

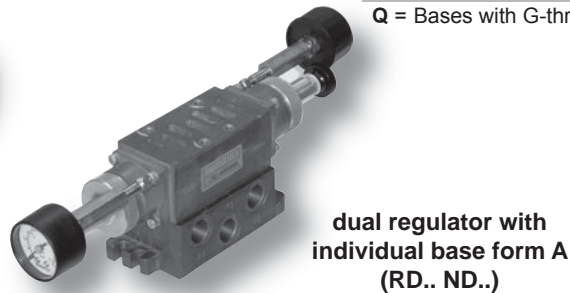
Sub-base Mounted Valves to ISO 5599/1



Sandwich Pressure Regulators ISO 1; ISO 2 and ISO 3 Series • Overview

How to Order: (example)

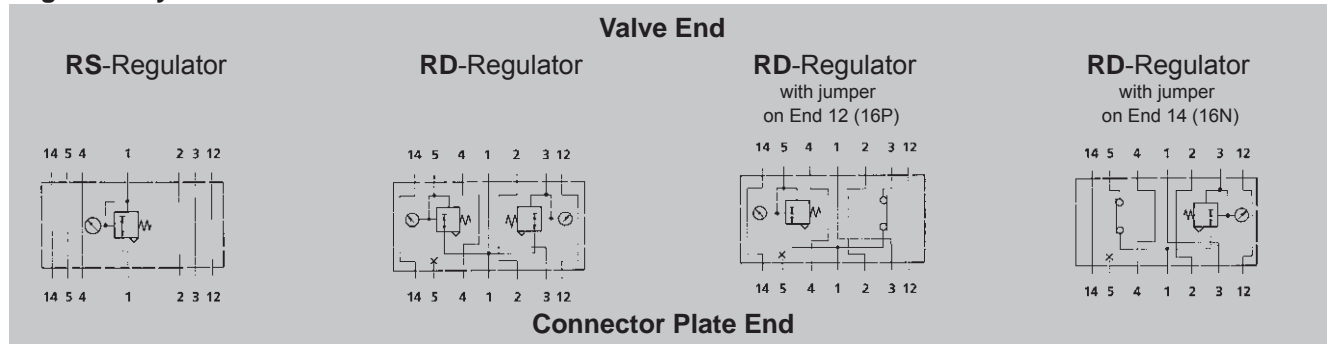
<p>I23</p> <table border="1"> <thead> <tr> <th>Regulator Series</th> <th>Port Size</th> </tr> </thead> <tbody> <tr> <td>I12 = ISO 1</td> <td>1/4</td> </tr> <tr> <td>I23 = ISO 2</td> <td>3/8</td> </tr> <tr> <td>I34 = ISO 3</td> <td>1/2</td> </tr> </tbody> </table>	Regulator Series	Port Size	I12 = ISO 1	1/4	I23 = ISO 2	3/8	I34 = ISO 3	1/2	<p>RD</p> <table border="1"> <thead> <tr> <th>Regulator Type</th> </tr> </thead> <tbody> <tr> <td>RS = Single type for port "1" regulation</td> </tr> <tr> <td>RD* = Dual type for "3" and "5" regulation</td> </tr> <tr> <td>NS** = Single type, piston design for "1" port regulation</td> </tr> <tr> <td>ND** = Dual type, piston design for "1" and "3" regulation</td> </tr> </tbody> </table> <p>* Not available with sandwich speed controls ** only for Series ISO 3, with pressure range 1.4 to 17 bar</p>	Regulator Type	RS = Single type for port "1" regulation	RD* = Dual type for "3" and "5" regulation	NS** = Single type, piston design for "1" port regulation	ND** = Dual type, piston design for "1" and "3" regulation	<p>1</p> <table border="1"> <thead> <tr> <th>Pressure Range</th> </tr> </thead> <tbody> <tr> <td>1 = 0.7 to 9 bar</td> </tr> <tr> <td>3 = 0.2 to 2 bar</td> </tr> <tr> <td>4 = 0.35 to 4 bar</td> </tr> <tr> <td>6 = 1.4 to 17 bar</td> </tr> </tbody> </table>	Pressure Range	1 = 0.7 to 9 bar	3 = 0.2 to 2 bar	4 = 0.35 to 4 bar	6 = 1.4 to 17 bar	<p>00</p> <table border="1"> <thead> <tr> <th>Bases*</th> </tr> </thead> <tbody> <tr> <td>00 = Without base</td> </tr> <tr> <td>1A = Mounted on manifold block form C</td> </tr> <tr> <td>11 = Mounted on connector plate form E, incl. mounting block "1A"</td> </tr> <tr> <td>15 = Mounted on manifold block with side and bottom ports</td> </tr> <tr> <td>25 = Mounted on sandwich speed control and manifold block "15"</td> </tr> <tr> <td>41 = Mounted on individual base form A</td> </tr> <tr> <td>56 = Mounted on individual base form B</td> </tr> <tr> <td>58 = Mounted on sandwich speed control and individual base "56"</td> </tr> </tbody> </table> <p>* On request: other bases</p>	Bases*	00 = Without base	1A = Mounted on manifold block form C	11 = Mounted on connector plate form E, incl. mounting block "1A"	15 = Mounted on manifold block with side and bottom ports	25 = Mounted on sandwich speed control and manifold block "15"	41 = Mounted on individual base form A	56 = Mounted on individual base form B	58 = Mounted on sandwich speed control and individual base "56"	<p>0</p> <table border="1"> <thead> <tr> <th>Type</th> </tr> </thead> <tbody> <tr> <td>0 = Regulator</td> </tr> </tbody> </table>	Type	0 = Regulator	<p>P</p> <table border="1"> <thead> <tr> <th>Options**</th> </tr> </thead> <tbody> <tr> <td>000 = Without options</td> </tr> <tr> <td>12H = Without gauge</td> </tr> <tr> <td>16P* = Jumper on regulator end 12, port "5" regulation</td> </tr> <tr> <td>16N* = Jumper on regulator end 14, port "3" regulation</td> </tr> <tr> <td>27J* = 12H and 16N</td> </tr> <tr> <td>27K* = 12H and 16P</td> </tr> </tbody> </table> <p>* only with dual regulator ** Other options: on request</p>	Options**	000 = Without options	12H = Without gauge	16P* = Jumper on regulator end 12, port "5" regulation	16N* = Jumper on regulator end 14, port "3" regulation	27J* = 12H and 16N	27K* = 12H and 16P	<p>16N 00</p> <table border="1"> <thead> <tr> <th>Base Ports</th> </tr> </thead> <tbody> <tr> <td>0 = Regulator unit only (Only Series ISO 3, Regulator type NS and ND)</td> </tr> <tr> <td>P = Regulator unit only or bases with NPTF- thread</td> </tr> <tr> <td>Q = Bases with G-thread</td> </tr> </tbody> </table>	Base Ports	0 = Regulator unit only (Only Series ISO 3, Regulator type NS and ND)	P = Regulator unit only or bases with NPTF- thread	Q = Bases with G-thread
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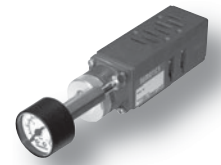
Order example: **I23RD1000P16N00**

This refers to a double sandwich pressure regulator of ISO 2 series. The pressure range is 0.7 to 9 bar. The regulator is equipped with a jumper on regulator end 14, port "3" regulation. The regulator is supplied without base.

Regulator Symbols

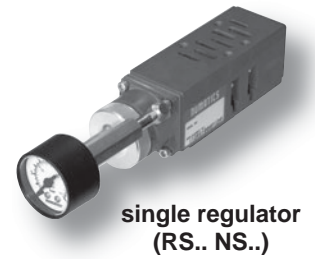
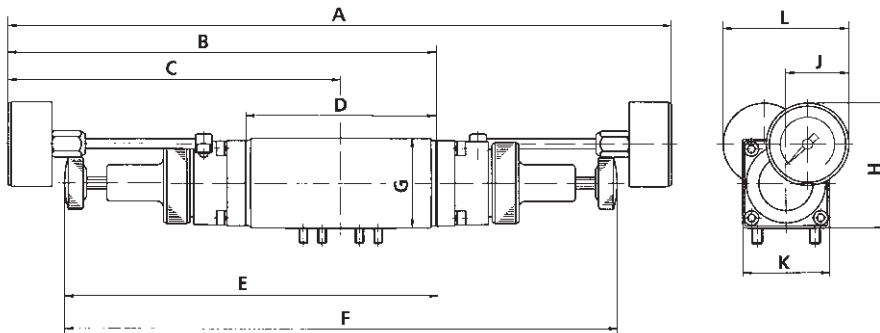


