symbol	Size	Connections	Way	Code	Feeler stroke	A	B	C	D	E	F	G	H	I	L	Ø P	Ø Q
	A	Gas 1/8"	2/2 NC	31101	3.5 ÷ 5.5	45	30	16	11.5	22	21.5	4	20	23	56	4.5	7
	A	Gas 1/8"	3/2 NC	31301	3.5 ÷ 5.5	45	30	16	11.5	22	21.5	4	20	23	56	4.5	7
	B	Gas 1/4"	3/2 NC	31303	4.5 ÷ 7	60	40	25	15	30	28	5	25	30	74	5	8
	C	Gas 1/2"	3/2 NC	31306	5 ÷ 7	75	50	25	17	41	37.5	5	32	41	89	5.3	7
	A	Gas 1/8"	3/2 NA	31401	3.5 ÷ 5.5	45	30	16	11.5	22	21.5	4	20	23	56	4.5	7
	B	Gas 1/4"	3/2 NA	31403	4.5 ÷ 7	60	40	25	15	30	28	5	25	30	74	5	8
	C	Gas 1/2"	3/2 NA	31406	5 ÷ 7	75	50	25	17	41	37.5	5	32	41	89	5.3	7
	A	Gas 1/8"	5/2	31701	3.5 ÷ 5.5	45	30	16	11.5	22	21.5	4	20	23	56	4.5	7
	B	Gas 1/4"	5/2	31703	4.5 ÷ 7	60	40	25	15	30	28	5	25	30	74	5	8

Mechanical and manual poppet valves - MC1 Series

Connection: Ø4 pipe

MC1 SERIES



Poppet valves

Low actuation force

 66 nylon body
 Other metal components

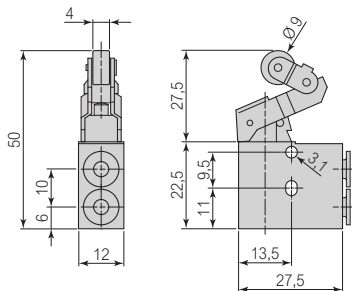
3/2 mechanical operation

TECHNICAL FEATURES

Function	3/2
Operation	Mechanical, manual - Monostable mechanical spring return, bistable
Materials	Body in nylon 66, other components in metal or plastic polymers Internal components in steel - aluminium - brass - NBR gaskets
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	Pipe Ø4 mm
Operational force	6 N
Operating temperature	0°C ÷ +60°C (-20°C with dry air, to avoid ice formation)
Operating pressure	1 ÷ 10 bar
Air flow rate	
Connection	Pipe Ø 4mm
Nominal diameter	2.5 mm
Supply pressure	5 bar 90 NI/min
(with ΔP 1 bar)	6 bar 105 NI/min
	7 bar 120 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)

MECHANICAL VALVES

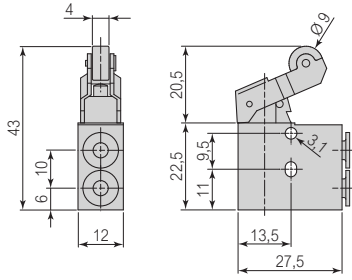
ONE-WAY MECHANICAL ROLLER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	MC1LS

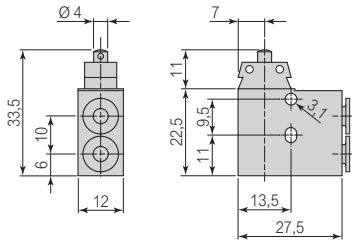
MECHANICAL VALVES

TWO-WAY MECHANICAL ROLLER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	MC1L

MECHANICAL OPERATION WITH FEELER - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	MC1

Mechanical and manual poppet valves - 310 Series

Connection: Ø4 pipe

310 SERIES



Poppet valves

Low actuation force

 Anodised aluminium body
 Other metal components

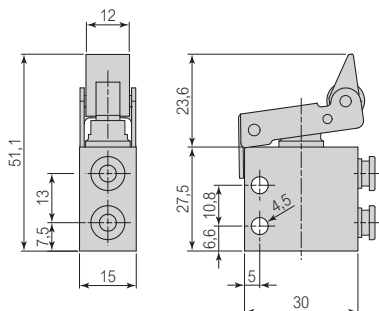
3/2 - 5/2 - 5/3 mechanical operation

TECHNICAL FEATURES

Function	3/2 - 5/2 - 5/3
Operation	Mechanical, manual - Monostable mechanical spring return, bistable, three positions
Materials	Body in anodised aluminium alloy, other components in metal or plastic polymers Internal components in steel - aluminium - brass - NBR gaskets
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	Pipe Ø4mm
Operational force	6 N
Operating temperature	0°C ÷ +60°C (-20°C with dry air, to avoid ice formation)
Operating pressure	2 ÷ 10 bar
Air flow rate	
Connection	Pipe Ø 4mm
Nominal diameter	2.5 mm
Supply pressure	5 bar 85 NI/min
(with ΔP 1 bar)	6 bar 100 NI/min
	7 bar 115 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)

MECHANICAL VALVES

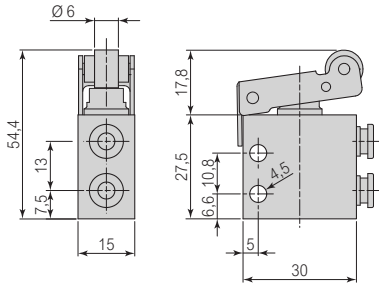
ONE-WAY MECHANICAL ROLLER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	32000C

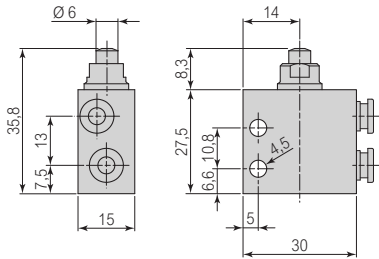
MECHANICAL VALVES

TWO-WAY MECHANICAL ROLLER OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN



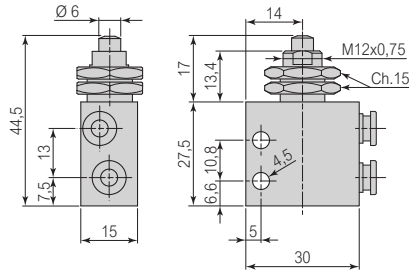
Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	33000C

MECHANICAL OPERATION WITH FEELER - MONOSTABLE WITH MECHANICAL SPRING RETURN



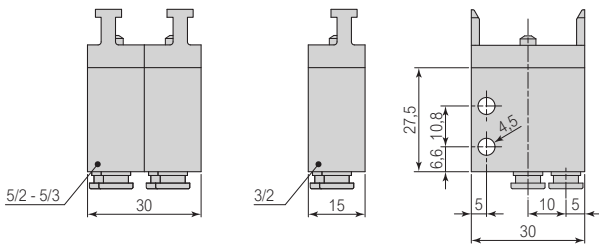
Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	31000C

