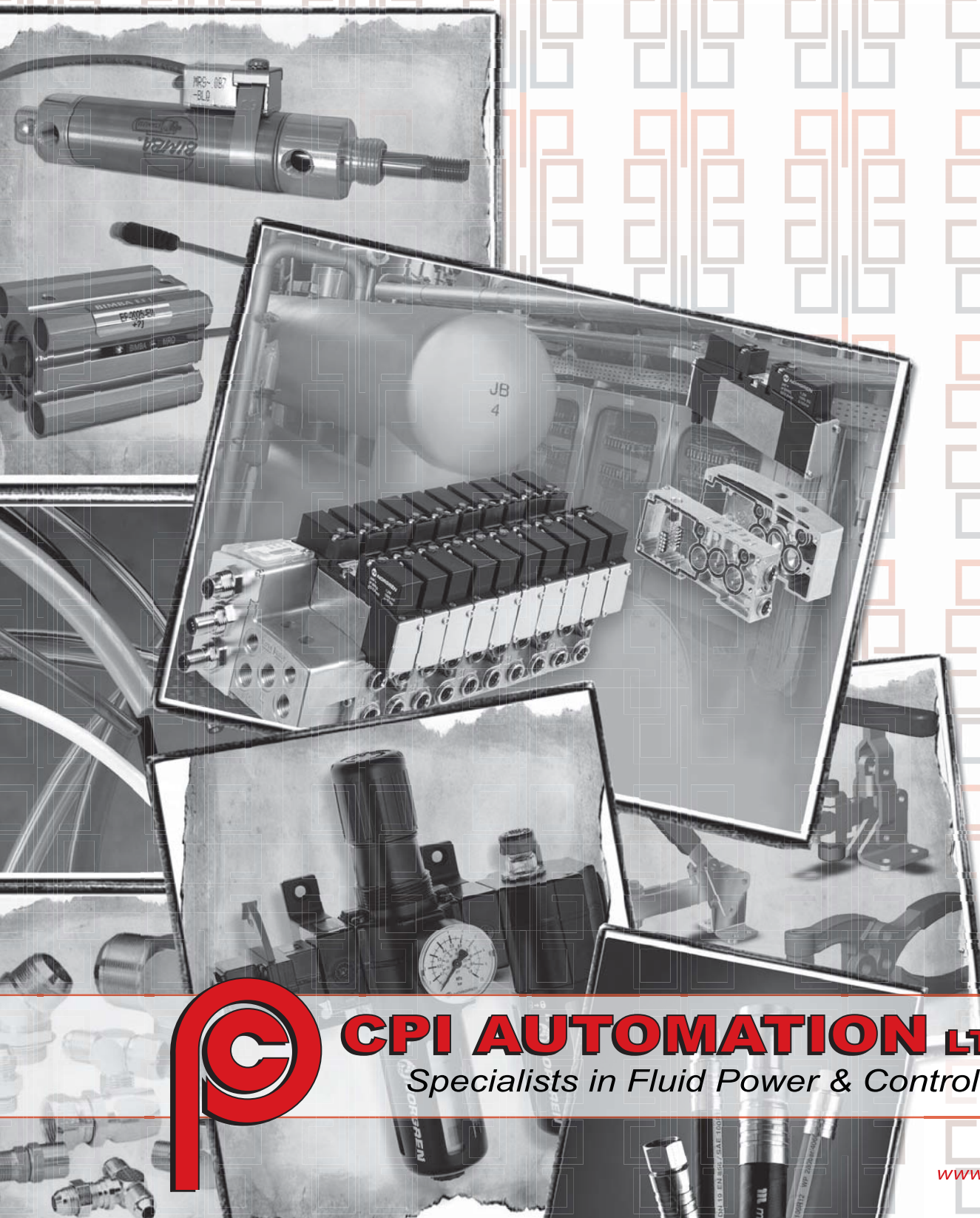


Fluid Power Controls & Accessories



CPI AUTOMATION LTD.
Specialists in Fluid Power & Control

www.cpiautomation.com

Conversion Tables

To Convert	Into	Multiply By	To Convert	Into	Multiply By
atmospheres	bar	1.0135	liters	cu dm	1.0
atmospheres	mm of mercury	760.0	liters	cu feet	0.0351
atmospheres	pounds/sq.in.	14.696	liters	cu inches	61.02
bars	atmospheres	0.9869	liters	cu meters	0.001
bars	kilopascal	100.0	liters	gallons (U.S.)	0.2642
bars	Newton/sq.meters	100,000.0	liters/min	gals/min	0.2642
bars	pounds/sq.in.	14.5			
Btu	foot-lbs.	778.3	meters	feet	3.281
Btu	horsepower/hrs	3.927×10^{-4}	meters	inches	39.37
Btu	joules	1,054.8	meters	yards	1.094
Btu	kilogram-calories	0.252	millimeters	inches	0.03937
Btu	kilowatts-hrs.	2.928×10^{-4}	millimeters of mercury	psi	0.0194
Btu/pound °F	kilogram-calories/kg °C	1.0			
Centigrade	Fahrenheit	$9/5^{\circ}\text{C} + 32^{\circ}$	Newton/sq.meter	pascal	1.0
Centigrade	Kelvin	$^{\circ}\text{C} + 273^{\circ}$	Newton-meter	foot-pounds	0.7375
centimeters	feet	0.0328	Newton-meter	joule	1.0
centimeters	inches	0.3937	Newtonmeter/sec.	foot-pounds/sec.	0.7375
centipoise	gram/cm.sec.	0.01	Newton-meter/sec.	watts	1.0
centipoise	pound mass/ft.sec.	0.000672			
centistokes	sq.feet/sec.	1.076×10^{-6}	ounces	grams	28.35
cubic centimeters	cu inches	0.06102			
cubic feet	cu cms	28,317.0	pounds	kilograms	0.4536
cubic feet	cu meters	0.028317	pounds/cu ft.	grams/cu cm	0.01602
cubic feet	liters	28.317	pounds/cu ft.	kgs/cu meter	16.02
cubic feet/min.	cu dms.sec.	0.472	pounds/cu in.	gms/cu cm	27.68
cubic feet/min.	pounds of air/hr.	4.5	pounds/hr.	kilograms/hr.	0.454
cubic feet/min.	cu Newton meters/hr.	1.7	pounds/sec.	kilograms/hr.	1,633.0
cubic inches	cu cms	16.39	pounds-sec./sq.ft.	pounds mass/ft.sec.	32.2
cubic inches	cu mm	16,387.0	pounds/sq.in.	atmospheres	0.06804
cubic inches	liters	0.01639	pounds/sq.in.	bar	0.069
cubic meters	cu feet	35.31	pounds/sq.in.	inches of mercury	2.036
			pounds/sq.in.	inches of water	27.7
			pounds/sq.in.	kilopascal	6.895
			pounds/sq.in.	mm of mercury	51.6
Fahrenheit	Centigrade	$5/9 (^{\circ}\text{F} - 32^{\circ})$	square centimeters	sq.feet	0.001076
Fahrenheit	Rankine	$^{\circ}\text{F} + 460^{\circ}$	square centimeters	sq.inches	0.155
feet	centimeters	30.48	square feet	sq.cms	929.0
feet	meters	0.3048	square feet	sq.meters	0.0929
feet	millimeters	304.8	square feet/sec.	centistokes	92,903.0
foot-pounds	Newton-meters	1.356	square inches	sq.cms	6.452
foot-pounds/sec.	Newton meters/sec.	1.356	square inches	sq.millimeters	645.2
			square inches	sq.feet	10.76
gallons (US)	liters	3.785	square meters	sq.yards	1.196
gallons/min.	cu in./min.	231.0	square meters	sq.inches	0.00155
gallons/min.	liters/min.	3.785	square millimeters	sq.meters	0.8361
gallons/min.	pounds of water/hr.	500.0			
grams	ounces (avdp)	0.3527	tons (metric)	kilograms	1,000.0
grams/cu cm	pounds/cu ft	62.43	tons (metric)	pounds	2,205.0
grams/cu cm	pounds/cu in.	0.03613	tons (short)	pounds	2,000.0
			tons (short)	tons (metric)	0.9072
horsepower	foot-lbs/min.	33,000.00			
horsepower	foot-lbs/sec.	550.0	yards	meter	0.9144
horsepower (metric)	horsepower	0.9863			
horsepower	horsepower (metric)	1.014			
horsepower	watts	745.7			
inches	centimeters	2.54			
inches	meters	0.0254			
inches	millimeters	25.4			
inches of mercury	pounds/sq.in.	0.4912			
inches of water	(4°C) pounds/sq.in.	0.03613			
kilograms	pounds	2.205			
kilograms/cu meter	pounds/cu ft.	0.06243			
kilograms-calories	Btu	3.968			
kilopascal	bar	0.01			
kilopascal	psi	0.145			
kilowatt-hrs.	Btu	3,415.0			

Pneumatic Mufflers

Pneumatic Mufflers	1,2
--------------------------	-----

Pneumatic Manifolds

Pneumatic Manifolds & Junction Blocks.....	3,4
--	-----

Pneumatic Tubing & Accessories

Pneumatic Tubing.....	5
Self Storing Hose Assemblies & Weld Spatter Resistant Tubing.....	6
Blow Guns & Tips.....	7
Pneumatic Lubricants & Tube Cutters.....	7

Fittings

Push-In Fittings.....	9-16
Brass/Steel Pipe Fittings.....	17-21
Hydraulic Tube Fittings.....	22-35
Brass Hose Barbs.....	36

Quick Connect Couplings

Hydraulic Quick Conn. Couplings.....	37
Pneumatic Quick Conn. Couplings.....	38-40

Hydraulic Hose Assemblies

Hose Assemblies.....	41
Crimp Couplings.....	42-47
Hydraulic Hoses.....	48,49
Hose Accessories.....	50
Hose Clamps.....	51

Air Preparation Products

Overview.....	52
General Purpose Air Filters.....	53
Oil Removal Filters.....	54
General Purpose Pressure Regulators.....	55
Integral Filter/Regulators.....	56
Lubricators.....	57
Filter/Filter Combinations.....	58
FRL 2 & 3 Piece Combination Units.....	59
Inline Lockout Valves.....	60
Pressure Guages.....	61
FRL Accessories.....	61,62

Pneumatic Valves

Mechanically Operated Valves.....	63
Manually Operated Spool Valves.....	64-67
Solenoid and Air Pilot Valves.....	68,70
System Accessory Controls.....	71-73
Fluid Control Valves.....	74

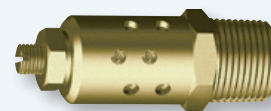
Cylinders

Pneumatic Cylinders.....	75-79
--------------------------	-------

Clamps

Manual Clamps.....	80-82
Pneumatic Clamps.....	83

Pneumatic Mufflers1,2



Pneumatic Manifolds3,4



**Pneumatic Tubing5-8
& Accessories**



Fittings9-36



**Quick Connect37-40
Couplings**



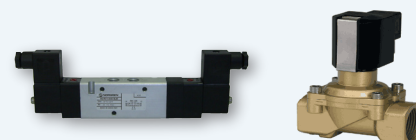
**Hydraulic Hose41-51
Assemblies**



**Air Preparation52-62
Products**



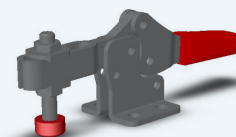
**Pneumatic Valves63-73
Fluid Control Valves74**



Pneumatic Cylinders75-79



Clamps80-83

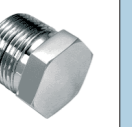


Push-In Fittings



Straight Adaptor (ext. + int. hex) pg# 9	Straight Adaptor (internal hex only) pg#9	Straight Adaptor (female thread) pg# 9	Female Bulkhead pg# 9	90° Swivel Elbow pg# 9	90° Swivel Elbow Adaptor (Extended) pg# 9	90° Swivel Elbow Adaptor (Female) pg# 10	Swivel Y adaptor pg# 10
Swivel Tee Adaptor pg# 10	Swivel Side Tee Adaptor pg# 10	Swivel Tee Adaptor (female) pg# 10	Banjo pg# 10	Banjo with Top Port pg# 11	Banjo Flow Control (regulating out) pg# 11	In Line Flow Control pg# 11	Straight Union pg# 11
Bulkhead Union pg# 11	Stem Union pg# 12	Plug pg# 11	Cap pg# 11	Union Elbow pg# 11	Stem Elbow pg# 12	Union Tee pg#12	Stem Tee pg# 12
Stem Side Tee pg# 12	Union Y pg# 12	Stem Y pg# 12	Union Cross pg# 12	Straight Union (unequal) pg# 13	Stem Reducer (stem/tube) pg# 13	Stem Union (unequal) pg# 13	Union Tee (unequal) pg#13
Stem Tee (unequal) pg# 13	Stem Side Tee (unequal) pg# 13	Union Y (unequal) pg# 13	Stem Y (unequal) pg# 13	Miniature Push-In Fittings			
Straight Adaptor (ext. + int. hex) pg# 14	Straight Adaptor (internal hex only) pg# 14	Straight Adaptor (female thread) pg# 14	90° Swivel Elbow Adaptor pg# 14				
Swivel Tee Adaptor pg# 14	Swivel Side Tee Adaptor pg# 15	Straight Union pg# 15	Union Elbow pg# 15				
Union Tee pg# 15	Straight Union (unequal) pg# 15	Stem Reducer (stem/tube) pg# 15	Stem Expander (stem/tube) pg# 15				
Banjo Flow Control pg# 16	Male Manifold pg# 16	Manifold Union pg# 16	Stem Manifold pg# 16				

Brass and Steel Pipe Fittings

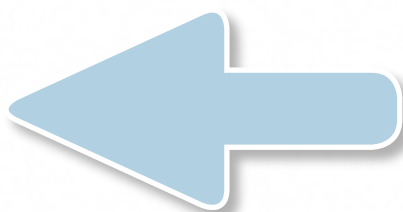
5000 pg# 20  Pipe Coupling	5000 pg# 20  Reducing Coupling	5050 pg# 21  Union Coupling	5404 pg# 17  Hex Reducer Nipple	5404 pg# 17  Hex Nipple	5404N pg# 21  Seamless Close/ Long Nipples	5406 pg# 17  Reducer Bushing	5406P pg# 21  Hex Head Plug
5409 pg# 21  Hex Socket Pipe Plug	5500 pg# 17  Male Pipe Elbow	5502 pg# 18  Street Elbow	5503 pg# 18  45° Street	5504 pg# 18  Female Pipe Elbow	5600 pg# 18  Male Pipe Tee	5601 pg# 19  Female Pipe Branch Tee	5603 pg# 19  Street Tee
5603 pg# 17  Female Pipe Run Tee	5604 pg# 20  Male Pipe Branch Tee	5605 pg# 19  Female Pipe Tee	5652 pg# 20  Female Pipe Cross	pg# 19  Sealing Tape			

Hydraulic Tube Fittings

100 pg# 23  Male Connector	100-L pg# 23  Long Male Connector	100-LL pg# 24  Extra Long Male Connector	250 pg# 24  Female Connector	300 pg# 24  union	350 pg# 25  Male 45° Elbow	400 pg# 25  Male Elbow	400-L pg# 25  Long Male Elbow
400-LL pg# 26  Extra Long Male Elbow	400-LLL pg# 26  Extra Long, Long Male Elbow	450 pg# 26  Female Elbow	500 pg# 27  Elbow Union	600 pg# 27  Male Branch Tee	650 pg# 27  Female Branch Tee	700 pg# 28  Tee Union	750 pg# 28  Male Run Tee
800 pg# 28  Female Run Tee	810 pg# 29  Male Cross	820 pg# 29  Tube Reducer	850 pg# 29  Tube Cross	860 pg# 29  Guage Tee	900 pg# 30  Bulkhead Union	940 pg# 30  Bulkhead 45° Union Elbow	950 pg# 30  Bulkhead Union Elbow
960 pg# 30  Bulkhead Tee	980 pg# 31  Female Bulkhead	A-100 pg# 31  Male Connector	A-100-L pg# 31  Long Male Connector	A-350 pg# 32  Male 45° Elbow	A-400 pg# 32  Male Elbow	A-600 pg# 32  Male Branch Tee	A-750 pg# 33  Male Run Tee

37° Flare Tube Fittings

2403 pg# 24  Tube Union	2404 pg# 23  Male Connector	2405 pg# 24  Female Connector	2406 pg# 33  Tube Reducer	2408 pg# 33  Tube Plug	2500 pg# 27  Union Elbow	2501 pg# 25  Male Elbow	2502 pg# 26  Female Elbow
2503 pg# 25  45° Male Elbow	2601 pg# 27  Male Branch Tee	2602 pg# 27  Female Branch Tee	2603 pg# 28  Union Tee	2605 pg# 28  Male Run Tee	2606 pg# 28  Female Run Tee	2650 pg# 29  Union Cross	2700LN pg# 30  Union Cross
2701 pg# 30  Bulkhead Union Elbow	2703 pg# 30 Picture Not Available Bulkhead Branch Tee	2705 pg# 31  Female Bulkhead Connector	304C pg# 34  JIC Tube Cap	318 pg# 34  Tube Nut	319 pg# 34  Tube Sleeve	6400 pg# 31  Straight Thread Connector	6400L pg# 31  Straight Thread Connector Long
6401 pg# 34  Straight Male Adaptor NPT to SAE	6407 pg# 34  SAE Male Swivel Union	6409 pg# 35  SAE Tube Plug	6410 pg# 35  O.R.B. Reducer SAE Male x SAE Female	6500 pg# 35  90° Swivel Tube Elbow	6502 pg# 35  45° Swivel Tube Elbow	6505 pg# 34  Straight Adaptor NPT Female x SAE Male	6505 pg# 35  Straight Adaptor Male NPT x Female JIC
6600 pg# 35  Swivel Branch Tee Tube All Ends	6602 pg# 35  Swivel Rub Tee Tube All Ends	6801 pg# 32  Straight Thread Elbow	6802 pg# 32  Male Run Tee	6803 pg# 32  O.R.B. Branch Tee	6804 pg# 33  O.R.B. Run Tee		



LENZ

Bantam Muffler
Male Connection

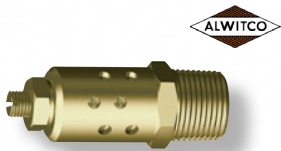


Model Number	Thread Size	Hex Size	Thread	Length
B18	1/8"	7/16	NPT	1-3/8
B28	1/4"	9/16	NPT	1-3/4
B38	3/8"	11/16	NPT	2-1/4
B48	1/2"	7/8	NPT	2-3/4
B68	3/4"	1-1/16	NPT	3-3/16
B88	1"	1-5/16	NPT	3-7/8
B108	1-1/4"	1-11/16	NPT	4-1/2
B128	1-1/2"	2	NPT	5
B168	2"	2-3/8	NPT	5-1/2

Operation Temperature:
0° to 300°F (-18° to 150° C)

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Adjustable Flo Muffler
Male Connection

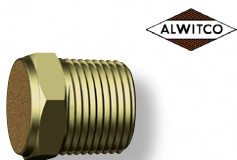


Model Number	Thread Size	Hex Size	Thread	Length
C18	1/8"	7/16	NPT	1-11/32
C28	1/4"	9/16	NPT	1-21/32
C38	3/8"	11/16	NPT	2-5/64
C48	1/2"	7/8	NPT	2-1/4
C68	3/4"	1-1/16	NPT	2-13/16
C88	1"	1-5/16	NPT	3-13/32

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operation Temperature:
0° to 300°F (-18° to 150° C)

Porous Metal
Breather Vent Filter

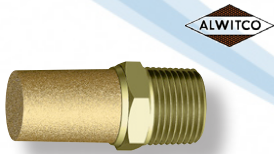


Model Number	Thread Size	Hex Size	Thread	Length
F08	10/32"	3/8	NPT	3/8
F16	1/16"	3/8	NPT	3/8
F18	1/8"	7/16	NPT	7/16
F28	1/4"	9/16	NPT	5/8
F38	3/8"	11/16	NPT	3/4
F48	1/2"	7/8	NPT	7/8
F68	3/4"	1-1/16	NPT	1"
F88	1"	1-5/16	NPT	1-1/16
F108	1-1/4"	1-11/16	NPT	1-7/16
F128	1-1/2"	2	NPT	1-1/2
F168	2"	2-3/8	NPT	1-1/2

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operation Temperature:
0° to 300°F (-18° to 150° C)

Porous Metal Filter Silencer
Male Connection

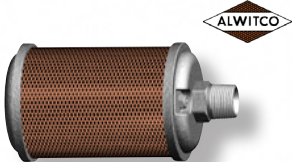


Model Number	Thread Size	Hex Size	Thread	Length
P08	10/32"	3/8	UNF	13/16
P16	1/16"	3/8	NPT	13/16
P18	1/8"	7/16	NPT	13/16
P28	1/4"	9/16	NPT	1-4/14
P38	3/8"	11/16	NPT	1-15/32
P48	1/2"	7/8	NPT	1-7/8
P68	3/4"	1-1/16	NPT	2-1/18
P88	1"	1-5/16	NPT	2-13/16
P108	1-1/4"	1-11/16	NPT	3-7/16
P128	1-1/2"	2"	NPT	4"
P168	2"	2-3/8	NPT	4-3/4

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operation Temperature:
0° to 300°F (-18° to 150° C)

Air Exhaust Mufflers
Male Connection



Model Number	Thread Size	Hex Size	Thread	Length
M01	1/8"	1-7/8	NPT	3-1/8
M02	1/4"	1-7/8	NPT	4-3/8
M00	3/8"	2-5/8	NPT	5-1/8
M04	1/2"	3-5/32	NPT	6
M07	3/4"	3-3/8	NPT	7-3/16
M10	1"	3-7/8	NPT	8-3/4
M12	1-1/4"	3-7/8	NPT	8-34
M15	1-1/2"	5-1/4	NPT	13-9/16
M20	2"	5-1/4	NPT	18-7/8

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operation Temperature:
0° to 300°F (-18° to 150° C)

Porous Plastic Mufflers
Male Connection



Model Number	Thread Size	Diameter	Thread	Length
C/S1	1/8"	1/2	NPT	1-1/8
C/S2	1/4"	11/16	NPT	1-3/8
C/S3	3/8"	1"	NPT	2-1/2
C/S4	1/2"	1"	NPT	2-1/2
C/S6	3/4"	1-1/2	NPT	5-1/2
C/S8	1"	1-15/16	NPT	6-5/16

Maximum Operating Pressure:
150 PSIG (217.5 kPa) – air

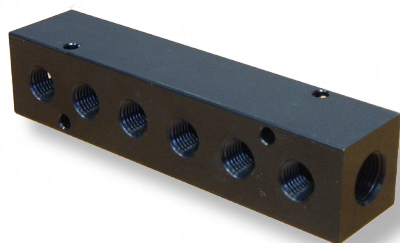
Operation Temperature:
0° to 140°F (-18° to 60° C)





Anodized Aluminum

Model Number	No. Of Stations	Inlet	Outlet (Npt)	Length	Height	Width	Port Centers
M10-125-2	2	1/4"	1/8"	1.75	1.00	1.00	.75
M10-125-3	3	1/4"	1/8"	2.50	1.00	1.00	.75
M10-125-4	4	1/4"	1/8"	3.25	1.00	1.00	.75
M10-125-5	5	1/4"	1/8"	4.00	1.00	1.00	.75
M10-125-6	6	1/4"	1/8"	4.75	1.00	1.00	.75
M10-125-7	7	1/4"	1/8"	5.50	1.00	1.00	.75
M10-125-8	8	1/4"	1/8"	6.25	1.00	1.00	.75
M10-125-9	9	1/4"	1/8"	7.00	1.00	1.00	.75
M10-125-10	10	1/4"	1/8"	7.75	1.00	1.00	.75
M20-125-4	4	1/8"	1/8"	3.25	1.25	1.25	.75
M20-125-6	6	1/8"	1/8"	4.75	1.25	1.25	.75
M20-125-8	8	1/8"	1/8"	6.25	1.25	1.25	.75
M20-125-10	10	1/8"	1/8"	7.75	1.25	1.25	.75
M20-250-2	2	1/4"	1/4"	2.13	1.25	1.25	.88
M20-250-3	3	1/4"	1/4"	3.00	1.25	1.25	.88
M20-250-4	4	1/4"	1/4"	3.88	1.25	1.25	.88
M20-250-5	5	1/4"	1/4"	4.75	1.25	1.25	.88
M20-250-6	6	1/4"	1/4"	5.63	1.25	1.25	.88
M20-250-7	7	1/4"	1/4"	6.50	1.25	1.25	.88
M20-250-8	8	1/4"	1/4"	7.38	1.25	1.25	.88
M20-250-9	9	1/4"	1/4"	8.25	1.25	1.25	.88
M20-250-10	10	1/4"	1/4"	9.13	1.25	1.25	.88
M20-375-2	2	3/8"	3/8"	3.13	1.25	1.25	1.13
M20-375-3	3	3/8"	3/8"	4.25	1.25	1.25	1.13
M20-375-4	4	3/8"	3/8"	5.38	1.25	1.25	1.13
M20-375-5	5	3/8"	3/8"	6.50	1.25	1.25	1.13
M20-375-6	6	3/8"	3/8"	7.63	1.25	1.25	1.13
M20-375-7	7	3/8"	3/8"	8.75	1.25	1.25	1.13
M20-375-8	8	3/8"	3/8"	9.88	1.25	1.25	1.13
M20-375-9	9	3/8"	3/8"	11.00	1.25	1.25	1.13
M20-375-10	10	3/8"	3/8"	12.13	1.25	1.25	1.13



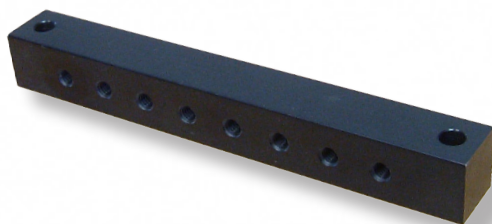
Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operating Temperature:
0° to 300°F (-18° to 150° C)

Miniature Manifolds

Model Number	No. Of Stations	Inlet Port (Npt)	Outlet Port	Length	Height	Width	Port Centers
Porting On One Side							
M32-4	4	1/8"	10-32	3.00	.62	.625	.50
M32-6	6	1/8"	10-32	4.00	.62	.625	.50
M32-8	8	1/8"	10-32	5.00	.62	.625	.50
M32-10	10	1/8"	10-32	6.00	.62	.625	.50
Porting On Two Sides							
MS32-4	8	1/8"	10-32	3.00	.62	.625	.50
MS32-6	12	1/8"	10-32	4.00	.62	.625	.50
MS32-8	16	1/8"	10-32	5.00	.62	.625	.50
MS32-10	20	1/8"	10-32	6.00	.62	.625	.50
Porting On Three Sides							
MT32-4	12	1/8"	10-32	3.00	.62	.625	.50
MT32-6	18	1/8"	10-32	4.00	.62	.625	.50
MT32-8	24	1/8"	10-32	5.00	.62	.625	.50
MT32-10	30	1/8"	10-32	6.00	.62	.625	.50

Pneumatic Junction & Terminal Blocks

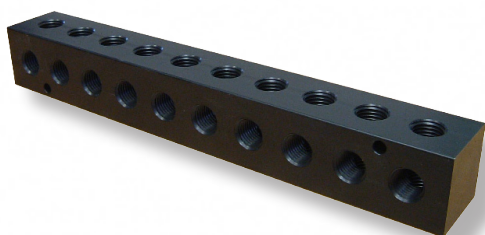


Junction Blocks Anodized Aluminum (Ports 180° Apart)

Model Number	No. Of Stations	Port Size	Length	Height	Width	Port Centers
JB32-4	4	10-32	3.00	.62	.62	.50
JB32-6	6	10-32	4.00	.62	.62	.50
JB32-8	8	10-32	5.00	.62	.62	.50
JB32-10	10	10-32	6.00	.62	.62	.50
NPT						
JB125-4	4	1/8"	4.75	.75	1.00	.75
JB125-6	6	1/8"	6.25	.75	1.00	.75
JB125-8	8	1/8"	7.75	.75	1.00	.75
JB125-10	10	1/8"	9.25	.75	1.00	.75
JB250-4	4	1/4"	5.37	1.00	1.00	.87
JB250-6	6	1/4"	7.12	1.00	1.00	.87
JB250-8	8	1/4"	8.87	1.00	1.00	.87
JB250-10	10	1/4"	10.62	1.00	1.00	.87

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operation Temperature:
0° to 300°F (-18° to 150° C)



Terminal Blocks Anodized Aluminum (3 Ports 180° Apart)

Model Number	No. Of Stations	Port Size	Length	Height	Width	Port Centers
TB32-4	4	10-32	3.00	.62	.62	.50
TB32-6	6	10-32	4.00	.62	.62	.50
TB32-8	8	10-32	5.00	.62	.62	.50
TB32-10	10	10-32	6.00	.62	.62	.50
NPT						
TB10-125-2	2	1/8"	1.75	1.00	1.00	.75
TB10-125-4	4	1/8"	3.25	1.00	1.00	.75
TB10-125-6	6	1/8"	4.75	1.00	1.00	.75
TB10-125-8	8	1/8"	6.25	1.00	1.00	.75
TB10-125-10	10	1/8"	7.75	1.00	1.00	.75
TB20-250-2	2	1/4"	2.12	1.25	1.25	.87
TB20-250-4	4	1/4"	3.87	1.25	1.25	.87
TB20-250-6	6	1/4"	5.62	1.25	1.25	.87
TB20-250-8	8	1/4"	7.37	1.25	1.25	.87
TB20-250-10	10	1/4"	9.12	1.25	1.25	.87

Maximum Operating Pressure:
250 PSIG (1725 kPa) – air

Operation Temperature:
0° to 300°F (-18° to 150° C)



Available Colours

- (0) Natural/Clear
- (1) Black
- (2) Red
- (3) Blue
- (4) Green
- (5) Yellow
- (6) Orange
- (7) Gray
- (8) White
- (9) Transparent Red
- (10) Transparent Blue
- (11) Transparent Green
- (12) Transparent Yellow
- (13) Transparent Orange

Nylon Fractional Inch Tubing

Model Number	Tube O.d.	Tube I.d.	Wall Thickness	Colour Code Suffix Key
6121__	1/8	0.080	0.023	0 = Natural 1 = Black 2 = Red 3 = Blue 4 = Green 5 = Yellow 6 = Orange 7 = Gray
6122__	1/8	0.093	0.016	
6123__	5/32	0.106	0.025	
6133__	3/16	0.137	0.025	
6144__	1/4	0.180	0.035	
6146__	1/4	0.125	0.062	
6147__	1/4	0.170	0.040	
6155__	5/16	0.232	0.040	
6166__	3/8	0.275	0.050	
6188__	1/2	0.375	0.062	

Nylon Metric Tubing

Model Number	Tube O.d.	Tube I.d.	Wall Thickness	Colour Code Suffix Key
7104__	4	2.7	0.65	0 = Natural 1 = Black 2 = Red 3 = Blue 4 = Green
7102__	4	2	1	
7105__	5	3	1	
7106__	6	4	1	
7108__	8	6	1	
7111__	10	8	1	
7110__	10	7.5	1.25	
7112__	12	9.5	1.25	
7116__	14	12	1	

Polyethylene Fractional Inch Tubing

Model Number	Tube O.d.	Tube I.d.	Wall Thickness	Colour Code Suffix Key
6244__	1/4	0.172	0.040	0 = Natural 4 = Green 1 = Black 5 = Yellow 2 = Red 6 = Orange 3 = Blue 7 = Gray
6255__	5/16	0.190	0.062	
6266__	3/8	0.250	0.062	
6288__	1/2	0.375	0.062	

All tubing part numbers shown as 100' lengths



95A Durometer Polyurethane Fractional Inch Tubing

Model Number	Tube O.d.	Tube I.d.	Wall Thickness	Colour Code Suffix Key
6322__	1/8	0.062	0.031	0 = Clear 7 = Gray 1 = Black 9 = White 2 = Red 12 = Transparent Red 3 = Blue 13 = Transparent Blue 4 = Green 14 = Transparent Green 5 = Yellow 15 = Transparent Yellow 6 = Orange 16 = Transparent Orange
6325__	5/32	0.093	0.031	
6333__	3/16	0.107	0.040	
6344__	1/4	0.170	0.040	
6346__	1/4	0.125	0.062	
6366__	3/8	0.250	0.062	
6387__	1/2	0.320	0.090	

95A Durometer Polyurethane Metric Tubing

Model Number	Tube O.d.	Tube I.d.	Wall Thickness	Colour Code Suffix Key
7303__	4	2.5	0.75	0 = Clear 1 = Black 2 = Red 3 = Blue 4 = Green
7305__	5	3	1	
7306__	6	4	1	
7308__	8	6	1	
7310__	10	6.5	1.75	
7313__	12	9	1.5	

Self Storing Hose Assemblies & Weld Spatter Resistant Tubing



Nylon Hose Assemblies (Blue)

Connection (Male NPT)	Hose I.D.	Working Length (Ft.)	Solid Height (Inches)	Part No.
1/4"	1/4"	10	4.5	N4AS3-12
		22	9	N4AS3-25
		45	18	N4AS3-50
1/4"	3/8"	10	5	N6AS3-12
		22	10	N6AS3-25
		42	20	N6AS3-50
3/8"	3/8"	10	4.5	N6BS3-12
		22	9	N6BS3-25
		45	18	N6BS3-50

Each Assembly includes Swivel Fittings @ Each end with Spring Guard
All Nylon Assemblies are sized by Hose (I.D.)



Polyurethane Hose Assemblies (Blue)

Connection (Male NPT)	Hose I.D.	Coil Size (I.D. x O.D.)	Working Length (Ft.)	Part No.
1/4"	1/4"	1.75" x 2.50"	10	U4103
			15	U4123
			20	U4203
			25	U4253
1/4"	3/8"	2.50" x 3.625"	10	U6A103
			15	U6A123
			20	U6A203
			25	U6A253
3/8"	3/8"	2.50" x 3.625"	10	U6103
			15	U6123
			20	U6203
			25	U6253

Each Assembly includes Swivel Fittings @ Each end with Strain Relief Guard
All Polyurethane Assemblies are sized by hose (I.D.)

* Polyurethane Coils are available in several colour options by changing the last digit in the Part Number.

1 = Black 5 = Yellow
2 = Red 13 = Trans, Blue
3 = Blue 16 = Neon Orange



Bulk Nylon Hose & Swivel End Kits

Connection (Male NPT)	Hose I.D.	Swivel End Kit	Hose Colour	Part No.
1/4"	1/4"	1400	Red	N4XX2-100
			Blue	N4XX3-100
			Yellow	N4XX5-100
1/4"	3/8"	1640	Red	N6XX2-100
			Blue	N6XX3-100
			Yellow	N6XX5-100
3/8"	1/2"	1600	Red	N6XX2-100
			Blue	N6XX3-100
			Yellow	N6XX5-100
1/2"	1/2"	1700	Black	N8XX1-100
			Red	N8XX1-100
			Yellow	N8XX1-100

Bulk Hose Part Numbers represent 100 ft. Lengths without fittings.



Polyurethane Mini-Coil Tubing (Black)

Tubing O.D.	Tubing I.D.	Coil Size (I.D. x O.D.)	Length (") with out Tail	*Part No.
5/32"	3/32"	.5" x .875"	12	48121
			24	48131
			48	48151
1/4"	3/8"	1.0" x 1.50"	12	48431
			48	48451
			72	48471
3/8"	1/4"	1.75" x 2.50"	48	48651
			108	48601

** All Straight Tail Lengths are 6" @ each end.

All Polyurethane Mini-Coils are suitable for use with Push-In Fittings.

