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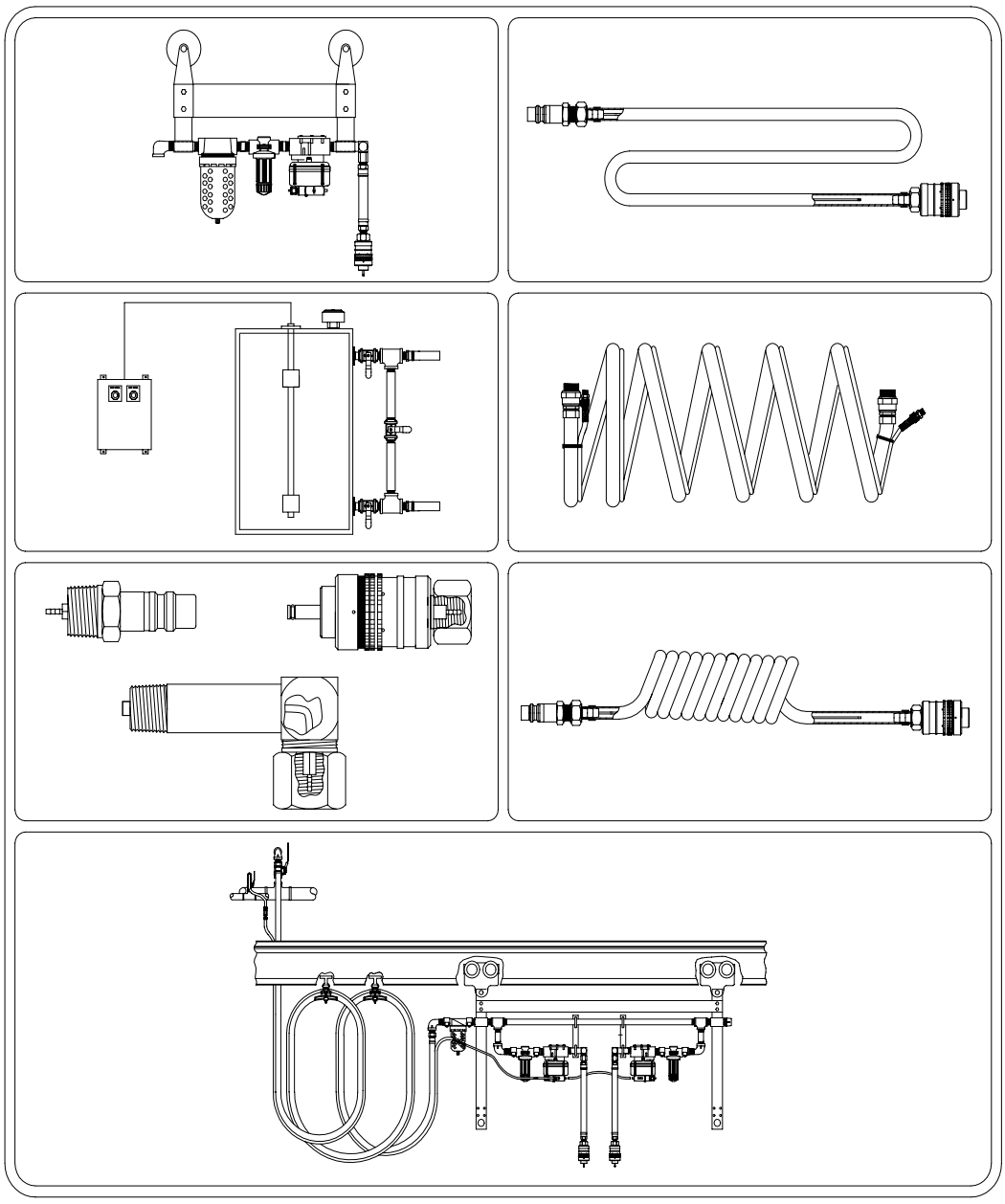

ENGINEERED LUBRICATION SYSTEMS AND COAXIAL COMPONENTS

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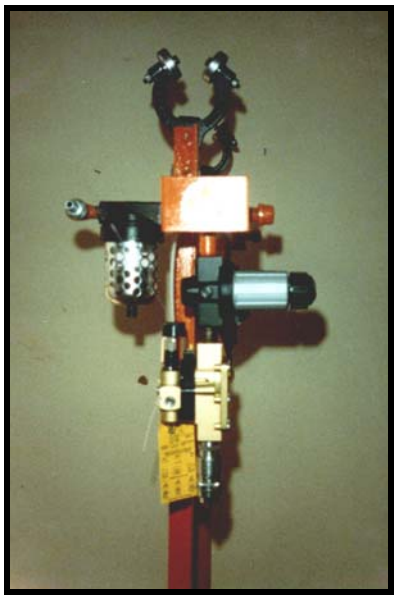
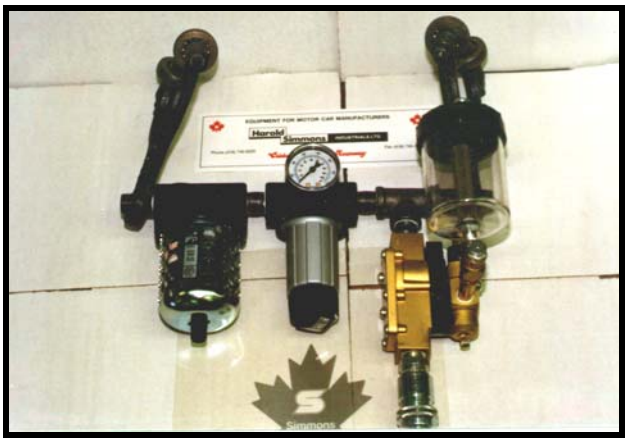
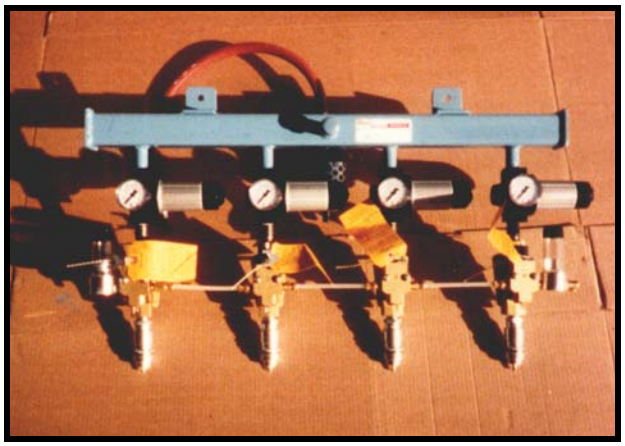
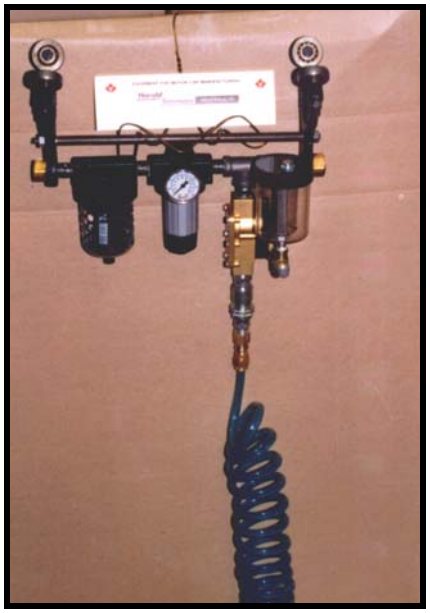
Typical Single Point Lubricator Tool Drop Configurations and Sample Air Tool Manifolds









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Why Single Point Lubrication for Air Tools?

Conventional lubricators send an oil mist through the air hose to the air tool. Much of the mist collects on the inside walls of air hoses or puddles in low areas of the hose and fails to reach the air tool on a consistent basis. Inadequate and inconsistent lubrication results in a reduction of the air tool speed, reduced torque, rapid internal wear of the vanes and even air tools seizing. To apply enough oil to the tools, excess oil is often applied. This introduces excessive amounts of oil into the exhaust and the atmosphere, causing pollution of the air and wasting lubricant. Excess oil can also cause other problems such as oil in the immediate area, causing safety concerns. It will also adversely affect the air tool torque and speed.

Extensive tests have proven single point lubricators deliver precise amounts of lubricant directly to the air tool which reduces repairs, increasing uptime, provides consistent torque control and reduces overall oil consumption. Single point lubricators dispense a precise amount of oil directly to the tool through an internal oil line. The internal oil line prevents oil from collecting on the inside walls of the air hose and puddling in low areas. The oil is delivered directly to the inlet of the air tool effectively and accurately which provides:

- Maximum air tool performance
- Improved torque control
- Extended air tool life
- Reduced maintenance
- Less downtime
- Reduced oil consumption
- Reduced plant air pollution

Suggested initial adjustments for the single point lubricator are:

Tool Size	Counter Settings	Clicks from Max.
Large	1	30 to 10
Medium	5	20 to 30
Small	10	30 to Min.

A lube rate of 1 drop per 20 standard cubic feet of air used is recommended.

The single point lubricator was specifically designed for lubrication of air tools. *It cannot be used for general lubrication of components other than air tools.*

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Who is Harold Simmons Industrials

Harold Simmons Industrials specializes in **Airline Preparation Equipment.** Today's pneumatic equipment requires precise, consistent lubrication. Precision injection lubricators combined with Co-Axial components provide consistent, dependable and reliable delivery of a measured amount of lubricant directly to the point of use. Precision lubrication *reduces* tool *downtime*, *reduces repair* costs and *reduces waste oil*. Precision lubrication also increases air tool performance and maintains consistent torque readings. In conjunction with our customers, we have designed, engineered and installed complete systems and accessories for the Motor Car Manufacturing industry for over twenty-five years. Our facilities cover complete design and fabrication of entire systems to meet your plants requirements to an entire range of replacement components such as airline filters, regulators and lubricators. From a completely installed centralized lubrication systems to an individual single point lubricator, we can supply your airline requirements. We also offer a complete line of filters; airline water separator filter, coalescing filters, activated carbon filters, regulators; piloted operated regulators, electronic regulators, dual pressure regulators and lubricators; oil mist lubricators, down stream lubricators, single point lubricators. We have a complete line of soft start valves to provide slow pressure build-up in pneumatic equipment and stop valves to provide venting of pneumatic equipment.

Lube System – Overhead Oil Lines

List of Oil Line specifications

General Specifications

To design, build and assemble a power tool central-fill system for Car Engine Line. The complete system is designed as modular sections to be installed in plant. All oil line sections are 9 ft. long consisting of all necessary components to supply a complete oil line drop to power tools. The sections are preassembed, tested and shipped to plant for overhead installation. The oil lines with run the length of the engine line on both sides with a 33" offset to the main conveyor. The internal of the oil lines are cleaned of all debris. All outlets are to point down at 9 ft. intervals with isolation valves on the oil line at 36 ft. intervals. The central fill tank is to be located in a central location. All oil lines are not to exceed 500 ft. in any direction from the central fill tank. The central fill tank is an 80 gallon reservoir with a velocity fuse kit, and should be mounted in a convenient location for refilling. Air vent valves must be mounted at the furthest ends of the main oil line, and at all elevation changes.

System Components – Manifold

All Oil lines have been supplied to meet the following characteristics:

- Overall dimensions, materials, and equipment as previously supplied by Harold Simmons Industrials Ltd
- Flareless steel fittings are used throughout the system.
- Check valves are installed on all tool drops
- Isolation ball valves are installed on all tool drops
- All seamless steel hydraulic tubing is 5/8" O.D. with 0.049" wall.
- Central fill reservoir is to be Uni-Mist model 69-5500-80ALL, 80 gallon with low level switch as previously supplied.

Major System Components

Major system components are as follows:

Components	Description	Manufacturer
Tubing	5/8” Seamless steel tubing 0.049” wall	
Oil Reservoir	69-5500-80ALL 80 Gallon Tank	Uni-Mist
Fuse Kit	69-5500-VF2 Velocity Fuse Kit	Uni-Mist
Flareless Tee	S6772-10D 5/8” Tube x ½” Male	Fairview Fittings
Oil Line Check	103CV-D ½” Check Valve	Fairview Fittings
Isolation Valve	BV2103-D Forged Brass Ball Valve ½” NPT Full Port Valve	Fairview Fittings
Reducer	122-DB Reducing Hex Nipple	Fairview Fittings
Quick Coupler	QD-B72C4-4F ¼” Brass two way Shut off coupler	Fairview Fittings
Vent Valves	OR21AR Vent Valve Assembly	Orsco

Notes

The above specifications are as previously supplied for Chassis Plant 1 Engine Line. If any further information is required on the components or their assembly, please contact Howie Simmons. Our phone number is (416) 745-5020 and FAX is (416) 745-1479.

