

AIR PREPARATION PRESSURE REGULATORS



ROSS CONTROLS

PRESSURE REGULATORS – KEY FEATURES

- Two design options available: Piston design for highest air flow Diaphragm design for high sensitivity and quick response
- Modular or In-line Mounting options
- Pressure Gauge included
- Removable Adjusting Knob for tamper resistance
- Self-relieving or non-relieving options
- Reverse Flow option available on some regulator models
- T-Handle option available on some regulator models

			AVA		BLE	POR	TSI	ZES			MOUN	NTING	FLOW	CONSTR	RUCTION		OF	στιο	NS		
REGULATOR TYPE/SERIES	1/8	1/4	3/8	1/2	3/4	1	1¼	1½	2	3	IN-LINE	MODULAR	MAX FLOW (scfm)	PISTON	DIAPHRAGM	SELF RELIEVING	NON RELIEVING	REVERSE FLOW	T-HANDLE	LOCKING KNOB	Page
STANDARD REGU	LATC	ORS																			
RIGHT-ANGLE													55								G2.3
BANTAM													23								G2.4
MINIATURE													40								G2.5
MID-SIZE													100								G2.6
MD3™													120								G2.7
FULL-SIZE													155								G2.8
MD4™													220								G2.9
HIGH-CAPACITY													800								G2.10
HIGH-PRESSURE	REG	ULA	TOR	s																	
HIGH-PRESSURE													70								G2.11
PRECISION REGU	LATC	ORS																			
MINIATURE													4								G2.12
FULL-SIZE													155								G2.13
MD4™													170								G2.14
HIGH-CAPACITY													800								G2.15
REMOTE PILOT RI	EGUI	ATC	RS																		
FULL-SIZE													155								G2.16 - G2.18
MD4™													190								G2.19
HIGH-CAPACITY													4000								G2.20 - G2.23
RELIEF VALVES																					
MINIATURE													40								G2.24
HIGH-FLOW													450								G2.25
PROPORTIONAL V		ES																			
RER Series													1000								G2.26
RB-RER Series													4000								G2.27

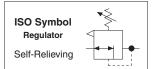


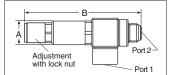
Port Sizes: 1/8, 1/4, 3/8 & 1/2 - Flow to 55 scfm

	Models with Threaded Banjo									
Port	Port Size		Model	Dimer inches	Tightening Torque					
Port 1 (female threads)	Port 2 (male threads)	Threads	Number	А	В	Max. Ft-lb (Nm)				
1/8	1/8	NPT	5214A1010	0.7 (17)	2.9 (74)	7.38 (10)				
1/4	1/4	NPT	5214A2010	0.7 (17)	3.2 (81)	8.85 (12)				
3/8	3/8	NPT	5214A3010	0.9 (22)	3.5 (88)	14.75 (20)				
1/2	1/2	NPT	5214A4010	1.1 (27)	3.5 (89)	22.13 (30)				
1/8	1/8	G	D5214A1010	0.7 (17)	2.9 (74)	11.06 (15)				
1/4	1/4	G	D5214A2010	0.7 (17)	3.2 (81)	14.75 (20)				
3/8	3/8	G	D5214A3010	0.9 (22)	3.5 (88)	22.13 (20)				
1/2	1/2	G	D5214A4010	1.1 (27)	3.5 (89)	22.50 (30)				

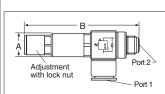


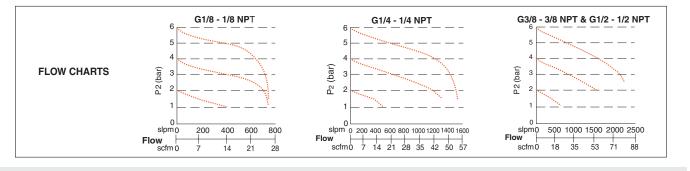
RIGHT-ANGLE Series





	Models with Push-to-Connect Fitting								
Por	t Size	Valve Model		n sions s (mm)	Tightening				
Port 1 [#] (tube size)	Port 2** (thread size)	Number	Α	В	Torque Max. Ft-lb (Nm)				
1/4"	1/8 NPT	5214A1120	0.7 (17)	2.9 (73)	11.06 (15)				
1/4"	1/4 NPT	5214A2120	0.7 (17)	3.2 (81)	14.75 (20)				
3/8"	1/4 NPT	5214A2130	0.7 (17)	3.2 (81)	14.75 (20)				
3/8"	3/8 NPT	5214A3130	0.9 (22)	3.5 (88)	22.13 (30)				
4 mm	1/8 G	D5214A1140	0.5 (13)	2.9 (73)	7.38 (10)				
6 mm	1/8 G	D5214A1160	0.5 (13)	2.9 (73)	7.38 (10)				
8 mm	1/8 G	D5214A1180	0.5 (13)	2.9 (73)	7.38 (10)				
6 mm	1/4 G	D5214A2160	0.7 (17)	3.2 (81)	8.85 (12)				
8 mm	1/4 G	D5214A2180	0.7 (17)	3.2 (81)	8.85 (12)				
10 mm	1/4 G	D5214A2110	0.7 (17)	3.2 (81)	8.85 (12)				
8 mm	3/8 G	D5214A3180	0.9 (22)	3.5 (88)	14.75 (20)				
10 mm	3/8 G	D5214A3110	0.9 (22)	3.5 (88)	14.75 (20)				
# Port 1 tubi	ng size in inch	es (") or millimet	ters (mm).	** Port 2 thr	eads are male.				





STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Self-relieving	Operating Pressure	15 to 240 psig (1 to 17 bar)
Temperature	Ambient/Media: 15° to 160°F (-10° to 70°C)		Regulated Pressure Range: 15 to 120 psig (1 to 8 bar).
Fluid Media	Filtered air	Construction Material	Bowl: Metal



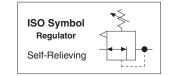
Modular Regulators

BANTAM Series

Port Sizes: 1/8, 1/4 & 3/8 - Flow to 23 scfm

		Piston			Diaphragm			
		Model Number		Model Number				
Port Size	Regula	ted Pressure ps	ig (bar)	Regulated Pressure pa		ig (bar)		
	0-50 (0-3.4)	0-100 (0-6.9)	0-125 (0-8.6)	0-50 (0-3.4)	0-100 (0-6.9)	0-125 (0-8.6)		
With THRE	ADED PORTS							
1/8 NPTF	5B01C0030	5B01C0010	5B01C0050	5B01C0040	5B01C0020	5B01C0060		
1/8 G	C5B01C0030	C5B01C0010	C5B01C0050	C5B01C0040	C5B01C0020	C5B01C0060		
1/4 NPTF	5B02C0030	5B02C0010	5B02C0050	5B02C0040	5B02C0020	5B02C0060		
1/4 G	C5B02C0030	C5B02C0010	C5B02C0050	C5B02C0040	C5B02C0020	C5B02C0060		
With Quick	Connect TUBE	FITTINGS						
1/4	5B03C0030	5B03C0010	5B03C0050	5B03C0040	5B03C0020	5B03C0060		
3/8	5B04C0030	5B04C0010	5B04C0050	5B04C0040	5B04C0020	5B04C0060		
4mm	5B05C0030	5B05C0010	5B05C0050	5B05C0040	5B05C0020	5B05C0060		
6mm	5B06C0030	5B06C0010	5B06C0050	5B06C0040	5B06C0020	5B06C0060		
8mm	5B07C0030	5B07C0010	5B07C0050	5B07C0040	5B07C0020	5B07C0060		
10mm	5B08C0030	5B08C0010	5B08C0050	5B08C0040	5B08C0020	5B08C0060		





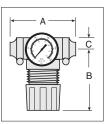
Port Size		Dimensions inches (mm)					
Port Size	Α	В	С	Depth*	lb (kg)		
No Port	1.7 (43)	2.6 (67)	0.5 (13)	1.8 (45)	0.21 (0.09)		
1/8, 1/4 (NPT or G)	3.0 (76)	2.6 (67)	0.5 (13)	1.8 (45)	0.43 (0.19)		
Models below have quick-connect tube fittings.							
1/4	3.4 (86)	2.6 (67)	0.5 (13)	1.8 (45)	0.21 (0.09)		
3/8	3.9 (99)	2.6 (67)	0.5 (13)	1.8 (45)	0.21 (0.09)		
4 mm	3.4 (86)	2.6 (67)	0.5 (13)	1.8 (45)	0.41 (0.18)		
6 mm	3.4 (86)	2.6 (67)	0.5 (13)	1.8 (45)	0.41 (0.18)		
8 mm	3.1 (79)	2.6 (67)	0.5 (13)	1.8 (45)	0.41 (0.18)		

2.6 (67)

0.5 (13)

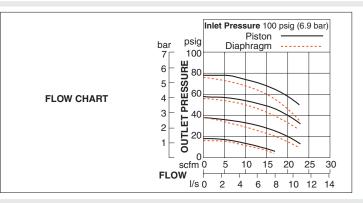
1.8 (45)

3.9 (99)



* Less gauge.

10 mm



0.41 (0.18)

Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Piston or Diaphragm Self-relieving; For non-relieving option consult ROSS.	Pressure Gauge	0 to 160 psig (0 to 11 bar); 1/8 gauge ports front and rear
		Panel Mounting	1-3/16 inch (30 mm) hole required
Fluid Media	Compressed air		Body: Acetal
0 II D	Inlet: Maximum 150 psig (10 bar)	Construction Material	Dome and Knob: Acetal
Unorating Proceitro	Outlet: Adjustable up to 100 psig (7 bar)		Seals: Nitrile



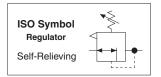
MINIATURE Series

In-line Regulators

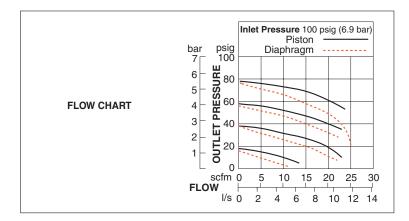


Port Sizes: 1/8 & 1/4 – Flow to 40 s

			Piston		Diaphragm				
Port Port			Model Number		Model Number				
Size	Threads	Regula	ited Pressure ps	ig (bar)	Regula	ated Pressure ps	ig (bar)		
		0-50 (0-3.4)	0-100 (0-6.9)	0-125 (0-8.6)	0-50 (0-3.4)	0-100 (0-6.9)	0-125 (0-8.6)		
1/0	NPTF	5212C1004	5211C1004	5213C1004	5212C1005	5211C1005	5213C1005		
1/8	G	C5212C1004	C5211C1004	C5213C1004	C5212C1005	C5211C1005	C5213C1005		
1/4	NPTF	5212C2004	5211C2004	5213C2004	5212C2005	5211C2005	5213C2005		
1/4	G	C5212C2004	C5211C2004	C5213C2004	C5212C2005	C5211C2005	C5213C2005		



Port Size	C	Dimensions inches (mm)						
	Α	В	С	Depth*	lb (kg)			
1/8, 1/4	1.6 (41)	2.7 (68)	0.4 (10)	1.6 (41)	0.24 (0.11)			
* Less gauge.								