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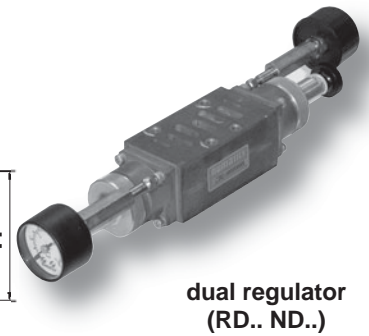
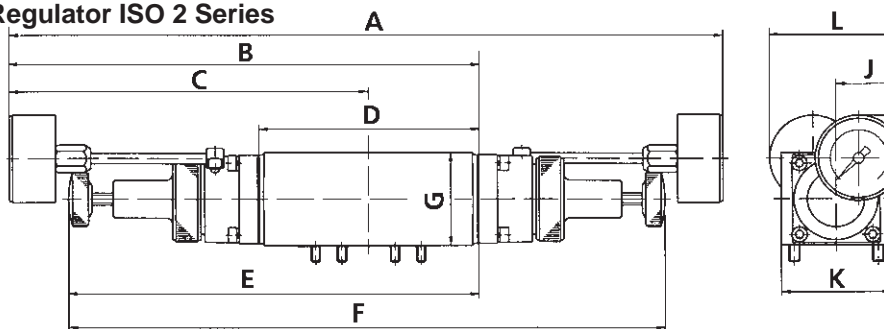


Sandwich Pressure Regulators ISO 1; ISO 2 and ISO 3 Series • Dimensions

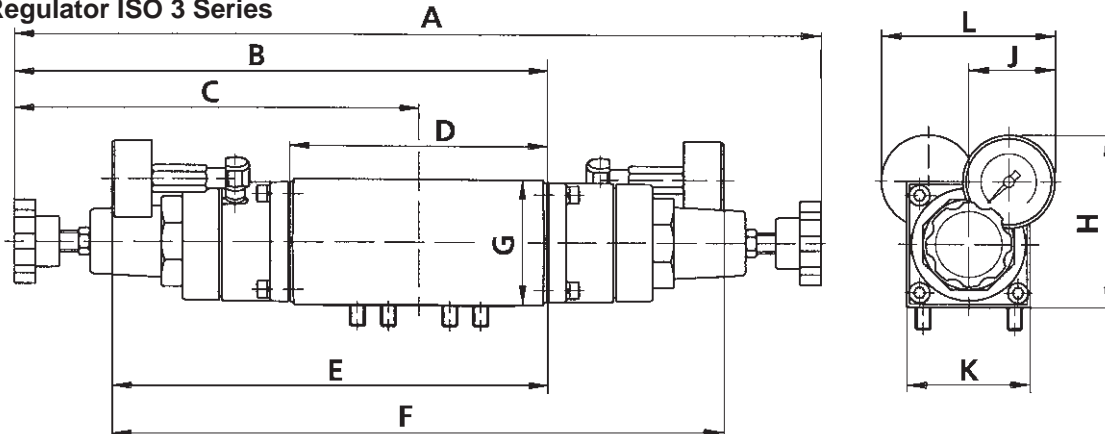
Sandwich Pressure Regulator, Single or Double Actuated
Regulator ISO 1 Series



Regulator ISO 2 Series



Regulator ISO 3 Series

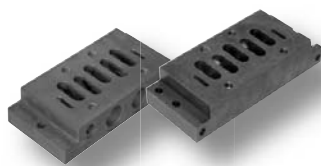


Dimensions [mm]

Series	Type	A	B	C	D	E	F	G	H	J	K	L	Weight approx. [kg]
ISO 1	I12RS...	—	204.7	158.8	92.0	180.0	—	43.2	60.0	37.5	42.0	—	0.600
ISO 1	I12RD...	317.6	—	158.8	92.0	—	268.0	43.2	60.0	37.5	42.0	75.0	0.800
ISO 2	I23RS...	—	212.7	162.8	100.0	188.0	—	43.2	60.0	37.5	50.0	—	0.700
ISO 2	I23RD...	325.6	—	162.8	100.0	—	276.0	43.2	60.0	37.5	50.0	75.0	0.900
ISO 3	I34RS/NS...	—	280.0	218.8	134.0	226.0	—	66.7	81.8	48.9	64.0	—	1.700
ISO 3	I34RD/ND...	423.6	—	218.8	134.0	—	318.0	66.7	81.8	48.9	64.0	97.8	2.320

incl. bolts, gaskets and gauge

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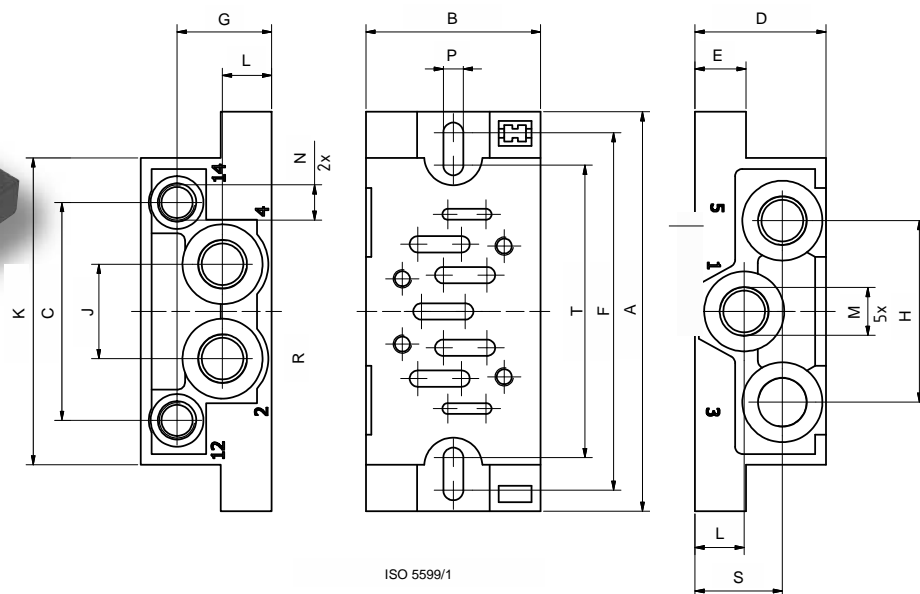


Sub-base Mounted Valves to ISO 5599/1

NUMATICS

Accessories

Individual Base Form A to VDMA 24345, with Side Ports



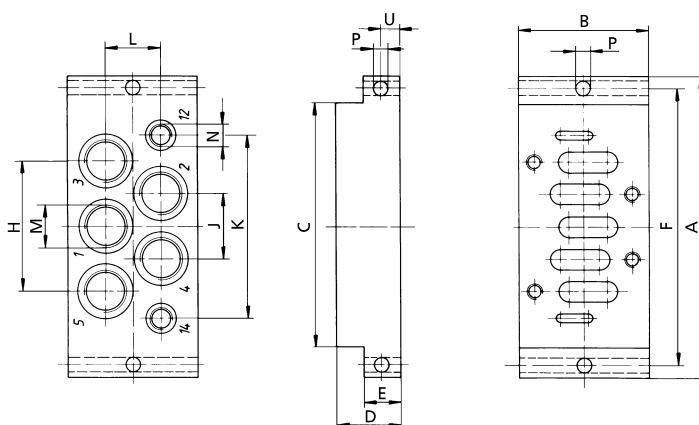
Dimensions [mm]

Series	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
ISO 1	110.0	48.0	84.5	36.0	14.0	89.0	26.0	50.0	26.0	60.0	13.5	G 1/4	G 1/8	5.5	15.0 / 0.3	19.00 (5X)
ISO 2	124.0	57.0	95.0	40.0	13.0	113.0	31.0	56.0	30.0	74.0	15.0	G 3/8	G 1/8	6.5	15.0 / 0.3	
ISO 3	149.0	71.0	119.0	32.0	18.0	136.0	22.0	68.0	32.0	90.0	17.0	G 1/2	G 1/8	6.5	15.0 / 0.3	

Series	S	T	Weight app. [kg]	Order Code
ISO 1	24.0	80.0	0.200	103-544
ISO 2	25.0	103.0	0.300	103-549
ISO 3	-	-	0.400	103-545

On request: individual bases with NPTF-thread

Individual Base Form B to VDMA 24345, with Bottom Ports



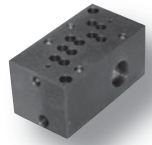
Dimensions [mm]

Series	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Weight approx. [kg]	Order Code
ISO 1	110.0	46.0	84.0	30.0	10.0	98.0	5.0	46.0	23.0	62.0	23.0	G 1/4	G 1/8	5.5	0.190	103-542
ISO 2	124.0	56.0	95.0	35.0	13.0	112.0	6.5	56.0	26.0	74.0	27.0	G 3/8	G 1/8	6.6	0.320	103-557
ISO 3	149.0	64.0	119.0	32.0	18.0	136.0	9.0	64.0	32.0	90.0	27.0	G 1/2	G 1/8	6.6	0.410	103-543