* Polyurethane Mini Coils are available in several colour options by changing the last digit in the Part Number.

0 = Clear 4 = Green
1 = Black 5 = Yellow
2 = Red 13 = Trans. Blue
3 = Blue



Tubing O.D.	Tubing I.D.	Jacket Wall Thickness	Available Colours	*Part No.
5/32"	.093"	.031"	Change last digit in part number for desired colour	W05411-C
1/4"	.170"	.031"		W08411-C
3/8"	.250"	.031"		W12211-C
1/2"	.320"	.031"		W16211-C

NY--Shield Weld Spatter Resistant Tubing

Weld spatter resistant tubing comprises a nylon tube with a flame retardant protective cover that resists weld sparks in addition to oils, greases and U.V. light. The protective sleeve is stripped back to allow use with push-in fittings.

* Part Numbers listed are for Black Tubing in 100 ft. Lengths

1 = Black 3 = Blue
2 = Red 5 = Yellow

Nycoil Blow Gun "Safety" Tips conform to the following standards:

- OSHA Standard 1910.242 (B) permitting a maximum of 30 psi outlet pressure when dead end with a maximum of 150 psi inlet pressure.
- OSHA Standard 1910.95 regulating occupational noise level exposure.



1/8" female NPT outlet port to accommodate all other tips. Part Number: G3C-N (chrome Plated Body). G3B-N (Black Powder Coat Body).

G3C-N



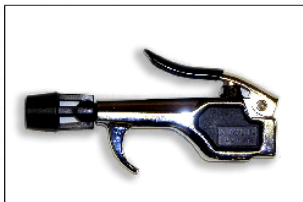
Nickel Plated Brass Safety Tip: general purpose tip for blowing away dust, chips, etc.

Vari-Flo Blow Gun (as shown): G1C-S
Tip Only: GTS



Whisper Tips: nickel plated brass tip produces a high volume of centrated air and low noise level.

Vari-Flo Blow Gun (as shown) G1C-WS
Tips Only: GTWS



Plastic Booster Tips: unique super booster Nylon tip provides large air volume at low velocity and will not mar or scratch delicate surfaces. Extremely Quiet.

Vari-Flo Blow Gun (as shown): G1C-PBS
Tip Only: GTPBS



"Non-Safety" Tips do not have a safety by-pass and must be used on air lines that have a regulated maximum pressure of 30 psi in order to comply with the OSHA Standards



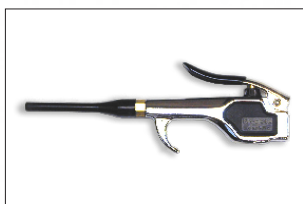
Spray Tip: delivers a fine mist good for spraying plants, fruits and vegetables.

Vari-Flo Blow Gun (as shwon): G1C-PR
Tip Only: GTPR



Rubber Tip: soft rubber tip with nickel plated brass base will not scratch or mar delicate surfaces.

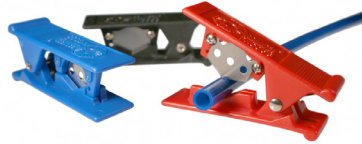
Vari-Flo Blow Gun (as shown): G1C-R
Tip Only: GTR



3" Nylon Flex Tip: designed to get into tight areas without marring delicate surfaces, especially where some bending is required.

Vari-Flo Blow Gun (as shown): G1C-Y03
Tip Only: GTY03

Tube Cutters



Plastic Tube Cutters

Part No.	Description
TC-1000	Tube Cutter
TCR	Replacement Blades

Precision cutter makes quick, clean and square cuts on all plastic tubing materials.



Heavy Duty Tube Cutters

Part No.	Description
PNZ-25	Large Cutter (1/2" and up)
PNZ-25 Blades	Replacement Blades

Precision cutter makes quick, clean and square cuts on all plastic tubing materials.

Pneumatic Lubricants

Pneu-Green

- Air Tool, valve, cylinder, air hoist lubricants

Part No.	Size
PNG-1	1 Liter
PNG-4	4 Liters
PNG-10	10 Liters



The Pneu-Green base meets the international ISO 14001 specifications, which focuses on the "OccUsafe" protection of workers and natural environment. It also is ISO 9001 certified and meets QS9000 specification developed by Chrysler, Ford, General Motors and the North American truck manufacturers. It has ISO/TS 16949 registration for automotive suppliers.

Polar Lube

Certified "OccUsafe"

- Protects air lines down to **-60°F (-50°C)**. Keep tools and outdoor machinery functioning in severe arctic conditions. Will unfreeze tools, compatible with polycarbonate bowls and sight glasses.

Part No.	Size
POL-1	1 Liter
POL-4	4 Liters

Pneu-Lube Food Grade

- A clear, registered food grade lubricant for use in both Canada and USA.

Part No.	Size
PFG-1	1 Liter
PFG-10	10 Liters

Food Grade approvals:

Canadian Food Inspection Agency (CFIA),
NSF H1, 3H registered, FDA 21CFR-section 178.3570 incidental food contact.
178.3620 (a) contact with aqueous and fatty foods.
Certified Kosher & Pareve by Star K, Hala by IFANCA.
Free of genetically modified substances (GMS)
Maintains food-allergy safety. Free of gluten, no peanuts, tree nuts or derivatives.



Straight Adapter (external + internal hex)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24250210	C24250310	C24250410	-	-	-
1/8" NPT	C24250218	C24250318	C24250418	C24250518	C24250618	C24250718
1/4" NPT	C24250228	C24250328	C24250428	C24250528	C24250628	C24250728
3/8" NPT	C24250238	C24250338	C24250438	C24250538	C24250638	C24250738
1/2" NPT	-	-	C24250448	C24250548	C24250648	C24250748
1/8" R	C01250418	-	C21250418	C01250818	C21250618	-
1/4" R	C01250428	-	C21250428	C01250828	C21250628	C21250728
3/8" R	C01250438	-	C21250438	C01250838	C21250638	C21250738
1/2" R	-	-	-	C01250848	C21250648	C21250748

Straight Adapter (Internal hex only)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C242A0210	C242A0310	C242A0410	-	-	-
1/8" NPT	C242A0218	C242A0318	C242A0418	C242A0518	C242A0618	-
1/4" NPT	C242A0228	C242A0328	C242A0428	C242A0528	C242A0628	C242A0728
3/8" NPT	-	-	-	C242A0538	C242A0638	C242A0738
1/2" NPT	-	-	-	-	C242A0648	C242A0748
1/8" R	C01250418	-	C212A0418	C012A0818	-	-
1/4" R	C01250428	-	C242A0428	C012A0828	C212A0628	-
3/8" R	C01250438	-	-	C012A0838	C212A0638	-
1/2" R	-	-	-	-	C212A0648	-

Straight Adapter (female thread)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
1/8" NPT	C24260218	C24260318	C24260418	C24260518	C24260618	-
1/4" NPT	C24260228	C24260328	C24260428	C24260528	C24260628	C24260728
3/8" NPT	-	-	C24260438	C24260538	C24260638	C24260738
1/2" NPT	C02260418	-	-	C24260548	C24260648	-
1/8" R	C22604128	-	C21260418	C02260818	-	-
1/4" R	-	-	C21260428	C02260828	C21260628	-
3/8" R	-	-	-	-	C21260638	-

Female Bulkhead



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
1/8" NPT	C24320218	C24320318	C24320418	C24320518	-	-
1/4" NPT	-	C24320328	C24320428	C24320528	C24320628	C24320728
3/8" NPT	-	-	-	C24320538	C24320638	C24320738
1/2" NPT	-	-	-	-	-	C24320748

90° Swivel Elbow



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24470210	C24470310	C24470410	-	-	-
1/8" NPT	C24470218	C24470318	C24470418	C24470518	C24470618	-
1/4" NPT	C24470228	C24470328	C24470428	C24470528	C24470628	C24470728
3/8" NPT	-	C24470338	C24470438	C24470538	C24470638	C24470738
1/2" NPT	-	-	-	C24470548	C24470648	C24470748
1/8" R	C01470418	-	C21470418	C01470818	C21470618	-
1/4" R	C01470428	-	C21470428	C01470828	C21470628	C21470728
3/8" R	C01470438	-	C21470438	C01470838	C21470638	C21470738
1/2" R	-	-	-	-	C21470648	C21470748

90° Swivel Elbow Adapter (Extended)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24540210	-	C24540410	-	-	-
1/8" NPT	C24540218	C24540318	C24540418	C24540518	C24540618	-
1/4" NPT	C24540218	C24540328	C24540428	C24540518	C24540628	C24540728
3/8" NPT	-	C24540338	C24540438	C24540518	C24540638	C24540738
1/2" NPT	-	-	-	-	C24540648	C24540748
1/8" R	C01540418	-	C21540418	C01540818	-	-
1/4" R	C01540428	-	C21540428	C01540828	C21540628	-
3/8" R	C01540438	-	-	C01540838	C21540638	-



90° Swivel Elbow Adapter (Female)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24480210	C24480310	C24480410	-	-	-
1/8" NPT	C24480218	C24480318	C24480418	C24480518	-	-
1/4" NPT	C24480228	C24480328	C24480428	C24480528	C24480628	-
3/8" NPT	-	-	C24480438	C24480538	C24480638	C24480738
1/2" NPT	-	-	-	-	C24480648	C24480748
1/8" R	C01480418	-	-	C01480818	-	-
1/4" R	-	-	-	C01480828	-	-

Swivel Y Adapter



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24880210	C24880310	C24880410	-	-	-
1/8" NPT	C24880218	C24880318	C24880418	C24880518	C24880618	-
1/4" NPT	C24880228	C24880328	C24880428	C24880528	C24880628	C24880728
3/8" NPT	-	C24880338	C24880438	C24880538	C24880638	C24880738
1/2" NPT	-	-	-	C24880548	C24880648	C24880748
1/8" R	C01880418	-	C21880418	C01880818	-	-
1/4" R	C01880428	-	C21880428	C01880828	C21880628	C21880728
3/8" R	C01880438	-	C21880438	C01880838	C21880638	C21880768
1/2" R	-	-	-	-	C21880648	C21880748

Swivel Tee Adapter



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24670210	C24670310	C24670410	-	-	-
1/8" NPT	C24670218	C24670318	C24670418	C24670518	C24670618	-
1/4" NPT	C24670228	C24670328	C24670428	C24670528	C24670628	C24680728
3/8" NPT	-	C24670338	C24670438	C24670538	C24670638	C24680738
1/2" NPT	-	-	-	C24670528	C24670648	C24680748
1/8" R	C01670418	-	C21670418	C01670818	C21670618	-
1/4" R	C01670428	-	C21670428	C01670828	C21670628	C21670728
3/8" R	C01670438	-	C21670438	C01670838	C21670638	C21670738
1/2" R	-	-	-	-	C21670648	C21670748

Swivel Side Tee Adaptor



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C24680210	C24680310	C24680410	-	-	-
1/8" NPT	C24680218	C24680318	C24680418	C24680518	C24680618	-
1/4" NPT	C24680228	C24680338	C24680428	C24680528	C24680628	C24680728
3/8" NPT	-	C24680348	C24680438	C24680538	C24680638	C24680738
1/2" NPT	-	-	-	C24680548	C24680648	C24680748
1/8" R	C01680418	-	C21680418	C01680818	-	-
1/4" R	C01680428	-	C21680428	C01680828	C21680628	C21680728
3/8" R	C01680438	-	C21680438	C01680838	C21680638	C21680738
1/2" R	-	-	-	-	C21680648	C21680748

Swivel Tee Adaptor (female)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
1/8" NPT	C246C0218	C246C0318	C246C0418	C246C0518	-	-
1/4" NPT	-	C246C0328	C246C0428	C246C0528	C246C0628	-
3/8" NPT	-	-	-	C246C0538	C246C0638	C246C0738
1/2" NPT	-	-	-	-	-	C246C0748

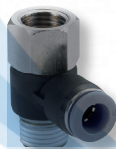
Banjo



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C2R510210	-	C2R510410	-	-	-
1/8" NPT	C2R510218	-	C2R510418	C2R510518	-	-
1/4" NPT	-	-	C2R510428	C2R510528	C2R510628	-
3/8" NPT	-	-	-	-	C2R510638	C2R510738
1/2" NPT	-	-	-	-	C2R510648	C2R510748



Banjo with Top Port



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	C2D510210	-	C2D510410	-	-	-
1/8" NPT	C2E510218	-	C2D510418	C2E510518	-	-
1/4" NPT	-	-	C2D510428	C2F510528	C2F510628	-
3/8" NPT	-	-	-	-	C2G510638	C2G510738

Banjo Flow Control (regulating out)



THREAD	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
10-32 UNF	CV2A00210	C2VA00310	C2VA00410	-	-	-
1/8" NPT	CV2A00218	C2VA00318	C2VA00418	C2VA00518	-	-
1/4" NPT	-	C2VA00328	C2VA00428	C2VA00528	CV2A00328	-
3/8" NPT	-	C2VA00338	C2VA00438	C2VA00538	CV2A00338	C2VA00738
1/2" NPT	-	-	-	C2VA00548	CV2A00348	C2VA00748
M5	COK510405	-	C2VA00405	-	-	-
1/8" R	COTA00418	-	C2TA00418	COTA00818	-	-
1/4" R	COTA00428	-	C2TA00428	C2VA00528	C2TA00628	-
3/8" R	-	-	-	C2VA00538	C2TA00638	-

In Line Flow Control



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20GE0200	C20GE0300	C20GE0400	C20GE0500	C20GE0600	C20GE0700

Straight Union



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20200200	C20200300	C20200400	C20200500	C20200600	C20200700

Bulkhead Union



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20290200	C20290300	C20290400	C20290500	C20290600	C20290700

Plug



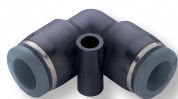
5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C00040400	C20040300	C20040400	C00040800	C20040600	C20040700

Cap



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20120200	C20120300	C20120400	C20120500	C20120600	C20120700

Union Elbow



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20400200	C20400300	C20400400	C20400500	C20400600	C20400700



Stem Union



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20220200	C20220300	C20220400	C20220500	C20220600	C20220700

Stem Elbow



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20430200	C20430300	C20430400	C20430500	C20430600	C20430700

Union Tee



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20600200	C20600300	C20600400	C20600500	C20600600	C20600700

Stem Tee



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20630200	C20630300	C20630400	C20630500	C20630600	C20630700

Stem Side Tee



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20640200	C20640300	C20640400	C20640500	C20640600	C20640700

Union Y



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20820200	C20820300	C20820400	C20820500	C20820600	C20820700

Stem Y



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20840202	C20840300	C20840404	C20840505	C20840600	C20840700

Union Cross



5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
C20900200	C20900300	C20900400	C20900500	C20900600	C20900700



Striaight Union (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
C20200302	C20200402	C20200403	C20200504	C20200604	C20200605	-	C20200706

Stem Reducer (stem/tube)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
-	C20230402	-	C20230504	C20230604	C20230605	C20230704	C20230706

Stem Union (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
C20220302	C20220402	C20220403	C20220504	C20220604	C20220605	-	C20220706

Union Tee (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
-	C206A0402	-	C206A0504	C206A0604	C206A0605	C206A0704	C206A0706

Stem Tee (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
-	C20630402	-	C20630504	C20630604	C20630605	-	-

Stem Side Tee (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
-	C20640402	-	C20640504	C20640604	-	C20640605	-

Union Y (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
C20820302	C20820402	C20820403	C20820504	C20820604	C20820605	-	C20820706

Stem Y (unequal)



3/16"-5/32"	1/4"-5/32"	1/4"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"	1/2"-1/4"	1/2"-3/8"
-	C20840402	-	C20840504	C20840604	C20840605	-	-

Straight Adapter
(external + internal hex)



Thread	1/8"	5/32"	1/4"
M3	M22250103	M02250403	-
M5	M22250105	M02250405	M22250405
M6	M22250106	M02250406	M22250406
10-32 UNF	M24250110	M24250210	M24250410
1/16" NPT	M24250116	M24250216	M24250416
1/8" NPT	M24250118	M24250218	M24250418
1/8" R	M21250118	M01250418	M21250418
1/4" NPT	M21250128	-	-

Straight Adapter
(internal hex only)



Thread	1/8"	5/32"	1/4"
M3	M222A0103	M022A0403	-
M5	M222A0105	M022A0405	M242A0405
M6	M222A0106	M022A0406	M242A0406
10-32 UNF	M242A0110	M242A0210	M242A0410
1/16" NPT	M242A0116	M242A0216	M242A0416
1/8" NPT	M242A0118	M242A0218	M242A0418

Straight Adapter
(female thread)



Thread	1/8"	5/32"	1/4"
M3	M22260103	M02260403	-
M5	M22260105	M02260405	-
10-32 UNF	M24260110	M24260210	-
1/16" NPT	M24260116	M24260216	-
1/8" NPT	M24260118	-	-
1/4" NPT	M24260128	-	-

90° Swivel Elbow Adapter



Thread	1/8"	5/32"	1/4"
M3	M22470103	M02470403	-
M5	M22470105	M02470405	-
M6	M22470106	M02470406	M22470406
10-32 UNF	M24470110	M24470210	M22470410
1/16" NPT	M24470116	M24470216	M24470416
1/8" NPT	M24470118	M24470218	M24470418
1/8" R	-	M01470418	-
1/4" NPT	M24470128	-	-

Swivel Tee Adapter



Thread	1/8"	5/32"	1/4"
M3	M22670103	M02670403	-
M5	M22670105	M02670405	M22670405
M6	M22670106	M02670406	M22670406
10-32 UNF	M24670110	M24670210	M24670410
1/16" NPT	M24670116	M24670216	M24670416
1/8" NPT	M24470118	M24670218	M24670418
1/8" R	-	M01670418	M21670418



Swivel Side Tee Adapter



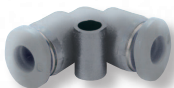
Thread	1/8"	5/32"	1/4"
M3	M24680103	M02680403	-
M5	M24680105	M02680405	M22680405
M6	M24680106	M02680406	M22680406
10-32 UNF	M34680110	M24680210	M24680410
1/16" NPT	M34680116	M24680216	M24680416
1/8" NPT	M34680118	M24680218	M24680418
1/8" R	-	M01680418	M21680418

Straight Union



Thread	1/8"	5/32"	1/4"
-	M20200100	M20200200	M20200400

Union Elbow



Thread	1/8"	5/32"	1/4"
-	M20400100	M20400200	M20400400

Union Tee



Thread	1/8"	5/32"	1/4"
-	M20600100	M20600200	M20600400

Straight Union

(unequal)



Thread	1/8"	5/32"	1/4"
-	M20200201	M20200401	M20200402

Stem Reducer

(stem/tube)



Thread	1/8"	5/32"	1/4"
-	C2030201	C2030401	-

Stem Expander

(stem/tube)



Thread	1/8"	5/32"	1/4"
-	C2030104	-	C2030204

Banjo Flow Control



Thread	1/8"
10-32 UNF	C2VA00110 regulating out
10-32 UNF	C2wA00110 regulating out

Male Manifold



Thread	1/4"-5/32"	5/16"-5/32"	5/16"-3/16"	5/16"-1/4"	3/8"-1/4"
1/8" NPT	C24D30218	-	-	-	-
1/4" NPT	-	C24D30228	C24D30328	C24D30428	-
3/8" NPT	-	-	-	-	C24D30438

Manifold Union



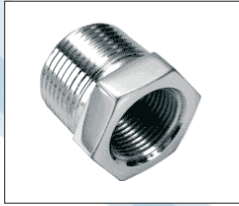
3/16"-5/32"	1/4"-5/32"	5/16"-5/32"	5/16"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"
C20D30302	C20D30402	C20D30502	C20D30503	C20D30504	C20D30604	C20D30605

Stem Manifold



3/16"-5/32"	1/4"-5/32"	5/16"-5/32"	5/16"-3/16"	5/16"-1/4"	3/8"-1/4"	3/8"-5/16"
C20J30302	C20J30402	C20J30502	C20J30503	C20J30504	C20J30604	C20J30605

Reducer Bushing



Npt	Brass Bushing	Steel Bushing
1/4-1/8	3220-04-02	5406-04-02
3/8-1/8	3220-06-02	5406-06-02
3/8-1/4	3220-06-04	5406-06-04
1/2-1/8	3220-08-02	5406-08-02
1/2-1/4	3220-08-04	5406-08-04
1/2-3/8	3220-08-06	5406-08-06
3/4-1/8	3220-12-02	5406-12-02
3/4-1/4	3220-12-04	5406-12-04
3/4-3/8	3220-12-06	5406-12-06
3/4-1/2	3220-12-08	5406-12-08
1"-1/4	3220-16-04	5406-16-04
1"-3/8	3220-16-06	5406-16-06
1"-1/2	3220-16-08	5406-16-08
1"-3/4	3220-16-12	5406-16-12
1 1/4-1/4	-	5406-20-04
1 1/4-3/8	-	5406-20-06
1 1/4-1/2	-	5406-20-08
1 1/4-3/4	-	5406-20-12
1 1/4-1"	-	5406-20-16
1 1/2-1/4	-	5406-24-04
1 1/2-3/8	-	5406-24-06
1 1/2-1/2	-	5406-24-08
1 1/2-3/4	-	5406-24-12
1 1/2-1"	-	5406-24-16
1 1/2-1 1/8	-	5406-24-20
2"-3/4	-	5406-32-12
2"-1"	-	5406-32-16
2"-1 1/4	-	5406-32-20
2"-1 1/2	-	5406-32-24

Hex Nipple



◆ These 5404's have 30° chamfers on both male pipes

Npt	Brass Nipple	Steel Nipple
1/8	3325-02-02	5404-02-02
1/4	3325-04-04	5404-04-04
1/4	-	5404-04-04X ◆
3/8	3325-06-06	5404-06-06
3/8	-	5404-06-06X ◆
1/2	3325-08-08	5404-08-08
3/4	3325-12-12	5404-12-12
1"	3325-16-16	5404-16-16
1 1/4	-	5404-20-20
1 1/2	-	5404-24-24 ◆
2"	-	5404-32-32 ◆

Hex Reducing Nipple



◆ These 5404's have 30° chamfers on both male pipes.

Npt	Brass Nipple	Steel Nipple
1/4-1/8	3325-04-02	5404-04-02
3/8-1/8	3325-06-02	5404-06-02
3/8-1/4	3325-06-04	5404-06-04
3/8-1/4	-	5404-06-04X ◆
1/2-1/4	3325-08-04	5404-08-04
1/2-3/8	3325-08-06	5404-08-06
3/4-1/4	-	5404-12-04
3/4-3/8	-	5404-12-06
3/4-1/2	3325-12-08	5404-12-08
1"-1/2	-	5404-16-08
1"-3/4	-	5404-16-12
1 1/4-3/4	-	5404-20-12
1 1/4-1"	-	5404-20-16
1 1/2-3/4	-	5404-24-12
1 1/2-1"	-	5404-24-16 ◆
1 1/2-1 1/8	-	5404-24-20 ◆
2"-1"	-	5404-32-16
2"-1 1/4	-	5404-32-20
2"-1 1/2	-	5404-32-24 ◆

Male Pipe Elbow



Npt	Brass Elbow	Steel Elbow
1/8	3455-02-02	5500-02-02-4
1/4	3455-04-04	5500-04-04-4
3/8	3455-06-06	5500-06-06-4
1/2	3455-08-08	5500-08-08-4
3/4	-	5500-12-12-4
1"	-	5500-16-16-4
1 1/4	-	5500-20-20-4
1 1/2	-	5500-24-24-4
2"	-	5500-32-32
Reducing		
1/4-1/8	3455-04-02	5500-04-02-4
3/8-1/8	-	-
3/8-1/4	3455-06-04	5500-06-04
1/2-1/4	-	5500-08-04-4
1/2-3/8	3455-08-06	5500-08-06-4
3/4-1/2	-	5500-12-08
3/4-1/2	-	5500-12-18-4
1"-3/4	-	5500-16-12
1 1/4-1"	-	5500-20-16

45 Deg. Street Elbow



Npt	Brass 45 Deg.	Steel 45 Deg.
1/8-1/8	3350-02-02	5503-02-02-4
1/8-1/4	-	5503-02-04
1/4-1/4	3350-04-04	5503-04-04-4
3/8-3/8	3350-06-06	5503-06-06-4
1/2-1/2	3350-08-08	5503-08-08-4
3/4-3/4	3350-12-12	5503-12-12-4
1"-1"	-	5503-16-16-4
1 1/4-1 1/4	-	5503-20-20-4
1 1/2-1 1/2	-	5503-24-24
2"-2"	-	5503-32-32
Suffix - 4 designates a Forged Fitting (5503-16-16-4)		

Street Elbow



Suffix - 4 designates a Forged Fitting.
(5504-16-16-4)

Npt	Brass Elbow	Steel Elbow
1/8-1/8	3500-02-02	5504-02-02-4
1/4-1/4	3500-04-04	5504-04-04
1/4-1/4	-	5504-04-04-4
3/8-3/8	3500-06-06	5504-06-06-4
1/2-1/2	3500-08-08	5504-08-08-4
3/4-3/4	3500-12-12	5504-12-12-4
1"-1"	-	5504-16-16-4
1 1/4-1 1/4	-	5504-20-20-4
1 1/2-1 1/2	-	5504-24-24-4
2"-2"	-	5504-32-32
Reducing - Male x Female		
1/4-1/8	3500-04-02	5504-04-02
1/4-1/8	-	5504-04-02-4
3/8-1/4	3500-06-04	5504-06-04
3/8-1/4	-	5504-06-04-4
1/2-1/4	5504-08-04	5504-08-04
1/2-3/8	-	5504-08-06
3/4-3/8	-	5504-12-06
3/4-1/2	-	5504-12-08-4
1"-1/2	-	5504-16-08
1"-3/4	-	5504-16-12
1 1/4-3/4	-	5504-20-12-4
1 1/4-1"	-	5504-20-16
1 1/2-1 1/4	-	5504-24-20

Female Pipe Elbow



Suffix - 4 designates a Forged Fitting.
(5502-12-12-4)

Npt	Brass Elbow	Steel Elbow
1/8-1/8	3400-02-02	5502-02-02-4
1/4-1/4	3400-04-04	5502-04-04-4
3/8-3/8	3400-06-06	5502-06-06-4
1/2-1/2	3400-08-08	5502-08-08-4
3/4-3/4	3400-12-12	5502-12-12-4
1"-1"	-	5502-16-16-4
1 1/4-1 1/4	-	5502-20-20-4
1 1/2-1 1/2	-	5502-24-24
2"-2"	-	5502-32-32
Reducing		
1/4-1/8	3400-04-02	5502-04-02-4
3/8-1/8	-	5502-06-02
3/8-1/4	3400-06-04	5502-06-04-4
1/2-1/4	-	5502-08-04-4
1/2-3/8	3400-08-06	5502-08-06-4
3/4-3/8	-	5502-12-06
3/4-1/2	-	5502-12-08-4
1"-3/4	-	5502-16-12
1 1/4-1"	-	5502-20-16
1 1/2-1 1/4	-	5502-24-20

Male Pipe Tee



Suffix - 4 designates a Forged Fitting.
(5600-06-06-06-4)

Npt	Brass Tee	Steel Tee
1/8	-	5600-02-02-02-4
1/4	3800-04-04-04	5600-04-04-04-4
3/8	-	5600-06-06-06-4
1/2	-	5600-08-08-08-4
3/4	3800-12-12-12	5600-12-12-12-4
1"	-	5600-16-16-16-4
1 1/4	-	5600-20-20-20

Street Tee



Npt	Brass Street Tee	Steel Street Tee
1/8-1/8-1/8	3750-02-02-02	5602-02-02-02
1/8-1/8-1/8	-	5602-02-02-02-4
1/4-1/4-1/4	3750-04-04-04	5602-04-04-04
1/4-1/4-1/4	-	5602-04-04-04-4
3/8-3/8-3/8	3750-06-06-06	5602-06-06-06
3/8-3/8-3/8	-	5602-06-06-06-4
1/2-1/2-1/2	3750-08-08-08	5602-08-08-08-4
3/4-3/4-3/4	3750-12-12-12	5602-12-12-12-4
1"-1"-1"	-	5602-16-16-16-4
1 1/4-1 1/4-1 1/4	-	5602-20-20-20-4
1 1/2-1 1/2-1 1/2	-	5602-24-24-24
2"-2"-2"	-	5602-32-32-32

Suffix - 4 designates a Forged Fitting.
(5602-06-06-06-4)

Female Pipe Run Tee



Npt	Steel Pipe Run Tee
1/8-1/8-1/8	5603-02-02-02-4
1/4-1/4-1/4	5603-04-04-04-4
3/8-3/8-3/8	5603-06-06-06-4
1/2-1/2-1/2	5603-08-08-08-4
3/4-3/4-3/4	5603-12-12-12-4
1"-1"-1"	5603-16-16-16-4
1 1/4-1 1/4-1 1/4	5603-20-20-20
1 1/2-1 1/2-1 1/2	5603-24-24-24

Suffix - 4 designates a Forged Fitting.
(5603-16-16-16-4)

Sealing Tape (For Sealing Pipe Joints)



Female Pipe Tee



Npt	Brass Tee	Steel Tee
1/8-1/8-1/8	3700-02-02-02	5605-02-02-02-4
1/4-1/4-1/4	3700-04-04-04	5605-04-04-04-4
1/4-1/4-1/4	-	5605-04-04-04-4
3/8-3/8-3/8	3700-06-06-06	5605-06-06-06-4
1/2-1/2-1/2	3700-08-08-08	5605-08-08-08-4
3/4-3/4-3/4	3700-12-12-12	5605-12-12-12-4
1"-1"-1"	-	5605-16-16-16-4
1 1/4-1 1/4-1 1/4	-	5605-20-20-20-4
1 1/2-1 1/2-1 1/2	-	5605-24-24-24
2"-2"-2"	-	5605-32-32-32

Suffix - 4 designates a Forged Fitting.
(5605-16-16-16-4)

Female Pipe Branch Tee



Npt	Steel Branch Tee
1/8-1/8-1/8	5601-02-02-02
1/8-1/8-1/8	5601-02-02-02-4
1/4-1/4-1/4	5601-04-04-04-4
3/8-3/8-3/8	5601-06-06-06
1/2-1/2-1/2	5601-08-08-08
1/2-1/2-1/2	5601-08-08-08-4
3/4-3/4-3/4	5601-12-12-12-4
1"-1"-1"	5601-16-16-16
1"-1"-1"	5601-16-16-16-4
1 1/8-1 1/8-1 1/8	5601-20-20-20

Suffix - 4 Designates A Forged Fitting
(5601-16-16-16-4)

Male Pipe Branch Tee



Npt	Brass Branch Tee	Steel Branch Tee
1/8-1/8-1/8	3600-02-02-02	5604-02-02-02
1/4-1/4-1/4	3600-04-04-04	5604-04-04-04-4
3/8-3/8-3/8	3600-06-06-06	5604-06-06-06-4
1/2-1/2-1/2	3600-08-08-08	5604-08-08-08-4
3/4-3/4-3/4	3600-12-12-12	5604-12-12-12-4
1"-1"-1"	-	5604-16-16-16-4
1 1/4-1 1/4-1 1/4	-	5604-20-20-20
1 1/2-1 1/2-1 1/2	-	5604-24-24-24
Suffix – 4 designates a Forged Fitting. (5604-16-16-16-4)		

Female Pipe Cross



Npt	Brass Cross	Steel Cross
1/8-1/8-1/8-1/8	3950-02	5652-02-02-02-02
1/4-1/4-1/4-1/4	3950-04	5652-04-04-04-04
3/8-3/8-3/8-3/8	3950-06	5652-06-06-06-06
1/2-1/2-1/2-1/2	-	5652-08-08-08-08-4
3/4-3/4-3/4-3/4	-	5652-12-12-12-12-4
1"-1"-1"-1"	-	5652-16-16-16-16-4
1 1/4-1 1/4-1 1/4-1 1/4	-	5652-20-20-20-20
1 1/2-1 1/2-1 1/2-1 1/2	-	5652-24-24-24-24
2"-2"-2"-2"	-	5652-32-32-32-32
Suffix – 4 designates a Forged Fitting. (5652-08-08-08-08-4)		

Pipe Coupling



Npt	Brass Coupling	Steel Coupling
1/8	3300-02-02	5000-02-02
1/4	3300-04-04	5000-04-04
3/8	3300-06-06	5000-06-06
1/2	3300-08-08	5000-08-08
3/4	3300-12-12	5000-12-12
1"	-	5000-16-16
1 1/4	-	5000-20-20
1 1/2	-	5000-24-24
2"	-	5000-32-32

Reducing Coupling



Npt	Brass Coupling	Steel Coupling
1/4-1/8	3300-04-02	5000-04-02
3/8-1/8	3300-06-02	5000-06-02
3/8-1/4	3300-06-04	5000-06-04
1/2-1/4	3300-08-04	5000-08-04
1/2-3/8	3300-08-06	5000-08-06
3/4-1/4	-	5000-12-04
3/4-3/8	3300-12-06	5000-12-06
3/4-1/2	3300-12-08	5000-12-08
1"-1/2	-	5000-16-08
1"-3/4	-	5000-16-12
1 1/4-1"	-	5000-20-16

Union Coupling



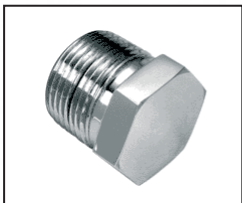
Npt	Brass Union	Steel Union
1/8	3250-02-02	5050-02-02
1/4	104-B	5050-04-04
3/8	104-C	5050-06-06
1/2	104-D	5050-08-08
3/4	104-E	5050-12-12-
1"	-	5050-16-16
1 1/4	-	5050-20-20
1 1/2	-	5050-24-24
2"	-	5050-32-32

Hex Socket Pipe Plug



Npt	Brass Plug	Steel Plug
1/16	-	5409-01
1/8	3162-02	5409-02
1/4	3162-04	5409-04
3/8	3162-06	5409-06
1/2	3162-08	5409-08
3/4	3162-12	5409-12
1"	-	5409-16
1 1/4	-	5409-20
1 1/2	-	5409-24
2"	-	5409-32

Hex Head Plug



Npt	Brass Plug	Steel Plug
1/16	-	5406P-01
1/8	3152-02	5406P-02
1/4	3152-04	5406P-04
3/8	3152-06	5406P-06
1/2	3152-08	5406P-08
3/4	3152-12	5406P-12
1"	3152-16	5406P-16
1 1/4	-	5406P-20
1 1/2	-	5406P-24
2"	-	5406P-32

Seamless Close / Long Nipples



Npt	Brass	Steel	Brass	Steel
1/8	3326-02-CLOSE	5404-02-CLOSE	3326-02"	5404N-02 "
1/4	3326-04-CLOSE	5404-04-CLOSE	3326-04"	5404N-04 "
3/8	3326-06-CLOSE	5404-06-CLOSE	3326-06"	5404N-06 "
1/2	3326-08-CLOSE	5404-08-CLOSE	3326-08"	5404N-08 "
3/4	3326-12-CLOSE	5404-12-CLOSE	3326-12"	5404N-12 "
1"	3326-16-CLOSE	5404-16-CLOSE	-	5404N-16 "
1 1/4	-	5404-20-CLOSE	-	5404N-20 "

" Add length in inches (1/2" increments 1 1/2 thru 6")

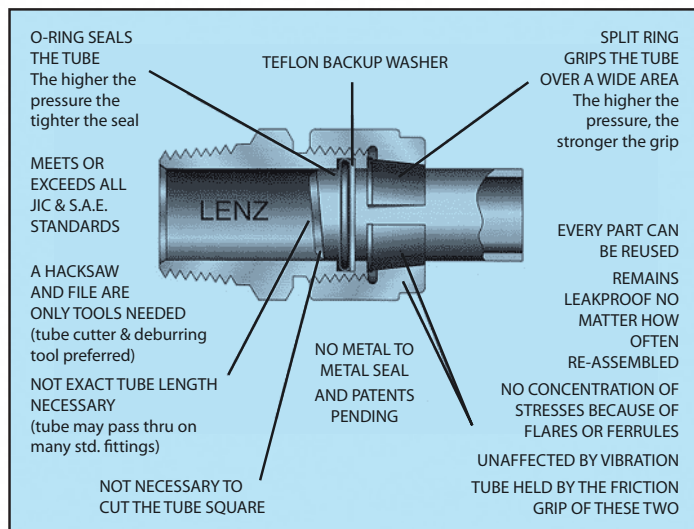
LENZ "O-Ring" Seal Tube Fittings are the simplest, most ingenious, and effective way of assembling Hydraulic Tubing for a trouble-free, leak-free system.

