DESCRIPTION

Complementary valves are very important components of the pneumatic circuits. This group includes the:
- SHUTTLE VALVES: these valves are used when there is the necessity to convey, in one pipeline, two pneumatic flows coming from two different pipelines without any interference; in fact the compressed air flows from one of the two inlet ports to the working port while the second inlet port is excluded.
- QUICK EXHAUST VALVES: air flows from the inlet port to the working port while the exhaust port is closed. By shutting off the inlet port, the compressed air from the working port is exhausted through the exhaust port.
- CHECK VALVES: these valves are used to prevent loss of pressure in a pipeline when the inlet is connected to the exhaust; the compressed air can flow freely from the inlet to the working port while the opposite direction is blocked.

SHUTTLE VALVES SERIES DS

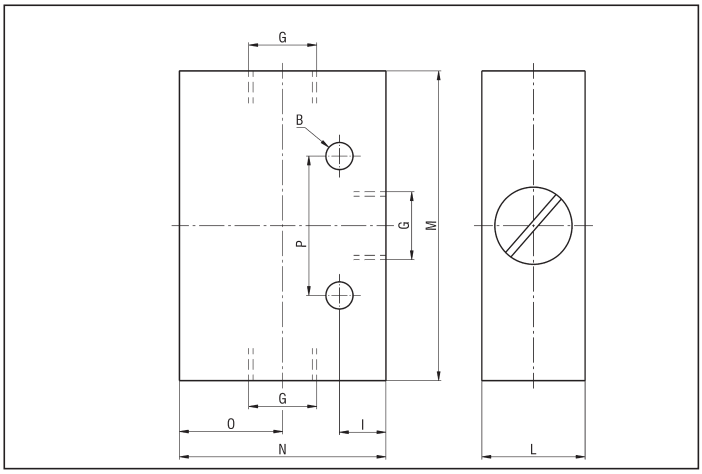
TECHNICAL DATA

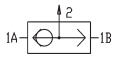
Operating pressure	0 ÷ 12 bar
Working temperature	0 ÷ +80° C (-20° C with dry air)
Fluid	Compressed air, filtered, continuous lubricated, unlubricated or dry lubricated
Port size	G 1/8 - G 1/4 - G 3/8 - G 1/2

MATERIALS

Body	Aluminium alloy
Seals	NBR rubber

DIMENSIONS AND WEIGHTS DS



Symbol	B	I	L	M	N	O	P	Flow rate at 6 bar ΔP=1 bar (Nl/min)	Pmin *(bar)*	Weight *(g)*	G	TYPE
	4,2	6	16	46	31	13	22	700	0,2	60	G 1/8	DS8
	5,2	8	20	60	40	17,5	27	1700	0,4	125	G 1/4	DS4
	6,4	10	25	80	50	21	38	3400	0,3	235	G 3/8	DS3
	6,4	12	30	100	60	26	48	5000	0,6	435	G 1/2	DS2

QUICK EXHAUST VALVES SERIES D3/

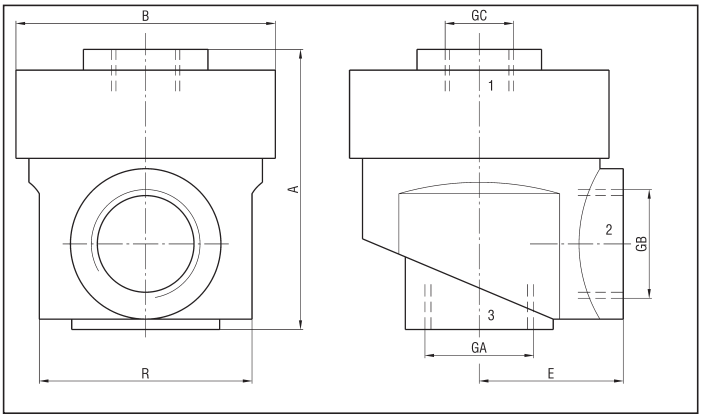
TECHNICAL DATA

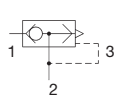
Operating pressure	0 ÷ 12 bar
Working temperature	0 ÷ +80° C (-20° C with dry air)
Fluid	Compressed air, filtered, continuous lubricated, unlubricated or dry lubricated
Port size	G 1/4 - G 1/2 - G 3/4