On request: individual bases with NPTF-thread

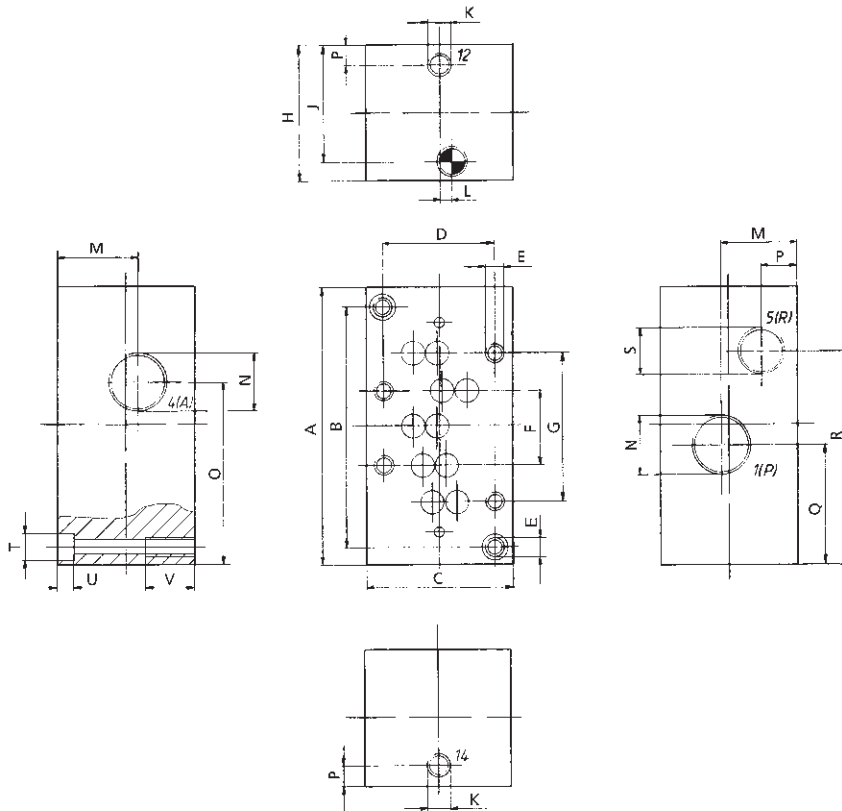
Valves

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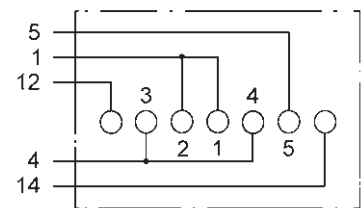


Accessories

Individual Base 3-ported, 2-pos. Function, with Increased Flow Capacity (NC)



Symbol



Dimensions [mm]

Series	A	B	C	D	E	F	G	H	J	K	L	M	N	O
ISO 3	120.0	100.0	64.0	48.0	M8	32.0	64.0	59.5	50.5	G 1/8	5.0	34.0	G 3/4	79.0

Series	P	Q	R	S	T	U	V	Weight approx. [kg]	Order Code
ISO 3	9.0	52.0	92.0	G 1/2	11.0	8.0	20.0	1.065	10.4935

On request: individual bases with NPTF-thread

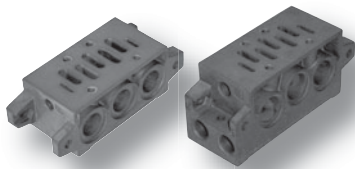
Without picture: Individual bases

Dimensions [mm]

Symbol	Description	Ports	Length	Width	Height	Weight approx. [kg]	Order Code
	Individual base with increased flow capacity ISO 1 series	"1" + "4" = G 3/8 "5" = G 1/4	110.0	45.0	45.0	0.500	239-357
—	Individual base for poppet valves ISO 3 series	"1", "4" + "5" = G 1/2	120.5	70.0	69.5	1.400	13.7964

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Valves

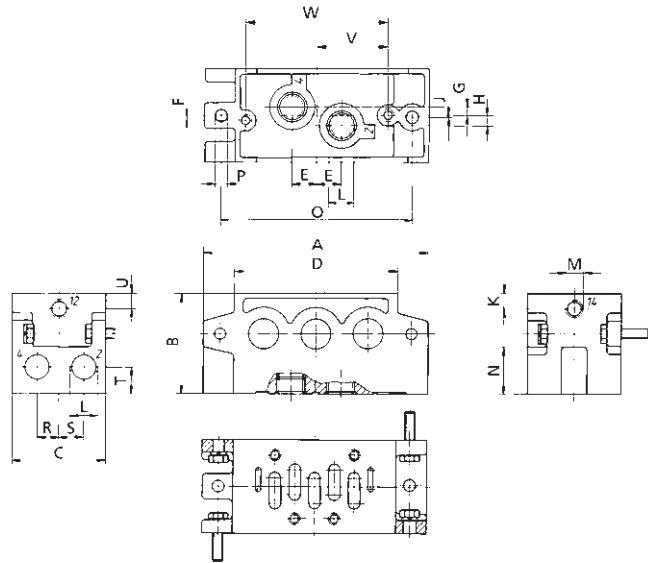
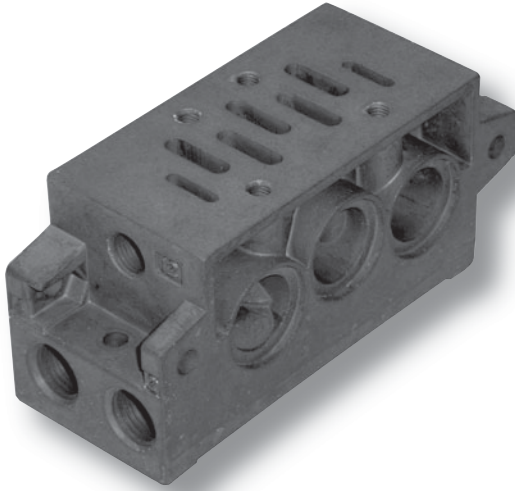


Sub-base Mounted Valves to ISO 5599/1



Accessories

Manifold Block with Side and Bottom Ports



Dimensions [mm]

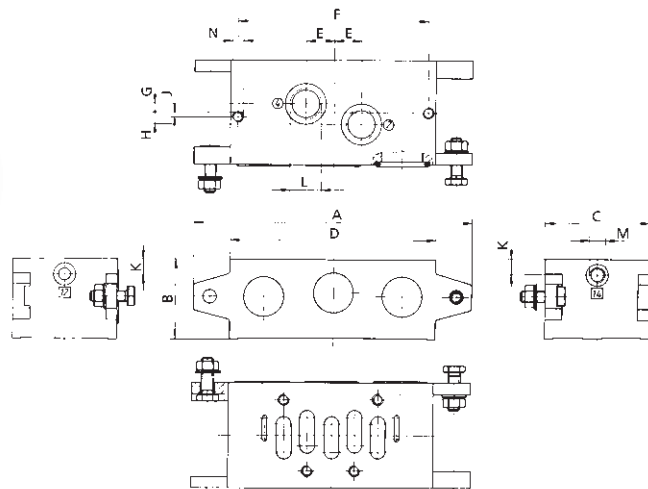
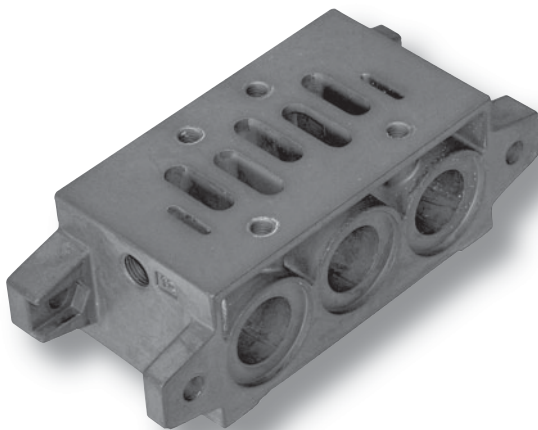
Series	A	B	C	D	E	F	G	H	J	K	L	M	N	O
ISO 1	110.0	50.0	43.0	84.0	13.0	3.0	1.5	7.5	1.2	10.0	G 1/4	G 1/8	23.0	95.0
ISO 2	135.0	60.0	56.0	98.5	15.0	3.0	5.0	6.0	1.0	9.0	G 3/8	G 1/8	28.0	115.0
ISO 3	190.0	66.0	71.0	140.0	19.0	3.0	6.0	8.0	1.3	9.5	G 1/2	G 1/8	32.0	168.0

Series	P	R	S	T	U	V	W	Weight approx. [kg]	Order Code
ISO 1	5.4	9.5	12.0	13.0	10.0	35.5	71.0	0.400	239-241
ISO 2	6.6	13.0	15.0	16.0	9.0	43.0	86.0	0.600	239-245
ISO 3	8.6	16.5	19.0	18.0	9.5	65.0	130.0	1.200	239-249

incl. bolts and gaskets

On request: individual bases with NPTF-thread

Manifold Block Form C to VDMA 24345, with Bottom Ports

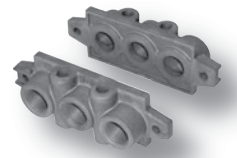


Dimensions [mm]