B

Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

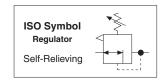
STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Piston or Diaphragm Self-relieving; For non-relieving option consult ROSS.		0 to 160 psig (0 to 11 bar); 1/8 gauge ports front and rear		
	Ambient/Media: 40° to 125°F (4° to 52°C)	Panel Mounting	1-3/16 inch (30 mm) hole required		
Fluid Media	Compressed air		Body: Aluminum		
a a lr	Inlet: Maximum 300 psig (21 bar)	Construction Material	Dome and Knob: Acetal		
	Outlet: Adjustable up to 100 psig (7 bar)		Seals: Nitrile		



Modular Regulators

MID-SIZE Series



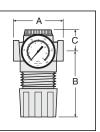
Port Sizes: 1/4, 3/8 & 1/2 – Flow to 100 scfm

			Pressure Range psig (bar)					
Port Size	0-50 (0-3.4)	0-100	(0-6.9)	0-150 (0-10.3)			
Port Size	Model I	Number	Model I	Number	Model I	Number		
	NPTF Threads	G Threads	NPTF Threads	G Threads	NPTF Threads	G Threads		
1/4	5212B2015	C5212B2015	5211B2015	C5211B2015	5213B2015	C5213B2015		
3/8	5212B3015	C5212B3015	5211B3015	C5211B3015	5213B3015	C5213B3015		
1/2	5212B4015	C5212B4015	5211B4015	C5211B4015	5213B4015	C5213B4015		

	REGULATORS with REVERSE FLOW						
			Pressure A	Adjustment			
Port Size	Regulated Pressure Range	Kn	ob	T-Handle			
FULL SIZE	psig (bar)	Model N	Model Numbers		lumbers		
		NPTF Threads	BSPP Threads	NPTF Threads	BSPP Threads		
1/4	0-100 (0-6.9)	5X00B2035	C5X00B2035	5X00B2039	C5X00B2039		
3/8	0-100 (0-6.9)	5X00B3024	C5X00B3024	5X00B3021	C5X00B3021		
1/2	0-100 (0-6.9)	5X00B4023	C5X00B4023	5X00B4041	C5X00B4041		

Port Size		Weight*			
	Α	В	С	Depth*	lb (kg)
1/4, 3/8, 1/2	2.7 (68)	3.3 (83)	1.3 (33)	2.1 (52)	1.0 (0.46)
*Less gauge.					

Reverse-Flow Regulators provide regulated in-to-out pressure control, plus quick exhausting from out-to-in. Used for downstream pressure regulation of weld guns and other applications requiring quick exhausting through the regulator.



FLOW CHART

Inlet Pressure 100 psig (6.9 bar) bar 7⊺ psig 100 1/4 3/8 1/2 **OUTLET PRESSURE** 6 5 80 60 4 3 2 40 20 1 0 scfm 0 40 60 80 100 120 20 FLOW 8 16 24 32 40 48 56 l/s 0

Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

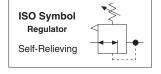
Construction Design	Piston or Diaphragm Self-relieving; For non-relieving option consult ROSS.	Panel Mounting	1-9/16 inch (40 mm) hole required
	Ambient/Media: 40° to 125°F (4° to 52°C)		Body: Zinc
Fluid Media	Compressed air		Cap: Nylon
	Inlet: Maximum 250 psig (17 bar) Outlet: Adjustable up to 150 psig (10 bar)		Dome: Acetal Knob: Acetal
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear		Seals: Nitrile



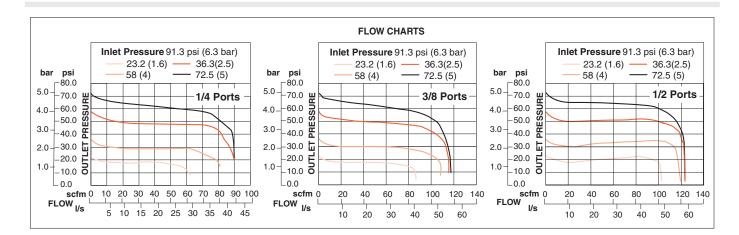
MD3[™] Series

Port Sizes: 1/4, 3/8 & 1/2 - Flow to 120 scfm Choose your options (in red) to configure your model number. MD3 52K 2 Α Α R С 2 ADJUSTMENT TYPE PIPE SIZE GAUGE 1/4 NPTF 2 Knob 52K Without Gauge A 3/8 NPTF 3 Gauge 0-200 psig (0-13.8 bar) В Tee Handle 52T 1/2 NPTF 4 Locking Knob 52L Gauge 0-60 psig (0-4.1 bar) С 1/4 G В D Without Gauge, with Panel Mount Nut С 3/8 G ADJUSTMENT RANGE Gauge 0-200 psig (0-13.8 bar), with Panel Mount Nut Е D 1/2 G 0-200 psig (0-13.8 bar) A Gauge 0-60 psig (0-4.1 bar), with Panel Mount Nut F 0-150 psig (0-10.3 bar) В FLOW OPTIONS 0-100 psig (0-6.9 bar) С **Reverse Flow** R 0-50 psig (0-3.4 bar) D S Standard Flow





Port Size		Dimensions	Weight†			
	Α	B*	C**	Depth [†]	lb (kg)	
1/4, 3/8, 1/2, 3/4	3.0 (76.2)	4.52 (114.9)	1.46 (37)	2.51 (63.8)	1.9 (0.86)	
* Dome removal clearance: add 0.575 (14.6). **Cap removal clearance: add 0.750 (19.1). † Less gauge.						



Accessories ordered separately, refer to page G6.3-5.

STANDARD SPECIFICATIONS (for regulators on this page):

	Diaphragm Self-relieving; For non-relieving option consult ROSS.	Panel Mounting	2-1/16 inch (52 mm) hole required
	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Zinc
Fluid Media	Compressed air		Dome: Nylon
	Inlet: Maximum 300 psig (21 bar)	Construction Material	Knob: Acetal
	Outlet: Adjustable up to 200 psig (14 bar); optional adjusting		Seals: Nitrile
	springs.		Valve: Brass
Optional Pressure Adjustment	Locking Key: Removable		Valve Cap: Nylon
	0-200 psig (0-14 bar) or 0-60 psig (0-4 bar); 1/4-NPT gauge ports front and rear		



FULL-SIZE Series

Port Sizes: 1/4, 3/8, 1/2 & 3/4 - Flow to 155 scfm

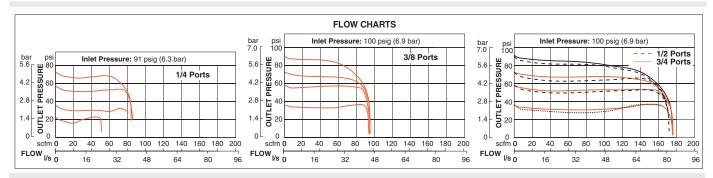
			Pressure R				
Port	0-50 (0-3.4) Model Number		0-125	6 (0-8.6)	0-175 (0-12.1)		
Size			Model Number		Model Number		
	NPTF Threads	G Threads	NPTF Threads	G Threads	NPTF Threads	G Threads	
1/4	5212B2017	C5212B2017	5211B2017	C5211B2017	5213B2017	C5213B2017	
3/8	5212B3017	C5212B3017	5211B3017	C5211B3017	5213B3017	C5213B3017	
1/2	5212B4017	C5212B4017	5211B4017	C5211B4017	5213B4017	C5213B4017	
3/4	5212B5027	C5212B5027	5211B5027	C5211B5027	5213B5027	C5213B5027	

REGULATORS with REVERSE FLOW						
		Pressure Adjustn	nent 0-125 (0-8.6))		
Port Size	Kn	ob	T-Handle			
Port Size	Model I	Number	Model Number			
	NPT Threads	G Threads	NPT Threads	G Threads		
1/4	5X00B2010	C5X00B2010	-	_		
3/8	5X00B3004	C5X00B3004	5X00B3012	C5X00B3012		
1/2	5X00B4004	C5X00B4004	5X00B4047	C5X00B4047		
3/4	5X00B5034	C5X00B5034	5X00B5044	C5X00B5044		

Port Size	Di	imensions	Weight <mark>†</mark>	A		
1 011 0120	Α	B**	C***	Depth [†]	lb (kg)	$\Box \oslash$
1/4, 3/8, 1/2, 3/4	3.5 (89)	5.8 (146)	1.3 (33)	2.8 (71)	2.06 (0.92)	
** Dome removal clearance: add 0.63 (16).						

*** Cap removal clearance: add 0.5 (13).

+ Less gauge.