MECHANICAL OPERATION WITH THROUGH-WALL FEELER - MONOSTABLE WITH MECHANICAL SPRING RETURN

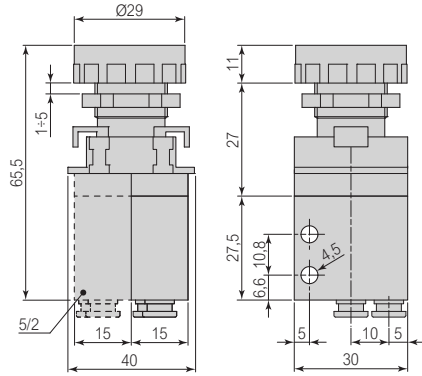


Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	32000D

MECHANICAL OPERATION WITH ACCESSORY PLATE - MONOSTABLE WITH MECHANICAL SPRING RETURN

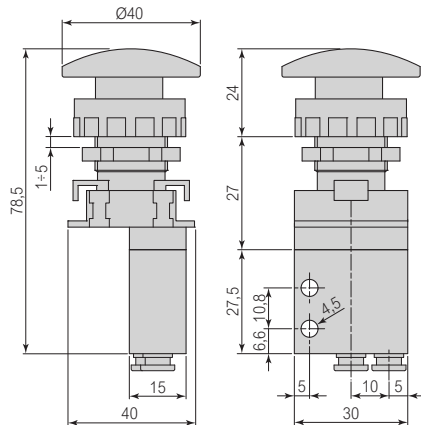


Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	34000A1
	5/2	Pipe Ø4	34000A2
	5/3 CA	Pipe Ø4	34000A3

MANUAL VALVES
MANUAL OPERATION WITH FLUSH BUTTON - MONOSTABLE WITH MECHANICAL SPRING RETURN


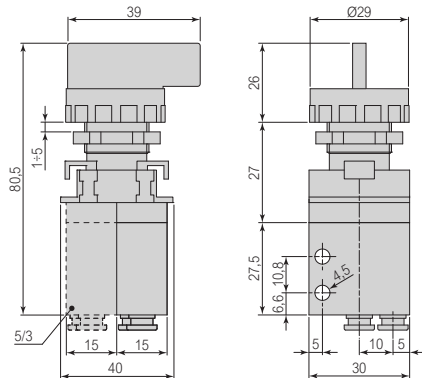
Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	34001
	5/2	Pipe Ø4	34011

Standard supplied with black / red / white colour button

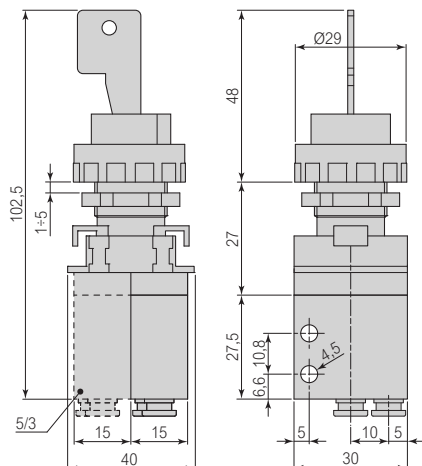
MANUAL OPERATION MUSHROOM BUTTON - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE


Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	34002
	3/2 NC	Pipe Ø4	34003

Standard supplied with red button

MANUAL OPERATION LEVER SELECTOR - BISTABLE - THREE POSITIONS OPEN CENTRES


Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	34005
	5/2	Pipe Ø4	34015
	5/3 CA	Pipe Ø4	34009

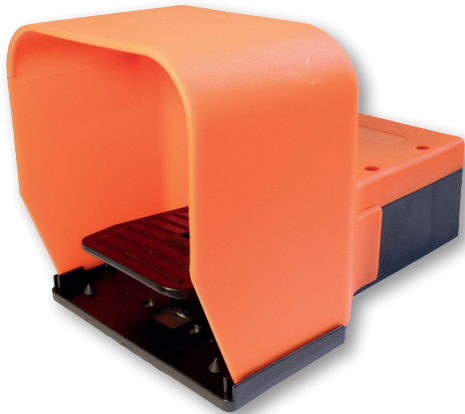
MANUAL OPERATION KEY SELECTOR SWITCH - BISTABLE - THREE POSITIONS OPEN CENTRES


Symbol	Way	Connections	Code
	3/2 NC	Pipe Ø4	34007
	5/2	Pipe Ø4	34017
	5/3 CA	Pipe Ø4	34010

Foot control valves

Connection: 1/4"

PEDAL VALVES



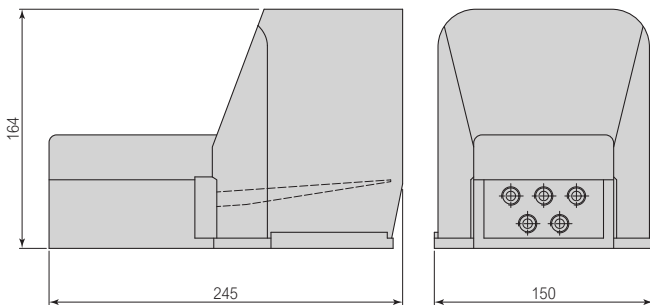
- Ideal for industrial applications
- Safety lever and position lock device
- Polypropylene body
- Anodised aluminium valve
- 3/2 - 5/2 pedal operated

TECHNICAL FEATURES

Function	3/2 - 5/2
Operation	Pedal - Monostable mechanical spring return, bistable
Materials	Polypropylene body, anodised aluminium valve - other components in metal or plastic polymers Internal components in steel - aluminium - brass - NBR gaskets
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	1/4" Gas
Threads	Cylindrical Gas (BSPP)
Operating temperature	0°C ÷ +70°C (-20°C with dry air, to avoid ice formation)
Operating pressure	2.5 ÷ 10 bar
Air flow rate	
Connection	1/4"
Nominal diameter	7.5 mm
Supply pressure	5 bar 700 NI/min
(with ΔP 1 bar)	6 bar 800 NI/min
	7 bar 920 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)

PEDAL VALVES

PEDAL OPERATION - MONOSTABLE WITH MECHANICAL SPRING RETURN - BISTABLE



Symbol	Way	Connections	Code
	3/2 NC	Gas 1/4"	36357
	3/2	Gas 1/4"	36367
	5/2	Gas 1/4"	36359
	5/2	Gas 1/4"	36369

Axial spool valves

Connection: 1/8", 1/4", 1/2"

AXIAL SPOOL VALVES



Ideal for industrial applications

High flow rate

 Anodised aluminium body
Other metal components

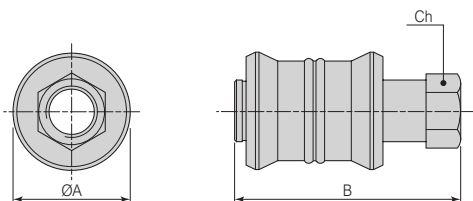
3/2 manual operation

TECHNICAL FEATURES

Function	3/2		
Operation	Manual - Bistable		
Materials	Anodised aluminium alloy body - Chromed brass rod - Harmonic steel Seeger NBR gaskets		
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)		
Connections	Size A: 1/8" Gas Size B: 1/4" Gas Size C: 1/2" Gas		
Threads	Cylindrical Gas (BSPP)		
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)		
Operating pressure	0 ÷ 10 bar		
Air flow rate			
Connection	Size A - 1/8"	Size B - 1/4"	Size C - 1/2"
Nominal diameter	3.5 mm	7 mm	11 mm
Supply pressure	5 bar	514 NI/min	840 NI/min
(with ΔP 1 bar)	6 bar	600 NI/min	980 NI/min
	7 bar	685 NI/min	1119 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]		
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)		

AXIAL SPOOL VALVES

MANUAL OPERATION - BISTABLE



Symbol	Way	Size	Connections	ØA	B	Ch	Code
	3/2 NC	A	Gas 1/8"	25	48	14	39001
		B	Gas 1/4"	30	58	17	39003
		C	Gas 1/2"	40	80	26	39006

Unidirectional valves

Connection: 1/8", 1/4", 1/2"

- Ideal for industrial applications
- High flow rate
- Nickel-plated brass body and shutter
- Spring in AISI 302 - NBR gaskets
- Automatic operation