Series	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight approx. [kg]	Order Code
ISO 1	110.0	44.0	43.0	85.0	13.0	71.0	1.5	7.5	3.0	9.0	G 1/4	G 1/8	M5	0.300	239-239
ISO 2	135.0	45.0	56.0	98.5	15.0	86.0	5.0	6.0	3.0	9.0	G 3/8	G 1/8	M6	0.400	239-243
ISO 3	190.0	54.0	71.0	140.0	19.0	130.0	6.0	8.0	3.0	10.0	G 1/2	G 1/8	M8	0.800	239-247

incl. bolts and gaskets

On request: individual bases with NPTF-thread



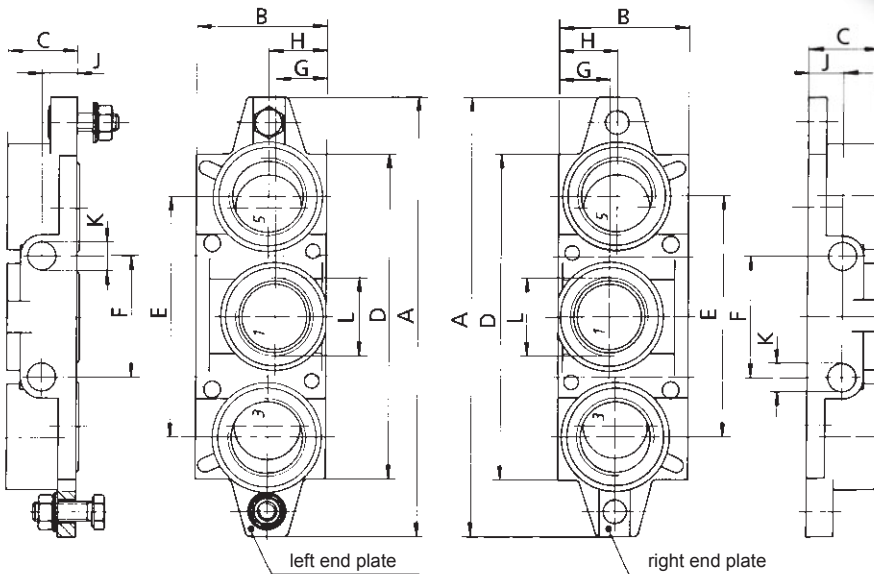
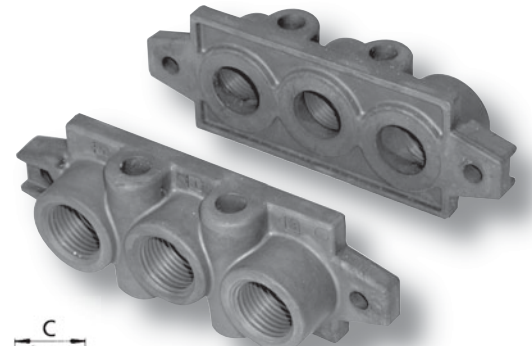
Accessories

Without picture: Manifold blocks

Dimensions [mm]

Symbol	Description	Length	Width	Height	Weight approx. [kg]	Order code
	Manifold block with increased flow capacity ISO 1 series	110.0	43.0	50.0	0.550	239-353
	Manifold block with increased flow capacity (NC) ISO 2 series	135.0	56.0	59.0	1.010	239-902
	Manifold block with increased flow capacity (NC) ISO 3 series	190.0	71.0	74.0	1.700	10.6062
	Manifold block with increased flow capacity ISO 2 series	95.0	50.0	49.5	0.650	10.5070
	Manifold block with port "1" locked (NC) ISO 2 series	190.0	88.0	70.0	2.200	10.6915

End Plate Kits Form D to VDMA 24345



Dimensions [mm]

Series	A	B	C	D	E	F	G	H	J	K	L	Weight approx. [kg]	Order Code
ISO 1	110.0	46.0	22.0	85.0	56.0	28.0	22.0	25.0	11.0	7.0	G 3/8	0.300	239-257
ISO 2	135.0	47.0	26.0	98.5	70.0	35.0	23.0	25.0	13.0	9.0	G 1/2	0.400	239-255
ISO 3	190.0	56.0	30.0	140.0	104.0	52.0	22.0	25.0	15.0	12.0	G 1	0.700	239-259

incl. bolts and gaskets

On request: end plate kits with NPTF-thread

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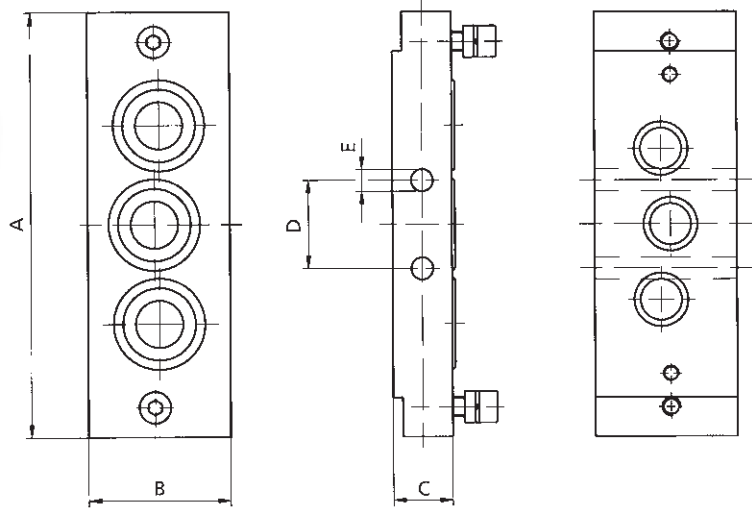


Sub-base Mounted Valves to ISO 5599/1



Accessories

Adapter Plates for mounting different ISO Valves



Dimensions [mm]

ISO-Series Lefthand Side	ISO-Series Righthand Side	A	B	C	D	E	Weight approx. [kg]	Order Code
ISO 1	ISO 2	135.0	45.0	19.0	28.0	7.0	0.900	239-186
ISO 1	ISO 3	190.0	55.0	32.0	28.0	7.0	1.100	239-149
ISO 2	ISO 1	135.0	45.0	19.0	28.0	7.0	0.900	239-181
ISO 2	ISO 3	190.0	55.0	32.0	35.0	9.0	1.100	239-179
ISO 3	ISO 1	190.0	55.0	32.0	28.0	7.0	1.100	239-152
ISO 3	ISO 2	190.0	60.0	40.0	—	—	1.100	239-183

incl. bolts and gaskets

Adapter plates (without picture)

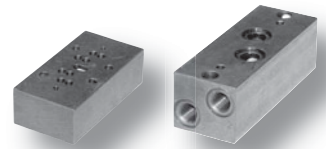
Dimensions [mm]

Symbol	Description	Length	Width	Height	Weight approx. [kg]	Order Code
	Adapter plate with side ports ISO 1 series on ISO 3 series	190.0	55.0	55.0	1.550	239-177
	Adapter plate with G 3/4 ports top and bottom ISO 3 series on ISO 1 series	190.0	55.0	55.0	1.550	10.6394

Intermediate plates (without picture)

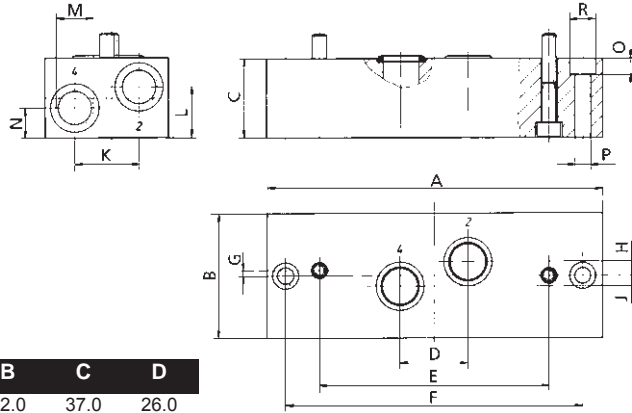
Dimensions [mm]

Symbol	Description	Ports "1" "3" "5"	Length	Width	Height	Weight approx. [kg]	Order Code
	Mid plate ISO 1 series	G 1/4	110.0	29.0	40.0	0.040	10.5239
	Mid plate ISO 2 series	G 3/8	135.0	30.0	50.0	0.500	10.5688
	Mid plate ISO 3 series	G 3/4	190.0	40.0	60.0	1.070	239-182



Accessories

Connector Plate Form E to VDMA 24345, with Side and Bottom Ports



Dimensions [mm]

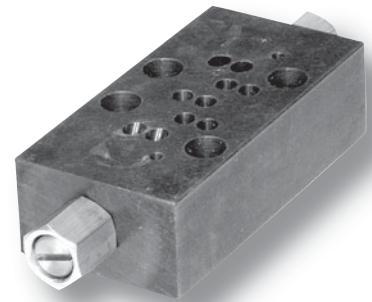
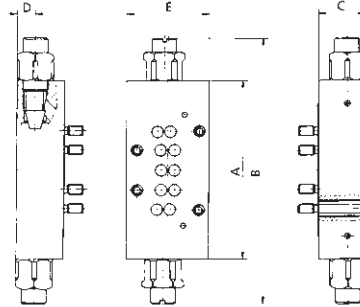
Series	A	B	C	D
ISO 1	110.0	42.0	37.0	26.0
ISO 2	135.0	55.0	40.0	30.0
ISO 3	190.0	70.0	45.0	38.0

