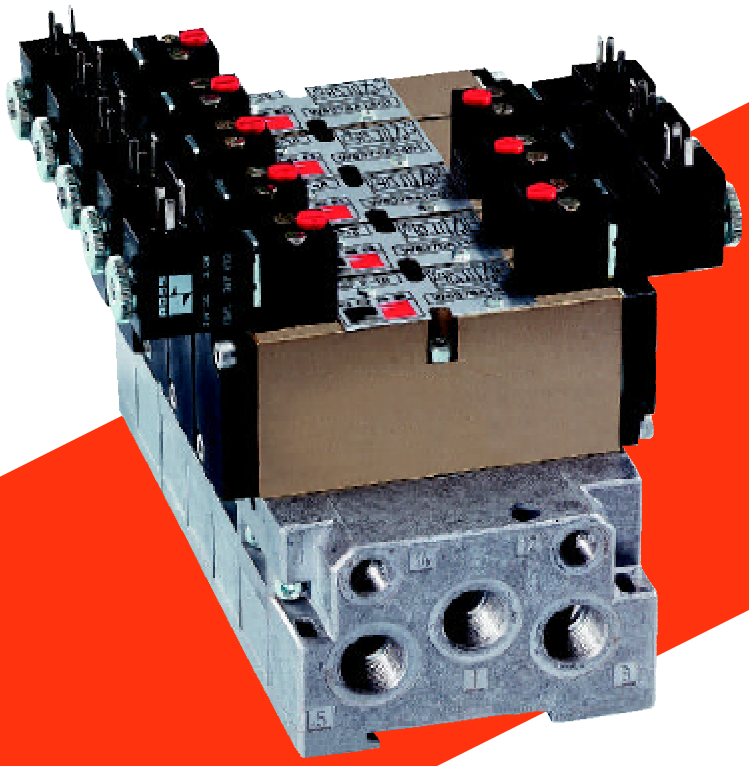
Bulletin E379

Series W63 Valves according to ISO/VDMA-Standard, Size 0



Premium Pneumatic Controls

ROSS®

ROSS' New Size 0 – Great Value in a Small Package

ROSS' new Series W63 valve is manufactured to the global VDMA 24563 standard interface, which is also proposed to be the new ISO Size 0 standard for valves in this flow and size range. The Series W63 design offers customers a globally-accepted pneumatic interface which is widely accepted throughout global industry. The goal of ROSS' design team was to maximize flow capability while minimizing the valve's physical dimensions as stated in the VDMA standard. The result is a valve with a flow coefficient of up to k_v=1,0 in a valve body only 26 mm wide. These features, coupled with long cycle life and virtually leak-free performance, result in big valve capabilities from a small valve.