Lenz "O"-Ring Seal Tube Fittings seal by means of an O-Ring on the outside diameter of the hydraulic tubing, and it seals equally well no matter if the hydraulic tubing is thin-walled, heavy-walled, or even stainless steel.

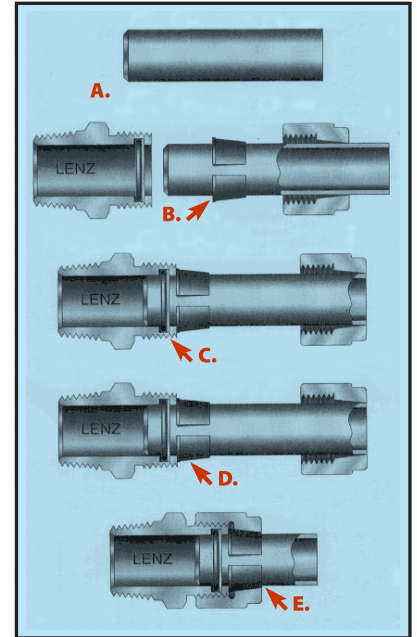
The hydraulic tubing is held by the locking tapered nut with the split tapered ring, which grips the outside diameter of the tubing over a wide surface area; in effect, making a "Mechanical Weld."

Lenz O-Ring seal Tube Fittings are unique in that they require no flaring of the hydraulic tubing, no brazing of tubing, and no setting of ferrules.

Lenz fittings can be disconnected and reassembled any number of times, since all parts are reusable.



- Chamfer outside diameter** of tube end to avoid cutting O-Ring. Use LENZ outside deburring cutters No. ODC. Not necessary to cut tube square.
- Slide Nut and Tapered Split Ring on Tube** - The large end of the tapered ring should face the fitting.
- Oil the O-Ring and Back-up Washer** - Then insert the tube past the O-Ring.
- Slide Tapered Split Ring** up to the body of the fitting.
- Tighten Nut Hand Tight** - Then with wrench tighten approximately one turn or until the rear of the tapered ring is flush with the nut.



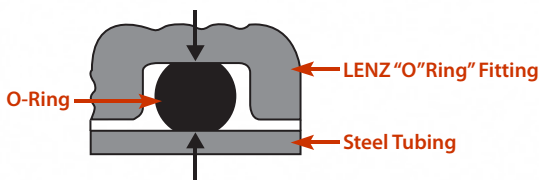
A + B + C + D + E

Your connection is now complete - a leak-free safe installation.

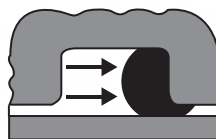
Note**

Stainless Steel Tubing requires a LENZ Stainless Steel Split Ring (#165-xxSS) and LENZ Buffer Washer (#195-xxSS). The SS washer is used as a buffer and provides a bearing surface or wiping action between the fitting face and the Lenz SS Split Ring, and is installed after Step B above.

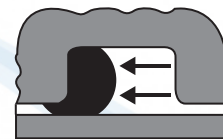
Cut-a-way view of how the "O-Ring" seals the tube. The only fitting that "Thinks For Itself."



AT ZERO PRESSURE When the tube is inserted in the fitting past the O-Ring there is a slight compression and the resiliency of the O-Ring makes a secure seal even at Zero pressure!

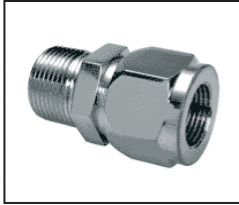


UNDER PRESSURE The pressure is an additional sealing force, pushing the O-Ring to the edge of the groove. As the pressure increases the O-Ring "knows" making the seal tighter.



UNDER VACUUM OR SUCTION If vacuum or suction is applied the O-Ring "intelligence" recognizes the condition and reverses its action to seal just as tightly!

100
Male Connector
Tube End-Male Pipe End



2404
37° Flare
Male Connector



* Fittings with tube diameter bored through
** Tube diameter bored through, optional

Part Numbers Include
Body Nuts, Sleeves,
"O-Rings" and Back-Up Washers.



Lenz Part No.	Pressure Part No.	Tube O.D.	Male Pipe Thread
100-2-2	2404-02-02	1/8	1/8
100-4-2	2404-04-02	1/4	1/8
100-4-4*	2404-04-04	1/4	1/4
100-5-2	2404-05-02	5/16	1/8
100-5-4*	2404-05-04	5/16	1/4
100-6-4	2404-06-04	3/8	1/4
100-6-2	2404-06-02	3/8	1/8
100-6-6*	2404-06-06	3/8	3/8
100-6-8*	2404-06-08	3/8	1/2
100-8-6	2404-08-06	1/2	3/8
100-8-4	2404-08-04	1/2	1/4
100-8-8	2404-08-08	1/2	1/2
100-8-12*	2404-08-12	1/2	3/4
100-10-8	2404-10-08	5/8	1/2
100-10-4	2404-10-04	5/8	1/4
100-10-6	2404-10-06	5/8	3/8
100-10-12*	2404-10-12	5/8	3/4
100-12-12*	2404-12-12	3/4	3/4
100-12-8	2404-12-08	3/4	1/2
100-14-12	2404-14-12	7/8	3/4
100-16-16**	2404-16-16	1"	1"
100-16-12	2404-16-12	1"	3/4
100-18-16	2404-18-16	1 1/8	1"
100-20-20*	2404-20-20	1 1/4	1 1/4
100-20-16	2404-20-16	1 1/4	1"
100-32-24	2404-32-24	1 1/4	1 1/2
100-24-24*	2404-24-24	1 1/2	1 1/2
100-24-20	2404-24-20	1 1/2	1 1/4
100-28-24	2404-28-24	1 3/4	1 1/2
100-28-32	2404-28-32	1 3/4	2"
100-32-32	2404-32-32	2"	2"
100-32-30	2404-32-30	2"	1 1/4
100-32-24	2404-32-24	2"	1 1/2

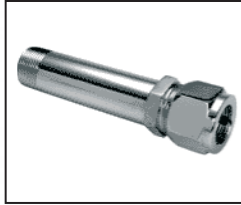
100-L
Long Male Connector
Tube End-Male Pipe End



Lenz Part No.	Tube O.D.	Male Pipe Thread
100L-4-2	1/4	1/8
100L-5-2	5/16	1/8
100L-6-4	3/8	1/4
100L-8-6	1/2	3/8
100L-10-8	5/8	1/2
100L-12-12	3/4	3/4
100L-14-12	7/8	3/4
100L-16-16	1"	1"
100L-20-20	1 1/4	1 1/4
100L-24-24	1 1/2	1 1/2

Tubing may be pushed all the way through the male connectors marked with an asterisk*. This exclusive feature has many uses in Hydraulic or air circuitry. For other fittings with this feature see Series 250 and Series A100.

100-LL
Extra Long Male Connector
Tube End-Male Pipe End



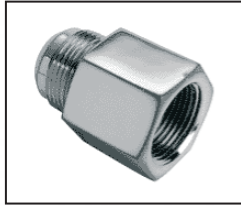
Lenz Part No.	Tube O.D.	Male Pipe Thread
100LL-4-2	1/4	1/8
100LL-5-2	5/16	1/8
100LL-6-4	3/8	1/4
100LL-8-6	1/2	3/8
100LL-10-8	5/8	1/2
100LL-12-12	3/4	3/4
100LL-14-12	7/8	3/4
100LL-16-16	1"	1"
100LL-20-20	1 1/4	1 1/4
100LL-24-24	1 1/2	1 1/2

250
Female Connector
Tube End-Female Pipe End

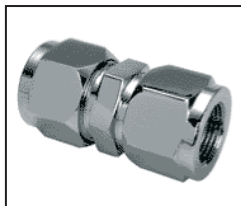


Lenz Part No.	Pressure Part No.	Tube O.D.	Female Pipe Thread
250-4-2*	2405-04-02	1/4	1/8
250-4-4*	2405-04-04	1/4	1/4
250-5-2*	2405-05-02	5/16	1/8
250-5-4*	2405-05-04	5/16	1/4
250-6-4*	2405-06-04	3/8	1/4
250-6-2	2405-06-02	3/8	1/8
250-6-6	2405-06-06	3/8	3/8
250-8-6*	2405-08-06	1/2	3/8
250-8-4	2405-08-04	1/2	1/4
250-8-8*	2405-08-08	1/2	1/2
250-10-8*	2405-10-08	5/8	1/2
250-10-4	2405-10-04	5/8	1/4
250-10-6	2405-10-06	5/8	3/8
250-12-12*	2405-12-12	3/4	3/4
250-12-8	2405-12-08	3/4	1/2
250-14-12*	2405-14-12	7/8	3/4
250-14-20*	2405-14-20	7/8	1 1/4
250-16-16*	2405-16-16	1"	1"
250-16-12	2405-16-12	1"	3/4
250-16-24*	2405-16-24	1"	1 1/2
250-18*16*	2405-18-16	1 1/8	1"
250-20-20*	2405-20-20	1 1/4	1 1/4
250-24-24*	2405-24-24	1 1/2	1 1/2
250-24-20*	2405-24-20	1 1/2	1 1/4
250-32-32*	2405-32-32	2"	2"

2405
37° Flare
Female Connector



300
Union
Tube End-Both Sides

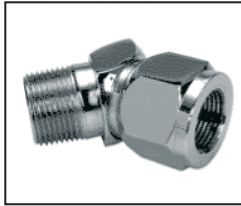


2403
37° Flare
Tube Union



Lenz Part No.	Pressure Part No.	Tube O.D.
300-2	2403-02-02	1/8
300-4	2403-04-04	1/4
300-5	2403-05-05	5/16
300-6	2403-06-06	3/8
300-8	2403-08-08	1/2
300-10	2403-10-10	5/8
300-12	2403-12-12	3/4
300-14	2403-14-14	7/8
300-16	2403-16-16	1"
300-20	2403-20-20	1 1/4
300-24	2403-24-24	1 1/2
300-32	2403-32-32	2"

350
Male 45° Elbow - Tube End
Male Pipe End



2503
37° Flare
Male Elbow



400-L
Long Male Elbow
Tube End - Male Pipe End



400
Male Elbow
Tube End - Male Pipe End



2501
37° Flare
Male Elbow



Lenz Part No.	Pressure Part No.	Tube O.D.	Male Pipe Thread
350-4-2	2503-04-02-4	1/4	1/8
350-5-2	2503-05-02-4	5/16	1/8
350-6-4	2503-06-04-4	3/8	1/4
350-6-6	2503-06-06-4	3/8	3/8
350-8-4	2503-08-04-4	1/2	1/4
350-8-6	2503-08-06-4	1/2	3/8
350-8-8	2503-08-08-4	1/2	1/2
350-10-8	2503-10-08-4	5/8	1/2
350-12-8	2503-12-08-4	3/4	1/2
350-12-12	2503-12-12-4	3/4	3/4
350-14-12	2503-14-12-4	7/8	3/4
350-16-12	2503-16-12-4	1"	3/4
350-16-16	2503-16-16-4	1"	1"
350-20-20	2503-20-20-4	1 1/4	1 1/4
350-24-24	2503-24-24-4	1 1/2	1 1/2
350-32-32	2503-32-32-4	2"	2"

Lenz Part No.	Tube O.D.	Male Pipe Thread	"A" (Tube Leg)
400L-4-2	1/4	1/8	1"
400L-5-2	5/16	1/8	1 1/32
400L-6-4	3/8	1/4	1 1/8
400L-8-6	1/2	3/8	1 15/32
400L-10-8	5/8	1/2	1 21/32
400L-12-12	3/4	3/4	1 27/32
400L-14-12	7/8	3/4	1 15/16
400L-16-16	1"	1"	2 7/32
400L-20-20	1 1/4	1 1/4	2 19/32

Lenz Part No.	Pressure Part No.	Tube O.D.	Male Pipe Thread
400-2-2	-	1/8	1/8
400-4-2	2501-04-02	1/4	1/8
400-4-4	2501-04-04	1/4	1/4
400-5-2	2501-05-02	5/16	1/8
400-5-4	2501-05-04	5/16	1/4
400-6-4	2501-06-04	3/8	1/4
400-6-2	2501-06-02	3/8	1/8
400-6-6	2501-06-06	3/8	3/8
400-6-8	2501-06-08	3/8	1/2
400-8-6	2501-08-06	1/2	3/8
400-8-4	2501-08-04	1/2	1/4
400-8-8	2501-08-08	1/2	1/2
400-8-12	2501-08-12-4	1/2	3/4
400-10-8	2501-10-08-4	5/8	1/2
400-10-4	-	5/8	1/4
400-10-6	2501-10-06-4	5/8	3/8
400-10-12	2501-10-12-4	5/8	3/4
400-12-12	2501-12-12-4	3/4	3/4
400-12-8	2501-12-08-4	3/4	1/2
400-14-12	2501-14-12-4	7/8	3/4
400-16-16	2501-16-16-4	1"	1"
400-16-12	2501-16-12-4	1"	1 1/4
400-20-20	2501-20-20-4	1 1/4	1 1/4
400-20-16	2501-20-16-4	1 1/4	1"
400-20-24	2501-20-24-4	1 1/4	1 1/2
400-24-24	2501-24-24-4	1 1/2	1 1/2
400-24-20	2501-24-20-4	1 1/2	1 1/4
400-32-32	2501-32-32-4	2"	2"
400-32-24	2501-32-24-4	2"	1 1/2

400-LL
Extra Long Male Elbow
Tube End - Male Pipe End



Lenz Part No.	Tube O.D.	Male Pipe Thread	"A" (Tube Leg)
400LL-4-2	1/4	1/8	1"
400LL-5-2	5/16	1/8	1 1/32
400LL-6-4	3/8	1/4	1 1/8
400LL-8-6	1/2	3/8	1 15/32
400LL-10-8	5/8	1/2	1 21/32
400LL-12-12	3/4	3/4	1 27/32
400LL-14-12	7/8	3/4	1 15/16
400LL-16-16	1"	1"	2 7/32
400LL-20-20	1 1/4	1 1/4	2 19/32

400-LLL
Extra Long, Long Male Elbow
Tube End - Male Pipe End



Lenz Part No.	Tube O.D.	Female Pipe Thread	"A" (Tube Leg)
400LLL-4-2	1/4	1/8	1"
400LLL-5-2	5/16	1/8	1 1/32
400LLL-6-4	3/8	1/4	1 1/8
400LLL-8-6	1/2	3/8	1 15/32
400LLL-10-8	5/8	1/2	1 21/32
400LLL-12-12	3/4	3/4	1 27/32
400LLL-14-12	7/8	3/4	1 15/16
400LLL-16-16	1"	1"	2 7/32
400LLL-20-20	1 1/4	1 1/4	2 19/32

450
Female Elbow • Tube End
Female Pipe End



2502
37° Flare
Female Elbow



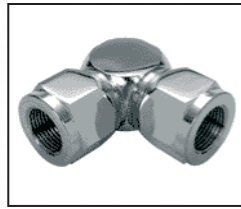
Lenz Part No.	Pressure Part No.	Tube O.D.	Female Pipe Thread
450-2-2	2502-02-02-4	1/8	1/8
450-4-2	2502-04-02-4	1/4	1/8
450-4-4	2502-04-04-4	1/4	1/4
450-5-2	2502-05-02-4	5/16	1/8
450-5-4	2502-05-04-4	5/16	1/4
450-6-4	2502-06-04-4	3/8	1/4
450-6-2	2502-06-02-4	3/8	1/8
450-6-6	2502-06-06-4	3/8	3/8
450-6-8	2502-06-08-4	3/8	1/2
450-8-6	2502-08-06-4	1/2	3/8
450-8-4	2502-08-04-4	1/2	1/4
450-8-8	2502-08-08-4	1/2	1/2
450-10-8	2502-10-08-4	5/8	1/2
450-10-4	-	5/8	1/4
450-10-6	2502-10-06-4	5/8	3/8
450-12-12	2502-12-12-4	3/4	3/4
450-12-8	2502-12-08-4	3/4	1/2
450-14-12	2502-14-12-4	7/8	3/4
450-16-16	2502-16-16-4	1"	1"
450-16-12	-	1"	3/4
450-20-20	2502-20-20-4	1 1/4	1 1/4
450-20-16	-	1 1/4	1"
450-24-24	2502-24-24-4	1 1/2	1 1/2
450-32-32	2502-32-32-4	2"	2"

Hydraulic Tube Fittings

500
Elbow Union
Tube End - Both Openings



2500
37° Flare
Union Elbow



600
Male Branch Tee • Tube End -
Tube End-Male Pipe Side Outlet



2601
37° Flare
Male Branch Tee



650
Female Branch Tee •
Tube End - Tube End -
Female Pipe Side Outlet



2602
37° Flare
Female Branch Tee



Lenz Part No.	Pressure Part No.	Tube O.D.
500-2	2500-02-02-4	1/8
500-4	2500-04-04-4	1/4
500-5	2500-05-05-4	5/16
500-6	2500-06-06-4	3/8
500-8	2500-08-08-4	1/2
500-10	2500-10-10-4	5/8
500-12	2500-12-12-4	3/4
500-14	2500-14-14	7/8
500-16	2500-16-16-4	1"
500-20	2500-20-20-4	1 1/4
500-24	2500-24-24-4	1 1/2
500-32	2500-32-32-4	2"

Lenz Part No.	Pressure Part No.	Tube O.D.	Male Pipe Thread
600-2-2-2	2601-02-02-02-4	1/8	1/8
600-4-4-2	2601-04-04-04-4	1/4	1/8
600-4-4-4	2601-04-04-04-4	1/4	1/4
600-5-5-2	2601-05-05-02-4	5/16	1/8
600-5-5-4	2601-05-05-04-4	5/16	1/4
600-6-6-4	2601-06-06-04-4	3/8	1/4
600-6-6-2	2601-06-06-02-4	3/8	1/8
600-6-6-6	2601-06-06-06-4	3/8	3/8
600-6-6-8	2601-06-06-08-4	3/8	1/2
600-8-8-6	2601-08-08-06-4	1/2	3/8
600-8-8-4	2601-08-08-04-4	1/2	1/4
600-8-8-8	2601-08-08-08-4	1/2	1/2
600-10-10-8	2601-10-10-08-4	5/8	1/2
600-10-10-6	2601-10-10-06-4	5/8	3/8
600-10-10-12	2601-10-10-12-4	5/8	3/4
600-12-12-12	2601-12-12-12-4	3/4	3/4
600-12-12-8	2601-12-12-08-4	3/4	1/2
600-14-14-12	2601-14-14-12-4	7/8	3/4
600-16-16-16	2601-16-16-16-4	1"	1"
600-16-16-12	2601-16-16-12-4	1"	3/4
600-20-20-20	2601-20-20-20-4	1 1/4	1 1/4
600-20-20-16	2601-20-20-16-4	1 1/4	1"
600-24-24-24	2601-24-24-24-4	1 1/2	1 1/2
600-24-24-20	-	1 1/2	1 1/4
600-32-32-32	2601-32-32-32-4	2"	2"

Lenz Part No.	Pressure Part No.	Tube O.D.	Female Pipe Thread
650-2-2-2	2602-02-02-02-4	1/8	1/8
650-4-4-2	2602-04-04-02-4	1/4	1/8
650-4-4-4	2602-04-04-04-4	1/4	1/4
650-5-5-2	2602-05-05-02	5/16	1/8
650-5-5-4	-	5/16	1/4
650-6-6-4	2602-06-06-04-4	3/8	1/4
650-6-6-2	2602-06-06-02	3/8	1/8
650-8-8-6	2602-08-08-06-4	1/2	3/8
650-8-8-4	2602-08-08-04	1/2	1/4
650-8-8-8	2602-08-08-08-4	1/2	1/2
650-10-10-8	2602-10-10-08-4	5/8	1/2
650-10-10-4	-	5/8	1/4
650-12-12-12	2602-12-12-12-4	3/4	3/4
650-12-12-8	2602-12-12-08	3/4	1/2
650-14-14-12	2602-14-14-12	7/8	3/4
650-16-16-16	2602-16-16-16-4	1"	1"
650-20-20-20	2602-20-20-20-4	1 1/4	1 1/4
650-24-24-24	2602-24-24-24-4	1 1/2	1 1/2
650-32-32-32	2602-32-32-32	2"	2"

700
Tee Union Tube End -
All Openings



2603
37° Flare
Union Tee



Lenz Part No.	Pressure Part No.	Tube O.D.
700-2	2603-02-02-02-4	1/8
700-4	2603-04-04-04-4	1/4
700-5	2603-05-05-05-4	5/16
700-6	2603-06-06-06-4	3/8
700-8	2603-08-08-08-4	1/2
700-10	2603-10-10-10-4	5/8
700-12	2603-12-12-12-4	3/4
700-14	2603-14-14-14-4	7/8
700-16	2603-16-16-16-4	1"
700-20	2603-20-20-20-4	1 1/4
700-24	2603-24-24-24-4	1 1/2
700-32	2603-32-32-32	2"

750
Male Run Tee •
Tube End - Male Pipe End -
Tube Side Outlet



2605
37° Flare
Male Run Tee



Lenz Part No.	Pressure Part No.	Tube O.D.	Male Pipe Thread
750-2-2-2	2605-02-02-02	1/8	1/8
750-4-2-4	2605-04-02-04-4	1/4	1/8
750-5-2-5	2605-05-02-05-4	5/16	1/8
750-6-4-6	2605-06-04-06-4	3/8	1/4
750-6-2-6	2605-06-02-06	3/8	1/8
750-8-6-8	2605-08-06-08-4	1/2	3/8
750-10-8-10	2605-10-08-10-4	5/8	1/2
750-12-12-12	2605-12-12-12-4	3/4	3/4
750-14-12-14	2605-14-12-14-4	7/8	3/4
750-16-16-16	2605-16-16-16-4	1"	1"
750-20-20-20	2605-20-20-20-4	1 1/4	1 1/4
750-24-24-24	2605-24-24-24-4	1 1/2	1 1/2
750-32-32-32	2605-32-32-32-4	2"	2"

800
Female Run Tee •
Tube End - Female Pipe End -
Tube Side Outlet



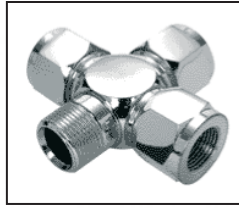
2606
37° Flare
Female Run Tee



Lenz Part No.	Pressure Part No.	Tube O.D.	Female Pipe Thread
800-2-2-2	-	1/8	1/8
800-4-2-4	-	1/4	1/8
800-5-2-5	-	5/16	1/8
800-6-4-6	-	3/8	1/4
800-6-2-6	-	3/8	1/8
800-8-6-8	2606-08-06-08-4	1/2	3/8
800-8-8-8	2606-08-08-08-4	1/2	1/2
800-10-8-10	2606-10-08-10-4	5/8	1/2
800-12-12-12	2606-12-12-12-4	3/4	3/4
800-14-12-14	2606-14-12-14-4	7/8	3/4
800-16-16-16	2606-16-16-16-4	1"	1"
800-20-20-20	2606-20-20-20-4	1 1/4	1 1/4
800-24-24-24	2606-24-24-24-4	1 1/2	1 1/2
800-32-32-32	2606-32-32-32	2"	2"

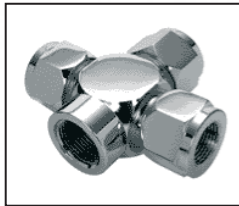
Hydraulic Tube Fittings

810
Male Cross •
Tube End - Tube End -
Tube End - Male Pipe End



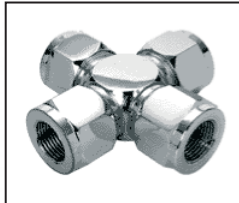
Lenz Part No.	Tube O.D.	Male Pipe Thread
810-4-4-4-2	1/4	1/8
810-5-5-5-2	5/16	1/8
810-6-6-6-4	3/8	1/4
810-8-8-8-6	1/2	3/8
810-10-10-10-8	5/8	1/2
810-12-12-12-12	3/4	3/4
810-14-14-14-12	7/8	3/4
810-16-16-16-16	1"	1"
810-20-20-20-20	1 1/4	1 1/4
810-24-24-24-24	1 1/2	1 1/2
810-32-32-32-32	2"	2"

820
Female Cross •
Tube End - Tube End -
Tube End - Female Pipe End



Lenz Part No.	Tube O.D.	Female Pipe Thread
820-4-4-2-2	1/4	1/8
820-5-5-5-2	5/16	1/8
820-6-6-6-4	3/8	1/4
820-8-8-8-6	1/2	3/8
820-10-10-10-8	5/8	1/2
820-12-12-12-12	3/4	3/4
820-14-14-14-12	7/8	3/4
820-16-16-16-16	1"	1"
820-20-20-20-20	1 1/4	1 1/4
820-24-24-24-24	1 1/2	1 1/2
820-32-32-32-32	2"	2"

850
Tube Cross
Tube End - All Openings



2650
37° Flare
Union Cross



Lenz Part No.	Pressure Part No.	Tube O.D.
850-4	2650-04-04-04-04-4	1/4
850-5	2650-05-05-05-05-4	5/16
850-6	2650-06-06-06-06-4	3/8
850-8	2650-08-08-08-08-4	1/2
850-10	2650-10-10-10-10-4	5/8
850-12	2650-12-12-12-12-4	3/4
850-14	2650-14-14-14-14-4	7/8
850-16	2650-16-16-16-16-4	1"
850-20	2650-20-20-20-20-4	1 1/4
850-24	2650-24-24-24-24-4	1 1/2
850-32	2650-32-32-32-32-4	2"

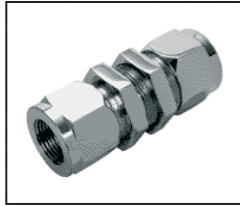
860
Guage Tee • Female Pipe End -
Male Pipe End - Tube Side Outlet



Particularly suited for guage &
air bleeder valve connections

Lenz Part No.	Tube O.D.	Male & Female Pipe Thread
860-4-2-2	1/4	1/8
860-6-4-4	3/8	1/4
860-8-6-6	1/2	3/8
860-10-8-8	5/8	1/2
860-12-12-12	3/4	3/4
860-14-12-12	7/8	3/4
860-16-16-16	1"	1"

900
Bulkhead Union • Tube Both Ends
Maximum Bulkhead Thickness 1/2"



2700LN
37° Flare
Union Cross



Lenz Part No.	Pressure Part No.	Tube O.D.	Bulkhead Hole Dia.
900-4-4	2700LN-04-04	1/4	17/32
900-5-5	2700LN-05-05	5/16	19/32
900-6-6	2700LN-06-06	3/8	21/32
900-8-8	2700LN-08-08	1/2	29/32
900-10-10	2700LN-10-10	5/8	1 1/32
900-10-8	-	5/8 to 1/2 BH	29/32
900-12-12	2700LN-12-12	3/4	1 5/32
900-14-14	2700LN-14-14	7/8	1 9/32
900-16-16	2700LN-16-16	1"	1 17/32
900-20-20	2700LN-20-20	1 1/4	1 25/32
900-20-16	-	1 1/4 to 1" BH	1 17/32
900-24-24	2700LN-24-24	1 1/2	2 1/32
900-32-32	2700LN-32-32	2"	2 21/32

940
Bulkhead 45° Union Elbow
Tube Both Openings
Max. Bulkhead Thickness 1/2"



Lenz Part No.	Tube O.D.	Bulkhead Hole Dia.
940-4	1/4	17/32
940-5	5/16	19/32
940-6	3/8	21/32
940-8	1/2	29/32
940-10	5/8	1 1/32
940-12	3/4	1 5/32
940-16	1"	1 17/32
940-20	1 1/4	1 25/32

950
Bulkhead Union Elbow
• Tube Both Openings
Max. Bulkhead Thickness 1/2"



2701
37° Flare
Bulkhead Union Elbow

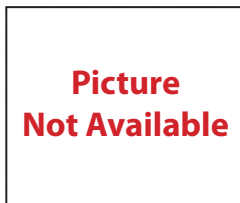


Lenz Part No.	Pressure Part No.	Tube O.D.	Blkhead Hole Dia.
950-4	2701-04-04-4	1/4	17/32
950-5	2701-05-05-4	5/16	19/32
950-6	2701-06-06-4	3/8	21/32
950-8	2701-08-08-4	1/2	29/32
950-10	2701-10-10-4	5/8	1 1/32
950-12	2701-12-12-4	3/4	1 5/32
950-14	-	7/8	1 9/32
950-16	2701-16-16-4	1"	1 17/32
950-20	2701-20-20-4	1 1/4	1 25/32
950-24	2701-24-24	1 1/2	2 1/32

960
Bulkhead Tee
Tube End All Openings
Max. Bulkhead Thickness 1/2"



2703
37° Flare
Bulkhead Branch Tee



Lenz Part No.	Pressure Part No.	Tube O.D.	Bulkhead Hole Dia.
960-4	2703-04-04-04-4	1/4	17/32
960-5	2703-05-05-05	5/16	19/32
960-6	2703-06-06-06-4	3/8	21/32
960-8	2703-08-08-08-4	1/2	29/32
960-10	2703-10-10-10-4	5/8	1 1/32
960-12	2703-12-12-12-4	3/4	1 5/32
960-16	2703-16-16-16-4	1"	1 17/32
960-20	2703-20-20-20	1 1/4	1 25/32

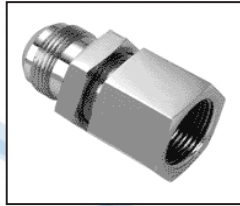
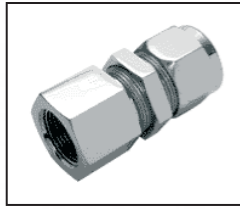
Picture
Not Available

Hydraulic Tube Fittings

980
Female Bulkhead
Tube End To Female Pipe End
Max. Bulkhead Thickness 1/2"



2705
37° Flare
Female Bulkhead Connector

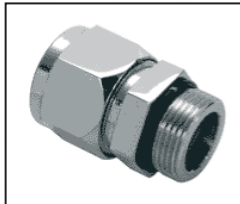


Lenz Part No.	Pressure Part No.	Tube O.D.	Bulkhead Hole Dia.	Female Pipe Thread
980-4-2	2705LN-02-04	1/4	17/32	1/8
980-4-4	2705LN-04-04	1/4	17/32	1/4
980-5-2	-	5/16	19/32	1/8
980-6-4	2705LN-04-06	3/8	21/32	1/4
980-6-6	2705LN-06-06	3/8	21/32	3/8
980-8-6	2705LN-06-08	1/2	29/32	3/8
980-8-8	2705LN-08-08	1/2	29/32	1/2
980-10-8	2705LN-08-10	5/8	1 1/32	1/2
980-12-12	2705LN-12-12	3/4	1 5/32	3/4
980-14-12	2705LN-12-14	7/8	1 9/32	3/4
980-16-16	2705LN-16-16	1"	1 17/32	1"
980-20-20	2705LN-20-20	1 1/4	1 25/32	1 1/4
980-24-24	2705LN-24-24	1 1/2	2 1/32	1 1/2
980-32-32	-	2"	2 21/32	2"

A-100
Male Connector • Tube End -
S.A.E Straight Thread End



6400
37° Flare
Straight Thread Connector



*Fittings with Tube Diameter
Bored Through

Lenz Part No.	Pressure Part No.	Tube O.D.	Straight Thread
A100-2-2*	6400-02-02	1/8	5/16-24
A100-4-4	6400-04-04	1/4	7/16-20
A100-4-5	6400-04-05	1/4	1/2-20
A100-4-6*	6400-04-06	1/4	9/16-18
A100-5-5	6400-05-05	5/16	1/2-20
A100-6-6	6400-06-06	3/8	9/16-18
A100-6-8*	6400-06-08	3/8	3/4-16
A100-8-8	6400-08-08	1/2	3/4-16
A100-8-6	6400-08-06	1/2	9/16-18
A100-8-10*	6400-08-10	1/2	7/8-14
A100-8-12*	6400-8-12	1/2	1 1/16-12
A100-10-10	6400-10-10	5/8	7/8-14
A100-10-8	6400-10-08	5/8	3/4-16
A100-10-12*	6400-10-12	5/8	1 1/16-12
A100-12-12	6400-12-12	3/4	1 1/16-12
A100-12-8	6400-12-08	3/4	3/4-16
A100-12-10	6400-12-10	3/4	7/8-14
A100-12-14*	6400-12-14	3/4	1 3/16-12
A100-12-16*	6400-12-16	3/4	1 5/16-12
A100-14-14	6400-14-14	7/8	1 3/16-12
A100-14-16*	6400-14-16	7/8	1 5/16-12
A100-16-12	6400-16-12	1"	1 5/16-12
A100-16-16	6400-16-16	1"	1 5/16-12
A100-16-20*	6400-16-20	1"	1 5/8-12
A100-20-20	6400-20-20	1 1/4	1 5/8-12
A100-20-16	6400-20-16	1 1/4	1 5/16-12
A100-20-24*	6400-20-24	1 1/4	1 7/8-12
A100-24-24	6400-24-24	1 1/2	1 7/8-12
A100-24-20	6400-24-20	1 1/2	1 5/8-12
A100-32-32	6400-32-32	2"	2 1/2-12

A-100-L
Long Male Connector • Tube End
S.A.E Straight Thread End



6400-L
37° Flare
Straight Thread Connector Long



Lenz Part No.	Pressure Part No.	Tube O.D.	Straight Thread
A100L-2-2	-	1/8	5/16-24
A100L-4-4	6400L-04-04	1/4	7/16-20
A100L-5-5	6400L-05-05	5/16	1/2-20
A100L-6-6	6400L-06-06	3/8	9/16-18
A100L-8-8	6400L-08-08	1/2	3/4-16
A100L-10-10	6400L-10-10	5/8	7/8-14
A100L-12-12	6400L-12-12	3/4	1 1/16-12
A100L-14-14	6400L-14-14	7/8	1 3/16-12
A100L-16-16	6400L-16-16	1"	1 5/16-12
A100L-20-20	6400L-20-20	1 1/4	1 5/8-12
A100L-24-24	6400L-24-24	1 1/2	1 7/8-12
A100L-32-32	-	2"	2 1/2-12