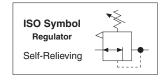


Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

	Diaphragm Self-relieving; For non-relieving option consult ROSS.	Panel Mounting	2-1/16 inch (52 mm) hole required
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Zinc
Fluid Media	Compressed air		Dome: Nylon; aluminum with optional 0 to 175 psig (0 to 12 bar) spring
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable up to 175 psig (12 bar); optional adjusting	Construction Material	Knob: Acetal
operating ressure	springs.		Seals: Nitrile
Optional Pressure Adjustment	Locking Key: Removable		Valve: Brass
Pressure Gauge	0-200 psig (0-14 bar); 1/4-NPT gauge ports front and rear		Valve Cap: Nylon





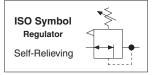


MD4[™] Series

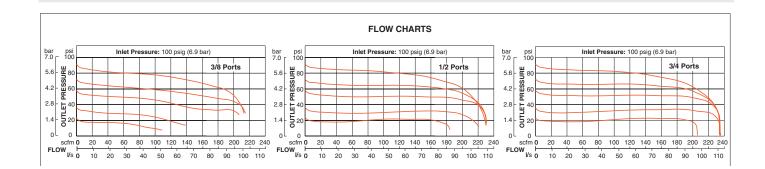
Port Sizes: 3/8, 1/2 & 3/4 – Flow to 220 scfm **HOW TO ORDER** Choose your options (in red) to configure your model number. MD4 **52K** S 5 2 В Α Β **ADJUSTMENT TYPE PIPE SIZE** (3/8 NPTF 3 Knob 52K W 1/2 NPTF 4 52T Ga Ga W Ga Tee Handle 3/4 NPTF 5 ADJUSTMENT RANGE 3/8 G С 1/2 G D 0-175 psig (0-12.1 bar) A 3/4 G Е 0-125 psig (0-8.6 bar) В Gá 0-50 psig (0-3.4 bar) С **CAP COLOR** FLOW OPTIONS D 0-20 psig (0-1.4 bar) Black 2 **Reverse Flow** R Y Standard Flow S Yellow

GAUGE	
Vithout Gauge	А
auge 0-200 psig (0-13.8 bar)	B
auge 0-60 psig (0-4.1 bar)	С
Vithout Gauge, with Panel Mount Nut	D
auge 0-200 psig (0-13.8 bar), with Panel Mount Nut	Е
auge 0-60 psig (0-4.1 bar), with Panel Mount Nut	F





Port		Dimensions inches (mm)						
Size	A B*		Size A		C**	Depth †	lb (kg)	A
3/8, 1/2, 3/4	3.5 (87)	5.6 (142)	1.6 (40)	2.9 (73)	2.56 (1.16)			
*Dome remov **Cap remova † Dimensions		B B						



Accessories ordered separately, refer to page G6.3-5.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving; For non-relieving option consult ROSS.	Panel Mounting	2-1/16 inch (52 mm) hole required	
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Zinc	
Fluid Media	Compressed air		Dome: Nylon; aluminum with optional 0 to 175 psig (0 to 12 bar) spring	
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable up to 175 psig (12 bar); optional adjusting	Construction Material	Knob: Acetal	
operating ressure	springs.		Seals: Nitrile	
Optional Pressure Adjustment	Locking Key: Removable		Valve: Brass Valve Cap: Nylon	
Pressure Gauge	0-200 psig (0-14 bar); 1/4-NPT gauge ports front and rear		valve cap. Nylon	



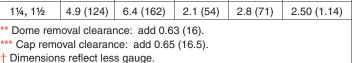
HIGH-CAPACITY Series

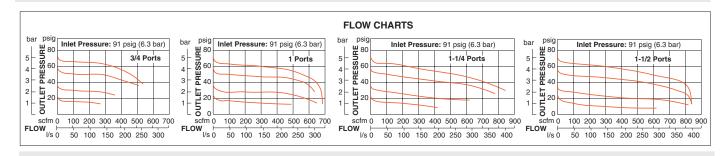
Port Sizes: 3/4, 1, 11/4 & 11/2 - Flow to 800 scfm

	Pressure Range psig (bar)						
Davit Cine	0-50 (0-3.4)	0-100 (0-6.9)				
Port Size	Model I	Number	Model Number				
	NPTF Threads	G Threads	NPTF Threads	G Threads			
3/4	5212D5017	C5212D5017	5211D5017	C5211D5017			
1	5212D6017	C5212D6017	5211D6017	C5211D6017			
1¼	5212C7017	C5212C7017	5211C7017	C5211C7017			
1½	5212C8017	C5212C8017	5211C8017	C5211C8017			

REGULATORS with REVERSE FLOW:							
			Pressure A	Adjustment			
Port Size	Pressure Range	Kn	ob	T-Handle			
FUIT SIZE	psig (bar)	Model Number		Model Number			
		NPTF Threads	G Threads	NPTF Threads	G Threads		
3/4	0-100 (0-6.9)	5X00B5049	C5X00B5049	5X00B5050	C5X00B5050		
1	0-100 (0-6.9)	5X00D6003	C5X00D6003	5X00B6038	C5X00B6038		
1¼	0-100 (0-6.9)	5X00C7003	C5X00C7003	5X00B7016	C5X00B7016		
1½	0-100 (0-6.9)	5X00C8001	C5X00C8001	5X00B8024	C5X00B8024		

Port Size		Weight †				
FUIT SIZE	Α	B**	C***	Depth †	lb (kg)	
3/4, 1	4.4 (111)	6.1 (154)	2.4 (62)	2.8 (71)	2.19 (0.99)	
1¼, 1½	4.9 (124)	6.4 (162)	2.1 (54)	2.8 (71)	2.50 (1.14)	
tt Dama remaind clearance, add 0.00 (10)						



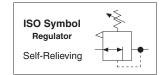


Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Piston Self-relieving		Body: Aluminum Dome: Nylon; aluminum with optional 0 to 150 psig (0 to
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		10 bar) spring
Fluid Media	Compressed air	Construction Material	Knob: Acetal
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable up to 100 psig (7 bar)		Seals: Nitrile
Optional Pressure Adjustment			Valve: Brass Valve Cap: Nylon
Pressure Gauge	0-200 psig (0-14 bar); 1/4-NPT gauge ports front and rear		
Panel Mounting	2-1/16 inch (52 mm) hole required		





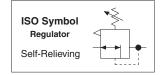


In-line High-Pressure Regulators

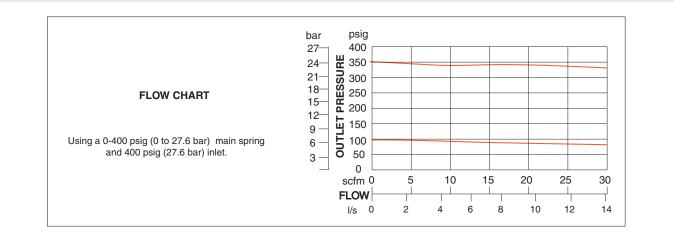
Port Sizes: 1/8, 1/4 & 3/8 - Flow to 70 scfm

	Piston Type					
Port Size	Relie	eving	Non-Relieving			
	Model Number NPTF Threads G Threads		Model Number			
			NPTF Threads	GThreads		
1/8	5215B1004	C5215B1004	5X00B1025	C5X00B1025		
1/4	5215B2004	C5215B2004	5X00B2076	C5X00B2076		
3/8	5215B3004	C5215B3004	5X00B3052	C5X00B3052		





		Dimensions in	Weight**			
Port Size	А	A B C Depth**		lb (kg)		
1/8, 1/4	1.9 (47)	7.3 (186) max	0.4 (10)	1.9 (47)	1.15 (0.53)	
3/8	2.1 (54)	7.4 (188) max	0.5 (13)	2.1 (54)	1.30 (0.59)	C
** Less ga	uge.					



Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):				
Construction Design	Piston	Maximum Flow Rate	70 scfm (33.0 l/s) @400 psi (28 bar)	
oonsuucuon Design	Self-relieving, Non-relieving		Body: Aluminum	
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Dome: Aluminum	
Fluid Media	Compressed air	Operations Material	Knob: Nylon	
Operating Pressure	Inlet: Maximum 400 psig (28 bar) Outlet: Adjustable up to 390 psig (27 bar)	Construction Material	Seals: Fluoroelastomer	
Pressure Gauge	0-600 psig (0-40 bar)		Valve: Brass Valve Cap: Nylon	

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.



HIGH-PRESSURE Series

In-line Precision Regulators

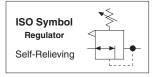
MINIATURE Series

Port Sizes: 1/8 & 1/4 - Flow to 4 scfm

Port Size	Regulated Pressure Range#	Model Number		
Port Size	psig (bar)	NPTF Threads	G Threads	
1/8	0-50 (0-3.4)	5212C1006	C5212C1006	
1/4	0-50 (0-3.4)	5212C2006	C5212C2006	

For 0-10 psig (0-0.7 bar), 0-20 psig (0-1.4 bar), and 0-60 psig (0-4.1 bar) ranges, consult ROSS.

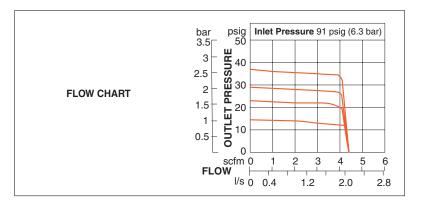




Port Size	D	imensions inches (mm)			Weight**		
Port Size	Α	В	С	Depth**	lb (kg)		
1/8, 1/4	1.8 (44)	3.4 (86)	0.4 (10)	1.8 (44)	0.38 (0.16)		
**Less gau	ige.						

Precision Regulators have a small valve seat and a large diaphragm area, a combination that allows greater precision, sensitivity, adjustment resolution, and less variation in regulated pressure.

В



Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving	Panel Mounting	1-3/16 inch (30 mm) hole required
Temperature	Ambient/Media: 40° to 125°F (4° to 52°C)		Body: Aluminum
Fluid Media	Compressed air	Construction Material	Dome: Acetal
	Inlet: Maximum 300 psig (21 bar)		Knob: Acetal
Operating Pressure	Outlet: Adjustable up to 100 psig (7 bar)		Seals: Nitrile
Pressure Gauge	0-160 psig (0-11 bar); 1/8-NPT gauge ports front and rear		11



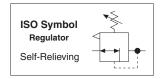
Modular Precision Regulators

Port Sizes: 1/4, 3/8, 1/2 & 3/4 - Flow to 155 scfm

Internally Piloted Regulator						
	Pressure Range psig (bar)					
Port Size	15-200	(1-13.8)	15-250	(1-17.2)		
FUIT SIZE	Model I	Number	Model Number			
	NPTF Threads	G Threads	NPT FThreads	G Threads		
1/4	5213C2018	C5213C2018	5214C2018	C5214C2018		
3/8	5213C3018	C5213C3018	5214C3018	C5214C3018		
1/2	5213C4018	C5213C4018	5214C4018	C5214C4018		
3/4	5213C5018	C5213C5018	5214C5018	C5214C5018		



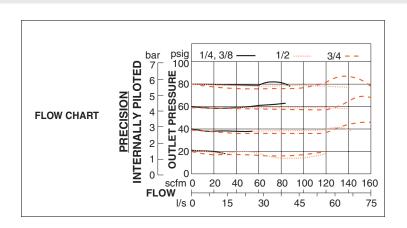
FULL-SIZE Series



Port Size	Dimensions inches (mm)				Weight <mark>†</mark>	⊢_A
	Α	B**	C***	Depth†	lb (kg)	
1/4, 3/8, 1/2, 3/4	3.5 (89)	4.2 (106)	1.3 (33)	2.8 (71)	2.06 (0.92)	
** Dome removal *** Cap removal c						

+ Less gauge.