MATERIALS

Body	Aluminium alloy
Seals	NBR rubber
Bottom	Aluminium alloy

DIMENSIONS AND WEIGHTS D3/



Symbol	A	B	E	R	Flow rate from 1 to 2 at 6 bar ΔP=1 bar (Nl/min)	Flow rate from 2 to 3 at 6 bar free exhaust (Nl/min)	Pmin *(bar)*	Weight *(g)*	GA	GB	GC	TYPE
	38	35	19,5	27	520	2300	0,2	70	G 1/4	G 1/4	G 1/8	D3/4
	43	35	19,5	27	610	2300	0,2	75	G 1/4	G 1/4	G 1/4	D3/4B
	54	50	27,5	41	1520	4300	0,2	135	G 1/2	G 1/2	G 1/4	D3/2
	58	50	27,5	41	2220	4300	0,2	140	G 1/2	G 1/2	G 1/2	D3/2B
	82	82	44	70	4400	6000	0,2	510	G 3/4	G 3/4	G 1/2	D3/15

CHECK VALVES SERIES U

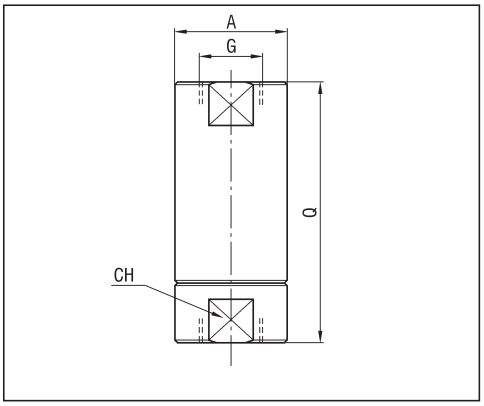
TECHNICAL DATA

Operating pressure	0 ÷ 12 bar
Working temperature	0 ÷ +80° C (-20° C with dry air)
Fluid	Compressed air, filtered, continuous lubricated, unlubricated or dry lubricated
Port size	G 1/8 - G 1/4 - G 1/2 - G 1

MATERIALS

Body	Anodized aluminium
Piston	Brass
Seals	NBR rubber
Spring	Stainless steel

DIMENSIONS AND WEIGHTS U



Symbol	CH	A	Q	Flow rate at 6 bar Δ P=1 bar (Nl/min)	Pmin *(bar)*	Weight *(g)*	G	TYPE
	13	15	34	70	0,2	25	G 1/8	U8
	19	21	48	700	0,7	75	G 1/4	U4
	19	21	48	725	0,2	75	G 1/4	U4/SM
	27	30	66	2750	0,2	170	G 1/2	U2
	50	50	110	5100	0,2	1000	G 1	U1
	19	21	48	800	0,2	75	G 1/4	U4/SM2

SLIDE VALVES SERIES VC

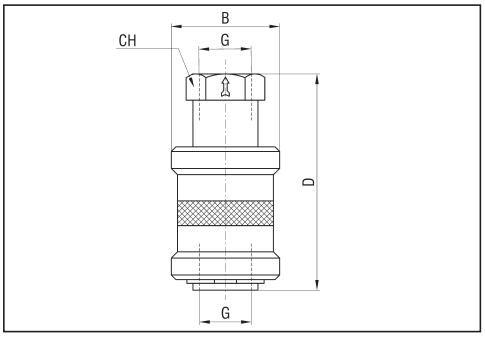
TECHNICAL DATA

Operating pressure	0 ÷ 16 bar
Working temperature	0 ÷ +80° C (-10° C with dry air)
Fluid	Compressed air, filtered, continuous lubricated, unlubricated or dry lubricated
Port size	G 1/8 - G 1/4 - G 3/8 - G 1/2

MATERIALS

Body	Nickel-plated brass
Slide	Anodized aluminium
Seals	NBR rubber

DIMENSIONS AND WEIGHTS VC



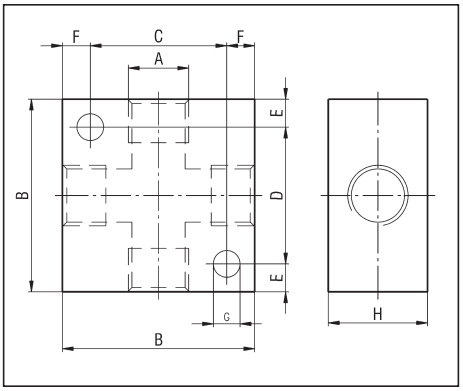
CH	B	Flow rate at 6 bar ΔP=1 bar (Nl/min)	D	Weight *(g)*	G	TYPE
14	25	700	48	54	G 1/8	VC-01
17	30	1500	58	102	G 1/4	VC-02
22	35	2200	68	153	G 3/8	VC-03
27	40	3400	80	204	G 1/2	VC-04