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Installation Suggestions on Central Fill Oil Systems

Central Fill systems can be either Pressure fed or Gravity fed

The following suggestions hold true for both types of systems

Central Oil Supply

1. Oil supply lines should be ½" pipe or larger. This is very important for gravity feed systems
2. The inside of the oil supply lines must be clean. Before start up, these lines should be flushed with a suitable fluid and blown clean with compressed air.
3. The oil supply headers should be pitched slightly upward away from the central reservoir as much as practicable to help evacuate air from the lines.
4. Stand-pipes (gravity) or automatic air vent valves (pressure fed) should be installed approximately every two bays for evacuating air from the oil supply line.
5. Air vent valves should be installed at the end of the oil headers. Stand pipes for gravity feed systems.
6. Stand pipes / air vent valves should be installed in the oil supply line whenever there is a change in elevation. Automatic vent valves should be installed on one side of the loop to evacuate air from the system.
7. As a reference for sizing reservoirs, 1 lubricator will use a maximum of 2 ¼ ounces of oil per week under maximum production condition in an automotive assembly plant based on 2 shifts per day.
8. Wherever possible, the air –over-oil reservoir should be installed in the middle of the oil supply header lines.
9. Oil supply lines should not exceed 300 feet in any direction maximum from the central fill reservoir.
10. Teflon tape must not be used in any part of the oil supply system. Strings from the Teflon tape can contaminate the lubricator check valve. A Teflon filled thread sealant is recommended.
11. Oil drop tees, minimum 3/8" size, should be installed beside the air tool drops where possible. Tees must be pointed down to allow air to escape from the oil supply lines.
12. Hose or tubing for oil supply lines to the lubricators should be no smaller than ¼". This is important to prevent air locks, especially on gravity feed systems.
13. Oil supply should be filtered to approximately 50 microns.
14. Ball valves should be installed between the oil supply header and lubricators for emergency shut off and repairs. New installations also have a check valve installed to prevent air from entering the oil lines if a leak occurs in the single point lubricator.
15. Sight domes should be installed on the end of each air tool manifold to allow purging during initial start up of the system.
16. Sight domes should be installed at the beginning of each air tool manifold to visually indicate if oil is being supplied to manifold and to help indicate if there are problems in the lubricator.
17. Once the system is initially purged and filled with oil, central fill tank should be set at 15 psi. Excessive air pressure will cause the oil to hold the lubricator checks off their seats and send excess oil to the tools.
18. On Pressure fed systems, velocity fuse kits are installed at the tank. The kit will sense an increase in oil flow to the system and shut the oil off. These kits are supplied in two pre-set sizes depending upon the number of lubricators in the system.
19. Air supply to the manifolds should be ½" I.D. or larger.
20. Pre-fabricated hose assemblies with the internal oil line are recommended on Single Point Lube systems. The internal oil line should be terminated with a check valve, within 1-2 feet of the tool.
21. Hose lengths from the lubricator to the tool should be limited to 25 feet in length where possible. If the hose must be longer, ensure the internal oil line travels the complete length of the hose.

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FLARELESS BITE TYPE FITTINGS

Assembly Instructions

There are 4 steps to the proper installation of a flareless fitting

Cutting, Deburring & Cleaning

1) Square-cut the seamless tubing with a fine tooth hacksaw or a cut-off saw.
2) Remove all burrs and sharp edges on the tube by lightly deburring the ID and OD. Emery paper may be used to perform this task.
3) Wipe the tube end completely with a clean cloth. Be sure to remove all metal chips from the tube end.

Pre-Setting Ferrule to the Tubing

This procedure must be followed to ensure the proper location of the ferrule to the tubing.

1) Lubricate the fitting body thread and the thread of the nut.
2) Slip the nut and ferrule over the deburred end of the tube. The long, straight end of the ferrule must point toward the deburred tube end.
3) Lubricate the ferrule.
4) Position the deburred tube end squarely on the shoulder of the fitting body.
5) Manually screw the nut onto the fitting body until it is finger tight.
6) Put a reference mark on the nut and the tube.
7) Hold the tube firmly on the fitting body and tighten the nut an additional 1 ¾ turns. Proper assembly of flareless fittings is dependant upon the ferrule travelling a prescribed distance into the fitting throat. This allows it to “bite” into the tube, creating a strong grip and seal.

Ferrule Bite Inspection

The following inspection procedure must be completed prior to final assembly.

1) Disassemble the fitting.
2) The tube surface must have a raised ridge of metal that is at least 50% of the thickness of the leading edge of the ferrule.
3) There must be a slight bow to the pilot section of the ferrule.
4) The tail of the ferrule should be snug against the tube
5) A slight indentation around the deburred end of the tube indicates that the tube was bottomed in the fitting. If this indentation is not visible, the ferrule may not be properly seated.
6) Do not rotate the ferrule.

Installation

1) Using the same nut and fitting used in locating the ferrule to the tubing, finger tighten the nut.
2) Wrench tighten the nut another 1/3 to ½ turn.

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Central Fill System Optional Velocity Fuse Kit

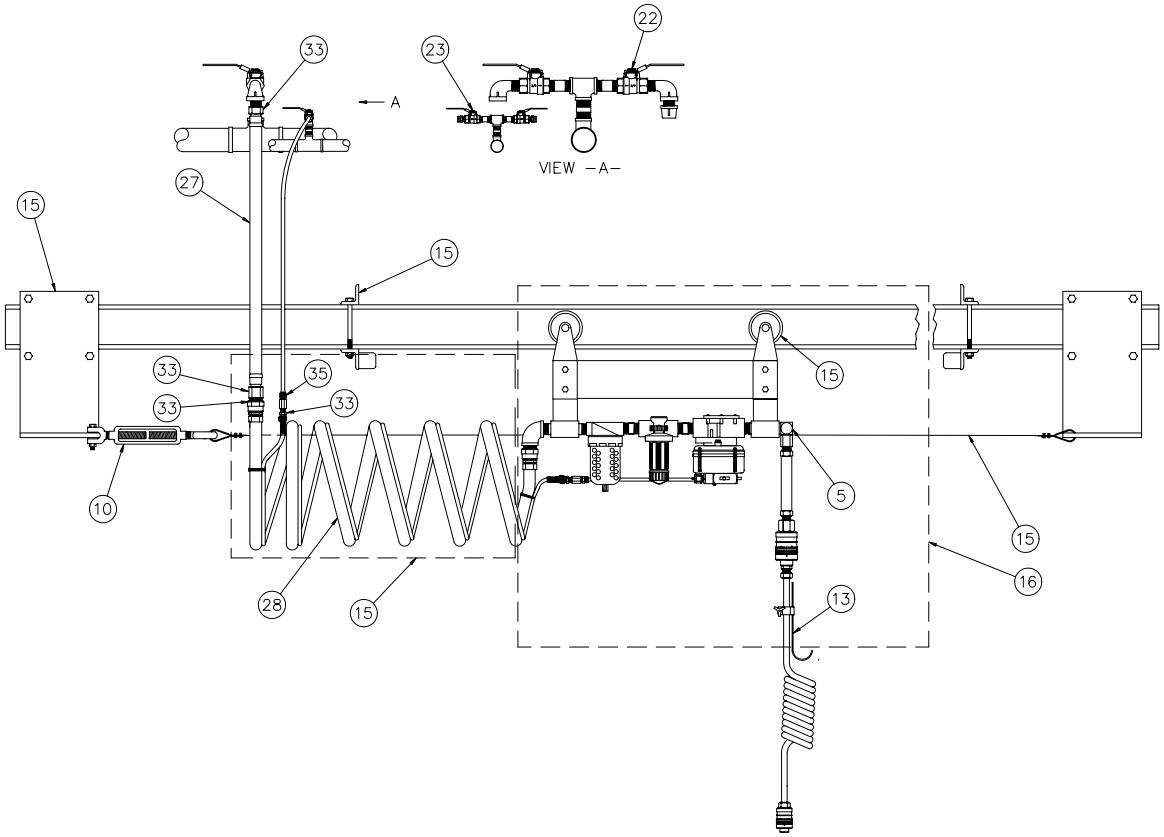
The model 69-5500-VF-**X** velocity fuse kit is used in conjunction with the pressurized central fill oil tank. It is designed to mount at the tank in the supply line leading to the overhead oil header. The Velocity fuse kit is designed to monitor the oil supply to single point lubricators in a system and automatically shut down the system if oil supply exceeds a preset limit. In cases of hose failures, fitting failure etc, the system will shut off the oil supply to the overhead system and prevent the oil from being emptied onto the floor.

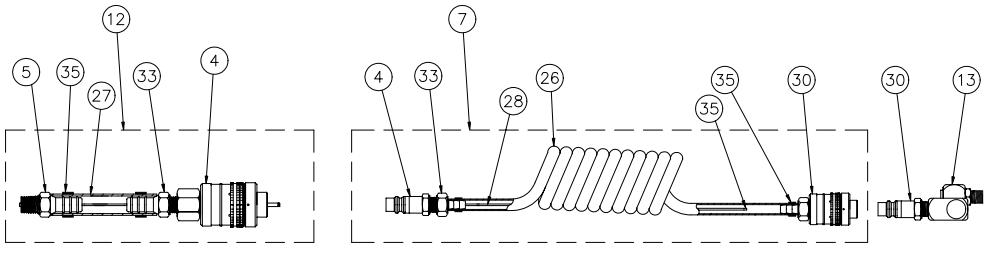
System Operation:

1. Oil enters through the ball valve “A”, which is normally open.
2. From there, it passes through the flow sensor “B” and continues on through the normally open solenoid valve.
3. If fluid passes too fast through the present flow sensor, the solenoid valve closes and the warning light and alarm are activated.
4. To reset the system, close valve “A”, then close valve “C” and then push the reset button.
5. Determine and correct the cause of excessive fluid velocity in the system.
6. Open valve “C” and then slowly re-open valve “A” enough to pressurize the fluid line without reactivating the alarm and solenoid.
7. The system can be bypassed by opening bypass valve “D”.

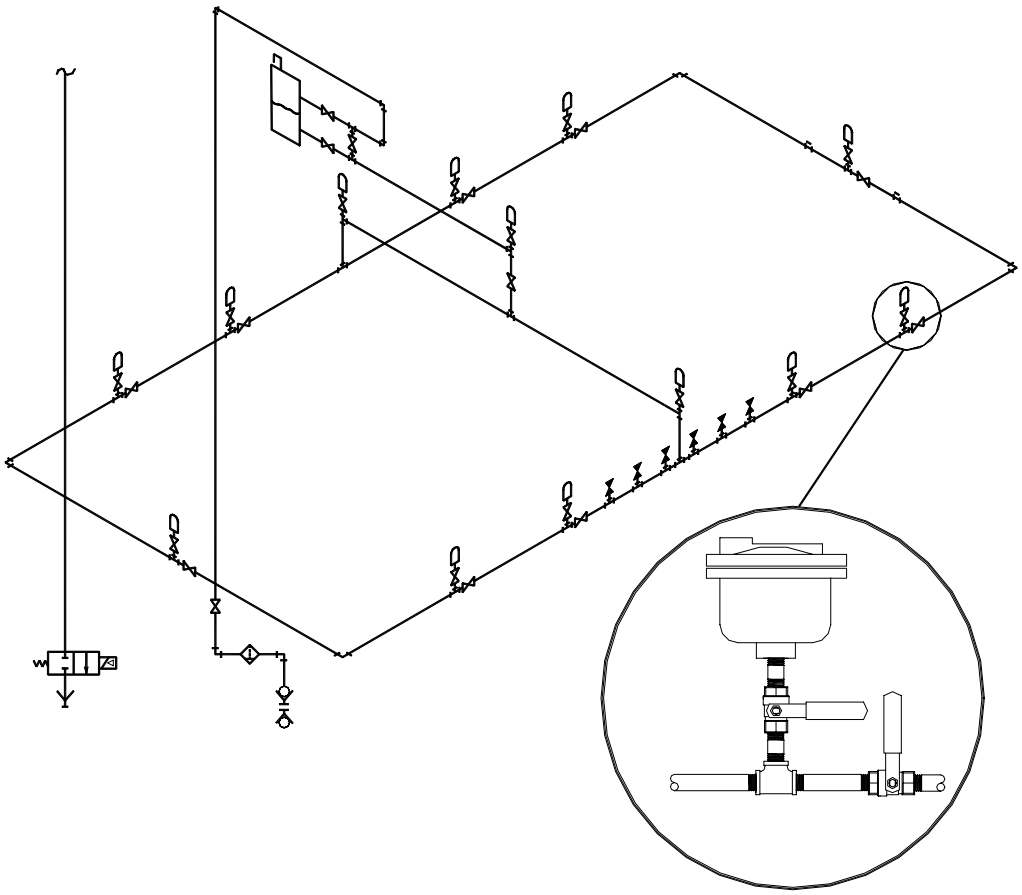
Flow set point on 69-5500-VF-1	0-50cc/minute
Flow set point on 69-5500-VF-2	0-120cc/minute

Typical Systems





Typical Air Vents



DESCRIPTION	PART NUMBER
OIL FILL CART	OR6257-L
OIL VENT	OR21AR
3/8 OD POLY TUBING	OR7691
QUICK-DISCONNECT PLUG	HN2-212D-M
QICK-DISCONNECT SOCKET	HK2-212D
POROUS BRONZE FILTER	J-584
CAP TUBE PLIERS	

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Air Vent Valve Assembly

Automatic Air Vent Valve

The Auto-Vent is designed for use in eliminated air from central fill overhead oil systems. It is designed for use in systems with a maximum working pressure of 150 P.S.I.