Precision internal Pilot Regulators provide improved torque control for pneumatic tools; diaphragm type. Pressure settings held within 3 psig (0.2 bar).



Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

Construction Design	Diaphragm Self-relieving	Panel Mounting	2-1/16 inch (52 mm) hole required
Temperature	Ambient/Media: 40° to 125°F (4° to 52°C)		Body: Zinc
Fluid Media	Compressed air		Dome: Nylon; Aluminum with optional 0 to 175 psig (0 to 12 bar) spring
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable 15 to 250 psig (1 to 17 bar)		Knob: Acetal
Optional Pressure Adjustment			Seals: Nitrile Valve: Brass
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear		Valve Cap: Nylon

STANDARD SPECIFICATIONS (for regulators on this page):

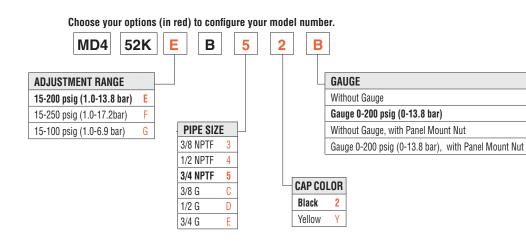


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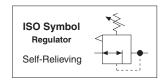
Modular Precision Regulators

MD4[™] Series

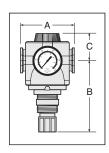
Port Sizes: 3/8, 1/2 & 3/4 - Flow to 170 scfm







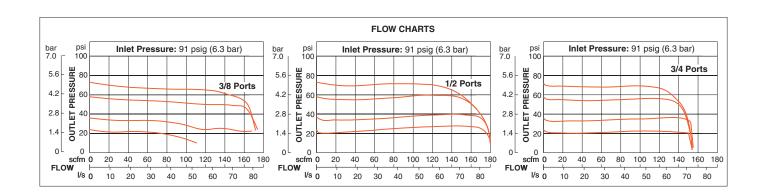
Port Size		Weight †			
FUIT SIZE	Α	В	С	Depth †	lb (kg)
3/8, 1/2, 3/4	3.5 (87)	4.8 (122)	1.6 (40)	2.9 (73)	2.3 (1.0)
Dimensions reflect less gauge.					



A B

D

Е



Accessories ordered separately, refer to page G6.3-5.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving		Body: Zinc
Temperature	Ambient/Media: 40° to 125°F (4° to 52°C)		Bonnet and Knob: Acetal
Fluid Media	Compressed air		Dome: Zinc
Onerating Pressure	Inlet: Maximum 250 psig (17 bar)		Seals: Nitrile
Operating Pressure	Outlet: Adjustable 15 to 250 psig (1 to 17 bar)		Valve: Brass
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear	Precision Regulators: Provide i	mproved torque control for pneumatic tools; diaphragm type.
Panel Mounting	2-1/16 (52 mm) hole required	Pressure settings held within 3	osig (u.2 dar)



In-line Precision Regulators

Port Size

3/4

1

11⁄4

1½

15-200 (1-13.8)

Model Number

NPTF Threads

5213D5017

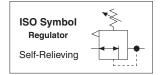
5213D6017

5213D7017

5213D8017

HIGH-CAPACITY Series





Port	Dimensions inches (mm) Weight †					
Size	Α	В	С	Depth †	lb (kg)	
3/4, 1	4.4 (111)	4.6 (112)	2.4 (62)	2.8 (71)	2.0 (0.91)	
1¼, 1½	4.9 (124)	4.9 (125)	2.1 (54)	2.8 (71)	2.38 (1.08)	
† Dimensions reflect less gauge.						<u> </u>

Port Sizes: 3/4, 1, 1¹/₄, 1¹/₂ – Flow to 800 scfm

G Threads

C5213D5017

C5213D6017

C5213D7017

C5213D8017

Pressure Range psig (bar)

15-250 (1-17.2)

Model Number

G Threads

C5214D5017

C5214D6017 C5214D7017

C5214D8017

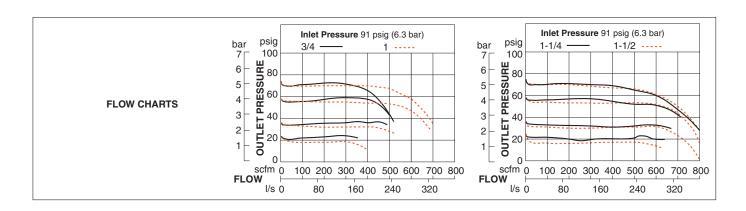
NPTF Threads

5214D5017

5214D6017

5214D7017

5214D8017



Precision Regulators:

Provide improved torque control for pneumatic tools. Pressure settings held within 3 psig (0.2 bar).

Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving		Body: Aluminum
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Bonnet and Knob: Acetal
Fluid Media	Compressed air	Construction Material	Dome: Zinc
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable 15 to 250 psig (1 to 17 bar)		Seals: Nitrile Valve: Brass
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear		Valve Cap: Nylon
Panel Mounting	1-3/16 (30 mm) hole required		



Port Sizes: 1/4, 3/8, 1/2, 3/4 - Flow to 155 scfm

	Pressure Rar	nge psig (bar)		
Port Size	0-200 (0-13.8)			
	Model Number			
	NPTF Threads G Threads			
1/4	5211C2007	C5211C2007		
3/8	5211C3007	C5211C3007		
1/2	5211C4007	C5211C4007		
3/4	5211C5007	C5211C5007		

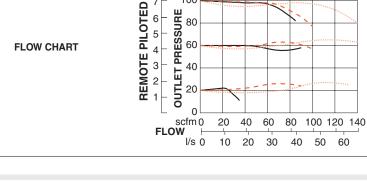
Port Size	Dimensions inches (mm)				Weight†	
1 011 0120	Α	B**	C***	Depth†	lb (kg)	A
1/4, 3/8, 1/2, 3/4	3.5 (89)	2.4 (62)	1.3 (33)	2.8 (71)	2.06 (0.92)	TOT -
	* Dome removal clearance: add 0.63 (16). ** Cap removal clearance: add 0.5 (13). • Less gauge.					

FLOW CHART

Remote Pilot Regulators use any small regulator to provide remote adjustment and to ensure accurate pressure control.

bar 8

7



psig 120

100

1/4

3/8

1/2 - -

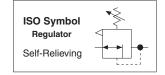
Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving		Body: Zinc
Temperature	Ambient/Media: 40° to 125°F (4° to 52°C)		Dome: Zinc
Fluid Media	Compressed air	Construction Material	Knob: Acetal
0 II D	Inlet: Maximum 300 psig (21 bar)		Seals: Nitrile
Operating Pressure	Outlet: Adjustable 15 to 250 psig (1 to 17 bar)		Valve: Brass
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear		Valve Cap: Nylon
Panel Mounting	2-1/16 inch (52 mm) hole required		

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.





FULL-SIZE Series





FULL-SIZE Series

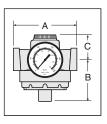
Modular Remote High-Relief Pilot Regulators

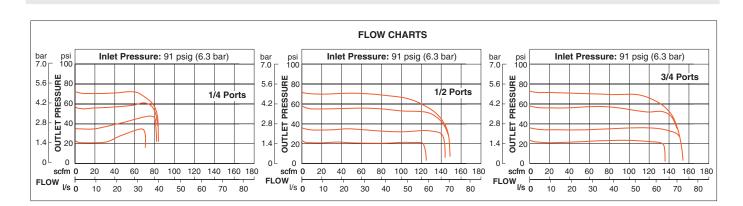
Port Sizes: 1/4, 3/8, 1/2 & 3/4 - Flow to 150 scfm

Port Size	Model Number		
Port Size	NPTF Threads	G Threads	
1/4	5X00B2037	C5X00B2037	
3/8	5X00B3025	C5X00B3025	
1/2	5X00B4040	C5X00B4040	
3/4	5X00B5035	C5X00B5035	

Port Size		Weight †			
Port Size	А	В	с	Depth †	lb (kg)
1/4, 3/8, 1/2, 3/4	3.5 (87)	2.4 (62)	1.3 (33)	2.8 (71)	2.06 (0.92)
		1			

† Dimensions reflect less gauge.

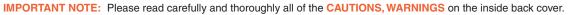




Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

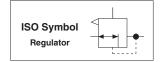
STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving	Panel Mounting	2-1/16 inch (52 mm) hole required
	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Zinc
Fluid Media	Compressed air		Dome: Zinc
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable 15 to 200 psig (1 to 14 bar)	Construction Material	Seals: Nitrile; Fluoroelastomer seals optional, consult ROSS Valve: Brass
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear		Valve Cap: Nylon
Pilot Ports	1/4 NPTF		









In-line Premium High-Relief Remote Pilot Regulators

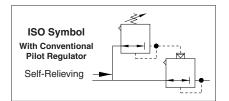
Port Sizes: 1/4, 3/8 & 1/2 - Flow to 150 scfm

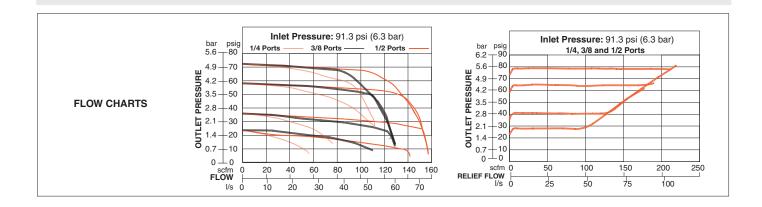
Dert Size	Model Number		
Port Size	NPTF Threads	G Threads	
1/4	5216A2007	C5216A2007	
3/8	5216A3007	C5216A3007	
1/2	5216A4007	C5216A4007	

Port Size	Dimensions inches (mm)					
POIL SIZE	А	B**	C***	Depth [†]	lb (kg)	
1/4, 3/8, 1/2	4.18 (106)	1.54 (39.1)	3.52 (89.3)	4.18 (106)	4.84 (2.2)	
** Dome remov *** Cap remova * Less gauge.		add 0.63 (16 add 0.5 (13).				