DISTRIBUTION FRAMES SERIES RX

TECHNICAL DATA

Fluid	Air, oil, water
Port size	G 1/8 - G 1/4 - G 3/8 - G 1/2

DIMENSIONS AND WEIGHTS RX

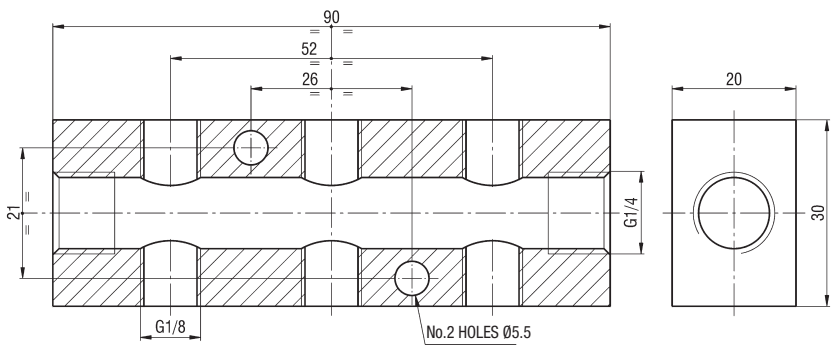


MATERIALS

Body	Anodized aluminium alloy

B	C	D	E	F	G	H	A	Weight *(g)*	TYPE
31	23	22	4,5	4	4,3	16	G 1/8	35	RX8
40	30	27	6,5	5	5,3	20	G 1/4	70	RX4
50	38	39	5,5	6	6,3	25	G 3/8	130	RX3
50	38	39	5,5	6	6,3	25	G 1/2	115	RX2

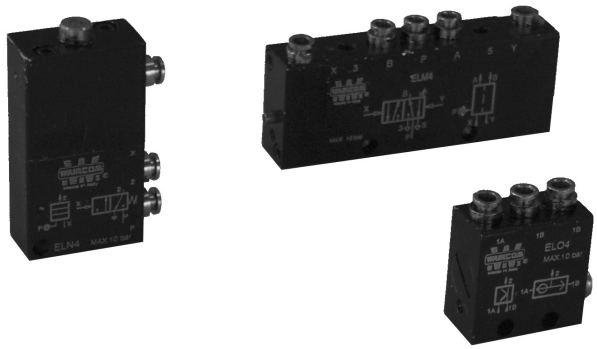
DIMENSIONS AND WEIGHT RX8/6



WEIGHT 110 g

DESCRIPTION

Pneumatic logic elements series “EL” are produced in the following No.5 basic functions: OR, AND, YES, NOT and MEMORY, with push-in fittings for pipe Ø 4 mm, and the pressure indicator is on body valve as standard. These elements can be mounted both separately (line mounted thanks to the No.2 holes on body valve) than on manifold bracket. The pneumatic logic element NOT is a threshold component and the pressure triggering value is 0,6 bar (at 6 bar).
They are in compliance with ATEX directive, 2GD category, upon request.