A-400
Male Elbow • Tube End
S.A.E Straight Thread End



6801
37° Flare
Straight Thread Elbow



Lenz Part No.	Pressure Part No.	Tube O.D.	Straight Thread
A400-4-4	6801-04-04-4	1/4	7/16-20
A400-4-6	6801-04-06-4	1/4	9/16-18
A400-5-5	6801-05-05-4	5/16	1/2-20
A400-6-6	6801-06-06-4	3/8	9/16-18
A400-6-8	6801-06-08-4	3/8	3/4-16
A400-8-8	6801-08-08-4	1/2	3/4-16
A400-8-6	6801-08-06-4	1/2	9/16-18
A400-8-10	6801-8-10-4	1/2	7/8-14
A400-10-10	6801-10-10-4	5/8	7/8-14
A400-10-8	6801-10-08-4	5/8	3/4-16
A400-10-12	6801-10-12-4	5/8	1 1/16-12
A400-12-12	6801-12-12-4	3/4	1 1/16-12
A400-12-8	6801-12-08-4	3/4	3/4-16
A400-12-10	6801-12-10-4	3/4	7/8-14
A400-12-16	6801-12-16-4	3/4	1 5/16-12
A400-14-14	6801-14-14-4	7/8	1 3/16-12
A400-16-16	6801-16-16-4	1"	1 5/16-12
A400-16-12	6801-16-12-4	1"	1 1/16-12
A400-16-20	6801-16-20-4	1"	1 5/8-12
A400-20-20	6801-20-20-4	1 1/4	1 5/8-12
A400-20-16	6801-20-16-4	1 1/4	1 5/16-12
A400-20-24	6801-20-24-4	1 1/4	1 7/8-12
A400-24-24	6801-24-24-4	1 1/2	1 7/8-12
A400-32-32	6801-32-32-4v	2"	2 1/2-12

A-350
Male 45° Elbow Tube End
S.A.E Straight Thread End



6802
37° Flare
Straight Thread Elbow



Lenz Part No.	Pressure Part No.	Tube O.D.	Straight Thread
A350-4	6802-04-04-4	1/4	7/16-20
A350-5	6802-05-05-4	5/16	1/2-20
A350-6	6802-06-06-4	3/8	9/16-18
A350-8	6802-08-08-4	1/2	3/4-16
A350-10	6802-10-10-4	5/8	7/8-14
A350-12	6802-12-12-4	3/4	1 1/16-12
A350-14	6802-14-14-4	7/8	1 3/16-12
A350-16	6802-16-16-4	1"	1 5/16-12
A350-20	6802-20-20-4	1 1/4	1 5/8-12
A350-24	6802-24-24-4	1 1/2	1 7/8-12
A350-32	6802-32-32	2"	2 1/2-12

A-600
Male Branch Tee - Tube End-
Tube End-S.A.E Straight
Thread Side Outlet



6803
37° Flare
O.R.B. Branch Tee



Lenz Part No.	Pressure Part No.	Tube O.D.	Straight Thread
A600-4	6803-04-04-04-4	1/4	7/16-20
A600-5	6803-05-05-05-4	5/16	1/2-20
A600-6	6803-06-06-06-4	3/8	9/16-18
A600-8	6803-08-08-08-4	1/2	3/4-16
A600-10	6803-10-10-10-4	5/8	7/8-14
A600-12	6803-12-12-12-4	3/4	1 1/16-12
A600-14	6803-14-14-14	7/8	1 3/16-12
A600-16	6803-16-16-16-4	1"	1 5/16-12
A600-20	6803-20-20-20-4	1 1/4	1 5/8-12
A600-24	6803-24-24-24	1 1/2	1 7/8-12
A600-32	6803-32-32-32	2"	2 1/2-12

Hydraulic Tube Fittings /ORB & 37° Flare Tube Fittings

A-750
Male Run Tee • Tube End - S.A.E
Straight Thread
End-Tube Side Outlet



6804
37° Flare
O.R.B. Run Tee

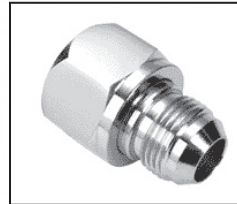


Lenz Part No.	Pressure Part No.	Tube O.D.	Straight Thread
A750-4	6804-04-04-04-4	1/4	7/16-20
A750-5	6804-05-05-05-4	5/16	1/2-20
A750-6	6804-06-06-06-4	3/8	9/16-18
A750-8	6804-08-08-08-4	1/2	3/4-16
A750-10	6804-10-10-10-4	5/8	7/8-14
A750-12	6804-12-12-12-4	3/4	1 1/16-12
A750-14	6804-14-14-14	7/8	1 3/16-12
A750-16	6804-16-16-16-4	1"	1 5/16-12
A750-20	6804-20-20-20-4	1 1/4	1 5/8-12
A750-24	6804-24-24-24	1 1/2	1 7/8-12
A750-32	6804-32-32-32	2"	2 1/2-12

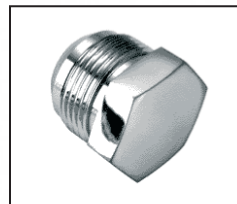
PART NUMBERS INCLUDE BODY NUTS, SLEEVES,
"O-RINGS, AND BACK-UP WASHERS

Part No.	Tube O.D.	Female Jic	Male Jic
Tube Reducers			
2406-04-03	1/4 x 3/16	7/16 - 20	3/8-24
2406-06-04	3/4 x 1/4	9/16 - 18	7/16-20
2406-08-04	1/2 x 1/4	3/4 - 16	7/16-20
2406-08-06	1/2 x 3/8	3/4 - 16	9/16-18
2406-10-04	5/8 x 1/4	7/8 - 14	7/16-20
2406-10-06	5/8 x 3/8	7/8 - 14	9/16-18
2406-10-08	5/8 x 1/2	7/8 - 14	3/4-16
2406-12-04	3/4 x 1/4	1 1/16 - 12	7/16-20
2406-12-06	3/4 x 3/8	1 1/16 - 12	9/16-18
2406-12-08	3/4 x 1/2	1 1/16 - 12	3/4-16
2406-12-10	3/4 x 5/8	1 1/16 - 12	7/8-14
2406-14-06	7/8 x 3/8	1 3/16 - 12	9/16-18
2406-14-08	7/8 x 1/2	1 3/16 - 12	3/4-16
2406-14-10	7/8 x 5/8	1 3/16 - 12	7/8-14
2406-14-12	7/8 x 3/4	1 3/16 - 12	1 1/16 - 12
2406-16-04	1" x 1/4	1 5/16 - 12	7/16 - 20
2406-16-06	1" x 3/8	1 5/16 - 12	9/16 - 18
2406-16-08	1" x 1/2	1 5/16 - 12	3/4 - 16
2406-16-10	1" x 5/8	1 5/16 - 12	7/8 - 14
2406-16-12	1" x 3/4	1 5/16 - 12	1 1/16 - 12
2406-16-14	1" x 7/8	1 5/16 - 12	1 3/16 - 12
2406-20-12	1 1/4 x 3/4	1 5/8 - 12	1 1/16 - 12
2406-20-16	1 1/4 x 1"	1 5/8 - 12	1 5/16 - 12
2406-24-08	1 1/2 x 1/2	1 7/8 - 12	3/4 - 16
2406-24-10	1 1/2 x 5/8	1 7/8 - 12	7/8 - 14
2406-24-12	1 1/2 x 3/4	1 7/8 - 12	1 1/16 - 12
2406-24-16	1 1/2 x 1"	1 7/8 - 12	1 5/16 - 12
2406-24-20	1 1/2 x 1 1/4	1 7/8 - 12	1 5/8 - 12
2406-32-24	2" x 1 1/2	2 1/2 - 12	1 7/8 - 12
Tube Expanders			
2406-04-06	1/4 x 3/8	7/16 - 20	9/16 - 18
2406-06-08	3/8 x 1/2	9/16 - 18	3/4 - 16
2406-08-10	1/2 x 5/8	3/4 - 16	7/8 - 14
2406-08-12	1/2 x 3/4	3/4 - 16	1 1/16 - 12
2406-10-12	5/8 x 3/4	7/8 - 14	1 1/16 - 12
2406-12-16	3/4 x 1"	1 1/16 - 12	1 5/16 - 12
2406-16-20	1" x 1 1/4	1 5/16 - 12	1 5/16 - 12
2406-20-24	1 1/4 x 1 1/2	1 5/8 - 12	1 5/8 - 12

Tube Reducer



Tube Plug



Part No.	Tube O.D.	Male Jic	Hex
2408-04	1/4	7/16 - 20	1/2
2408-05	5/16	1/2 - 20	9/16
2408-06	3/8	9/16 - 18	5/8
2408-08	1/2	3/4 - 16	13/16
2408-10	5/8	7/8 - 14	15/16
2408-12	3/4	1 1/16 - 12	1 1/8
2408-14	7/8	1 3/16 - 12	1 1/4
2408-16	1"	1 5/16 - 12	1 3/8
2408-20	1 1/4	1 5/8 - 12	1 11/16
2408-24	1 1/2	1 7/8 - 12	2"
2408-32	2"	2 1/2 - 12	2 5/8

ORB & 37° Flare Tube Fittings



JIC Tube Cap

Part No.	Tube O.D.
304C-02	1/8
304C-04	1/4
304C-05	5/16
304C-06	3/8
304C-08	1/2
304C-10	5/8
304C-12	3/4
304C-14	7/8
304C-16	1"
304C-20	1 1/4
304C-24	1 1/2
304C-32	2"



JIC Tube Nut

Part No.	Tube O.D.
318-02	1/8
318-04	1/4
318-05	5/16
318-06	3/8
318-08	1/2
318-10	5/8
318-12	3/4
318-14	7/8
318-16	1"
318-20	1 1/4
318-24	1 1/2
318-32	2"



JIC Tube Sleeve

Part No.	Tube O.D.
319-02	1/8
319-04	1/4
319-05	5/16
319-06	3/8
319-08	1/2
319-10	5/8
319-12	3/4
319-14	7/8
319-16	1"
319-20	1 1/4
319-24	1 1/2
319-32	2"



Straight Male Adaptor, ORB x NPT

Part No.	Male ORB	Male NPTF
6401-04-02	7/16 - 20	1/8 - 27
6401-04-04	7/16 - 20	1/4 - 18
6401-06-02	9/16 - 18	1/8 - 27
6401-06-04	9/16 - 18	1/4 - 18
6401-06-06	9/16 - 18	3/8 - 18
6401-06-08	9/16 - 18	1/2 - 14
6401-08-04	3/4 - 16	1/4 - 18
6401-08-06	3/4 - 16	3/8 - 18
6401-08-08	3/4 - 16	1/2 - 14
6401-08-12	3/4 - 16	3/4 - 14
6401-10-04	7/8 - 14	1/4 - 18
6401-10-06	7/8 - 14	3/8 - 18
6401-10-08	7/8 - 14	1/2 - 14
6401-10-12	7/8 - 14	3/4 - 14
6401-12-06	1 1/16 - 12	3/8 - 18
6401-12-08	1 1/16 - 12	1/2 - 14
6401-12-12	1 1/16 - 12	3/4 - 14
6401-12-16	1 1/16 - 12	1 - 11 1/2
6401-16-12	1 5/16 - 12	3/4 - 14
6401-16-16	1 5/16 - 12	1 - 11 1/2
6401-20-20	1 5/8 - 12	1 1/4 - 11 1/2
6401-24-24	1 7/8 - 12	1 1/2 - 11 1/2
6401-32-32	2 1/2 - 12	2 - 11 1/2



ORB Male x NPT Female Adaptor

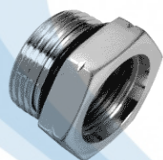
Part No.	Male ORB	Male NPTF
6405-04-02	7/16 - 20	1/8 - 27
6405-04-04	7/16 - 20	1/4 - 18
6405-06-02	9/16 - 18	1/8 - 27
6405-06-04	9/16 - 18	1/4 - 18
6405-06-06	9/16 - 18	3/8 - 18
6405-06-08	9/16 - 18	1/2 - 14
6405-08-04	3/4 - 16	1/4 - 18
6405-08-06	3/4 - 16	3/8 - 18
6405-08-08	3/4 - 16	1/2 - 14
6405-08-12	3/4 - 16	3/4 - 14
6405-10-04	7/8 - 14	1/4 - 18
6405-10-06	7/8 - 14	3/8 - 18
6405-10-08	7/8 - 14	1/2 - 14
6405-10-12	7/8 - 14	3/4 - 14
6405-12-06	1 1/16 - 12	3/8 - 18
6405-12-08	1 1/16 - 12	1/2 - 14
6405-12-12	1 1/16 - 12	3/4 - 14
6405-12-16	1 1/16 - 12	1 - 11 1/2
6405-16-12	1 5/16 - 12	3/4 - 14
6405-16-16	1 5/16 - 12	1 - 11 1/2
6405-20-20	1 5/8 - 12	1 1/4 - 11 1/2
6405-24-24	1 7/8 - 12	1 1/2 - 11 1/2
6405-32-32	2 1/2 - 12	2 - 11 1/2



ORB Swivel Male Union

Part No.	Straight Thread
6407-04-04	7/16-20
6407-05-05	1/2-20
6407-06-06	9/16-18
6407-08-08	3/4-16
6407-10-10	7/8-14
6407-12-12	1 1/16-12
6407-16-16	1 5/16-12
6407-20-20	1 5/8-12
6407-24-24	1 7/8-12
6407-32-32	2 1/2-12

ORB & 37° Flare Tube Fittings



Male x Female ORB Reducers

Part No.	Male ORB	Female ORB
6410-06-04	9/16-18	7/16-20
6410-08-04	3/4-16	7/16-20
6410-08-06	3/4-16	9/16-18
6410-10-04	7/8-14	7/16-20
6410-10-06	7/8-14	9/16-18
6410-10-08	7/8-14	3/4-16
6410-12-04	1 1/16-12	7/16-20
6410-12-06	1 1/16-12	9/16-18
6410-12-08	1 1/16-12	3/4-16
6410-12-10	1 1/16-12	7/8-14
6410-14-06	1 3/16-12	9/16-18
6410-14-08	1 3/16-12	3/4-16
6410-14-10	1 3/16-12	7/8-14
6410-14-12	1 3/16-12	1 1/16-12
6410-16-04	1 5/16-12	7/16-20
6410-16-10	1 5/16-12	7/8-14
6410-16-12	1 5/16-12	1 1/16-12
6410-16-14	1 5/16-12	1 3/16-12
6410-20-12	1 5/8-12	1 1/16-12
6410-20-16	1 5/8-12	1 5/16-12
6410-24-12	1 7/8-12	1 1/16-12
6410-24-16	1 7/8-12	1 5/16-12
6410-24-20	1 7/8-12	1 5/8-12
6410-32-24	2 1/2-12	1 7/8-12



ORB Socket Hex Plug

Part No.	Straight Thread
6409-04	7/16-20
6409-05	1/2-20
6409-06	9/16-18
6409-08	3/4-16
6409-10	7/8-14
6409-12	1 1/16-12
A400-14	1 3/16-12
6409-16	1 5/16-12
6409-20	1 5/8-12
6409-24	1 7/8-12



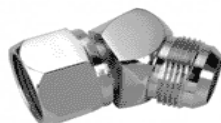
90 Degree Swivel Tube Elbow

Part No.	Tube O.D.
6500-02	1/8
6500-04	1/4
6500-05	5/16
6500-06	3/8
6500-08	1/2
6500-10	5/8
6500-12	3/4
6500-14	7/8
6500-16	1"
6500-20	1 1/4
6500-24	1 1/2



Swivel Nut Adaptor, Male NPT x Female JIC

Part No.	Tube O.D.	Female JIC	Male NPT
6505-04-04	1/4	7/16 - 20	1/4 - 18
6505-04-06	3/8	9/16 - 18	1/4 - 18
6505-06-06	3/8	9/16 - 18	3/8 - 18
6505-06-08	1/2	3/4 - 16	3/8 - 18
6505-06-10	5/8	7/8 - 14	3/8 - 18
6505-08-08	1/2	3/4 - 16	1/2 - 14
6505-08-10	5/8	7/8-14	1/2 - 14
6505-08-12	3/4	1 1/16-12	1/2 - 14
6505-12-12	3/4	1 1/16 - 12	3/4 - 14
6505-16-16	1	1 5/16 - 12	1 - 11 1/2
6505-20-20	1 1/4	1 5/8 - 12	1 1/4 - 11 1/2
6505-24-24	1 1/2	1 7/8 - 12	1 1/2 - 11 1/2



45° Swivel Tube Elbow

Part No.	Tube O.D.
6502-02	1/8
6502-04	1/4
6502-05	5/16
6502-06	3/8
6502-08	1/2
6502-10	5/8
6502-12	3/4
6502-14	7/8
6502-16	1"
6502-20	1 1/4
6502-24	1 1/2



Swivel Nut Branch Tee

Part No.	Straight Thread.
6600-04-04-04	7/16-20
6600-05-05-05	1/2-20
6600-06-06-06	9/16-18
6600-08-08-08	3/4-16
6600-10-10-10	7/8-14
6600-12-12-12	1 1/16-12
6600-14-14-14	1 3/16-12
6600-16-16-16	1 5/16-12
6600-20-20-20	1 5/8-12
6600-24-24-24	1 7/8-12



Swivel Nut Run Tee

Part No.	Straight Thread
6602-04-04-04	7/16-20
6602-05-05-05	1/2-20
6602-06-06-06	9/16-18
6602-08-08-08	3/4-16
6602-10-10-10	7/8-14
6602-12-12-12	1 1/16-12
6602-14-14-14	1 3/16-12
6602-16-16-16	1 5/16-12
6602-20-20-20	1 5/8-12
6602-24-24-24	1 7/8-12



Female Pipe

Part No.	Hose ID	Thread Size NPT
104-02-02	1/8"	1/8"
104-02-04	1/8"	1/4"
104-03-02	3/16"	1/8"
104-03-04	3/16"	1/4"
104-04-02	1/4"	1/8"
104-04-04	1/4"	1/4"
104-04-06	1/4"	3/8"
104-05-02	5/16"	1/8"
104-05-04	5/16"	1/4"
104-05-06	5/16"	3/8"
104-05-08	5/16"	1/2"
104-06-02	3/8"	1/8"
104-06-04	3/8"	1/4"
104-06-06	3/8"	3/8"
104-06-08	3/8"	1/2"
104-08-04	1/2"	1/4"
104-08-06	1/2"	3/8"
104-08-08	1/2"	1/2"
104-12-12	3/4"	3/4"
104-16-12	1"	3/4"
104-16-16	1"	1"

Standard Hose Barb



Push-Lock Hose Barb



Male Pipe

Standard Part No.	Push-Lock Part No.	Hose ID	Thread Size NPT
102-04-02	272-04-02	1/4"	1/8"
102-04-04	272-04-04	1/4"	1/4"
1022-04-06	272-04-06	1/4"	3/8"
102-05-02	272-05-02	5/16"	1/8"
102-05-04	272-05-04	5/16"	1/4"
102-06-04	272-06-04	3/8"	1/4"
102-06-06	272-06-06	3/8"	3/8"
102-06-08	272-06-08	3/8"	1/2"
102-06-12	272-06-12	3/8"	3/4"
102-08-04	272-08-04	1/2"	1/4"
102-08-06	272-08-06	1/2"	3/8"
102-08-08	272-08-08	1/2"	1/2"
102-08-12	272-08-12	1/2"	3/4"
102-10-06	272-10-06	5/8"	3/8"
102-10-08	272-10-08	5/8"	1/2"
102-10-12	272-10-12	5/8"	3/4"
102-12-08	272-12-08	3/4"	1/2"
102-12-12	272-12-12	3/4"	3/4"



Standard Hose Splicer



Part No.	Hose ID	Thread Size NPT
178-02-02	1/8"	1/8"
178-03-03	3/16	3/16
178-04-04	1/4"	1/4"
178-05-05	5/16"	5/16"
178-06-06	3/8"	3/8"
178-08-08	1/2"	1/2"
178-10-10	5/8"	5/8"
178-12-12	3/4"	3/4"
178-16-16	1"	1"



Push Lock Hose Splicer

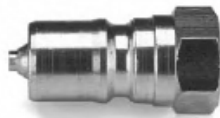


Part No.	Hose ID	Thread Size NPT
296-04-04	1/4"	1/4"
296-05-05	5/16"	5/16"
296-06-06	3/8"	3/8"
296-08-08	1/2"	1/2"
296-10-10	5/8"	5/8"
296-12-12	3/4"	3/4"



Coupling Half

Connection (Female NPT)	Body Size	Working Pressure	Parker Part Number	Competitive Part Number			Dust Cap
				Press. Conn.	Aeroquip	Hansen	
1/8"	1/8"	4000	H1-62	PCC-02	1003-02-02	1-H11	PCC-02P
1/4"	1/4"	3700	H2-62	PCC-04	1003-04-04	2-H16	PCC-04P
3/8"	3/8"	3700	H3-62	PCC-06	1003-06-06	3-H21	PCC-06P
1/2"	1/2"	5000	H4-62	PCC-08	1003-08-08	6-HP26	PCC-08P
3/4"	3/4"	4000	H6-62	PCC-12	1003-12-12	6-HP31	PCC-12P
1"	1"	4000	H8-62	PCC-16	1003-16-16	8-HP36	PCC-16P



Plug Half

Connection (Female NPT)	Body Size	Working Pressure	Parker Part Number	Competitive Part Number			Dust Cap
				Press. Conn.	Aeroquip	Hansen	
1/8"	1/8"	4000	H1-63	PCN-02	1002-02-02	1-K11	PCC-02C
1/4"	1/4"	3700	H2-63	PCN-04	1002-04-04	2-K16	PCC-04C
3/8"	3/8"	3700	H3-63	PCN-06	1002-06-06	3-K21	PCC-06C
1/2"	1/2"	5000	H4-63	PCN-08	1002-08-08	6-KP26	PCC-08C
3/4"	3/4"	4000	H6-63	PCN-12	1002-12-12	6-KP31	PCC-12C
1"	1"	4000	H8-63	PCN-16	1002-16-16	8-KP36	PCC-16C

Flat Face Coupling (No Spill)

(Conforms to ISO-16028 HTMA Series)

Coupling Half

Connection (Female NPT)	Body Size	Working Pressure	Parker Part Number	Competitive Part Number	
				Press. Conn.	Hansen
1/4"	1/4"	4285	FEM-251-4FP	HTMC-01	QA-29111-00
3/8"	1/4"	4285	FEM-251-6FP	HTMC-06	QC-29221-00
1/2"	3/8"	4285	FF-371-8FP	HTMC-06-08	QA-29231-00
1/2"	1/2"	3571	FEM-501-8FP	HTMC-08	-
3/4"	3/4"	3571	FEM-751-12FP	HTMC-12	QA-29241-00
1"	1"	3571	FEM-1001-16FP	HTMC-16	QA-29251-00



Plug Half

Connection (Female NPT)	Body Size	Working Pressure	Parker Part Number	Competitive Part Number	
				Press. Conn.	Hansen
1/4"	1/4"	4285	FEM-252-4FP	HTMN-01	QA-29112-00
3/8"	1/4"	4285	FEM-252-6FP	HTMN-06	QC-29222-00
1/2"	3/8"	4285	FF-372-8FP	HTMN-06-08	QA-29232-00
1/2"	1/2"	3571	FEM-502-8FP	HTMN-08	-
3/4"	3/4"	3571	FEM-752-12FP	HTMN-12	QA-29242-00
1"	1"	3571	FEM-1002-16FP	HTMN-16	QA-29252-00



Pneumatic Quick Connect Couplings

Plug Half

Connection (Female NPT)	Interchange	Parker Part Number	Competitive Part Number				
			Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	A3C	A4N-04F	DCP38	210-11	2609	22SF1N13SXZ
1/4"	1/4" Industrial (Mil-C4109)	H3C	4N-04F	DCP20	11-3	11	23SF1N13SXZ
3/8"		H3C-E	4N-06F	DCP2023	15-3	15	23SF1N17SXZ
1/4"	3/8" Industrial (Mil-C4109)	H1E	6N-04F	DCP2622	41-4	41	-
3/8"		H3E	6N-06F	DCP26	43-4	43	-
3/8"	1/2" Industrial (Mil-C4109)	H1F	8N-6F	DCP1823	53-5	53	-
1/2"		H3F	8N-08F	DCP18	55-5	55	-
3/4"	3/4" Industrial (Mil-C4109)	H3G	12N-12F	DCP7026	67-6	67A	-
1"		H3G-J	12N-16F	DCP7028	69-6	69A	-



Connection (Male NPT)	Interchange	Parker Part Number	Competitive Part Number				
			Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	A2C	A4N-04M	DCP37	210-10	2608	22SFAN13SXZ
1/4"	1/4" Industrial (Mil-C4109)	H2C	4N-04M	DCP21	10-3	10	23SFAN13SXZ
3/8"		H2C-E	4N-06M	DCP2103	14-3	14	23SFAN17SXZ
1/4"	3/8" Industrial (Mil-C4109)	H0E	6N-04M	DCP2502	40-4	40	-
3/8"		H2E	6N-06M	DCP25	42-4	42	-
3/8"	1/2" Industrial (Mil-C4109)	H2F	8N-06M	DCP1703	52-5	52	-
1/2"		H2F-G	8N-08M	DCP17	54-5	54	-
3/4"	3/4" Industrial (Mil-C4109)	H2G	12N-12M	DCP7106	66-6	66A	-
1"		H2G-J	12N-16M	DCP7109	68-6	68A	-



Connection (I.D.Hose Barb)	Interchange	Parker Part Number	Competitive Part Number				
			Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	A8C	-	DCP3742	210-16	-	22SFTF01SXN
1/4"	1/4" Industrial (Mil-C4109)	H8C	-	DCP2142	16-3	16	23SFTF06SXN
3/8"		H9C	-	DCP2144	17-3	17	23SFTF10SXN
3/8"	3/8" Industrial (Mil-C4109)	H5E	-	DCP2544	48-4	406	-
1/2"		H6E	-	DCP2545	49-4	408	-
1/2"	1/2" Industrial (Mil-C4109)	H5F	-	DCP1745	60-5	-	-
3/4"		H5F-G	-	DCP1746	61-5	-	-



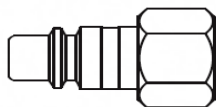
Connection (I.D.Push-Lok)	Interchange	Parker Part Number	Competitive Part Number				
			Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	A8CP	-	DCP3742L	210-51	-	-
1/4"	1/4" Industrial (Mil-C4109)	H8CP	-	DCP2142L	51-3	16P	23SFTP06SXZ
3/8"		H9CP	-	DCP2144L	71-3	17P	23SFTP10SXZ
3/8"	3/8" Industrial (Mil-C4109)	H5EP	-	DCP2544L	71-4	-	-
1/2"		H6EP	-	-	81-4	-	-
1/2"	1/2" Industrial (Mil-C4109)	H5FP	-	-	81-5	-	-



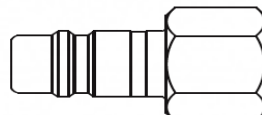
ARO-210



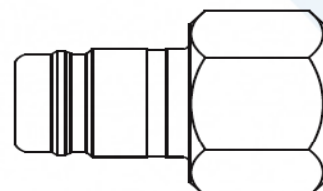
1/4" IND'L.



3/8" IND'L.



1/2" IND'L.



3/4" IND'L.

Manual Couplings



Sleeve Must be Retracted Manually before Plug can be connected

Automatic Couplings with Sleeve Guard



Plug can be connected by pressing into coupling "One Hand Connect" Sleeve Guard prevents accidental uncoupling should sleeve contact obstruction

Automatic Couplings



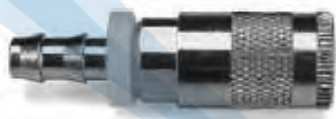
Plug can be connected by pressing into coupling "One Hand Connect"

Coupler Half

Connection (Female NPT)	Interchange	Design Type	Parker Part Number	Competitive Part Number				
				Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	Manual- Flanged	B53	A4C-04F	DC38	210-3003		22KAIN13MPX
3/8"		Manual- Flanged	B53E	A4C-06F	DC3823	210-3203		22KAIN17MPX
1/4"	1/4" Industrial (Mil-C4109)	Auto	B33	4C-04F-HP	DCB20	FM3003	3000	23KAIN13MPX
1/4"		Auto - Sleeve	HF-251-4FP					
1/4"		Manual- Flanged	B23		DC20	SG3003	1000	24KMIN13MPX
3/8"		Auto	B33E	4C-06F-HP	DCB2023	FM3203	3200	23KAIN17MPX
3/8"		Auto - Sleeve	HF-251-6FP					
3/8"		Manual- Flanged	B23E		DC2023	SG3203	1200	24KMIN17MPX
1/4"	3/8" Industrial (Mil-C4109)	Auto	B35C	6C-04F-HP	DCB2622	FM4004	4000	30KAIN13SPX
1/4"		Auto - Sleeve	HF-371-4FP					
3/8"		Auto	B35	6C-06F-HP	DCB26	FM4204	4200	30KAIN17SPX
3/8"		Auto - Sleeve	HF-371-6FP					
3/8"		Manual- Flanged	B25		DC26	4204	420	30KMIN17SPZ
3/8"	1/2" Industrial (Mil-C4109)	Auto	B37E	8C-06F-HP	DCB1023	FM5005	5000	37KAIN17MPX
1/2"		Auto	B37	8C-08F-HP	DCB10	FM5205	5200	37KAIN21MPX
1/2"		Auto - Sleeve	HF-501-8FP					
1/2"		Manual- Flanged	B17		DC10	5205	520	37KMIN21SPZ
3/4"	3/4" Industrial (Mil-C4109)	Auto	B39	12C-12F-HP	DC7026	67-6		38KBIN26MPX
1"		Auto	B39J	12C-16F-HP	DC7028	69-6		38KBIN33MPX

Connection (Male NPT)	Interchange	Design Type	Parker Part Number	Competitive Part Number				
				Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	Manual- Flanged	B52	A4C-04M	DC37	210-3103		22KAAN13MPX
3/8"		Manual- Flanged	B52E	A4C-06M	DC3703	210-3303		22KAAN17MPX
1/4"	1/4" Industrial (Mil-C4109)	Auto	B32	4C-04M-HP	DCB21	FM3103	3100	23KAAN13MPX
1/4"		Auto - Sleeve	HF-251-4MP					
1/4"		Manual- Flanged	B22		DC21	SG3103	1100	24KMAN13MPX
3/8"		Auto	B32E	4C-06M-HP	DCB2103	FM3303	3300	23KAAN17MPX
3/8"		Auto - Sleeve	HF-251-6MP					
3/8"		Manual- Flanged	B22E		DC2103	SG3303	1300	24KMAN17MPX
1/4"	3/8" Industrial (Mil-C4109)	Auto	B34C	6C-04M-HP	DCB2502	FM4104	4100	30KAAN13SPX
1/4"		Auto - Sleeve	HF-371-4MP					
3/8"		Auto	B34	6C-06M-HP	DCB25	FM4304	4300	30KAAN17SPX
3/8"		Auto - Sleeve	HF-371-6MP					
3/8"		Manual- Flanged	B24		DC25	4304	430	30KMAN17SPZ
3/8"	1/2" Industrial (Mil-C4109)	Auto	B36E	8C-06M-HP	DCB903	FM5105	5100	37KAAN17MPX
1/2"		Auto	B36	8C-08M-HP	DCB9	FM5305	5200	37KAAN21MPX
1/2"		Auto - Sleeve	HF-501-8MP					
1/2"		Manual- Flanged	B16		DC9	5305	530	37KMAN21SPZ
3/4"	3/4" Industrial (Mil-C4109)	Auto	B38	12C-12M-HP	DC7106	66-6		38KBAN26MPX
1"		Auto	B38J	12C-16M-HP	DC7108	68-6		38KBAN33MPX

Manual Couplings



Sleeve Must be Retracted Manually before Plug can be connected

Automatic Couplings with Sleeve Guard



Plug can be connected by pressing into coupling "One Hand Connect" Sleeve Guard prevents accidental uncoupling should sleeve contact obstruction

Automatic Couplings



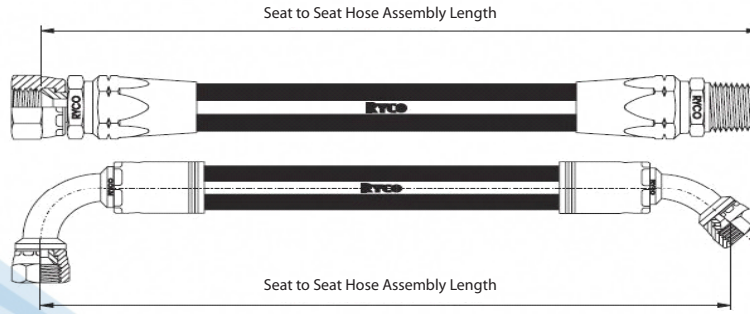
Plug can be connected by pressing into coupling "One Hand Connect"

Coupler Half

Connection (I.D.Hose Barb)	Interchange	Design Type	Parker Part Number	Competitive Part Number				
				Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	1/4" Industrial (Mil-C4109)	Auto	B30-3B	-	DCB2042	FM3603	3600	23KATF06MPX
1/4"		Auto - Sleeve Guard	HF-251-4HB	-				
1/4"		Manual- Flanged	B20-3B	-	DC2042	SG3603	1600	24KMTF06MPX
3/8"		Auto	B30-5B	-	DCB2044	FM3703	3700	23KATF10MPX
3/8"		Auto - Sleeve Guard	HF-251-6HB	-				
3/8"		Manual- Flanged	B20-5B	-	DC2044	SG3703	1700	24KMTF10MPX
3/8"	3/8" Industrial (Mil-C4109)	Auto	B34-5B	-	DCB2644	FM4804	40600	30KATF10SPX
3/8"		Auto - Sleeve Guard	HF-371-6HB	-				-
1/2"		Auto	B34-6B	-	DCB2645	FM4904	40800	30KATF13SPX
1/2"		Auto - Sleeve Guard	HF-371-8HB	-	-	-	-	-
1/2"	1/2" Industrial (Mil-C4109)	Auto	B36-6B	-	DCB1045	FM5805	5800	37KATF13MPX
3/4"		Auto	B36-7B	-	DCB1046	FM5905	5900	37KATF19MPX

Connection (I.D.Push-Lok)	Interchange	Design Type	Parker Part Number	Competitive Part Number				
				Pres. Conn.	Dixon	Foster	Hansen	Tema/Rectus
1/4"	ARO-210	Manual- Flanged	B50-3BP		DC3842L	210-1513		
3/8"		Manual- Flanged	B50-5BP		DC3844L	210-1713		
1/4"	1/4" Industrial (Mil-C4109)	Auto	B30-3BP			FM1513	3600P	23KATP06MPX
1/4"		Auto - Sleeve Guard	HF-251-4PL					
1/4"		Manual- Flanged	B20-3BP		DC2042L	SG1513	1600P	24KMTP04MPX
3/8"		Auto	B30-5BP			FM1713	3700P	23KATP10MPX
3/8"		Auto - Sleeve Guard	HF-251-6PL					
3/8"		Manual- Flanged	B20-5BP		DC2644L	SG1713	1700P	24KMTP10MPX
3/8"	3/8" Industrial (Mil-C4109)	Auto	B34-5BP			FM1714		
3/8"		Auto - Sleeve Guard	HF-371-6PL					
1/2"		Auto - Sleeve Guard	HF-371-8PL					
1/2"	1/2" Industrial (Mil-C4109)	Auto	B36-6B			FM1815		

Hydraulic Hose Assemblies



T28A	8	FJ	8	MP	-24
-------------	----------	-----------	----------	-----------	------------

Hose Type & Size
(see pg. 48,49)

Connector Size
End #1

Connector Style
End #1

Connector Size
End #2

Connector Style
End #1

Length of
Assembly in inches
(from above)

Order Sample

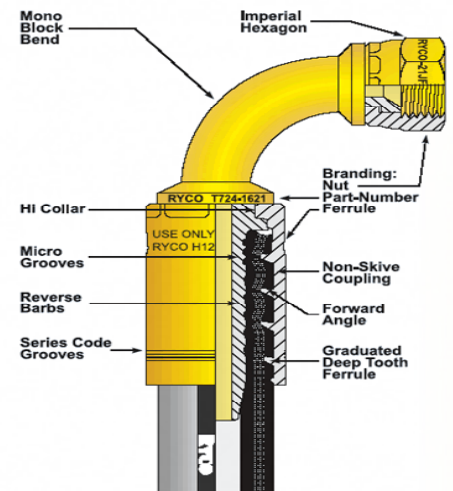
#T28A-08FJ-08MP-024

Sample is a 100R2 Hose, 1/2" ID, with Straight Female JIC Connector, in -8 size on end #1, and straight male NPT Connector in 8 size size on end #2. Overall length is 24" from seat of JIC end to tip of straight male NPT connector.

