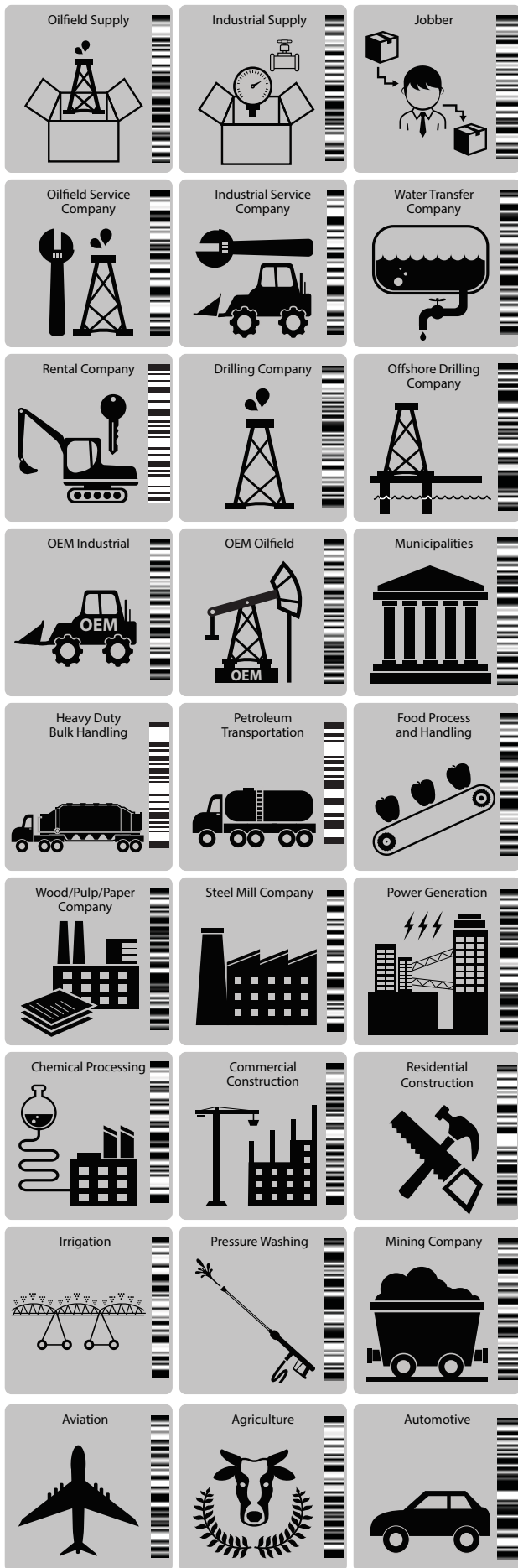


Midwest Hose & Specialty, Inc.

Keeping the Industry Connected










Our Quality Policy









Midwest Hose & Specialty, Inc. will meet or exceed the expected requirements of our customers by providing the finest quality products and service. We will strive for continual improvement and meet our quality objectives as we become one of the foremost suppliers of Hose Assemblies.










Members of main industry groups including:

-  **ABS** American Bureau of Shipping
-  **API** American Petroleum Institution
-  **NACE** National Association of Corrosion Engineers
-  **NAHAD** National Association of Hose and Accessories Distributors
-  **NFPA** National Fluid Power Association

Industry Groups that our products adhere to or are approved according to their specifications:

-  **ANSI** American National Standards Institute
-  **ASME** American Society of Mechanical Engineers
-  **ASTM** American Society for Testing and Materials
-  **DIN** Deutsches Institut für Normung (German Institute for Standardization)
-  **MSHA** Mine Safety and Health Administration
-  **SAE** Society of Automotive Engineers
-  **UL** Underwriters Laboratories
-  **USCG** United States Coast Guard

3rd Party Test Witnesses or Test Facilities for our product:

-  **DNV** Det Norske Veritas
-  **LR** Lloyd's Register
-  **OT** Otis Engineering
-  **SwRI** Southwest Research
-  **Arge** Argen Polymer
-  **AIT** Advanced Inspection Technologies
-  **TESTMASTER** TES Testmasters



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What We Specialize In

Midwest Hose is known for delivering the best quality, value, and service in the industry. We specialize in certified hose assemblies and quick delivery.



Introduction Video
1 Minute



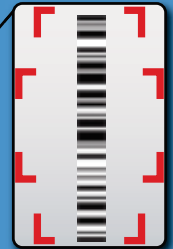
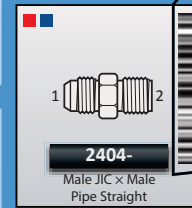
Introduction Video
4 Minutes

Midwest Hose Customer App

Our free app has assembly tracking, crimp specs, helpful calculators, chemical charts, a shopping cart, and more! To find our free app, search "Midwest Hose" on the app store.

The best way to use the barcode scanner is by holding your phone very close and slowly moving it away from the barcode.

Scan the barcode with our app's barcode reader



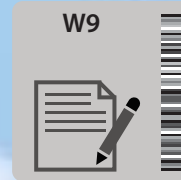
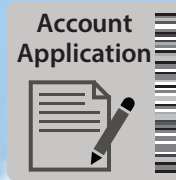
Shop



Search



Track




Corporate Headquarters Oklahoma City, OK



Why Midwest Hose?
Layflat Hose Program
Rotary Hose Program Info, Fittings Choke & Kill, BOP Rotary
Hydraulic Hose Program Rubber Thermoplastic Teflon Crimp Fittings Crimp Machines
Industrial Hose Program Suction & Discharge Discharge Only Fire Hose Composite Hose Ducting Hose Metal Hose & Exp Joints Brake, Automotive Hose
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Why Midwest Hose?

Excellent Customer Service & Availability

- Most comprehensive product line for a hose distributor – wide range of fittings and full lines of hydraulic, industrial, rotary, and layflat hose.
- Diversified inventory keeps many industries connected – 15,000 unique items sold in 2014.
- Oilfield Ready – locations with local inventory in almost all major shale plays in the U.S.
- No automatic answering service – we answer the phones ready to provide the services you need. Account customers can rely on 24/7 phone and call out service.
- Free local delivery and daily UPS and FedEx pick-ups – we strive to provide you with flexibility.
- EDI Capable – this is the electronic exchange of invoicing and payment data between your organization and MWH. Many companies use this to improve the speed and accuracy of bill paying. 
- Variety of Service Levels
 - **Walk-ins** We see you when you visit the store.
 - **Accounts** Account Sales Rep assigned to your account.
 - **VMI** Reorder inventory with cell phone app and barcodes (Summer 2015).
 - **Satellite Store** Put MWH inside your facility.
 - **Resellers/Supply Stores** Box and reel quantities of commonly bought items.
 - **Crimper Installation** Always up to date crimp specs available though cell phone app.





Local inventory helps provide excellent customer service.



Our mobile truck provides on-site service.

Unmatched Reliability

- Founded in 1983, you can depend on our long history of financial stability. We are here for the long haul.
- We have serious hose expertise – 42 MWH employees have over 10 years of hose experience.
- Training content and records are managed according to API and NAHAD standards. We can train, certify, and manage records of our people and your people. 
- Employees are trained to API and NAHAD Hose Assembly Guidelines. All managers, salespeople, and hose assemblers are required to study and pass exams to be certified in each area. This helps stay current in product knowledge and industry standards which pay off in understanding customers needs.
- We have a Learning Management System to manage training content and certifications of our people and your people. 
- We have an insurance policy to cover accidents in the field.
- Throughout the year we perform internal quality audits and spot audits as part of our quality management program. Our Oklahoma City headquarters has a Lean/Six Sigma Black Belt on staff that leads continuous improvement initiatives.
- Inspector double checks every order before it leaves.



Experience and Know-How



Testing and Quality Driven Culture

- All locations have a test bench capable of testing hydraulic and industrial assemblies.
- We already do, or can do upon request, these tests:
 - Rupture test
 - Pull test
 - Chemically compatibility test
 - Flow rate test
 - Impulse test
 - Abrasion test
 - Salt spray test
 - Proof test/Design Test
 - Chemical composition test (metals)
 - Hardness test (metals)
 - Radiography (x-ray)
 - Phased array test (ultrasound)
 - Durometer test (rubber)
 - All rotary hose assemblies are proof tested per API requirements. All layflat hose assemblies are also proof tested
- Mobile Testing available – saves transportation costs.
- Safety Assessments – we stress safety awareness and compliance with safety audits and frequent spot checks.
- The Quality Department strives to have the best assembly procedures and tests these procedures on our in-house life cycle test machine before implementing changes at all locations.
- Demo Days – come to our 425,000 square foot corporate headquarters in Oklahoma City for a lunch and let us showcase our products. This involves a tour of our facility and typically a test of our products most relevant to you.



Our mobile testing unit can recertify hoses on-site



Industrial Hose Rupture Test



Custom Expansion Joints, Metal Hose, Rotary and Choke & Kill Assemblies

In-House Capabilities

- Our in-house machine shop uses the latest in CNC technology to fabricate fittings for development, emergency, or custom product development.
- In-house testing includes rupture tests, impulse tests, chemical composition test, and phased array ultrasound tests.
- In-house certified welders
- In-house X-Ray results can be sent digitally.
- In-house Spectrometer can test the chemical composition of any fitting.

Convenient Apps and Online Services

- We can provide 3D CAD Drawing Support through our website or app upon request.
- Literature for the engineer – our interactive catalog is designed to provide the most up-to-date info and links with our phone app to access videos, spec sheets, calculators, assembly instructions, and more.
- Tracking System – to assist you in proper maintenance and inspection and easy reordering of your hoses.
- Tracking System – Tracking System with Electronic Databook access (Spring 2015).
- iPhone and Android apps.
- Place orders via app or website (Spring 2015).
- Print bin labels (Spring 2015).



Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings



- Why Midwest Hose?
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Layflat Hose vs. Aluminum Pipe for Fracking Operators

Use of flexible layflat hoses reduces transport, deployment treatment and disposal costs. High flexibility and kink resistance allows natural ground contours to be followed without putting stress on the hose and eliminates expensive path-cutting work.

Aluminum pipe has 176 connections per mile, versus only eight–660 foot connections of layflat hose. This yields reduced labor costs and equipment costs. And lower pressure loss results in far more efficient pumping.

Layflat hose is the choice of fracking operators worldwide. It provides superior performance and reduces operation costs. Its coilable construction improves handling, speeds deployment and reduces both transportation and storage costs.

One-Stop Shop

Midwest Hose is a trusted name in water transfer products with hundreds of miles of layflat hose in service.

We are your one-stop shop for your water transfer needs. We produce our own layflat fittings, reels, and deployment system and have the largest hose inventory in North America. We're a great partner- we provide the same excellent customer service and availability perfected in providing our other hose lines.

Why We Test

We proof test all layflat assemblies ourselves because we are dedicated to providing a safe, reliable, and cost effective product. We take a great deal of pride in promising that only the highest of quality product leaves through our doors.

Fitting Inventory

We stock a wide variety of hose fittings to fit our customers' needs. Midwest Hose & Specialty is proud to manufacture both grooved and Storz fitting assemblies, right here in the U.S.A.

Purchasing Options

Purchase outright or Lease-Purchase contracts available.

Through-the-Weave vs. 3-Ply Layflat Hose

There are many layflat hoses on the market, and as one of the largest suppliers in North America, Midwest Hose offers through-the-weave urethane layflat hose, as we believe it represents the best value for our customers. Compared with hoses made from a blend of nitrile rubber and PVC, urethane hose offers 5X the abrasion resistance, less elongation, and far superior puncture resistance.

Polyurethane (PU) hose, is manufactured a couple different ways: "three-ply" and "through-the-weave." 3-ply hose is relatively labor intensive, whereas a long tube of urethane is glued over a woven polyester hose jacket. Then it is turned inside-out, and an outer PU cover is glued to the other side of the jacket. The final step is to fill the hose with steam, which cures the glue and creates the adhesion between the various layers. It's important to note that the outer layer of urethane is pin-pricked with thousands of small holes to allow gases to escape during the steam curing process.

Through-the-weave layflat hose also begins with a woven polyester hose jacket. At the end of a plastics extruder is specialized tooling, through which the jacket is penetrated and coated with hot, molten thermoplastic polyurethane (TPU). The urethane, in liquid form at such a high temperature, is literally forced through all the gaps in the weave of the hose jacket. The hose exits the die and begins to cool immediately. Urethane completely encapsulates the woven jacket, and provides a watertight hose wall as well as incredibly tough protection for the hose jacket. The hose jacket, in turn, provides all the pressure capability for the hose, as well as limiting elongation and expansion. Once the hose is cooled it is fully formed, then coiled on a reel and ready to be tested. This through-the-weave method is a more difficult manufacturing process than 3-ply, but well worth the extra difficulty as it results in a much stronger final product.

For a brief time, Midwest Hose sold 3-ply layflat and we are quite familiar with its advantages and disadvantages. We've chosen to supply our customers a through-the-weave layflat product, as we believe modern through-the-weave construction represents the best design in today's large diameter layflat hose. 3-ply hose technology is adapted from the fire hose industry, a manufacturing technology that has been around for at least 140 years. Much like cars have replaced the horse and buggy in moving people around these days, modern through-the-weave hoses, specifically ones made from thermoplastic urethane, are the best way to move large amounts of water.

Midwest Hose & Specialty's layflat hose uses no glues or adhesives, which prematurely fail when exposed to moisture, heat, UV exposure, repeated flexing, or dry out naturally over longer periods of time. Our layflat hose is free of pinholes and the cover will not delaminate. Rather than sit on top of the woven polyester, our TPU is an integral part of the hose, working in concert with the hose jacket. Our hose will not "snake" along the ground due to excessive elongation.

Midwest Hose & Specialty supplies a tough, durable hose that is guaranteed for 5 years. We also offer a deployment system and several types of fittings made in the U.S.A. Along with a huge inventory and unbeatable service, our goal is to deliver the best overall hose value in the market.

 <p>Layflat Hose Hydrofracking Diagram</p>	 <p>Layflat Purchasing Questionnaire</p>	 <p>Layflat Example Quotation</p>	 <p>Layflat Handling & Service Instructions</p>	 <p>IMR Program Inspection, Maintenance, and Recertification</p>	 <p>Layflat RGA Procedure and Warranty</p>	 <p>Helpful Layflat Calculations</p>
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Over 80 miles in stock at all times

Reels

- Stands upright by itself – round reels need a cradle
- More practical – one piece instead of two (no stand)
- Compact design saves transportation cost – approximately 24 reels for 8", 20-22 reels for 10", and 16-18 reels for 12" fit on a 53 foot flatbed trailer (weight, not space, is biggest factor)
- Fork pockets make loading/unloading on trailer easier
- Round center has room for fitting and drive shaft
- 45° edges to prevent knicks when retrieving or deploying
- Reel weight loaded with 8" 1,640 lbs

10" 1,997 lbs

12" 2,238 lbs



Deployment System *Patent Pending*

SPECSHEET ORDER

- We have an organized work force and short lead times
- Coil and deploy driving forward. Can deploy one 660 foot length in less than a minute consistently (level ground)
- Not necessary to drive over the hose deploying, which prevents damage if a rock is underneath the hose.
- Direct Drive Chain System for coiling works directly from the hydraulics of a skytrack. Minimum 8,000 lb skytrack
- Works in rain, sleet, or snow – not reliant on a wheel driven system with tires
- Pin system locks skytrack's forks to deployer for operation in hills and ditches
- Manual brake for deploying
- Detachable gate, squeezes hose and keeps hose in line with reel on coiling
- Expanded metal panels protects workers while in operation
- Labor Efficient – deploy or retrieve several miles of hose per hour with a crew of 2 (most need at least 3)
- Most Replacement parts available at local hardware stores for minimal downtime
- We have a Learning Management System to manage training content and certifications of your people upon request