Installation

The vent is installed vertically in the system at the beginning of all elevation changes and also at the end of the line in a loop system.

Operation

The vent should be turned off with the ball valve until the system has been filled. After filling the system, turn on the ball valve and loosen the cap slightly on the vent valve to allow the air to escape from the system slowly. Check vent by gently pushing down on valve stem under cap and allowing to seat. To shut off vent, screw cap down tightly.

After system is filled and vent valves are primed properly, the ball valves should be left in the open position. For normal venting, the cap should be open one full turn.

Inspection

Vent assemblies should be checked periodically for proper seating.

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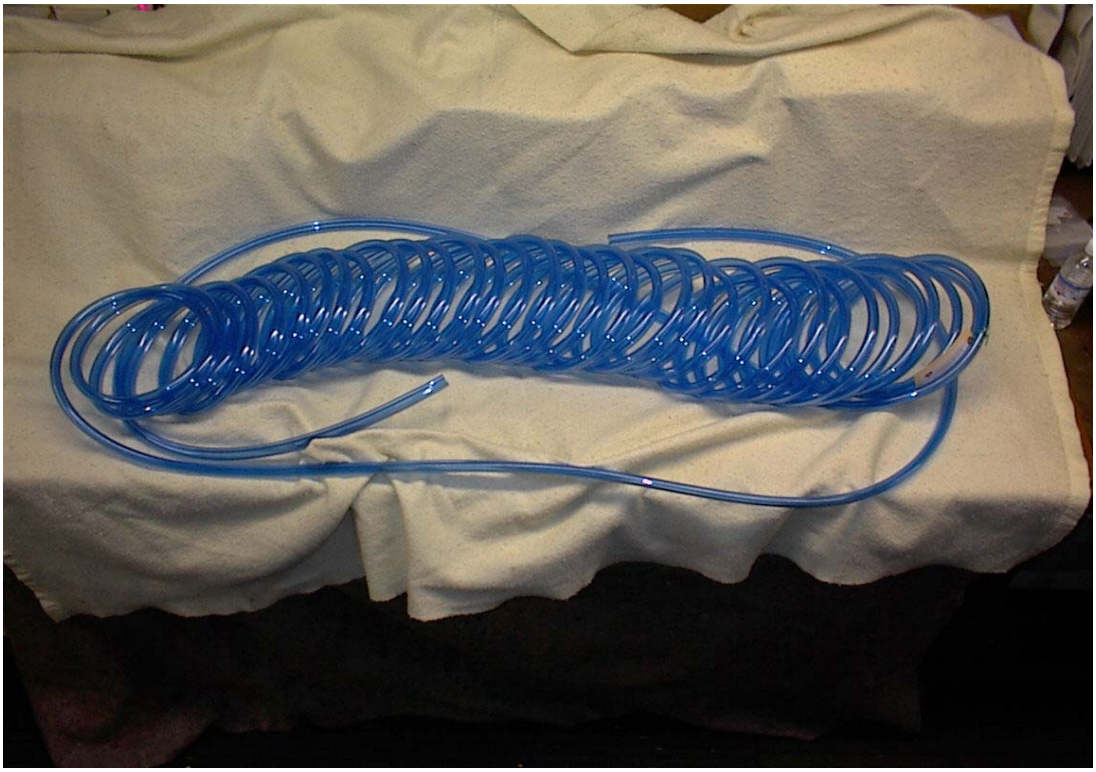
Twin Line Polyurethane Hose Assemblies

1/2” Airline bonded to a 1/4” Oil delivery line.
This hose was specially designed for air tool drops where air and oil must be delivered to the tool.

Part Number	Model	Description	Sizes	Length
0422-8811	SK6992-1	Twinline Hose	1/2” & 1/4”	33 ft.
0422-8A57	S110696B	Twinline Hose	1/2” & 1/4”	50 ft.
0422-8AY9	S061168-100	Twinline Hose	1/2” & 1/4”	100 ft.
0422-8C0L	SS12-04 x 50	Twinline Hose	3/4” & 1/4”	50 ft.



Power Tool Manifolds

List of manifold specifications

General Specifications

To design, build and assemble a set of manifolds for the purpose of holding power tools and supplying air and oil to the tools. The manifolds have been built as specified by General Motors of Canada Ltd., with all required components. All manifolds have been pre-tested.

System Components – Manifold

All manifolds have been supplied to meet the following characteristics:

- Overall dimensions, materials, and equipment as per GMCL drawings.
- Square tube thickness to withstand line pressures and support 500 lbs. tooling
- All welds to be seal welds
- All air pipe fittings to be schedule 40 unless otherwise specified.
- All oil pipe fittings to be brass unless otherwise specified.
- All air hose and pipe fittings to be ½" unless otherwise specified.
- All oil hose and pipe fittings to be ¼" unless otherwise specified
- Twin line air hose to be Uni-Mist polyurethane hose.
- All manifolds to be pickled and leak tested. All manifolds are to be fabricated to withstand line pressures of 150 psi.
- All manifolds to be painted Livonia Blue

Major System Components

Major system components are as follows:

Components	Part	Model	Manufacturer
Manifold		Fabricated	Harold Simmons Industrials Ltd
Twin Line Hose	**0422-8811**	SK-6992-1	Uni-Mist, Inc
Filter ½"	**0339-0388**	F100-4	Master Pneumatic, Inc
Regulator ½"	**0657-0410**	R100-4	Master Pneumatic, Inc
Lubricator ½"	**0499-0036**	A60041	Master Pneumatic, Inc
Sight Dome	**0661-0040**	M481R	Master Pneumatic, Inc
Gauge	**0366-4740**	200-BDD	Master Pneumatic, Inc
Co-Ax Socket	**0225-0778**	71-2060	Uni-Mist, Inc
Co-Ax Plug	**0225-1260**	71-2031	Uni-Mist, Inc
Tool Drop Hose	**0422-888P**	4010-16-6-6-B-22	Uni-Mist, Inc
Fittings	Misc.	Pipe Tee etc.	Fairview Fittings & Manufacturer

Quantities Supplied

Number of Drops	Qty Ordered
2 Drop Manifold	Tba
3 Drop Manifold	Tba
4 Drop Manifold	Tba

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Below is a drawing of a typical Single Point Lubricator System complete with Components.

There are numerous configurations in which the single point lubricator can be assembled. Oil for the single point lubricator can be fed from an overhead central fill system or they can use individual reservoirs. The co-axial hose assemblies are designed to deliver the pre-measured amount of oil through an internal oil line directly to the air tool. These hoses are available in a variety of sizes lengths and configurations, with the most popular being the coiled polyurethane hose assembly.

Airline Regulator

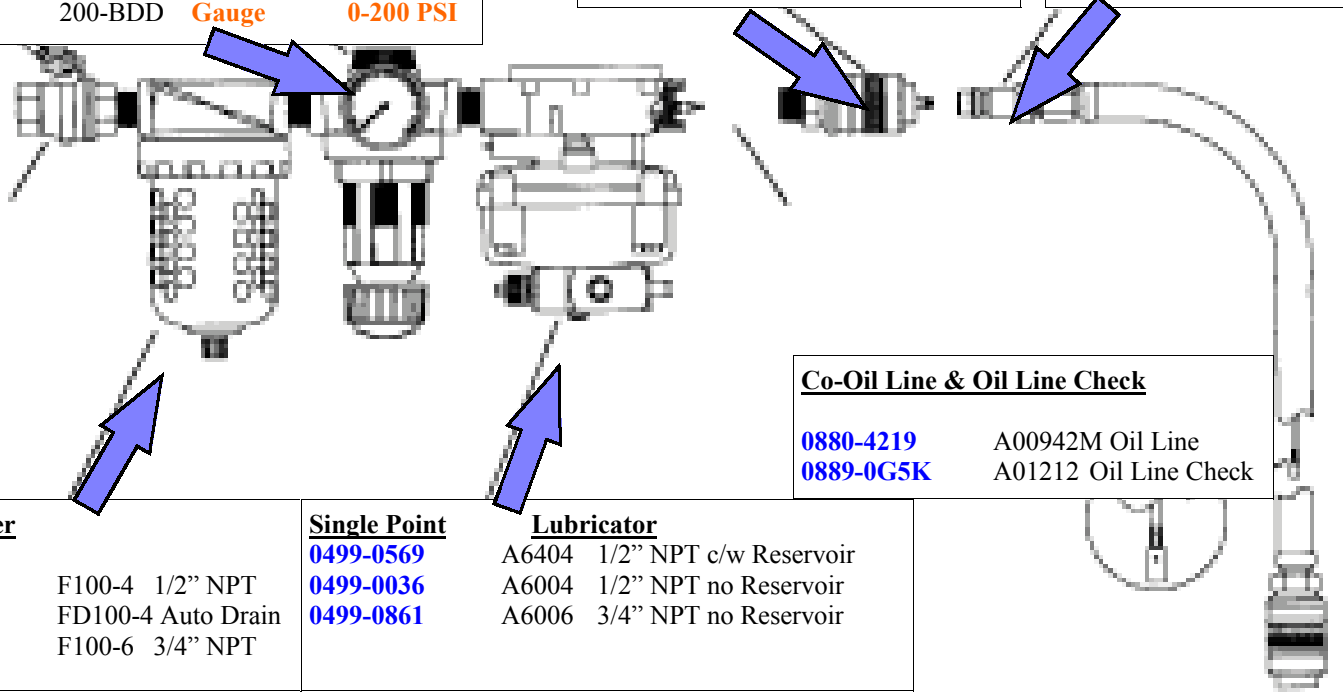
0657-0410	R100-4 Regulator	1/2" NPT
0657-1167	R100-6 Regulator	3/4" NPT
0366-4740	200-BDD Gauge	0-200 PSI

Co-Axial Sockets

0225-0778	71-2060 1/2" NPT
0225-0999	DC2121SL 3/4" NPT

Co-Axial Plug

0225-1260	71-2031 1/2" NPT



Co-Oil Line & Oil Line Check

0880-4219	A00942M Oil Line
0889-0G5K	A01212 Oil Line Check

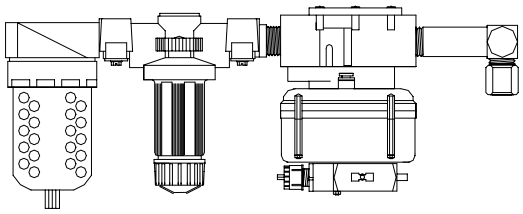
Airline Filter

0339-0388	F100-4 1/2" NPT
0339-0725	FD100-4 Auto Drain
0339-6565	F100-6 3/4" NPT

Single Point Lubricator

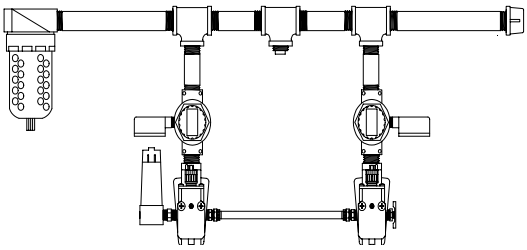
0499-0569	A6404 1/2" NPT c/w Reservoir
0499-0036	A6004 1/2" NPT no Reservoir
0499-0861	A6006 3/4" NPT no Reservoir