High Flow – Compact Size

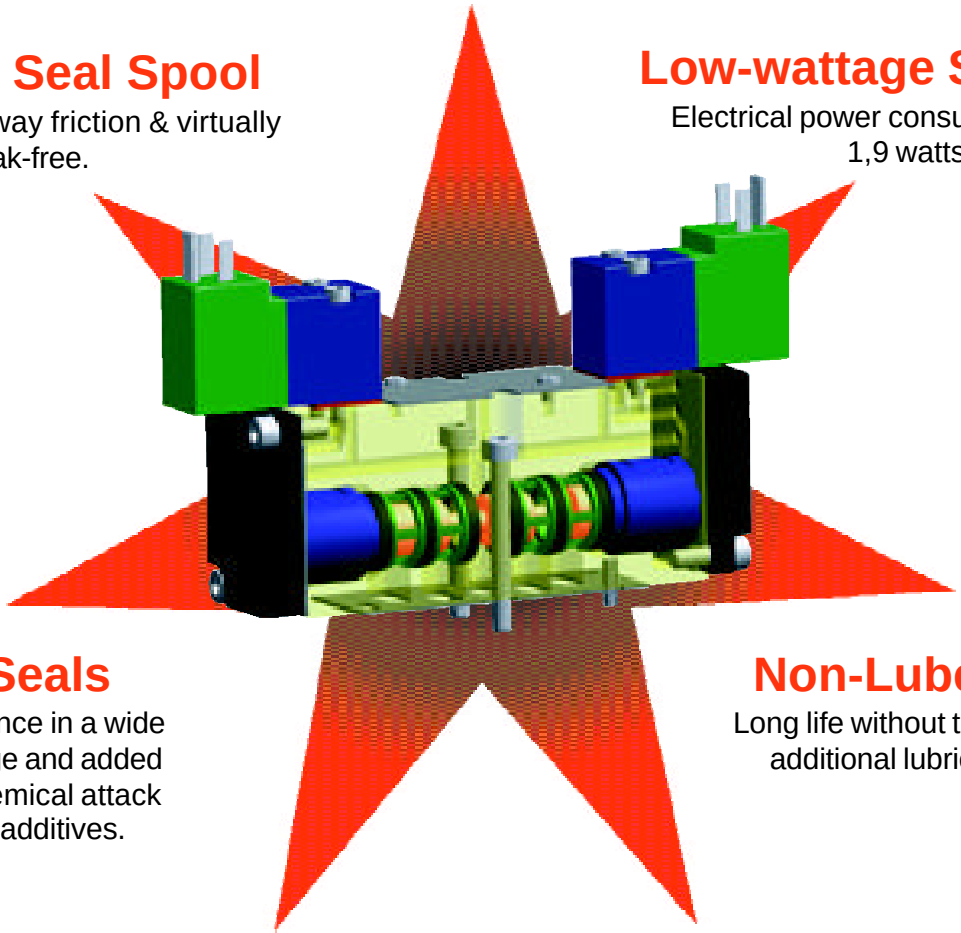
Amazing 1,0 k_v from a 26 mm wide valve. Downsize your package size without sacrificing performance.

Resilient Seal Spool

Minimal break away friction & virtually leak-free.

Low-wattage Solenoids

Electrical power consumption is only 1,9 watts.



Viton® Seals

Robust performance in a wide temperature range and added resistance to chemical attack from lubricant additives.

Non-Lube Service

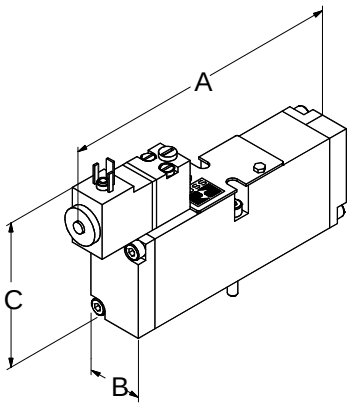
Long life without the expense of an additional lubrication system.

DIN Rail Mounting

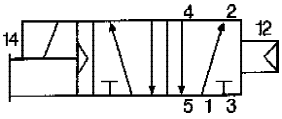
Manifolds mount easily in control panels on existing DIN rails.

Indicator Lights & Surge Suppressors

5/2 Single Solenoid Pilot Valves



5/2 Single Solenoid Pilot - Internal Air Return



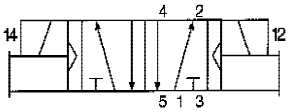
STANDARD SPECIFICATIONS
Solenoids: Rated for continuous duty.
Standard voltage 24 volts d.c.; 115 volts, 50/60 Hz; 230 volts, 50/60 Hz.
Power Consumption: 1,9 watts.
Ambient/Media Temperature: -5° to 50° C.
Flow Media: 5 micron filtered air.
Pressure: 2 to 10 bar.

Size	Avg. k_v	Valve Model Number	Dimensions - mm A	B	C	Weigh kg
0	1,0	W6376A1401	132	26	68	0,35

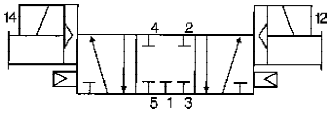
Bases & manifolds sold separately (See page 5).
See page 6 for valve response times and accessories.

