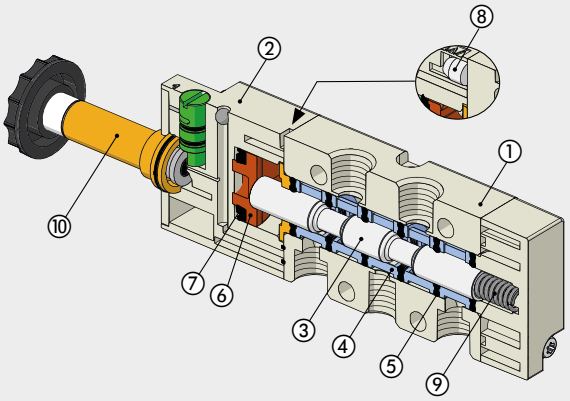
VALVES SERIES 70

The Series 70 forms part of Metal Work's full range of traditional valves.
They are available in sizes 1/8", 1/4", 3/8" and 1/2", versions 3/2, 5/2, 5/3 and double 3/2, with mechanical, manual, pneumatic and electric drives.
They can be installed in line, onto a wall, on the cylinder (using a special bracket) or in series (on a multiple or modular base) to suit all possible applications.
A range of valves (Series 70 LT) designed using components for specific low-temperature applications is now available for the most commonly used types and sizes.
These highly reliable valves comply with the main applicable standards, including Atex, ISO 13489 and SIL, as stated in the documents and certificates available online.

TECHNICAL DATA			1/8"	1/4"	3/8"	1/2"
Thread on the valve ports			1/8"	1/4"	3/8"	1/2"
Operating pressure series 70 versions		bar				
monostable and bistable differential				2.5 to 10		
bistable				1 to 10		
asserved				vacuum to 10		
Operating pressure series 70 LT (low temperature) versions		bar				
hand operated		perfectly		vacuum to 10		-
pneumatic and solenoid/pneumatic	t = -40°C to -10°C			5 to 10		-
	t = -10°C to +60°C			3 to 10		-
Minimum pilot pressure		bar		2.5		
Operating temperature range		°C				
series 70 versions				−10 to +60		
series 70 LT (low temperature) versions				−40 to +60		
Nominal diameter		mm	5	7.5	13.3	15
Conductance C		Nl/min · bar	121.43	264.26	505.52	971.43
Critical ratio b		bar/bar	0.32	0.27	0.32	0.43
Flow rate at 6 bar ΔP 0.5 bar		Nl/min	400	750	1560	3200
Flow rate at 6 bar ΔP 1 bar		Nl/min	550	1100	2150	4600
Installation			In any position (vertical assembly is not recommended for bistable valves subjected to vibration)			
Fluid			Filtered air without lubrication; lubrication, if used, must be continuous.			
			For series 70 LT (low-temperature) versions, it is recommended to use of perfetamente dried air.			
Recommended lubricant			ISO and UNI FD 22			
			For series 70 LT (low-temperature) it is not expected to be used with lubricated air.			
Maximum coil nut torque		Nm	1			
Compatibility with oils			See **chapter Z1**			

COMPONENTS SERIES 70

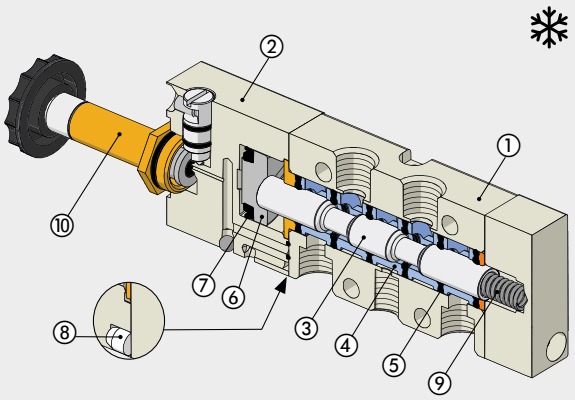
① ALVE BODY: Aluminium
② CONTROL/END CAP: plastic
③ SPOOL: chemically nickel-plated aluminium
④ DISTANCE PLATES: plastic
⑤ GASKETS: NBR
⑥ PISTONS: Hostaform®
⑦ PISTON GASKET: NBR
⑧ FILTER: plastic
⑨ SPRINGS: special steel
⑩ OPERATOR: Brass pipe - Stainless steel core