BASE ASSEMBLIES

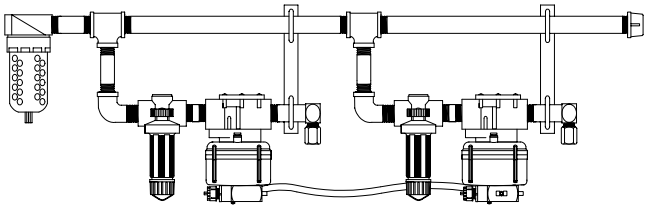


SINGLE AIR DROP ASSEMBLIES

SIZE	ASSEMBLY NUMBER	
1/2	FRL-4111-1XYYY-Z	(VERTICAL LUBRICATOR)
1/2	FRL-4112-1XYYY-Z	(HORIZONTAL LUBRICATOR)
3/4	FRL-6211-1XYYY-Z	(VERTICAL LUBRICATOR)
3/4	FRL-6212-1XYYY-Z	(HORIZONTAL LUBRICATOR)



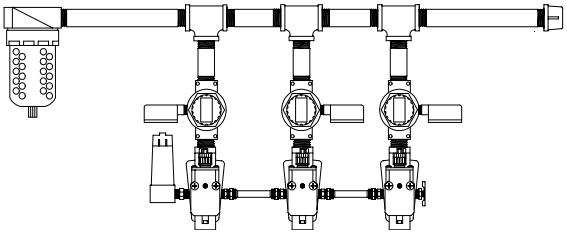
VERTICAL REGULATOR AND LUBRICATOR



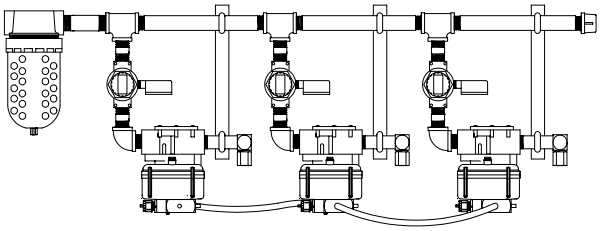
HORIZONTAL REGULATOR AND LUBRICATOR

DOUBLE AIR DROP ASSEMBLIES

SIZE		
1/2	FRL-4111-2XYYY-Z	(VERTICAL LUBRICATOR)
1/2	FRL-4112-2XYYY-Z	(HORIZONTAL LUBRICATOR)
3/4	FRL-6211-2XYYY-Z	(VERTICAL LUBRICATOR)
3/4	FRL-6212-2XYYY-Z	(HORIZONTAL LUBRICATOR)



VERTICAL REGULATOR AND LUBRICATOR



VERTICAL REGULATOR AND HORIZONTAL LUBRICATOR

TRIPLE AIR DROP ASSEMBLIES

SIZE	ASSEMBLY NUMBER	
1/2	FRL-4111-3XYYY-Z	(VERTICAL LUBRICATOR)
1/2	FRL-4112-3XYYY-Z	(HORIZONTAL LUBRICATOR)
3/4	FRL-6211-3XYYY-Z	(VERTICAL LUBRICATOR)
3/4	FRL-6212-3XYYY-Z	(HORIZONTAL LUBRICATOR)

CONSULT THE FACTORY FOR SPECIALS

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Full Size Vanguard Filter
100 Series - 1/4” to 3/4” Sizes

The Unique shroud around the filter element, and the double lower baffle in theses filters provide the ultimate in water removal. With internal or external automatic drain and a tube kit to empty liquids remotely, these filters are highly efficient and enviromently friendly. For even finer than 5-micron filtration, these units can be used in tadem with our “FC” model coalescent filters to remove particles as fine as 0.01 micron, and also to remove harmful compressor

Model Number		Pipe Size
F100-4		1/2” NPT
BF100-3	**(Metal Bowl)**	3/8” NPT
F100-6X		3/4” NPT
FD100-4	**(Automatic Drain)**	1/2” NPT
FD100-6	**(Automatic Drain)**	3/4” NPT

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Master Pneumatic R100-4 Regulator Vanguard Series

Design parameters that reflect a "blend" of performance characteristics to best meet the needs of industry are found in M/P's series . of GENERAL-PURPOSE pressure regulators. Air-flow accuracy of pressure settings, variations in air flow and supply pressure, regulated pressure ranges, response time, repeatability, sensitivity and relief capacity, phyiscal size and cost were all major considerations ith their design. All regulators are "Self-Relieving with non-relieving feature optional.

VANGUARD Series

Both the full-size and High-Capacity Regultaors provide high air flow with low pressure drop. Changes in supply pressure cause minimal variations in regulated pressure. Standard adjustment locking-key prevents tampering.

Number	Part Number	Pipe Size
0657-3096	R100-2	1/4" NPT
0657-1649	R100-3	3/8" NPT
0657-2971	R100-3L **(0-50 PSI Ajusting Spring)**	3/8" NPT
0657-0410	R100-4	1/2" NPT
0657-0994	R100-4G **(Gauge)**	1/2" NPT
0657-1167	R100-6	3/4" NPT
0657-32FN	R100-6G **(Gauge)**	3/4" NPT

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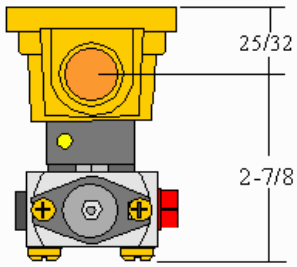
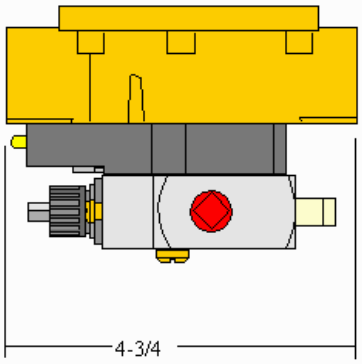
MASTER PNEUMATIC SERVO-OIL

Pneumatic Injection Lubrication

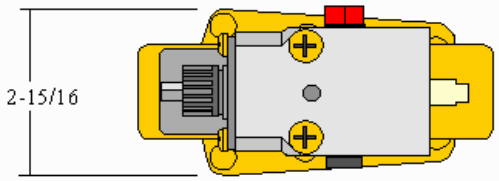
A6000 Series

Serv-oil equipment has been used to reliably lubricate air tools, valves, cylinders, fixtures, machinery, bearings in ways for over twenty years. **Serv-oil** equipment was developed to overcome the application problems encountered with conventional air line lubricators. It insures lubrication- independent of complex circuts and distance from lubricators. **Serv-oil** equipment has been successfully applied to lubricate various machine componets, and servo-meters have adapted to dispense and spray lubricants and othe fluids.



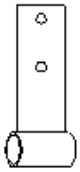


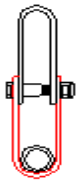
Servo-oil pneumatic injectors consists of air-operated adjustable injectors called Sevro Meters that deliver a precise amount of lubrication each time the injector is cycled Lubricants is carried to the device to be lubricated through tubing from servo-meter. A ball check is used at the lubricated device so the oil line remains filled with lubricant.

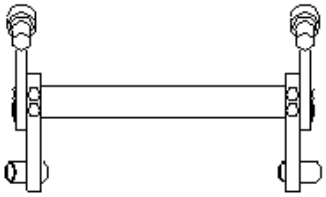


Number	Part number	Pipe size
0499-0036	A60041	1/2” NPT
0499-0338	A64041R **(Reservoir)**	1/2” NPT
0499-0861	A60061	3/4” NPT
0499-0316	A64061R **(Reservoir)**	3/4” NPT

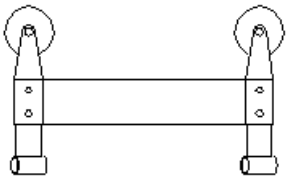
SUSPENSION OPTIONS



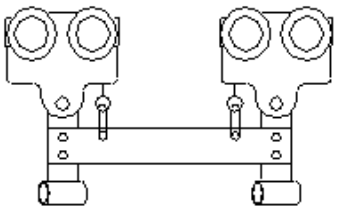




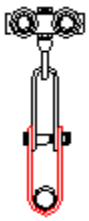
CODE	DESCRIPTION
B	WELDING BRACKET
C	CLEVIS ATTACHMENTS
D	HOLLYWOOD TROLLEY ASSEMBLY

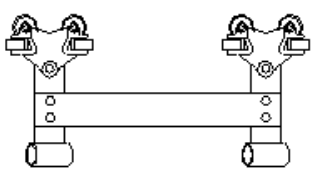


F	3” I-BEAM ASSEMBLY
L	4” I-BEAM ASSEMBLY



G	ETA-4 TROLLEY ASSEMBLY
H	KBK I TROLLEY ASSEMBLY
S	ETA-8 TROLLEY
N	KBK II TROLLEY
P	KNIGHT 4” TROLEY
Z	ZIMMERMAN TROLLY





J	JOHNSON / UNISTRUT TROLLEYS WITH CLEVIS
K	9792 WEBB WHEEL ASSEMBLY
U	TROLLEY ASSEMBLY WITHOUT WHEELS

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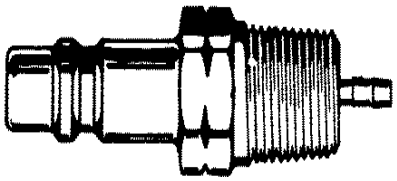
This Co-axial Plug allows the user to simutaneously connect and disconnect the air/oil line under a zero pressure conditon. Co-axial sockets (below) are available for direct connection to either the Single Point Lubricator or to a Co-axial elbow which is connected to the single point lubricator.

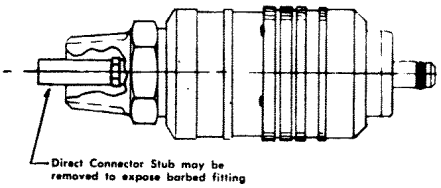
Coupler Uni-Mist 71-2031 male Quick Change 1/2" in NPT MALE.

COAX PLUGS



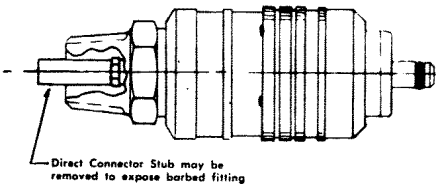
Coupler Uni-Mist 71-2060 Soc Pipe THD QCK DIS Co-Axial Type Locking Style **1/2" NPT MALE** Steel.