FULL-SIZE Series







Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

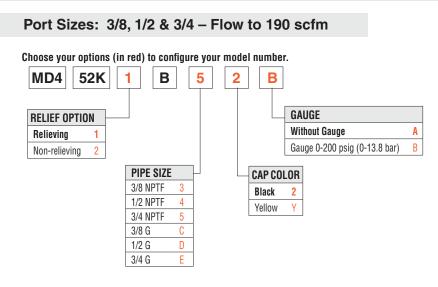
STANDARD SPECIFICATIONS (for regulators on this page):						
Construction Design	Diaphragm Self-relieving	Pressure Gauge	0 to 200 psig (0 to 14 bar) standard, 1/4-NPTF (1/4 BSPP) gauge ports front and rear;			
Temperature	Ambient/Media: 0° to 158°F (-18° to 70°C)		0 to 600 psig (0 to 40 bar) optional			
Fluid Media	Compressed air		Body: Zinc			
On smatting Designed	Inlet: Maximum 400 psig (28 bar)		Dome: Zinc			
Operating Pressure	Outlet: Adjustable up to 250 psig (17 bar)	Construction Material	Seals: Nitrile			
			Valve: Brass Valve Cap: Glass filled Nylon			

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

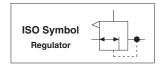
ROSS

Modular Remote Pilot Regulators

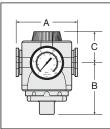
MD4[™] Series







Port Size	Dimensions inches (mm)								Weight †
Port Size	А	В	С	Depth †	lb (kg)				
1/4, 3/8, 1/2, 3/4	3.5 (87)	2.4 (62)	1.6 (41)	2.9 (73)	2.2 (1.0)				
Toimensions reflect less gauge.									



						F	LOW CH	ARTS									
r psi	Inlet Pres	sure: 91 psig (6.3 l	oar)	bar psi 7.0 100	I	nlet Pre	ssure: 91	psig (6.3	bar)	bar 7.0	psi 100	ļ	nlet Pre	ssure: 9	91 psig (6	3.3 ba	r)
6 - 3 80 2 - 3 60		3/	/8 Ports —	5.6 - 🖁 80 -				1	/2 Ports		- 80 -					3/4 P	orts
6				4.2 - SS H 60						4.2	- 60						
⁸ - 1 40 4 - 10 20				2.8 - 1 40 1.4 - 1 20					À	2.8	- 13 40 - 10 20						
				olol					^	0	° 。						
scfm 0 LOW ├─ I/s 0	20 40 60	80 100 120 140	160 180 200	0 scfm.0 FLOW ⊦ l/s.0		10 60	80 100	120 140	160 180) 200 	scfm 0 -OW ⊢ I/s 0		0 60	80 100) 120 14	40 16	50 18

Accessories ordered separately, refer to page G6.3-5.

			, pagoj.
Construction Design	Diaphragm Self-relieving	Pressure Gauge	0 to 200 psig (0 to 14 bar) standard, 1/4-NPTF (1/4 BSPP) gauge ports front and rear;
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Zinc
Fluid Media	Compressed air		Dome: Zinc
Operating Pressure		Construction Material	Seals: Nitrile
	Outlet: Adjustable 0 to 250 psig (0 to 17 bar)		Valve: Brass Valve Cap: Nylon

STANDARD SPECIFICATIONS (for regulators on this page):



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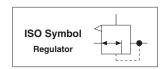


In-line Remote Pilot Regulators

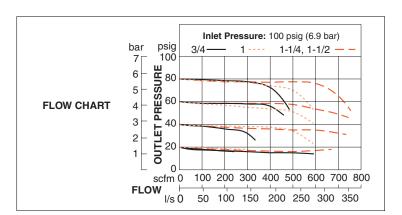
Port Sizes: 3/4, 1, 11/4 & 11/2- Flow to 740 scfm

Port Size	Model Number				
Port Size	NPTF Threads	G Threads			
3/4	5211D5006	C5211D5006			
1	5211D6007	C5211D6007			
1¼	5211D7007	C5211D7007			
1½	5211D8007	C5211D8007			





Port Size	D	Weight+				
1 011 0120	Α	B*	C**	Depth <mark>†</mark>	lb (kg)	
3/4, 1	4.4 (111)	2.9 (74)	2.4 (62)	2.8 (71)	1.88 (0.85)	
1¼, 1½	4.9 (124)	3.2 (81)	2.1 (54)	2.8 (71)	2.25 (1.02)	
† Less gai	uge.	×	<u> </u>	<u> </u>		



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Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving	Pressure Gauge	0 to 200 psig (0 to 14 bar) standard, 1/4-NPTF) gauge ports front and rear
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Aluminum
Fluid Media	Compressed air		Dome: Zinc
	Inlet: Maximum 300 psig (21 bar)	Construction Material	Seals: Nitrile
Operating Pressure	Outlet: Adjustable 0 to 200 psig (0 to 14 bar) NOTE: Outlet pressure depends on the adjustment of the		Valve: Brass Valve Cap: Nylon
	pilot regulator		
Pilot Ports	1/4-NPTF		

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.



HIGH-CAPACITY Series

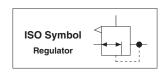
In-line High-Relief Remote Pilot Regulators

HIGH-CAPACITY Series

Port Sizes: 3/4, 1, 11/4 & 11/2 - Flow to 700 scfm

Dant Cine	Model Number				
Port Size	NPTF Threads	G Threads			
3/4	5X00B5046	C5X00B5046			
1	5X00B6039	C5X00B6039			
1¼	5X00B7021	C5X00B7021			
1½	5X00B8049	C5X00B8049			





ċ

В

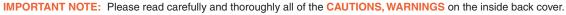
Port Size		Dimensions i	nches (mm)	Weight†	← A ───	
FUIT SIZE	Α	B**	C***	Depth+	lb (kg)	
3/4, 1	4.4 (111)	2.9 (74)	2.4 (62)	2.8 (71)	1.88 (0.85)	
1¼, 1½	4.9 (124)	3.2 (81)	2.1 (54)	2.8 (71)	2.25 (1.02)	
	noval clearan oval clearanc je.		· /			

bsi 80 60 40 40 psi 80 80 60 bar Inlet Pressure: 91 psig (6.3 bar) bar Inlet Pressure: 91 psig (6.3 bar) 5.6 5.6 3/4 Ports 1 Ports 4.2 4.2 **ä** 40 2.8 2.8 OUTLET 1.4 20 1.4 ^о о 0 0 оL scfm 0 scfm 0 FLOW ⊢ ∥s 0 100 200 300 400 500 600 700 800 100 200 300 400 500 600 700 800 FLOW H 50 100 150 200 250 300 350 50 100 150 200 250 300 350 FLOW CHARTS bar 5.6 psi 80 60 40 bar 5.6 Inlet Pressure: 91 psig (6.3 bar) psi 80 60 60 Inlet Pressure: 91 psig (6.3 bar) 1-1/4 Ports 1-1/2 Ports 4.2 4.2 **H** 40 2.8 2.8 OUTLET 1.4 1.4 20 0 0 0 0 scfm 0 100 200 300 400 500 600 700 800 scfm 0 100 200 300 400 500 600 700 800 FLOW H FLOW H 50 100 150 200 250 300 350 50 100 150 200 250 300 350

Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving	Proceiling 1-31100	0 to 200 psig (0 to 14 bar) standard, 1/4-NPTF) gauge ports front and rear
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Aluminum
Fluid Media	Compressed air	Construction Material	Dome: Zinc
Operating Pressure	Inlet: Maximum 300 psid (21 par)		Seals: Nitrile Valve: Brass
Pilot Ports	1/4-NPTF		Valve Cap: Nylon



ROSS

In-line Premium High-Relief Remote Pilot Regulators

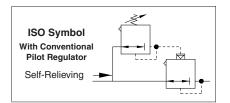
HIGH-CAPACITY Series

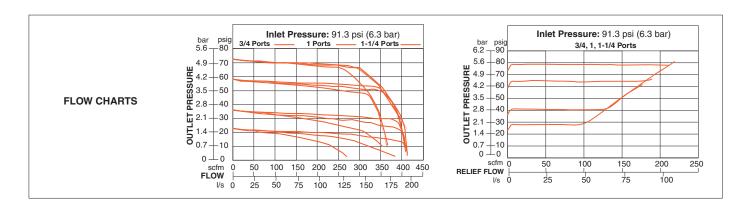
Port Sizes: 3/4, 1 & 11/4 - Flow to 400 scfm

Port Size	Model I	Number
Port Size	NPTF Threads	G Threads
3/4	5216A5007	C5216A5007
1	5216A6007	C5216A6007
1¼	5216A7007	C5216A7007

Port Size	Port Size					
FOIT SIZE	Α	B**	C***	Depth [†]	lb (kg)	
3/4, 1, 1¼	4.18 (117)	1.87 (47.5)	3.99 (101.3)	4.18 (106)	6.44 (3.0)	
** Dome removal clearance: add 0.63 (16). *** Cap removal clearance: add 0.5 (13). † Less gauge.						







Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Diaphragm Self-relieving	Construction Material	Body: Zinc
Temperature	Ambient/Media: 0° to 158°F (-18° to 70°C)		Dome: Zinc
Fluid Media	Compressed air		Seals: Nitrile Valve: Brass
Operating Pressure	Inlet: Maximum 400 psig (28 bar) Outlet: Adjustable up to 250 psig (up to 17 bar)		Valve: Brass Valve Cap: Glass filled Nylon
Pressure Gauge	0 to 200 psig (0 to 14 bar) standard, 1/4-NPTF (1/4 BSPP) gauge ports front and rear; 0 to 600 psig (0 to 40 bar) optional		



In-line Remote Pilot Regulators

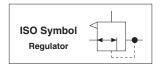
Port Sizes: 1¹/₂, 2 & 3 – Flow to 4000 scfm

Flow to 850 scfm				
Port Size	Model Number			
Port Size	NPTF Threads	G Threads		
1½	5211B8027	C5211B8027		
2	5211B9007	C5211B9007		

Flow to 4000 scfm					
Doub Cine	Casla	Model Number			
Port Size	Seals	NPTF Threads	G Threads		
3	Nitrile	5211B9008	C5211B9008		
3	Fluoroelastomer	5X00B9021	C5X00B9021		

HIGH-CAPACITY Series



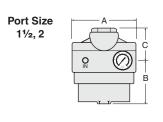


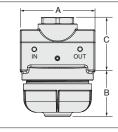
Port Size		Weight+			
Port Size	Α	В	С	Depth [†]	lb (kg)
1½, 2	6.4 (162)	5.0 (127)	3.0 (76)	2.8 (71)	8.94 (4.06)
3	8.4 (214)	7.36 (187)	3.74 (95)	8.0 (203)	21.77 (9.88)

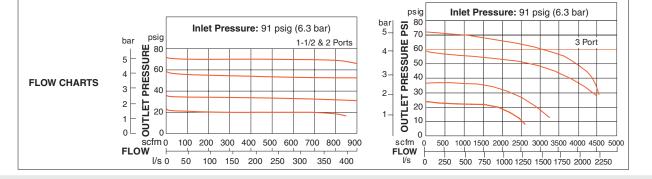
Port Size

3

† Less gauge.