Deployment System Video



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings



Made by Midwest Hose in the USA

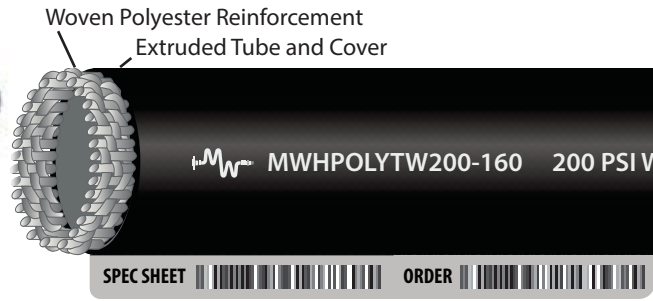
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<ul style="list-style-type: none"> • Cast Aluminum A356-T6 • Machined with knurled texture to thoroughly engage hose between stem and clamp • Anodized for abrasion/corrosion 		<ul style="list-style-type: none"> • Cast Aluminum A356-T6 • Machined with knurled texture to thoroughly engage hose between stem and clamp • Anodized for abrasion/corrosion • Safety lock avoids accidental uncoupling • Gasket in stem for leak-tight seal 		<ul style="list-style-type: none"> • Grooved or Storz Stem • Cast Aluminum A356-T6 • Anodized for abrasion/corrosion • SS bolts for longevity • Lightweight, rounded 						
 <p>LAYGST Grooved Stem Field Attachable</p>		 <p>LAYST2SET Storz Stem Field Attachable</p>		 <p>LAYGHC Clamp Field Attachable</p>						
<p>Grooved Also Bought</p> 		 <p>LAYGCP Grooved Clamps</p>	 <p>LAYGSKT Replacement Gaskets for Grooved Clamp</p>	 <p>LAYG45 Grooved 45°</p>	 <p>LAYGTEE Grooved Tee</p>	 <p>LAYGY Grooved Y, Parallel Y Lateral Y</p>				
 <p>LAYGCR Grooved Cross</p>		 <p>LAYGFL150 Grooved x Class 150 Flange</p>		<p>Storz Also Bought</p> 		<p>For opening/closing Storz Fitting</p>  <p>LAYSTZHND Storz Bars 7/8" ID</p>	 <p>LAYSTZQC Replacement Storz Quick Connect</p>	 <p>LAYST2ST Replacement Storz Stem</p>		
<p>Buna or Viton</p>  <p>LAYSTZG Replacement Gasket Storz Stem</p>		 <p>LAYSTZ Storz 90°, 45°, 22.5° Elbows</p>		 <p>LAYSTZFL150 Storz x Class 150 Flange</p>		<p>General Also Bought</p> 		 <p>LAYGME Mender</p>	 <p>LAYFMT Flow Meters</p>	
 <p>LAYPIG Pigging Products</p>		<p>Stops flow to repair hose w/o losing water</p>  <p>LAYHRT Layflat Hose Restrictor</p>		 <p>LAYRCR Road Crossings</p>		 <p>LAYMFD Manifolds</p>		 <p>LAYMFDTRL Manifold to Manifold Trailers</p>		 <p>SPLITTER Grooved/Storz Splitter Valves</p>
 <p>LAYSTR Strainers</p>		 <p>LAYCCA Candy Canes</p>		 <p>LAYTWM Torque Wrenches and Meters</p>		 <p>LAYCAM Camlock Adapters for Layflat sizes</p>		 <p>LAYCOAT Coating handles corrosion better than SS. Any color.</p>		 <p>Tracking & Vault Electronic Database</p>



TPU Layflat Hose

Designed for produced water/ fresh water transfer. Typically used for hydraulic fracture water transfer, to replace damaged hydrant lines, or to replace a broken water main. Manufactured with NSF standard 61 approved materials for use with potable water.



Part Number MWHPOLYTW200-XXX

ID	Wall Thickness	Max WP	Elongation	Expansion	Weight	Reel Length
inch	inch	psi	at WP	at WP	lbs./660 ft.	feet
4	0.157	250	1.0%	3.4%	667	660
6	0.161		1.0%	3.2%	1063	
8	0.165	200	0.7%	3.0%	1419	
10	0.165		0.5%	2.8%	1894	
12	0.196	150	0.5%	2.6%	2462	

TEST DOCUMENTATION



All assemblies are proof tested at working pressure in the USA. We take a great deal of pride in promising that only the highest quality product leaves through our doors.

Construction Polyurethane Extruded Through the Weave and a Circular Polyester Woven Reinforcement. No use of glues or adhesives.

Safety Factor Minimum 2.25 to 1

Lining Properties

Ultimate Tensile Strength no less than 1200 psi

Ultimate Elongation when tested to UL-19 guidelines a small dumbbell sample of lining elongates a minimum of 400%

Resistance

Abrasion 25mm³ on DIN 53516/ISO4649 testing, up to 5 times more resistant and 50% more puncture resistant than Nitrile/PVC

Cold Remains flexible in as low as -40° F conditions

Ozone No cracking in lining or cover when tested to ASTM D518 Procedure B (100 pphm/118°F/70 hours)

Chemical Resistant to most chemicals and petroleum products Custom hose color and branding available on big volume orders

Warflex Through the Weave

A more economical alternative to our polyurethane layflat hose. Warflex is reinforced with high-tenacity polyester yarn and coated through the weave with a 70% nitrile rubber / 30% PVC blend for good chemical resistance and excellent flexibility. Designed for less rugged ground environments, Warflex will elongate approximately 6-7% more than hoses made from through-the-weave construction.



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Licenses, Guidelines, etc.

Scan below to see the latest version of our licenses, guidelines, and more.

<p>API 7K-0060 License FSL 0, 1 and 2</p>	<p>Rotary Purchasing Questionnaire</p>	<p>Rotary Example Quotation</p>
<p>Rotary Handling and Service Instructions</p>	<p>IMR Program Inspection, Maintenance, and Recertification</p>	<p>Rotary RGA Procedure and Warranty</p>
<p>Rotary Hose MSDS</p>	<p>Couplings material meets NACE MR 01-75/ISO 15156 latest edition</p>	<p>H2S Guidelines for Rotary Hose Program</p>
<p>Natural Gas Guidelines for Rotary Hose Program</p>	<p>Land Drilling Rig Diagram w/ Recommended Products</p>	<p>Offshore Drilling Rig Diagram w/ Recommended Products</p>
<p>Rig Machinery Diagram</p>	<p>Oilfield Glossary</p>	

Flow Rates

To maximize the useful life of rotary hoses and reduce tube failure velocity, fluid velocity is limited to a maximum of 30 fps (feet per second). Up to 45 fps can be used but a shorter lifespan is expected and this type of service is not under warranty.

$$Q = 2.4480 \cdot d^2 \cdot v$$

Q Flow Rate (gpm)

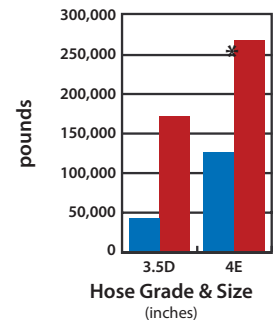
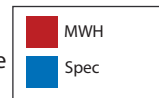
v Velocity (fps)

d Inside Diameter of hose (inch)

Flow Rate (gpm)	Hose Inside Diameter (inch)				
	2	2.5	3	3.5	4
100	10.2	6.5	4.5	3.3	2.6
150	15.3	9.8	6.8	5.0	3.8
200	20.4	13.1	9.1	6.7	5.1
250	25.5	16.3	11.3	8.3	6.4
300	30.6	19.6	13.6	10.0	7.7
350		22.9	15.9	11.7	8.9
400		26.1	18.2	13.3	10.2
450		29.4	20.4	15.0	11.5
500		32.7	22.7	16.7	12.8
550			25.0	18.3	14.0
600			27.2	20.0	15.3
650			29.5	21.7	16.6
700			31.8	23.3	17.9
750				25.0	19.1
800				26.7	20.4
850				28.3	21.7
900				30.0	23.0
950					24.3
1,000					25.5
1,050					26.8
1,100					28.1
1,150					29.4
1,200					30.6
1,250					

Pull Tests

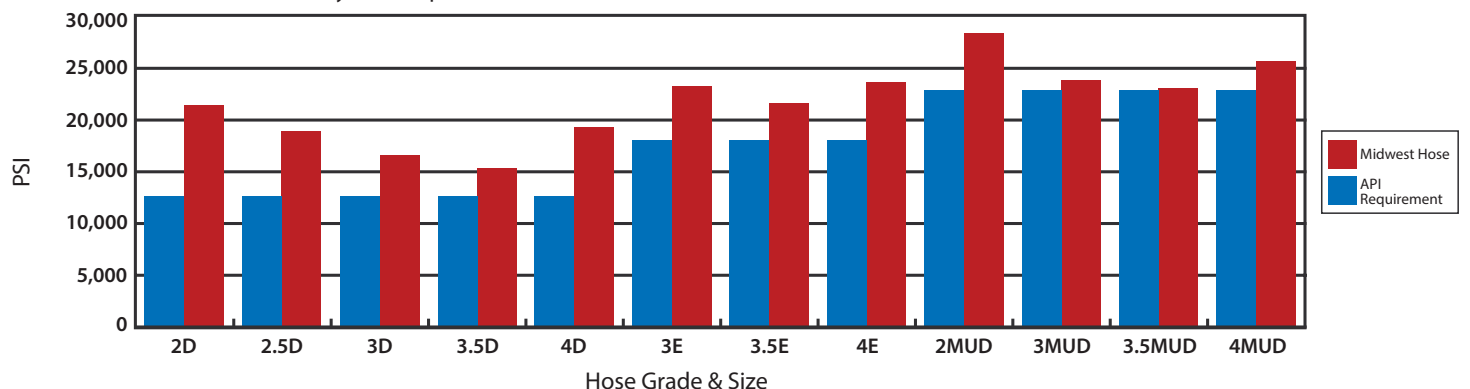
MWH swaged one piece integral design can be stronger than some of the pipework to which it is connected and will rarely be the "weak point" of a system.

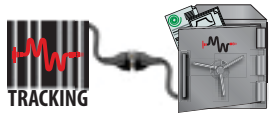


*Test stopped at 269,000 in fear of breaking equipment.

Rupture Tests

Our API 7K Rotary Hose rupture tests exceed standards as shown below.





Tracking & Vault Electronic Databook

Our tracking system used on hydraulic hose assemblies will be available for our rotary hose program in Spring 2015.

Tracking Allows easy reordering and instant access to hose assembly information via our phone app.

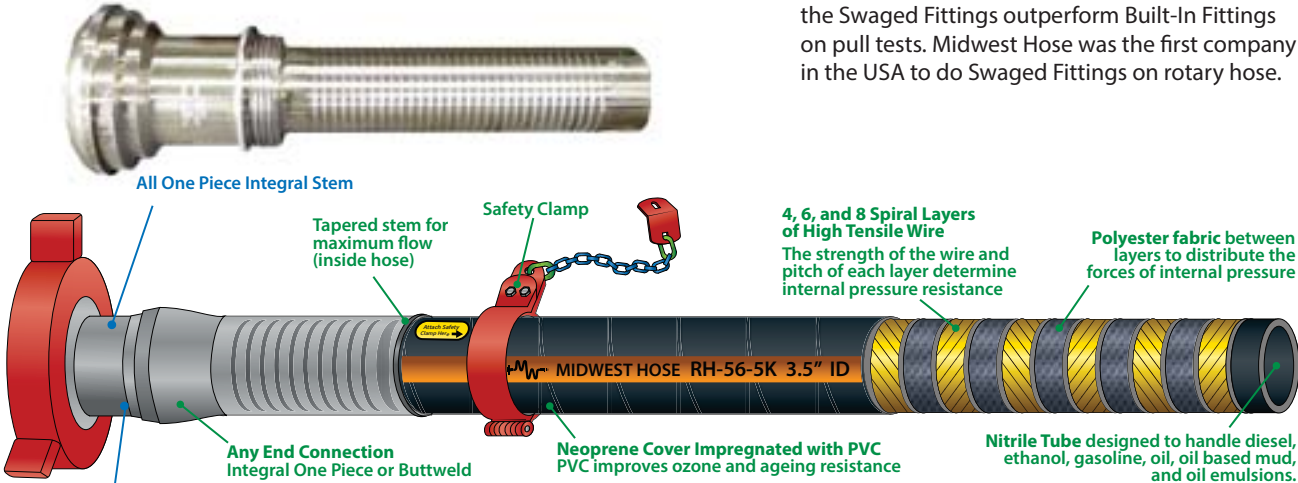
Vault Electronic Databook Need a test cert in the middle of the night? Lost the paper databook delivered with the hose? Access this information easily, electronically.

Barcode tags are standard and GPS tags are available for an extra cost. Scan below to see example information available with each rotary assembly.

 Tracking & Vault Introduction	 Test Graph, Test Certificate, Certificate of Conformance	 Pictures prior to shipping and packing list	 Weld Stress Relief Graph and NDT Certificate
 For non-integrals Weld Instructions and Welder Certificates	 Stem MTR	 Ferrule MTR	 Hammer Union Nut MTR
 Lifter Pull Test Certificate	 Safety Clamp Pull Test Certificate	 EXTRA COST Certified 3rd party witness such as ABS, DIV, DNV, & LR	 EXTRA COST Endoscope Video

Integral Design Fittings *Patent Pending*

Our integral design allows us to have the shortest lead times in the industry and eliminates a leak point and pipe dope.



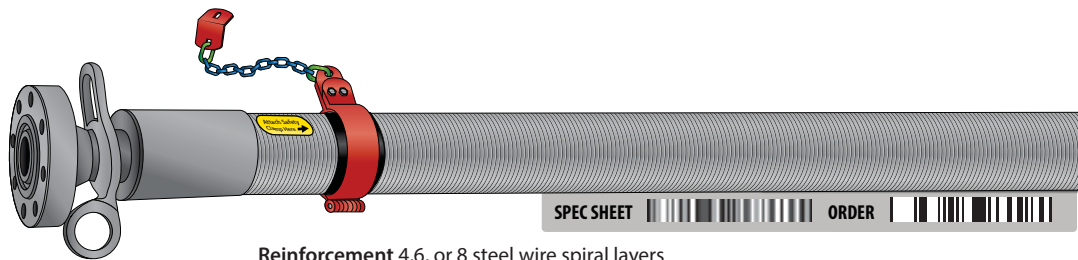
Rotary End Connections

 API Threads	 Fig 602	 Fig 1002	 Fig 1003	 Fig 1502
 Fig 2202	 XXH 3K Flange	 XXH 5K Flange	 XXH 10K Flange	 Grayloc
				 Unibolt

- Why Midwest Hose?
- Flatlay Hose Program
- Rotary Hose Program**
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
 - Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
 - Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program**
- Info, Fittings
- Choke & Kill, BOP
- Rotary
- Hydraulic Hose Program
- Rubber
- Thermoplastic
- Teflon
- Crimp Fittings
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- Quick Couplings
- Steel Adapters
- Brass Fittings



Tube Nitrile

Reinforcement 4,6, or 8 steel wire spiral layers

Cover Stainless steel armor 0.144" wall, protects against impacts, wear, handling, etc.

Fire Protection 1500° F rated thermal blanket, non-flammable, non-conductive

Choke & Kill Armor	ID	OD	Max WP	Test Pressure	Bend Radius	Weight		
	inch	inch	psi	psi	inch	lbs./ft.	coupling	
Designed for general choke and kill service. Used as a flexible connection (instead of pipe) to the choke manifold.	CK-32 Armor	2	3.25	5,000	10,000	13	11.1	55
	CK-48 Armor	3	6.5			26	20.8	117
	CK-56 Armor	3-1/2	7			28	23.1	151
	CK-64 Armor	4	8			32	26.3	168
	CK-3210K Armor	2	3.25	10,000	15,000	13	14.9	58
	CK-4810K Armor	3	6.5			26	26.0	126
	CK-5610K Armor	3-1/2	7			28	29.0	171
	CK-6410K Armor	4	8			32	32.8	188

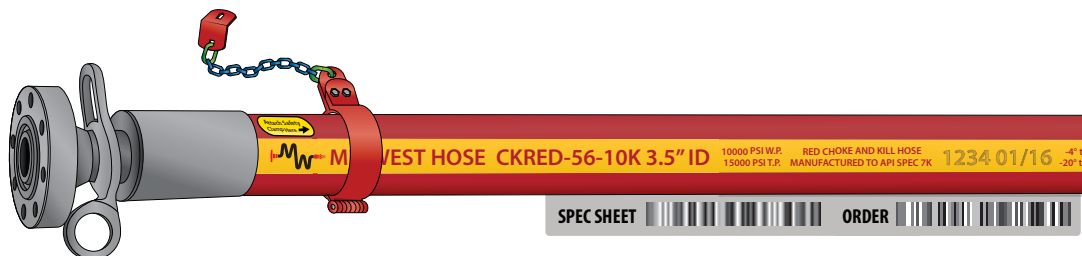
Max Length 150 feet

Min Burst Requirement 12,500 psi on 5K, 22,500 psi on 10K

Inspected

Proof tested to test pressure

TEST DOCUMENTATION



Tube Special Nitrile Blend

Reinforcement 4,6, or 8 steel wire spiral layers

Cover Synthetic rubber with impregnated fiberglass. Spiral wrap recommended for abrasion resistance. Fire resistant cover of Red Choke & Kill is less abrasion resistant than rotary hose.