FITTING TYPE CODES		
JIC	MJ	JIC 37° MALE
	FJ	JIC 37° FEMALE SWIVEL
	FJ45	JIC 37° FEMALE SWIVEL - 45° ELBOW
	FJ90	JIC 37° FEMALE SWIVEL - 90° ELBOW STANDARD DROP
	FJ90L	JIC 37° FEMALE SWIVEL - 90° ELBOW LONG DROP
	FJ90B	JIC 37° FEMALE SWIVEL - 90° ELBOW BLOCK
NPTF-NPSM	MP	NPT MALE
	MPX	NPT MALE SWIVEL
	MPX90	NPT MALE SWIVEL - 90° ELBOW
	FP	NPT FEMALE RIGID
	FPX	NPSM FEMALE SWIVEL (60° CONE SEAT)
	FPXT	NPT FEMALE SWIVEL
ORFS	MF	ORFS MALE
	FF	ORFS FEMALE SWIVEL
	FF45	ORFS FEMALE SWIVEL - 45° ELBOW
	FF90	ORFS FEMALE SWIVEL - 90° ELBOW STANDARD DROP
	FF90L	ORFS FEMALE SWIVEL - 90° ELBOW LONG DROP
SAE CODE 61	FL	SAE CODE 61 FLANGE
	FL22.5	SAE CODE 61 FLANGE - 22.5°
	FL30	SAE CODE 61 FLANGE - 30° ELBOW
	FL45	SAE CODE 61 FLANGE - 45° ELBOW
	FL60	SAE CODE 61 FLANGE - 60° ELBOW
	FL67.5	SAE CODE 61 FLANGE - 67.5° ELBOW
	FL90	SAE CODE 61 FLANGE - 90° ELBOW
	FL90L	SAE CODE 61 FLANGE - 90° ELBOW
	FL110	SAE CODE 61 FLANGE - 110° ELBOW
SAE CODE 62	FLH	SAE CODE 62 FLANGE
	FLH45	SAE CODE 62 FLANGE - 45° ELBOW
	FLH90	SAE CODE 62 FLANGE - 90° ELBOW

HOSE TYPE CODES		
T1A	SAE 100R1AT	One Wire
T3KA	SAE-100R17	High Flex
T2A	SAE-100R2AT	2 Wire
H12A	SAE100R12	4 Wire
SR	SAE 100R4	Suction

SIZE CODES	
04	1/4"
06	3/8"
08	1/2"
10	5/8"
12	3/4"
16	1"
20	1-1/4"
24	1-1/2"
32	2"
40	2-1/2"
48	3"



Ryco supplies 3 main series of Couplings to suit various hose offerings. Each Ryco Coupling is stamped with a part number and a number of Identification Grooves. (Refer hoses details to determine which series of couplings is matched to a particular hose)

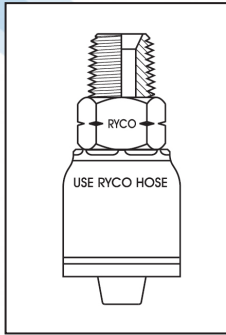
T200 Series: (2 Grooves) Most Common - used for T1A, T2A and T3KA up to 1.25" Hose Size

T400 Series: (3 Grooves) Used for Series "SR" Suction Hoses

T700 Series: (4 Grooves) High Pressure Series - used for Series H12A and T1A / T2A over 1.25" Hose Size

Bitelock One Piece Crimp Couplings

T209

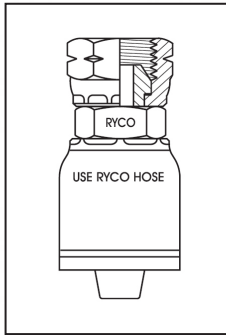


NPT Male

RYCO

Hose Size		Thread Size	Part No.	
DIN	INCH	INCH		
6	1/4	1/8	T209-0402	
6	1/4	1/4	T209-0404	
6	1/4	3/8	T209-0406	
10	3/8	1/4	T209-0604	◇
10	3/8	3/8	T209-0606	◇
10	3/8	1/2	T209-0608	
12	1/2	3/8	T209-0806	◇
12	1/2	1/2	T209-0808	◇
12	1/2	3/4	T209-0812	
16	5/8	1/2	T209-1008	
16	5/8	3/4	T209-1012	
20	3/4	3/4	T209-1212	◇ F
25	1	1	T209-1616	◇ F
32	1.1/4	1	T209-2016	◇ F
32	1.1/4	1.1/4	T209-2020	◇ F
40	1.1/2	1.1/2	T209-2424	◇ F
50	2	2	T209-3232	◇ F

T202N

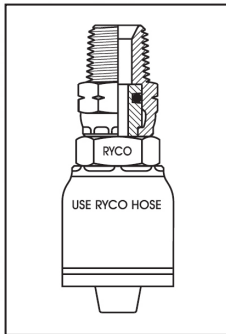


NPSM Female

RYCO

Hose Size		Thread Size	Part No.	
DIN	INCH	INCH		
6	1/4	1/8	-	
6	1/4	1/4	T202N-0404	
6	1/4	3/8	-	
10	3/8	1/4	T202N-0604	
10	3/8	3/8	T202N-0606	
10	3/8	1/2	-	
12	1/2	3/8	-	
12	1/2	1/2	T202N-0808	
12	1/2	3/4	-	
16	5/8	1/2	-	
16	5/8	3/4	-	
20	3/4	3/4	T202N-1212	
25	1	1	T202N-1616	
32	1.1/4	1	-	
32	1.1/4	1.1/4	T202N-2020	◇
40	1.1/2	1.1/2	T702N-2424	◇
50	2	2	T702N-3232	◇

T232N



NPT Male Swivel

RYCO

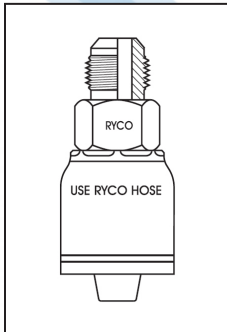
Hose Size		Thread Size	Part No.	
DIN	INCH	INCH		
6	1/4	1/8	-	
6	1/4	1/4	T232N-0404	
6	1/4	3/8	-	
10	3/8	1/4	-	
10	3/8	3/8	T232N-0606	
10	3/8	1/2	T232N-0608	
12	1/2	3/8	T232N-0806	
12	1/2	1/2	T232N-0808	
20	3/4	3/4	T232N-1212	
25	1	1	T232N-1616	

* All Part Numbers Shown are Ryco Series **T200** General Purpose One Piece Crimp Fittings (with two Series Code Grooves)
 Equivalent configurations marked "**F**" are available in Series 400 for use with Suction hoses Type "**SR**" (with three Series Code Grooves)
 And in Series 700 marked "**O**" for use with all type **H12A** Hose and **T1A/T2A** hose over 1.25" diameter (with four Series Code Grooves)
 Example: Part Number **T204-1621** becomes **T404-1621** for Series **T400** and **T704-1621** for Series **T700**



Bitelock One Piece Crimp Couplings

T203

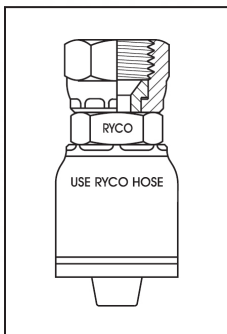


JIC Male

RYCO

Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	7/16	1/4	T203-0407	
6	1/4	1/2	5/16	T203-0408	
6	1/4	9/16	3/8	T203-0409	
6	1/4	3/4	1/2	T203-0412	
10	3/8	9/16	3/8	T203-0609	◇
10	3/8	3/4	1/2	T203-0612	
10	3/8	9/16	5/8	T203-0614	
12	1/2	3/4	1/2	T203-0812	◇
12	1/2	7/8	5/8	T203-0814	◇
12	1/2	1.1/16	3/4	T203-0817	
16	5/8	7/8	5/8	T203-1014	
16	5/8	1.1/16	3/4	T203-1017	
20	3/4	7/8	5/8	-	
20	3/4	1.1/16	3/4	T203-1217	◇
20	3/4	1.3/16	7/8	T203-1219	
20	3/4	1.5/16	1	T203-1221	◇
25	1	1.1/16	3/4	-	
25	1	1.5/16	1	T203-1621	◇
32	1.1/4	1.5/8	1.1/4	T203-2026	◇
40	1.1/2	1.7/8	1.1/2	T703-2430	◇
50	2	2.1/2	2	T703-3240	◇

T204



JIC Female

RYCO

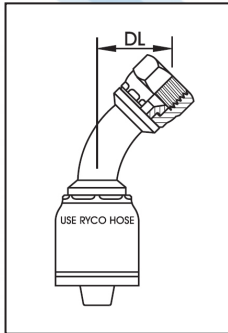
Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	7/16	1/4	T204-0407	
6	1/4	1/2	5/16	T204-0408	
6	1/4	9/16	3/8	T204-0409	
6	1/4	3/4	1/2	T204-0412	
10	3/8	9/16	3/8	T204-0609	◇
10	3/8	3/4	1/2	T204-0612	◇
10	3/8	7/8	5/8	T204-0614	
12	1/2	3/4	1/2	T204-0812	◇
12	1/2	7/8	5/8	T204-0814	◇
12	1/2	1.1/16	3/4	T204-0817	◇
16	5/8	7/8	5/8	T204-1014	◇
16	5/8	1.1/16	3/4	T204-1017	
20	3/4	7/8	5/8	T204-1214	◇
20	3/4	1.1/16	3/4	T204-1217	◇ F
20	3/4	1.3/16	7/8	T204-1219	◇
20	3/4	1.5/16	1	T204-1221	◇
25	1	1.1/16	3/4	T204-1617	◇
25	1	1.5/16	1	T204-1621	◇ F
32	1.1/4	1.5/8	1.1/4	T204-2026	◇ F
40	1.1/2	1.7/8	1.1/2	T704-2430	◇ F
50	2	2.1/2	2	T704-3240	◇ F

* All Part Numbers Shown are Ryco Series **T200** General Purpose One Piece Crimp Fittings (with two Series Code Grooves)
 Equivalent configurations marked "**F**" are available in Series 400 for use with Suction hoses Type "**SR**" (with three Series Code Grooves)
 And in Series 700 marked "**◇**" for use with all type **H12A** Hose and **T1A/T2A** hose over 1.25" diameter (with four Series Code Grooves)
 Example: Part Number **T204-1621** becomes **T404-1621** for Series **T400** and **T704-1621** for Series **T700**



Bitelock One Piece Crimp Couplings

T225

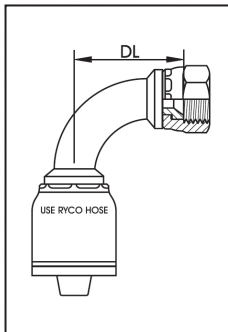


JIC Female
45° Tube End

RYCO

Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	7/16	1/4	T225-0407	
6	1/4	1/2	5/16	T225-0408	
6	1/4	9/16	3/8	T225-0409	
6	1/4	3/4	1/2	-	
10	3/8	9/16	3/8	T225-0609	◇
10	3/8	3/4	1/2	T225-0612	
10	3/8	7/8	5/8	-	
12	1/2	3/4	1/2	T225-0812	◇
12	1/2	7/8	5/8	T225-0814	◇
12	1/2	1.1/16	3/4	-	
16	5/8	7/8	5/8	T225-1014	◇
16	5/8	1.1/16	3/4	T225-1017	◇
20	3/4	7/8	5/8	-	
20	3/4	1.1/16	3/4	T225-1217	◇ F
20	3/4	1.3/16	7/8	-	
20	3/4	1.5/16	1	T225-1221	◇
25	1	1.1/16	3/4	-	
25	1	1.5/16	1	T225-1621	◇ F
32	1.1/4	1.5/8	1.1/4	T225-2026	◇ F
40	1.1/2	1.7/8	1.1/2	T725-2430	◇
50	2	2.1/2	2	T725-3240	◇

T224



JIC Female
90° Tube Bend

RYCO

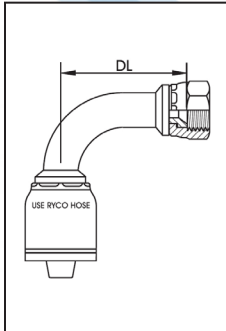
Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	7/16	1/4	T224-0407	
6	1/4	1/2	5/16	T224-0408	
6	1/4	9/16	3/8	T224-0409	
6	1/4	3/4	1/2	-	
10	3/8	9/16	3/8	T224-0609	◇
10	3/8	3/4	1/2	T224-0612	
10	3/8	7/8	5/8	-	
12	1/2	3/4	1/2	T224-0812	◇
12	1/2	7/8	5/8	T224-0814	◇
12	1/2	1.1/16	3/4	-	
16	5/8	7/8	5/8	T224-1014	◇
16	5/8	1.1/16	3/4	T224-1017	◇
20	3/4	7/8	5/8	-	
20	3/4	1.1/16	3/4	T224-1217	F
20	3/4	1.3/16	7/8	-	
20	3/4	1.5/16	1	T224-1221	◇
25	1	1.1/16	3/4	-	
25	1	1.5/16	1	T224-1621	◇ F
32	1.1/4	1.5/8	1.1/4	T224-2026	◇ F
40	1.1/2	1.7/8	1.1/2	T724-2430	◇
50	2	2.1/2	2	T724-3240	◇ F

* All Part Numbers Shown are Ryco Series **T200** General Purpose One Piece Crimp Fittings (with two Series Code Grooves)
Equivalent configurations marked "**F**" are available in Series 400 for use with Suction hoses Type "**SR**" (with three Series Code Grooves)
And in Series 700 marked "**O**" for use with all type **H12A** Hose and **T1A/T2A** hose over 1.25" diameter (with four Series Code Grooves)
Example: Part Number **T204-1621** becomes **T404-1621** for Series **T400** and **T704-1621** for Series **T700**



Bitelock One Piece Crimp Couplings

T228

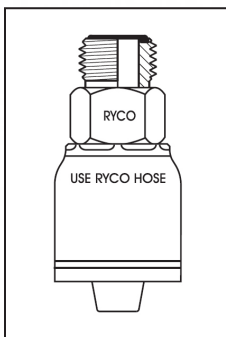


JIC Female
90° Long Bend

RYCO

Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	7/16	1/4	T228-0407	
6	1/4	1/2	5/16	-	
6	1/4	9/16	3/8	T228-0409	
6	1/4	3/4	1/2	-	
10	3/8	9/16	3/8	T228-0609	
10	3/8	3/4	1/2	T228-0612	
10	3/8	7/8	5/8	-	
12	1/2	3/4	1/2	T228-0812	
12	1/2	7/8	5/8	T228-0814	
12	1/2	1.1/16	3/4	-	
16	5/8	7/8	5/8	T228-1014	
16	5/8	1.1/16	3/4	-	
20	3/4	7/8	5/8	-	
20	3/4	1.1/16	3/4	T228-1217	◇
20	3/4	1.3/16	7/8	-	
20	3/4	1.5/16	1	-	
25	1	1.1/16	3/4	-	
25	1	1.5/16	1	T228-1621	◇
32	1.1/4	1.5/8	1.1/4	T228-2026	◇
40	1.1/2	1.7/8	1.1/2	-	
50	2	2.1/2	2	-	

T284



ORFS Male

RYCO

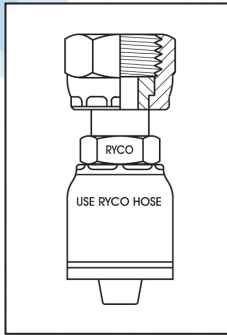
Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	9/16	1/4	T284-0409	
6	1/4	11/16	3/8	T284-0411	
10	3/8	11/16	3/8	T284-0611	◇
10	3/8	13/16	1/2	T284-0613	
12	1/2	13/16	1/2	T284-0813	◇
12	1/2	1	5/8	T284-0816	
16	5/8	1	5/8	T284-1016	
16	5/8	1.3/16	3/4	T284-1019	
20	3/4	1.3/16	3/4	T284-1219	◇ F
20	3/4	1.7/16	1	T284-1223	
25	1	1.7/16	1	T284-1623	◇ F
32	1.1/4	1.11/16	1.1/4	T284-2027	◇ F

* All Part Numbers Shown are Ryco Series **T200** General Purpose One Piece Crimp Fittings (with two Series Code Grooves)
 Equivalent configurations marked "**F**" are available in Series 400 for use with Suction hoses Type "**SR**" (with three Series Code Grooves)
 And in Series 700 marked "**◇**" for use with all type **H12A** Hose and **T1A/T2A** hose over 1.25" diameter (with four Series Code Grooves)
 Example: Part Number **T204-1621** becomes **T404-1621** for Series **T400** and **T704-1621** for Series **T700**



Bitelock One Piece Crimp Couplings

T280

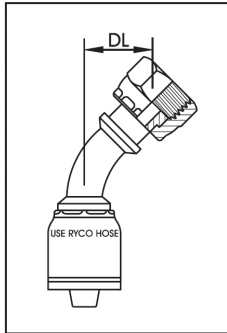


ORFS Female

RYCO

Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	9/16	1/4	T280-0409	
6	1/4	11/16	3/8	T280-0411	
10	3/8	11/16	3/8	T280-0611	◇
10	3/8	13/16	1/2	T280-0613	
12	1/2	13/16	1/2	T280-0813	◇
12	1/2	1	5/8	T280-0816	◇
16	5/8	1	5/8	T280-1016	◇
16	5/8	1.3/16	3/4	T280-1019	
20	3/4	1.3/16	3/4	T280-1219	◇ F
20	3/4	1.7/16	1	T280-1223	◇ F
25	1	1.7/16	1	T280-1623	◇ F
32	1.1/4	1.11/16	1.1/4	T280-2027	◇ F

T281

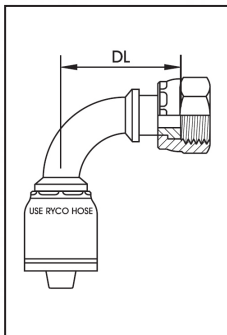


ORFS Female
45° Tube End

RYCO

Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	9/16	1/4	T281-0409	
6	1/4	11/16	3/8	T281-0411	
10	3/8	11/16	3/8	T281-0611	◇
10	3/8	13/16	1/2	T281-0613	◇
12	1/2	13/16	1/2	T281-0813	◇
12	1/2	1	5/8	T281-0816	
16	5/8	1	5/8	T281-1016	◇
16	5/8	1.3/16	3/4	T281-1019	
20	3/4	1.3/16	3/4	T281-1219	◇ F
20	3/4	1.7/16	1	T281-1223	
25	1	1.7/16	1	T281-1623	◇ F
32	1.1/4	1.11/16	1.1/4	T281-2027	◇ F

T282



ORFS Female
90° Tube End

RYCO

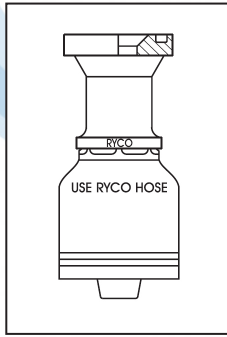
Hose Sizes		Thread Size	Tube Size	Part No.	
DIN	INCH	INCH	INCH		
6	1/4	9/16	1/4	T282-0409	
6	1/4	11/16	3/8	T282-0411	
10	3/8	11/16	3/8	T282-0611	◇
10	3/8	13/16	1/2	T282-0613	
12	1/2	13/16	1/2	T282-0813	◇
12	1/2	1	5/8	T282-0816	
16	5/8	1	5/8	T282-1016	◇
16	5/8	1.3/16	3/4	T282-1019	
20	3/4	1.3/16	3/4	T282-1219	◇
20	3/4	1.7/16	1	T282-1223	
25	1	1.7/16	1	T282-1623	◇ F
32	1.1/4	1.11/16	1.1/4	T282-2027	◇

* All Part Numbers Shown are Ryco Series **T200** General Purpose One Piece Crimp Fittings (with two Series Code Grooves)
Equivalent configurations marked "**F**" are available in Series 400 for use with Suction hoses Type "**SR**" (with three Series Code Grooves)
And in Series 700 marked "**O**" for use with all type **H12A** Hose and **T1A/T2A** hose over 1.25" diameter (with four Series Code Grooves)
Example: Part Number **T204-1621** becomes **T404-1621** for Series **T400** and **T704-1621** for Series **T700**



Bitelock One Piece Crimp Couplings

T213



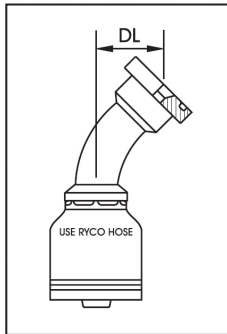
Code 61 Flange

RYCO

Hose Sizes		Flange Size	Part No. *	
DIN	INCH	INCH		
20	3/4	3/4	T213-1212	◇ F
20	3/4	1	T213-1216	◇ F
25	1	1	T213-1616	◇ F
25	1	1.1/4	T213-1620	◇ F
32	1.1/4	1.14	T213-2020	◇ F
32	1.1/4	1.1/2	T213-2024	◇ F
40	1.1/2	1.1/2	T213-2424	◇ F
40	1.1/2	2	T213-2432	◇ F
50	2	2	T213-3232	◇ F

* For Series 700 Couplings with high pressure C62 flange ends substitute "73" in pos. *2 & *3 of part number i.e. T733-1616

T215



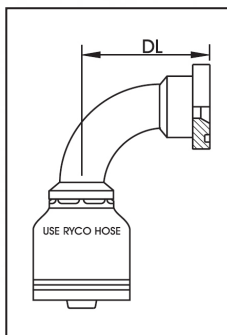
Code 61 Flange
45° Tube End

RYCO

Hose Sizes		Flange Size	Part No. *	
DIN	INCH	INCH		
20	3/4	3/4	T215-1212	◇ F
20	3/4	1	-	◇
25	1	1	T215-1616	◇ F
25	1	1.1/4	-	◇
32	1.1/4	1.14	T215-2020	◇ F
32	1.1/4	1.1/2	-	◇
40	1.1/2	1.1/2	T215-2424	◇ F
40	1.1/2	2	-	◇
50	2	2	T215-3232	◇ F

* For Series 700 Couplings with high pressure C62 flange ends substitute "75" in pos. *2 & *3 of part number i.e. T775-1616

T217



Code 61 Flange
90° Tube End

RYCO

Hose Sizes		Flange Size	Part No. *	
DIN	INCH	INCH		
20	3/4	3/4	T217-1212	◇ F
20	3/4	1	-	◇
25	1	1	T217-1616	◇ F
25	1	1.1/4	-	◇
32	1.1/4	1.14	T217-2020	◇ F
32	1.1/4	1.1/2	-	◇
40	1.1/2	1.1/2	T217-2424	◇ F
40	1.1/2	2	-	◇
50	2	2	T217-3232	◇ F

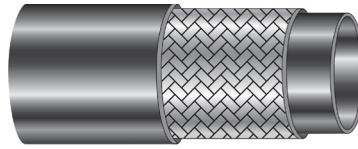
* For Series 700 Couplings with high pressure C62 flange ends substitute "77" in pos. *2 & *3 of part number i.e. T777-1616

* All Part Numbers Shown are Ryco Series **T200** General Purpose One Piece Crimp Fittings (with two Series Code Grooves)
Equivalent configurations marked "F" are available in Series 400 for use with Suction hoses Type "SR" (with three Series Code Grooves)
And in Series 700 marked "O" for use with all type **H12A** Hose and **T1A/T2A** hose over 1.25" diameter (with four Series Code Grooves)
Example: Part Number **T204-1621** becomes **T404-1621** for Series **T400** and **T704-1621** for Series **T700**



Avenger Series

T1A



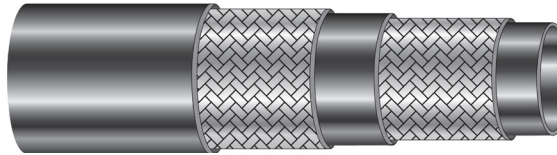
SAE 100 R1AT

RYCO

Part No.	Hose Size ID			Max. Dynamic Working Pressure		Max. Static Working Pressure		Min. Burst Pressure		Minimum Bend Radius		Recommended Coupling
	DIN	INCH	DASH	BAR	PSI	BAR	PSI	BAR	PSI	mm	inch	
T14A	6	1/4	-04	225	3250	300	4330	900	13000	100	4.0	T200 Series
T16A	10	3/8	-06	180	2600	240	3470	720	10400	127	5.0	T200 Series
T18A	12	1/2	-08	160	2300	213	3100	640	9300	178	7.0	T200 Series
T110A	16	5/8	-10	130	1900	173	2530	520	7600	200	8.0	T200 Series
T112A	20	3/4	-12	105	1500	140	2030	420	6100	240	9.5	T200 Series
T116A	25	1	-16	90	1300	120	1740	360	5200	300	12.0	T200 Series
T120A	32	1.1/4	-20	65	945	87	1260	260	3780	419	16.5	T200 Series
T124A	40	1.1/2	-24	50	725	67	970	200	2900	500	20.0	T700 Series
T132A	50	2	-32	40	580	53	775	160	2320	600	24.0	T700 Series

Avenger Series

T2A



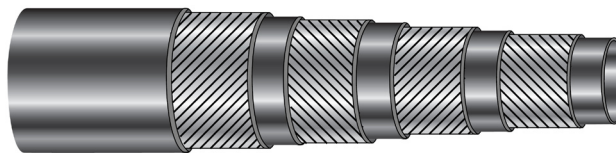
SAE 100 R2AT

RYCO

Part No.	Hose Size ID			Max. Dynamic Working Pressure		Max. Static Working Pressure		Min. Burst Pressure		Minimum Bend Radius		Recommended Coupling
	DIN	INCH	DASH	BAR	PSI	BAR	PSI	BAR	PSI	mm	inch	
T24A	6	1/4	-04	420	6000	560	8000	1680	24000	100	4.0	T200 Series
T26A	10	3/8	-06	350	5100	467	6800	1400	20400	127	5.0	T200 Series
T28A	12	1/2	-08	345	5000	460	6670	1380	20000	178	7.0	T200 Series
T210A	16	5/8	-10	250	3600	333	4830	1000	14500	200	8.0	T200 Series
T212A	20	3/4	-12	215	3100	287	4130	860	12400	240	9.5	T200 Series
T216A	25	1	-16	167	2400	223	3200	670	9600	300	12.0	T200 Series
T220A	32	1.1/4	-20	125	1800	167	2400	500	7200	419	16.5	T200 Series
T224A	40	1.1/2	-24	90	1300	120	1730	360	5200	500	20.0	T700 Series
T232A	50	2	-32	80	1150	107	1530	320	4600	600	24.0	T700 Series

Avenger Series

H12A



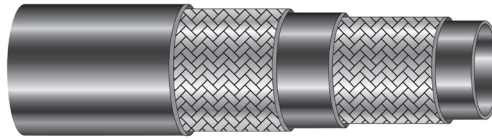
SAE 100 R12

RYCO

Part No.	Hose Size ID			Max. Dynamic Working Pressure		Max. Static Working Pressure		Min. Burst Pressure		Minimum Bend Radius		Recommended Coupling
	DIN	INCH	DASH	BAR	PSI	BAR	PSI	BAR	PSI	mm	inch	
H1206A	10	3/8	-06	350	5100	467	6800	1400	20400	127	5.0	T700 Series
H1208A	12	1/2	-08	350	5100	467	6800	1400	20400	178	7.0	T700 Series
H1210A	16	5/8	-10	350	5100	467	6800	1400	20400	200	8.0	T700 Series
H1212A	20	3/4	-12	350	5100	467	6800	1400	20400	240	9.5	T700 Series
H1216A	25	1	-16	350	5100	467	6800	1400	20400	300	12.0	T700 Series
H1220A	32	1.1/4	-20	275	4000	367	5330	1100	16000	400	16.0	T700 Series
H1224A	40	1.1/2	-24	255	3700	340	4930	1020	14800	500	20.0	T700 Series
H1232A	50	2	-32	210	3000	280	4000	840	12000	600	24.0	T700 Series

Avenger Series

T3KA



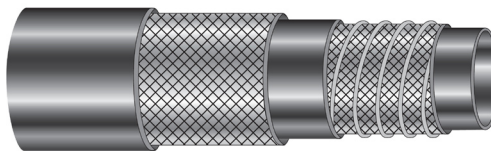
RYCO

SAE 100 R17

Part No.	Hose Size ID			Max. Working Pressure		Min. Burst Pressure		Minimum Bend Radius		Recommended Coupling
	DIN	INCH	DASH	BAR	PSI	BAR	PSI	mm	inch	
T3K4A	6	1/4	-04	210	3050	840	12200	50	2.0	T200 Series
T3K5A	8	5/16	-05	210	3050	840	12200	55	2.2	T200 Series
T3K6A	10	3/8	-06	210	3050	840	12200	65	2.5	T200 Series
T3K8A	12	1/2	-08	210	3050	840	12200	90	3.5	T200 Series
T3K10A	16	5/8	-10	210	3050	840	12200	100	4.0	T200 Series
T3K12A	19	3/4	-12	210	3050	840	12200	125	4.9	T200 Series
T3K16A	25	1	-16	210	3050	840	12200	150	5.9	T200 Series

Suction Series

SR



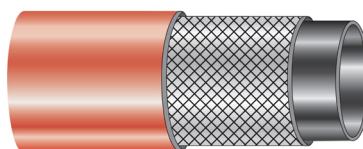
RYCO

SAE 100 R2AT

Part No.	Hose Size ID			Max. Working Pressure		Min. Burst Pressure		Minimum Bend Radius		Recommended Coupling
	DIN	INCH	DASH	BAR	PSI	BAR	PSI	mm	inch	
SR12	20	3/4	-12	21	300	84	1200	-	5.0	T400 Series
SR16	25	1	-16	17	250	68	1000	-	6.0	T400 Series
SR20	32	1.1/4	-20	14	200	56	800	-	8.0	T400 Series
SR24	40	1.1/2	-24	10	150	40	600	-	10.0	T400 Series
SR32	50	2	-32	7	100	28	400	-	12.0	T400 Series
SR40	63	2.1/2	-40	4,3	62	17	250	-	14.0	T400 Series
SR48	75	3	-48	3,9	56	16	225	-	18.0	T400 Series

Multi-Purpose

MP1



RYCO

SAE 100 R2AT

Part No.	Hose Size ID			Max. Dynamic Working Pressure		Min. Burst Pressure		Minimum Bend Radius		Recommended Coupling
	DIN	INCH	DASH	BAR	PSI	BAR	PSI	mm	inch	
MP14	6	1/4	-04	13,8	200	55,2	800	50	2.0	Brass Hose Barbs See Page 36 (For Clamps)
MP16	10	3/8	-06	13,8	200	55,2	800	75	3.0	
MP18	12	1/2	-08	13,8	200	55,2	800	100	4.0	
MP110	16	5/8	-10	13,8	200	55,2	800	125	5.0	
MP112	20	3/4	-12	13,8	200	55,2	800	125	5.0	
MP116	25	1	-16	13,8	200	55,2	800	200	8.0	
MP120	32	1.1/4	-20	13,8	200	55,2	800	250	10.0	

Spiral Guard

H12A



RYCO

Size Nominal OD	Nominal ID		Hose series				
mm	mm	Inch	T1A	T2A	H12A	SR	MP1
-16L	13	0,51	-4	-4	-	-	-4
-20L	16	0,61	-6,-8,-10	-6,-8,-10	-6,-8	-	-6,-8,-10
-32L	28	1,10	-12,-16	-12,-16	-12,-16	-12,-16	-12,-16
-50L	44	1,73	-20,-24	-20,-24	-20,-24	-20,-24	-20
-63L	56	2,20	-32	-32	-32	-32	-
-75L	67	2,64	-	-40	-	-40	-
-90L	82	3,32	Hose Groups				
-110L	100	3,94	Hose Groups				

Fire Sleeve

FS
1072


RYCO

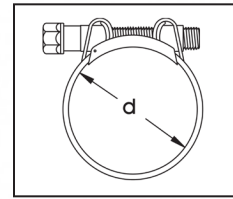
Part No.	Nominal Round Inside Diameter		Nominal Wall Thickness		Nominal Inside Flat Dimension		Nominal Weight	
	A mm	A inch	B mm	B inch	C mm	C inch	kgs/m	lbs/ft
FS1072-08	12,7	0.50	4,3	0.17	20,0	0.79	0,20	0.13
FS1072-11	17,5	0.69	4,3	0.17	27,5	1.08	0,29	0.19
FS1072-14	22,2	0.87	4,4	0.17	34,9	1.37	0,37	0.25
FS1072-16	25,4	1.00	4,8	0.19	39,9	1.57	0,49	0.33
FS1072-22	34,9	1.38	4,8	0.19	54,8	2.17	0,60	0.40
FS1072-30	47,6	1.87	4,0	0.16	74,8	2.93	0,63	0.42
FS1072-32	50,8	2.00	4,0	0.16	79,8	3.14	0,71	0.48
FS1072-44	69,9	2.75	5,0	0.20	109,8	4.32	1,08	0.73
FS1072-64	102,0	4.02	5,0	0.20	160,2	6.32	1,89	1.27
FS1072-80	127,0	5.00	5,0	0.20	199,5	7.89	2,26	1.52
FS1072-104	165,0	6.50	5,0	0.20	259,2	10.21	2,86	1.92

Crimp Clamps

Part No.	Nominal Clamp Size
HC9-2	1/8
HC9-2-3/4	11/64
HC9-3	3/16
HC9-4	1/4
HC9-5	5/16
HC9-6	3/8
HC9-7	7/16
HC9-8	1/2
HC9-9	9/16
HC9-9-1/2	19/32
HC9-10	5/8
HC9-12	3/4
HC9-13	13/16
HC9-14	7/8
HC9-15	15/16
HC9-16	1
HC9-17	1-1/16
HC9-18	1-1/8
HC9-19	1-3/16
HC9-21	1-5/16
HC9-23	1-7/16
HC9-24	1-1/2
HC9-26	1-5/8
HC9-28	1-3/4



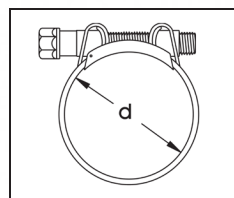
IRYCO



IRYCO

Standard Gear Clamps

Part No.	Clamp Size Max.
HC6-4TB*	5/8
HC6-6TB*	7/8
HC6-8TB*	1
HC6-10TB*	1-1/16
HC6-12TB*	1-1/4
HC6-16TB*	1-1/2
HC6-20TB*	1-3/4
HC6-6	7/8
HC6-8	1
HC6-10	1-1/16
HC6-12	1-1/4
HC6-16	1-1/2
HC6-20	1-3/4
HC6-24	2
HC6-28	2-1/4
HC6-32	2-1/2
HC6-36	2-3/4
HC6-40	3
HC6-44	3-1/4
HC6-48	3-1/2
HC6-52	3-3/4
HC6-56	4
HC6-60	4-1/4
HC6-64	4-1/2
HC6-72	5
HC6-80	5-3/4
HC6-88	6
HC6-96	6-1/2
HC6-104	7
HC6-116	7-3/4
HC6-128	8-1/2
HC6-152	10
HC6-164	10-3/4
HC6-188	12-1/4
HC6-200	13
HC6-212	13-3/4



IRYCO

Heavy Duty Gear Clamps

Clamp Part No.	Clamp Adjustment Range d inch	Recommended Tightening Torque	
		NM	ft. lbs
RSC-3134	1.22 to 1.34	20	15
RSC-3740	1.46 to 1.57	20	15
RSC-4043	1.57 to 1.69	20	15
RSC-4347	1.69 to 1.85	20	15
RSC-4751	1.85 to 2.00	20	15
RSC-5155	2.00 to 2.16	20	15
RSC-6368	2.48 to 2.68	20	15
RSC-7379	2.87 to 3.11	20	15
RSC-8591	3.35 to 3.58	20	15

For use with type "SR" Hose



All Air Preparation products on the following pages are typically part of 6 main product families
the following is a basic outline of each family and its size and performance specifications



07 Series

Miniature Range - Line Mounted
Basic Body Size - 1/8"
Port Size: 1/8", 1/4"
Flows: 10-15 SCFM



72 Series

Modular Series
Basic Body Size - 1/4"
Port Size: 1/4", 3/8"
Flows: 25-55 SCFM



73 Series

Modular Series
Basic Body Size - 3/8"
Port Size: 1/4", 3/8", 1/2"
Flows: 40-65 SCFM



74 Series

Modular Series
Basic Body Size - 1/2"
Port Size: 3/8", 1/2", 3/4"
Flows: 75-140 SCFM



17 Series

Line Mounted
Basic Body Size - 1"
Port Size: 3/4", 1", 1-1/4", 1-1/2"
Flows: 300-400 SCFM



18 Series

Line Mounted
Basic Body Size - 2"
Port Size: 1-1/2", 2"
Flows: 1400 SCFM



Excelon Modular Series

Series 72, 73 and 74 are part of the Excelon Modular Series. Components within the same series number can be combined to form modular assemblies with the accessory components shown on pages 60-62. Components from the 73 and 74 Series can be interchanged within the same assembly.