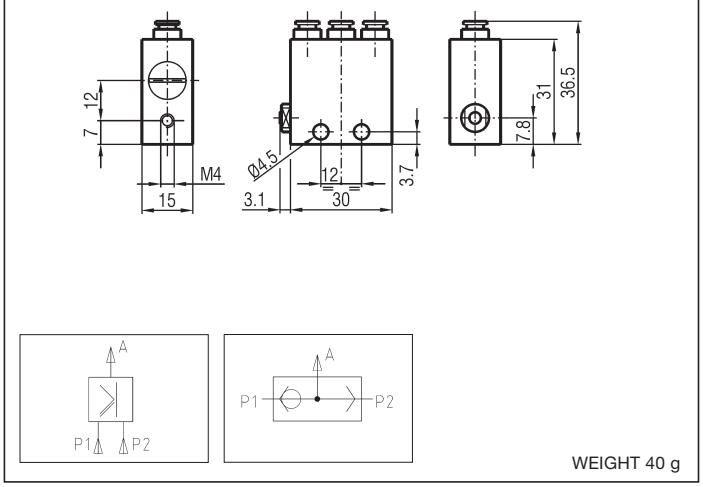
TECHNICAL DATA

Operating pressure	1,5 ÷10 bar
Working temperature	0 ÷ +60 °C (-20 °C with dry air)
Fluid	Compressed air, filtered, continuous lubricated, unlubricated or dry lubricated
Port size	Push-in fittings for pipe Ø 4 mm
Rated flow rate	90 Nl/min

MATERIALS

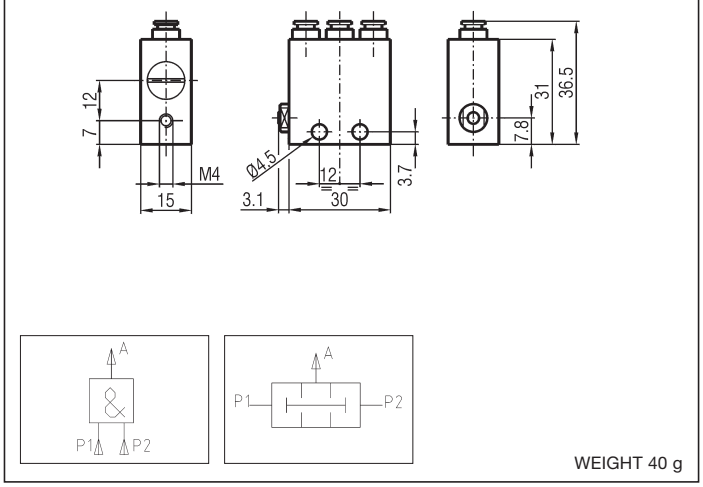
Body	Anodized aluminium alloy
Bushing and guide	Nickel - plated brass
Springs	Stainless steel
Seals	NBR rubber
Spool	Anodized aluminium alloy
Connections	Nickel - plated brass, plastic material

LOGIC ELEMENT - ELO4 (OR - logical sum)*



WEIGHT 40 g

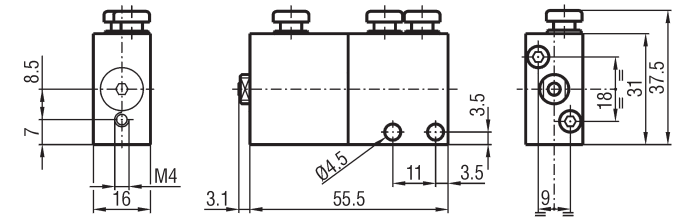
LOGIC ELEMENT - ELA4 (AND - logical multiplication)*



WEIGHT 40 g

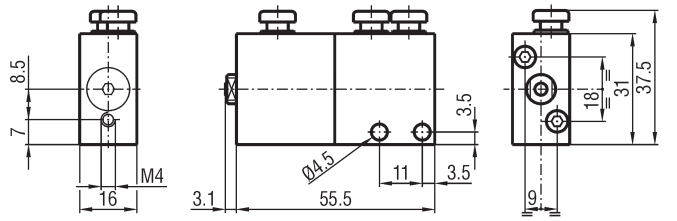
***/EX** Consistent with the ATEX directive Ⓔx II 2GD c T5 T100°C -20°C≤Ta≤60°C E.G.: **ELO4/EX**