METAL WORK PNEUMATIC

COMPONENTS SERIES 70 LT (LOW TEMPERATURE)

① ALVE BODY: aluminium
② CONTROL/END CAP: aluminium
③ SPOOL: chemically nickel-plated aluminium
④ DISTANCE PLATES: plastic
⑤ GASKETS: HNBR
⑥ PISTONS: aluminium
⑦ PISTON GASKET: HNBR
⑧ FILTER: plastic
⑨ SPRINGS: special steel
⑩ OPERATOR: brass pipe - Stainless steel core
(version specific for low-temperature applications)



FLOW CHARTS

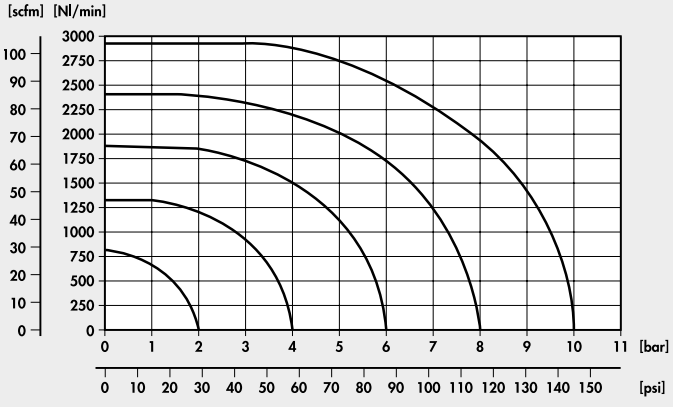
VALVES SERIES 70 1/8"

Flow rates

Pressures

VALVES SERIES 70 1/4"

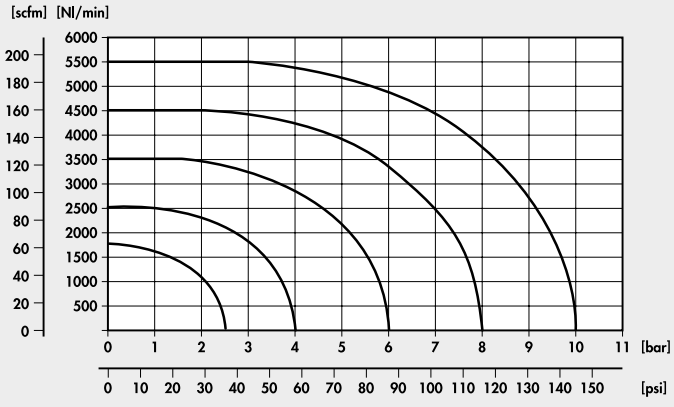
Flow rates



Pressures

VALVES SERIES 70 3/8"

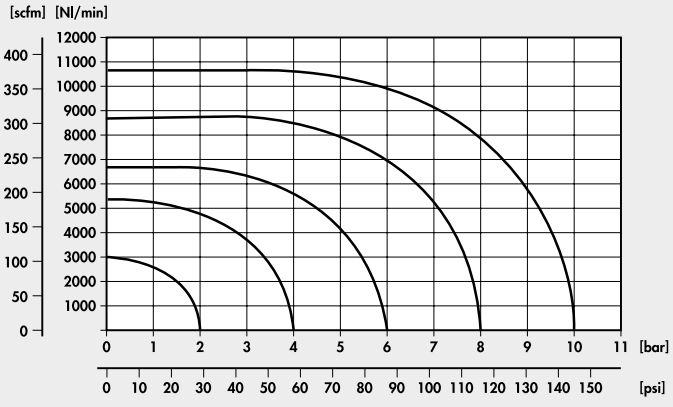
Flow rates



Pressures

VALVES SERIES 70 1/2"