Manual Drain

Operating Pressure: Poly Bowl Units 0-150 PSI, Metal Bowl Units 0-250 PSI

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number	Element Size (Micron)	Bowl Type
1/8"	F07	19	F07-100-M1TA	5	Poly
1/4"		24	F07-200-M1TA	5	Poly
1/4"	F72	55	F72G-2AN-QD3	40	Metal With Sight Glass
3/8"		55	F72G-3AN-QD3	40	Metal With Sight Glass
1/4"	F73	60	F73G-2AN-QD3	40	Metal With Sight Glass
3/8"		65	F73G-3AN-QD3	40	Metal With Sight Glass
1/2"		69	F73G-4AN-QD3	40	Metal With Sight Glass
3/8"	F74	112	F74G-3AN-QD3	40	Metal With Sight Glass
1/2"		140	F74G-4AN-QD3	40	Metal With Sight Glass
3/4"		140	F74G-6AN-QD3	40	Metal With Sight Glass
3/4"	F17	325	F17-600-M3DA	40	Metal With Sight Glass
1"		425	F17-800-M3DA	40	Metal With Sight Glass
1.25"		425	F17-A00-M3DA	40	Metal With Sight Glass
1.50"		425	F17-B00-M3DA	40	Metal With Sight Glass
1.50"	F18	1400	F18-B00-M3DA	40	Metal With Sight Glass
2.0"		1400	F18-C00-M3DA	40	Metal With Sight Glass

Note: All Filter/Regulators are supplied with 40 Micron elements, except Series B07 (5 Micron)

Options

Automatic Drains

Series F07, F17, F18

Substitute "A" for "M" in position #7 of the Part Number
ie: F17-800-A3DA

Series*F72, F73, F74

Substitute "A" for "Q" in position #8 of the Part Number
ie: F72G-3AN-AD3

* Note for F72 Series Filters, a longer filter bowl is required to accommodate the added length of the Automatic Drain, Substitute "E" for "D" in position #8 of the Part Number ie: F72C-2AD-AE0

5 Micron Elements

Series F17, F18

Substitute "1" for "3" in position #7 of the Part Number
ie: F17-800-M3DA

Series F72, F73, F74

Substitute "1" for "3" in position #10 of the Part Number
ie: F72G-3AN-QD1



Replacement Elements

Filter Series	5 Micron	40 Micron
F07	3652-17	3652-18
F72	5925-03	5925-02
F73	4438-01	4438-03
F74	4338-04	4338-05
F17	5311-01	5311-03
F18	5882-11	5882-13

Coalescing Oil Removal Filters

Manual Drain , with Service Life Indicator, 0.01 Micron Element

Operating Pressure: Poly Bowl Units 0-150 PSI, Metal Bowl Units 0-250 PSI

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number	Bowl Type
1/8"	F39	11	F39-100-M0TA *	Poly
1/4"		12	F39-200-M0TA *	Poly
1/4"	F72C	9.5	F72C-2AD-QD0	Metal With Sight Glass
3/8"		9.5	F72C-3AD-QD0	Metal With Sight Glass
1/4"	F73C	21.2	F73C-2AD-QD0	Metal With Sight Glass
3/8"		21.2	F73C-3AD-QD0	Metal With Sight Glass
1/2"		21.2	F73C-4AD-QD0	Metal With Sight Glass
3/8"	F74C	33	F74C-3AD-QD0	Metal With Sight Glass
1/2"		33	F74C-4AD-QD0	Metal With Sight Glass
1/2" Hi-Flo		59.3	F74H-4AD-QD0	Metal With Sight Glass
3/4" Hi-Flo		59.3	F74H-6AD-QD0	Metal With Sight Glass
3/4"	F46	90	F46-601-M0DA	Metal With Sight Glass
1"		125	F46-801-M0DA	Metal With Sight Glass
1.25"		125	F46-A01-M0DA	Metal With Sight Glass
1.50"	F47	250	F47-B01-M0DA	Metal With Sight Glass
2.0"		300	F47-C01-M0DA	Metal With Sight Glass
2.0" Hi-Flo		600	F47-C21-M0DA	Metal With Sight Glass

* F39 Filters are not available with pressure drop indicators
Maximum Remaining Oil Content in outlet @ 20 Deg. C. = .01 ppm

Coalescing Filter Elements

Filter Series	Part No.
F39	4141-10
F72C	5925-09
F73C	4444-01
F74C	4344-01
F74H	4344-02
F46	5351-04
F47	3203-02
F47 Hi-Flo	3203-05

Adsorbing Filter Elements

Filter Series	Part No.
F72V	4241-01
F74V	4341-01
F46V	665-08

Oil Vapour Removal Adsorbing Filters

Closed Bottom Bowl, Activated Carbon Element

Operating Pressure: 250 PSI Max.

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number	Bowl Type
1/4"	F72V	3.4	F72V-2AN-EMC	Metal no Sight Glass
3/8"			F72V-3AN-EMC	
3/8"	F74V	27	F74V-3AM-EMA	
1/2"			F74V-4AM-EMA	
3/4"			F74V-6AM-EMA	
3/8"	F46V	60	F46-323-MAGA	
1/2"			F46-424-MAMA	
3/4"			F46-624-MAMA	

Maximum Remaining Oil Content in outlet @ 20 Deg. C. = .003 ppm



Notes: - When Using Coalescing filters it is recommended that a 5 Micron Pre-Filter be placed upstream to prolong element life
- Oil Vapour Removal Filters should be used with a Coalescing Filter Upstream

Coalescing Filter Options

Automatic Drains

Series F39, F46, F47 Substitute "A" for "M" in position #7 of the Part Number ie: F46-801-A0DA

Series *F72, F73, F74 Substitute "A" for "Q" in position #8 of the Part Number ie: F72C-3AD-AD0

* Note for F72 Series Filters, a longer filter bowl is required to accommodate the added length of the Automatic Drain, Substitute "E" for "D" in position #8 of the Part Number ie: F72C-2AD-AE0

Assemblies without Service Life Indicators

Series F46, F47 Substitute "0" for "1" in position #6 of the Part Number ie: F46-800-M0DA

Series F72, F73, F74 Substitute "N" for "D" in position #7 of the Part Number ie: F72C-3AN-QD0

Relieving type, with Pressure Gauge

Operating Pressure: 300 PSI Max.



Regulators Without Pressure Gauge

Series R07, R17, R18

Substitute "N" for "G" in position #8 of the Part Number
ie: R17-800-RNLA

Series R72, R73, R74

Substitute "N" for "G" in position #10 of the Part Number
ie: R72G-3AK-RMN

Regulators Without Non Relieving Diaphragms

Series R07, R17, R18

Substitute "N" for "R" in position #7 of the Part Number
ie: R17-800-NGLA

Series R72, R73, R74

Substitute "N" for "R" in position #8 of the Part Number
ie: R72G-3AK-NMG

Repair Kits

Filter Series	Relieving	Non Relieving
R07	3407-02	3407-01
R72	4381-500	4381-501
R73	4381-600	4381-601
R74	4381-700	4381-701
R17	5578-02	5578-01
R18	5945-40	5945-41

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number	Reduced Pressure Range (PSI)	
1/8"	R07	14	R07-100-RGAA	1 - 10	
			R07-100-RGEA	5 - 50	
			R07-100-RGKA	5 - 100	
1/4"		15	R07-200-RGAA	1 - 10	
			R07-200-RGEA	5 - 50	
			R07-200-RGKA	5 - 100	
1/4"	R72	70	R72G-2AK-RCG	5 - 30	
R72G-2AK-RFG			5 - 60		
R72G-2AK-RMG			5 - 150		
3/8"			R72G-3AK-RCG	5 - 30	
			R72G-3AK-RFG	5 - 60	
			R72G-3AK-RMG	5 - 150	
1/4"	R73	90	R73G-2AK-RFG	5 - 60	
			R73G-2AK-RMG	5 - 150	
			R73G-2AK-RSG	10 - 250	
3/8"		144	R73G-3AK-RFG	5 - 60	
			R73G-3AK-RMG	5 - 150	
			R73G-3AK-RSG	10 - 250	
1/2"			R73G-4AK-RFG	5 - 60	
			R73G-4AK-RMG	5 - 150	
			R73G-4AK-RSG	10 - 250	
3/8"		R74	208	R74G-3AK-RFG	5 - 60
				R74G-3AK-RMG	5 - 150
				R74G-3AK-RSG	10 - 250
1/2"	220		R74G-4AK-RFG	5 - 60	
			R74G-4AK-RMG	5 - 150	
			R74G-4AK-RSG	10 - 250	
3/4"			R74G-6AK-RFG	5 - 60	
			R74G-6AK-RMG	5 - 150	
			R74G-6AK-RSG	10 - 250	
3/4"	R17		440	R17-600-RGEA	5 - 60
				R17-600-RGLA	5 - 125
				R17-600-RGSA	10 - 250
1.0"		480	R17-800-RGEA	5 - 60	
			R17-800-RGLA	5 - 125	
			R17-800-RGSA	10 - 250	
1.25"		400	R17-A00-RGEA	5 - 60	
			R17-A00-RGLA	5 - 125	
			R17-A00-RGSA	10 - 250	
1.50"		440	R17-B00-RGEA	5 - 60	
			R17-B00-RGLA	5 - 125	
			R17-B00-RGSA	10 - 250	
1.50"		*R18	2000	R18-B05-RGEA	5 - 60
				R18-B05-RGLA	5 - 125
				R18-B05-RGSA	10 - 250
2.00"				R18-C05-RGEA	5 - 60
				R18-C05-RGLA	5 - 125
				R18-C05-RGSA	10 - 250

*Note R18 Regulators are Pilot Operated units

Relieving type, with Pressure Gauge

Operating Pressure: Poly Bowl Units 0-150 PSI (07 Series Only),
Metal Bowl Units 0-250 PSI

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number	Reduced Pressure Range (PSI)	
1/8"	B07	13	B07-102-M1AA	1 - 10	
			B07-102-M1EA	5 - 50	
			B07-102-M1KA	5 - 100	
1/4"		14	B07-202-M1AA	1 - 10	
			B07-202-M1EA	5 - 50	
			B07-202-M1KA	5 - 100	
1/4"	B72	80	B72G-2AK-QD3-RCG	5 - 30	
B72G-2AK-QD3-RFG			5 - 60		
B72G-2AK-QD3-RMG			5 - 150		
3/8"			B72G-3AK-QD3-RCG	5 - 30	
			B72G-3AK-QD3-RFG	5 - 60	
			B72G-3AK-QD3-RMG	5 - 150	
1/4"	B73	78	B73G-2AK-QD3-RFG	5 - 60	
B73G-2AK-QD3-RMG			5 - 150		
B73G-2AK-QD3-RSG			10 - 250		
3/8"		123	B73G-3AK-QD3-RFG	5 - 60	
			B73G-3AK-QD3-RMG	5 - 150	
			B73G-3AK-QD3-RSG	10 - 250	
1/2"			B73G-4AK-QD3-RFG	5 - 60	
			B73G-4AK-QD3-RMG	5 - 150	
			B73G-4AK-QD3-RSG	10 - 250	
3/8"		B74	163	B74G-3AK-QD3-RFG	5 - 60
B74G-3AK-QD3-RMG				5 - 150	
B74G-3AK-QD3-RSG				10 - 250	
1/2"	212		B74G-4AK-QD3-RFG	5 - 60	
			B74G-4AK-QD3-RMG	5 - 150	
			B74G-4AK-QD3-RSG	10 - 250	
3/4"			B74G-6AK-QD3-RFG	5 - 60	
			B74G-6AK-QD3-RMG	5 - 150	
			B74G-6AK-QD3-RSG	10 - 250	

Note: All Filter/Regulators are supplied with 40 Micron elements, except Series B07 (5 Micron)

Options

Filter - Regulators Without Pressure Gauge

Series B07 Substitute "1" for "2" in position #6 of the Part Number ie: B07-101-M1KA

Series B72, B73, B74 Substitute "N" for "G" in position #13 of the Part Number ie: B72G-3AK-QD3-RMN

Filter - Regulators Without Non Relieving Diaphragms

Series B07 Substitute "23" for "02" in positions #5&6 of the Part Number ie: B07-123-M1KA

Series B72, B73, B74 Substitute "N" for "R" in position #11 of the Part Number ie: B72G-3AK-QD3-NMG

Filter - Regulators With 5 Micron Elements

Series B72, B73, B74 Substitute "1" for "3" in position #10 of the Part Number ie: B72G-3AK-QD1-RMG

Filter - Regulators Without Automatic Drains

Series B07 Substitute "A" for "M" in position #7 of the Part Number ie: B07-102-A1KA

Series B72, B73, B74 Substitute "A" for "Q" in position #8 of the Part Number ie: B72G-3AK-AD3-RMG

* Repair Kits

Filter Series	Relieving	Non Relieving
B07	3820-14	3820-13
B72	4383-500	4383-501
B73	4383-600	4383-601
B74	4383-700	4383-701

* Repair Kits do NOT include Replacement filter element, Refer "General Purpose Filters" page and select Element Kit part number from corresponding Series Filter





Operating Pressure: Poly Bowl Units 0-150 PSI, Metal Bowl Units 0-250 PSI

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number	Bowl Type	Bowl Capacity in Ounces
1/8"	L07	10	L07-100-MPAA	Poly	1.0
1/4"		14	L07-200-MPAA	Poly	1.0
1/4"	F72	51	L72M-2AP-QDN	Metal With Sight Glass	1.9
3/8"		51	L72M-3AP-QDN	Metal With Sight Glass	1.9
1/4"	L73	60	L73M-2AP-QDN	Metal With Sight Glass	3.5
3/8"		60	L73M-3AP-QDN	Metal With Sight Glass	3.5
1/2"		60	L73M-4AP-QDN	Metal With Sight Glass	3.5
3/8"	L74	114	L74M-3AP-QDN	Metal With Sight Glass	7.0
1/2"		154	L74M-4AP-QDN	Metal With Sight Glass	7.0
3/4"		142	L74M-6AP-QDN	Metal With Sight Glass	7.0
3/4"	L17	160	L17-600-MPDA	Metal With Sight Glass	36.0
1"		275	L17-800-MPDA	Metal With Sight Glass	36.0
1.25"		275	L17-A00-MPDA	Metal With Sight Glass	36.0
1.50"		275	L17-B00-MPDA	Metal With Sight Glass	36.0



Repair Kits

Series	Kit#
L07	3795-03
L72	4382-500
L73	4382-600
L74	4382-700
L17	5771-02

Options

Large Capacity Bowls

Series L17 2 Litre Bowl (72 Ounce) Substitute "H" for "D" in position #9 of the Part Number ie: L17-600-MPHA
 8 Litre Bowl (2 Gallon) Substitute "J" for "D" in position #9 of the Part Number ie: L17-600-MPJA
 20 Litre Bowl (5 Gallon) Substitute "K" for "D" in position #9 of the Part Number ie: L17-600-MPKA

Series L74 1 Litre Bowl (36 Ounce) Substitute "A" for "D" in position #9 of the Part Number ie: L74M-4AP-QAN

Other Options

Consult Customer Service for

- Remote Fill Adaptors
- Oil Fog Versions
- Low Level Switches



2 Piece Prefilter and Coalescing Filter Combinations

Prefilter with 5 Micron element and Manual Drain

Coalescing Filter with 0.01 Micron element and Manual Drain

Operating Pressure: 250 PSI Max.

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number Service Life Indicator on Coalescing Filter Only	Model Number Service Life Indicator on both Prefilter & Coalescing Filter
1/4"	72	9.5	H72A-2AC-QD1-NNN-DNN	H72A-2AB-QD1-NNN-DNN
3/8"			H72A-3AC-QD1-NNN-DNN	H72A-3AB-QD1-NNN-DNN
1/4"	73	21.2	H73A-2AC-QD1-NNN-DNN	H73A-2AB-QD1-NNN-DNN
3/8"			H73A-3AC-QD1-NNN-DNN	H73A-3AB-QD1-NNN-DNN
1/2"			H73A-4AC-QD1-NNN-DNN	H73A-4AB-QD1-NNN-DNN
3/8"	74	33	H74A-3AC-QD1-NNN-DNN	H74A-3AB-QD1-NNN-DNN
1/2"		33	H74A-4AC-QD1-NNN-DNN	H74A-4AB-QD1-NNN-DNN
1/2" Hi Flo		59.3	H74B-4AC-QD1-NNN-DNN	H74B-4AB-QD1-NNN-DNN
3/4" Hi Flo		59.3	H74A-4AC-QD1-NNN-DNN	H74A-4AB-QD1-NNN-DNN

3 Piece Prefilter, Coalescing Filter and Vapour Removal Combinations

Prefilter with 5 Micron element and Manual Drain

Coalescing Filter with 0.01 Micron element and Manual Drain

Activated Carbon Adsorbing Filter No Drain

Operating Pressure: 250 PSI Max.

Port Size (NPT)	Series	Flow Rate (SCFM)	Model Number Service Life Indicator on Coalescing Filter Only	Model Number Service Life Indicator on both Prefilter & Coalescing Filter
1/4"	72	3.4	H72F-2AC-QD1-NNN-DMN	H72F-2AB-QD1-NNN-DMN
3/8"			H72F-3AC-QD1-NNN-DMN	H72F-3AB-QD1-NNN-DMN
3/8"	74	27	H74F-3AC-QD1-NNN-DMN	H74F-3AB-QD1-NNN-DMN
1/2"			H74F-4AC-QD1-NNN-DMN	H74F-4AB-QD1-NNN-DMN

Options

Automatic Drains (Both Filters)

Series *72

Substitute "AE" for "QD" in position #8&9 of the Part Number ie: H72A-2AC-AE1-NNN-DNN

* Note for F72 Series Filters, a longer filter bowl is required to accommodate the added length of the Automatic Drain

Series 73, 74

Substitute "A" for "Q" in position #8 of the Part Number ie: H73A-2AC-AD1-NNN-DNN

Add Modular shut-Off Valve to Inlet (Refer Pg. 60)

Series 72, 73, 74

Substitute "J" for "H" in position #1 of the Part Number ie: J74A-4AC-QD1-NNN-DNN

Remove Service Life Indicator(s)

Series 72, 73, 74

Substitute "N" for "C" or "B" in position #7 of the Part Number ie: H74A-4AN-QD1-NNN-DNN

Add Wall Mounting Bracket(s) (refer Page #62) Series 72, 73, 74

Substitute "B" for "N" in the last digit of the part Number, ie H73A-4AC-QD1-NNN-DNB

Note: 2 piece units without shut-off valve have only **one** bracket, 3 piece units with shut-off have **two** brackets.





Relieving type Regulators , with Pressure Gauge

Filters with 40 Micron Elements (5 Micron for "07" Series) and Manual Drains

Operating Pressure: 250 PSI Max., (150 PSI for Series "07")

Port Size (NPT)	Series	Flow Rate (SCFM)	2 Piece Filter/Regulator & Lubricator Model Number	3 Piece Filter, Regulator & Lubricator Model Number	Reduced Pressure Range (PSI)
1/8"	07	10	P1H-100-M1AA	P1A-100-M1AA	5 - 50
			P1H-105-M1AA	P1A-105-M1AA	5 - 100
1/4"		14	P1H-200-M1AA	P1A-200-M1AA	5 - 50
			P1H-205-M1AA	P1A-205-M1AA	5 - 100
1/4"	72	51	C72H-2AK-QD3-RCG-QDN	C72A-2AK-QD3-RCG-QDN	5 - 30
			C72H-2AK-QD3-RFG-QDN	C72A-2AK-QD3-RFG-QDN	5 - 60
C72H-2AK-QD3-RMG-QDN			C72A-2AK-QD3-RMG-QDN	5 - 150	
3/8"			C72H-3AK-QD3-RCG-QDN	C72A-3AK-QD3-RCG-QDN	5 - 30
			C72H-3AK-QD3-RFG-QDN	C72A-3AK-QD3-RFG-QDN	5 - 60
			C72H-3AK-QD3-RMG-QDN	C72A-3AK-QD3-RMG-QDN	5 - 150
1/4"	73	60	C73H-2AK-QD3-RFG-QDN	C73A-2AK-QD3-RFG-QDN	5 - 60
			C73H-2AK-QD3-RMG-QDN	C73A-2AK-QD3-RMG-QDN	5 - 150
C73H-2AK-QD3-RSG-QDN			C73A-2AK-QD3-RSG-QDN	10 - 250	
3/8"			C73H-3AK-QD3-RFG-QDN	C73A-3AK-QD3-RFG-QDN	5 - 60
			C73H-3AK-QD3-RMG-QDN	C73A-3AK-QD3-RMG-QDN	5 - 150
			C73H-3AK-QD3-RSG-QDN	C73A-3AK-QD3-RSG-QDN	10 - 250
1/2"			C73H-4AK-QD3-RFG-QDN	C73A-4AK-QD3-RFG-QDN	5 - 60
			C73H-4AK-QD3-RMG-QDN	C73A-4AK-QD3-RMG-QDN	5 - 150
			C73H-4AK-QD3-RSG-QDN	C73A-4AK-QD3-RSG-QDN	10 - 250
3/8"			74	115	C74H-3AK-QD3-RFG-QDN
	C74H-3AK-QD3-RMG-QDN	C74A-3AK-QD3-RMG-QDN			5 - 150
	C74H-3AK-QD3-RSG-QDN	C74A-3AK-QD3-RSG-QDN			10 - 250
1/2"	154	C74H-4AK-QD3-RFG-QDN		C74A-4AK-QD3-RFG-QDN	5 - 60
		C74H-4AK-QD3-RMG-QDN		C74A-4AK-QD3-RMG-QDN	5 - 150
		C74H-4AK-QD3-RSG-QDN		C74A-4AK-QD3-RSG-QDN	10 - 250
3/4"	142	C74H-6AK-QD3-RFG-QDN		C74A-6AK-QD3-RFG-QDN	5 - 60
		C74H-6AK-QD3-RMG-QDN		C74A-6AK-QD3-RMG-QDN	5 - 150
		C74H-6AK-QD3-RSG-QDN		C74A-6AK-QD3-RSG-QDN	10 - 250
3/4"	17	160	-	P8A-665-M3DA	5 - 60
			-	P8A-660-M3DA	5 - 125
			-	P8A-677-M3DA	10 - 250
1.0"		275	-	P8A-865-M3DA	5 - 60
			-	P8A-860-M3DA	5 - 125
			-	P8A-877-M3DA	10 - 250
1.25"			-	P8A-A65-M3DA	5 - 60
			-	P8A-A60-M3DA	5 - 125
			-	P8A-A77-M3DA	10 - 250
1.50"	-		P8A-B65-M3DA	5 - 60	
	-		P8A-B60-M3DA	5 - 125	
	-	P8A-B77-M3DA	10 - 250		

Options

Automatic Drains

Series 07, 17

Substitute "A" for "M" in position #7 of the Part Number ie: P8A-860-A3DA

Series *72

Substitute "AE" for "QE" in position #8&9 of the Part Number ie: C72H-2AK-AE3-RMG-QDN

* Note for F72 Series Filters, a longer filter bowl is required to accommodate the added length of the Automatic Drain

Series 73, 74

Substitute "A" for "Q" in position #8 of the Part Number ie: C73A-2AK-AD3-RMG-QDN

5 Micron Elements

Series 72, 73, 74

Substitute "1" for "3" in position #10 of the Part Number ie: C72A-2AK-QD1-RMG-QDN

Series 17

Substitute "1" for "3" in position #8 of the Part Number ie: P8A-860-M1DA

Add Modular shut-Off Valve to Inlet (Refer Pg. 60)

Series 72, 73, 74

Substitute "D" for "C" in position #1 of the Part Number ie: D72A-2AK-QD3-RMG-QDN

Add Wall Mounting Bracket(s)

(refer Page #62)

Series 72, 73, 74

Substitute "B" for "N" in the last digit of the part Number

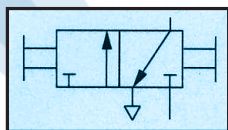
ie C72A-2AK-QD3-RMG-QDB

Note: 2 piece units without shut-off valve have only **one** bracket, 3 piece units with shut-off have **two** brackets.





Excelon®



72 Series



73 Series



74 Series

Technical Data

Fluid: Compressed air

Maximum Pressure: 250 psig (17 bar)

Operating Temperature*: -30° to 150°F
(-34° to 65°C)

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Series	Port Size	Part No.	Weight lb (kg)
72	1/4"	T72E-2AA-P1N	0.79 (0.36)
	3/8"	T72E-2AA-P1N	0.86 (0.39)
73	1/4"	T73E-3AA-P1N	0.7 (0.3)
	3/8"	T73E-4AA-P1N	0.7 (0.3)
	1/2"	T73E-6AA-P1N	0.7 (0.3)
74	3/8"	T74E-3AA-P1N	0.69 (0.32)
	1/2"	T74E-4AA-P1N	0.65 (0.32)
	3/4"	T74E-6AA-P1N	0.62 (0.28)



Basic Size	Port Size PTF	Model Numbers	
		Without Muffler	With Muffler
1/2"	1/4"	C0021A	C0023A
	3/8"	C0021B	C0023B
	1/2"	C0021C	C0023C
1"	3/4"	C0021D	C0023D
	1"	C0022A	C0024A
	1-1/4"	C0022B	C0024B
	1-1/2"	C0022C	C0024C
	1-1/2"	C0022D	C0024D



Pressure Guages

Dial Size »»»	1.50"		2.00"				2.50" **	
Connection »»»	1/8"NPT		1/8"NPT		1/4"NPT		1/4"NPT	
Port Location »»»	Back	Bottom	Back	Bottom	Back	Bottom	Back***	Bottom
0-30" Hg (Vaccum)	E1397	E1297	E1424	E195	E1428*	E135	Q801	Q801
0-15 PSI	E1399	E1299	E1425	E196	E1429*	E136	Q901	Q800
0-30 PSI	E1400*	E1300	E1402*	E206	E1403*	E199	Q902	Q802
0-60 PSI	E1401*	E1301	E1404*	E207	E1405*	E201	Q903	Q803
0-100 PSI	E1420*	E1320	E1406*	E208	E1407*	E202	Q904	Q804
0-160 PSI	E1421*	E1321	E1408*	E197	E1409*	E203	Q905	Q805
0-200 PSI	E1422*	E1322	E1426	E209	E1410*	E204	Q906	Q806
0-300 PSI	E1423*	E1323	E1427	E198	E1411*	E205	Q907	Q807
0-500 PSI	-	-	-	-	-	-	-	-
0-600 PSI	-	-	-	-	-	-	Q908	Q808
0-1000 PSI	-	-	-	-	-	-	Q909	Q809
0-2000 PSI	-	-	-	-	-	-	Q910	Q810
0-3000 PSI	-	-	-	-	-	-	Q911	Q811
0-5000 PSI	-	-	-	-	-	-	Q912	Q812

*Chrome Bezel and Rear "U" Clamp available by adding Suffix "UC" ie E1421-UC

**All "Q" Series guages are Liquid Filled

***Panel Mount flange ring available by adding Suffix "25FF" ie Q905-25FF



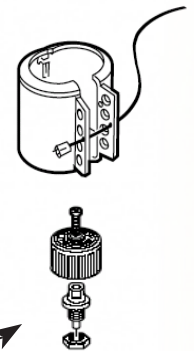
Regulator Mount Accessories

Regulator / Filter Regulator Series	Panel Nut Only	Wall Brkt. With Panel Nut
R07, B07	2962-89	18-025-003
R72, B72	4248-01	74316-50
R73, B73	5191-88	4461-50
R74, B74	4348-89	4368-51
R17	5226-97	5570-04

Regulator Tamper Resistant Kit

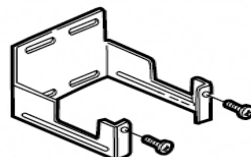
Regulator / Filter Regulator Series	Kit number (Cover & Wrie)	Replacement Wire Only
R07, B07	18-001-092*	-
R72, B72	4255-51	2117-01
R73, B73	4455-01	2117-01
R74, B74	4355-01	2117-01
R17	-	2117-01

*18-001-092 is a tamper resistant Knob Kit (lower image)



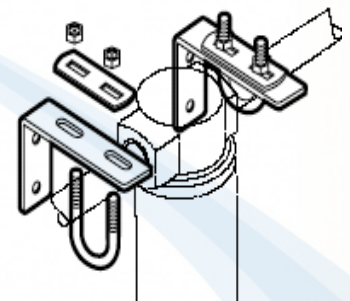
Modular Series 72, 73, 74 Component Mounting Bracket

Regulator / Filter Regulator Series	Mounting Bracket
F72, R72, L72, B72	4224-50
F73, R73, L73, B73	4424-50
F73, R73, L73, B73	4324-50



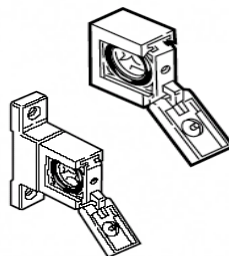
Line Mount Wall Brackets

Series 17 Filter & Lubricators, Series 46 Oil Removal Filters	Mounting Bracket
3/4", 1" Port Series	6212-50
1.25", 1.50" Port Series	6212-51



Modular Series 72,73,74 Component Connection Blocks

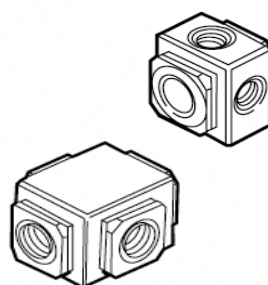
Modular Series	Quick Clamp Only	Wall Bracket Only	Quick Clamp with Wall Brkt.
72 Series	4214-51	4213-89	4214-52
73 Series	4314-51	4314-50	4314-52
74 Series	4314-51	4313-50	4314-52



Modular Series 72,73,74 Porting Block & Manifold Blocks*

Modular Series	Porting Block Side Ports (3x)	Manifold Block Side and end Ports	Porting Block	Manifold Block
72 Series	1/4"NPT	3/8"NPT	4216-50	4228-01
73 Series	1/4"NPT	3/4"NPT	4316-50	4328-51
74 Series	1/4"NPT	3/4"NPT	4316-50	4328-51

*Manifold Blocks allow components to be mounted at right angle to the main assembly ie: branch Regulators etc.



Auto Drain Kits

Filter/ Filter Regulator Series	Auto Drain Kit
F72*, B72*	4000-50R
F73, B73	5000-51R
F74, B74	3000-10
F17	3000-10

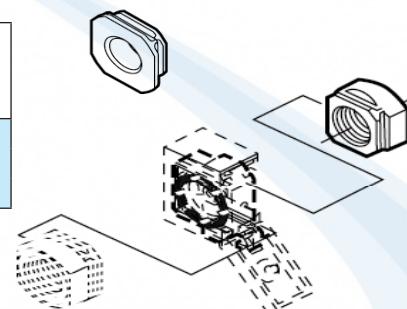


*Auto Drain Kits for 72 Series will only fit in Long Bowls Type "E, L & W"

Modular Series 72,73,74 Modular End Porting Block

Modular Series	1/4"NPT	3/8"NPT	1/2"NPT	3/4"NPT	Transition Block*
72 Series	4215-03	4215-03	-	-	4417-01
73 Series	4315-01	4215-02	4215-03	4215-04	
74 Series	4315-01	4215-02	4215-03	4215-04	

Transition Block allow 72 series components to be combined with a 73/74 series assembly.