COAX SOCKETS



Coupler DC2121SL-LD SOC PIPE THD QCK DIS W/CHECK Type Non-Locking Style **3/4" NPT MALE** Steel

COAX SOCKETS



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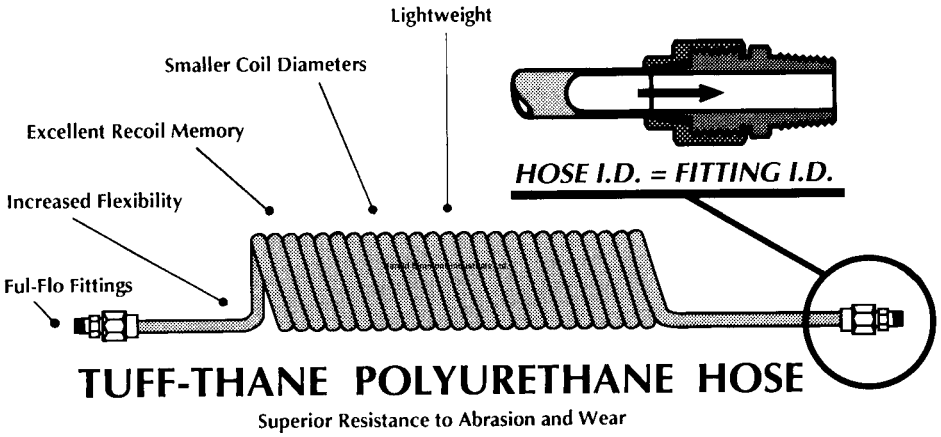

	Part No.	Size	Length	Tail	Hose Type	Oil Lines
	K2840-04x15	1/4”	15 Ft.	18”	Single	No Oil Line
	1936-4-25	1/4"	25 Ft.	6”	Single	No Oil Line
	4010-16-66B-10	3/8"	10 Ft.	6”	Single	Internal Oil Line
	4010-16-66B-22	3/8"	22 Ft.	18”	Single	Internal Oil Line
	4010-16-86B-25	3/8"	25 Ft.	18”	Single	Internal Oil Line
	4010-16-86B-25-8CA	3/8”	25 Ft.	8 Ft.	Single with Fittings	Internal Oil Line With Co-Ax Plug
	4010-18-00B-14	1/2"	14	18”	Single	Internal Oil Line
	SK6992-1	1/2" & 1/4"	33	3 ft.	Twin	External 1/4" Line
	S110696B	1/2" & 1/4"	50	8 ft.	Twin	External 1/4" Line
	S-061168-100	1/2" & 1/4"	100	8 ft.	Twin	External 1/4" Line
	SS12-04x50	3/4" & 1/4"	50	none	Twin	External 1/4" Line

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Self Storing Hose Fittings and Replacement Sleeves

Number	Fairview Part Number	Description
	1978-4B	1/4” Self Store Fitting 1/4” Male Swivel
	1978-6C	3/8” Self Store Fitting 3/8” Male Swivel
	1978-8D	1/2” Self Store Fitting 1/2” Male Swivel
	FCN909	3/4” Self Store Fitting 3/4” Male Swivel
	1966-4B	1/4” Self Store Fitting 1/4” Female Rigid
	1966-6C	3/8” Self Store Fitting 3/8” Female Rigid
	1960-4	1/4” Replacement Sleeve for 1/4” Self Store
	1960-6	3/8” Replacement Sleeve for 3/8” Self Store
	1960-8	1/2” Replacement Sleeve for 1/2” Self Store

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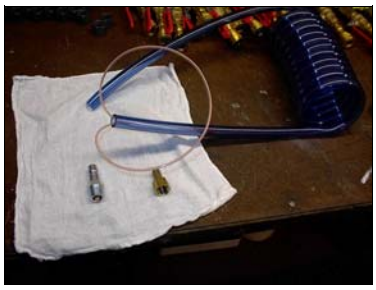
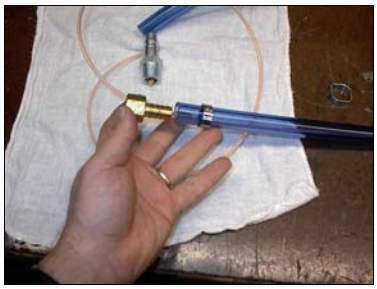
Co-Axial Hose Assembly Procedures

Install the Lincoln check #275-198 on the end of the pre-filled oil line #A00942M. (0880-4219)

The check should be inserted in the hose close to the tool end, within 10% of the hose length.



The co-axial plug #71-2031 is installed on the opposite end of the hose. (#0225-1260)



Install the Fairview hose barb #126-8D onto the polyurethane hose with an oetiker clamp.

Cut the oil line to the proper length and install onto the co-axial plug.

Install the proper sized standard airline coupler on the opposite end of your hose assembly.

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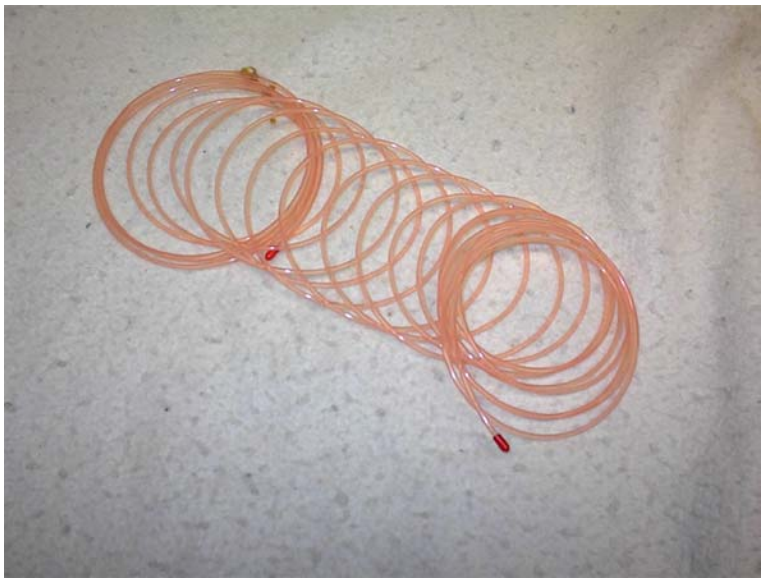
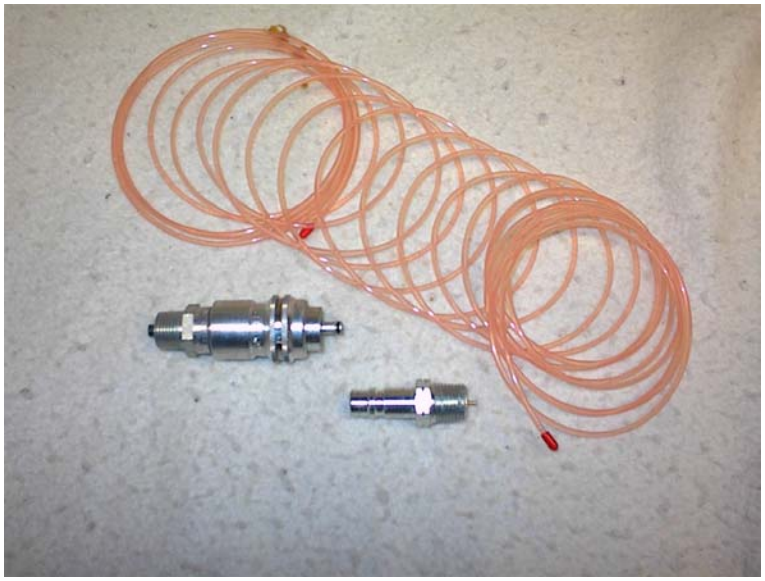
Corporate Number 0880-4219

Master Pneumatic A00942M oil filled nylon tubing .077 in I.D. X 1/8" O.D. cut to length (25ft - 8 Meters Coil)





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Single Point Lubricator Adjustment Recommendations

Recommended Initial Settings:

Tool Size	Counter Switch Settings	Lubricator Adjustment
Large	1 (Lubricates on every cycle)	3-10 Clicks (Maximum Setting)
Medium	5 (Lubricates every 5th cycle)	20-30 Clicks
Small	10 (Lubricates every 10th cycle)	30-46 Clicks (Minimum Setting)

Recommended lubrication rate is 1 drop of lubricant for every 20 standard cubic feet of air.

Recommended oil viscosity is between 80 and 500 SSU @ 100 degrees Fahrenheit.

Maximum oil supply line pressure is 30 psi.

Maximum oil delivery of lubricator is 1 drop of oil per every tool cycle.

Minimum oil delivery of lubricator is .01 drops of oil, when set at .1 drop per 10 cycles.

Rotate black control knob counter-clockwise for less oil.

Rotate black control knob clockwise for more oil.

Black control knob has detents and will click for every 1/10th revolution.

There are approximately .02 drops of oil for every click of adjustment.

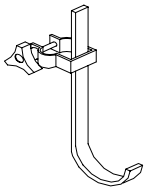
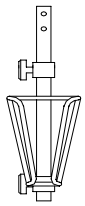
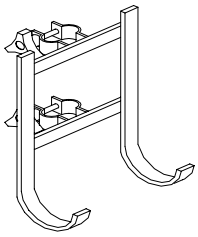
1 drop of oil is equal to 1/30 cc.

The unit has been factory set to deliver 1 drop of lubricant per cycle.

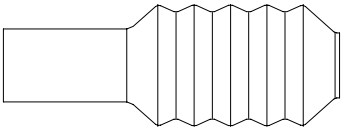
The unit has been factory tested and primed with oil.

$$\text{Drops per Tool Cycle} = \frac{\text{Air used by tool (SCFM)} \times \text{seconds of operations}}{1200}$$

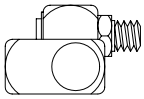
SPECIALTIES

DESCRIPTION	PART NUMBER
TOOL HOOK - “J” TYPE	OR434-2
TOOL HOOK - “DOUBLE J” TYPE	OR434-5
TOOL HOOK - 6” CAGE TYPE	OR434-9
TOOL HOOK 6” CAGE TYPE WITH CLAMPS	OR434-8
TOOL HOOK - 8” CAGE TYPE	OR434-7
TOOL HOOK - 8” CAGE TYPE WITH CLAMPS	OR434-6

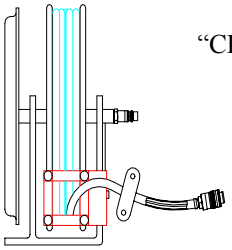


FINISH PROTECTOR LARGE (FITS DCA, DC2)	FP-DC2
FINISH PROTECTOR SMALL (FITS DC0)	FP-D3



DYNA SWIVEL 1/4 STEEL	OR94300
DYNA SWIVEL 3/8 STEEL	OR190027
DYNA SWIVEL 1/2 STEEL	OR190028
DYNA SWIVEL 3/8 INLET X 1/4 PLASTIC COATED	OR190010
DYNA SWIVEL 3/8 PLASTIC COATED	OR190011
DYNA SWIVEL 1/2 PLASTIC COATED	OR190012

CO-AXIAL HOSE REEL



“CHR- __ __ __ __ __”

EX: CHR-6820DC2-1

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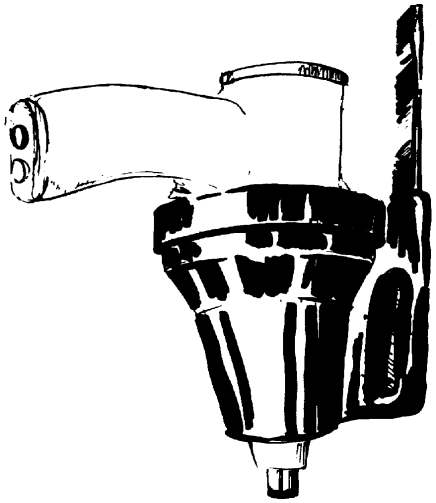
Number 1059-0061

Simmons Rubber Tool Holster
Keeps Air Tools off the Floor
A Flat Steel Bar Riveted to Holster can be attached to Bench or Stock Carrier for Operators Convenience



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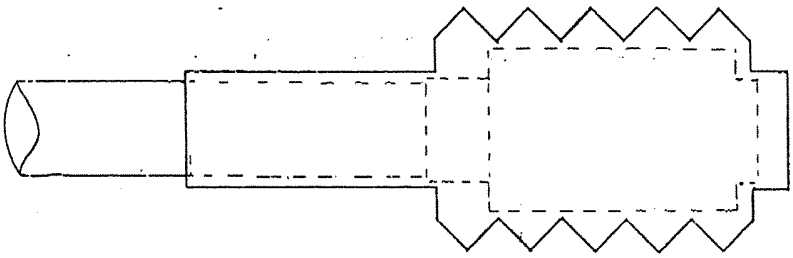
Surface Finish Coupling Protector



Number	Part Number	Size
0628-0679	FP-DC2	LARGE COUPLING PROTECTOR
0628-0680	FP-DC	SMALL COUPLING PROTECTOR

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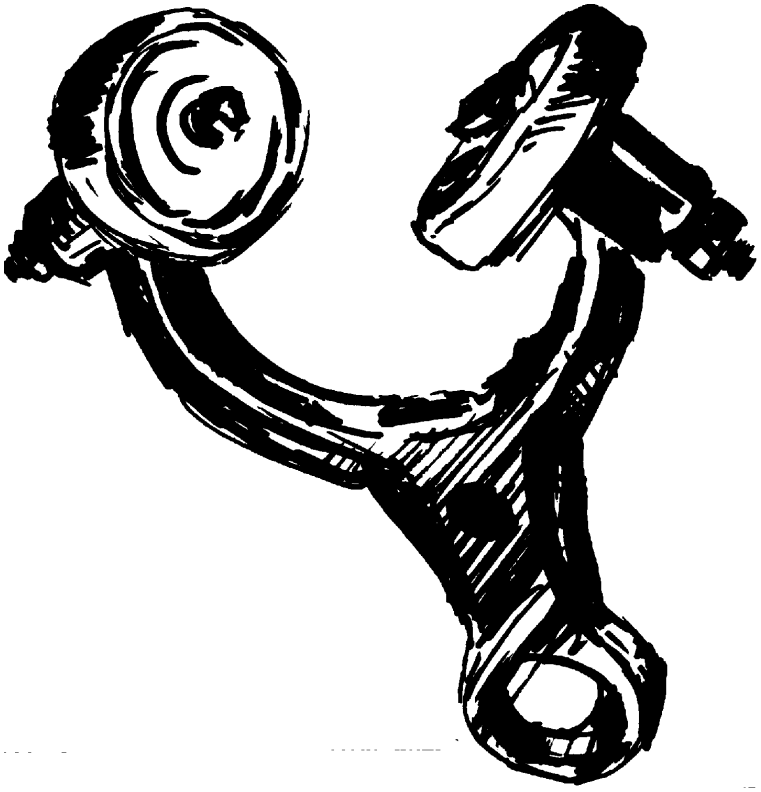
Hollywood Trolley A7A-1 Hand Push

Hollywood Trolleys were used in California to move large background screens on and off movie sets. Today, many manufacturing plants use Hollywood Trolleys to give easy movement of fixtures beside assembly lines, including air tool drops filters, regulators and single point lubricators. The simple lightweight design makes it easy to incorporate into many custom fixtures which must track the production line.