5/2 & 5/3 Double Solenoid Pilot Valves

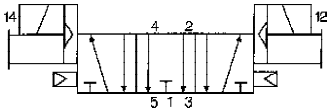
5/2 Double Solenoid Pilot

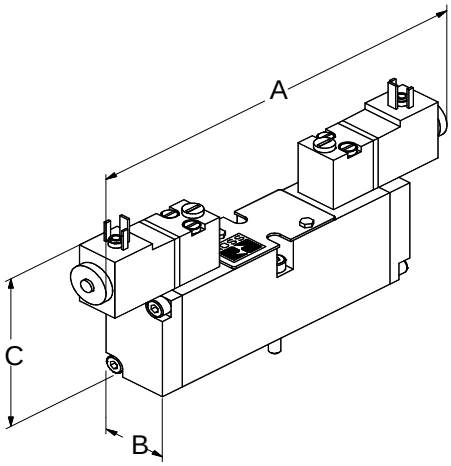


5/3 Closed Centre - Air Spring to Centre*



5/3 Open Centre - Air Spring to Centre**



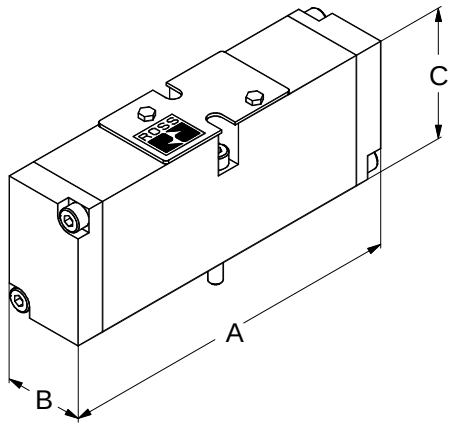


STANDARD SPECIFICATIONS
Solenoids: Rated for continuous duty.
Standard voltage 24 volts d.c.; 115 volts, 50/60 Hz; 230 volts, 50/60 Hz.
Power Consumption: 1,9 watts.
Ambient/Media Temperature: -5° to 50° C.
Flow Media: 5 micron filtered air.
Pressure: 2 to 10 bar.

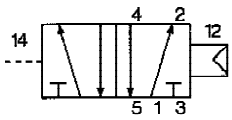
Size	Avg. k_v	Function	Valve Model Number	Dimensions - mm A	B	C	Weig kg
0	1,0	5/2	W6376A1407	152	26	68	0,4
0	0,8	5/3*	W6377A1401	152	26	68	0,4
0	0,8	5/3**	W6377A1407	152	26	68	0,4

Bases & manifolds sold separately (See page 5).
See page 6 for valve response times and accessories.

5/2 Single Pressure Control Valves



5/2 Single Remote Air Pilot - Internal Air Return



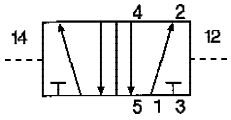
STANDARD SPECIFICATIONS
Ambient/Media Temperature: -5° to 100° C.
Flow Media: 5 micron filtered air.
Pressure: 2 to 10 bar.
Pilot Pressure: Must be equal to or greater than inlet pressure.

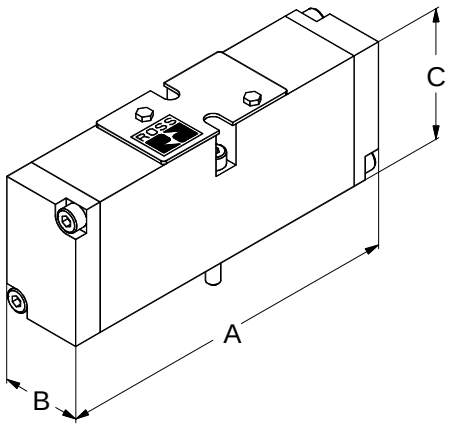
Size	Avg. k_v	Valve Model Number	Dimensions - mm A	B	C	Weight kg
0	1,0	W6356A1411	117	26	42	0,3

Bases & manifolds sold separately (See page 5).
See page 6 for valve response times and accessories.