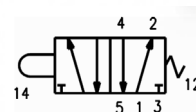
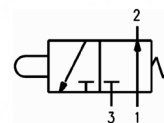


Plunger Operated, Spring Return



Model Number	Function	Port Size	Design
234-945	3/2 N.C.	5/32" Tube	Poppet
235-945	3/2 N.C.	10-32 UNF	Poppet
138-945TF	3/2 N.C.	1/8"	Poppet
338-945TF	3/2*	1/8"	Spool
358-945TF	5/2	1/8"	Spool

* Spool Valves may be plumbed normally Open or Closed

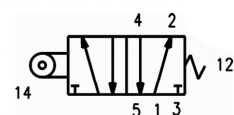
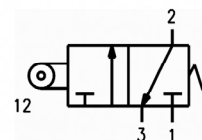


Cam Roller Operated, Spring Return



Model Number	Function	Port Size	Design
234-955	3/2 N.C.	5/32" Tube	Poppet
235-955	3/2 N.C.	10-32 UNF	Poppet
138-955TF	3/2 N.C.	1/8"	Poppet
338-955TF	3/2*	1/8"	Spool
358-955TF	5/2	1/8"	Spool

* Spool Valves may be plumbed normally Open or Closed

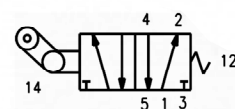
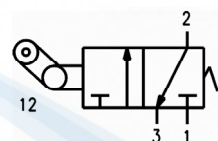


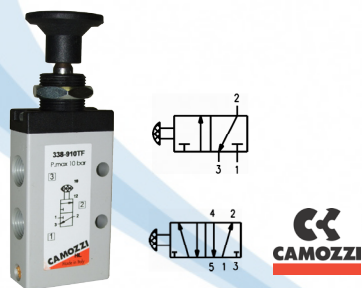
One Way Trip Operated, Spring Return Valves



Model Number	Function	Port Size	Design
234-965	3/2 N.C.	5/32" Tube	Poppet
235-965	3/2 N.C.	10-32 UNF	Poppet
138-965TF	3/2 N.C.	1/8"	Poppet
338-965TF	3/2*	1/8"	Spool
358-965TF	5/2	1/8"	Spool

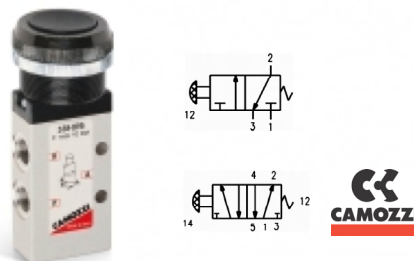
* Spool Valves may be plumbed normally Open or Closed





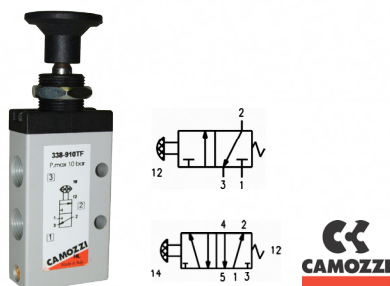
Push-Pull Knob operated Valves

Model Number	Function	Port Size
338-910TF	3/2	1/8"
358-910TF	5/2	1/8"
434-910TF	3/2	1/4"
454-910TF	5/2	1/4"



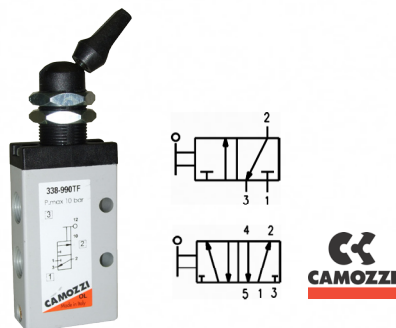
Flush Push Button Operated, Spring Return

Model Number	Function	Port Size	Port Button Colour
338-895TF	3/2	1/8"	BLACK
338-896TF	3/2	1/8"	GREEN
338-897TF	3/2	1/8"	RED
358-895TF	5/2	1/8"	BLACK
358-896TF	5/2	1/8"	GREEN
358-897TF	5/2	1/8"	RED



Knob Operated, Spring Return Valves

Model Number	Function	Port Size
338-915TF	3/2	1/8"
358-915TF	5/2	1/8"
434-915TF	3/2	1/4"
454-915TF	5/2	1/4"



Toggle Switch Operated

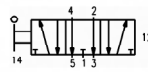
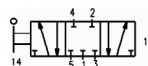
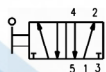
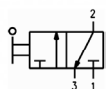
Model Number	Function	Port Size
338-990TF	3/2	1/8"
358-990TF	5/2	1/8"



Palm Button Operated, Spring Return

Model Number	Function	Port Size	Port Button Colour
338-975TF	3/2	1/8"	BLACK
338-976TF	3/2	1/8"	GREEN
338-977TF	3/2	1/8"	RED
358-975TF	5/2	1/8"	BLACK
358-976TF	5/2	1/8"	GREEN
358-977TF	5/2	1/8"	RED

Manually Operated Spool Valves

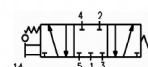
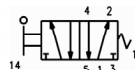
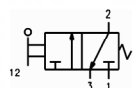


Lever Operated, 2 Position Detent

Model Number	Function	Port Size
338-900TF	3/2	1/8"
358-900TF	5/2	1/8"
434-900TF	3/2	1/4"
454-900TF	5/2	1/4"

Lever Operated Valves, 3 Position Detented

Model Number	Function	Port Size	Center Condition
368-900TF	5/3	1/8"	All Ports blocked
378-900TF	5/3	1/8"	Cyl. Ports Open to Exhaust
464-900TF	5/3	1/4"	All Ports blocked
474-900TF	5/3	1/4"	Cyl. Ports Open to Exhaust

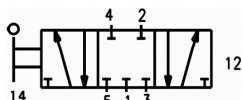
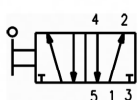


Lever Operated, Spring Return Valves

Model Number	Function	Port Size
338-905TF	3/2	1/8"
358-905TF	5/2	1/8"
434-905TF	3/2	1/4"
454-905TF	5/2	1/4"

Lever Operated Valves, 3 Position Spring Centered

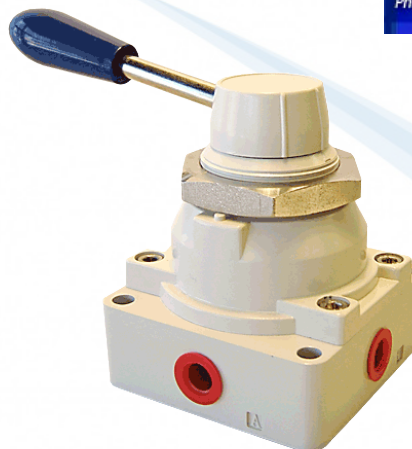
Model Number	Function	Port Size	Center Condition
368-905TF	5/3	1/8"	All Ports blocked
378-905TF	5/3	1/8"	Cyl. Ports Open to Exhaust
464-905TF	5/3	1/4"	All Ports blocked
474-905TF	5/3	1/4"	Cyl. Ports Open to Exhaust



Rotary Lever Operated Valves, 2 and 3 Position Detented

Model Number	Function	Port Size	Center Condition
M4HV310-08-S	5/2	1/4"	None
M4HV330-08-S	5/3	1/4"	All Ports blocked
M4HV410-15-S	5/2	1/2"	None
M4HV430-15-S	5/3	1/2"	All Ports blocked

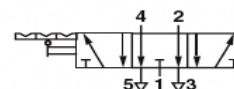
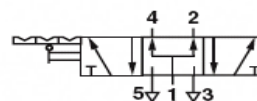
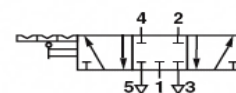
2 Position Rotary Lever Valves are a good choice for applications requiring some degree of "Feathering" or jogging of an actuator.





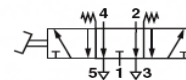
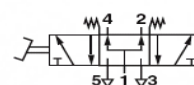
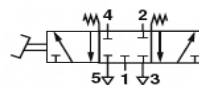
Lever Operated Valves, 3 position Detented

Model	Function	Port Size	Center
K81DA00-KC0-KL3	5/3	1/4"	All Ports Blocked
K81DA06-KC0-KL3	5/3	1/4"	Cyl. Ports Open to Exhaust
K81DA05-KC0-KL3	5/3	1/4"	Cyl. Ports Open to Supply
K81EA00-KC0-KL3	5/3	3/8"	All Ports Blocked
K81EA06-KC0-KL3	5/3	3/8"	Cyl. Ports Open to Exhaust
K81EA05-KC0-KL3	5/3	3/8"	Cyl. Ports Open to Supply
K81FA00-KC0-KL3	5/3	1/2"	All Ports Blocked
K81FA06-KC0-KL3	5/3	1/2"	Cyl. Ports Open to Exhaust
K81FA05-KC0-KL3	5/3	1/2"	Cyl. Ports Open to Supply



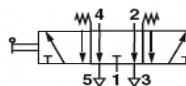
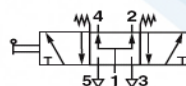
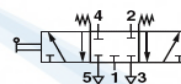
Foot Treadle Operated Valves, 3 position Spring Centered

Model	Function	Port Size	Center
K81DA00-KC0-KT2	5/3	1/4"	All Ports Blocked
K81DA06-KC0-KT2	5/3	1/4"	Cyl. Ports Open to Exhaust
K81DA05-KC0-KT2	5/3	1/4"	Cyl. Ports Open to Supply
K81EA00-KC0-KT2	5/3	3/8"	All Ports Blocked
K81EA06-KC0-KT2	5/3	3/8"	Cyl. Ports Open to Exhaust
K81EA05-KC0-KT2	5/3	3/8"	Cyl. Ports Open to Supply
K81FA00-KC0-KT3	5/3	1/2"	All Ports Blocked
K81FA06-KC0-KT2	5/3	1/2"	Cyl. Ports Open to Exhaust
K81FA05-KC0-KT2	5/3	1/2"	Cyl. Ports Open to Supply



Lever Operated Valves, 3 position Spring Centered

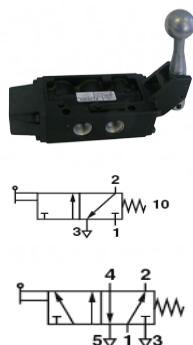
Model	Function	Port Size	Center
K81DA00-KC0-KL2	5/3	1/4"	All Ports Blocked
K81DA06-KC0-KL2	5/3	1/4"	Cyl. Ports Open to Exhaust
K81DA05-KC0-KL2	5/3	1/4"	Cyl. Ports Open to Supply
K81EA00-KC0-KL2	5/3	3/8"	All Ports Blocked
K81EA06-KC0-KL2	5/3	3/8"	Cyl. Ports Open to Exhaust
K81EA05-KC0-KL2	5/3	3/8"	Cyl. Ports Open to Supply
K81FA00-KC0-KL3	5/3	1/2"	All Ports Blocked
K81FA06-KC0-KL2	5/3	1/2"	Cyl. Ports Open to Exhaust
K81FA05-KC0-KL2	5/3	1/2"	Cyl. Ports Open to Supply





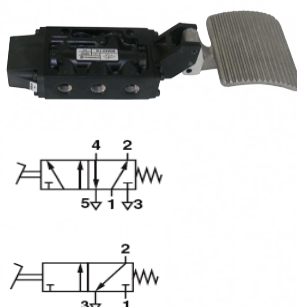
Lever Operated, Spring Return Valves

Model	Function	Port Size
K41DA00-KS1-KL0	3/2	1/4"
K41EA00-KS1-KL0	3/2	3/8"
K71DA00-KS6-KL0	5/2	1/4"
K71EA00-KS6-KL0	5/2	3/8"
K41FA00-KS6-KL0	5/2	1/2"



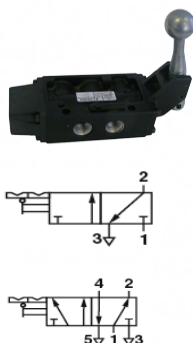
Foot Pedal Operated, Spring Return Valves

Model	Function	Port Size
K41DA00-KS1-KF0	3/2	1/4"
K41EA00-KS1-KF0	3/2	3/8"
K71DA00-KS6-KF0	5/2	1/4"
K71EA00-KS6-KF0	5/2	3/8"
K41FA00-KS6-KF0	5/2	1/2"



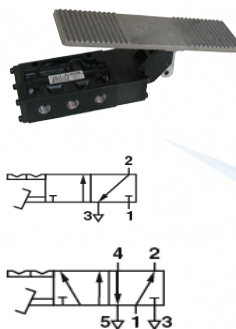
Lever Operated Valves, 2 position Detented

Model	Function	Port Size
K41DA00-KC0-KL1	3/2	1/4"
K41EA00-KC0-KL1	3/2	3/8"
K71DA00-KC0-KL1	5/2	1/4"
K71EA00-KC0-KL1	5/2	3/8"
K41FA00-KC0-KL1	5/2	1/2"



Foot Treadle Operated Valves, 2 position Detented

Model	Function	Port Size
K41DA00-KC0-KT1	3/2	1/4"
K41EA00-KC0-KT1	3/2	3/8"
K71DA00-KC0-KT1	5/2	1/4"
K71EA00-KC0-KT1	5/2	3/8"
K41FA00-KC0-KT1	5/2	1/2"



Foot Pedal With Guard, 2 Position

Model	Type	Function	Port Size
M4F210-08-G	Pedal/spring Return	5/2	1/4"
M4F210-08-LG	Latching Pedal, Set/Reset	5/2	1/4"



Also Available
(Contact CPI customer Service)



In Line Lever Operators



Solenoid Valves



Roller Lever Valves



Air Pilot Valves



Push-Pull Knob Operators



Low Pressure Diaphragm



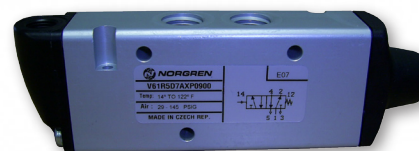
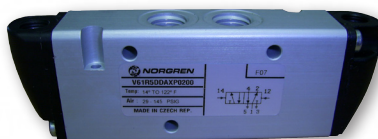
Note 1: All ports are opposite to pedal end of valve. Exhaust ports are not connectible
Operating Pressure: 0-120 PSI



V60-V62 Series

3/2, 5/2, 5/3, and 2 x 3/2

Directional control valves



3-Port and 5-Port Air Pilot Valves

High flow rate

Extensive manual override options

Manifold system with easy assembly

Low power consumption

Maintenance-free

Technical Data

Medium:

Compressed air, filtered to 50 µm, lubricated or non-lubricated.

Operation:

Solenoid pilot or air pilot operated

Mounting:

Individual or fixed length manifold

Connection:

1/8" NPT, 1/4" NPT and 3/8" NPT

Operating Pressure:

116 to 145 psi (8 to 10 bar)

Flow direction:

Internal pilot supply: fixed

External pilot supply: optional

Flow:

Size NPT 3/2, 5/2 2 x 3/2, 5/3

Cv (l/min) Cv (l/min)

1/8 0.75 (750) 0.50 (500)

1/4 1.3 (1300) 0.95 (950)

3/8 2.6 (2600) 1.9 (1900)

Ambient temperature:

14°F to +122°F (-10°C to +50°C)

Consult our Technical Service for use below 36°F (+2°C).

Materials:

Housing and base plate: aluminum

Spool: stainless steel,

Piston, spacers and cover: synthetic material

Static and dynamic seals: NBR

Screws: zinc plated

Springs: stainless steel

Model Number 3/2 Air Pilot Valves	Port Size	Function	Operator/ Operator	Flow Cv	Operating Pressure(Cv)	Pilot Pressure (psi)	Weight (lbs)
V60P4D7A-XP0900	1/8	NC	Air/Spring	0.75	26" Hg to 145	36 to 145	0.29
V61R4D7A-XP0900	1/4	NC	Air/Spring	1.30	26" Hg to 145	36 to 145	0.46
V62S4D7A-XP0900	3/8	NC	Air/Spring	2.60	26" Hg to 145	36 to 145	0.95
V60P3D7A-XP0900	1/8	NO	Spring/Air	0.75	26" Hg to 145	36 to 145	0.29
V61R3D7A-XP0900	1/4	NO	Spring/Air	1.30	26" Hg to 145	36 to 145	0.46
V62S3D7A-XP0900	3/8	NO	Spring/Air	2.60	26" Hg to 145	36 to 145	0.95
V60P4DDA-XP0200	1/8	-	Air/Air	6.75	26" Hg to 145	22 to 145	0.29
V61R4DDA-XP0200	1/4	-	Air/Air	1.30	26" Hg to 145	22 to 145	0.45
V62S4DDA-XP0200	3/8	-	Air/Air	2.60	26" Hg to 145	22 to 145	0.95
2 x 3/2 Air Pilot Valves							
V60PADDA-XP0200	1/8	NC/NC	Air/Air	0.50	29 to 145	29 to 145	0.4
V61RADDA-XP0200	1/4	NC/NC	Air/Air	0.95	29 to 145	29 to 145	0.67
V62SADDA-XP0200	3/8	NC/NC	Air/Air	1.90	29 to 145	29 to 145	1.32
5/2 Air Pilot Valves							
V60P5D7A-XP0900	1/8	-	Air/Spring	0.75	26" Hg to 145	36 to 145	0.35
V61R5D7A-XP0900	1/4	-	Air/Spring	1.30	26" Hg to 145	36 to 145	0.57
V62S5D7A-XP0900	3/8	-	Air/Spring	2.60	26" Hg to 145	36 to 145	1.23
V60P5DDA-XP0200	1/8	-	Air/Air	0.75	26" Hg to 145	22 to 145	0.37
V61R5DDA-XP0200	1/4	-	Air/Air	1.30	26" Hg to 145	22 to 145	0.6
V62S5DDA-XP0200	3/8	-	Air/Air	2.60	26" Hg to 145	22 to 145	1.28
5/3 Air Pilot Valves							
V60P6DDA-XP0200	1/8	APB	Air/Air	0.50	26" Hg to 145	44 to 145	0.44
V61R6DDA-XP0200	1/4	APB	Air/Air	0.95	26" Hg to 145	44 to 145	0.71
V62S6DDA-XP0200	3/8	APB	Air/Air	1.90	26" Hg to 145	44 to 145	0.44
V60P7DDA-XP0200	1/8	COE	Air/Air	0.50	26" Hg to 145	44 to 145	1.48
V61R7DDA-XP0200	1/4	COE	Air/Air	0.95	26" Hg to 145	44 to 145	0.71
V62S7DDA-XP0200	3/8	COE	Air/Air	1.90	26" Hg to 145	44 to 145	1.48

Refer to model number makeup chart for electrical options.

NC = Normally closed, NO = Normally open, APB = All ports blocked, COE = Cylinder ports Open to Exhaust.



5-Port Solenoid Pilot Valves

Model Number 2 x 3/2 Solenoid Pilot Valves	Port Size	Function	Pilot Supply	Operator	Solenoid Variant	Flow Cv	Operating Pressure (psi)	Pilot pressure	Weight (lbs)
V60PA11A-A218JB	1/8	NC/NC	Internal	Sol/sol	Standard	0.5	29 to 116	-	0.75
V61RA11A-A218JB	1/4	NC/NC	Internal	Sol/sol	Standard	0.95	29 to 116	-	0.95
V62SA11A-A218JB	3/8	NC/NC	Internal	Sol/sol	Standard	1.9	29 to 116	-	0.73
5/2 Solenoid Pilot Valves									
V60P517A-A218JB	1/8	-	Internal	Sol/spring	Standard	0.75	29 to 116	-	0.53
V61R517A-A218JB	1/4	-	Internal	Sol/spring	Standard	1.3	29 to 116	-	0.73
V62S517A-A218JB	3/8	-	Internal	Sol/spring	Standard	2.6	29 to 116	-	1.36
V60P511A-A218JB	1/8	-	Internal	Sol/sol	Standard	0.75	29 to 116	-	0.73
V61R511A-A218JB	1/4	-	Internal	Sol/sol	Standard	1.3	29 to 116	-	0.93
V62S511A-A218JB	3/8	-	Internal	Sol/sol	Standard	2.6	29 to 116	-	1.59
5/3 Solenoid Pilot Valves									
V60P611A-A218JB	1/8	APB	Internal	Sol/sol	Standard	0.5	44 to 116	-	0.77
V61R611A-A218JB	1/4	APB	Internal	Sol/sol	Standard	0.95	44 to 116	-	1.04
V62S611A-A218JB	3/8	APB	Internal	Sol/sol	Standard	1.9	44 to 116	-	1.79
V60P711A-A218JB	1/8	COE	Internal	Sol/sol	Standard	0.5	44 to 116	-	0.77
V61R711A-A218JB	1/4	COE	Internal	Sol/sol	Standard	0.95	44 to 116	-	1.04
V62S711A-A218JB	3/8	COE	Internal	Sol/sol	Standard	1.9	44 to 116	-	1.79

3-Port Solenoid Pilot Valves

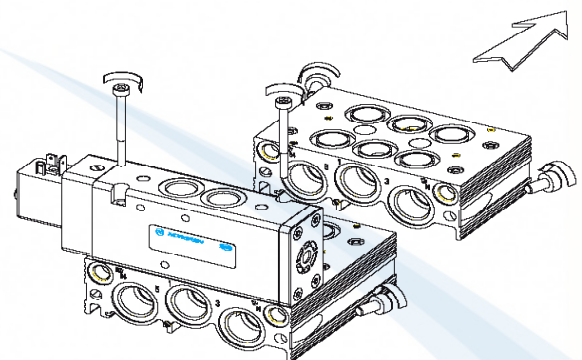
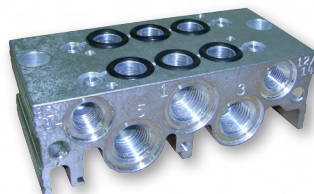
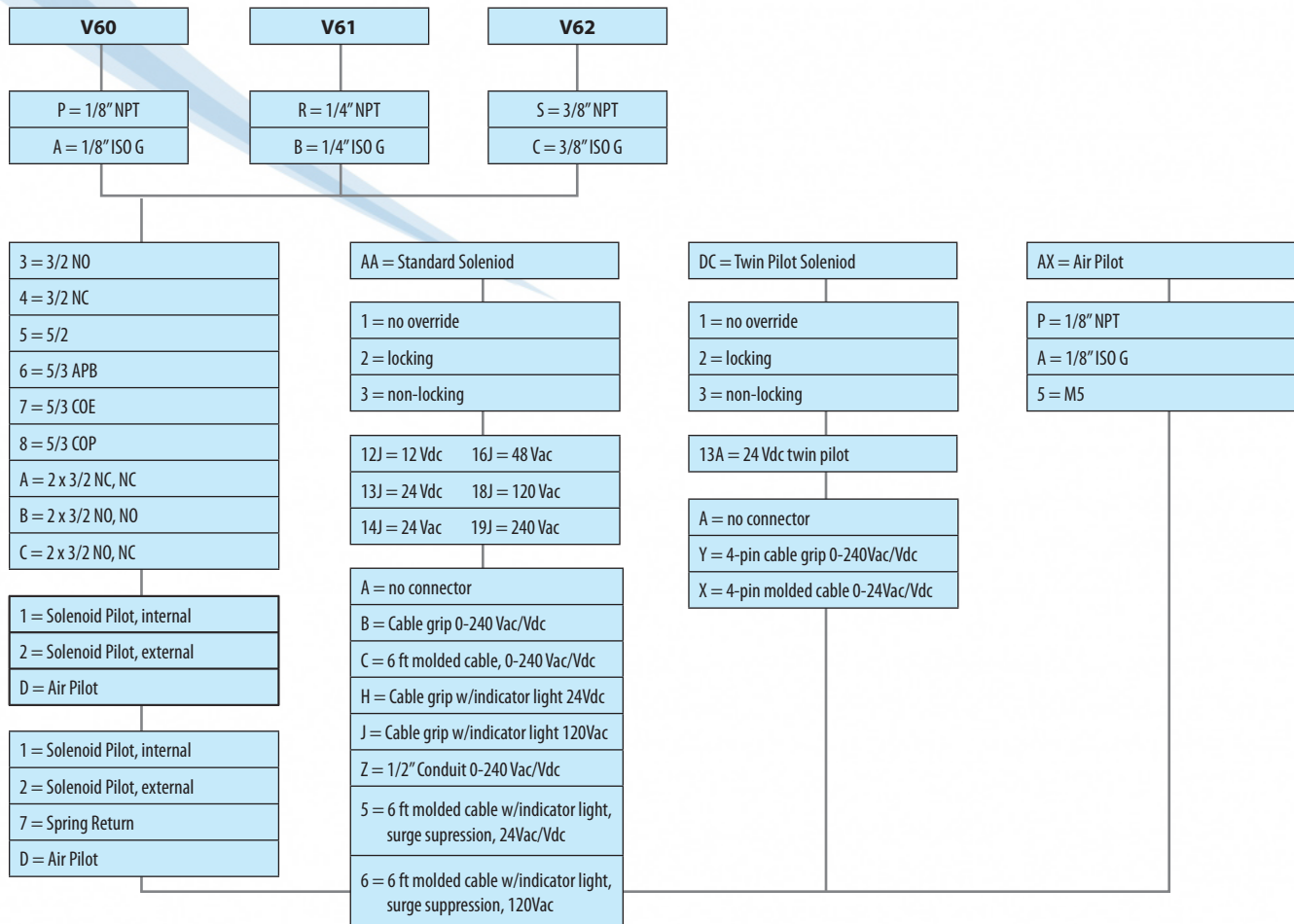
Model Number 3/2 Solenoid Pilot Valves	Port Size	Function	Pilot Supply	Operator	Solenoid Variant	Flow Cv	Operating Pressure (psi)	Pilot pressure	Weight (lbs)
V60P417A-A218JB	1/8	NC	Internal	Sol/spring	Standard	0.75	29 to 116	-	0.49
V61R417A-A218JB	1/4	NC	Internal	Sol/spring	Standard	1.30	29 to 116	-	0.64
V62S417A-A218JB	3/8	NC	Internal	Sol/spring	Standard	2.60	29 to 116	-	1.15
V60P317A-A218JB	1/8	NO	Internal	Sol/spring	Standard	0.75	29 to 116	-	0.5
V61R317A-A218JB	1/4	NO	Internal	Sol/spring	Standard	1.30	29 to 116	-	0.64
V62S317A-A218JB	3/8	NO	Internal	Sol/spring	Standard	2.60	29 to 116	-	1.15
V60P411A-A218JB	1/8	-	Internal	Sol/sol	Standard	0.75	22 to 116	-	0.66
V61R411A-A218JB	1/4	-	Internal	Sol/sol	Standard	1.30	22 to 116	-	0.84
V62S411A-A218JB	3/8	-	Internal	Sol/sol	Standard	2.60	22 to 116	-	1.34

Refer to model number makeup chart for electrical options.

NC = Normally closed, NO = Normally open, APB = All ports blocked,
COE = Cylinder ports Open to Exhaust.

Product Numbering Tree

V 6 0 A 5 1 7 A - A 3 1 3 J B



V60 Series Stacking Manifolds (Common Supply and Exhaust)

Valve Series	Port Size (NPT) Both Ends	2 Station Manifolding Base with Screws	3 Station Manifolding Base with Screws
V60	1/4"	2221032	2221033
V61	3/8"	2221132	2221133
V62	1/2"	2221232	2221233

Pneumatic System Accessory Controls

Shuttle Valves



Model No.	Operation	Ports
T65A1800	Shuttle valves are used to direct 2 or more signals from push buttons etc. to a pilot operated valves. Multiple shuttle valves can be ganged for 3 or more signals	1/8" NPT
T65A2800		1/4" NPT

Quick Exhaust Valves



Model No.	Operation	Ports
T70A1800	Quick Exhaust Valves are typically mounted to the ports of a pneumatic cylinder to increase travel speed by exhausting air directly to atmosphere thereby eliminating back pressure created by plumbing and directional controls	1/8" NPT
T70A2800		1/4" NPT
T70A3800		3/8" NPT
T70A4800		1/2" NPT

Velocity Fuses



Model No.	Operation	Shut-Off Flow*	Ports
T60A2890	Velocity fuses are safety devices that are typically mounted in cylinder lines and allow preset air maximum air flows. In case of line breakage etc. these valves close and prevent runaway loads	17.1	1/4" NPT
T60A2891		29.7	1/4" NPT
T60A3890		41.1	3/8" NPT
T60A3891		68.2	3/8" NPT
T68A4890		68.2	1/2" NPT
T68A4891		102.3	1/2" NPT
T68A6890		102.3	3/4" NPT
T68A6891		169.5	3/4" NPT
T68A8890		195	1" NPT
T68A8891		271	1" NPT
T68AB890		394	1-1/4" NPT
T68AB891		568	1-1/4" NPT

* Velocity fuses do not provide tight shut-off

Line Mount Flow Control Valves



Model No.	Operation	Ports
MASC100-06	Flow Controls incorporate a variable needle valve and check valve in a common body. These devices are usually arranged in a "Meter-Out" arrangement to allow free flow into a pneumatic device, while restricting the exhaust	1/8" NPT
MASC200-08		1/4" NPT
MASC300-10		3/8" NPT
MASC300-15		1/2" NPT

Line Mount Check Valves



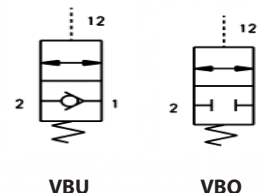
Model No.	Operation	Ports
T55A1800	Check Valves are line mounted devices that permit flow in one direction only. Usually used to prevent back-flow from air chambers or in circuits where pressure must be held in case of supply air loss.	1/8" NPT
T55A2800		1/4" NPT
T55A3800		3/8" NPT
T55A4800		1/2" NPT

Pneumatic System Accessory Controls

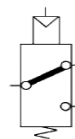


Pneumatic Locking Valves

Model	Operation	Switching Range	Port Size
VBO-1/8	Air pilot operated check and locking valves are typically mounted directly into the actuator ports to prevent movement in case of line breakage or supply loss. Type "VBU" allows free flow into the actuator, while type "VBO" blocks flow in both directions.	Uni-Directional	1/8"
VBU-1/8		Bi-Directional	1/8"
VBO-1/4		Uni-Directional	1/4"
VBU-1/4		Bi-Directional	1/4"
VBO-3/8		Uni-Directional	3/8"
VBU-3/8		Bi-Directional	3/8"



• Pilot Port for All Models is 5/32" (4MM) Push-In Tube Connection



Electro-Pneumatic/Hydraulic Pressure Switches

Model	Operation	Switching Range	Switching Differential
SVA-1-4M-C-HC	Pressure Switches detect the presence of a preset pressure level to cause internal electrical contacts to "Make" or "Break" there by providing an electrical signal to related control equipment. All switches feature +/- 2.0% repeatability. All Switches are fully field adjustable within their specified switchin range.	5-30" Vacuum	2-4" Hg.
SPA-1-4M-C-HC		3-7 PSI	0.5-1.2 PSI
SPA-2-4M-C-HC		5-30 PSI	1-2.5 PSI
SPA-3-4M-C-HC		25-150 PSI	2-10 PSI
SMA-5-4M-C-HC		75-300 PSI	12-36 PSI
SMA-6-4M-C-HC		300-1200 PSI	69-80 PSI
SMA-7-4M-C-HC		1000-3000 PSI	180-360 PSI
SMA-8-4M-C-HC		2000-5000 PSI	200-400 PSI

Note 1 Fluid Connection All models is 1/4" NPT Male (1/8" NPT available on Request)

Note 2 Electrical Connection is via 4 Pin DIN Form "A" Connector,

for Optional 18" Flying Leads Substitute "FL" for "HC" in Part Number

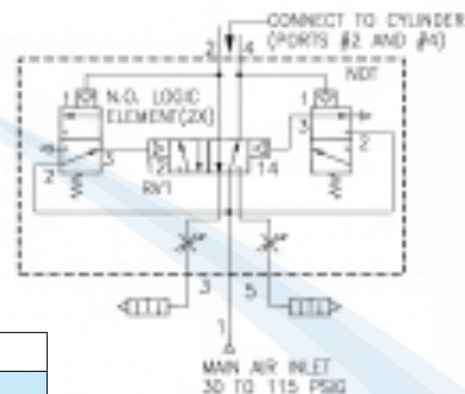
Note 3 Max Overpressure type SVA, SPA Switches is 350 PSI, (9000 PSI for type SMA Switches)



- For control for Pneumatic Agitators
- For control of Stamping Press Shakers

Reciprocator Valve

Model	Operation	Function	Port Size
CPX/06009	5/2 Valve with integral Stroke completion sensors causing cylinder to automatically reverse @ end of stroke	5/2 with integral Speed Controls	1/4" NPT



Pneumatic Two Hand Control Units



* Fittings and Tubing
Not included*

Model No.	Function	Ports
CSV-109	Remote Logic Unit Only	5/32" PIF
LTV-PBGF	Low Stress Palm Button Valve wth guard and Mounting feet (2 req'd per system)	(5) 1/8"

Electrical Two Hand Control Units



Model No.	Function	Output	Switch Loc.
CSV-109	While all "No Touch" models utilize a 120 VAC power supply, each model provides a different output. CSV -109 (24VDC) and CVS-110 (120VAC) each provide electrical outputs while CSV-111 Provides an output air signal upon actuation.	24 V DC (Max. draw 400mA)	End Caps
CSV-109R		24 V DC (Max. draw 400mA)	Remote*
CSV-110		120V AC (Max. draw 5A)	End Caps
CSV-110R		120V AC (Max. draw 5A)	Remote*
CSV-111		Pneumatic Signal	End Caps
CSV-111R		Pneumatic Signal	Remote*

Time Delay Relays



Model No.	Flow Pattern	Range	Ports
KLC-105	N.C. - Output on after set time delay	0.75-6 sec	1/8"
KLH-105	N.O. - Output normally on, vents after delay	0.75-6 sec	1/8"
KLC-110	N.C. - Output on after set time delay	1-11 sec	1/8"
KLH-110	N.O. - Output normally on, vents after delay	1-11 sec	1/8"
KLC-230	N.C. - Output on after set time delay	2-30 sec	1/8"
KLH-230	N.O. - Output normally on, vents after delay	2-30 sec	1/8"

Impulse "One Shot" Valves



Model No.	Operation	Type	Ports
414B	Momentary output with sustained input. (automatically resets when supply removed)	Pressure	1/8"
415B	As above expect output vents the pilot of a Bleed type Directional Valve	Bleed	1/8"

Binary "Flip-Flop" Valves



Model No.	Operation	Ports
USV-100	Output switches every time Supply is applied to inlet. Output is created by inlet supply. Inlet must be vented & re-applied to switch outlet.	5/32" PIF
USV-250	Output switches every time a signal is applied to pilot port. Maintained supply is required @ inlet port. Output is maintained as long as supply is present. Signal port must be vented & re-applied o switch outlet.	5/32" PIF (Signal) 1/4" PIF (Inlet/Outlets) 1/4" NPT Exhausts

Stroke Completion Sensors



Model No.	Operation	Pilot Tubing	Mtg. Thread
SCS-112	Stroke completion sensors thread into cylinder ports to detect loss of exhausting air the end of stroke. Meter-Out Flow controls must be fitted to the inlet of the sensor or in the exhaust ports of the directional valve for proper operation.	5/32" OD	1/8" NPT
SCS-250		5/32" OD	1/4" NPT
SCS-375		5/32" OD	3/8" NPT
SCS-500		5/32" OD	1/2" NPT

Fluid Control Valves, Diaphragm and Piston

Diaphragm Type Fluid Control Valves 2 Port Normally Closed

Model No.	Port Size	Application	Operating Pressure
8241000.9101.G	1/4" NPT	For Air, Water, Neutral Gases and Liquids, Solenoid Pilot Operated, Dampened Operation . Solenoid has Mechanical assist for "0" pressure operation	1.5..232 PSI
8241100.9101.G	3/8" NPT		1.5..232 PSI
8241200.9101.G	1/2" NPT		1.5..232 PSI
8241300.9101.G	3/4" NPT		1.5..232 PSI
8241400.9101.G	1.0" NPT		1.5..232 PSI
8241600.9101.G	1.50" NPT		1.5..145 PSI
8241700.9101.G	2.0" NPT		1.5..145 PSI

Note 1 Operating Temperature: +14 Deg. F. to +122 Deg. F.

Note 2 Fluid Temperature: +14 Deg. F. to +194 Deg. F.