Series	E	F	G	H	J	K	L	M	N	O	P	R	Weight approx. [kg]	Order Code
ISO 1	71.0	95.0	3.0	7.5	1.5	22.0	25.0	G 1/4	12.0	5.7	5.5	10.0	0.500	239-143
ISO 2	86.0	115.0	3.0	6.0	5.0	29.0	26.0	G 3/8	14.0	6.8	6.6	11.0	0.800	239-180
ISO 3	130.0	168.0	3.0	8.0	6.0	36.0	29.0	G 1/2	17.0	9.0	9.0	15.0	1.600	239-144

incl. bolts and gaskets

On request: connector plates with NPTF-thread

Sandwich Speed Control

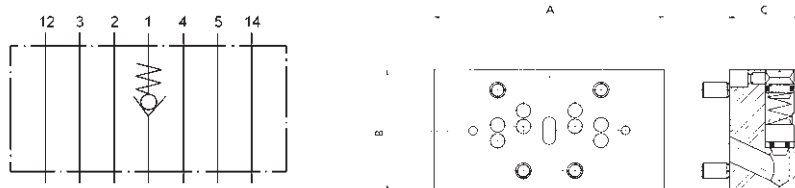


Dimensions [mm]

Series	A	B	C	D	E	Weight approx. [kg]	Order Code
ISO 1	89.0	126.5	24.5	12.5	42.0	0.600	239-321
ISO 2	110.0	169.0	29.5	11.0	50.0	0.700	239-322
ISO 3	128.0	188.0	34.5	14.0	64.0	0.900	239-323

incl. studs and gaskets

Non-Return Plate for Port 1

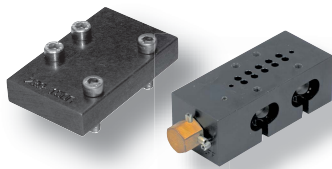


Dimensions [mm]

Series	A	B	C	Weight approx. [kg]	Order Code
ISO 1	80.0	42.0	24.5	0.500	239-324
ISO 2	96.0	50.0	29.5	0.600	239-325
ISO 3	120.0	69.0	38.5	0.700	239-326

incl. studs and gaskets

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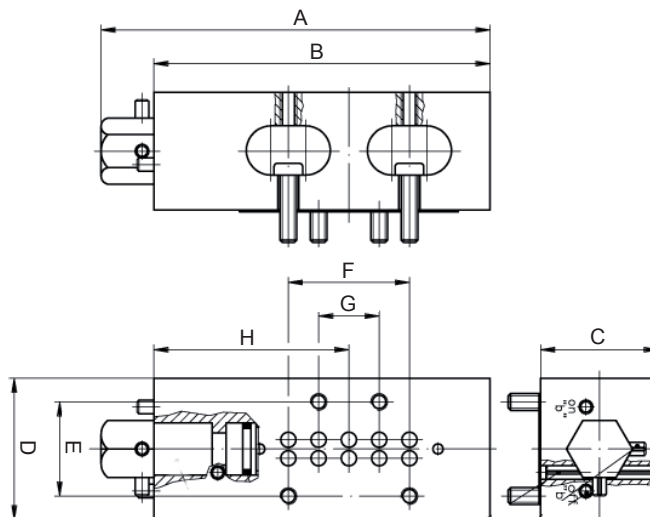
Sub-base Mounted Valves to ISO 5599/1

NUMATICS

Accessories

Valve Isolating Plate

Valve side

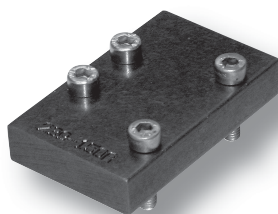
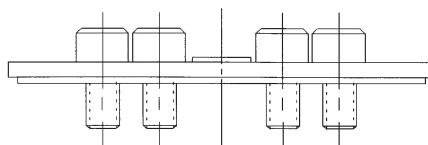


Dimensions [mm]

Series	Operating pressure	A	B	C	D	E	F	G	H	Weight approx. [kg]	Order Code
ISO 1	vacuum to 10 bar*	116	100	35	42	28	36	18	58	0.452	10.6328
ISO 2	vacuum to 10 bar*	122	106	40	50	25	55	25	58	on request	10.8071
ISO 3	vacuum to 10 bar*	159	143	40	64	40	64	32	78	on request	10.7389

*Higher pressures on request.

Blank Station Plate



Series	Weight approx. [kg]	Order Code
ISO 1	0.100	239-150
ISO 2	0.200	239-178
ISO 3	0.300	239-153

incl. bolts and gaskets

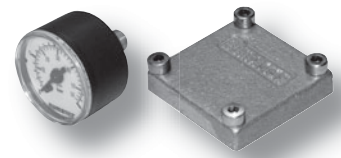
Blocking Disc



Series	Order Code
ISO 1	239-1598*
ISO 2	239-2263*
ISO 3	239-253*

* incl. o-ring

Subject to change without notice. Not liable for printing errors



Accessories

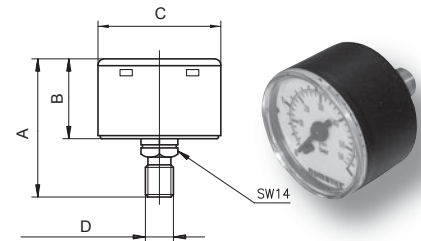
Gauge for Sandwich Pressure Regulator

Dimensions [mm]

Pressure Range	A	B	C Ø	D	Weight approx. [kg]	Order Code
0 to 2.5 bar	42.0	26.0	40.0	R 1/8	0.040	214-151
0 to 4 bar	42.0	26.0	40.0	R 1/8	0.040	214-152
0 to 10 bar	42.0	26.0	40.0	R 1/8	0.040	214-153
0 to 16 bar	42.0	26.0	40.0	R 1/8	0.040	214-154

On request: other pressure ranges

Pressure Range	A	B	C Ø	D NPTF	Weight approx. [kg]	Order Code
0 to 2.5 bar	42.0	26.0	40.0	1/8	0.040	214-138
0 to 4 bar	42.0	26.0	40.0	1/8	0.052	214-139
0 to 10 bar	42.0	26.0	40.0	1/8	0.040	214-140
0 to 16 bar	42.0	26.0	40.0	1/8	0.052	214-141

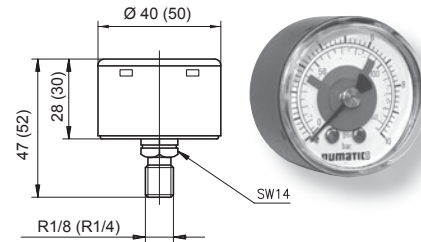


Gauge for Sandwich Pressure Regulator with adjustable Scale

Dimensions [mm]

Pressure Range	A	B	C Ø	D R	Weight approx. [kg]	Order Code
0 to 10 bar	47.0	28.0	40.0	1/8	0.040	214-274
0 to 10 bar	52.0	30.0	50.0	1/4	0.052	214-275
0 to 4 bar	52.0	30.0	50.0	1/4	0.052	214-276
0 to 16 bar	52.0	30.0	50.0	1/4	0.052	214-277
0 to 4 bar	47.0	28.0	40.0	1/8	0.040	214-278
0 to 16 bar	47.0	28.0	40.0	1/8	0.040	214-279

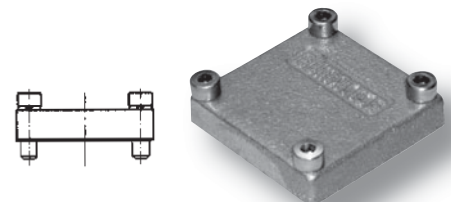
On request: Gauges with adjustable Scale and G-thread



Jumper Plate for Sandwich Pressure Regulator "RD/ND"

Description	Series	Weight approx. [kg]	Order Code
Jumper plate option "16P" or "16N"	ISO 1+ISO 2	0.035	239-363
Jumper plate option "16P" or "16N"	ISO 3	0.105	239-364

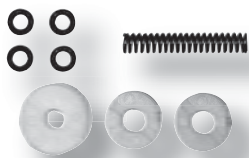
incl. bolts and gaskets



Without picture: Jumper Plate to Mount on Sandwich Pressure Regulator

Symbol	Description	Length	Width	Height	Weight approx. [kg]	Order Code
	Jumper plate, connecting "1" to "2" and "4" ISO 1 series	74.0	42.0	10.0	0.100	10.5267
	Jumper plate, connecting "1" to "2" and "4" ISO 2 series	90.0	50.0	10.0	0.130	10.6118
	Jumper plate, connecting "1" to "2" and "4" ISO 3 series	120.0	66.0	10.0	0.244	10.5826
	Jumper plate, connecting "2" to "3" and "4" to "5" ISO 1 series	65.0	40.0	12.0	0.100	10.6847
	Jumper plate, connecting "2" to "3" and "4" to "5" ISO 3 series	120.0	66.0	10.0	0.244	10.6065