LOGIC ELEMENT - ELY4 (YES - affirmation)*



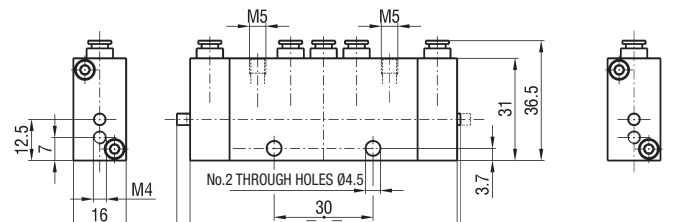
WEIGHT 82 g

LOGIC ELEMENT - ELN4 (NOT - negation)*



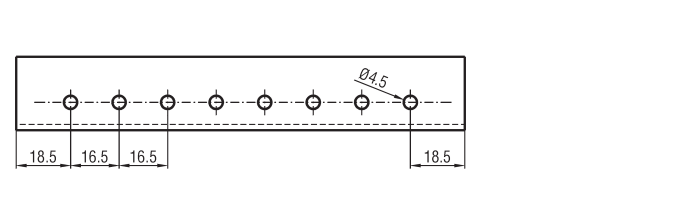
WEIGHT 82 g

LOGIC ELEMENT - ELM4 (memory)*



WEIGHT 110 g

BRACKET - ELSQ



WEIGHT 30 g

***/EX** Consistent with the ATEX directive Ex II 2GD c T5 T100°C -20°C≤Ta≤60°C E.G.: **ELY4/EX**

DESCRIPTION

Block valves series “WB” are produced in the 2/2 - G 1/8, G 1/4 and G 1/2 monostable pneumatic functions in both the uni- and bi-directional versions. The working of the block valve consists in avoiding unexpected depressurisation of the cylinder’s chamber due to lack of compressed air at the piloting port. For a correct functioning of the block valves we suggest to mount them directly on the cylinder.

TECHNICAL DATA

Operating pressure	0 ÷ 10 bar
Minimum piloting pressure (at 10 bar)	G 1/8 = 2,5 bar G 1/4 = 4 bar G 1/2 = 5 bar
Working temperature	0 ÷ +70 °C (–10 °C with dry air)
Fluid	Compressed air, filtered, continuous lubricated, unlubricated or dry lubricated
Port size	G 1/8 - G 1/4 - G 1/2
Pneumating piloting port size	G 1/8
Nominal diameter	G 1/8 = 5 mm G 1/4 = 7 mm G 1/2 = 12 mm
Flow rate at 6 bar (with ΔP = 1 bar)	G 1/8 = 500 Nl/min G 1/4 = 700 Nl/min G 1/2 = 1900 Nl/min

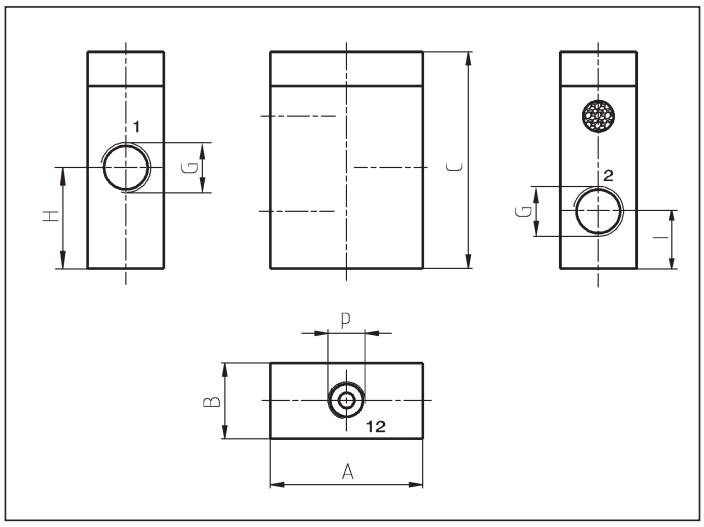
MATERIALS

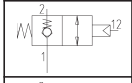
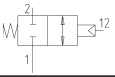
Control rod	Anodized aluminium alloy
Body	Anodized aluminium alloy
Spring	Stainless steel
End plug	Nick-plated brass
Seals	NBR rubber
Washer	Brass

SPARE PARTS

SEALS KIT	
G 1/8	**WB/SG/8**
G 1/4	**WB/SG/4**
G 1/2	**WB/SG/2**

DIMENSIONS AND WEIGHTS



Symbol	A	B	C	H	I	P	Weight (g)	G	TYPE
	31	16	47	21,5	11,5	G 1/8	61	G 1/8	WB8U
	40	20	57	26,5	15		120	G 1/4	WB4U
	50	25	69	34,5	18		220	G 1/2	WB2U
	31	16	47	21,5	11,5		61	G 1/8	WB8B
	40	20	57	26,5	15		120	G 1/4	WB4B
	50	25	69	34,5	18		220	G 1/2	WB2B

DESCRIPTION OF THE CONNECTION
1 = INPUT
2 = CYLINDER
12 = PILOTING