Flow rates



Pressures

VALVES SERIES 70, MECHANICALLY OPERATED, 1/8"

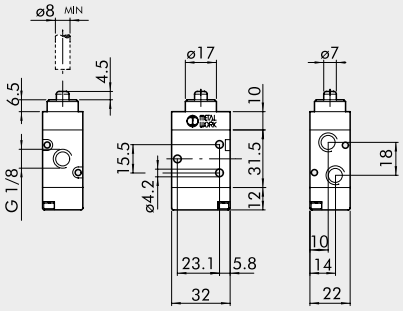
TECHNICAL DATA

Thread at valve ports		1/8"
Operation force at 6 bar:		
• version with direct control	N	50
• pilot-assisted version	N	6
Operating pressure:		
• version with direct control	bar	Vacuum to 10
• pilot-assisted version	bar	2.5 to 10
Operating temperature range	°C	-10 to +60
Nominal diameter	mm	5
Conductance C	Nl/min · bar	121.43
Critical ratio b	bar/bar	0.32
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	400
Flow rate at 6 bar ΔP 1 bar	Nl/min	550

SYNOPTIC, SIZES AND VERSIONS

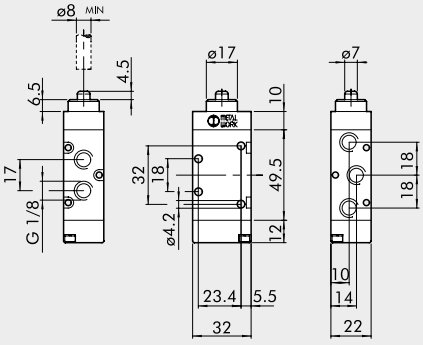
M E V	2	3	T A	S	N C
FAMILY	**DIMENSIONS**	**FUNCTION**	**OPERATORS 14**	**RESETTING (12)**	**FURTHER DETAILS**
MEV mechanically-operated valves	**2** 1/8"	**3** 3/2 **5** 5/2	**TA** plunger **BR** bidirectional roller **UR** unidirectional roller **TS** sensitive plunger **RS** sensitive roller **AS** sensitive aerial **LL** frontal roller lever	**S** mechanical springs **A** pneumatic/mechanical spring* *on demand	**NC** normally closed **OO** no indication

PLUNGER 3/2, 1/8"



Symbol	Code	Abbrev.	Weight [g]
	**7001000100**	MEV 23 TAS NC	88

PLUNGER 5/2, 1/8"



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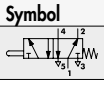
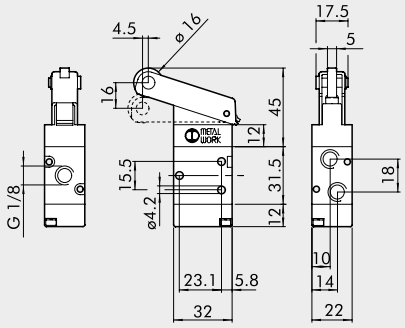
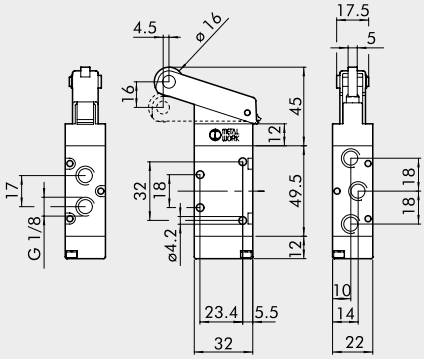
	**7001000110**	MEV 25 TAS OO	114

ROLLER LEVER 3/2, 1/8"