Choke & Kill Red	ID	OD	Max WP	Test Pressure	Bend Radius at WP	Bend Radius in Storage	Weight		
	inch	inch	psi	psi	inch	inch	lbs./ft.	coupling	
Designed for burner, test, acidizing, cementing, fracking, high pressure jetting, and H2S operations. Used as a flexible connection (instead of pipe) between the riser and manifold or around the ball joint of offshore drillings rigs.	CKRED5K-32	2	3.75	5,000	10,000	36	30	9.76	55
	CKRED5K-48	3	4.97			36		14.4	117
	CKRED5K-56	3-1/2	5.48			54		16.1	151
	CKRED5K-64	4	6.35			60		24.7	168
	CKRED10K-32	2	4.02	10,000	15,000	48	30	13.53	58
	CKRED10K-48	3	5.39			48		21.8	126
	CKRED10K-56	3-1/2	5.90			64		23.9	171
	CKRED10K-64	4	6.82			72		26.4	188

Certifications couplings material meets NACE MR 01-75/ISO 15156 latest edition

Max Length 150 feet

Min Burst Requirement 12,500 psi on 5K, 22,500 psi on 10K

Inspected

Proof tested to test pressure

TEST DOCUMENTATION



Fire Rating Can handle flame temperature 1,100° C for 5 minutes (API 16C requirements)



Hinged Safety Clamp & Chain



Spiral Wrap



Lifting Collar



Ring Joint Gaskets Type BX



Safety Clamp Sticker





Blowout Preventer Hose is ideally suited for any high pressure hydraulic applications where there is a need for hoses to be Fire Rated and capable of working in extreme heat in the event of an emergency.

Applications

Blowout Preventer - between well control equipment and control system

Offshore - Blowout Preventer Valves

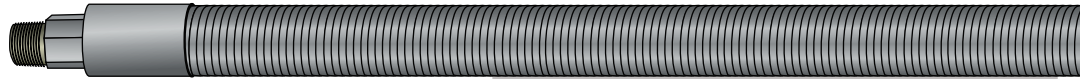
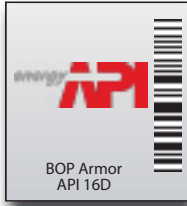
Hydraulic Systems - with petroleum or water/glycol based fluids and for fuel and lubricating oils

Industrial - steel mills, foundries, forging shops, and other volatile environments

Refineries - Critical plant control systems

Mining - Fiery mines and areas with low flash point ignition risk

Marine - Tanker pump rooms and ring main systems



BOP Armor *better against abrasion*

Tube Synthetic rubber **Cover** Stainless steel armor, .08" armor wall, protects against impacts, wear, handling, etc.

Reinforcement High tensile steel wire spiral layers

Fire Protection 1500° F rated thermal blanket, non-flammable, non-conductive



BOP Red *more flexible, lighter weight*

Tube Synthetic rubber **Cover** Fire resistant synthetic rubber impregnated with fiberglass

Reinforcement High tensile steel wire spiral layers

BOP	ID inch	OD inch	Max WP psi	Min BP psi	Bend Radius at WP inch	Weight lbs./ft.	Fitting Series
ArmorBOP3K-08	1/2		3,000	12,000	7.0	1.04	2WB
ArmorBOP3K-16	1				7.0	1.87	
ArmorBOP5K-04	1/4				6.0	0.75	
ArmorBOP5K-06	3/8		5,000	20,000	6.0	0.86	4WB
ArmorBOP5K-08	1/2				7.0	1.12	
ArmorBOP5K-12	3/4				7.0	1.84	
ArmorBOP5K-16	1	2.06			7.0	2.37	6WB
ArmorBOP5K-20	1-1/4				10.0	2.8	
ArmorBOP5K-24	1-1/2				10.0	4.41	
ArmorBOP5K-32	2	3.75			13.0	5.84	
MWHFIREWALL3K-08	1/2		3,000	12,000	7.8	0.76	2WB
MWHFIREWALL3K-16	1				13.0	1.51	
MWHFIREWALL5K-04	1/4		5,000	20,000	4.3	0.67	4WB
MWHFIREWALL5K-06	3/8				5.5	0.71	
MWHFIREWALL5K-08	1/2				9.8	1.09	
MWHFIREWALL5K-12	3/4				13.0	1.55	6WB
MWHFIREWALL5K-16	1	1.77			14.8	2.07	
MWHFIREWALL5K-20	1-1/4				18.1	3.49	
MWHFIREWALL5K-24	1-1/2		19.7	4.46			
MWHFIREWALL5K-32	2	3.09			29.9	6.65	

Safety Factor 4 to 1
Proof tested to 1.5 x WP

Popular with our API crimp fitting for its larger hex and longer threads for easier installation of hammer unions.

Approvals (both require the hose to handle 1,300° F for 5 minutes)
API 16D Control Systems for Drilling Well Control Equipment
Lloyd's Register's Fire Tests for Flexible Hoses on Offshore Installations, OD 1000/499

TEST DOCUMENTATION



Fire Rating Can handle flame temperature 1,300° F for 5 minutes (API 16D requirements)

- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
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- Hydraulic Hose Program
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 - Teflon
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 - Crimp Machines
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- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings



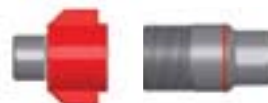
VEP (API 16D)
Quick Couplings



Nylon Hose
Halter



API Crimp Fitting



Wing 5000 (API 16D)
BOP QCs



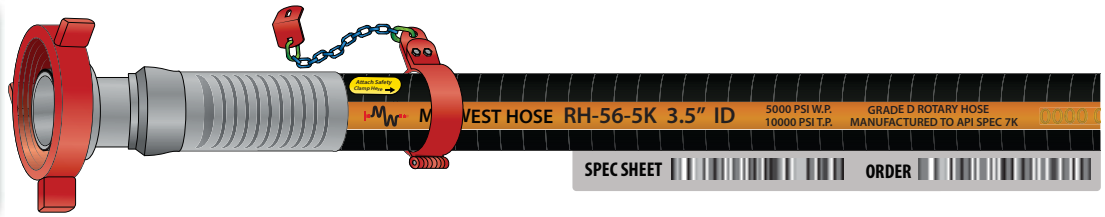
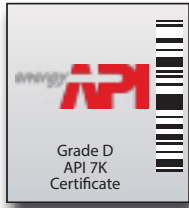
Fig 1502
Integral Hose End



Rotary Hose Program



- Why Midwest Hose?
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Tube Nitrile
Reinforcement 4 or 6 steel wire spiral layers
Cover Neoprene/PVC (PVC improves ozone and ageing resistance)

Grade D	ID	OD	Max WP	Test Pressure	Bend Radius at WP	Bend Radius in Storage	Weight		
	inch	inch	psi	psi	inch	inch	lbs./ft.	coupling	
Designed for mud delivery, mud jumper, motion compensator, decoking, and water injection operations on a drilling rig. Used as a flexible connection (instead of pipe) between the standpipe and swivel (rotary) or between the pump and standpipe (vibrator) for pumping mud in drilling and exploration work.	RH-32-5K	2	3.76	5,000	10,000	30	36	9.5	27
	RH-40-5K	2-1/2	4.36				36	11.4	40
	RH-48-5K	3	4.96				48	13.6	60
	RH-56-5K	3-1/2	5.46				54	15.5	70
	RH-64-5K	4	6.34				54	24.4	85
RH-80-5K	Under Development								
RH-96-5K	Under Development								

Designed for mud delivery, mud jumper, motion compensator, decoking, and water injection operations on a drilling rig. Used as a flexible connection (instead of pipe) between the standpipe and swivel (rotary) or between the pump and standpipe (vibrator) for pumping mud in drilling and exploration work.

Certifications API 7K-0060
 Max Length 150 feet
 Min Burst Requirement 12,500 psi
 Inspected
 Proof tested to API requirements



Tube Nitrile
Reinforcement 6 or 8 steel wire spiral layers
Cover Neoprene/PVC (PVC improves ozone and ageing resistance)

Grade E	ID	OD	Max WP	Test Pressure	Bend Radius at WP	Bend Radius in Storage	Weight		
	inch	inch	psi	psi	inch	inch	lbs./ft.	coupling	
Designed for mud delivery, mud jumper, motion compensator, decoking and water injection operations on a drilling rig. Used as a flexible connection (instead of pipe) between the standpipe and swivel (rotary) or between the pump and standpipe (vibrator) for pumping mud in drilling and exploration work. Can handle higher flow rates than Grade D.	RH-48-7.5K	3	5.25	7,500	15,000	30	48	18.7	60
	RH-56-7.5K	3-1/2	5.75				54	21.0	70
	RH-64-7.5K	4	6.63				60	30.4	85

Designed for mud delivery, mud jumper, motion compensator, decoking and water injection operations on a drilling rig. Used as a flexible connection (instead of pipe) between the standpipe and swivel (rotary) or between the pump and standpipe (vibrator) for pumping mud in drilling and exploration work. Can handle higher flow rates than Grade D.

Certifications API 7K-0060
 Max Length 150 feet
 Min Burst Requirement 18,500 psi
 Inspected
 Proof tested to API requirements



Swivel Joints



Drill Collar and Drill Pipe Dope

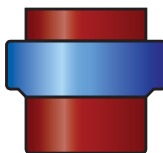


Fig 1502 Threaded Union

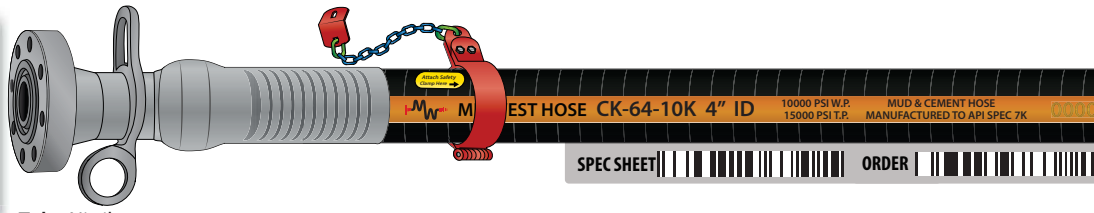


Lifting Sling



Pup Joint



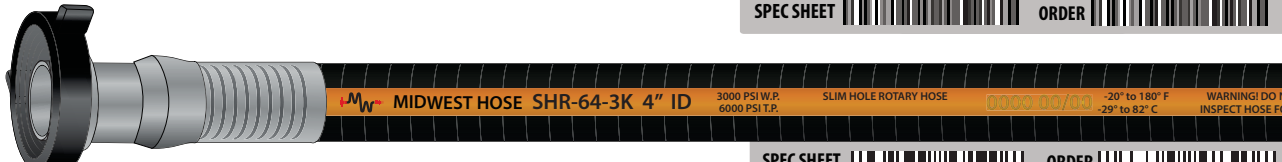


Tube Nitrile
 Reinforcement 6 or 8 steel wire spiral layers
 Cover Neoprene/PVC (PVC improves ozone and ageing resistance)

Cement	ID	OD	Max WP	Test Pressure	Bend Radius at WP	Bend Radius in Storage	Weight	
	inch	inch	psi	psi	inch	inch	lbs./ft.	coupling
Designed for cementing service or acidizing service on a drilling rig. Used as a flexible connection (instead of pipe) to connect the cementing pump manifold and cementing head.	CK-32-5K	2	5,000	10,000	36	30	9.5	27
	CK-48-5K	3			36		13.6	60
	CK-56-5K	3-1/2			48		15.5	70
	CK-64-5K	4			54		24.4	85
CK-32-10K	2	4.02	10,000	15,000	48		13.3	27
CK-48-10K	3	5.38			60		18.7	60
CK-56-10K	3-1/2	5.88			64		21.0	70
CK-64-10K	4	6.61			72		30.4	85

Certifications API 7K-0060
 Max Length 150 feet
 Min Burst Requirement
 12,500 psi on 5K
 22,500 psi on 10K
 Inspected
 Proof tested to API requirements

TEST DOCUMENTATION



Tube Nitrile
 Reinforcement high tensile wires
 Cover Neoprene impregnated with PVC

Slim Hole	ID	OD	Max WP	Min BP	Bend Radius at WP	Bend Radius in Storage	Weight	
	inch	inch	psi	psi	inch	inch	lbs./ft.	coupling
Designed to operate between 2,000 and 3,000 psi for water well, core drill, blast, or shot hole operations on portable drilling rigs, work-over rigs, slim hole and seismograph rigs.	SHR-40-2K	2-1/2	2,000	4,000	30.0	23	3.4	11.2
	SHR-48-2K	3			43.5	30	4.5	17.8
	SHRAIR-64-2K	4			48.0	38	6.0	21.6
	SHRAIR-48-3K	3	3,000	6,000	43.5	30	4.6	17.8
	SHR-64-3K	4			48.0	38	14.9	50

Max Length 150 feet
 Inspected
 Proof tested to 1.5 x WP

TEST DOCUMENTATION



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
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- Crimp Machines
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- Valves
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- Steel Adapters
- Brass Fittings



Fig 602 Threaded Union



XXH Oil Country Bull Plug



Banded Belt



Mud Gate Valve



Pull Test Video





- Why Midwest Hose?
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 Hydraulic Hose Purchasing Questionnaire (STAMP)	 SAE J516 and J343 That Governs Hydraulic Hose	 SAE Wave Form Requirement	 MSHA Requirements (Flame Resistant)	3Q2014 LOT 65604 Hoses Traceable by Date Code	85,000 impulse cycles daily In-House Life Cycle Testing
 Test Bench can test any hydraulic hose upon request	 Crimp Fitting Clocking Guide	 Hydraulic Hose Routing and Installation Guide and Key Concepts	 Hydraulic Hose MSDS	 Hydraulic Hose Assembly RGA Procedure and Warranty	 Crimp Specs Utility

Midwest Hose Hydraulic Hose Program Compared to Competitors

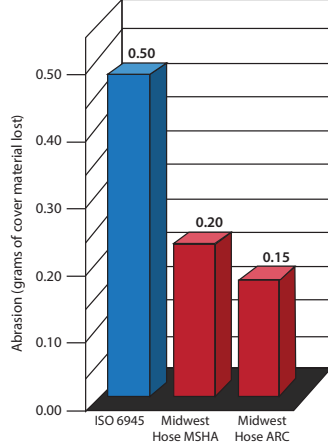
- All hydraulic hose is made according to our tolerances– I.D., O.D., braid O.D., gauge of the wire used in the hose and the lead angle (how long the revolution of the wire in the hose is), and maximum length change at working pressure. Any information not shown in the catalog is confidential.
- All hoses exceed SAE impulse cycle requirements.
- All hoses and crimp fittings are produced from ISO 9001 factories.
- In-house impulse testing available. Impulse test results available upon request. We can do a test comparing our hose vs a competitor's hose upon request too.
- Safety factor on all hydraulic hose is 4 to 1.

Section	Reinforcement	Max Temp	Hose	Notes	Page	
Rubber	Braided	212° F	1SN	#2 selling braided hose, lower WP than 2SN	18	
			R17	Tighter bend radius, constant 3,045 psi on all sizes	18	
			2SN	#1 selling braided hose	19	
			2SNARC	2SN hose with higher abrasion resistance	19	
	Spiral	250° F	2SNAT	2SN hose with wider temperature range	22	
			R16	Slightly less WP than 2SN, tighter bend radius	19	
			R12	Superseded by 4SH but still used by some	20	
			4SH	#1 selling spiral hose	20	
	Braided	212° F	R13	5,000 psi WP on all sizes	21	
			R15	6,000 psi WP on all sizes	21	
			JACK	10,000 psi WP, available in 1/4", 3/8"	21	
			275° F	R5	Polyester braid covered hose	22
			300° F	R5AT	Polyester braid covered hose, wider temp range	22
Helical Wire	180° F	275° F	HO	Hot oiler hose	23	
		200° F	PW	Pressure washer hose	23	
Thermoplastic	Braided	160° F	R4	Suction and return line hose	23	
			JackTH	10,000 psi WP, available in 1/4", 3/8"	24	
			SWR2500	2,500 psi sewer cleaning hose	24	
	212° F	CNG5000	5,000 psi electrically conductive CNG hose	24		
		R7C/R7NC	Conductive or nonconductive, medium pressure	25		
-----	MICRO	Mini-hydraulic hose for diagnosis	25			
PTFE	Braided	450° F	NCOLLAPSE	Collapse proof up to 10,000 feet	25	
			R14	#1 selling PTFE hose, smooth bore	26	
			R14SC	Spiral convoluted tube, more flexible	26	
			R14PC	Parallel convoluted tube, most flexible	26	



Abrasion Resistance Exceeds ISO Standard

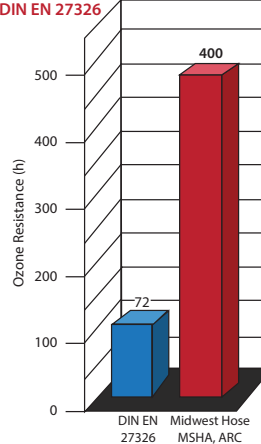
Less Abrasion Compared to ISO 6945



Abrasion caused by hoses rubbing against each other or surrounding surfaces is a common type of hose damage warranting replacement. The ISO 6945 test standard tests rubber hoses to determine abrasion resistance of the outer cover. During testing, an abrasive mechanical apparatus repeatedly rubs against the outer cover of a hose specimen until failure occurs. Quality is determined by arriving at a required minimum number of cycles at a specified force, and the amount of cover extraction is weighed.