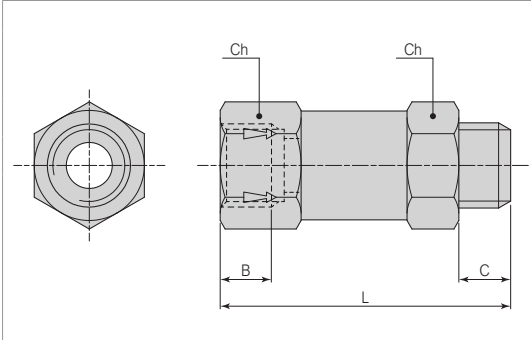
TECHNICAL FEATURES

Function	Unidirectional valve		
Operation	Automatic		
Materials	Nickel-plated brass body and shutter - Spring in AISI 302 NBR gaskets		
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)		
Connections	Size A: 1/8" Gas Size B: 1/4" Gas Size C: 1/2" Gas		
Threads	Cylindrical Gas (BSPP)		
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)		
Operating pressure	2 ÷ 8 bar (minimum closing pressure: 0,2 bar)		
Air flow rate			
Connection	Size A - 1/8"	Size B - 1/4"	Size C - 1/2"
Supply pressure	5 bar	570 NI/min	950 NI/min
(with ΔP 1 bar)	6 bar	630 NI/min	1050 NI/min
	7 bar	690 NI/min	1110 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]		
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)		

3
PNEUMATIC DISTRIBUTORS

UNIDIRECTIONAL VALVES

AUTOMATIC OPERATION - MONOSTABLE



Symbol	Size	Connections	B	C	Ch	L	Code
	A	Gas 1/8"	8,5	6	14	37,5	UM8
	B	Gas 1/4"	11	8	17	46,5	UM4
	C	Gas 1/2"	15	10	24	64	UM2

Quick exhaust valves

Connection: 1/8", 1/4", 1/2", 1"

QUICK EXHAUST VALVES



Ideal for industrial applications

High flow rate

 Anodised aluminium body
NBR gaskets

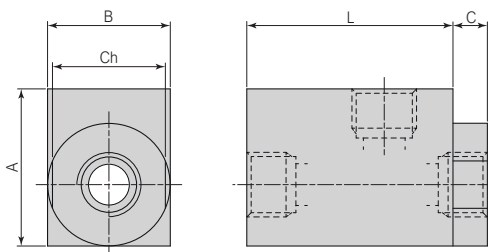
3/2 automatic operation

TECHNICAL FEATURES

Function	3/2			
Operation	Automatic			
Materials	Body and cover in anodised aluminium alloy NBR gaskets			
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)			
Connections	1/8", 1/4", 1/2", 1" Gas			
Threads	Cylindrical Gas (BSPP)			
Operating temperature	0°C ÷ +80°C (-20°C with dry air, to avoid ice formation)			
Operating pressure	0 ÷ 10 bar			
Air flow rate				
Connection	1/8" Gas	1/4" Gas	1/2" Gas	1" Gas
Nominal diameter	6,0 mm	8,5 mm	11,0 mm	23,0 mm
Supply pressure at 6 bar	620 NI/min	1350 NI/min	3880 NI/min	16000 NI/min
With open exhaust	980 NI/min	2100 NI/min	5400 NI/min	19000 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]			
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)			

QUICK EXHAUST VALVES

AUTOMATIC OPERATION



Symbol	Way	Connections	A	B	C	L	Ch	Code
	3/2 NC	Gas 1/8"	23	18	4	35	16	SR-8
		Gas 1/4"	32	25	4	42	23	SR-4
		Gas 1/2"	50	40	7	62	38	SR-2
		Gas 1"	80	60	10	100	50	SR-1

Circuit switch valves

Connection: 1/8", 1/4"

- Ideal for industrial applications
- High flow rate
- Anodised aluminium body
- NBR gaskets
- Automatic operation - OR function

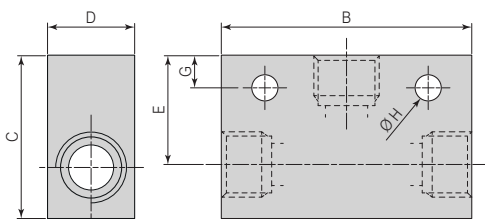


TECHNICAL FEATURES

Function	Circuit switch valve - OR function
Operation	Automatic
Materials	Body in anodised aluminium alloy - Internal components in brass NBR gaskets
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	1/8", 1/4" Gas
Threads	Cylindrical Gas (BSPP)
Operating temperature	0°C ÷ +80°C (-20°C with dry air, to avoid ice formation)
Operating pressure	0 ÷ 10 bar
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)

CIRCUIT SWITCH VALVES

AUTOMATIC OPERATION - "OR" FUNCTION

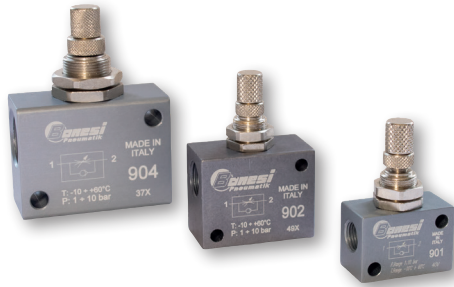


Symbol	Connections	B	C	D	E	F	G	H	I	Code
	Gas 1/8"	40	20	15	12,5	25	4	4,5	4,5	SLT-8
	Gas 1/4"	46	30	16	20	30	6	6	4,5	SLT-4

Flow regulators

Connection: 1/8", 1/4", 1/2"

FLOW REGULATORS



Version with standard or precision adjustment

One-way or two-way regulation

 Anodised aluminium body
 Other metal components

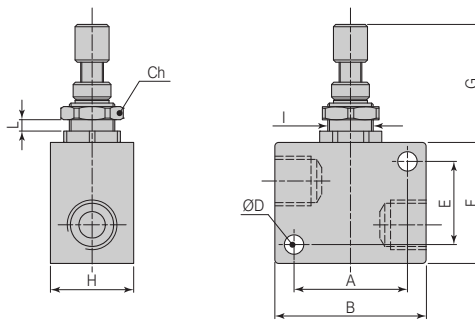
Panel, wall or in-line assembly

TECHNICAL FEATURES

Operation	Standard or fine needle adjustment - One-way or two-way control		
Regulation	Manual with knob and locking ring nut		
Materials	Anodised aluminium alloy body - Nickel-plated brass adjustment unit - NBR gaskets		
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)		
Connections	Size A: 1/8" Gas Size B: 1/4" Gas Size C: 1/2" Gas		
Threads	Cylindrical Gas (BSPP)		
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)		
Operating pressure	0 ÷ 10 bar		
Air flow rate			
Connection	Size A - 1/8"	Size B - 1/4"	Size C - 1/2"
Nominal diameter	3.5 mm	7 mm	11 mm
Supply pressure	5 bar	214 NI/min	342 NI/min
(with ΔP 1 bar)	6 bar	250 NI/min	406 NI/min
	7 bar	285 NI/min	457 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]		
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)		

FLOW REGULATORS

MANUAL ADJUSTMENT



	Symbol	Regulation	Size	Connections	Code	A	B	Ch	OED	E	F	G	H	I	L max.
One-way		Precise	A	Gas 1/8"	901	23	32	15	4.5	12	22	35	17	M12x0.75	5
			B	Gas 1/4"	902	30	40	15	4.5	22	32	35	22	M12x0.75	5
			C	Gas 1/2"	904	43	56	24	6.5	27	42	43	27	M18x1	7
		Standard	A	Gas 1/4"	901.3	23	32	15	4.5	13	22	35	17	M12x0.75	5
B	Gas 1/2"		902.3	30	40	15	4.5	22	32	35	22	M12x0.75	5		
Two-way		Precise	A	Gas 1/8"	911	23	32	15	4.5	13	22	35	17	M12x0.75	5
			B	Gas 1/4"	912	30	40	15	4.5	22	32	35	22	M12x0.75	5
			C	Gas 1/2"	914	43	56	24	6.5	27	42	43	27	M18x1	7
		Standard	A	Gas 1/4"	911.3	23	32	15	4.5	13	22	35	17	M12x0.75	5
B	Gas 1/2"		912.3	30	40	15	4.5	22	32	35	22	M12x0.75	5		