5/2 Double Pressure Control Valves

5/2 Double Remote Air Pilot



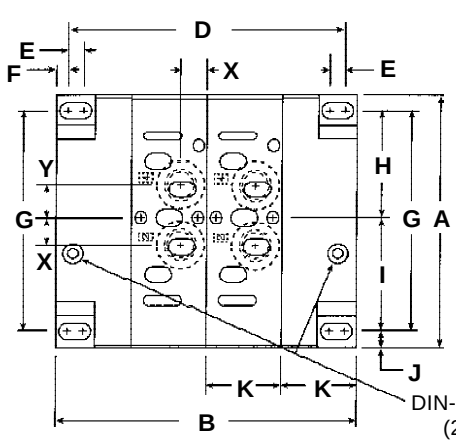


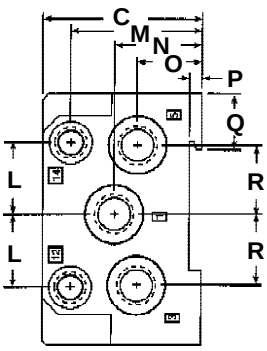
STANDARD SPECIFICATIONS
Ambient/Media Temperature: -5° to 100° C.
Flow Media: 5 micron filtered air.
Pressure: 2 to 10 bar.
Pilot Pressure: Must be equal to or greater than inlet pressure.

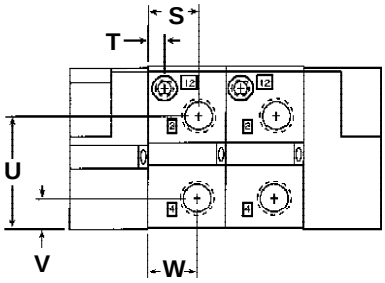
Size	Avg. k_v	Valve Model Number	Dimensions - mm A	B	C	Weight kg
0	1,0	W6356A1417	107	26	42	0,3

Bases & manifolds sold separately (See page 5).
See page 6 for valve response times and accessories.

Sub-Bases and Manifolds







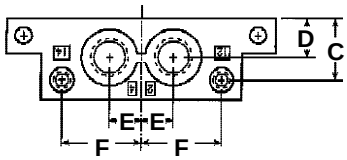
DIMENSIONS - mm

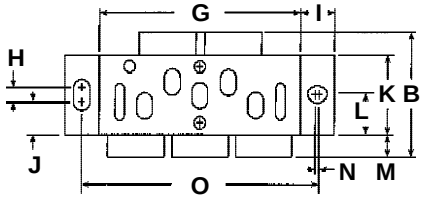
A	90	**N**	31
B	108	**O**	23
C	55	**P**	5
D	100	**Q**	20
E	5	**R**	25
F	5	**S**	18
G	78	**T**	5
H	39	**U**	39
I	39	**V**	11
J	8	**W**	17
K	27	**X**	10
L	26	**Y**	12
M	47		