	Part Number	Description
	A7A-1	125 LB Trolley 5/16 DIA Bolt Skate Wheel
	A7A-1HD	250 LB Trolley 3/8 DIA Bolt Trolly Wheel
	A7A	Bare Hollywood Trolley Casting

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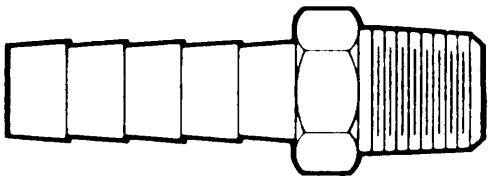
HOSE BARB x MALE PIPE



Number	Part Number	Size **Hose x Pipe**
0225-2882	125-2A	1/8 x 1/8
0225-2881	125-2B	1/8 x 1/4
0225-2884	125-3A	3/16 x 1/8
0225-2883	125-3B	3/16 x 1/4
	125-4A	1/4 x 1/8
0225-2234	125-4B	1/4 x 1/4
	125-4C	1/4 x 3/8
	125-4D	1/4 x 1/2
	125-5a	5/16 x 1/8
	125-5B	5/16 x 1/4
0225-3000	125-5c	5/16 x 3/8
	125-5D	5/16 x 1/2
	125-6A	3/8 x 1/8
	125-6B	3/8 x 1/4
	125-6c	3/8 x 3/8
	125-6D	3/8 x 1/2
	125-8B	1/2 x 1/4
0207-C073	125-8C	1/2 x 3/8
0207-D387	125-8D	1/2 X 1/2
	125-8E	1/2 X 3/4
	125-10B	5/8 X 1/4
	125-10C	5/8 X 3/8
	125-10D	5/8 X 1/2
	125-10E	5/8 X 3/4
	125-12B	3/4 X 1/4
	125-12C	3/4 X 3/8
0207-D392	125-12D	3/4 X 1/2
0207-D393	125-12E	3/4 X 3/4
	125-16E	1 X3/4
	125-16H	1 X 1

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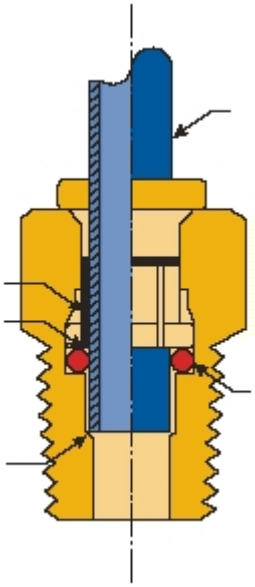
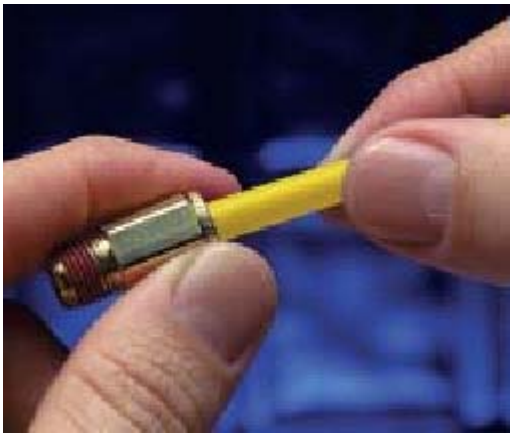
BRASS PUSH-TO-CONNECT FITTINGS

FEATURES & BENEFITS



- Save up to 75% of assembly time of standard compression fittings. Simply push tubing into the fitting. No tools required.
- Quickly disconnects from the tubing. Simply hold two fingers on the sleeve and pull tubing out. No tool required.
- Totally reusable fittings connect & disconnect numerous times.
- Full Flow design provides up to 60% more flow area than conventional fittings with internal tube supports
- Positive seal of the internal O-ring means no leaks.
- Buna N O-ring is standard with other O-ring materials available for special applications.
- The tubing is secure. Accidental pulling on the tubing only tightens the fitting connection
- Self contained fitting with no loose parts e.g. sleeve, nut, and inserts.
- Brass construction. All fittings are complete brass construction, capable of withstanding severe conditions. Resistant to external fluids.
- Pre-applied Teflon sealant on all male threads.
- Nickel-plated and metric push-to-connect fittings are available upon request.

To connect tube, simply cut tube square and insert into fitting. A small amount of friction is felt as the tube passes the O-ring. Continue to push the tube until it bottoms firmly against the internal tube stop.



To disconnect the tube, simply hold down the top of the insert with thumb and forefinger, against the fitting body. With the other hand, pull the tubing out. No tools are required.

• QUICK CONNECT • FULL FLOW DESIGN • BRASS CONSTRUCTION • SWIVEL • FOR USE WITH POLYETHYLENE, NYLON AND SOFT METAL TUBINGS.

UNION COUPLING

PART No.	Tube	G.M. #
PC62-2	1/8	0887-32P1
PC62-2-1/2	5/32	0887-32P2
PC62-4	1/4	0887-32N8
PC62-6	3/8	
PC62-8	1/2	
PC62R-64	3/8 to 1/4	

CONNECTOR Tube To Female Pipe

PART No.	Tube	Pipe
PC66-2A	1/8	1/8
PC66-2-1/2A	5/32	1/8
PC66-4A	1/4	1/8
PC66-4B	1/4	1/4
PC66-6B	3/8	1/4
PC66-6C	3/8	3/8

CONNECTOR Tube To Male Pipe

PART No.	Tube	Pipe	
PC68-2X0	1/8	10-32	
PC68-2X1	1/8	1/16	
PC68-2A	1/8	1/8	
PC68-2-1/2X0	5/32	10-32	0207-G7PT
PC68-2-1/2A	5/32	1/8	0207-G6RG
PC68-2-1/2B	5/32	1/4	0207-G6RH
PC68-3X0	3/16	10-32	
PC68-3A	3/16	1/8	
PC68-4X0	1/4	10-32	0207-G6MJ
PC68-4A	1/4	1/8	0207-G6G1
PC68-4B	1/4	1/4	0207-G6J0
PC68-4C	1/4	3/8	
PC68-6A	3/8	1/8	
PC68-6B	3/8	1/4	0207-G6R5
PC68-6C	3/8	3/8	0207-G6R6
PC68-6D	3/8	1/2	
PC68-8B	1/2	1/4	
PC68-8C	1/2	3/8	.....0207-G7YN
PC68-8D	1/2	1/2	

BULKHEAD UNION

PART No.	Tube	
PC77-2	1/8	0887-32PM
PC77-2-1/2	5/32	0887-32PN
PC77-3	3/16	0887-32PP
PC77-4	1/4	0887-32PR
PC77-6	3/8	0887-32PK
PC77-8	1/2	0887-32PT

BULKHEAD UNION Tube To Female Pipe

PART No.	Tube	Pipe
PC86-4A	1/4	1/8
PC86-4B	1/4	1/4
PC86-6B	3/8	1/4

90°ELBOW Tube To Tube

PART No.	Tube
PC65-2	1/8
PC65-2-1/2	5/32
PC65-4	1/4
PC65-6	3/8
PC65-8	1/2

90° ELBOW Tube To Female Pipe

PART No.	Tube	Pipe
PC70-2A	1/8	1/8
PC70-2-1/2A	5/32	1/8
PC70-4A	1/4	1/8
PC70-4B	1/4	1/4
PC70-6B	3/8	1/4

90° ELBOW Tube To Swivel Female Pipe

PART No.	Tube	Pipe
PC70SW-2-1/2A	5/32	1/8
PC70SW-4A	1/4	1/8
PC70SW-4B	1/4	1/4
PC70SW-6B	3/8	1/4
PC70SW-6C	3/8	3/8
PC70SW-8C	1/2	3/8

90° ELBOW Tube To Male Pipe

PART No.	Tube	Pipe	
PC69-2A	1/8	1/8	0294-A21J
PC69-2-1/2A	5/32	1/8	0294-A21H
PC69-3A	3/16	1/8	
PC69-4A	1/4	1/8	
PC69-4B	1/4	1/4	
PC69-4C	1/4	3/8	
PC69-6A	3/8	1/8	
PC69-6B	3/8	1/4	
PC69-6C	3/8	3/8	
PC69-8B	1/2	1/4	
PC69-8C	1/2	3/8	
PC69-8D	1/2	1/2	

90° ELBOW Tube To Male Pipe Swivel

PART No.	Tube	Pipe	G.M. #
PC69SW-2A	1/8	1/8	
PC69SW-2-1/2X0	5/32	10-32	0294-A2G5
PC69SW-2-1/2A	5/32	1/8	0294-A21K
PC69SW-2-1/2B	5/32	1/4	0294-A21L
PC69SW-3A	3/16	1/8	
PC69SW-4X0	1/4	10-32	
PC69SW-4A	1/4	1/8	0294-A1XR
PC69SW-4B	1/4	1/4	0294-A219
PC69SW-4C	1/4	3/8	0294-A21A
PC69SW-6A	3/8	1/8	0294-A2PV
PC69SW-6B	3/8	1/4	0294-A23M
PC69SW-6C	3/8	3/8	0294-A21F
PC69SW-6D	3/8	1/2	
PC69SW-8C	1/2	3/8	0294-A2H2
PC69SW-8D	1/2	1/2	

UNION TEE Tube Each End

PART No.	Tube	G.M. #
PC64-2	1/8	0840-569R
PC64-2-1/2	5/32	0840-569T
PC64-3	3/16	0840-569V
PC64-4	1/4	0840-569W
PC64-6	3/8	0840-56AV
PC64-8	1/2	

TEE Ends Tube and Male Pipe Center Tube

PART No.	Tube	Pipe
PC71-2A	1/8	1/8
PC71-2-1/2A	5/32	1/8
PC71-3A	3/16	1/8
PC71-4A	1/4	1/8
PC71-4B	1/4	1/4
PC71-6A	3/8	1/8
PC71-6B	3/8	1/4
PC71-6C	3/8	3/8
PC71-8C	1/2	3/8

• QUICK CONNECT • FULL FLOW DESIGN • BRASS CONSTRUCTION • SWIVEL • FOR USE WITH POLYETHYLENE, NYLON AND SOFT METAL TUBINGS.