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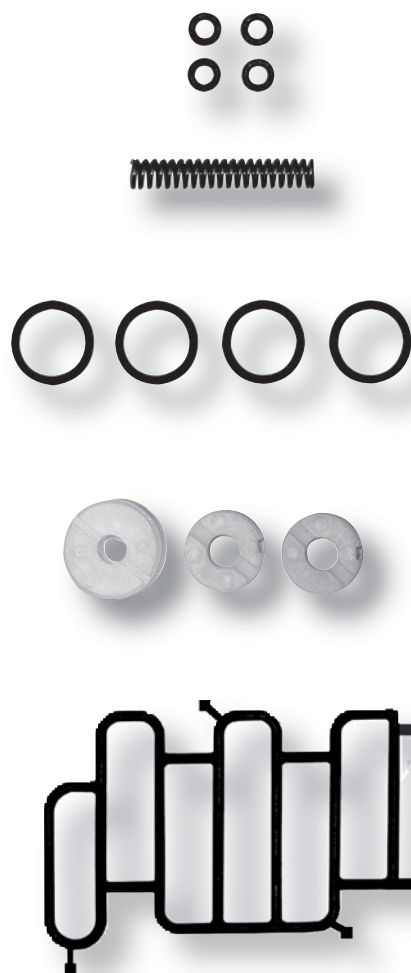


Sub-base Mounted Valves to ISO 5599/1



Accessories

Spare Part Kits for Valves



ISO 1; ISO 2 and ISO 3 Series

Valve Type	Order Code		
	ISO 1	ISO 2	ISO 3
BA4.. / ZA4.. PA4.. / JA4..	I1B-K1	I2B-K1	I3B-K1
BB4.. / ZZ4.. PP4.. / JJ4..	I1B-K2	I2B-K2	I3B-K2
BB5 / 6 / 7.. PP5 / 6 / 7.. / JJ5 / 6 / 7..	I1B-K3	I2B-K3	I3B-K3
BW4.. / ZW4..	I1B-K4	I2B-K4	I3B-K4
SA4..	I1S-K1	I2S-K1	I3S-K1
SS4..	I1S-K2	I2S-K2	I3S-K2
SS5 / 6 / 7..	I1S-K3	I2S-K3	I3S-K3

incl. Gasket, O-Rings, Spring or Bumper

ISO 1; ISO 2 and ISO 3 Compact Series

Valve Type	Order Code		
	ISO 1	ISO 2	ISO 3
BA4.. / ZA4.. PA4..	C1B-K1	C2B-K1	C3B-K1
BB4.. / ZZ4.. / PP4..	C1B-K2	C2B-K2	C3B-K2
BB5 / 6 / 7.. PP5 / 6 / 7..	C1B-K3	C2B-K3	C3B-K3
BW4.. / ZW4..	C1B-K4		

incl. Gasket, O-Rings, Spring or Bumper

Poppet Valves Series ISO 3

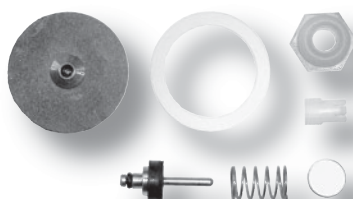
Valve Type	Order Code
	Series ISO 3
G34B...	G3B-K1
G34P...	G3P-K1

incl. O-Rings, gaskets, spring

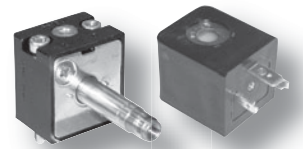
Slow-Start-Valve

Valve-Type	Order Code
P01794000...	40.7069

Spare Part Kits for Regulators



Series	Type	Order Code
ISO 1	I12RS... / I12RD...	229-640
ISO 2	I23RS... / I23RD...	229-640
ISO 3	I34RS... / I34RD...	< Nov. 2004 229-907
ISO 3	I34RS... / I34RD...	> Nov. 2004 239-2277
ISO 3	I34NS... / I34ND	239-2259



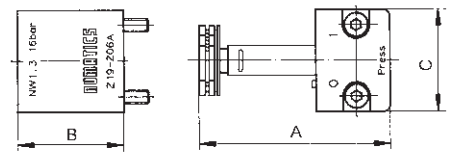
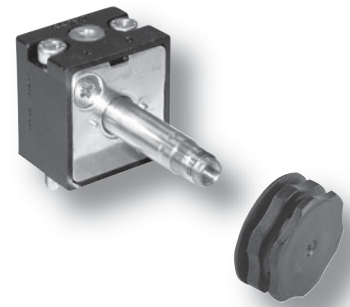
Accessories

Pilot Systems

Dimensions [mm]

Type	A	B	C	Weight approx. [kg]	Order Code
10 bar, without manual override	59.0	32.0	30.0	0.063	219-216
10 bar, non-locking manual override	59.0	32.0	30.0	0.063	219-217
10 bar, manual override push/locking	59.0	32.0	30.0	0.063	219-218
16 bar*, without manual override	59.0	32.0	30.0	0.063	219-219
16 bar*, non-locking manual override	59.0	32.0	30.0	0.063	219-220
16 bar*, manual override push/locking	59.0	32.0	30.0	0.063	219-221
16 bar*, non-locking manual override	59.0	32.0	30.0	0.063	219-489

* only available with 16 bar solenoid



Exhaust Protection Screw

Description	Weight approx. [gr]	Order Code
Exhaust protection screw for valve system	1.850	125-1027

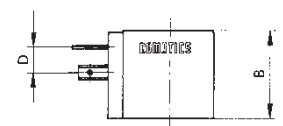
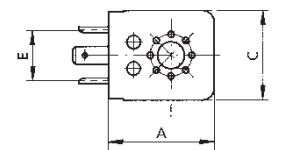
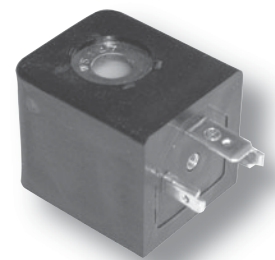


Plug-in Solenoids for Connector Sockets to DIN 43650, Form A, Type 30 mm

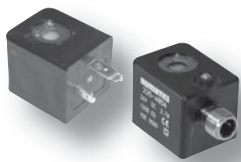
Dimensions [mm]

Voltage	A	B	C	D	E	Weight approx. [kg]	Order Code
10 bar, 2.7 W 24 VDC	35.5	30.0	30.0	9.0	18.8	0.10	225-354
10 bar, 5.2/3.9 VA 24 VAC, 50-60 Hz	35.5	30.0	30.0	9.0	18.8	0.10	228-772
10 bar, 4.8/3.6 VA 110 VAC, 50-60 Hz and 42/48/60 VDC, 2.5/3.4/5.3 W	35.5	30.0	30.0	9.0	18.8	0.10	228-773
10 bar, 4.9/3.7 VA 230 VAC, 50-60 Hz and 110 VDC, 3.9 W	35.5	30.0	30.0	9.0	18.8	0.10	228-774
16 bar*, 6.8 W 24 VDC and 48/42-V, 50-60 Hz, 9.9/7.1 VA	35.5	30.0	30.0	9.0	18.8	0.10	225-355
16 bar*, 10.8/7.6 VA 24 VAC, 50-60 Hz and 12 VDC, 7.8 W	35.5	30.0	30.0	9.0	18.8	0.10	228-775
16 bar*, 10.5/7.6 VA 110 VAC, 50-60 Hz and 48/60 VDC, 5.3/8.3 W	35.5	30.0	30.0	9.0	18.8	0.10	228-776
16 bar*, 10.5/7.6 VA 230 VAC, 50-60 Hz and 110 VDC, 6.3 W	35.5	30.0	30.0	9.0	18.8	0.10	228-777

* only available with 16 bar pilot system



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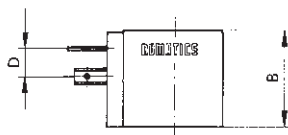
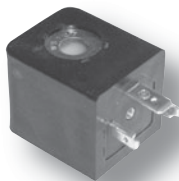
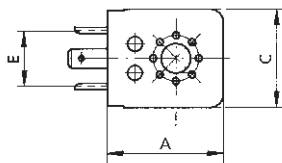


Sub-base Mounted Valves to ISO 5599/1

NUMATICS

Accessories

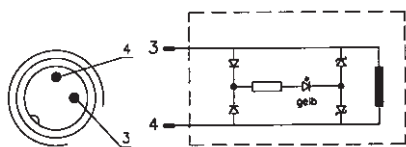
Solenoids to DIN EN 175301-803 (before DIN 43650) Form A, with UL- and CSA-Approval, Type 30 mm



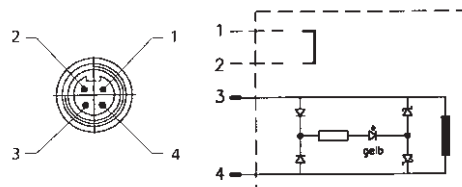
Dimensions [mm]

Voltage	A	B	C	D	E	Weight approx. [kg]	Order Code
10 bar, 2.7 W ; 24 VDC	35.5	30.0	30.0	9.0	18.8	0.10	225-480
10 bar, 4.9/3.6 VA; 110 VAC, 50-60 Hz	35.5	30.0	30.0	9.0	18.8	0.10	228-792

Solenoids to ISO 20401 with M12 Connector and LED or M12 DESINA Standard Connector and LED, Type 30 mm



2 Pin M12 Connector with LED



4 Pin M12 DESINA Standard connector with LED

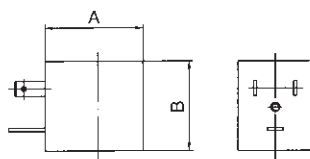


Dimensions [mm]