Symbol	Code	Abbrev.	Weight [g]
	7001000500	MEV 23 BRS NC	130

ROLLER LEVER 5/2, 1/8"



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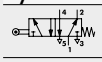
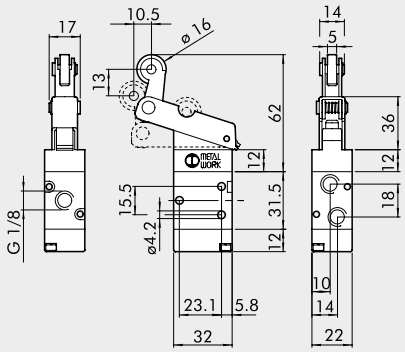
	7001000510	MEV 25 BRS OO	156

UNIDIRECTIONAL ROLLER 3/2, 1/8" LEVERS



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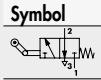
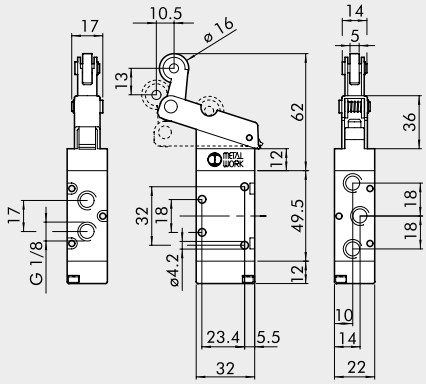
	7001000600	MEV 23 URS NC	136

UNIDIRECTIONAL ROLLER 5/2, 1/8" LEVERS



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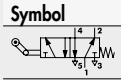
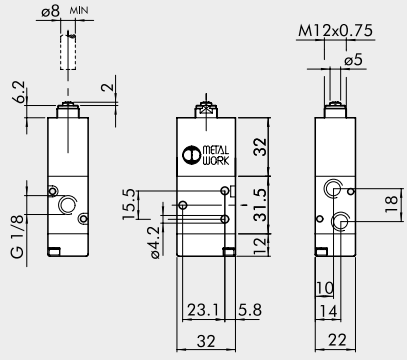
	7001000610	MEV 25 URS OO	162

PILOT-ASSISTED PLUNGER 3/2 NC, 1/8"



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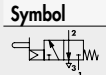
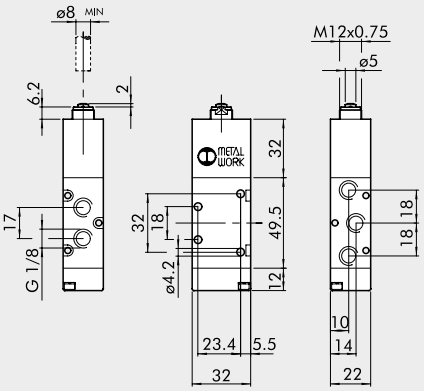
	7001000200	MEV 23 TSS NC	126

PILOT-ASSISTED PLUNGER 5/2, 1/8"



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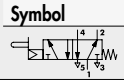
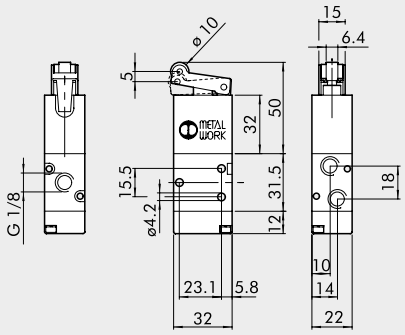
	7001000210	MEV 25 TSS OO	152

PILOT-ASSISTED ROLLER LEVER 3/2 NC, 1/8"