3.6.05.24

Flow regulators

Connection: M5, 1/8", 1/4"

FLOW REGULATORS



Version with screwdriver or knob adjustment

One-way regulation

Nickel-plated brass body
Other metal components

Direct assembly on cylinders or valves

TECHNICAL FEATURES

Operation	Adjustment by knob or screwdriver - One-way control in input or output					
Regulation	Manual with knob and locking ring nut - Manual with screwdriver					
Materials	Nickel-plated brass body - Nickel-plated brass regulation group - NBR gaskets					
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)					
Connections	M5 - Pipe Ø4 1/8" Gas - Pipe Ø4 - Ø6 - Ø8 1/4" Gas - Pipe Ø6 - Ø8					
Threads	Metric (ISO 965) - Conical Gas (UNI EN 10266)					
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)					
Operating pressure	0 ÷ 10 bar					
Air flow rate						
Connections	M5 - Pipe Ø4	1/8" - Pipe Ø4	1/8" - Pipe Ø6	1/8" - Pipe Ø8	1/4" - Pipe Ø6	1/4" - Pipe Ø8
Nominal diameter	2.25 mm	2.25 mm	3.5 mm	3.5 mm	6.0 mm	6.0 mm
Supply pressure 6 bar (ΔP 1)	0 ÷ 70 NI/min	0 ÷ 70 NI/min	0 ÷ 150 NI/min	0 ÷ 225 NI/min	0 ÷ 150 NI/min	0 ÷ 280 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]					
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)					

FLOW REGULATORS

MANUAL ADJUSTMENT WITH KNOB AND LOCKING RING NUT

		Symbol	Ø A	E	Code	B	C	Ch	D	F	G	H
One-way in input		4	M5	RGM4/5RE	10	20.5	7	21	3	12	12	
		4	Gas 1/8"	RGM4/8RE	10	28	10	21	7.5	12	12	
		6	Gas 1/8"	RGM6/8RE	16	38.5	15	26.5	7.5	18	17	
		6	Gas 1/4"	RGM6/4RE	16	40	15	25.5	9	18	17	
		8	Gas 1/8"	RGM8/8RE	16	38.5	15	26.5	7.5	18	17	
		8	Gas 1/4"	RGM8/4RE	16	40	15	25.5	9	18	17	
One-way in output		4	M5	RGM4/5RU	10	20.5	7	21	3	12	12	
		4	Gas 1/8"	RGM4/8RU	10	28	10	21	7.5	12	12	
		6	Gas 1/8"	RGM6/8RU	16	38.5	15	26.5	7.5	18	17	
		6	Gas 1/4"	RGM6/4RU	16	40	15	25.5	9	18	17	
		8	Gas 1/8"	RGM8/8RU	16	38.5	15	26.5	7.5	18	17	
		8	Gas 1/4"	RGM8/4RU	16	40	15	25.5	9	18	17	

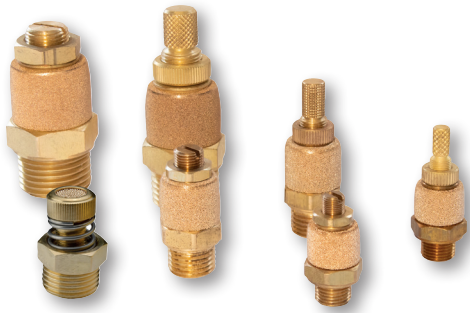
MANUAL ADJUSTMENT WITH SCREWDRIVER

		Symbol	Ø A	E	Code	B	C	Ch	D	F	G
One-way in input		4	M5	RG4/5RE	10	20.5	7	21	3	12	
		4	Gas 1/8"	RG4/8RE	10	28	10	21	7.5	12	
		6	Gas 1/8"	RG6/8RE	16	38.5	15	26.5	7.5	18	
		6	Gas 1/4"	RG6/4RE	16	40	15	25.5	9	18	
		8	Gas 1/8"	RG8/8RE	16	38.5	15	26.5	7.5	18	
		8	Gas 1/4"	RG8/4RE	16	40	15	25.5	9	18	
One-way in output		4	M5	RG4/5RU	10	20.5	7	21	3	12	
		4	Gas 1/8"	RG4/8RU	10	28	10	21	7.5	12	
		6	Gas 1/8"	RG6/8RU	16	38.5	15	26.5	7.5	18	
		6	Gas 1/4"	RG6/4RU	16	40	15	25.5	9	18	
		8	Gas 1/8"	RG8/8RU	16	38.5	15	26.5	7.5	18	
		8	Gas 1/4"	RG8/4RU	16	40	15	25.5	9	18	

Discharge regulators

Connection: 1/8", 1/4", 3/8", 1/2", 3/4", 1"

DISCHARGE REGULATORS



Version with screwdriver, knob or screw adjustment

One-way discharge regulation

Passivated brass body and components
Sintered bronze silencer

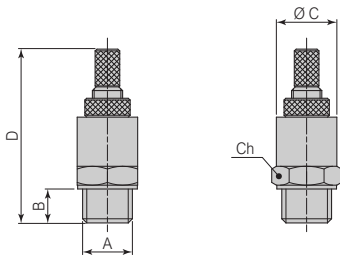
Direct assembly on cylinders or valves

TECHNICAL FEATURES

Operation	Adjustment by knob, screw or screwdriver - One-way control in discharge
Regulation	Manual with knob and locking ring nut - Manual with screwdriver
Materials	Passivated brass body and control unit - NBR gaskets - Sintered bronze silencer
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	1/8", 1/4", 3/8", 1/2", 3/4", 1" Gas
Threads	Cylindrical Gas (BSPP)
Operating temperature	0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)
Operating pressure	0 ÷ 10 bar
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Lubrication	Not required (if required in the pneumatic circuit, it must be continuous)

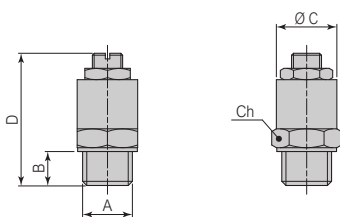
DISCHARGE REGULATORS

MANUAL ADJUSTMENT WITH KNOB AND LOCKING RING NUT



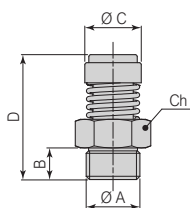
Symbol	A	Code	B	Ø C	Ch	D
	Gas 1/8"	SBRM/8	6.5	14	14	42
	Gas 1/4"	SBRM/4	9	16	16	51
	Gas 1/2"	SBRM/2	12	23	23	67

MANUAL ADJUSTMENT WITH SCREWDRIVER



Symbol	A	Code	B	Ø C	Ch	D
	Gas 1/8"	SBRC/8	6.5	14	14	34
	Gas 1/4"	SBRC/4	9	16	16	41
	Gas 1/2"	SBRC/2	12	23	23	57