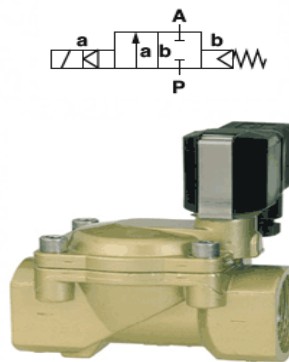
Note 3 Optional Coil Voltages Substitute letters below for "G" in part Number

12 VDC = "B"

24 VDC = "D"

120/60 VAC = "G"

240/60 VAC = "H"



Zero Pressure Diaphragm Type Fluid Control Valves 2 Port Normally Closed

Model No.	Port Size	Application	Operating Pressure
8264000.9101.G	1/4" NPT	For Air, Water, Neutral Gases and Liquids, Solenoid Pilot Operated, Dampened Operation . Solenoid has Mechanical assist for "0" pressure operation	0-145 PSI
8264100.9101.G	3/8" NPT		
8264200.9101.G	1/2" NPT		
8264300.9101.G	3/4" NPT		
8264400.9101.G	1.0" NPT		
8264600.9101.G	1.50" NPT		
8264700.9101.G	2.0" NPT		

Note 1 Operating Temperature: +14 Deg. F. to +122 Deg. F.

Note 2 Fluid Temperature: +14 Deg. F. to +194 Deg. F.

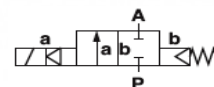
Note 3 Optional Coil Voltages, substitute letters below for "G" in part Number

12 VDC = "B"

24 VDC = "D"

120/60 VAC = "G"

240/60 VAC = "H"



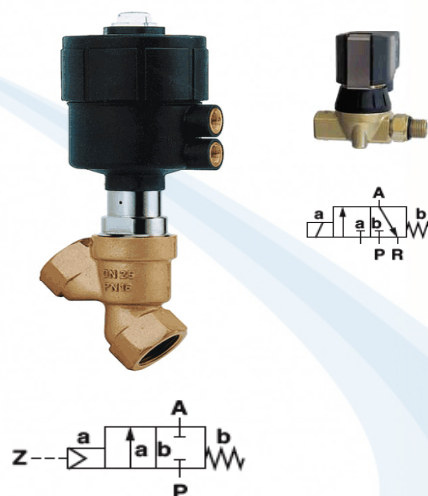
Piston Type Fluid Control Valves 2 Port Normally Closed

Model No.	Port Size	Application	Operating Pressure
8451200.0000	1/2" NPT	For Air, Water, Neutral Gases and Liquids. Air Pilot Operated, Spring to Close	0-232 PSI
8451300.0000	3/4" NPT		0-145 PSI
8451400.0000	1.0" NPT		0-145 PSI
8451600.0000	1.50" NPT		0-65 SPi
8451700.0000	2.0" NPT		0-43 PSI

Note 1 Operating Temperature: +14 Deg. F. to +140 Deg. F.

Note 2 Fluid Temperature: +14 Deg. F. to +356 Deg. F.

Note 3 Valves may be ordered with 1/4" NPT, 3/2 N.C. Solenoid Pilot Valves, Order Code #8467000.9101.G (Change last digit in part number for optional voltages as per listings above).





Single Acting, Front Nose Mounting

Model Number	Bore	Max Stroke (Inches)	Standard Strokes in Inches								
			0.5	1	1.5	2	2.5	3	4	5	6
007*	5/16"	4	*	*	*	*		*	*		
01*	7/16"	6	*	*	*	*	*	*	*		
02*	9/16"	6	*	*	*	*		*			
04*	3/4"	6	*	*	*	*	*	*	*		
06*	7/8"	6	*	*	*	*		*	*		
09*	1-1/16"	6	*	*	*	*		*	*		
12*	1-1/4"	6	*	*		*		*			
17*	1-1/2"	6	*	*	*	*	*	*	*		
24*	1-3/4"	6	*	*		*					
31*	2"	4	*	*	*	*		*	*		

*Complete Model Number with Stroke Length ie: 092.5 = 1 1/16" Bore x 1.0" Stroke



Double Acting, Front Nose Mounting

Model Number	Bore	Max Stroke (Inches)	Standard Strokes in Inches								
			0.5	1	1.5	2	2.5	3	4	5	6
007* -D	5/16"	4	*	*	*	*		*	*		
01* -D	7/16"	12	*	*	*	*	*	*	*		
02* -D	9/16"	12	*	*	*	*	*	*	*		
04* -D	3/4"	12	*	*	*	*	*	*	*	*	*
06* -D	7/8"	12	*	*	*			*	*	*	*
09* -D	1-1/16"	12	*	*	*	*	*	*	*	*	*
12* -D	1-1/4"	12	*	*	*	*	*	*	*	*	*
17* -D	1-1/2"	12	*	*	*	*	*	*	*	*	*
24* -D	1-3/4"	12	*	*	*	*		*	*	*	*
31* -D	2"	12	*	*	*	*	*	*	*	*	*
50* -D	2-1/2"	12	*	*	*	*	*	*	*	*	*
70* -D	3"	12		*	*	*		*	*	*	*

*Complete Model Number with Stroke Length ie: 091-D = 1 1/16" Bore x 1.0" Stroke



Double Acting, Rear Pivot Mount

Model Number	Bore	Max Stroke (Inches)	Standard Strokes in Inches														
			0.5	1	1.5	2	2.5	3	4	5	6	7	8	9	10	11	12
01* -DP	7/16"	12	*	*	*	*		*	*								
04* -DP	3/4"	32	*	*	*	*	*	*	*	*	*		*		*		*
09* -DP	1-1/16"	32	*	*	*	*	*	*	*	*	*	*	*	*	*		*
12* -DP	1-1/4"	32	*	*	*	*	*	*	*	*	*	*	*	*	*		*
17* -DP	1-1/2"	32	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
24* -DP	1-3/4"	32		*		*		*	*	*	*	*	*		*		*
50* -DP	2-1/2"	12	*	*	*	*	*	*	*	*	*	*	*	*	*		*
70* -DP	3"	12		*	*	*		*	*	*	*						

*Complete Model Number with Stroke Length ie: 504-DP = 2.50" Bore x 4.0" Stroke



Double Acting, Universal Mount

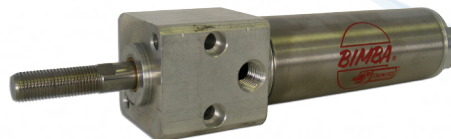
Model Number	Bore	Max Stroke (Inches)	Standard Strokes in Inches														
			0.5	1	1.5	2	2.5	3	4	5	6	7	8	9	10	11	12
007* -DXP	5/16"	4	*	*	*	*		*	*								
02* -DXP	9/16"	12		*	*	*	*	*									
04* -DXP	3/4"	32	*	*	*	*		*	*	*	*		*				*
09* -DXP	7/8"	32	*	*	*	*	*	*	*	*	*	*	*		*		*
24* -DXP	1-3/4"	32	*	*	*	*		*	*	*	*						
31* -DXP	2"	32	*	*	*	*	*	*	*	*	*	*	*	*	*		**
50* -DXP	2-1/2"	32	*	*	*			*	*	*	*	*	*	*	*		***
70* -DXP	3"	32	*	*	*	*		*	*	*	*	*	*	*	*		****

*Complete Model Number with Stroke Length ie: 312.5-DXP - 2" Bore x 2.5" Stroke

** 2" Bore cylinders also available with 13, 14, 15, 16, 18, 20 and 24" Strokes

*** 2 1/2" Bore cylinders also available with 14, 16 and 18" Strokes

**** 3" Bore cylinders also available with 14, 16, 20 and 24" Strokes



Double Acting, Block Front Mount

Model Number	Bore	Max Stroke (Inches)	Standard Strokes in Inches								
			0.5	1	1.5	2	2.5	3	4	5	6
BF-007* -D	5/16"	4	*	*	*	*		*	*		
BF-01* -D	7/16"	12	*	*	*	*		*	*		
BF-04* -D	3/4"	12	*	*	*	*	*	*	*	*	*
BF-09* -D	1-1/16"	12	*	*	*	*		*	*	*	*
BF-17* -D	1-1/2"	12	*	*	*	*		*	*	*	*

*Complete Model Number with Stroke Length ie: BF-091-D - 1 1/16" Bore x 1.0" Stroke



Cylinder Mounting Accessories



Bore	Model Number	Piston Rod Jam Nut	Front Nose Mount Jam Nut	Piston Rod Clevis (With Pin)	Rear Pivot Bracket Assembly Split, for Type "DP" Mounts	Rear Pivot Bracket With Pin for Type "DXP" Mounts	Nose Mounting Bracket
5/16"	007	-	D-344	D-26690	-	D-26689	D-26731
	007-D*	-	D-801	D-26690	-	D-26689	D-26765
7/16"	01	-	D-801	D-850	D-780	-	D-775
	01-D*	-	D-154	D-850	D-780	-	D-770
9/16"	02	-	D-154	D-850	D-12321-A	-	D-770
3/4"	04	D-344	D-98	D-166-3	D-167	D-13498-A	D-226
	04-D*	D-344	D-9	D-166-3	D-167	D-13498-A	D-129
7/8"	06	D-344	D-9	D-166-3	D-167	D-13498-A	D-129
1-1/16"	09	-	D-9	D-166-1	D-167	D-13498-A	D-129
1-1/4"	12	D-154	D-3556	D-231-1	-	D-1360	D-241
1-1/2"	17	D-154	D-3556	D-231-1	D-229	-	D-241
	17-DNR**	-	D-2545	D-8310-A	D-229	-	D-2669
1-3/4"	24	D-98	D-1331	D-231-3	-	D-620-1	C-1337
2"	31	D-98	D-508	D-231-3	-	D-620	D-615
2-1/2"	50	D-98	D-2540	D-231-3	-	D-620	D-615-1
3"	70	D-9	D-5379	D-8314-A	-	D-13512-A	D-19127

Bimba Original Line Cylinder Model Code Makeup and Options List

Prefix Codes

BF, BR	Block Head Mount, Front or Rear
BFT, BRT	Block Head Trunnion Mount, Front or Rear
C, CF, CR	Cushions, Both ends, Head Only, Cap Only
HL	Hydraulic Services (to250 PSI)
M	Magnetic Piston
SR*	Stainless Steel Rod

CM-174.5-DPG

Bore Size/Power Factor

Code	Bore	Force@ 100 (PSI)
007	5/16"	7
01	7/16"	10
02	9/16"	20
04	3/4"	40
06	7/8"	60
09	1 1/16"	90
12	1 1/4"	120
17	1 1/2"	170
24	1 3/4"	240
31	2"	310
50	2 1/2"	500
70	3"	700

Suffix Codes

B	Bumper Both ends
EEX.xx	Extra Plain rod Extension
G	Pre-lube with Magna-Lube Lubricant
H	Heavy Spring (Add before Mounting Style)
JR	Double Acting Cylinder, Spring Extend
JS	Double Acting Cylinder, Spring Retract
K	Ports Rotated 90 Degrees
N	Low Temp. Seals and Lube
NT	No Piston Rod Thread
Q	Side Ported Read Head
V	High Temp Seals and Lube
W	Rod Wiper
Y	Pivot Bushing Replaces Pivot Pin

Mounting Codes

Blank	Single Acting Spring Return, Nose Mount
D	Double Acting, Nose Mount
DP	Double Acting, Pivot Mount w/Pivot Pin
DXDE	Double Acting, Double Rod End, Nose Mount
DXDEH	D.A., Double Rod End, Nose Mnt. Hollow Rod
DXP	Double Acting, Universal Mount w/o Pivot Pin
LS	S.A. Spr. Ret., Nose Mount w/Solenoid Valve
M	S.A. Spr. Ret., Nose Mount w/Manual Valve
NR	S.A. Spr. Ret., Nose Mount Non Rotating Rod
NRP	S.A. Spr. Ret., Pivot Mount Non Rotating Rod
P	Single Acting Spring Return, Pivot Mount
R	Single Acting Spring Extend, Nose Mount
RP	Single Acting Spring Extend, Pivot Mount

Stroke Length

Specify in Decimal Inches
ie: Model CM-174.5- DP = 4.50" Stroke

* The following cylinder types are furnished with Type 303 SS Piston Rod as Standard

- All Type 007, 01 and 02 Cylinders
- All Cushioned Cylinders with Prefix C, CF, CR
- All cylinders with Prefix BF, BR, BFT, BRT
- All Type 02 thru 70 Series Cylinders with Prefix M



Switches

Switch Model	Contact Rating	Current	Voltage	Type & Suggested Use	LED
MRS-.087	10 Watts Max.	0-500mA (Resistive)	120VAC/DC	2 wire, 24 or 120V Reed Sw., Basic Switch, No LED	NO
MRS-.087-Q*	Same as above except with M8 Quick Connect Connector				
MRS-.087-BL	9 Watts Max.	0-500mA (Resistive)	24VDC	3 wire, 24VDC Reed Switch, with LED	Yes
MRS-.087-BLQ*	Same as above except with M8 Quick Connect Connector				
MRS-.087-PBL	2.5 Watts Max.	10-20mA (Resistive)	3-120VAC/DC	2 wire bi-polar, LED 24VDC/120VAC Low Current (Good for PLC)	Yes
MRS-.087-PBLQ*	Same as above except with M8 Quick Connect Connector				

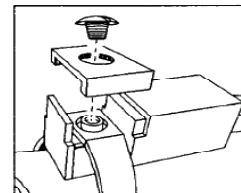
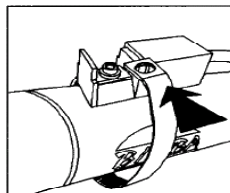
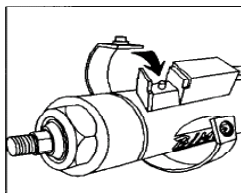
*M8 Quick Connect Cables Sold Separately #M83F-4B-3-PVC (3 metre) #M83F-4B-5-PVC (5 metre)

All Switches have SPST Form "A" Normally Open Contacts

Refer main Bimba Catalogue for other Switch Options including Track Mounts for 4MM Sensors

Band-style (MRS)

The switch can be mounted anywhere along the length and circumference of the actuator body. Mounting hardware includes the switch, a band, a U-shaped bracket and a screw (included). 2-3 in.- lbs. of torque recommended for mounting



Cylinder Position Sensing Switches and Bands

Switch Band

Bore	Model Number	Switch Band
9/16"	02	D-27435-1
3/4"	04	D-27435-2
1 1/16"	09	D-27435-3
1 1/4"	12	D-27435-4
1 1/2"	17	D-27435-5
1 3/4"	24	D-27435-6
2"	31	D-27435-7
2 1/2"	50	D-27435-8
3"	70	D-27435-9

Order Switch Bands to correspond to the required size actuator
(One Band is required per Switch)





Double Acting, Extruded body Flat Cylinders

Model	Bore	Max Stroke (Inches)	Standard Strokes In Inches										
			5mm	10mm	20mm	25mm	30mm	35mm	40mm	45mm	50mm	75mm	
EF-12*-EM	12mm	30	*		*	*					*		
EF-16*-EM	16mm	30		*									
EF-20*-EM	20mm	50		*		*			*		*		
EF-25*-EM	25mm	50		*		*			*		*		
EF-32*-EM	32mm	100			*	*			*		*		
EF-40*-EM	40mm	100			*	*			*		*	*	
EF-50*-EM	50mm	100			*	*			*		*	*	*
EF-63*-EM	63mm	100											
EF-80*-EM	80mm	100		*		*			*		*		
EF-100*-EM	100mm	100											

* Complete Model Number with Stroke Length ie: EF-2550-EM

"M" in model Number indicates Magnetic Strip Piston, delete from part number if not required
Switches not Included



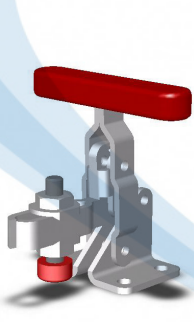
The Model Number for all extruded track mount switches consists of three alphanumeric clusters. these designate switch type and lead length. Please refer to the chart below for an example of Model Number.

MSCQCX. this is a Solid State switch with PNP output including a Quick Connect cable attachment and a 5 meter mating cable.

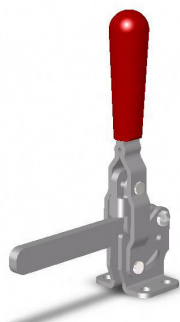
MSC X QCX

Switch Type	Optional	Optional
MR - Magnetic Reed Switch MSC - GMR Source (PNP) output MSK - GMR Sink (NPN) output MS - GMR auto-configure	X - Include if 144" (3.6m) pigtail lead needed (not applicable with Quick Connect)	Q - 8mm Quick Connect without cable QC - 2 meter mating cable accompanies switch QCX - 5 meter mating cable accompanies switch

Manual Clamps



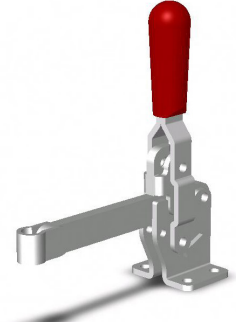
Series	Holding Capacity	Holding Moves	Bar Opens
201	100 lb.	60°	110°
202	200 lb.	64°	104°



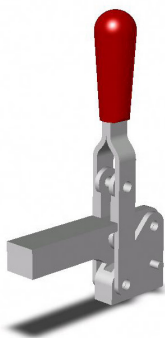
Series	Holding Capacity	Holding Moves	Bar Opens
207	500 lb.	62°	115°
210	750 lb.	58°	106°



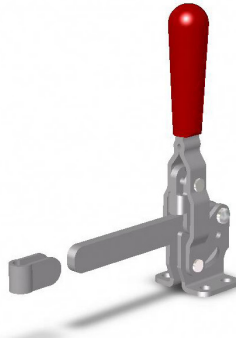
Series	Holding Capacity	Holding Moves	Bar Opens
219	350 lb.	180°	115°
229	1000 lb.	180°	115°



Series	Holding Capacity	Holding Moves	Bar Opens
247	1000 lb.	75°	136°
267	1200 lb.	70°	140°



Series	Holding Capacity	Holding Moves	Bar Opens
516	750 lb.	66°	122°
517	600 lb.	225°	135°
518	500 lb.	75°	90°
548	2500 lb.	129°	199°
578	4000 lb.	129°	199°
588	6000 lb.	129°	199°



Series	Holding Capacity	Holding Moves	Bar Opens
220	750 lb.	66°	110°
228	750 lb.	66°	110°
240	750 lb.	65°	104°
250	1000 lb.	68°	109°
258	1000 lb.	68°	109°
270	1200 lb.	77°	152°



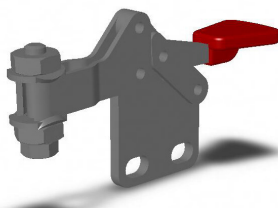
Series	Holding Capacity	Holding Moves	Bar Opens
91090	358 lb.	60°	100°
91140	1000 lb.	65°	110°



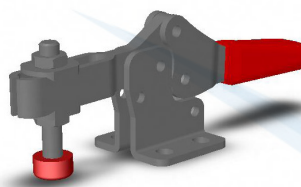
Series	Holding Capacity	Holding Moves	Bar Opens
317	375 lb.	60°	185°
527	1000 lb.	65°	195°
528	1000 lb.	65°	195°
530	1000 lb.	65°	195°



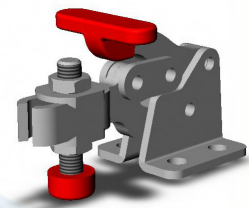
Series	Holding Capacity	Holding Moves	Bar Opens
557	2500 lb.	64°	192°
558	2500 lb.	64°	192°
560	2500 lb.	64°	192°
568	4000 lb.	64°	192°



Series	Holding Capacity	Holding Moves	Bar Opens
205	60 lb.	80 lb.	90°
206-SS	100 lb.	90 lb.	90°
215	200 lb.	70 lb.	90°
225	500 lb.	70 lb.	90°

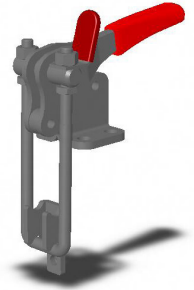
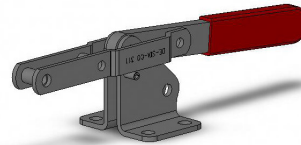
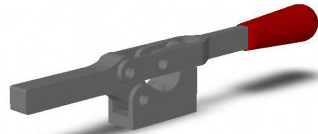


Series	Holding Capacity	Holding Moves	Bar Opens
213	150 lb.	60°	90°
217	200 lb.	76°	92°
227	500 lb.	62°	92°
235	750 lb.	55°	90°
237	750 lb.	63°	92°
2445	1000 lb.	67°	105°



Series	Holding Capacity	Holding Moves	Bar Opens
305	150 lb.	175°	92°
307	350 lb.	175°	92°
309	750 lb.	160°	88°

Manual Clamps

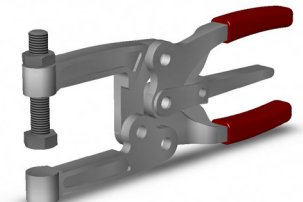
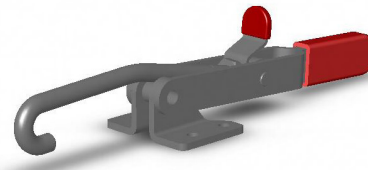
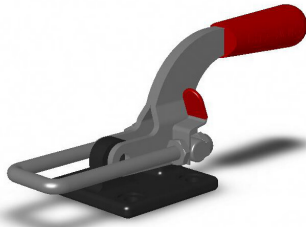


Series	Holding Capacity	Holding Moves	Bar Opens
317	375 lb.	60°	185°
527	1000 lb.	65°	195°
528	1000 lb.	65°	195°
530	1000 lb.	65°	195°

Series	Holding Capacity	Holding Moves	Bar Opens
515	800 lb.	77°	86°
515-B	800 lb.	77°	86°

Series	Holding Capacity	Drawing Movement
301	375 lb.	4.00"
311	1200 lb.	3.38"
323	360 lb.	1.81"
331	1200 lb.	1.75"
341	2000 lb.	2.50"

Series	Holding Capacity	Drawing Movement
324	500 lb.	1.53"
334	1000 lb.	2.00"
344	2000 lb.	2.50"
374	4000 lb.	1.75"

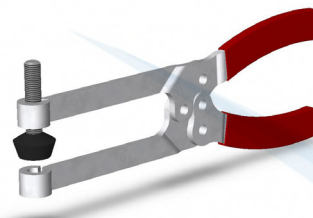


Series	Holding Capacity	Drawing Movement
375	4000 lb.	3.50"
375-B	4000 lb.	3.50"
385	7500 lb.	2.19"
385-L	7500 lb.	2.19"

Series	Holding Capacity	Holding Moves	Bar Opens
91090	385 lb.	60°	100°
91140	1000 lb.	65°	110°

Series	Holding Capacity	Drawing Movement
330	200 lb.	2.31"
351	375 lb.	4.00"
371	750 lb.	5.38"
381	1000 lb.	6.13"

Series	Holding Capacity	Holding Moves	Bar Opens
213	150 lb.	60°	90°
217	200 lb.	76°	92°
227	500 lb.	62°	92°
235	750 lb.	55°	90°
237	750 lb.	63°	92°
245	1000 lb.	67°	105°



Series	Holding Capacity	Holding Moves	Bar Opens
557	2500 lb.	64°	192°
558	2500 lb.	64°	192°
560	2500 lb.	64°	192°
568	4000 lb.	64°	192°

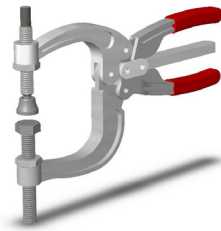
Series	Holding Capacity	Holding Moves	Bar Opens
205	60 lb.	80°	90°
206-SS	100 lb.	90°	90°
215	200 lb.	70°	90°
225	500 lb.	70°	90°

Series	Holding Capacity	Holding Moves	Bar Opens
317	375 lb.	60°	185°
527	1000 lb.	65°	195°
528	1000 lb.	65°	195°
530	1000 lb.	65°	195°



Automation
Robohand FERGUSON
CAMCO

Manual Clamps

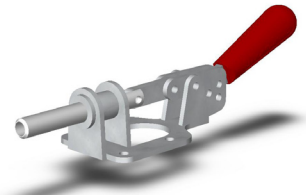
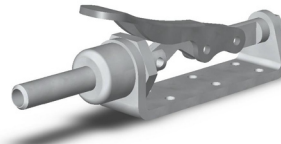
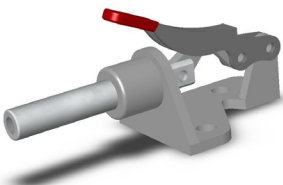


Model No.	Holding Capacity
468	700 lb.
468-S	75 lb. per 1/8" spring compression
462	
482	
491	

Model No.	Holding Capacity
463	700 lb.
463-S	90 lb. per 1/8" spring compression

Model No.	Holding Capacity
484	1200 lb.
486	1000 lb.

Model No.	Holding Capacity
491	850 lb.



Model No.	Holding Capacity	Plunger Travel
601	100 lb.	0.63"
601-O	100 lb.	0.63"
6001-M	100 lb.	0.63"

Model No.	Holding Capacity	Plunger Travel
602	200 lb.	0.75"
604	300 lb.	1.50"
624	700 lb.	2.63"
6004	450 lb.	1.50"

Model No.	Holding Capacity	Plunger Travel
606	450 lb.	1.50"
607	800 lb.	1.63"
607-SQ	800 lb.	1.63"
608	850 lb.	1.63"
609	300 lb.	1.25"
610	800 lb.	1.63"
618	800 lb.	1.63"

Model No.	Holding Capacity	Plunger Travel
615	300 lb.	0.97"
617	2000 lb.	1.00"
620	600 lb.	1.11"
628	600 lb.	1.11"
630*	2500 lb.	2.00"
640*	7500 lb.	4.00"
650*	16000 lb.	3.00"



Model No.	Holding Capacity	Plunger Travel
6015-M	350 lb.	0.70"
603	600 lb.	1.25"
605	300 lb.	1.25"

Model No.	Holding Capacity	Plunger Travel
670	2500 lb.	2.25"
675	2500 lb.	1.13"
690	5000 lb.	3.00"
695	5000 lb.	1.50"

Model No.	Holding Capacity	Stroke
FRF	5500-1100 lb.	2.36/2.97
FRL	5500-1100 lb.	3.5/4.08

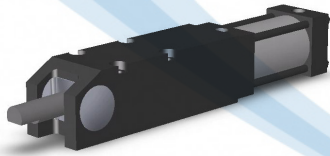


A DOWEN COMPANY

Automation
Robohand FERGUSON
CAMCO

Pneumatic Clamps

Low Profile Clamps



Straight Line Clamps



Low Profile Clamps



Swing Clamps

Series	Holding Capacity
801	238 lb. Max

Series	Holding Capacity	Plunger Travel
8031	2000 lb.	0.75"

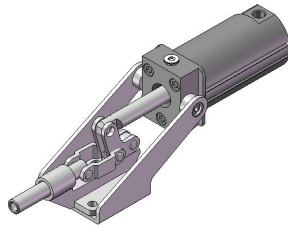
Model No.	Holding Capacity
800	800 lb.
800-E	500 lb.
1200	1200 lb.
1200-E	775 lb.

Series	Holding Capacity
8000/8100	36 lb.
8400	118 lb.
8200/8300	204 lb.

Hold Down Clamps



Straight Line Clamps



Model No.	Holding Capacity	Bar Opens
817-S	450 lb.	90°
817-U	350 lb.	90°
827-S	700 lb.	88°
827-U	600 lb.	88°
868	4000 lb.	90°

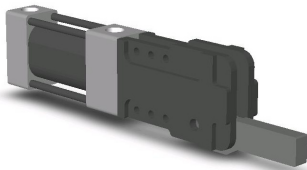
Model No.	Holding Capacity	Plunger Travel
803	600 lb.	0.75"
816	200 lb.	0.44"
830	2500 lb.	1.25"
830-10	2500 lb.	0.75"
850	16000 lb.	2.00"



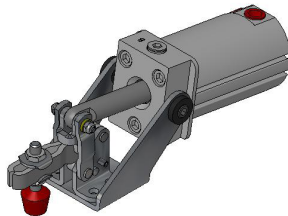
A DOVER COMPANY

Automation
Robohand FERGUSON
CAMCO

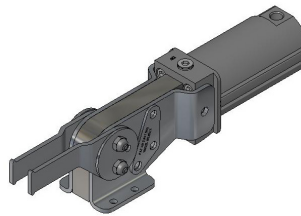
Toggle Lock Clamps



Hold Down Clamps



Hold Down Clamps



Toggle Lock Clamps



Model No.	Holding Capacity	Bar Opens
840	1500 lb.	100°
880	3000 lb.	96°
890	5000 lb.	96°
1000	10000 lb.	98°
870	2000 lb.	112°
871	2000 lb.	126°

Model No.	Holding Capacity	Bar Opens
802	200 lb.	95°
812	150 lb.	90°
807-L	500 lb.	92°
807-UL	350 lb.	92°
801-S	750 lb.	95°
810-U	600 lb.	95°

Model No.	Holding Capacity	Bar Opens
8021	390 lb.	90°
8071	450 lb.	90°
8101	700 lb.	90°
846	7500 lb.	90°
847-S	1000 lb.	95°
847-U	800 lb.	95°
849	2000 lb.	90°
858	4000 lb.	92°

Model No.	Holding Capacity	Plunger Travel
8820-2	663 lb.	120°
8825-1	663 lb.	120°
863	1500 lb.	130°
864	1500 lb.	121°
893	2800 lb.	118°
894	2800 lb.	118°

Fluid Power Formulas

Pressure

$$P = \frac{F}{A} ; F = P \times A$$

P = pressure (PSI)
F = force (lb.)
A = area (in²)

Volume (cylinder)

$$V = A \times S$$

V = volume (in³)
A = area (in²) [note: either A_p or A_r]
S = stroke (in.)

Piston Area (cylinder)

$$A_p = 0.7854 (D_p)^2$$

A_p = piston area
 D_p = piston diameter

Rod Area (cylinder)

$$A_r = 0.7854 (D_r)^2$$

A_r = rod area
 D_r = rod diameter

Effective Area (cylinder)

$$A_e = A_p - A_r$$

A_e = effective area
 A_p = piston area
 A_r = rod area

Piston Rod Speed (cylinder)

$$v = \frac{Q \times 231}{A}$$

v = piston rod speed (in/min)
Q = flow (gpm)
A = area (in²)

Flow (cylinder)

$$Q = \frac{v \times A}{231}$$

Q = flow (gpm)
v = rod speed (in/min)
A = area (in²) [note: either A_p or A_r]

Pipe Flow

$$V = \frac{0.3208 \times \text{GPM}}{A}$$

V = velocity
GPM = gallons per minute
A = area

Pressure Drop in Pipes

$$\Delta P/\text{ft} = \frac{\text{GPM} \times V (\text{SSU})}{18,300 \times (D)^4}$$

GPM = gallons per minute
V = viscosity (SSU)
D = diameter

Torque

$$T = F \times d$$

T = torque (lb.-in.)
F = force (lb.)
d = distance (in.)

Motor Torque

$$T = \frac{P \times \text{Disp}}{2\pi}$$

T = motor torque (lb.-in.)
P = pressure (PSI)
Disp = motor displacement (in³/rev)

Motor Shaft Speed

$$\text{RPM} = \frac{Q \times 231}{\text{Disp}}$$

RPM = motor shaft speed (rpm)
Q = flow (gpm)
Disp = motor displacement (in³/rev)

Work (ft.-lb.)

$$W = d \times F$$

W = work (ft.-lb.)
d = distance (ft.)
F = force (lb.)

Power (ft.-lb./sec)

$$\text{Power} = \frac{d \times F}{t}$$

d = distance (ft.)
F = force (lb.)
t = time (seconds)

Mechanical Horsepower

$$\text{HP} = \frac{d \times F}{550 t}$$

HP = mechanical horsepower
d = distance (ft.)
F = force (lb.)
t = time (seconds)

Mechanical Horsepower

$$\text{HP} = \frac{F \times v}{396,000}$$

HP = mechanical horsepower
F = force (lb.)
v = velocity (in./min.)

Hydraulic Horsepower

$$\text{HP} = P \times Q \times 0.000583$$

HP = hydraulic horsepower
Q = flow (gpm)
P = pressure (PSI)

Motor Horsepower

$$\text{HP} = \frac{S \times T}{63,025}$$

HP = motor horsepower
S = speed (rpm)
T = torque (lb.-in.)

Heat

$$H = \text{HP} \times 2,547$$

H = heat (btu/hour)
HP = hydraulic horsepower

Flow (SCFM)

$$Q = \frac{V \times \text{CR}}{28.8 t}$$

Q = flow (ft³/min.)
V = cylinder volume (in³)
CR = compression ratio
t = stroke time (seconds)

Compression Ratio

$$\text{CR} = \frac{P_g + P_a}{P_a}$$

CR = compression ratio
 P_g = gauge pressure (PSIG)
 P_a = atmospheric pressure (PSIA)

Air Motor Speed

$$\text{RPM} = \frac{1.728 Q}{\text{Disp}}$$

RPM = air motor speed
Q = flow (cfm)
Disp = motor displacement (in³/rev)

Flow Coefficient (C_v)

$$C_v = \frac{Q}{22.48} \sqrt{\frac{T_{\text{abs}} \times G}{\Delta P \times (P_o + P_a)}}$$

C_v = flow coefficient
Q = SCFM
G = specific gravity of flowing medium (G = 1 for air)
 T_{abs} = absolute temperature (460+ °F)
 ΔP = pressure drop (PSI) static to static pressure
 P_o = outlet pressure = (inlet press - ΔP)
 P_a = atmospheric pressure

Pneumatic Cylinder Rod Speed

$$V = \frac{S \times 60}{t}$$

V = cylinder rod speed (in./min.)
S = stroke (in.)
t = stroke time (seconds)

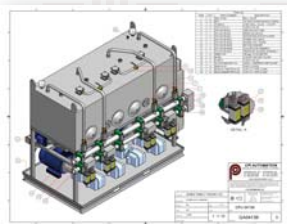
Hydraulic Tank Cooling

$$H_p = 0.001 \times A_w \times \Delta T$$

H_p = horsepower
 A_w = wetted area (ft²)
 ΔT = oil temp - ambient air temp

Vendors & Services

Hydraulic Systems



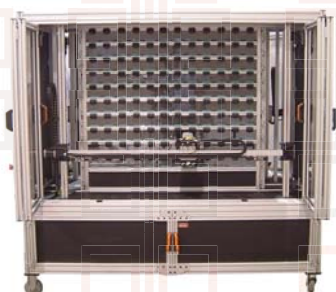
Field Service & Installations



- Press Safety Upgrades
- Hydraulic Installations
- Pump, Motor & Cylinder Repair
- Overhaul & Testing



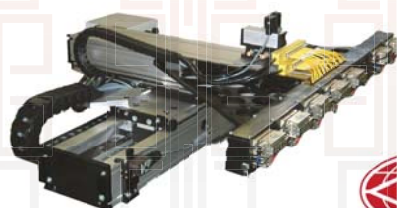
Guarding and Safety Solutions



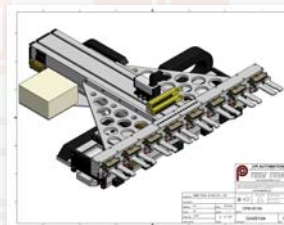
80/20 Inc.

The **Industrial Erector Set®**

Automation Solutions



Automation
Robohand FERGUSON
CAMCO



Head Office:

5155 Timberlea Blvd.
Mississauga, Ontario, L4W-2S3
Ph: 905-625-4805 • Fx: 905-629-8409
E-mail: sales@cpiautomation.com



Branch Office:

500 Trillium Dr., Unit #2
Kitchener, Ontario, N2R-1A7
Ph: 519-748-0600 • Fx: 519-748-2122
E-mail: sales@cpiautomation.com