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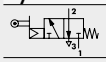
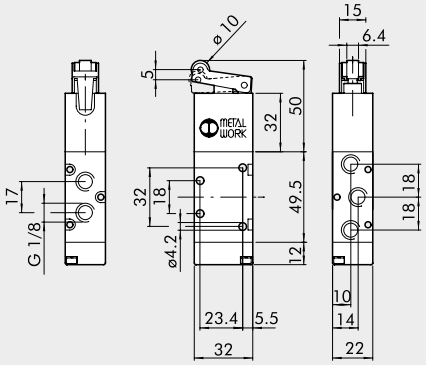
	7001000400	MEV 23 RSS NC	138

PILOT-ASSISTED ROLLER LEVER 5/2, 1/8"



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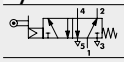
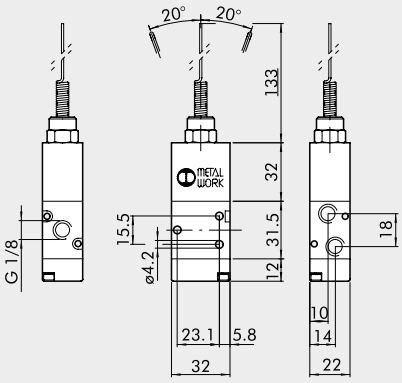
	7001000410	MEV 25 RSS OO	164

PILOT-ASSISTED AERIAL 3/2 NC, 1/8"



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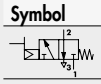
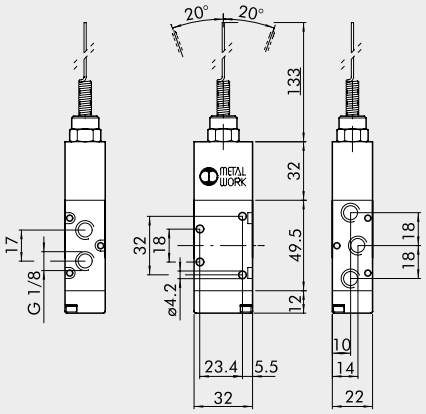
	7001000700	MEV 23 ASS NC	142

PILOT-ASSISTED AERIAL 5/2 NC, 1/8"



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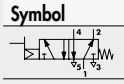
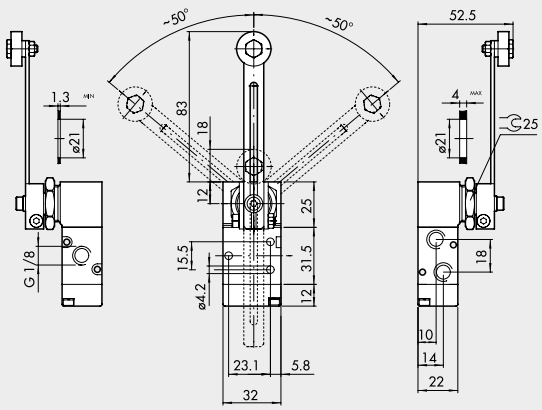
	7001000710	MEV 25 ASS OO	168

ROLLER-LEVER 3/2 1/8"

Operating torque: 0.5 Nm



Symbol	Code	Abbrev.	Weight [g]
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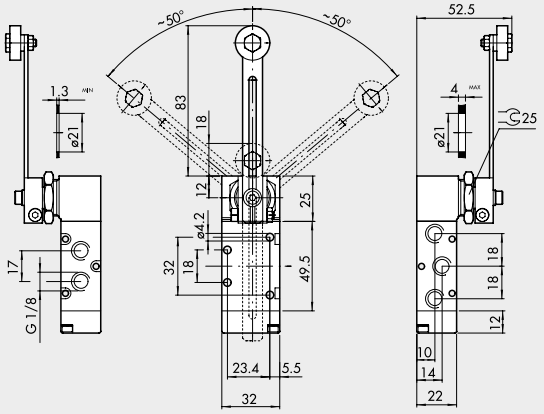
ROLLER-LEVER 5/2 1/8"

Operating torque: 0.5 Nm



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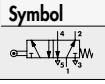	7001000910	MEV 25 LLS OO	216