Ozone Resistance Exceeds DIN EN Standard

More Ozone Resistance Compared to DIN EN 27326



Rubber hoses are naturally susceptible to cracking caused by exposure to ozone. When hoses are tested in accordance with DIN EN 27326, they must undergo a demanding combination of high ozone levels, high temperature and tight bends. More precisely, hoses are exposed simultaneously to 50 ppm (parts per hundred million) ozone, a temperature of 104° F and are held at minimum bend radius. After 72 hours in these conditions, tested hoses are inspected under two times magnification for cover cracking and deterioration, neither of which are allowed to be visibly present.

Working Pressure (PSI)

Hose	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-40
1SN		3,265		2,610	2,323	1,885	1,525	1,275	915	725	580	
R17		3,045		3,045	3,045	3,045	3,045	3,045				
R16		5,000		4,000	3,500	2,750	2,250	2,000	2,250			
ALL 2SN		5,800		4,800	4,000	3,625	3,100	2,400	1,815	1305	1,160	
R12					4,000		4,000	4,000	3,000	2,500	2,500	
4SH							6,095	5,515	5,000	4,200	3,625	
R13					5,000		5,000	5,000	5,000	5,000	5,000	
R15								6,000	6,000	6,000	6,000	
JACK		10,000		10,000								
R5 R5AT		3,000	3,000	2,250	2,000	1,750	1,500	800	625	500	350	350
HO										2,250		
PW		3,000		3,000	3,000							
R4							300	250	200	150	100	
JackTH		10,000		10,000								
SWR2500												
CNG5000		5,000		5,000			5,000	5,000				
R7C/R7NC		2,750	2,500	2,250	2,000		1,250	1,000				
NCOLLAPSE					5,000		5,000	5,000				
R14	3,000	3,000	3,000	2,500	2,000		1,200	1,000	800			
R14SC					1,500		1,200	1,050	650	580	500	
R14PC		1,300	1,000	940	870		650	435				

Bend Radius (Inches)

Hose	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-40
1SN		3.9		5.1	7.1	7.9	9.4	11.8	16.5	19.7	24.8	
R17		2.0		2.6	3.5	3.9	4.7	5.9				
R16		2.0		2.6	3.5	3.9	4.7	5.9	8.3			
ALL 2SN		3.9		5.1	7.1	7.9	9.4	11.8	16.5	19.7	24.8	
R12					7.0		9.5	12.0	16.5	20.0	25.0	
4SH							11.0	13.4	18.1	22.0	27.6	
R13										19.7	24.8	
R15									16.5	19.7	23.5	
JACK		3.9		5.1								
R5 R5AT		3.0	3.3	3.9	4.5	5.5	6.5	7.3	9.1	10.4	13.2	24.0
HO				5.1						19.7		
PW		3.9										
R4							2.25	3.00	3.75	4.50	6.00	
JackTH												
SWR2500							5	6				
CNG5000												
R7C/R7NC												
R14	2.0	2.0	3.0	4.0	5.2		7.7	9.0	16.0			
R14SC					3.0		3.5	4.0	4.5	4.5	5.5	
R14PC		1.2	1.6	2.0	2.3		2.8	3.2				

- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program**
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron,
 - Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill &
 - Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings



- Why Midwest Hose?
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SAE/DIN Rubber Hydraulic Hose

COMPATIBLE FLUID Mineral Oil
Hoses pigged and/or tested upon request.
Safety factor on all hydraulic hose is 4 to 1.



Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement One or two high tensile steel wire braids

SPEC SHEET **ORDER**

MWH1SN	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quantity	
									inch
Approvals SAE 100R1AT 1SN DIN 853 MSHA cover	MWH1SN-04	1/4	0.260 +/- .016	0.528 +/- .028	3,265	13,060	3.9	0.15	500
	MWH1SN-06	3/8	0.382 +/- .016	0.685 +/- .028	2,610	10,440	5.1	0.22	400
	MWH1SN-08	1/2	0.508 +/- .024	0.813 +/- .030	2,323	9,280	7.1	0.27	350
	MWH1SN-10	5/8	0.634 +/- .024	0.935 +/- .030	1,885	7,540	7.9	0.32	200
	MWH1SN-12	3/4	0.756 +/- .024	1.093 +/- .030	1,525	6,100	9.4	0.39	325
	MWH1SN-16	1	1.012 +/- .028	1.407 +/- .033	1,275	5,100	11.8	0.59	225
	MWH1SN-20	1-1/4	1.268 +/- .031	1.722 +/- .041	915	3,660	16.5	0.81	150 coil
	MWH1SN-24	1-1/2	1.516 +/- .031	2.000 +/- .051	725	2,900	19.7	1.00	150 coil
	MWH1SN-32	2	2.016 +/- .031	2.531 +/- .051	580	2,320	24.8	1.35	150 coil

SAE Impulse Test Requirement 150,000 cycles minimum at 125% WP and 212° F
Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION



Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement 1/4", 3/8" one steel wire braid, 1/2" and above has two braids

SPEC SHEET **ORDER**

MWHR17	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quantity
Approvals SAE 100R1AT 1SN DIN 853 MSHA cover	MWHR17-04	1/4	0.260 +/- .016	.0490 +/- .028	3,045	12,180	2WB or 2WC	600
	MWHR17-06	3/8	0.382 +/- .016	0.632 +/- .028				500
	MWHR17-08	1/2	0.508 +/- .024	0.813 +/- .030				350
	MWHR17-10	5/8	0.634 +/- .024	0.988 +/- .030				200
	MWHR17-12	3/4	0.756 +/- .024	1.132 +/- .061				300
	MWHR17-16	1	1.012 +/- .028	1.459 +/- .061				225

SAE Impulse Test Requirement 200,000 cycles minimum at 133% WP and 212° F
Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION



ISO-A
Quick Couplings



Nylon Hose
Sleeve



Wing Quick
Couplings



Whip Sock

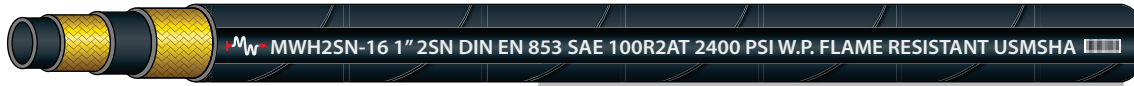


ISO-B
Quick Couplings





Hydraulic Hose Program



SPEC SHEET ORDER

higher abrasion resistance



SPEC SHEET ORDER

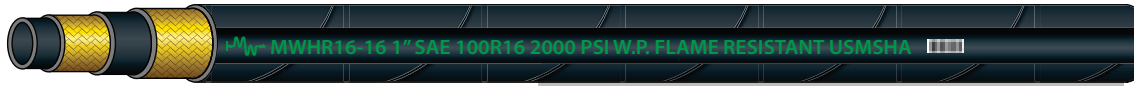
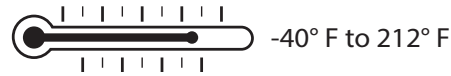
Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement Two high tensile steel wire braids

MWH2SN	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quantity
MWH2SN-04	1/4	0.260 +/- .016	0.594 +/- .024	5,800	23,200	3.9	2WB or 2WC	500
MWH2SN-06	3/8	0.382 +/- .016	0.750 +/- .026	4,800	19,200	5.1		400
MWH2SN-08	1/2	0.508 +/- .024	0.880 +/- .026	4,000	16,000	7.1		300
MWH2SN-10	5/8	0.634 +/- .024	0.992 +/- .028	3,625	14,500	7.9		200
MWH2SN-12	3/4	0.756 +/- .024	1.157 +/- .028	3,100	12,400	9.4		300
MWH2SN-16	1	1.012 +/- .028	1.488 +/- .043	2,400	9,600	11.8		200
MWH2SN-20	1-1/4	1.268 +/- .031	1.890 +/- .059	1,815	7,260	16.5		150 coil
MWH2SN-24	1-1/2	1.516 +/- .031	2.142 +/- .059	1,305	5,220	19.7		150 coil
MWH2SN-32	2	2.016 +/- .031	2.648 +/- .059	1,160	4,640	24.8		150 coil

Approvals
SAE 100R2AT
2SN DIN 853
MSHA cover

SAE Impulse Test Requirement 200,000 cycles minimum at 133% WP and 212° F
Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION



SPEC SHEET ORDER

Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement Two high tensile steel wire braids

MWHR16	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quantity
MWHR16-04	1/4	0.26 +/- .016	0.535 +/- .035	5,000	20,000	2.0	2WB or 2WC	500
MWHR16-06	3/8	0.382 +/- .016	0.695 +/- .045	4,000	16,000	2.6		450
MWHR16-08	1/2	0.508 +/- .024	0.831 +/- .045	3,500	14,000	3.5		350
MWHR16-10	5/8	0.634 +/- .024	0.961 +/- .028	2,750	11,000	3.9		200
MWHR16-12	3/4	0.756 +/- .024	1.114 +/- .028	2,250	9,000	4.7		325
MWHR16-16	1	1.012 +/- .028	1.398 +/- .043	2,000	8,000	5.9		225
MWHR16-20	1-1/4	1.268 +/- .031	1.685 +/- .059	2,250	9,000	8.3		150 coil

SAE Impulse Test Requirement 200,000 cycles minimum at 133% WP and 212° F
Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION



ISO 16028 Quick Couplings



VBA2FC6K Valve



Cushion Clamps



V Series Quick Couplings



Abrasion Shields (hot dog buns)



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
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 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
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- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

Hydraulic Hose Program



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
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- Hyd ACPV, Filter Carts
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- Brass Fittings



Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement four high tensile steel wire spirals

SPEC SHEET ORDER

MWHR12	ID		OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Coil Length	
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.			
Approvals SAE 100R12 R12 DIN EN 856 MSHA cover	MWHR12-08	1/2	0.508 +/- .024	0.937 +/- .031	4,000	16,000	7.0	4WB	200	
	MWHR12-12	3/4	0.756 +/- .024	1.209 +/- .031			9.5		0.77	200
	MWHR12-16	1	1.012 +/- .028	1.496 +/- .047	12.0	1.22	200			
	MWHR12-20	1-1/4	1.268 +/- .031	1.850 +/- .063	3,000	12,000	16.5		1.68	200
	MWHR12-24	1-1/2	1.516 +/- .031	2.104 +/- .061	2,500	10,000	20.0		1.95	200
MWHR12-32	2	2.016 +/- .031	2.620 +/- .063	25.0			2.74	200		

SAE Impulse Test Requirement 500,000 cycles minimum at 133% WP and 250° F
 Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION



Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement four high tensile steel wire spirals

SPEC SHEET ORDER

MWH4SH	ID		OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Coil Length	
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.			
Approvals 4SH DIN EN 856 MSHA cover	MWH4SH-12	3/4	0.756 +/- .024	1.268 +/- .031	6,095	24,380	11.0	4WB	200	
	MWH4SH-16	1	1.012 +/- .028	1.524 +/- .047	5,515	22,060	13.4		1.37	200
	MWH4SH-20	1-1/4	1.268 +/- .031	1.791 +/- .063	5,000	20,000	18.1		1.60	200
	MWH4SH-24	1-1/2	1.516 +/- .031	2.106 +/- .063	4,200	16,800	22.0		2.14	200
	MWH4SH-32	2	2.016 +/- .031	2.681 +/- .063	3,625	14,500	27.6		2.93	200

DIN EN 856 Impulse Test Requirement 400,000 cycles minimum at 133% WP and 212° F
 Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION




Aluminum Split Flange Caps



Ultraclean System



Whip Sock



VEP Quick Couplings



Threaded Plastic Caps





Hydraulic Hose Program



SPEC SHEET ORDER

Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement Four or six high tensile steel wire spirals

MWHR13	ID		OD		Max WP psi	Min BP psi	Bend Radius inch	Weight lbs./ft.	Fitting Series	Coil Length
	inch	Tolerance (in.)	Tolerance (in.)							
MWHR13-08	1/2	0.508 +/- .024	0.864 +/- .035		5,000	20,000	4.5	0.52	6WB	200
MWHR13-12	3/4	0.756 +/- .024	1.264 +/- .043				9.4	1.05		200
MWHR13-16	1	1.012 +/- .028	1.524 +/- .043				11.8	1.37		200
MWHR13-20	1-1/4	1.268 +/- .031	1.961 +/- .059				16.5	2.56		200
MWHR13-24	1-1/2	1.516 +/- .031	2.256 +/- .059				19.7	3.21		200
MWHR13-32	2	2.016 +/- .031	2.799 +/- .063				24.8	4.24		200

Approvals
 SAE 100R13
 R13 DIN EN 856
 MSHA cover

SAE Impulse Test Requirement 200,000 cycles minimum at 120% WP and 250° F
 Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION

1/2", 3" is not specified by SAE 100R13 but tested to same standards as other sizes.



SPEC SHEET ORDER

Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement Six high tensile steel wire spirals

MWHR15	ID		OD		Max WP psi	Min BP psi	Bend Radius inch	Weight lbs./ft.	Fitting Series	Normal Roll Length
	inch	Tolerance (in.)	Tolerance (in.)							
MWHR15-16	1	1.012 +/- .028	1.647 +/- .043		6,000	24,000	13.0	1.37	6WB	200
MWHR15-20	1 1/4	1.268 +/- .031	1.961 +/- .059				16.5	2.56		200
MWHR15-24	1 1/2	1.516 +/- .031	2.256 +/- .059				19.7	3.21		200
MWHR15-32	2	2.016 +/- .031	2.815 +/- .063				23.5	4.37		200

Approvals
 SAE 100R15
 MSHA cover

SAE Impulse Test Requirement 500,000 cycles minimum at 120% WP and 250° F
 Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION

2" is not specified by SAE 100R15 but tested to the same standards as other sizes.



SPEC SHEET ORDER

Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement Two high tensile steel wire braids

Jack Hose	ID		OD		Max WP psi	Min BP psi	Bend Radius inch	Weight lbs./ft.	Fitting Series	Normal Reel Quantity
	inch	Tolerance (in.)	Tolerance (in.)							
MWHJH-04	1/4	0.26 +/- .016	0.594 +/- .024		10,000	20,000	3.9	0.25	2WB	500
MWHJH-06	3/8	0.382 +/- .016	0.750 +/- .026				5.1	0.36		400

Approvals
 MSHA accepted
 IJ100 Material Handling Institute

Maximum Abrasion Resistance (ISO 6945): 0.2 grams

TEST DOCUMENTATION



Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
 Info, Fittings
 Choke & Kill, BOP
 Rotary

Hydraulic Hose Program
 Rubber

Thermoplastic
 Teflon
 Crimp Fittings
 Crimp Machines

Industrial Hose Program
 Suction & Discharge
 Discharge Only
 Fire Hose
 Composite Hose
 Ducting Hose
 Metal Hose & Exp Joints
 Brake, Automotive Hose

Ind Hose Connections,
 Protection

Hammer Unions

Flow Iron,
 Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
 Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings



Fig 1502
 Integral Crimp Fittings



Lifting Sling



Safety Clamps



Hose Handle



API
 Crimp Fitting



Hydraulic Hose Program



- Why Midwest Hose?
- Layflat Hose Program
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- Brass Fittings



Tube Synthetic Rubber **Cover** Synthetic Rubber
Reinforcement two high tensile steel wire braids

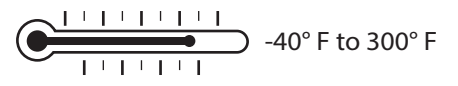
SPEC SHEET **ORDER**

MWH2SNAT	ID		OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quantity
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.		
MWH2SNAT-04	1/4	0.260 +/- .016	0.594 +/- .024	5,800	23,200	3.9	0.25	2WB or 2WC	500
MWH2SNAT-06	3/8	0.382 +/- .016	0.750 +/- .026	4,800	19,200	5.1	0.36		400
MWH2SNAT-08	1/2	0.508 +/- .024	0.880 +/- .026	4,000	16,000	7.1	0.44		300
MWH2SNAT-10	5/8	0.634 +/- .024	0.992 +/- .028	3,625	14,500	7.9	0.50		200
MWH2SNAT-12	3/4	0.756 +/- .024	1.157 +/- .028	3,100	12,400	9.4	0.62		300
MWH2SNAT-16	1	1.012 +/- .028	1.488 +/- .043	2,400	9,600	11.8	0.87		200

Approvals
 SAE 100R2AT
 25N DIN 853
 MSHA cover

SAE Impulse Test Requirement 200,000 cycles minimum at 133% WP and 300° F
 Maximum Abrasion Resistance (ISO 6945) 0.2 grams

TEST DOCUMENTATION



SPEC SHEET **ORDER**

wider temp range



SPEC SHEET **ORDER**

Tube Synthetic Rubber **Cover** Polyester Braid
Reinforcement one high tensile steel wire braid