Description	Voltage	A	B	C	D	Weight approx. [kg]	Order Code
M12 connector with LED, 2 pins	10 bar, 24 VDC, 2.7 W	38.4	29.5	30.0	M12x1	0.110	225-485
M12 connector with LED, 2 pins	16 bar*, 24 VDC, 6.8W	38.4	29.5	30.0	M12x1	0.110	225-486
M12 connector DESINA standard, 4 pins	10 bar, 24 VDC, 2.7 W	38.4	29.5	30.0	M12x1	0.110	225-483
M12 connector DESINA standard, 4 pins	16 bar*, 24 VDC, 6.8 W	38.4	29.5	30.0	M12x1	0.110	225-484

* only available with 16 bar 3-port., 2-pos. function NO pilot system

Solenoids to Industrial Standard, Type 22 mm



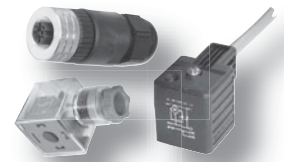
Dimensions [mm]

Voltage	A	B	C	Weight approx. [kg]	Order Code
10 bar, 24 VDC, 4.8 W	28.8	29,5	22.0	0.054	225-479
10 bar, 24 VAC, 50-60 Hz; 8.5/6.9 VA	28.8	29,5	22.0	0.054	228-794
10 bar, 110 VAC, 50-60 Hz; 8.5/6.9 VA	28.8	29,5	22.0	0.054	228-791
10 bar, 230 VAC, 50-60 Hz; 8.5/6.9 VA	28.8	29,5	22.0	0.054	228-790

Valves

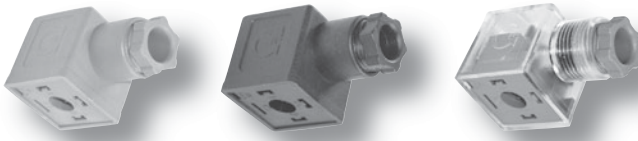
Drawing shows M12 connector with LED, 2 pins (same dimensions)

Subject to change without notice. Not liable for printing errors

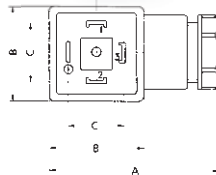


Accessories

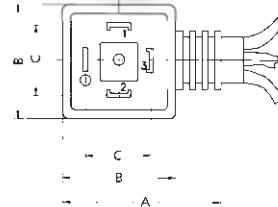
Connector Sockets to DIN EN 175301-803 (before DIN 43650) Form A



with PG 9 screw fitting cable for cable with Ø 6 to 8 mm



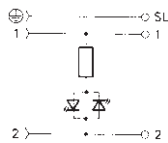
with 2-m-cable



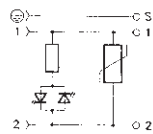
Technical Data and Dimensions [mm]

Nominal Voltage	Wiring Type	Diagram	Colour	Peak Cut-off Voltage	A	B	C	Weight approx. [kg]	Order Code
With PG 9 screw fitting cable									
Up to 250 V	—	—	grey	unlimited	49.0	28.0	18.0	0.02	230-592
Up to 250 V	—	—	black	unlimited	49.0	28.0	18.0	0.02	230-593
10-50 V	LED red	a	transparent	unlimited	49.0	28.0	18.0	0.02	230-582
10-30 V	LED red + Varistor	b	transparent	65 V	49.0	28.0	18.0	0.02	230-567
70-250 V	LED red	a	transparent	unlimited	49.0	28.0	18.0	0.02	230-584
70-250 V	LED red + Varistor	b	transparent	440 V	49.0	28.0	18.0	0.02	230-585
10-30 V	LED green + Varistor	b	transparent	65 V	49.0	28.0	18.0	0.02	230-587
10-50 V	LED green	a	transparent	unlimited	49.0	28.0	18.0	0.02	230-586
70-250 V	LED green	a	transparent	unlimited	49.0	28.0	18.0	0.02	230-588
70-250 V	LED green + Varistor	b	transparent	440 V	49.0	28.0	18.0	0.02	230-589
With 2-m-cable									
Up to 250 V	—	—	black	unlimited	44.0	27.5	18.0	0.20	230-412
24 V	LED yellow + Varistor	b	black	65 V	44.0	27.5	18.0	0.20	230-413
110 V	LED yellow + Varistor	c	black	260 V	44.0	27.5	18.0	0.20	230-414
230 V	LED yellow + Varistor	c	black	470 V	44.0	27.5	18.0	0.20	230-415

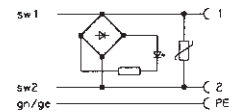
Circuit diagram „a“



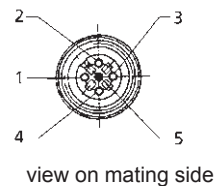
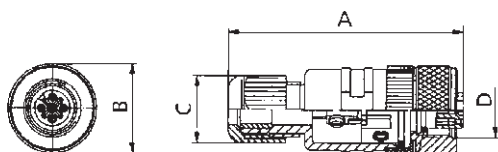
Circuit diagram „b“



Circuit diagram „c“



M12 Straight Female Connector



Dimensions [mm]

Description	A	B	C	D	Weight approx. [kg]	Order Code
M12 straight 5 pin female connector, without cable	52.5	20.0	SW19	M12x1	0.033	230-957

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Valves

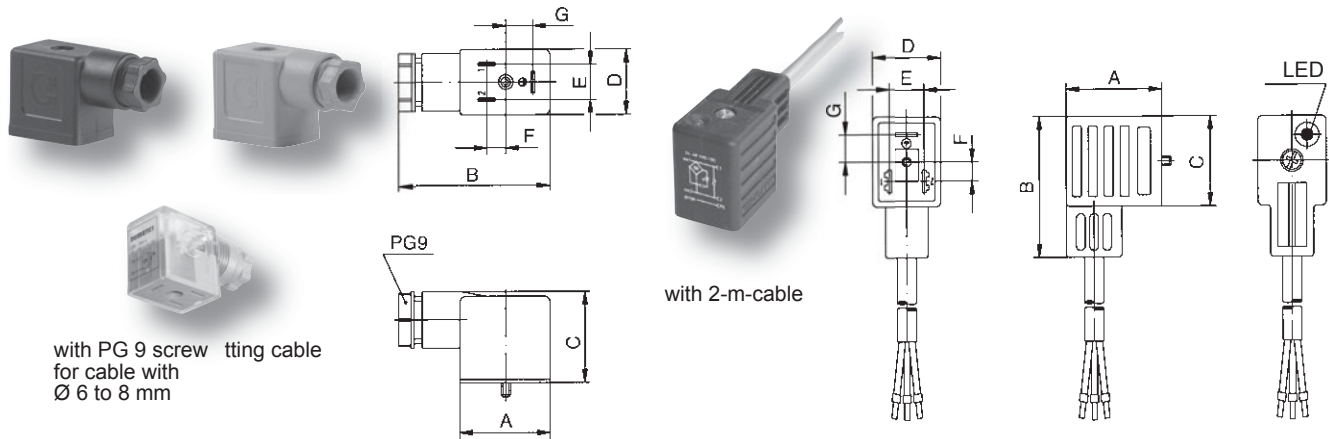


Sub-base Mounted Valves to ISO 5599/1

NUMATICS

Accessories

Connector Sockets, Type 22 mm, Industrial Standard



with PG 9 screw fitting cable for cable with Ø 6 to 8 mm

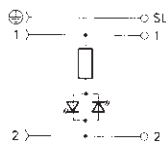
with 2-m-cable

Technical Data and Dimensions [mm]

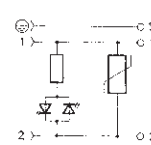
Nominal Voltage	Wiring Type	Colour Diagram	Peak cut-off Voltage	A	B	C	D	E	F	Weight approx. [kg]	Order Code		
With PG 9 screw fitting cable													
Up to 250 V	—	—	grey	unlimited	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-363
Up to 250 V	—	—	black	unlimited	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-364
10-50 V	LED red	a	translucent	unlimited	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-391
10-30 V	LED red + Varistor	b	translucent	65 V	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-392
70-250 V	LED red	a	translucent	unlimited	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-393
70-250 V	LED red + Varistor	b	translucent	440 V	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-394
10-30 V	LED green + Varistor	b	translucent	65 V	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-400
10-50 V	LED green	a	translucent	nicht begrenzt	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-401
70-250 V	LED green	a	translucent	unlimited	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-402
70-250 V	LED green + Varistor	b	translucent	440 V	28.3	49.0	28.7	20.8	12.0	7.0	9.4	0.020	230-403
with 2-m-Cable													
bis 250 V	—	—	black	unlimited	28.3	41.2	28.7	20.8	12.0	7.0	9.4	0.020	230-408
24 V	LED yellow + Varistor	b	black	65 V	28.3	41.2	28.7	20.8	12.0	7.0	9.4	0.020	230-409-xxm
110 V	LED yellow + Varistor	b	black	260 V	28.3	41.2	28.7	20.8	12.0	7.0	9.4	0.020	230-410
230 V	LED yellow + Varistor	b	black	470 V	28.3	41.2	28.7	20.8	12.0	7.0	9.4	0.020	230-411

xxm = add the required cable length in m (e. g. 230-409-05m), standard lengths: 2, 5 and 10 m

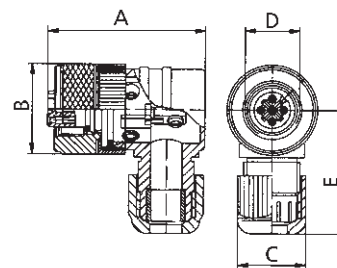
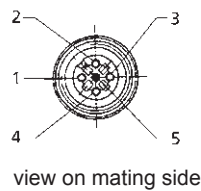
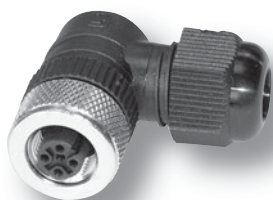
Circuit diagram „a“



Circuit diagram „b“

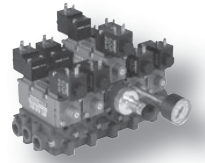


M12 Elbow Female Connector



Dimensions [mm]

Description	A	B	C	D	E	Weight approx. [kg]	Order Code
M12 elbow 5 pin female connector, without cable	35.0	20.0	SW19	M12x1	27.5	0.025	230-956



Technical Information

Completely Assembled Manifolds

All manifolds offer side and/or bottom cylinder ports.