MANUAL ADJUSTMENT WITH SCREW AND LOCKING SPRING



Symbol	A	Code	B	Ø C	Ch	D
	Gas 1/8"	60140 18	6	12	13	26 ÷ 28
	Gas 1/4"	60140 14	8	14	15	30 ÷ 32
	Gas 3/8"	60140 38	10	17	18	35 ÷ 38
	Gas 1/2"	60140 12	11	18	22	36 ÷ 39
	Gas 3/4"	60140 34	12	28	30	45 ÷ 50
	Gas 1"	60140 11	12	32	36	45 ÷ 50

Nebulizer by depression for fluids NBZ-5

Connection: Pipe Ø4 - Pipe Ø6

NBZ-5

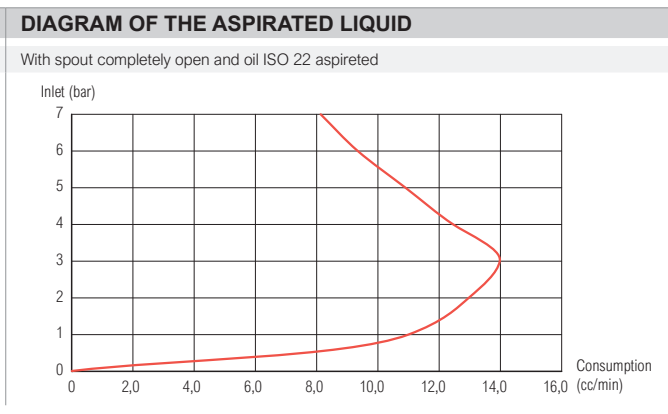
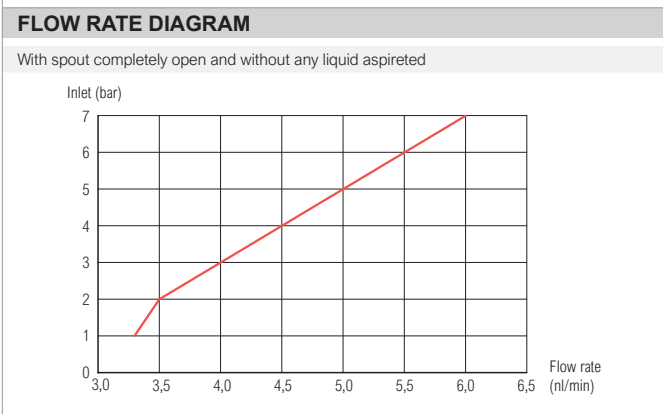


- Nebulizer with Venturi effect
- Adjustable spout by means of a knurled ring nut
- Not effected by impurities on pneumatic fluid
- Dimensions extremally reduced
- Body in aluminum alloy fumè anodized
- Adjustable ring nut in nickel plated brass
- Available version for high temperature
- Especially suitable for use with aggressive liquids, coolings, lubricants, stickings and detachment liquids.

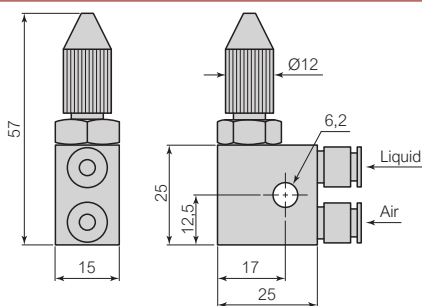
TECHNICAL FEATURES

Operation	Nebulizer for fluids with Venturi effect with adjustable spout by means of a knurled ring nut
Regulation	Pneumatic: the aspiration of the liquid happens at flowing of the air throughout the valve
Materials	Body in aluminium alloy fumè anodized, adjustable ring nut in nickel plated brass, Internal components in brass, seals NBR/FKM.
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)
Connections	Pipe Ø4, pipe Ø6
Operating temperature	Standard: 0°C ÷ +60°C (-10°C with dry air, to avoid ice formation) High temperature (FKM): 0°C ÷ +150°C
Operating pressure	0 ÷ 10 bar
Air flow rate	
Nominal diameter	0,5 mm
Supply pressure	2 bar 3,5 NI/min
(at ΔP 1 bar)	3 bar 4,0 NI/min
	4 bar 4,5 NI/min
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]
Quantity of liquid aspirated	See diagram according to pressure

DIAGRAMS OF CAPACITY AND OF THE ASPIRATED LIQUID



NEBULIZER BY DEPRESSION



Symbol	Connections	Seals	Code
	Tubo Ø 4	NBR	NBZ-5
	Tubo Ø 6	NBR	NBZ-5/6
	Tubo Ø 4	FKM	NBZ-5 FKM
	Tubo Ø 6	FKM	NBZ-5/6 FKM

Sintered spherical bronze discharge silencers

Connection: M5, 1/8", 1/4", 3/8", 1/2", 3/4", 1"

SINTERED BRONZE SILENCERS



Reduction of noise emitted by valve discharges

Silencers in sintered bronze

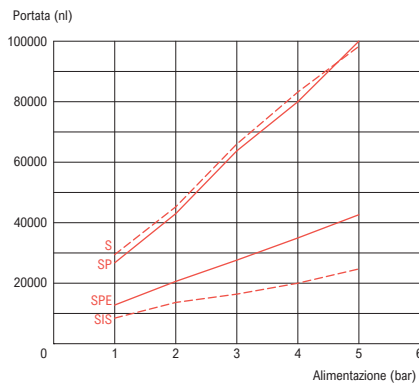
Passivated brass body - Copper-plated steel

TECHNICAL FEATURES

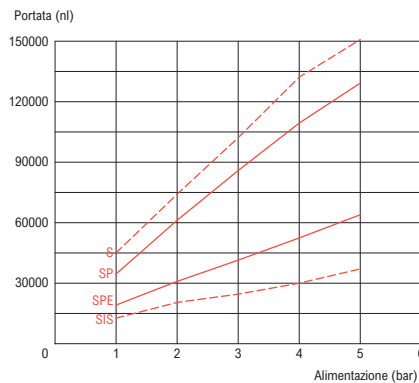
Materials	Passivated brass body / Copper-plated steel - Silencer in sintered bronze spherical powder						
Note on materials	Compliant with REACH (1907/2006/EC and subsequent amendments)						
Connections	M5, 1/8", 1/4", 3/8", 1/2", 3/4", 1" Gas						
Threads	Metric - Cylindrical Gas (BSPP)						
Operating temperature	0°C ÷ +150°C (-20°C with dry air, to avoid ice formation)						
Operating pressure	0 ÷ 10 bar						
Air flow rate							
Connections	1/8"	1/4"	3/8"	1/2"	3/4"	1"	
6 bar (ΔP 1)	S Type	28660 ÷ 98300 NI/H	44900 ÷ 153600 NI/H	87200 ÷ 249200 NI/H	140700 ÷ 322600 NI/H	189900 ÷ 500500 NI/H	39500 ÷ 912200 NI/H
	SP Type	26760 ÷ 99890 NI/H	34400 ÷ 129300 NI/H	74500 ÷ 263100 NI/H	111140 ÷ 367000 NI/H	189900 ÷ 534300 NI/H	379800 ÷ 979000 NI/H
	SIS Type	8550 ÷ 24900 NI/H	13300 ÷ 40200 NI/H	17700 ÷ 44800 NI/H	23880 ÷ 80500 NI/H	53400 ÷ 170900 NI/H	81600 ÷ 280800 NI/H
	SPE Type	12630 ÷ 42100 NI/H	20390 ÷ 61800 NI/H	28160 ÷ 99200 NI/H	42200 ÷ 115900 NI/H	84380 ÷ 234000 NI/H	77400 ÷ 223300 NI/H
Fluid	Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]						
Filtration degree	5 - 120 μm						