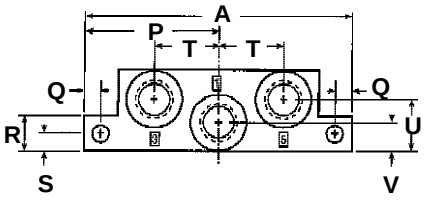
MANIFOLDS

	Manifold Numbers	Port Sizes 1, 3, 5	2, 4	12, 14	Weight kg
End Ported with Pilot Ports 12, 14	1145C91	-	1/4 NPTF	M5	0,2
	D1145C91	-	G 1/4	M5	0,2
End Ported with Pilot Ports 12, 14, with Hose Fittings 2, 4	D1209C91	-	10/8	M 5	0,2
End Ported without Pilot Ports 12, 14	1147C91	-	1/4 NPTF	-	0,2
	D1147C91	-	G 1/4	-	0,2
End Ported without Pilot Ports 12, 14, with Hose Fittings 2, 4	D1210C91	-	10/8	-	0,2
Bottom Ported with Pilot Ports 12, 14	1146C91	-	1/4 NPTF	M5	0,2
	D1146C91	-	G 1/4	M5	0,2
Bottom Ported without Pilot Ports 12, 14	1148C91	-	1/4 NPTF	-	0,2
	D1148C91	-	G 1/4	-	0,2
End Station Kit*	519B86	3/8 NPTF	-	1/8 NPTF	0,3
	D519B86	G 3/8	-	G 1/8	0,3

*an end station kit must be ordered separately for each manifold installation.







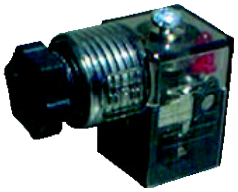
DIMENSIONS - mm

A	92	**L**	14
B	42	**M**	8
C	21	**N**	1
D	14	**O**	81
E	11	**P**	46
F	28	**Q**	6
G	69	**R**	12
H	5	**S**	6
I	12	**T**	22
J	11	**U**	18
K	27	**V**	10

SUB-BASES

Sub-Base Numbers	Port Sizes 1, 2, 4	3, 5	12, 14	Weight kg
1144C91	1/4 NPTF	1/4 NPTF	M5	0,1
D1144C91	G 1/4	G 1/4	M5	0,1

Accessories and Response Times



• **Built-in surge suppressors**

Connectors for use with Dropcords

Electrical connectors are required to connect the valve solenoids to the dropcords supplying electrical power. Each connector can be oriented so that the cord can exit in any one of four directions: outboard, inboard, and to the right or left of the valve centerline. Includes a strain relief nut, that accepts a 5-mm diameter cord, a gasket and a mounting screw.

Connector Type	Part Number
For use with dropcord (cord not included)	**1604K77****
Wired with 5-mm diameter cord (Cord length - 2 meters)	**1605K77****

****Specify solenoid voltage.**

Wired Connectors

Connectors have a 2 meters cord with three 20-gauge conductors. Cord exits outboard. Insulation is water, oil, and abrasion resistant. Connectors are available with 5-mm diameter cords. Includes gasket and mounting screw.

Blocking Disks for Inlet/Exhaust Ports

Ports 1, 3, and 5, between manifold stations, can be closed with blocking disks which are available in kits of three disks. **1600K77**

Blocking Disks for Control Ports

Ports 12 and 14, between manifold stations, can be closed with blocking disks which are available in kits of two disks. **1601K77**

Blank Station Kit

A blank station plate is used to cover the top of a manifold station that is not in use. A kit consists of a metal plate 10 mm thick, a gasket, and mounting bolts. **1602K77**

DIN Rail Mounting Kit

A cam assembly is used to mount a manifold assembly (through the end-station plates) to a DIN rail. A kit consists of two cam assemblies (rail not included). **1603K77**

VALVE RESPONSE TIME

Valve Model	Average Response Constants M	F (In-Out)	F (Out-Exh.)
W6376A1401	64	4,9	5,2
W6376A1407	43	3,1	5,4
W6356A1411	64	4,9	5,2
W6356A1417	43	3,1	5,4
W6377A1401	38	5,2	5,7
W6377A1407	48	7,1	8,6

Valve response time (msec) = M + (F • V ÷ 16,4). This is the average time required to fill volume V (cm^3) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M is the parts movement time in milliseconds and is measured from the time of signal application (or removal when de-actuating) to the point at which steady flow is established. F values represent the average number of milliseconds required to fill or exhaust one cm^3 of volume V. M and F values are shown in the chart at left and will be valid for any supply pressure from 3,5 to 10 bar.

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WARRANTY AND CAUTIONS

Standard ROSS warranty and cautions apply. For further information call ROSS EUROPA or your nearest ROSS representative.

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