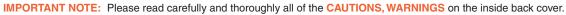




Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for regulators on this page):

Construction Design	Piston Self-relieving	Pilot Ports	1/4-NPTF
	Ambient/Media: 40° to 175°F (4° to 79°C)	Pressure Gauge	0 to 200 psig (0 to 14 bar) standard, 1/4-NPTF) gauge ports front and rear
Fluid Media	Compressed air	Construction Material	Body: Aluminum
Operating Pressure	Inlet: Maximum 300 psig (21 bar) Outlet: Adjustable 0 to 200 psig (0 to 14 bar) NOTE: Outlet pressure depends on the adjustment of the pilot regulator		Dome: Aluminum
			Seals: Nitrile
			Valve: Brass on 1/2" & 2" ports; Aluminum on 3" ports Valve
Pilot Ports	1/4-NPTF		Cap: Aluminum





In-line Relief Valves

1-15 (0.07-1.0)

Model Number

5210B1002

C5210B1002

5210B2002

C5210B2002

Port

Threads

NPTF

G

NPTF

G

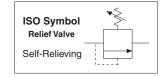
Port

Size

1/8

1/4

MINIATURE Series



Port Size	Dimensions inches (mm)				Weight†	
FOIT SIZE	Α	В	С	Depth [†]	lb (kg)	(\bigcirc)
1/8, 1/4	1.6 (41)	2.7 (68)	0.4 (10)	1.6 (41)	0.24 (0.11)	
†Less gauge.						

Port Sizes: 1/8 & 1/4 - Flow to 40 scfm

1-30 (0.07-2.1)

Model Number

5210B1003

C5210B1003

5210B2003

C5210B2003

Pressure Range psig (bar)

1-50 (0.07-3.4)

Model Number

5210B1004

C5210B1004

5210B2004

C5210B2004

1-140 (0.07-9.6)

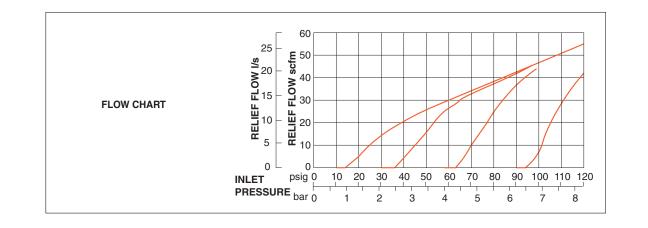
Model Number

5210B1001

C5210B1001

5210B2001

C5210B2001



Relief Valves have maximum relief flows of 10 to 20 scfm (4.7 to 9.4 l/s). For models with increased sensitivity at lower pressure, consult ROSS.

Pressure Gauge included. Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Diaphragm Self-relieving	Panel Mounting	1-3/16 inch (30 mm) hole required
Temperature	Ambient/Media: 40° to 125°F (4° to 52°C)		Body: Aluminum
Fluid Media	Compressed air	Construction Material	Dome: Acetal
Ou suchia a Das sources	Inlet: Maximum 300 psig (21 bar)	Construction Material	Knob: Acetal
Operating Pressure	Outlet: Adjustable 1 to 140 psig (0.07 to 9.6 bar)		Seals: Nitrile; Fluoroelastomer seals optional, consult ROSS
Pressure Gauge	0 to 160 psig (0 to 11 bar); 1/8 NPT gauge ports front and rear		·



In-line Relief Valve

Α

4.4 (111)

Port Size

1

HIGH-FLOW Series

Port Sizes: 1 – Flow to 450 scfm

Dort Size	Model Number		
Port Size	NPTF Threads	G Threads	
1	5X00D6012	C5X00D6012	

Dimensions inches (mm)

С

2.5 (62)

в

4.8 (122)

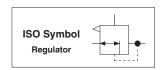
Port A	
Port B	

Weight

lb (kg)

1.8 (0.8)





On the right is a typical circuit using the High-Flow Relief Valve. The circuit utilizes a remotely piloted "fill" regulator (port size 1 NPT) and a small, remotely mounted, pilot regulator with 1/4 NPT ports.

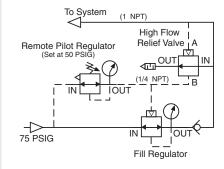
Depth

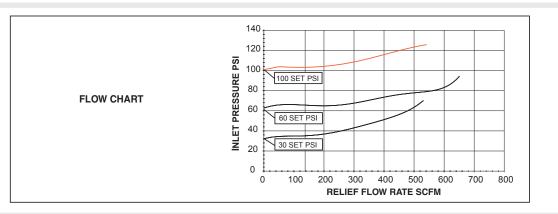
2.9 (72)

The required system pressure is set by adjusting the knob on the pilot regulator until the desired system pressure is shown on the pilot regulator's gauge. An example system pressure of 50 psig was selected in the circuit.

Outlet pressure from the pilot regulator is sent to the fill regulator's signal port and the Port 2 of the High-Flow Relief Valve. The Port 1 of the High-Flow Relief Valve is connected to the system, as shown, to monitor system pressure.

If the system pressure exceeds the pilot regulator setting (set-point), the High-Flow Relief Valve will begin to exhaust air after an approximate 2 psig (0.1 bar) rise above the set-point. Should the system pressure drop below the set-point, the fill valve will open to supply air downstream and maintain the system at the set-point.





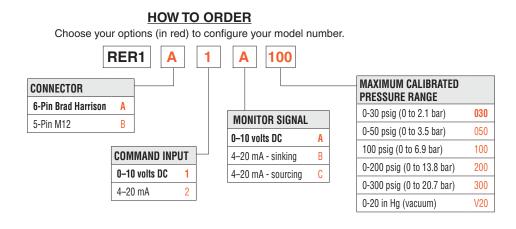
Accessories ordered separately, refer to page G6.3-4.

STANDARD SPECIFICATIONS (for valves on this page):					
Construction Design	Diaphragm Self-relieving	Pilot Ports	1/4 NPTF		
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Body: Aluminum		
Fluid Media	Compressed air		Dome: Zinc		
Operating Pressure	Inlet: Maximum 200 psig (14 bar)	Construction Material	Seals: Nitrile		
Outlet: Adjustable 0 to 200 psig (0 to 14 bar)			Valve: Brass		
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear		Valve Cap: Nylon		

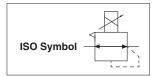


Electro-Pneumatic Proportional Valves

RER1 Series







Accessories ordered separately, see below.

ACCESSORIES

Cables

For 6-Pin Brad Harrison Connector.

Cable Length	Model Number*			
6 feet (1.8 meters)	RER-CBL-6			
12 feet (3.7 meters)	RER-CBL-12			
25 feet (7.5 meters)	RER-CBL-25			
*For cables for 5-Pin M12 connector, consult ROSS.				



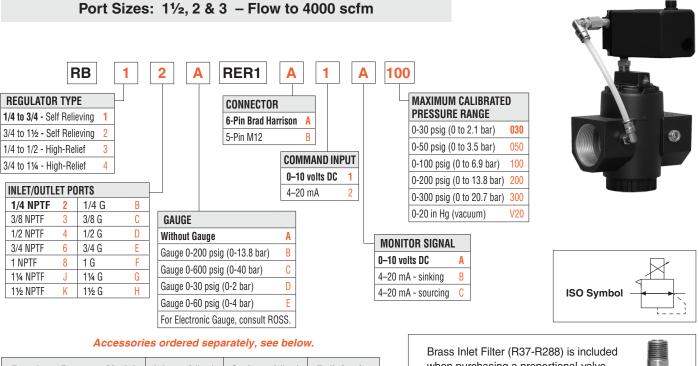
STANDARD SPECIFICATIONS (for valves on this page):

	1					
Supply Voltage/Current	15 – 24 volts DC/250 mA (required)		Body: Zinc			
Analog Monitor Signal:	Voltage: 0 – 10 volts DC@20 mA maximum		Dome: Zinc			
	Current: 4 – 20 mA sinking (sourcing optional)		Housing: Aluminum; powder coated			
Command Signal Impedance:	Voltage: 4.7 kQ		Manifold: Brass			
command orginal impodance.	Current: 100Q		Seals: Fluorocarbon			
Command Signal Voltage/Current:	0 – 10 volts DC/4 – 20 mA					
			Transducer: Silicon, Aluminum			
Electrical Connector:	6-pin Brad Harrison or 5-pin M12		Valve: Nickel-plated Brass			
Temperature	Ambient/Media: 32° to 158°F (0° to 70°C)	Accuracy:	< ± .25% F.S.			
	O-managed sin	Linearity/Hysteresis:	< ± .2% F.S. BFSL			
Fluid Media	Compressed air	Repeatability:	< ±2% F.S.			
Operating Pressure	Input: 29.9 in Hg to 300 psig (760 mm Hg to 21 bar) Ouput: 0 to 200 psi (0 to 14 bar)	Note: High-pressure Proportional valve Q175 psi (12 bar) - inlet and exhaust ports reversed from picture shown				



E-P Proportional Valves with Volume Booster

RB Series



Regulator Pressure Model	Inlet psi (bar)	Outlet psi (bar)	Relief scfm
RB1 - RB2	300 (20.7)	200 (13.8)	627
RB3 - RB4	400 (27.6)	250 (17.3)	200

Brass Inlet Filter (R37-R288) is included
when purchasing a proportional-valve.
NOTE: Cable not included with the product,
see choices below.