These ports and the end plates are available with G-threads or NPTF-threads.

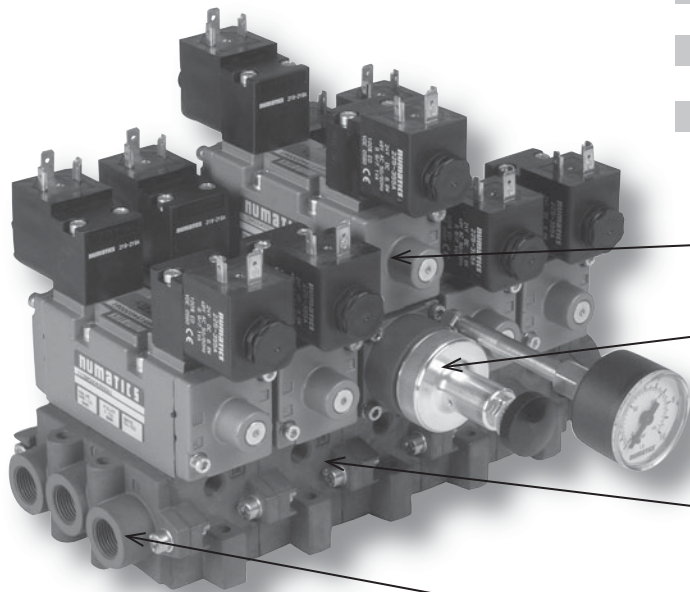
To order a completely assembled manifold, it is necessary to order the assembly kit and the valve or regulator required at each station. All kits are pre fixed **AKI**, followed by the valve series, a dash and the number of stations.

Put in "N" for NPTF-thread.

Select assembly kits from the following chart. A maximum of 12 stations is recommended.

How to order: (example)

AKI	1C	—	05	
Version	Valve Series		Number of Stations	Port Type
AKI = Completely assembled manifolds	1C = ISO 1 2D = ISO 2 3E = ISO 3		02 = 2 stations 03 = 3 stations 04 = 4 stations 05 = 5 stations 06 = 6 stations 07 = 7 stations 08 = 8 stations 09 = 9 stations 10 = 10 stations 11 = 11 stations 12 = 12 stations	= G-thread N = NPTF-thread



Solenoid Pilot Actuated
5-ported, 3-position Valve

Sandwich Pressure Regulator with Gauge

Manifold Block with Bottom Ports (form C)

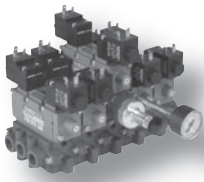
End Plates with Ports „1“, „3“ and „5“

Order example: AKI1C-05

Stations	Valve Position Code	Denomination
Station 1:	(1) I12BB51AG00061	1 BB-valve with manifold block form C
Station 2:	(1) I12BB51AG00061	1 BB-valve with manifold block form C
Station 3:	(1) I12BB500G00061	1 BB-valve without manifold block
	(1) I12RS11A0P00000	1 regulator with gauge and manifold block form C
Station 4:	(1) I12BB51AG00061	1 BB-valve with manifold block form C
Station 5:	(1) I12BB51AG00061	1 BB-valve with manifold block form C

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Valves



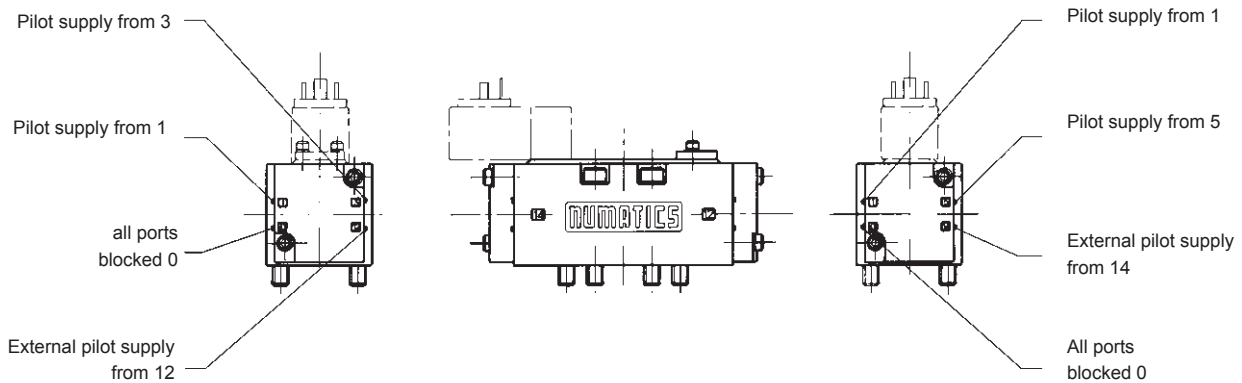
Sub-base Mounted Valves to ISO 5599/1



Technical Information

Conversion of Pilot Air Supply Pilot Plugging Arrangements (only for type ISO1 / ISO2 / ISO3-valves)

Air pilot actuated valves are shipped with external pilot supply to ports 12 and 14.
All solenoid pilot actuated valves are shipped with internal pilot supply from port 1. If supply air is piped to ports 3 and 5, or if external pilot supply is required, the valve must be converted (for example, if an RD regulator is used).
Conversion is simple - remove the end caps and position the gasket so that the tab points toward the appropriate port number, install end caps. Please refer to the chart and drawing below.



Pilot Supply Options

Gasket Tap Location

"14" End "12" End

Options	Gasket Tap Location	
	"14" End	"12" End
1. All air pilot actuated valves External pilot to ports 12 and 14	0	0
2. Single solenoid pilot actuated valves		
a. Internal supply from port 1	1	0
b. Internal supply from port 3	0	3
c. Internal supply from port 5	5	0
d. External pilot from port 14	14	0
e. External pilot from port 12	0	12
3. Double solenoid pilot actuated valves		
a. Internal supply from port 1	1	1
b. Internal supply from port 3	0	3
c. Internal supply from port 5	5	0
d. External pilot from port 14	14	0
e. External pilot from port 12	0	12

For use of RD-regulators, the pilot plugging arrangement is as described under b. and c.

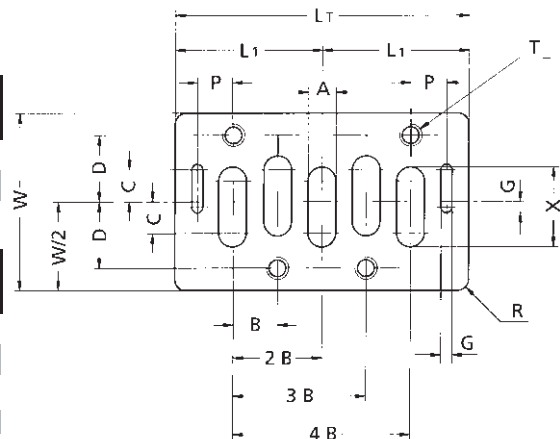
Interface to ISO 5599/1

Dimensions [mm]

Series	A	B	C	D	G ¹⁾	L ₁ min.	L _T min.	P
ISO 1	4.5	9.0	9.0	14.0	3.0	32.5	65.0	8.5
ISO 2	7.0	12.0	10.0	19.0	3.0	40.5	81.0	10.0
ISO 3	10.0	16.0	11.5	24.0	4.0	53.0	106.0	13.0

Series	R max.	T ²⁾	W	X	Y ³⁾	Cross-section Slots [mm ²]
ISO 1	2.5	M5x0.8	38.0	16.5	43.0	70.0
ISO 2	3.0	M6x1.0	50.0	22.0	56.0	143.0
ISO 3	4.0	M8x1.25	64.0	29.0	71.0	269.0

1) G is the minimum width of the slots
2) The thread depth is at least twice the nominal threaded diameter
3) Dimension Y is the distance between the centrelines of adjacent blocks.



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