100R5/R5AT	ID		OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quantity
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.		
MWHR5-04	3/16	0.203 +/- .014	0.520 +/- .020	3,000	12,000	3.0	0.16	R5C or R5R	1440
MWHR5-05	1/4	0.268 +/- .016	0.583 +/- .020	3,000	12,000	3.3	0.19		965
MWHR5-06	5/16	0.327 +/- .016	0.675 +/- .022	2,250	9,000	3.9	0.24		590
MWHR5-08	13/32	0.421 +/- .016	0.766 +/- .022	2,000	8,000	4.5	0.27		490
MWHR5-10	1/2	0.520 +/- .020	0.921 +/- .024	1,750	7,000	5.5	0.38		570
MWHR5-12	5/8	0.648 +/- .022	1.079 +/- .024	1,500	6,000	6.5	0.47		195
MWHR5-16	7/8	0.896 +/- .022	1.236 +/- .031	800	3,200	7.3	0.49		310
MWHR5-20	1-1/8	1.150 +/- .024	1.500 +/- .031	625	2,500	9.1	0.61		200 coil
MWHR5-24	1-3/8	1.398 +/- .024	1.750 +/- .031	500	2,000	10.4	0.77		200 coil
MWHR5-32	1-3/16	1.835 +/- .024	2.220 +/- .047	350	1,400	13.2	0.92		200 coil
MWHR5-40	2-3/8	2.406 +/- .031	2.874 +/- .047	350	1,400	24.0	1.53		200 coil

SAE Impulse Test Requirement up to -16 150,000 cycles minimum at 125% WP and 212° F
 up to -20 100,000 cycles minimum at 100% WP and 212° F

TEST DOCUMENTATION



Agricultural Quick Couplings



R5R Reusables



R5C Crimp Fittings



VCKSPC...FF Check Valve

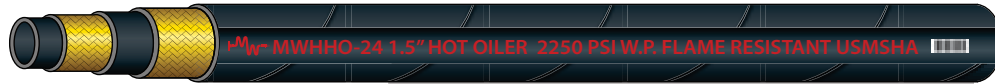


ISO-B Quick Couplings





Hydraulic Hose Program



Tube Synthetic Rubber
Cover Synthetic Rubber
Reinforcement Two high tensile steel wire braids

SPEC SHEET ORDER

Hot Oiler	ID		OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Coil Length
	inch	Tolerance	Tolerance (in.)	psi	psi	inch	lbs./ft.		
MWHHO-24	1-1/2	1.516 +/- .031	2.142 +/- .059	2,250	6,900	19.7	1.59	4WB	150

Approvals MSHA cover
 Maximum Abrasion Resistance (ISO 6945): 0.2 grams

TEST DOCUMENTATION



-40° F to 275° F
 300° F intermittent



SPEC SHEET ORDER



SPEC SHEET ORDER

Tube Synthetic Rubber
Cover Synthetic Rubber
Reinforcement One high tensile steel wire braid

Pressure Washer	ID		OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Reel Quality
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.		
MWHPWBU-04	1/4	0.260 +/- .012	0.520 +/- .020	3,000	12,000	3.9	0.15	2WB	500
MWHPWBU-06	3/8	0.386 +/- .012	0.677 +/- .020			5.1	0.22		400
MWHPWBU-08	1/2	0.508 +/- .024	0.813 +/- .030			7.1	0.27		350



0° F to 200° F pressure washer service
 -40° F to 250° F hydraulic service

TEST DOCUMENTATION



SPEC SHEET ORDER

Tube Nitrile (NBR)
Cover Neoprene (CR)
Reinforcement Multiple textile piles, dual helix wire for suction

100R4	OD		Max WP	Suction	Bend Radius	Weight	Fitting Series	Normal Roll Length
	inch	Tolerance (in.)	psi	in./HG	inch	lbs./ft.		
MWHR4-12	3/4	1.14	300	25	2.25	0.41		100
MWHR4-16	1	1.38	250		3.00	0.50		
MWHR4-20	1-1/4	1.65	200		3.75	0.61		
MWHR4-24	1-1/2	1.89	150		4.50	0.69		
MWHR4-32	2	2.40	100		6.00	0.89		

Approvals SAE 100R4



-40° F to 180° F

TEST DOCUMENTATION

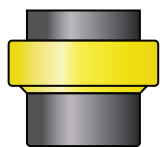


Fig G Union
 use with Hot Oiler



T-Bolt
 Clamp



Trigger Gun
 Nozzles



Wands



Spray Tips

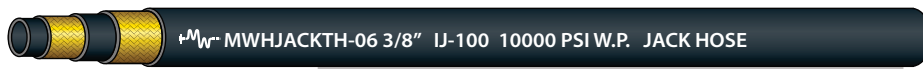
- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 Info, Fittings
 Choke & Kill, BOP
 Rotary
- Hydraulic Hose Program
 Rubber
 Thermoplastic
 Teflon
 Crimp Fittings
 Crimp Machines
- Industrial Hose Program
 Suction & Discharge
 Discharge Only
 Fire Hose
 Composite Hose
 Ducting Hose
 Metal Hose & Exp Joints
 Brake, Automotive Hose
- Ind Hose Connections,
 Protection
- Hammer Unions
- Flow Iron,
 Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill &
 Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings



- Why Midwest Hose?
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6 Reasons to Use Thermoplastic Hose

- High chemical resistance to almost all chemicals, solvents, and cleaning fluids
- Up to 50% weight reduction to comparable rubber hoses
- Excellent resistance against ozone, UV light, and aging
- Excellent resistance to hydrolysis and micro organisms
- Higher abrasion resistance
- Lower flow resistance and lower volumetric expansion



SPEC SHEET ORDER

Tube Thermoplastic **Cover** Polyurethane
Reinforcement One aramid fiber braid, one steel wire braid

Jack TH	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	inch	psi	psi	inch	lbs./ft.	
MWHJACKTH-04	1/4	0.54	10,000	40,000	3.0	.11	2WC
MWHJACKTH-06	3/8	0.74		40,000	4.0	.18	
MWHJACKTH-08	1/2	0.88		30,000	7.0	.23	



TEST DOCUMENTATION



SPEC SHEET ORDER

Tube Thermoplastic **Cover** Polyurethane
Reinforcement 1 or 2 synthetic fiber braids

Sewer	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	inch	psi	psi	inch	lbs./ft.	
MWHSEWER2500-12	3/4	1.15	2,500	6,250	5	.28	2WC
MWHSEWER2500-16	1	1.45	2,500	6,250	6	.40	

Used with sewer cleaning equipment in high humidity environments.



TEST DOCUMENTATION



SPEC SHEET ORDER

Tube Nylon **Cover** Polyurethane - Pin Pricked
Reinforcement One aramid fiber braid, one steel wire braid

CNG	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	inch	psi	psi	inch	lbs./ft.	
MWHCNG5000-04	1/4	0.54	5,000	20,000	50	.08	R7C
MWHCNG5000-06	3/8	0.69			70	.15	
MWHCNG5000-08	1/2	0.83			90	.20	
MWHCNG5000-12	3/4	1.15			180	.27	
MWHCNG5000-16	1	1.44			200	.48	

Approvals
 NFPA 52
 ANSI/AS NCV 4.2-1999
 CSA 12.52-M99

Used to refill tanks in natural gas vehicles.



TEST DOCUMENTATION



10K Quick Couplings



Steel Adapters



Teflon Tape



Filter Cart

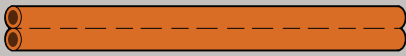


Hydraulic Oil





Twin Line Available From 1/4" to 1/2"



conductive

SPECSHEET

ORDER



non-conductive, can be used with high voltage equipment

SPECSHEET

ORDER

Tube Thermoplastic Cover Polyurethane
Reinforcement one fiber braid

MWHR7	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Coil Quantity
	inch	inch	psi	psi	inch	lbs./ft.		
MWHR7C-04	1/4	0.49	2,750	11,000	1.3	.057	R7C	500
MWHR7C-05	5/16	0.56	2,500	10,000	1.8	.068		
MWHR7C-06	3/8	0.62	2,250	9,000	2.2	.086		
MWHR7C-08	1/2	0.76	2,000	8,000	3.0	.126		
MWHR7C-12	3/4	1.04	1,250	5,000	5.5	.168		
MWHR7C-16	1	1.31	1,000	4,000	8.0	.25		100

Approvals
SAE 100R7

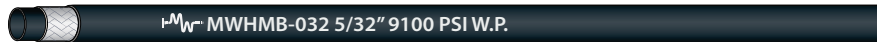
Used on hydraulic and pneumatic systems.

SAE Impulse Test Requirement 150,000 cycles minimum at 125% up and 200° F



-40° F to 212° F hydraulic service
-40° F to 160° F air/water service

TEST DOCUMENTATION



Tube Thermoplastic Cover Polyurethane
Reinforcement one aramid fiber braid

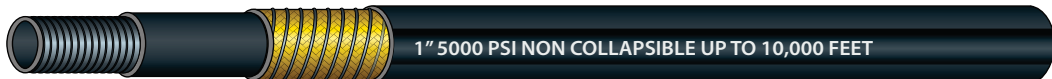
Microbore	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	inch	psi	psi	inch	lbs./ft.	
MWHMB-012	5/64	0.197	9,100	27,300	0.8	.081	MB
MWHMB-02	1/8	0.236			1.2	.148	
MWHMB-032	5/32	0.315			1.6	.195	

Replaces steel tubing in instrumentation, diagnostic, hydraulic workholding and testing applications.



-40° F to 212° F hydraulic service
-40° F to 160° F air/water service

TEST DOCUMENTATION



Tube Nylon Cover Nylon
Reinforcement 316 Stainless steel interlocking carcass, minimum 5,000 psi differential pressure

Noncollapsible Hose	ID	OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series	Normal Roll Length
	inch	inch	psi	psi	inch	lbs./ft.		
NCR5K-08	1/2	1.085	5,000	20,000	18	43.2	NCL	Continuous lengths over 10,000 feet
NCR7.5K-12	3/4	1.455			18	72.2		
NCR5K-16	1	1.740			20	112.0		
NCR7.5K-08	1/2	1.185	7,500	30,000	18	50.1		

Approvals
API 17E
GP 65-06-03
GP 65-05-06

Capable of working in 10,000 feet of water.

TEST DOCUMENTATION

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

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Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

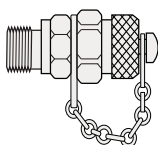
Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings



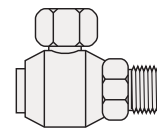
Test Points



R7C Crimp Fitting



Hose Straps



LS5502
Live Swivel



Hose Sleeve
with Velcro





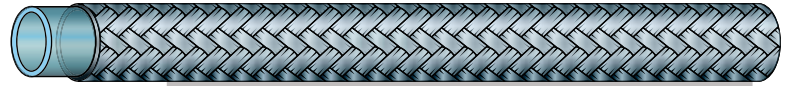
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- Brass Fittings

5 Reasons to Use Teflon Hose

- High chemical compatibility to almost all chemicals, excellent resistance
- Light weight, excellent flexibility and small bend radius
- Small inner friction loss and water absorption
- Higher temperature resistance
- Deliverable with polyurethane abrasion protectant coat



-65° F to 450° F all teflon hoses



Tube Teflon/PTFE, smooth bore
Cover Stainless steel braid

SPEC SHEET ORDER

MWHR14	Braid ID		Braid OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./100ft.	
MWHR14-03	3/16	0.187" +/- .01"	0.31" +/- .016"	3,000	12,000	2.0	6.7	R7C
MWHR14-04	1/4	0.250" +/- .014"	0.360" +/- .02"	3,000	12,000	2.0	7.4	
MWHR14-05	5/16	0.312" +/- .016"	0.42" +/- .02"	3,000	12,000	3.0	10.7	
MWHR14-06	3/8	0.375" +/- .018"	0.500" +/- .024"	2,500	10,000	4.0	13.4	
MWHR14-08	1/2	0.500" +/- .02"	0.640" +/- .028"	2,000	8,000	5.2	16.1	
MWHR14-12	3/4	0.750" +/- .024"	0.890" +/- .03"	1,200	4,800	7.7	24.8	
MWHR14-16	1	1.00" +/- .031"	1.13" +/- .047"	1,000	4,000	9.0	29.6	

TEST DOCUMENTATION

more flexible



Tube Teflon/PTFE spiral convoluted
Cover Stainless steel braid

SPEC SHEET ORDER

MWHR14SC	Braid ID		Braid OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.	
MWHR14SC-08	1/2	0.5" +/- .031"	0.82" +/- .031"	1,500	6,000	3.0	24.9	SCC
MWHR14SC-12	3/4	0.75" +/- .031"	1.07" +/- .031"	1,200	4,800	3.5	32.3	
MWHR14SC-16	1	1.00" +/- .031"	1.34" +/- .031"	1,050	4,200	4.0	43.7	
MWHR14SC-20	1-1/4	1.25" +/- .031"	1.57" +/- .031"	650	2,600	4.5	53.8	
MWHR14SC-24	1-1/2	1.50" +/- .031"	1.81" +/- .031"	580	2,320	4.5	63.8	
MWHR14SC-32	2	2.0" +/- .031"	2.32" +/- .031"	500	2,000	5.5	89.4	

TEST DOCUMENTATION

most flexible



Tube Teflon/PTFE parallel convoluted
Cover Stainless steel braid

SPEC SHEET ORDER

MWHR14PC	Braid ID		Braid OD	Max WP	Min BP	Bend Radius	Weight	Fitting Series
	inch	Tolerance (in.)	Tolerance (in.)	psi	psi	inch	lbs./ft.	
MWHR14PC-04	1/4	0.27" +/- .024"	0.45" +/- .024"	1,300	5,220	1.2	10.1	PCC
MWHR14PC-05	5/16	0.3" +/- .024"	0.49" +/- .024"	1,000	4,060	1.6	10.1	
MWHR14PC-06	3/8	0.38" +/- .024"	0.59" +/- .024"	940	3,750	2.0	13.4	
MWHR14PC-08	1/2	0.49" +/- .031"	0.71" +/- .031"	870	3,450	2.3	17.5	
MWHR14PC-12	3/4	0.78" +/- .031"	1.06" +/- .031"	650	2,600	2.8	26.9	
MWHR14PC-16	1	1.1" +/- .031"	1.37" +/- .031"	435	1,880	3.2	37	

TEST DOCUMENTATION



Stainless Steel Adapters



Spiral Wrap



Gauges



Brass Adapters




VBA2F62K Ball Valve



OEM Shops

OEM Shops are designed to handle large hydraulic hose orders in an organized way. We have OEM Shops in Houston, Dallas, and Oklahoma City. Each are equipped with an automatic hose saw which automatically cuts all hose lengths to its exact length. Our turnkey OEM shops produce dozens of different kits quickly. We produce quality fluid transfer hoses which complements your business manufacturing products with equal quality and dependability.

Services Offered

- Field Engineering Support.
Whether it is a productivity issue, challenging specification, safety concern, or something that just is not working quite right, MWH is ready to assist.
- Free audit service at your site
- Hose assembly design capabilities using Solidworks 3D imaging
- Tracking System assists you in proper maintenance, inspection, and easy reordering of your hoses. 

123 Steps to Get Started

- 1. Provide kit list.** This can be a spreadsheet, old quote, sales ticket, a hose kit itself (old or new), or we can measure the hoses on a unit. Include each hose's size, length, working psi, end connections, application, and temperature, customer part number, where and what the hose connects, and any safety products such as whip socks, hose sleeves, spiral wrap, or abrasion shields.
- 2. Quote.** Include customer's unit number/name.
- 3. Build the kit.** Assemble it, pig it, plug it, tag it. There is a labor charge per kit.
- 4. Testing** is optional at an additional cost.
- 5. Packaging** is clean, organized, and labeled.
- 6. Inspector** double checks every order before it leaves.
- 7. Seal** the packaging for customer pick up, delivery, or shipment.