TEE
Ends Tube and Male Pipe Swivel Center Tube

PART No.	Tube	Pipe	G.M. #
PC71SW-2A	1/8	1/8	
PC71SW-2-1/2X0	5/32	10-32	
PC71SW-2-1/2A	5/32	1/8	0840-56AG
PC71SW-4A	1/4	1/8	0840-56AK
PC71SW-4B	1/4	1/4	0840-56AL
PC71SW-6B	3/8	1/4	0840-56AW
PC71SW-6C	3/8	3/8	
PC71SW-8C	1/2	3/8	
PC71SW-8D	1/2	1/2	

TEE
Ends Tube Center Male Pipe

PART No.	Tube	Pipe
PC72-2A	1/8	1/8
PC72-2-1/2A	5/32	1/8
PC72-3A	3/16	1/8
PC72-4A	1/4	1/8
PC72-4B	1/4	1/4
PC72-6A	3/8	1/8
PC72-6B	3/8	1/4
PC72-6C	3/8	3/8
PC72-8C	1/2	3/8

TEE
Ends Tube Center Male Pipe Swivel

PART No.	Tube	Pipe	G.M. #
PC72SW-2A	1/8	1/8	
PC72SW-2-1/2X0	5/32	10-32	
PC72SW-2-1/2A	5/32	1/8	0840-56AJ
PC72SW-4A	1/4	1/8	0840-56AM
PC72SW-4B	1/4	1/4	0840-56AN
PC72SW-6B	3/8	1/4	0840-56AP
PC72SW-6C	3/8	3/8	0840-56AR
PC72SW-8C	1/2	3/8	
PC72SW-8D	1/2	1/2	

TEE
Ends Tube Center Female Pipe

PART No.	Tube	Pipe
PC78-4A	1/4	1/8
PC78-4B	1/4	1/4
PC78-6B	3/8	1/4

TEE
Ends Tube Center Female Pipe Swivel

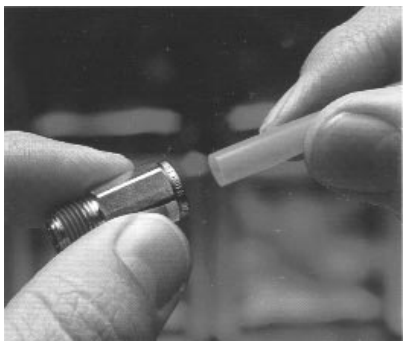
PART No.	Tube	Pipe
PC78SW-4A	1/4	1/8

PLUG

(Plastic)

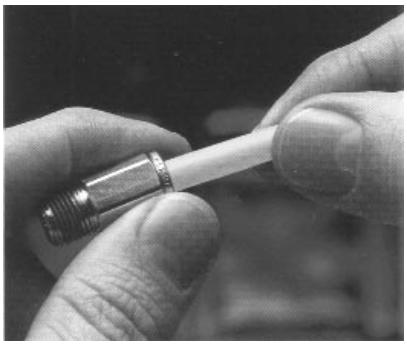
PART No.	Tube	G.M. #
PC67-2	1/8	
PC67-2-1/2	5/32	0611-88X3
PC67-4	1/4	0611-88X4
PC67-6	3/8	0611-88X5
PC67-8	1/2	0611-88X6

NICKEL PLATED AND METRIC PUSH-TO-CONNECT FITTINGS ARE AVAILABLE UPON REQUEST.



TO CONNECT TUBE:

Cut plastic as squarely as possible. Insert tube end into fitting until friction is felt as tube slides past the O-ring. Using a slight twisting motion while inserting the tube is often helpful. After this initial friction is felt, continue to push in the tube until it bottoms firmly against the internal tube stop.



TO DISCONNECT TUBE:

With thumb and forefinger, hold down the top of the insert against the fitting body and then, with the other hand, pull out the tubing. No tools are needed.

BRASS FITTINGS FOR POLY TUBING

COMPLETE WITH FIXED INSERTS

FOR USE WITH POLYETHYLENE TUBE FEATURED ON PAGE B15

BRASS INSERT

PART No.	Tube I.D.
481-4H	.125
481-4	.170
481-5	.187
481-6	.250
481-8	.375
481-10	.500
481-12	.625

THE 480 SLEEVE AND 481 INSERT WILL CONVERT STANDARD COMPRESSION FITTINGS AND VALVES FOR USE WITH POLY TUBING.

DELRIN SLEEVE

PART No.	Tube O.D.
480-4	1/4
480-5	5/16
480-6	3/8
480-8	1/2
480-10	5/8

NUT

PART No.	Tube O.D.
61-4	1/4
61-5	5/16
61-6	3/8
61-8	1/2
61-10	5/8

UNION COUPLING Poly Tube To Poly Tube

PART No.	Tube
462-4	1/4
462-5	5/16
462-6	3/8
462-8	1/2
462-10	5/8
Reducing	
462R-64	3/8 to 1/4
462R-65	3/8 to 5/16
462R-86	1/2 to 3/8
462R-108	5/8 to 1/2

COUPLING Poly Tube To Copper Tube

PART No.	Tube
467-44	1/4
467-55	5/16
467-66	3/8
467-88	1/2
467-1010	5/8

BULKHEAD UNION Poly Tube To Poly Tube

PART No.	Tube
477-4	1/4
477-6	3/8

CONNECTOR Poly Tube To Female Pipe

PART No.	Tube	Pipe
466-4A	1/4	1/8
466-4B	1/4	1/4
466-4C	1/4	3/8
466-4D	1/4	1/2
466-5A	5/16	1/8
466-5B	5/16	1/4
466-6A	3/8	1/8
466-6B	3/8	1/4
466-6C	3/8	3/8
466-6D	3/8	1/2
466-6E	3/8	3/4
466-8C	1/2	3/8
466-8D	1/2	1/2
466-8E	1/2	3/4
466-10D	5/8	1/2

CONNECTOR Poly Tube To Male Pipe

PART No.	Tube	Pipe
468-4A	1/4	1/8
468-4B	1/4	1/4
468-4C	1/4	3/8
468-4D	1/4	1/2
468-5A	5/16	1/8
468-5B	5/16	1/4
468-5C	5/16	3/8
468-6A	3/8	1/8
468-6B	3/8	1/4
468-6C	3/8	3/8
468-6D	3/8	1/2
468-6E	3/8	3/4
468-8B	1/2	1/4
468-8C	1/2	3/8
468-8D	1/2	1/2
468-8E	1/2	3/4
468-10C	5/8	3/8
468-10D	5/8	1/2

90° ELBOW Poly Tube To Poly Tube

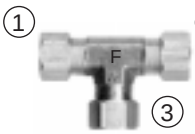
PART No.	Tube
465-4	1/4
465-5	5/16
465-6	3/8
465-8	1/2
465-10	5/8
	Reducing
465R-64	3/8 to 1/4
465R-86	1/2 to 3/8

90° ELBOW Poly Tube To Male Pipe

PART No.	Tube	Pipe
469-4A	1/4	1/8
469-4B	1/4	1/4
469-4C	1/4	3/8
469-4D	1/4	1/2
469-5A	5/16	1/8
469-5B	5/16	1/4
469-5C	5/16	3/8
469-6A	3/8	1/8
469-6B	3/8	1/4
469-6C	3/8	3/8
469-6D	3/8	1/2
469-6E	3/8	3/4
469-8B	1/2	1/4
469-8C	1/2	
469-8D	1/2	1/2
469-8E	1/2	3/4
469-10C	5/8	3/8
469-10D	5/8	1/2

BRASS FITTINGS FOR POLY TUBING

COMPLETE WITH FIXED INSERTS



TEE
Poly Tube
Three Ends

PART No.	Tube		
464-4	1/4		
464-5	5/16		
464-6	3/8		
464-8	1/2		
464-10	5/8		
	Reducing		
	1	2	3
464R-644	3/8	1/4	1/4
464R-64	3/8	3/8	1/4
464R-86	1/2	1/2	3/8

90° ELBOW
Poly Tube
To
Female Pipe

PART No.	Tube	Pipe
470-4A	1/4	1/8
470-4B	1/4	1/4
470-5A	5/16	1/8
470-5B	5/16	1/4
470-6A	3/8	1/8
470-6B	3/8	1/4
470-6C	3/8	3/8
470-8C	1/2	3/8
470-8D	1/2	1/2
470-10D	5/8	1/2

45° ELBOW
Poly Tube
To
Male Pipe

PART No.	Tube	Pipe
474-4A	1/4	1/8
474-4B	1/4	1/4
474-5A	5/16	1/8
474-6B	3/8	1/4
474-8C	1/2	3/8
474-8D	1/2	1/2
474-10D	5/8	1/2

TEE
Ends Poly
Tube and
Male Pipe
Center Poly Tube

PART No.	Tube	Pipe
471-4A	1/4	1/8
471-4B	1/4	1/4
471-5A	5/16	1/8
471-5B	5/16	1/4
471-6A	3/8	1/8
471-6B	3/8	1/4
471-6C	3/8	3/8
471-8C	1/2	3/8
471-8D	1/2	1/2
471-10D	5/8	1/2

TEE
Ends Poly
Tube Center
Male Pipe

PART No.	Tube	Pipe
472-4A	1/4	1/8
472-4B	1/4	1/4
472-5A	5/16	1/8
472-5B	5/16	1/4
472-6A	3/8	1/8
472-6B	3/8	1/4
472-6C	3/8	3/8
472-8C	1/2	3/8
472-8D	1/2	1/2
472-10D	5/8	1/2

TEE
Ends Male
and
Female Pipe
Center Poly
Tube

PART No.	Tube	Pipe
476-4A	1/4	1/8
476-4B	1/4	1/4
476-6B	3/8	1/4

TEE
Ends Poly
Tube Center
Female Pipe

PART No.	Tube	Pipe
478-4A	1/4	1/8
478-4B	1/4	1/4
478-6B	3/8	1/4

TO ASSEMBLE

- PLACE NUT AND SLEEVE OVER TUBING
- PUSH INSERT INSIDE TUBING
- PUSH TUBING INTO FITTING AS FAR AS POSSIBLE
- TIGHTEN NUT

BRASS AIR SHIFT TRANSMISSION FITTINGS

SLEEVE

PART No.	Tube	Fuller No.
860-2	1/8	83001
860-2-1/2	5/32	83002

NUT

PART No.	Tube	Fuller No.
861-2	1/8	83501
861-2-1/2	5/32	83502

UNION
COUPLING

PART No.	Tube	Fuller No.
862-2	1/8	84101
862-2-1/2	5/32	84102

CONNECTOR
Tube
To
Male Pipe

PART No.	Tube	Pipe	Fuller No.
868-2-1	1/8	1/16	84001
868-2A	1/8	1/8	84002
868-2-1/2-1	5/32	1/16	83003
868-2-1/2A	5/32	1/8	N/A

90° ELBOW
Tube To
Male Pipe

PART No.	Tube	Pipe	Fuller No.
869-2A	1/8	1/8	85002
869-2-1/2A	5/32	1/8	85001

TO ASSEMBLE

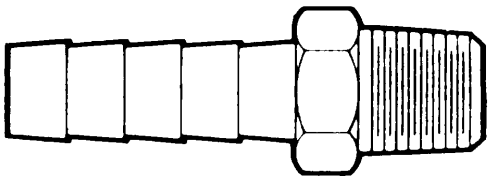
- PLACE NUT AND SLEEVE OVER TUBING
- PUSH TUBING INTO FITTING AS FAR AS POSSIBLE
- TIGHTEN NUT

Harold Simmons INDUSTRIALS LTD.

TEL: (416) 745-5020
FAX: (416) 745-1479

30 Baywood Road, Unit #11, REXDALE, Ontario M9V 3Z2
Specializing in Equipment for Motor Car Manufacturers

HOSE BARB x MALE PIPE



Number	Part Number	Size **Hose x Pipe**
0225-2882	125-2A	1/8 x 1/8
0225-2881	125-2B	1/8 x 1/4
0225-2884	125-3A	3/16 x 1/8
0225-2883	125-3B	3/16 x 1/4
	125-4A	1/4 x 1/8
0225-2234	125-4B	1/4 x 1/4
	125-4C	1/4 x 3/8
	125-4D	1/4 x 1/2
	125-5a	5/16 x 1/8
0225-327H	125-5B	5/16 x 1/4
0225-3000	125-5c	5/16 x 3/8
	125-5D	5/16 x 1/2
	125-6A	3/8 x 1/8
0207-D383	125-6B	3/8 x 1/4
0207-G662	125-6C	3/8 x 3/8
0207-D385	125-6D	3/8 x 1/2
0207-G663	125-8B	1/2 x 1/4
0207-C073	125-8C	1/2 x 3/8
0207-D387	125-8D	1/2 X 1/2
	125-8E	1/2 X 3/4
	125-10B	5/8 X 1/4
	125-10C	5/8 X 3/8
	125-10D	5/8 X 1/2
0207-D391	125-10E	5/8 X 3/4
	125-12B	3/4 X 1/4
	125-12C	3/4 X 3/8
0207-D392	125-12D	3/4 X 1/2
0207-D393	125-12E	3/4 X 3/4
	125-16E	1 X3/4
	125-16H	1 X 1

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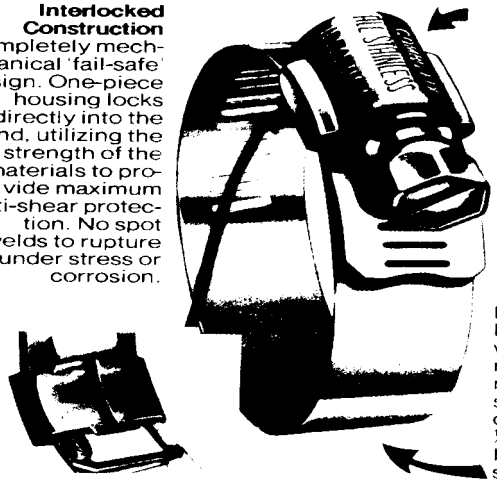
Specializing in Equipment for Motor Car Manufacturers

FOR TOUGH INSTALLATIONS

Premium quality clamps designed to provide positive, reliable connections.