FLOW DIAGRAMS - SINTERED BRONZE SILENCERS

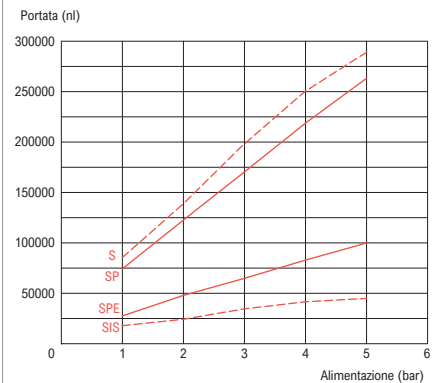
SILENCERS 1/8" Gas



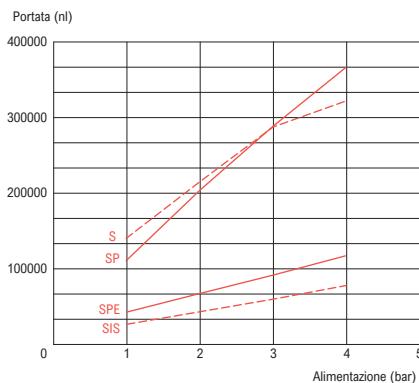
SILENCERS 1/4" Gas



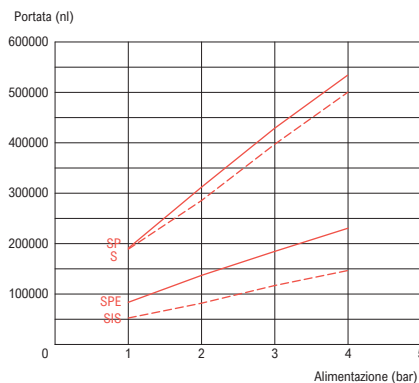
SILENCERS 3/8" Gas



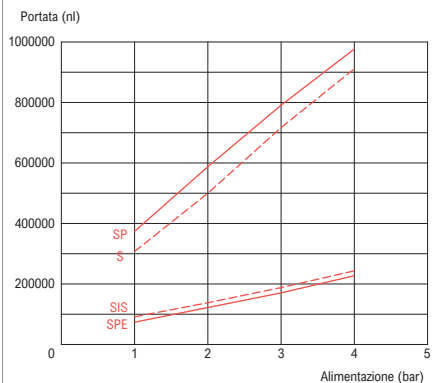
SILENCERS 1/2" Gas



SILENCERS 3/4" Gas

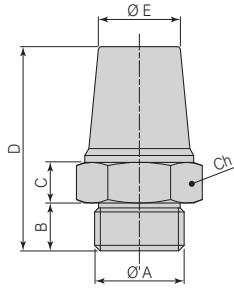


SILENCERS 1" Gas



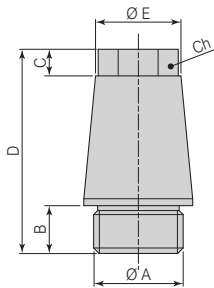
SINTERED BRONZE SILENCERS

CONICAL SILENCER IN SINTERED SPHERICAL BRONZE - HEXAGONAL BODY IN COPPER-PLATED STEEL



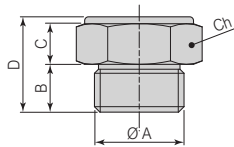
Symbol	Ø A	Code	B	C	Ch	D	Ø E
	M5	S/5	3.5	4	7	17	4.5
	Gas 1/8"	S/8	4.5	3.8	12	21	8.5
	Gas 1/4"	S/4	6	4.5	15	27	11
	Gas 3/8"	S/3	7	5.4	19	35	14
	Gas 1/2"	S/2	8	6	23	41.5	17
	Gas 3/4"	S/6	9	7.5	30	54	21
	Gas 1"	S/1	11	9	36	66	26.5

CONICAL SILENCER WITH HEXAGON HEAD IN SINTERED SPHERICAL BRONZE - COPPER-PLATED STEEL BODY



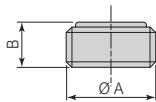
Symbol	Ø A	Code	B	C	Ch	D	Ø E
	M5	SP/5	5	-	-	19.5	7.5
	Gas 1/8"	SP/8	4.5	3	9	22.5	9.8
	Gas 1/4"	SP/4	6	4	10	28	12.5
	Gas 3/8"	SP/3	7	5	13	36	16
	Gas 1/2"	SP/2	8	6	15	44	19
	Gas 3/4"	SP/6	9	6	19	56	24.5
	Gas 1"	SP/1	11	7	24	69	30

SILENCER WITH SINTERED SPHERICAL BRONZE PAD - HEXAGONAL BRASS BODY



Symbol	Ø A	Code	B	C	Ch	D
	M5	SPE/5	4	3	8	8.5
	Gas 1/8"	SPE/8	6	4	13	12
	Gas 1/4"	SPE/4	8	5	16	16
	Gas 3/8"	SPE/3	8	5	19	17
	Gas 1/2"	SPE/2	10	6	24	18
	Gas 3/4"	SPE/6	10	6	30	19
	Gas 1"	SPE/1	10	6	36	20

SILENCER WITH SINTERED SPHERICAL BRONZE PAD - SCREWDRIVER CUT BRASS BODY



Symbol	Ø A	Code	B
	Gas 1/8"	SIS 1 SP	4.5
	Gas 1/4"	SIS 2 SP	6
	Gas 3/8"	SIS 3 SP	7
	Gas 1/2"	SIS 4 SP	9
	Gas 3/4"	SIS 5 SP	9
	Gas 1"	SIS 6 SP	10

Discharge silencers with stainless steel wire dome

Connection: M5, 1/8", 1/4", 3/8", 1/2", 3/4", 1"

STAINLESS STEEL WIRE SILENCERS



Reduction of noise emitted by valve discharges

AISI 304 stainless steel wire silencers

Passivated brass body

TECHNICAL FEATURES

Materials Passivated brass body - Silencer in AISI 304 stainless steel wire

Note on materials Compliant with REACH (1907/2006/EC and subsequent amendments)

Connections M5, 1/8", 1/4", 3/8", 1/2", 3/4", 1" Gas

Threads Metric - Cylindrical Gas (BSPP)

Operating temperature 0°C ÷ +150°C (-20°C with dry air, to avoid ice formation)

Operating pressure 0 ÷ 10 bar

Air flow rate

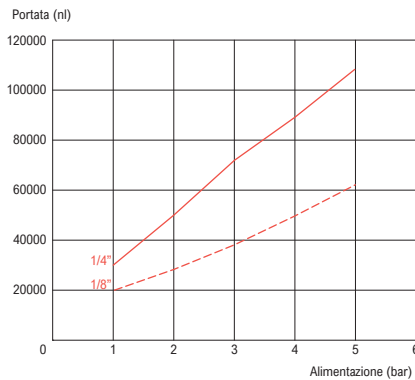
Connections	1/8"	1/4"	3/8"	1/2"	3/4"	1"
6 bar (ΔP 1)	19700 ÷ 61000 NI/H	295850 ÷ 108100 NI/H	35120 ÷ 126400 NI/H	104000 ÷ 240700 NI/H	161700 ÷ 490500 NI/H	154700 ÷ 423500 NI/H

Fluid Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]