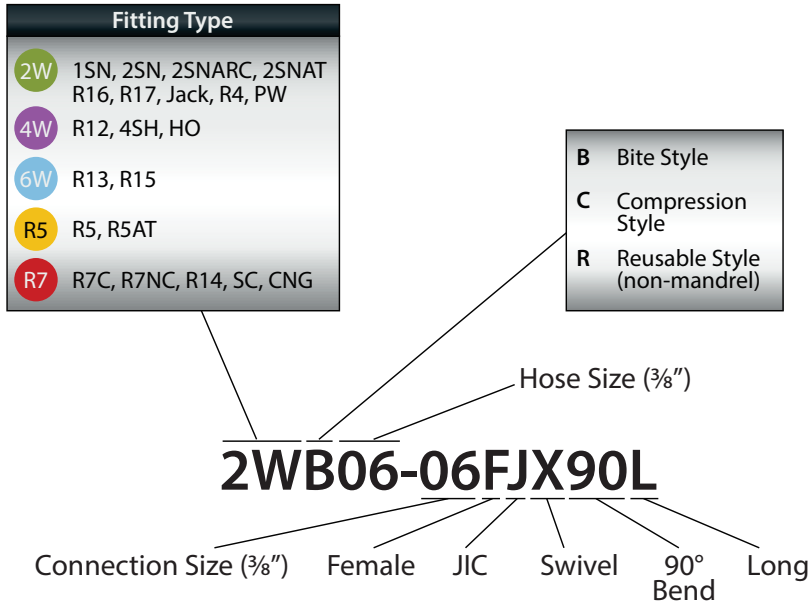
MWH Tracking System

Why Midwest Hose?
Layflat Hose Program
Rotary Hose Program Info, Fittings Choke & Kill, BOP Rotary
Hydraulic Hose Program Rubber Thermoplastic Teflon Crimp Fittings Crimp Machines
Industrial Hose Program Suction & Discharge Discharge Only Fire Hose Composite Hose Ducting Hose Metal Hose & Exp Joints Brake, Automotive Hose
Ind Hose Connections, Protection
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Pipe Fittings, Flanges
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Brass Fittings



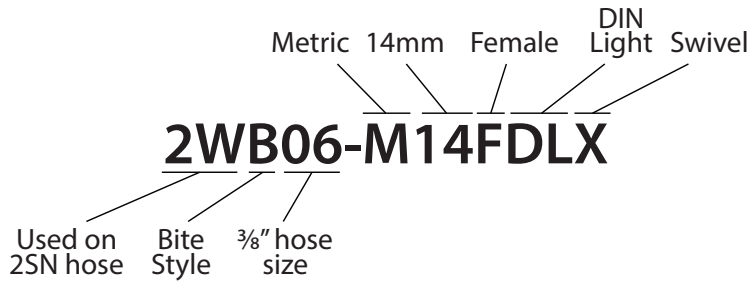
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Nomenclature for Standard Crimp Fittings



Code	Description
AB	Air Brake
API	API Threads
B	O-Ring Boss
BJ	Banjo
BSPP	British Standard Pipe Parallel
BSPT	British Standard Pipe Tapered
DH	DIN Heavy
DL	DIN Light
F	Female
FF	Flat Face
FOR	Flat Face O-Ring
FFS	Female Flareless Sleeve
FG	Female Grease Thread
FL	Code 61 O-Ring Flange
FLC	Catepillar Style Flange
FLH	Code 62 O-Ring Flange
I	Inverted Flare
J	JIC (37° Flare)
JIS	Japanese Industrial Standard
K	Komatsu
M	Male
MFA	Male Flareless Assembly (Ermeto)
MSP	Metric Stand Pipe
NASP	North American Stand Pipe
OR	O-Ring
P	Pipe Thread (NPTF or NPSM)
PT	Port
S	SAE (45° Flare)
SP	Special
X	Swivel
22	22° Drop
30	30° Drop
45	45° Drop
60	60° Drop
67	67½° Drop
90	90° Drop
110	110° Drop
135	135° Drop

Nomenclature for Metric Crimp Fittings



Stainless Steel Crimp Fittings available upon request. Most commonly in stock are 2WB FJX and MP crimp fittings.

 Crimp Specs Utility	 All crimp fittings are trivalent zinc plated. Salt spray testing available upon request.	 Thread ID and Shadow Chart App or Thread ID Poster Request	 How to Identify Fluid Ports and Connectors	 Recommended Torque Values	37° JIC →
 MJ Male JIC	 FJX Female JIC	 FJX30 Female JIC Swivel 30°	 FJX45 Female JIC Swivel 45°	 FJX90S Female JIC Swivel 90° Short Neck	 FJX90M Female JIC Swivel 90° Medium Neck
 FJX90L Female JIC Swivel 90° Long Neck	NPT Pipe →	 MP Male Pipe	 MPX Male Pipe Swivel	 MPX90 Male Pipe Swivel 90°	 MPAPI Male Pipe API Threads Allow for easier installation of hammer unions



<p>FP Female Pipe</p> <p>2W</p>	<p>FPTX Female Pipe Tapered Swivel</p> <p>2W</p>	<p>FPX Female Pipe Swivel</p> <p>2W</p>	SAE 	<p>MS Male SAE</p> <p>2W R5</p>	<p>FSX Female SAE Swivel</p> <p>2W R5 R7</p>
<p>FSX45 Female SAE Swivel 45°</p> <p>2W R5 R7</p>	<p>FSX90 Female SAE Swivel 90°</p> <p>2W R5 R7</p>	<p>FSX90L Female SAE Swivel 90° Long Neck</p> <p>2W R5</p>	O-Ring Boss 	<p>MB Male O-Ring Boss</p> <p>2W 4W R7</p>	<p>MBX Male O-Ring Boss Swivel</p> <p>2W</p>
<p>MBX90 Male O-Ring Boss Swivel 90°</p> <p>2W</p>	Flat Face 	<p>MFOR Male Flat Face O-Ring</p> <p>2W 4W</p>	<p>FFORX Female Flat Face O-Ring Swivel</p> <p>2W 4W 6W R5 R7</p>	<p>FFORX45 Female Flat Face O-Ring Swivel 45°</p> <p>2W 4W R5 R7</p>	<p>FFORX90S Female Flat Face O-Ring Swivel 90° Short Neck</p> <p>2W 4W 6W R5 R7</p>
<p>FFORX90M Female Flat Face O-Ring Swivel 90° Medium Neck</p> <p>2W R5 R7</p>	<p>FFORX90L Female Flat Face O-Ring Swivel 90° Long Neck</p> <p>2W 4W R7</p>	Inverted Flare 	<p>MIX Male Inverted Flare Swivel</p> <p>2W R5 R7</p>	<p>MIX45 Male Inverted Flare Swivel 45°</p> <p>2W R5 R7</p>	<p>MIX90 Male Inverted Flare Swivel 90°</p> <p>2W R5 R7</p>
Flange 	<p>FL Code 61 O-Ring Flange</p> <p>2W 4W 6W</p>	<p>FL22 Code 61 O-Ring Flange 22°</p> <p>4W</p>	<p>FL30 Code 61 O-Ring Flange 30°</p> <p>4W</p>	<p>FL45 Code 61 O-Ring Flange 45°</p> <p>2W 4W 6W</p>	<p>FL60 Code 61 O-Ring Flange 60°</p> <p>4W</p>
<p>FL67 Code 61 O-Ring Flange 67°</p> <p>4W</p>	<p>FL90 Code 61 O-Ring Flange 90°</p> <p>2W 4W 6W</p>	<p>FL90L Code 61 O-Ring Flange 90° Long</p> <p>4W</p>	<p>FL100 Code 61 O-Ring Flange 100°</p> <p>4W</p>	<p>FL110 Code 61 O-Ring Flange 110°</p> <p>4W</p>	<p>FL135 Code 61 O-Ring Flange 135°</p> <p>4W</p>
<p>FLH Code 62 O-Ring Flange Heavy</p> <p>4W 6W</p>	<p>FLH30 Code 62 O-Ring Flange Heavy 30°</p> <p>6W</p>	<p>FLH45 Code 62 O-Ring Flange Heavy 45°</p> <p>4W 6W</p>	<p>FLH60 Code 62 O-Ring Flange Heavy 60°</p> <p>6W</p>	<p>FLH67 Code 62 O-Ring Flange Heavy 67°</p> <p>6W</p>	<p>FLH90 Code 62 O-Ring Flange Heavy 90°</p> <p>4W 6W</p>
<p>FLC Catpillar Style O-Ring Flange 45°</p> <p>6W</p>	<p>FLC45 Catpillar Style O-Ring Flange 45°</p> <p>6W</p>	<p>FLC90 Catpillar Style O-Ring Flange 90°</p> <p>6W</p>	<p>Catpillar Style and Code 62 Flanges are the same diameter in all sizes but use a different o-ring and the CAT flanges are .560" thick in all sizes. Catpillar split flange kits and "D" rings are available.</p>		

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- Brass Fittings

Crimp Fittings, Crimp Machines



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
- Info, Fittings
- Choke & Kill, BOP
- Rotary
- Hydraulic Hose Program
- Rubber
- Thermoplastic
- Teflon
- Crimp Fittings
- Crimp Machines
- Industrial Hose Program
- Suction & Discharge
- Discharge Only
- Fire Hose
- Composite Hose
- Ducting Hose
- Metal Hose & Exp Joints
- Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

<h2>Flareless Assembly</h2>	<p>MFA Male Flareless Assembly (Ermeto)</p> <p>2W R5 R7</p>	<p>MFA45 Female Flareless Assembly 45°</p> <p>2W</p>	<p>MFA90 Female Flareless Assembly 90°</p> <p>2W</p>	<h2>Metric</h2>	<p>M••DL Metric DIN Light</p> <p>2W</p>					
	<p>M••FDLX Metric Female DIN Light Swivel</p> <p>2W 4W</p>	<p>M••FDLX45 Metric Female DIN Light Swivel 45°</p> <p>2W</p>	<p>M••FDLX90 Metric Female DIN Light Swivel 90°</p> <p>2W</p>		<p>M••DH Metric DIN Heavy</p> <p>2W</p>	<p>M••FDHX Metric Female DIN Heavy</p> <p>2W 4W 6W</p>	<p>M••FDHX45 Metric Female DIN Heavy Swivel 45°</p> <p>2W</p>			
	<p>M••FKX Metric Female Komatsu Swivel</p> <p>2W 4W R5</p>	<p>M••SP Metric Stand Pipe</p> <p>2W</p>	<h2>BSPP</h2>		<p>MBSPP Male British Standard Pipe Parallel</p> <p>2W 4W</p>	<p>FBSPPX Female British Standard Pipe Parallel Swivel</p> <p>2W 4W 6W R7</p>	<p>FBSPPX45 Female British Standard Pipe Parallel Swivel 45°</p> <p>2W 4W 6W</p>			
	<p>FBSPPX90 Female British Standard Pipe Parallel Swivel 90°</p> <p>2W 4W 6W R7</p>	<h2>BSPT</h2>			<p>MBSPT Male British Standard Pipe Tapered</p> <p>2W</p>	<h2>JIS</h2>		<p>FJISX Female Japanese Industrial Standard</p> <p>2W R7</p>	<h2>Special</h2>	
	<p>FG Female Grease Thread</p> <p>2W</p>	<p>NASP North American Standard Pipe</p> <p>2W R5 R7</p>	<p>30° Flare Female (P.T.T. Thread for Diesel) Swivel</p> <p>R5</p>		<p>Compressor Discharge (PTFE Hose) Flange</p> <p>R7</p>	<p>1502F Integral 1502 "Threaded"</p> <p>4W 6W</p>	<p>1502M Integral 1502 "Wing"</p> <p>4W 6W</p>			
	<h2>Crimp Machines</h2>						<p>60 tons Weighs 50 lbs</p> <p>Option 1: Hand Pump</p> <p>Option 2: Air Pump</p> <p>D160 Crimps up to 1" 2SN, portable crimper, uses same dies as D165</p>	<p>60 tons 1 HP 110v Weighs 140 lbs</p> <p>2HP alternative</p> <p>D165 Crimps up to 1.25" 2SN, Or 1.25" 4SH/R12 Compact design and reliable</p>		
<p>340 tons 5HP 230v 3 Phase Weighs 579 lbs</p> <p>230v 1 Phase alternative</p> <p>CC200 Crimps from 3/16" to 2" R15 More tonnage than CC60</p>	<p>265 tons 7.5 HP 230v 3 Phase Weighs 579 lbs</p> <p>230v 1 Phase alternative</p> <p>CC60 Crimps from 3/16" to 2" R15, 2" 90° with ease, up to 4" industrial hose</p>	<p>400 tons 7.5 HP 460v 3 Phase Weighs 6185 lbs</p> <p>Saves crimp diameters on internal computer</p> <p>CC1000 Crimps from 3/16" to 2" R15, up to 10" industrial hose</p>								



Crimp Machine Installation Program

Crimp Machine Installation Program

Mechanic shops and Custom Fabrication shops like to install a crimp machine and stock hose and fittings to decrease downtime and increase profitability. No need to send a driver to pick up a hose when you can custom build hoses in your shop. This solution provides more flexibility than stocking premade hoses.

Steps

- 1) **Establish hoses and fittings needed**
 - Smaller hoses are easier, cheaper
 - Bigger hoses are more complicated, more liability so it's easier to let us build these
 - How many hoses do you expect to build? Need a reel or 100 feet?
 - Straights, 45s, 90s for fittings?
 - Look at order history
 - Make list of items and bring labels to you
- 2) **Select Crimp Machine**
- 3) **Purchase Saw?**
 - Best to use a saw with a metal blade for a cleaner cut
- 4) **Purchase or consign hose rack, cabinet**
- 5) **Setup Process**
 - Install and calibrate crimper
 - Set up inventory
 - Train and certify appropriate staff
 - Inventory can be managed by Midwest Hose (VMI Program)

Vendor Managed Inventory Program (VMI)






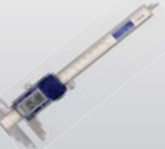







Our Vendor Managed Inventory program is a great way to administer inventory at your facility without the stress. We have set up this program with many customers and have been successful by filling bins only to needed quantities. We have modeled this from nut and bolt suppliers. This has significantly decreased our customer's time from keeping inventory, contacting vendors, and altering purchase orders.

Steps

- 1) **Which items you'll stock?**
 - Consider order history and expectations
- 2) **Set up min/max. Put min/max on label?**
- 3) **Where to put the items?**
- 4) **Purchase bins if needed**
- 5) **Bring labels to you and setup all bins**
- 6) **An MWH employee will stop by and go through your inventory to see what you need. MWH personnel are used to the parts and can help keep things organized. Both salespeople and delivery drivers are accustomed to doing this service**

Satellite Store Program

Put MWH inside your facility. Talk to your salesperson for further information.

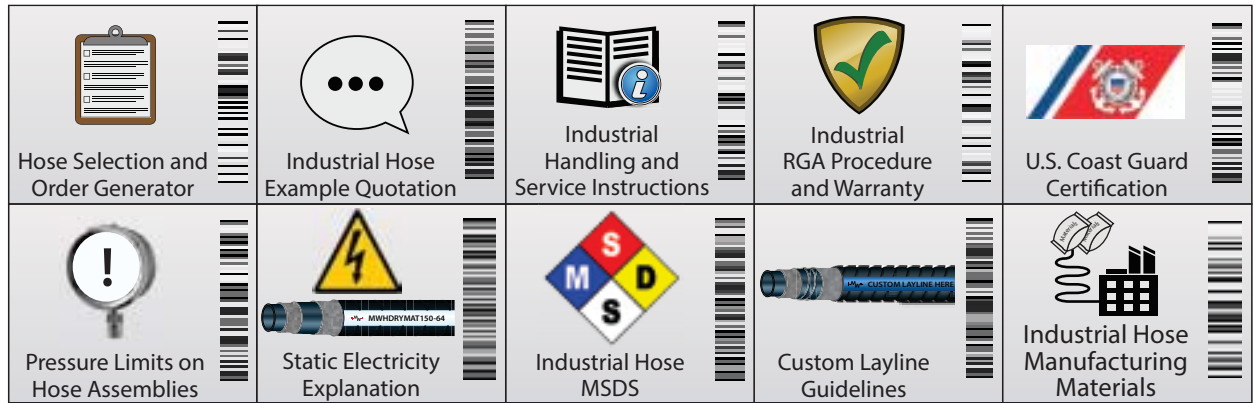
 Crimper Parts Layout	 Saves crimp diameters on internal computer Act Control Panel	 Cabinets and Bins
 Reel Racks	 Standard saw cuts up to 2" braided hydraulic hose Saws	 Check every crimp Electronic Calipers
 Reduces contamination significantly Ultra Clean System	 D160/D165 Dies	 Same as CC60 CC200 Dies
 Same as CC200 CC60 Dies	 CC1000 Dies	 Grease crimper Calibrate micrometer Calibrate calipers Reminders Program Info Logged Into Database From App (Spring 2015)
 Grease Crimper Bowl Weekly	 If hose does not meet crimp specs, recalibrate Calibrate Monthly	 Training and Certification for your people



Why Midwest Hose?
Layflat Hose Program
Rotary Hose Program Info, Fittings Choke & Kill, BOP Rotary
Hydraulic Hose Program Rubber Thermoplastic Teflon Crimp Fittings Crimp Machines
Industrial Hose Program Suction & Discharge Discharge Only Fire Hose Composite Hose Ducting Hose Metal Hose & Exp Joints Brake, Automotive Hose
Ind Hose Connections, Protection
Hammer Unions
Flow Iron, Frac Tank Supplies
Pipe Fittings, Flanges
Prod, Drill & Well Serv Products
Hyd ACPV, Filter Carts
Belts, Sheaves, Bushings
Valves
Instrumentation
Gauges
Quick Couplings
Steel Adapters
Brass Fittings



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52	PVC Tubing FDA
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59	Rubber Heater Hose
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46	Push-On 300 PSI
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55	Thermoplastic Urethane Ducting	-65° F
54	Petroleum Composite	-40° F
54	Petroleum, Bottom Loading Composite	-40° F
54	Vapor Recovery Composite	-40° F
54	Chemical Composite	-40° F
54	Chemical (Agressive) Composite	-40° F
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37	Tank Truck 300 PSI Built-In Fixed x Floating Flange
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54	Chemical (Premium) Composite
37	Mud Pump Suction
37	Short Frac Tank Assemblies
37	Short Frac Tank Assemblies
35	Tank Truck Corrugated 500 PSI
39	Multipurpose Suction
38	Chemical Hose 400 PSI
44	Liquid Mud 500 PSI
44	High Pressure Water Jetting
45	Concrete Pumping

Why Midwest Hose?
Layflat Hose Program
Rotary Hose Program Info, Fittings Choke & Kill, BOP Rotary
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Belts, Sheaves, Bushings
Valves
Instrumentation
Gauges
Quick Couplings
Steel Adapters
Brass Fittings

A	Air
C	Chemical
F	Fracking
F&B	Food and Bev
G&W	Gas and Welding
V	Ventilation
O&G	Oil and Gas
MH	Material Handling
LT	Low Temp
S	Steam
W	Water
	Primary Use



Tank Truck 300 PSI

Designed to handle diesel, ethanol, gasoline, oil, and petroleum based products that has up to 50% aromatics.