ACCESSORIES

Mounting Bracket Kit

For 6-Pin Brad Harrison Connector.

Regulator Type	Kit Number1
Self Relieving	RER-BRK-1
High-Relief	R-A37-381

Cables

Cable Length	Model Number*
6 feet (1.8 meters)	RER-CBL-6
12 feet (3.7 meters)	RER-CBL-12
25 feet (7.5 meters)	RER-CBL-25
*For cables for 5-Pin M12 conr	nector, consult ROSS.



STANDARD SPECIFICATIONS (for valves on this page):

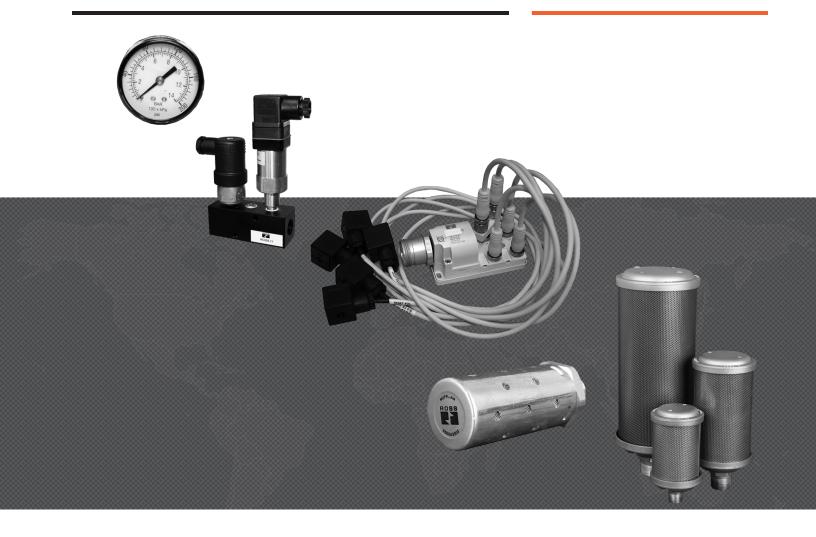
a 1 1/ II /a 1			Deduc Zine			
Supply Voltage/Current	15 – 24 volts DC/250 mA (required)		Body: Zinc			
Command Signal Voltage/Current: Electrical Connector:	Voltage: 0 – 10 volts DC@20 mA maximum		Dome: Zinc			
Analog Montor Signal.	Current: 4 – 20 mA sinking (sourcing optional)		Housing: Aluminum; powder coated			
Command Signal Impedance:	Voltage: 4.7 kQ	Construction Material	Manifold: Brass Seals: Fluorocarbon			
	Current: 100Q					
Command Signal Voltage/Current:	0 – 10 volts DC/4 – 20 mA		Transducer: Silicon, Aluminum			
Electrical Connector:	6-pin Brad Harrison or 5-pin M12		Valve: Nickel-plated Brass			
Temperature	Ambient/Media: 32° to 158°F (0° to 70°C)	Accuracy:	< ± .25% F.S.			
Fluid Media	Compressed sir	Linearity/Hysteresis:	< ± .2% F.S. BFSL			
Fluid Media	Compressed air	Repeatability:	< ± .0.6% F.S.			
Operating Pressure	Input: 29.9 in Hg to 300 psig (760 mm Hg to 21 bar) Ouput: 0 to 200 psi (0 to 14 bar)					







Accessories



ROSS CONTROLS



Silencers

Dout Cino	Thread Tune	Model	Number	Aug. C	Dimensions	Weight		
Port Size	Inread Type	NPT Threads	R/Rp Threads	Avg. C _v	Length	Width	lb (kg)	
1/8	Male	5500A1003	D5500A1003	1.2	0.9 (21)	2.0 (51)	0.1 (0.1)	
1/4	Male	5500A2003	D5500A2003	2.1	0.9 (21)	2.2 (55)	0.1 (0.1)	
0.0	Mala	5500A3013	D5500A3013	2.7	0.9 (21)	2.2 (55)	0.1 (0.1)	
3/0	iviale	5500A3003	D5500A3003	4.3	1.3 (32)	3.5 (88)	0.2 (0.1)	
1/2	Male	5500A4003	D5500A4003	4.7	1.3 (32)	3.6 (91)	0.2 (0.1)	
0/4	Mala	5500A5013	D5500A5013	5.1	1.3 (32)	3.6 (92)	0.2 (0.1)	
1/4 Male 3/8 Male	3/4	iviale	5500A5003	D5500A5003	11.5	2.0 (51)	5.3 (135)	0.6 (0.3)
1	Male	5500A6003	D5500A6003	14.6	2.0 (51)	5.4 (138)	0.6 (0.3)	
41/	Male	5500A7013	D5500A7013	16.4	2.0 (51)	5.5 (140)	0.6 (0.3)	
1/4 Male 3/8 Male 1/2 Male 3/4 Male 1 Male 1½ Male 1 Male 1% Female	Female	5500A7001	D5500A7001	24	2.5 (64)	5.7 (144)	1.0 (0.5)	
1½	Female	5500A8001	D5500A8001	29.9	2.5 (64)	5.7 (144)	1.0 (0.5)	
2	Female	5500B9001	D5500B9001	34.2	3.0 (76)	6.6 (168)	1.5 (0.7)	
21⁄2	Female	5500A9002	D5500A9002	103.7	4.0 (102)	5.7 (145)	2.9 (1.4)	

Pneumatic Valves Accessories





Port size 21/2



Port	Thread	Model Number		Ave C	Dimensions i	nches (mm)	Weight	Construction					
Size	Туре	NPT Threads	R/Rp Threads	Avg. C _v	Length	Width	lb (kg)	CONSTRUCTION					
1/4	Male	5500B2004	D5500B2004	1.44	1.75 (44.5)	0.56 (14.2)	0.05 (0.23)	Stainless steel					
1/2	Male	5500B4004	D5500B4004	3.01	2.75 (69.7)	0.87 (22.1)	0.25 (0.11)	Stanness steel					
1	Male	5500B6004	D5500B6004	10.41	3.87 (98.3)	1.31 (33.3)	0.45 (0.20)	NPT - Stainless steel R - Nickel plated cold rolled steel					
2	Male	5500A9004	D5500A9004	28.11	5.50 (139.7)	2.37 (60.2)	1.5 (0.68)	Nickel plated cold rolled steel					
Cupplin	d with a at	ndard nina thra	ad fitting for attac	hing dire	atly to the aybe	unt north of air	r operated equi	nmont					

Supplied with a standard pipe thread fitting for attaching directly to the exhaust ports of air-operated equipment. **Pressure Range:** 0 to 175 psig (0 to 12.3 bar) maximum. **Flow Media:** Filtered air.

SILENCERS for Stainless Steel L-O-X® Air Entry Assemblies

- L												
Port	Thread	Model Number		Avg. C _v	Dimensions	s inches (mm)	Description					
	Size	Туре	NPT Threads	BSP Threads	Mug. 0 ₁	Length	Width	Besshprion				
	1/4	Male	5500A2005	D5500A2005	1.5	1.50 (38)	0.67 (17)	Pressure Range:				
	1/2	Male	5500A4005	D5500A4005	3.5	2.17 (55	0.94 (24)	0 to 125 psig (0 to 8.6 bar) maximum.				
	1	Male	5500A6005	D5500A6005	5.7	2.95 (75)	1.41 (36)	Seals: Nitrile.				

Noise-Reduction SILENCERS for DM¹ & DM^{2®} Series C Double Valves Dimensions inches (mm) Basic Kit Number* Flow Valve Model Size scfm NPT Threads R/Rp Threads A B (NPT) B (R) C 2 2324H77 2329H77 800 (378) 4.34 (110.2) 19.06 (484.1) 21.40 (543.6) 7.27 (184.7) 2329H77 4 2324H77 800 (378) 4.34 (110.2) 19.06 (484.1) 21.40 (543.6) 7.27 (184.7) DM 8 2325H77 2329H77 800 (378) 5.41 (137.4) 21.18 (538.0) 23.52 (597.4) 8.41 (213.6) Series C 12 2326H77 2330H77 2080 (982) 6.74 (117.2) 25.85 (656.6) 28.20 (716.3) 10.66 (270.8) 30 2327H77 2331H77 7200 (3398) 9.85 (250.2) 41.55 (1055.4) 41.55 (1055.4) 13.47 (342.1) Pressure Range: 125 psig (8.6 bar) maximum.

* Kits include all plumbing required for installation.

Online Version

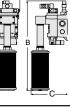
Reduces the Exponentially Perceived Noise (EPNdB), Impact noise reduction in the 35–40 dB range Recommended for air exhaust applications for pressures up to 125 psig (8.6 bar) Pressure Range – 125 psig (8.6 bar) maximum











Natao Daduatian CII ENCEDO far DM2® Cartao D Dauble Valu

NOISE-KE	auction	SILENCERS	IOF DIM ^{2®} Se	eries d dou	DIE VAIVES	
Valve	Thread	Kit Number*#	Kit Number*# Flow Dimensions inches (mm)		Description	
Basic Size	Туре		scfm	Height	Width	Description
	NPT	2324H77	800 (378)	19.1 (484)	4.4 (110)	
Basic Size Type Kit Nu 4 NPT 232 BSPT 232 8 NPT 232 BSPT 233 NPT 233 NPT 233 NPT 233 NPT 233 NPT 233	2329H77	800 (378)	21.4 (544)	4.4 (110)		
	NPT	2325H77	800 (378)	21.2 (538)	5.4 (138)	Reduces the Exponentially Perceived Noise (EPNdB),
0	BSPT	2330H77	800 (378)	23.5 (598)	5.4 (138)	Impact noise reduction in the 35–40 dB range Recommended for air exhaust applications for
10	NPT	2326H77	2080 (982)	25.9 (657)	6.8 (117)	pressures up to 125 psig (8.6 bar)
Basic Size 4 - 8 - 12 - 30	BSPT	2331H77	2080 (982)	28.2 (716)	6.8 (117)	Pressure Range – 125 psig (8.6 bar) maximum
20	NPT	2327H77	7200 (3398)	41.6 (1056)	9.9 (250)	
30	BSPT	2332H77	1200 (3390)	41.0 (1000)	9.9 (200)	



* Kits include all plumbing required for installation.

Exhaust flange kit required, see below ordering information.