Interlocked Construction Completely mechanical 'fail-safe' design. One-piece housing locks directly into the band, utilizing the full strength of the materials to provide maximum anti-shear protection. No spot welds to rupture under stress or corrosion.



Stainless Steel Band and Housing—All styles made from nickel-rich 300 series stainless steel.

Extra-wide Band—9/16" full width band means 12½% more compression area over conventional ½" wide bands It's compression that seals!

Corporate Number	Part Number	Size
0174-7073	HC5-4TB	1/4 x 5/8
0174-7072	HC5-6TB	3/8 X 7/8
0174-7929	HC5-8	7/16 X 1
	HC5-10	1/2 X 1-1/8
0174-7116	HC5-12	1/2 X 1-1/4
0174-7117	HC5-16	3/4 X 1-3/4
	HC5-20	3/4 X 1-3/4
0174-7925	HC5-24	1 X 2
	HC5-28	1-5/16 X 2-1/2
0174-7928	HC5-32	1-9/16 X 2-1/2
	HC5-36	7/8 X 2-3/4
0174-8229	HC5-40	1-1/8 X 3
	HC5-44	1-5/16 X 3-1/4
	HC5-48	1-7/8 X 3-3/4
	HC5-52	1-7/8 X 3-3/4
	HC5-64	2-5/8 X 4-1/2
	HC5-72	3-1/8 X 5
	HC5-80	3-5/8 X 5-1/2
0174-6792	HC5-88	4-1/4 X 6
	HC5-96	4-3/4 X 6-1/2
0174-7926	HC5-104	4 X 7
	HC5-116	5-7/8 X 7-3/4
0174-6791	HC5-128	2-1/2 X 8-1/2
	HC5-152	2-1/2 X 10
	HC5-188	2-1/2 X 12-1/4

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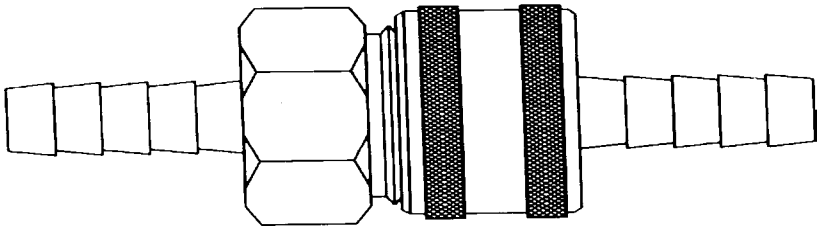
Specializing in Equipment for Motor Car Manufacturers

GARDEN HOSE FITTINGS

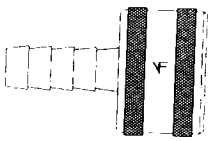


These Brass Fittings are designed for rugged use in applications where a durable water hose fitting is required. Used with rubber and thermoplatic hose in applications. The maximum design working pressure for this series of fittings is 150P.S.I. at 73 Deg. F. or the maximum working pressure of the hose you are using whichever is less. The temperature range is from +35 Deg. F. to + 100 Deg. F.

Corporate Numbers

195-8	**0207-C454**	**1/2”**
195-12	**0207-C456**	**3/4”**

Swivel Female Hose Barb
(barb x female hose thread)

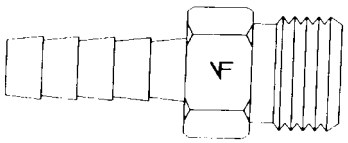


Part No	*Barb*	*Hose Thread*
195-6	3/8	3/4-11½NH
195-8	1/2	3/4-11½NH
195-10	5/8	3/4-11½NH
195-12	3/4	3/4-11½NH
195-16	1	1-11½NPSH

Corporate Numbers

193-8	**0207-C454**	**1/2”**
193-12	**0207-C455**	**3/4”**

Male Hose Barb
(barb x male hose thread)



Part No	*Barb*	*Hose Thread*
193-6	3/8	3/4-11½NH
193-8	1/2	3/4-11½NH
193-10	5/8	3/4-11½NH
193-12	3/4	3/4-11½NH
193-16	1	1-11½NPSH

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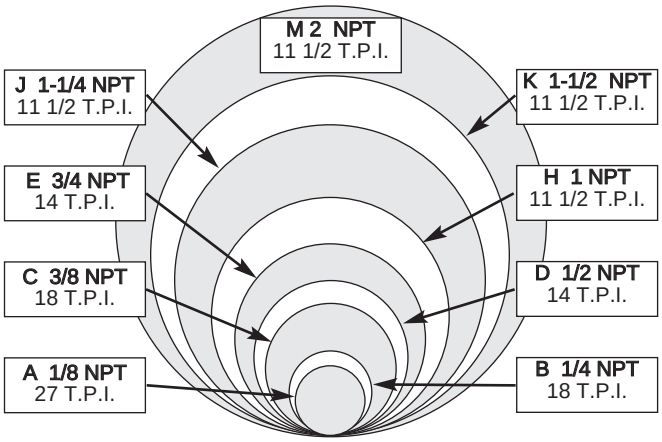
Nylon Self Storing Air Hose Fittings

Number	Mfg. Number	Size	Description
0207-E710	1978-4B	1/4” NPT Male	Self Store Fitting 1/4” Male Swivel
0207-G5XW	1978-6C	3/8” NPT Male	Self Store Fitting 3/8” Male Swivel
0207-G5XX	1978-8D	1/2” NPT Male	Self Store Fitting 1/2” Male Swivel
0207-G955	FCN-909	3/4” NPT Male	Self Store Fitting 3/4” Male Swivel
0207-G5XT	1966-4B	1/4” NPT Female	Self Store Fitting 1/4” Female Rigid
0207-G5XV	1966-6C	3/8” NPT Female	Self Store Fitting 3/8” Female Rigid
0331-0626	1960-4	1/4” Sleeve	Replacement Sleeve for 1/4” SS
0331-0627	1960-6	3/8” Sleeve	Replacement Sleeve for 3/8” SS
0331-0719	1960-8	1/2” Sleeve	Replacement Sleeve for 1/2” SS
0422-8CJ5	NSB-9102	3/4” SS Hose	3/4” Nylon Self Store 100 Ft. Coil

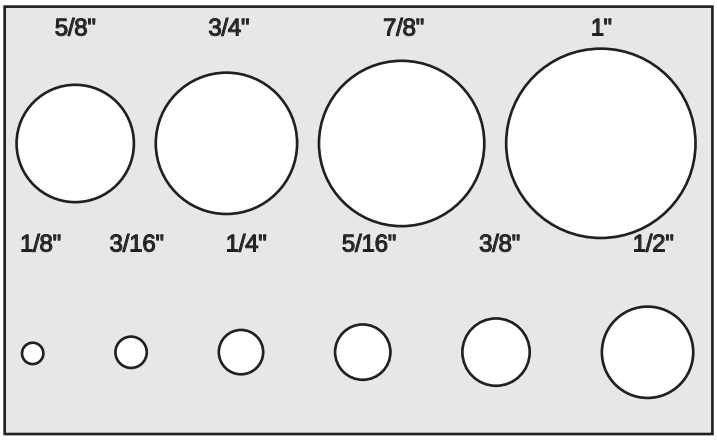
CONVERSION FACTORS

Quantity	Metric Units	Imperial Units	From Metric To Imperial	From Imperial To Metric
Length	MILLIMETERS (MM)	INCHES (IN)	MM x .03937 = IN	IN x 25.4 = MM
	CENTIMETERS (CM)	INCHES (IN)	CM x 3.937 = IN	IN x 2.540 = CM
	METERS (MT)	FEET (FT)	MT x 3.281 = FT	FT x .3048 = MT
Pressure	BAR (BAR)	POUNDS/SQ.IN (PSI)	BAR x 14.50 = PSI	PSI x .0689 = BAR
	PASCAL (PA)	POUNDS/SQ.IN (PSI)	PA x .145 = PSI	PSI x 6.8948 = PA
	ATMOSPHERES	POUNDS/SQ.IN	ATM x 14.70 = PSI	PSI x .0680 = ATM
Temperature	DEGREES CELSIUS (°C)	DEGREES FAHRENHEIT (°F)	$°C = \frac{°F - 32}{1.8}$	°F = °C x 1.8 + 32
Power	KILOWATTS (KWH)	HORSEPOWER (HP)	KWH x .7457 = HP	HP x 1.3410 =KWH

Actual Outside Diameters of Pipe Threads



Actual Outside Diameters of Tubing



FRACTIONAL SIZE CODES: Used with all Part Numbers to designate Tube and Pipe Fractional Sizes.

Tube Size Code -- 1/16ths

1/8 2	3/16 3	1/4 4	5/16 5	3/8 6	7/16 7	1/2 8	5/8 10	3/4 12	7/8 14	1 16	1-1/4 20	1-1/2 24	2 32

Pipe Size Code

1/16 1	1/8 A	1/4 B	3/8 C	1/2 D	3/4 E	1 H	1 1/4 J	1 1/2 K	2 M

TUBE FITTING SIZE AND THREAD STANDARDS

DASH SIZE	O.D. TUBE SIZE	45° S.A.E. FLARE O.D.	45° S.A.E. FLARE THREAD	37° S.A.E. FLARE O.D.	37° S.A.E. FLARE THREAD	COMPRESSION O.D.	COMPRESSION THREAD	45° INVERTED FLARE O.D.	45° INVERTED FLARE THREAD
-2	1/8	5/16	24	5/16	24	5/16	24	5/16	28
-3	3/16	3/8	24	3/8	24	3/8	24	3/8	24
-4	1/4	7/16	20	7/16	20	7/16	24	7/16	24
-5	5/16	1/2	20	1/2	20	1/2	24	1/2	20
-6	3/8	5/8	18	9/16	18	9/16	24	5/8	18
-7	7/16	-	-	-	-	-	-	-	-
-8	1/2	3/4	16	3/4	16	5/8	24	11/16	18
-10	5/8	7/8	14	7/8	14	11/16	20	3/4	18
-12	3/4	1-1/16	14	1-1/16	12	13/16	18	7/8	18
-14	7/8	1-1/4	12	1-3/16	12	1	18	1-1/16	16
-16	1	1-3/8	12	1-5/16	12	1-1/8	18	1-3/16	16
-20	1-1/4	–	–	1-5/8	12	1-1/4	16	–	–
-24	1-1/2	–	–	1-7/8	12	–	–	–	–
-32	2	–	–	2-1/2	12	–	–	–	–

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- Airline Regulators/ Pilot Operated/ Electronic
- Airline Lubricators/ Injection Lubrication
- Airline Valves/ Couplers/ Fittings/ Hose

Automated Lubrication Systems

- Centralized Lubrication Systems / Grease / Oil
- Air Tool Single Point Lubrication Systems
- Multi-Point Injection Lubrication Systems
- Monitor equipment for all Lubrication Systems

Fluid Handling Equipment

- Transfer Pumps / Air Operated / Manual
- Diaphragm Pumps / Aluminium / Plastic
- Hose Reels / Manual / Spring / Power Rewind
- Couplers / Valves / Hose / Fittings

Linear Motion Equipment

- Rodless Pneumatic Cylinders
- Rodless c/w Integral Precision Slideway
- Twin Rod Pneumatic Cylinders
- Compact Pneumatic Cylinders

Material Dispensing Systems

- Air Operated Extrusion Pumps
- Dispensing Systems / Sealers / Lubricant
- Measuring Valves / Material Ejectors
- High Pressure Metering Equipment
- Airless Spay Systems
- High Pressure Material Filters