Corrugated construction gives the hose greater flexibility.

Tube Nitrile (NBR) **Cover** Neoprene (CR)
Reinforcement Multiple textile plies, dual helix wire

Safety Factor Minimum 3 to 1



Part Number MWHTT300-XX

SPECSHEET ORDER



Part Number MWHTTC300-XX

SPECSHEET ORDER



Item	ID inch	OD inch	Max WP psi	Suction in./HG	Bend Radius inch	Weight lbs/ft	Coil Length feet
Smooth Cover	2	2.56	300	30 Full Vacuum	9.1	1.40	100/200
	3	3.62			13.2	2.36	
	4	4.70			17.3	3.45	
Corrugated Cover More Flexible	6	6.89			20.0	9.52	100
	8	9.06			30.0	10.20	65
	10	11.22			50.0	15.0	40

TEST DOCUMENTATION

Tank Truck Corrugated 500 PSI

Designed to handle diesel, ethanol, gasoline, oil, and petroleum based products that has up to 50% aromatics.

Corrugated construction gives the hose greater flexibility.

Tube Nitrile (NBR) **Cover** Neoprene (CR)
Reinforcement

Safety Factor Minimum 3 to 1



Part Number MWHTT500-XX

SPECSHEET ORDER



ID inch	OD inch	Max WP psi	Suction in./HG	Bend Radius inch	Weight lbs/ft	Coil Length feet
2	2.67	500	30 Full Vacuum	9.3	1.71	100/200
3	3.78			13.6	2.94	
4	5.04			18.1	5.06	

TEST DOCUMENTATION

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 Rotary

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Quick Couplings

Steel Adapters

Brass Fittings

- A Air
- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use



Heavy Duty Notched KC Nipple

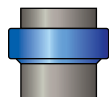


Figure 206 Hammer Union



Fixed or Floating Flanged End



Figure 100 Integral Fittings



Back Up Wrench Sticker





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Oilfield Vacuum Corrugated 150 PSI

Designed for oilfield waste pit recovery service. Ideal for handling crude oil, salt and freshwater, tank bottoms, and drilling mud up to 35% aromatics. Tube is designed to handle diluted solutions of hydrochloric acids and diesel fuels. Corrugated construction makes this hose more flexible.

Tube Nitrile RMA Type C **Cover** EPDM
Reinforcement Multiple textile plies, dual helix wire
Safety Factor Minimum 3 to 1



Part Number MWHOVC150-XX SPEC SHEET ORDER

ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
1-1/2	1.89	150	30 Full Vacuum	5.9	0.79	100
2	2.48			9.1	1.30	
3	3.46			13.0	1.94	
4	4.57			17.1	3.04	
6	6.73			25.4	5.92	
8	8.82			42.1	8.77	65

TEST DOCUMENTATION

Tank Truck Corrugated Low Temp 150 PSI

Designed to handle diesel, ethanol, gasoline, oil, and petroleum based products that has up to 50% aromatics.

Corrugated construction with low temperature features make this our most flexible tank truck hose.

Tube Nitrile (NBR) **Cover** Neoprene (CR)
Reinforcement Multiple textile plies, dual helix wire
Safety Factor Minimum 3 to 1



Part Number MWHTTCLT150-64 SPEC SHEET ORDER

ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
2	2.48	150	30 Full Vacuum	4.0	1.25	100
3	3.50			6.0	2.02	
4	4.57			9.0	2.94	

TEST DOCUMENTATION

Tank Truck Ribbed 150 PSI

Designed to handle diesel, ethanol, gasoline, oil, and petroleum based products that has up to 35% aromatics.

Ribbed construction makes this hose more flexible than the corrugated design but also less durable.

Tube Nitrile (NBR) **Cover** Chloroprene (CR)
Reinforcement Multiple textile plies, helix wire
Safety Factor Minimum 3 to 1



Part Number MWHTTR150-XX SPEC SHEET ORDER

ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
6	6.75	150	25	7.5	4.17	100
8	8.81			18.0	6.02	65

TEST DOCUMENTATION



Spool Adapter with Relief Nipple



Safety Bumps



MWHNAKESKIN Nylon Hose Sleeve



LAYRCR Road Crossings



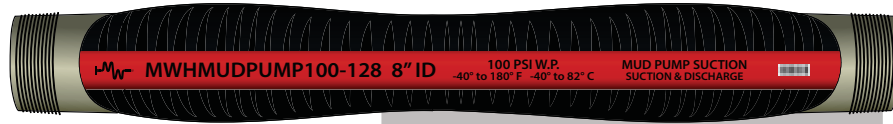
Industrial Hose Example Quotation





Mud Pump Suction

Designed as an oilfield suction hose used between the slush pump and mud pit to absorb the muds. Has a tank truck hose construction.



Part Number MUDPUMP-XX-6MP

O&G

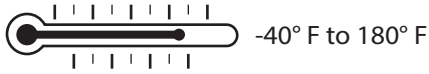
W

ID	OD	Max WP	Suction	Bend Radius	Weight	Standard Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
6	7.50	100	30 Full Vacuum	36	9.7	6 feet
8	9.63			48	15.9	
10	11.75			60	22.0	
12	13.88			72	28.3	

Tube Nitrile (NBR) **Cover** Neoprene (CR)

Reinforcement Multiple textile plies, heavy gauge helix wire.

Safety Factor Minimum 3 to 1



Suggested Fittings NPT or Beveled Lengths up to 50 feet available upon request.

TEST DOCUMENTATION



Part Number MWHTT300-XX-FFX

O&G

W

ID	OD	Max WP	Suction	Bend Radius	Weight	Standard Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
6	6.89	300	30 Full Vacuum	36	8.0	10, 20
8	9.06			48	13.3	
10	11.22			60	20.0	
12	13.56			72	27.0	
14	15.80			100	38.0	

Tank Truck 300 PSI Built-In Fixed x Floating Flange

Designed to handle diesel, ethanol, gasoline, oil, and petroleum based products that has up to 50% aromatics. Used as a heavy duty suction and discharge dock hose.

Meets USCG and RMA Class II Requirements.

ANSI 150# carbon steel flanges coated in rubber for saltwater protection.

Tube Nitrile (NBR) **Cover** Neoprene (CR)

Reinforcement Multiple textile plies, heavy gauge wire helix.

Safety Factor Minimum 3 to 1



TEST DOCUMENTATION

Short Frac Tank Assemblies (Tank Truck Corrugated or Ribbed)

Designed to handle diesel, ethanol, gasoline, oil, and petroleum based products that has up to 50% aromatics.

Can also handle salt and fresh water, drilling muds, and mild solutions of hydrochloric acid.

Assembled with female frac tank ends crimped with short ferrules designed to maintain maximum flexibility.

F

O&G

W



Tank Truck Corrugated flexible, more durable. 30 in/HG full vacuum

Tank Truck Ribbed most flexible, easiest to keep straight. 25 in/HG vacuum

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Rotary

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Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge

Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
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Flow Iron,
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- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use



LAYMFDTRL
Manifold to
Manifold Trailers



Splitter Valve



Figure 100 Frac
Tank Threaded Blind



Flange Gaskets



Figure 100
Frac Tank Tee





Industrial Hose

- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary
- Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines
- Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose
- Ind Hose Connections,
Protection
- Hammer Unions
- Flow Iron,
Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill &
Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

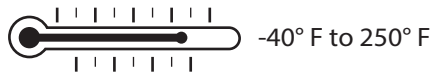
Chemical Hose 400 PSI

Hoses have a higher working pressure than normally available chemical hoses. CPE handles a wide variety of acids, alcohols, salt solutions, and petroleum based products.

UHMW handles almost every common industrial chemical used in industry today (98% of chemicals) without staining / contamination.

Reinforcement Multiple textile plies, dual helix wire

Safety Factor Minimum 3 to 1



Tube CPE

Cover EPDM Economical option



Tube UHMW

Cover Corrugated Special Abrasion Resistant Cover

(ARC) is 10 times more abrasion resistant than ISO 6945 requirements



Item	ID inch	OD inch	Max WP psi	Suction in./HG	Bend Radius inch	Weight lbs/ft	Coil Length feet
Smooth Cover	4	4.99	400	30 Full Vacuum	28.0	3.25	100
Corrugated Cover	4	4.99			24.0	3.25	



Chemical 200 PSI

Lightweight chemical transfer hose designed for almost every common industrial chemical used in industry today (98% of chemicals) without staining / contamination.

UHMW handles a wider variety of chemicals than XLPE at virtually the same cost.

Tube UHMW **Cover** EPDM

Reinforcement Multiple textile plies, dual helix wire

Safety Factor Minimum 3 to 1



Part Number CHEMUHMW200-XX



Part Number CHEMUHMWC200-XX



Item	ID inch	OD inch	Max WP psi	Suction in./HG	Bend Radius inch	Weight lbs/ft	Coil Length feet
Smooth Cover	3/4	1.19	200	30 Full Vacuum	3.5	0.58	100
	1	1.47			4.3	0.62	
	1-1/4	1.80			5.3	0.89	
	1-1/2	2.08			6.3	1.11	
	2	2.58			9.3	1.47	
	3	3.61			13.2	2.34	
Corrugated Cover More Flexible	4	4.61	17.3	3.06			
	2	2.60	9.2	1.52			
	3	3.66	13.4	2.53			
	4	4.65	17.3	3.23			
	6	6.85	25.8	7.09			



Camlock Type C
STA-LOK II



Stainless Sch. 40
Street Elbow 90



2 Piece Reduced Port
316SS 1,000 PSI Ball Valve



Stainless Schedule 40 TEE



TODO Hose Unit
Couplers and Adapters





Multipurpose Suction

Designed for air-operated construction equipment and tank truck service.



Part Number MWHMPSUCTION-XX [SPEC SHEET](#) [ORDER](#)

Tube Nitrile RMA Type A

Cover Pin pricked carboxylated nitrile

Reinforcement 1, 2, or 3 wire braids

Safety Factor Minimum 3 to 1

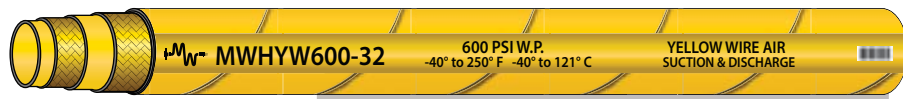


	ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
	inch	inch	psi	in./HG	inch	lbs/ft	feet
A	2	2.66	600	30 Full Vacuum	14	1.93	100
F	2-1/2	3.16			30	3.28	
O&G	3	3.72	48	4.10			
W	4	5	500	48	5.32		

[TEST DOCUMENTATION](#)

Yellow Wire Braid Air

Designed for air-operated construction equipment, can handle oil mist from compressors. The standard for heavy duty rock drilling.



Part Number MWHYW600-32 [SPEC SHEET](#) [ORDER](#)

Tube Nitrile / SBR blend

Cover Neoprene / SBR blend

Reinforcement 2 wire braids

Safety Factor Minimum 3 to 1



	ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
	inch	inch	psi	in./HG	inch	lbs/ft	feet
A	3/4	1.28	800	25	6	0.41	100
W	1	1.55			8	0.80	
	1-1/4	1.80	600	15	10	1.02	
	1-1/2	2.21			12	1.43	
	2	2.66			14	1.93	
	2-1/2	3.16			30	3.28	
	3	3.72	500	10	36	4.10	
	4	5.00			48	5.32	

[TEST DOCUMENTATION](#)

Hot Air Blower

Designed to convey hot non-oily air from blower or compressor to storage tank in the transfer of dry bulk materials. Can also be used for transferring mild chemicals at ambient temperatures.



Part Number MWHHA150-48 [SPEC SHEET](#) [ORDER](#)

Part Number MWHHA150-XX

Tube EPDM **Cover** EPDM

Reinforcement Multiple textile plies, dual wire helix

Safety Factor Minimum 3 to 1



	ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
	inch	inch	psi	in./HG	inch	lbs/ft	feet
A	3	3.64	150	30 Full Vacuum	18.0	1.63	100
	4	4.64			24.0	2.21	

[TEST DOCUMENTATION](#)

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program

Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program

Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program

Suction & Discharge

Discharge Only

Fire Hose

Composite Hose

Ducting Hose

Metal Hose & Exp Joints

Brake, Automotive Hose

Ind Hose Connections, Protection

Hammer Unions

Flow Iron, Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill & Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

A Air

C Chemical

F Fracking

F&B Food and Bev

G&W Gas and Welding

V Ventilation

O&G Oil and Gas

MH Material Handling

LT Low Temp

S Steam

W Water

[] Primary Use



External Swage
Hose Ends



Whip Sock and
Whip Checks



2, 4, and 6
Bolt Clamps



Ground Joint
Couplings



Crowsfoot
Couplings



- Why Midwest Hose?
- Why Midwest Hose?
 - Why Midwest Hose?
- Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Protection
- Hammer Unions
- Flow Iron,
 - Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill &
 - Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

Rubber Water Suction

Designed for water, salt water, and mild acids such as water based agricultural fertilizers.



Part Number MWHBRS150-XX



Tube EPDM **Cover** EPDM

Reinforcement Multiple textile plies, dual helix wire

Safety Factor Minimum 3 to 1



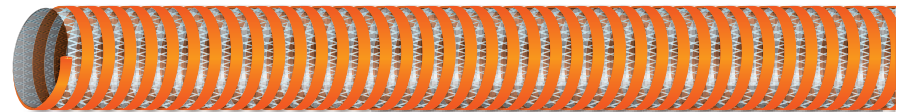
NOTE 10" size is corrugated for greater flexibility

ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
1-1/2	1.86	150	30 Full Vacuum	6.0	0.60	100
2	2.36			8.0	0.76	
3	3.54			14.0	1.44	
4	4.54			18.0	2.25	
6	6.68			28.0	3.94	
8	9.00	100		40.0	8.68	65
10	11.27			50.0	15.80	40



Clear with Orange Helix Water Suction

Designed for applications that require the hose to slide easily or require visual confirmation of material flow. Great for pumping water and light chemical solutions. Popular with pumping equipment because it handles suction discharge uses.



Part Number COHWS-XX



Tube Double ply PVC **Cover** Rigid PVC helix

Reinforcement Polyester braid and PVC helix

Safety Factor Minimum 3 to 1



ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
2	2.62	100	30	4	0.71	100
3	3.71	100	Full	6	1.14	
4	4.80	75	Suction	7	1.75	
6	7.17	70	28	10	3.90	100/60/20
8	9.33	70		16	5.56	25/20



Petroleum Lightweight Gas Drop

Designed to transfer biodiesel and ethanol blends, gasoline, and other petroleum based products under pressure, gravity flow, or medium suction. Handles up to 50% aromatics.



Part Number LWG-XX



Has a static conductive tube and copper static wire.

Tube Synthetic rubber

Cover Synthetic rubber and orange helix

Reinforcement Multiple textile plies and static wire

Safety Factor Minimum 3 to 1



ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs/ft	feet
2	2.66	100	23	4	.87	100
3	3.76	65		6	1.71	
4	4.79			8	2.44	



Fig 100 Threaded Hammer Union



Bauers Style Quick Connects



Spiral Clamps



Butterfly Valves



Safety Breakaway Couplings

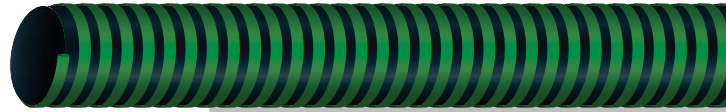




EPDM Suction

Lightweight, flexible, rugged suction/discharge hose that has good chemical resistance. Excellent for transferring fertilizer solutions, septic solutions, and pesticides. Hose remains flexible in sub-zero temperatures. Helix serves as a scuff strip.