	Valve	David Olina	Kit Nı	umber	
Exhaust Flange Kits for Noise Reduction Silencers	Basic Size	Port Size	NPT Threads	G Threads	
	4	1	726B25	D276B25	
	8	1	617B25	D617B25	Used when installing noise reduction silencers
	12	1½	619B25	D619B25	
	30	21⁄2	621B25	D621B25	

Electrical CONNECTORS & CORD Sets

Connection Type	EN 175301	-803	0	Cord	Туре/	Length		Model Number			
	Connect	Connector		Termination		meters	Cord Diameter	Without	Lighted Connector		Cord Quantity
	Option	Form	Fitting Connection	End 1	End 2	(feet)	Diameter	Light	24 V DC	120 V AC	Öð
		_	-	-	-	-	-	937K87	936K87-W	936K87-Z	-
	Connector	A	1/2" NPT conduit	-	-	-	-	723K77	724K77-W	724K77-Z	_
	Only	В	-	-	-	-	-	372K77	328K77-W	328K77-Z	_
		С						2452K77	2453K77-W	2453K77-Z	
				Connector	onnector Flying leads -	2 (6.5)	6-mm	721K77	720K77-W	720K77-Z	1
Solenoid							10-mm	371K77	383K77-W	383K77-Z	1
			A –			5 (16.4)	-	2243H77	-	-	2
	Prewired Connector					10 (32.8)	-	2244H77	-	-	2
	CONNECLUI	В	-	Connector	Flying leads	2 (6.5)	10-mm	266K77	267K77-W	267K77-Z	1
		С		Connector	Elving loado	2 (6.5)	5-mm	_	2476K77-W	2476K77-Z	1
		U	_	Connector	Flying leads	3 (10)	8-mm	2449K77	2450K77-W	2450K77-Z	1



CAUTIONS: Do not use electrical connectors with surge suppressors, as this may increase valve response time when de-actuating the solenoids.

PRESSURE Indicators

Pop-Up (Visual)	Model Number	Port Threads	May be installed on all valves with pressure sensing port. Provides a means to verify the release of downstream pressure to next	
Indicator	988A30	1/8 NPT	obstruction.	

	Model Number	Model Number Port		inches (mm)	Weight	Hexagon Nut -2.33 (59.3)
Stainless Steel	wouer number	Threads	A	В	lb (kg)	1.2 (30.5) Across Flats
Visual Indicator	1155H30	1/8 NPT	2.33 (59.3)	1.00 (25.4)	0.22 (0.1)	Port

316 Stainless Steel Body, Internals and Springs, Nitrile Seals

Visual Indicator piston, Acetal; Visual Indicator assembly, Acetal with acrylic lens

Status Indicator	Model Number	The Status Indicator pressure switch actuates when the valve is in a ready-to-run condition and de-actuates when the valve is in a lockout condition or when the inlet air pressure has	
Status muicator	670B94	been removed.	





PRESSURE SWITCHES For Verification Of Downstream Pressure Release

		Туре	Number	Threads	EN Connector Pinout Normally Open	M12 Connector Pinout	
May be installed on all valves with p Provides means to verify the release o		EN 175301-803 Form A	586A86	1/8 NPT	Normally Closed	Pin 4 Normally Open Pin 2 Pin 1 Normally Common Closed	
	ication	Pressure Switch M12	1153A30	M10x1	Ground	M12 Connector Pinout	T EP
	S	Solid State Pressure Sensor M12	1335B30W	WITOXT	<	Sensor Pin 1	
		EN 175301-803 Form A	RC026-13	3/8 NPT	Factory preset, 5	$\begin{array}{c} P \\ \hline Pin4 \\ \hline Pin2 \\ \hline PNP NO+NC \\ \hline Pin3 \\ \hline Pn2 \\ \hline PND \\ PND $	
			ction.				etenati
Stainless Steel	Inlet Port Siz	ze Model Number	Weight Ib (k	g)			
Pressure Switch	1/8	1162A30	0.23 (.01)			01191 WICH-1-190192-32-34-2	114 HODE SSUT
316 Stainless Steel Body, N Factory preset 5 psi (falling		DT (Double-Pole Double-Throw S	Switch				
NPT port threads.	C All Red	Pin 3 Pin 6	1/8-27 NPTF 1.1 (29 ↓ 0	15	.61.6 (40.7) 5.3)Max.	3.5 (215.9) 6.0 (152.4) Ø 1.13 (28.7) HEX	

Digital PRESSURE TRANSDUCER For Digital Pressure Readout

					Descr	iption	
Digital Pressure	Threads	Model Number	Pressure Range psig (bar)	Electrical Output	Electrical Connection	Pressure Port Size/Type	Weight Ib (Kg)
Transducer	NPT	760B94	0 (0) to	(1) PNP with	M8. 4 Pin	1/8 NPT	0.099
	G	D760B94	145 (10)	(1) 4-20ma	IVIð, 4 PIII	male	(0.045)
	Analog 4-2	ΩmA Output and Tra	ansistor Switching O	utnut			

Analog 4-20mA Output, and Transistor Switching Output.

Sensor Pinout with Analog Output



Wire Colors 1 - Brown - 24 VDC

2 - White - 4 to 20mA 3 - Blue - 0 VDC

4 - Black PNP Open Collector Output 1



Gauges, Lockout Device Indicator Light Kits, Manual Overrides

Pressure GAUGES

	Turne (Material	Port	Model	Number	Pressure	Case	
	Type/Material Size		NPT Threads	G Threads	Range psig (bar)	Diameter inches (mm)	
		1/8	5400A1002	D5400A1002	0-160 (0-11)	1.7 (43)	
Center Back Mounting)	Standard	Standard 1/4 5400A2010 D5400A2010		0-60 (0-4)	2.0 (51)		
	Pressure Gauges Aluminum	1/4	5400A2011	D5400A2011	0-200 (0-14)	2.0 (51)	$ \searrow$
(Genter Dack Mounting)		1/4	5400A2012	D5400A2012	0-300 (0-20)	2.0 (51)	
	Liquid Filled	1/4	5400A2014	D5400A2014	0-160 (0-11)	2.5 (64)	
	Stainless Steel	1/4	5400A2015*	D5400A2015*	0-160 (0-11)	2.0 (51)	
	* Green shade be	tween 40	D-70 psi (2.7-4.8	3 bar).			

Multiple Lock-out	Model Number	For use with any ROSS model valve with L-O-X [®] capability. Allows use of multiple	
Device	356A30	lockout devices on a single energy isolation device.	

INDICATOR Light Kits for valves with Solenoid Controlled Pacer Pilot

Indicator Light Kits		Indicator Light		
Indicator Light Kits for 27 & 21 Series and	24 volts DC	110-120 volts AC 50-60 Hz	220 volts 50-60 Hz	
SV27 & SV27 PO Check Valves	862K87-W	862K87-Z	862K87-Y	

To visually verify valve operation indicator lights are available in kit form. The indicator light extends through the solenoid or pilot cover and is illuminated when the solenoid is energized. Such lights are standard on double solenoid valves. Indicator light kit is available for single solenoid models.

	Flush E	Button		Extende	d Button	Extended But	on with Palm	
Manual Override	Locking Type	Kit Number	0	Locking Type	Kit Number	Locking Type	Kit Number	
Kits	Non-Locking	790K87		Non-Locking	791K87	Non-Locking	984H87	
	Locking	792K87		Locking	_	Locking	_	

Flush flexible manual overrides are standard on single solenoid models. Double solenoid models have flush metal-button overrides. Both types are non-locking. Each of the buttons in the override kits below is made of metal and is spring-returned. The locking type button, however, can be kept in the actuated position by turning the slot in the top of the button with a screwdriver.











CONNECTORS & CORD Sets

				С	ord			Mode	l Number	ntity	
Type Con Solenoid Pr	Connector Option	Connector Form	Fitting Connection	Type/Termination		Length meters (feet)	Cord Diameter	Without	Lighted Connector	Cord Quantity	
				End 1	End 2			Light	24 Volts DC	Cori	
Solenoid Prewired Connector	EN 175301-803	-	-	_	_	_	937K87	936K87-W	-		
	Form A	1/2" NPT conduit	-	-	-	-	723K77	724K77-W	-		
						0 (0 5)	6-mm	721K77	720K77-W	1	
	1/5301-803		Connector	Flying leads	2 (6.5)	10-mm	371K77	383K77-W	1		
		_	CONNECTOR	riyiliy leaus	5 (16.4)	-	2243H77	—	2		
						10 (32.8)	-	2244H77	-	2	
				Female	Flying leads	5 (16.4)	-	2644B77	-	2	
Sensor	Prewired	M12 5-nin_straight		Female	Male	5 (16.4)	-	2645B77	-	2	
3611301	Connector	A-coded	5-pin, straight A-coded	_	Female	Flying leads	10 (32.8)	-	2370B77	-	2
			Female	Male	10 (32.8)	_	2371B77	_	2		





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PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure all sources of energy are turned off, the entire pneumatic system is shut down and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).

2. All ROSS Group Products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any product can be tampered with and/or need servicing after installation, persons responsible for the safety of others or the care of equipment must check ROSS Group Products on a regular basis and perform all necessary maintenance to ensure safe operating conditions.

3. All applicable instructions should be read and complied with before using any fluid power system to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS Group location.

4. Each ROSS Group Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Group Products.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

FILTRATION and LUBRICATION

1. Dirt, scale, moisture, etc., are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. The ROSS Group recommends a filter with a 5-micron rating for normal applications.

2. All standard ROSS Group filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition and hazardous leakage. Immediately replace crazed, cracked, or deteriorated bowls.

3. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum base oils with oxidation inhibitors, an aniline

point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks personal injury, and/or damage to property.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

AVOID INTAKE/EXHAUST RESTRICTION

1. Do not restrict air flow in the supply line. To do so could reduce the pressure of the supply air below minimum requirements for the valve and thereby causing erratic action.

2. Do not restrict a valve's exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

SAFETY APPLICATIONS

1. Mechanical Power Presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

2. Safety exhaust (dump) valves without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All safety exhaust valve installations should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

3. Per specifications and regulations, the ROSS L-O-X[®] and L-O-X[®] with EEZ-ON[®], N06 and N16 Series operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

STANDARD WARRANTY

All products sold by the ROSS Group are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators ("FRLs") which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods,

warranted to be free of defects in material and workmanship. The ROSS Group's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Group freight prepaid.

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