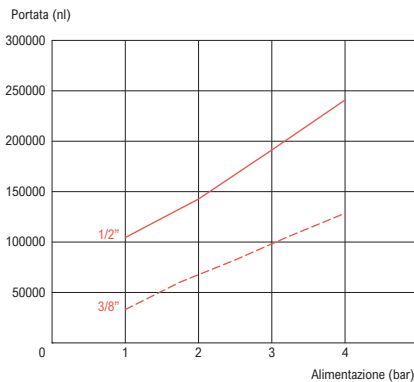
Filtration degree 5 - 120 μm

FLOW DIAGRAMS - STAINLESS STEEL WIRE SILENCERS

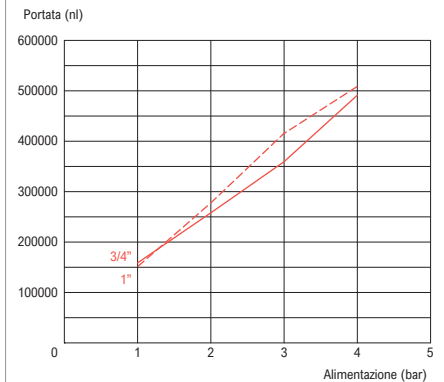
SILENCERS 1/8" - 1/4" Gas



SILENCERS 3/8" - 1/2" Gas

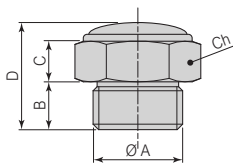


SILENCERS 3/4" - 1" Gas



STAINLESS STEEL WIRE SILENCERS

SILENCER WITH AISI 304 WIRE DOME - HEXAGONAL BRASS BODY

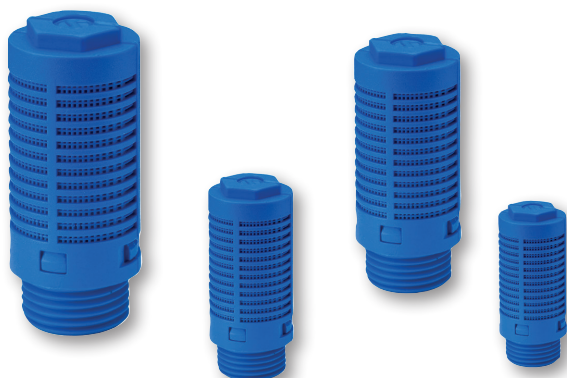


Symbol	Ø A	Code	B	C	Ch	D
	M5	S/5/N	4	3	8	8
	Gas 1/8"	S/8/N	6	4	13	13.5
	Gas 1/4"	S/4/N	8	5	16	18
	Gas 3/8"	S/3/N	8	5	19	19
	Gas 1/2"	S/2/N	9	5.5	24	20.5
	Gas 3/4"	S/6/N	9	5	30	23
	Gas 1"	S/1/N	10	6	36	26

Sintered polythene discharge silencers

Connection: 1/8", 1/4", 3/8", 1/2", 3/4", 1"

PLASTIC SILENCERS



Reduction of noise emitted by valve discharges

Sintered polythene silencers

PA6 nylon body

TECHNICAL FEATURES

Materials PA6 nylon body - Silencer in sintered polythene

Note on materials Compliant with REACH (1907/2006/EC and subsequent amendments)

Connections 1/8", 1/4", 3/8", 1/2", 3/4", 1" Gas

Threads Cylindrical Gas (BSPP)

Operating temperature 0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)

Operating pressure 0 ÷ 10 bar

Air flow rate

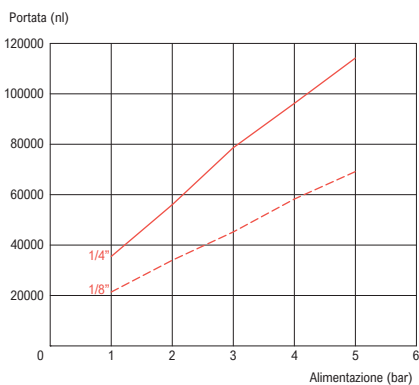
Connections	1/8"	1/4"	3/8"	1/2"	3/4"	1"
6 bar (ΔP 1)	21090 ÷ 68700 NI/H	35300 ÷ 114100 NI/H	44900 ÷ 152500 NI/H	59000 ÷ 158200NI/H	188700 ÷ 450600 NI/H	183000 ÷ 492500 NI/H

Fluid Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]

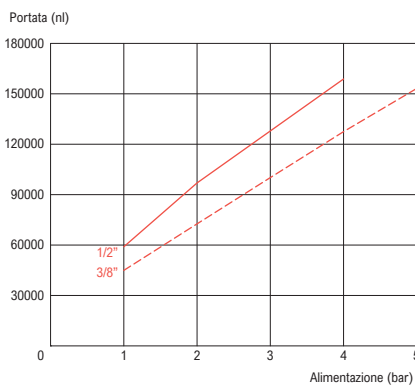
Filtration degree 50 μm

FLOW DIAGRAMS - PLASTIC SILENCERS

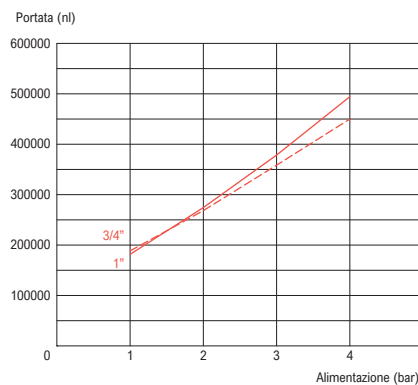
SILENCERS 1/8" - 1/4" Gas



SILENCERS 3/8" - 1/2" Gas

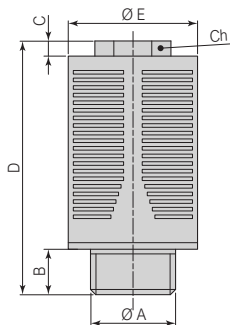


SILENCERS 3/4" - 1" Gas



PLASTIC SILENCERS

SINTERED POLYTHENE SILENCER - ACETAL RESIN BODY



Symbol	Ø A	Code	B	C	Ch	D	Ø E
	Gas 1/8"	SN/8	7	2.5	10	35	15.5
	Gas 1/4"	SN/4	7	3	12	43	19.5
	Gas 3/8"	SN/3	11	3	16	59	24.5
	Gas 1/2"	SN/2	11	3	16	59	24.5
	Gas 3/4"	SN/6	18	10	25	118	50
	Gas 1"	SN/1	18	10	25	118	50

High flow metal discharge silencers

Connection: 1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2"

HIGH FLOW METAL SILENCERS



Reduction of noise emitted by valve discharges

Sound-absorbing fibre silencers

Body in aluminium / galvanised steel
Micro-perforated steel sheet

TECHNICAL FEATURES

Materials Aluminium body and micro-perforated sheet metal - Sound-absorbing fibre silencer

Note on materials Compliant with REACH (1907/2006/EC and subsequent amendments)

Connections 1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2" Gas

Threads Cylindrical Gas (BSPP)

Operating temperature 0°C + 80°C (-20°C with dry air, to avoid ice formation)

Operating pressure 0 + 15 bar

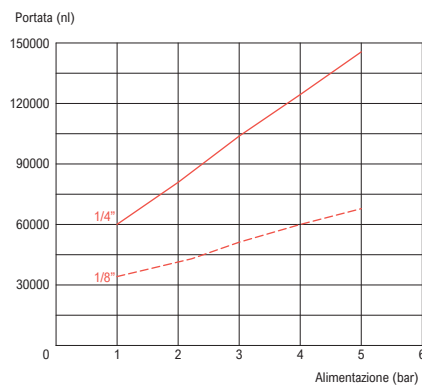
Air flow rate

Connections	1/8"	1/4"	3/8"	1/2"
6 bar (ΔP 1)	33000 ÷ 67200 NI/H	58700 ÷ 142800 NI/H	117000 ÷ 270000 NI/H	185000 ÷ 400000 NI/H
Connections	3/4"	1"	1.1/4"	1.1/2"
6 bar (ΔP 1)	370000 ÷ 840000 NI/H	537500 ÷ 1188000 NI/H	924000 ÷ 2100000 NI/H	1180000 ÷ 3210000 NI/H

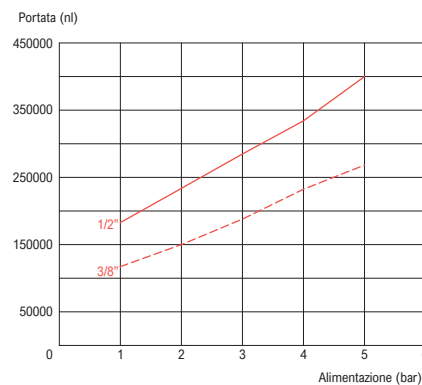
Fluid Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]

FLOW RATE DIAGRAMS - HIGH FLOW RATE METAL SILENCERS

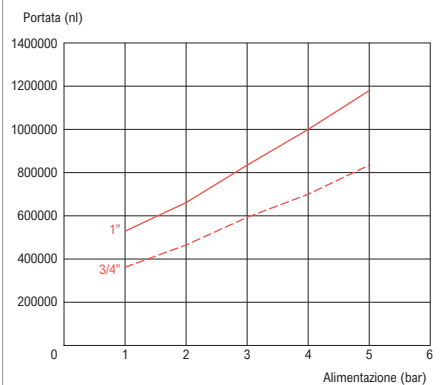
SILENCERS 1/8" - 1/4" Gas



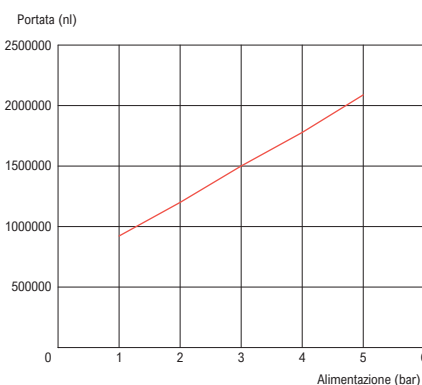
SILENCERS 3/8" - 1/2" Gas



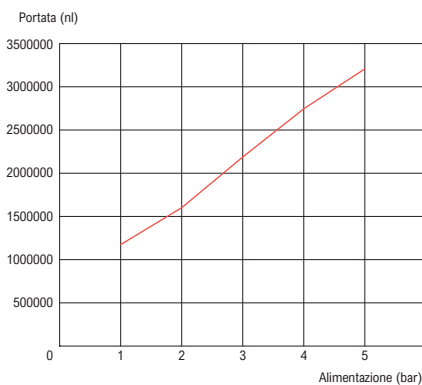
SILENCERS 3/4" - 1" Gas



SILENCERS 1.1/4" Gas

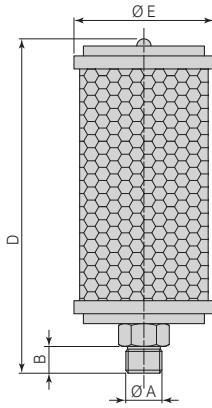


SILENCERS 1.1/2" Gas

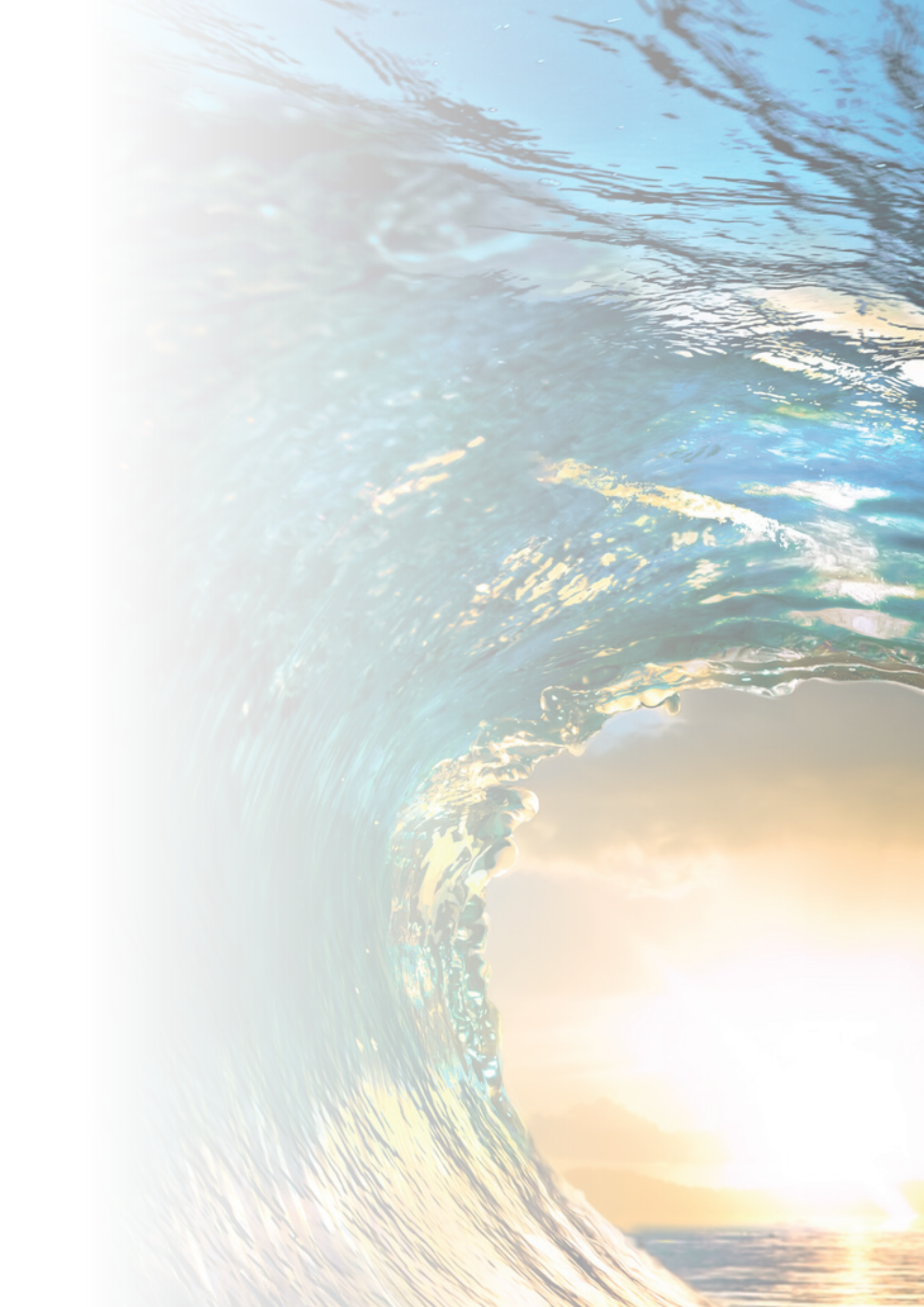


HIGH FLOW METAL SILENCERS

SOUND-ABSORBING FIBRE SILENCER - ALUMINIUM BODY AND MICRO-PERFORATED SHEET METAL



Symbol	Ø A	Code	B	D	Ø E
	Gas 1/8"	BES 18	10	70	49
	Gas 1/4"	BES 14	13	93	49
	Gas 3/8"	BES 38	16	113	70
	Gas 1/2"	BES 12	13	132	86
	Gas 3/4"	BES 34	17	162	89
	Gas 1"	BES 11	26	192	103
	Gas 1.1/4"	BES 411	26	318	103
	Gas 1.1/2"	BES 211	33	450	136



BONESI PNEUMATIK manufactures all its products in Italy



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