Tube EPDM **Cover** EPDM/Green Spiral
Reinforcement Green polyethylene helix
Safety Factor Minimum 3 to 1



Part Number EPDMGS-XX **SPEC SHEET** **ORDER**



ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs./ft.	ft.
1	1.34	80	28	4	0.23	100
1-1/2	1.96	60		0.49		
2	2.49	60		9	0.69	
3	3.60	50		12	1.03	
4	4.69	45		17	1.81	
6	6.86	35	20	27	3.84	

TEST DOCUMENTATION

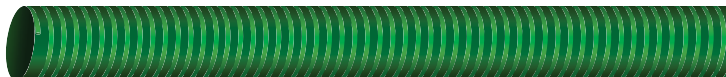
Clear/Green PVC Suction

Economical general service suction and discharge hose used for pumping water and light chemical solutions. PVC helix increases flexibility and abrasion resistance while the smooth interior provides maximum flow.

Tube PVC **Cover** PVC
Reinforcement Rigid poly helix
Safety Factor Minimum 3 to 1



Part Number CS-XX **SPEC SHEET** **ORDER**



Part Number GS-XX **SPEC SHEET** **ORDER**



ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs./ft.	ft.
1	1.27	90	28	3	.27	100
1-1/4	1.56	90		4	.36	
1-1/2	1.82	90		5	.47	
2	2.36	70		6	.66	
2-1/2	2.90	65		8	.92	
3	3.44	55		9	1.20	
4	4.52	50		13	1.87	
6	6.80	45		24	4.56	

TEST DOCUMENTATION

Why Midwest Hose?

Layout Hose Program

Rotary Hose Program
 Info, Fittings
 Choke & Kill, BOP
 Rotary

Hydraulic Hose Program
 Rubber
 Thermoplastic
 Teflon
 Crimp Fittings
 Crimp Machines

Industrial Hose Program
 Suction & Discharge

Discharge Only
 Fire Hose
 Composite Hose
 Ducting Hose
 Metal Hose & Exp Joints
 Brake, Automotive Hose

Ind Hose Connections,
 Protection

Hammer Unions

Flow Iron,
 Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
 Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

- A Air
- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use



Round and Square
Hole Strainers



Quick Opening
Gate Valve



Foot Valves



Camlock D, Camlock A,
Sightglass, and Funnel
Strainer Assembly



Pin Lug Couplers





- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary
- Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines
- Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

Frac Discharge

Tube Nitrile (NBR)
Cover Corrugated Special Abrasion Resistant Cover
ARC cover provides higher abrasion resistance



SPEC SHEET ORDER

Tube Natural Rubber/SBR Blend
Cover Natural Rubber/SBR Blend



SPEC SHEET ORDER

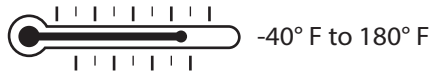
Tube Neoprene (CR)
Cover Neoprene



SPEC SHEET ORDER

Designed for discharge use of petroleum based fluids, dilute acids, chemical and abrasive slurries used in oil and gas well stimulation and fracking.

Reinforcement Synthetic textile
Safety Factor Minimum 3 to 1
(all Frac Discharge hoses)



F
W

Item						Coil Length
	ID	OD	Max WP	Bend Radius	Weight	
	inch	inch	psi	inch	lbs/ft	feet
MWHFRACARC400-64	4	4.92	400	21.0	4.00	100
MWHBLENDER300-64		4.80	300	40.0	2.81	
MWHFRAC/BLENDER150-64		4.56	150	40.0	2.14	

TEST DOCUMENTATION

Water Discharge

Designed for water discharge in construction, heavy duty equipment rental, and mines and quarries. Soft-wall hose construction provides similar performance to a layflat hose but a higher working pressure and more abrasion resistance.

Tube SBR
Cover SBR
Reinforcement Synthetic textile
Safety Factor 3 to 1



Part Number MWHWD2PLY-XX SPEC SHEET ORDER



Part Number MWHWD4PLY-XX SPEC SHEET ORDER

W

Hose					Coil Length
	ID	OD	Max WP	Weight	
	inch	inch	psi	lbs/ft	feet
2 Ply	1-1/2	1.78	150	0.44	100
	2	2.28		0.62	
	2-1/2	2.78		0.75	
	3	3.28		0.95	
	4	4.31	1.25		
	6	6.31	100	2.68	
	8	8.72	100	3.77	
4 Ply	10	10.42	80	5.00	100
	1-1/2	1.89	250	0.55	
	2	2.39		1.00	
	2-1/2	2.89		1.33	
	3	3.39	200	1.58	
	4	4.43		2.15	
	6	6.43		3.25	
	8	8.47		4.50	
	10	10.53	150	5.50	
	12	12.53		8.00	
					50

TEST DOCUMENTATION



Integral Figure 206 Fittings



Figure 100 Union Splitter Valve



Figure 206 2 Piece Nuts





Dry Material Discharge 75 PSI

Designed for dry bulk transfer of bulk cement, grains, animal feed, and other dry abrasive materials. High abrasion resistant tube resists cutting and gouges. Can be rolled for transport and storage.

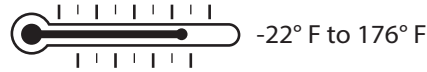


Part Number MWHDRYMAT75L-64 **SPECSHEET** **ORDER**



Part Number MWHDRYMAT75H-XX **SPECSHEET** **ORDER**

Tube Natural rubber/SBR blend (static conductive/static dissipating)
Cover Natural rubber/SBR blend
Reinforcement Synthetic textile
Safety Factor Minimum 3 to 1



MH

Tube Size inch	ID inch	OD inch	Max WP psi	Weight lbs/ft	Coil Length feet
3/16"	4	4.53	75	1.6	100
1/4"		4.72		2.14	
1/4"	5	5.71		2.63	

TEST DOCUMENTATION

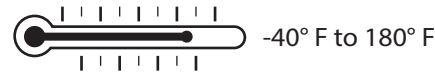
Dry Material Discharge 150 PSI

Designed for dry bulk transfer of bulk cement, grains, animal feed, and other dry abrasive materials. High abrasion resistant tube resists cutting and gouges. Can be rolled for transport and storage.



Part Number MWHDRYMAT150-XX **SPECSHEET** **ORDER**

Tube Natural rubber/SBR blend (static conductive/static dissipating)
Cover Natural rubber/SBR blend
Reinforcement Synthetic textile
Safety Factor Minimum 3 to 1



MH

ID inch	OD inch	Max WP psi	Bend Radius inch	Weight lbs/ft	Coil Length feet
4	5.00	150	24	4.10	200
5	6.09		30	6.01	

TEST DOCUMENTATION

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

- A Air
- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use



CL Coupler x Hose Shank 90° Camlocks



Hopper Tee Groove x Groove x FL150



Center Punch Clamps



CFC Series Gauges



Schedule 40 Black Pipe 45





- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Inl Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACMPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

Liquid Mud 500 PSI

Mud discharge hose designed for petroleum waste, drilling mud, diesel, and water. The standard to transfer liquid mud at high pressures from the mud pump.

Tube Nitrile (NBR)

Cover Neoplane (CR)

Reinforcement Synthetic textile

Safety Factor Minimum 3 to 1



Part Number LIQUIDMUD500-XX SPEC SHEET ORDER



ID	OD	Max WP	Weight	Coil Length
inch	inch	psi	lbs/ft	feet
2	2.87	500	1.67	200
3	3.86		2.84	
4	4.92		4.13	
6	7.18		5.50	

TEST DOCUMENTATION

Potable Water FDA

Designed for discharge of potable water or liquids not containing oils or chemicals from a supply ship to an offshore drilling rig or temporary water lines in construction or industrial applications. Tube meets FDA requirements.

Tube White Nitrile (NBR)

Cover SBR/EPDM blend

Reinforcement Synthetic textile

Safety Factor Minimum 3 to 1



Part Number POTABLE150-XX SPEC SHEET ORDER



ID	OD	Max WP	Bend Radius	Weight	Coil Length
inch	inch	psi	inch	lbs/ft	feet
2	2.60	150	16.1	1.54	1
3	3.66		24.0	2.51	200
4	4.67		32.1	3.21	1

TEST DOCUMENTATION

High Pressure Water Jetting

Designed to transfer water in inland water ways and offshore high pressure water jetting service. Meets all USCG requirements.

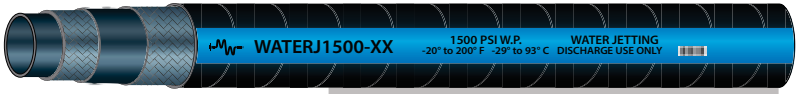
8" or assemblies more than 60 feet require special delivery

Tube Nitrile (NBR)

Cover Neoprene (CR)

Reinforcement Multiple wire braids

Safety Factor Minimum 3 to 1



Part Number WATERJ1500-XX SPEC SHEET ORDER



ID	OD	Max WP	Bend Radius	Weight	Coil Length
inch	inch	psi	inch	lbs/ft	feet
4	5.19	1500	16	7.8	100
6	7.50		24	14.1	
8	9.75		32	22.4	

TEST DOCUMENTATION



External Swage Hose Ends



Hose Floats



Grooved Tee Fittings



Grooved Quick Release Coupling



150# Flange x Figure 206 Adapters





Concrete Pumping

Designed to handle plaster, grout, and concrete at the critical flex areas of a concrete boom truck and high pump concrete boom.

Tube SBR/EPDM **Cover** SBR/EPDM
Reinforcement System textile or high intensity steel wire
Safety Factor Minimum 2 to 1 (per CPMA standards)



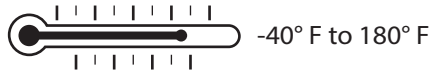
Part Number MWHTEXCON800-XX

SPEC SHEET ORDER



Part Number MWHWIRECON1275-XX

SPEC SHEET ORDER



MH
W

Hose	ID	OD	Max WP	Bend Radius	Weight	Coil Length
	inch	inch	psi	inch	lbs/ft	feet
Textile	2	2.68	800	12	1.45	50
	3	3.75		15	2.40	
	4	4.81		18	4.06	100
	5	6.30		24	5.60	
Wire	2	2.78	1275	24	1.74	100
	3	3.29		36	4.05	
	4	5.02		40	5.95	
	5	6.00		60	7.44	12.5

TEST DOCUMENTATION

Sandblast

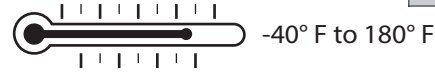
Designed for sand, steel, shot, or other sharp abrasives to handle cleaning, cutting, or finishing stone, glass, or metal surfaces.

Static conductive tube prevents the build up of electrical charges.

Tube SBR/Natural rubber blend
Cover SBR/EPDM blend pin pricked
Reinforcement Synthetic textile
Safety Factor Minimum 4 to 1



Nozzle Blast Guide



A
MH



Part Number SANDBL150-XX

SPEC SHEET ORDER

ID	OD	Max WP	Bend Radius	Weight	Coil Length
inch	inch	psi	inch	lbs/ft	feet
3/4	1.50	150	8	.57	100
1	1.88		12	.94	
1-1/4	2.13		14	1.18	
1-1/2	2.38		18	1.35	
2	2.78		20	1.74	

TEST DOCUMENTATION

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
 Info, Fittings
 Choke & Kill, BOP
 Rotary

Hydraulic Hose Program
 Rubber
 Thermoplastic
 Teflon
 Crimp Fittings
 Crimp Machines

Industrial Hose Program
 Suction & Discharge
 Discharge Only

Fire Hose
 Composite Hose
 Ducting Hose
 Metal Hose & Exp Joints
 Brake, Automotive Hose

Ind Hose Connections,
 Protection

Hammer Unions

Flow Iron,
 Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
 Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

- A Air
- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use



Internal Expansion California Style Hose End



California Style Coupling



Sand Blast Quick Coupling



Hose Straps



Sand Blast Nozzle Holder Coupling



- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
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 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron,
 - Frac Tank Supplies
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- Prod, Drill &
 - Well Serv Products
- Hyd ACMPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

Yellow Multipurpose Air 500 PSI

Non-conductive and MSHA approved hose can handle air, oils, fats, kerosene, gasoline, and petroleum products.

Tube Nitrile/PVC blend
Cover Carboxylated Nitrile/PVC blend, MSHR approved
 Type C/PVC blend MSHA approved
Reinforcement 4 textile spirals
Safety Factor Minimum 4 to 1



SPEC SHEET ORDER

Part Number MWHMP500-XX

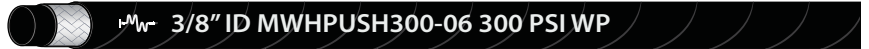
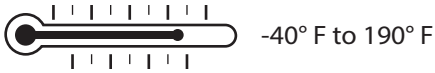
A W	ID	OD	Max WP	Bend Radius	Weight	Reel Quality
	inch	inch	psi	inch	lbs/ft	feet
	1/4	.63	500	1.50	0.14	500 to 600
	3/8	.75		2.25	0.21	
	1/2	.91		3	0.24	
	3/4	1.19		4.5	0.36	
	1	1.50		7	0.51	

TEST DOCUMENTATION

Push-On 300 PSI

Designed for use with push-on fittings for air tools, petroleum products, gasoline, mild chemicals or water. No clamps or special tools required. Hose reinforcement laid at the most effective angle for maximum strength and coupling holding ability.

Tube Nitrile RMA Class A
Cover Neoprene, MSHA approved
Reinforcement Braided textile
Safety Factor Minimum 3 to 1



SPEC SHEET ORDER

Part Number MWHPUSH300-XX

A O&G W	ID	OD	Max WP	Bend Radius	Weight	Reel Quantity
	inch	inch	psi	inch	lbs/ft	feet
	1/4	.54	300	3	.09	700
	3/8	.69		3	.14	
	1/2	.81		5	.17	
	5/8	.93		6	.20	
	3/4	1.07		7	.26	
	1	1.19		8	.30	500

TEST DOCUMENTATION

Liquid Propane Gas 350 PSI

Designed to transfer liquid propane gas or butane. Can also transfer natural gas in open, well vented areas at 1 PSI max. UL21 LP Gas/Natural Gas approved

NOT for compressed natural gas.

Tube Nitrile
Cover Synthetic Rubber pin pricked
Reinforcement 1 or 2 textile braids
Safety Factor Minimum 4 to 1



LP Gas should never be above 100° F



SPEC SHEET ORDER

Part Number LPG-XX

A G&W O&G W	ID	OD	Max WP	Weight	Reel Quantity
	inch	inch	psi	lbs/ft	feet
	1/4	.58	350	.12	500
	3/8	.72		.17	
	1/2	.91		.24	
	3/4	1.23		.41	
	1	1.5		.52	100 coil

TEST DOCUMENTATION



Whip Checks



Push-On Hose Barb Fittings



Spring Ball Cone Brass or SS316 Check Valve



Crowsfoot Couplings



SAE 45° Flare Brass Fittings





Fuel Oil Delivery 250 PSI

Designed to transfer fuel oils, diesel, or commercial gasolines. Compatible with bio-diesel fuels up to B20. Smooth cover resists dragging. Static wire included on all sizes.

Tube Nitrile RMA Class A

Cover Nitrile RMA Class A/PVC blend

Reinforcement 4 textile spirals

Safety Factor Minimum 4 to 1



Gasoline normally transferred below 120 ° F



Part Number FUELDEL250-XX **SPEC SHEET** **ORDER**

O&G

ID	OD	Max WP	Bend Radius	Weight	Coil Length
inch	inch	psi	inch	lbs/ft	feet
1	1.5	250	7	0.47	100,
1-1/4	1.78		8.75	0.59	125,
1-3/8	1.88		9.25	0.65	150, or
1-1/2	2.09		10.5	0.80	175

TEST DOCUMENTATION

Farm Tank Fuel 50 PSI

For gravity or electric pump dispensing of oil, gasoline, diesel, and petroleum products. Typically used with farm or barrel-type pumps where UL approval is not required. Has static wire, designed for use with electric pumps.

NOT for gas station use. Only UL 330 listed hose used for gas station use. NOT for aircraft fueling.

Tube Nitrile RMA Class A

Cover Nitrile RMA Class A/PVC blend

Reinforcement 4 textile spirals

Safety Factor 4 to 1



Part Number FARMTANK50-XX **SPEC SHEET** **ORDER**

A

O&G

W

ID	OD	Max WP	Bend Radius	Weight	Reel Quantity
inch	inch	psi	inch	lbs/ft	feet
3/4	1.12	50	5	.35	700
1	1.38		8	.47	700

TEST DOCUMENTATION

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections, Protection

Hammer Unions

Flow Iron, Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill & Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

- A** Air
- C** Chemical
- F** Fracking
- F&B** Food and Bev
- G&W** Gas and Welding
- V** Ventilation
- O&G** Oil and Gas
- MH** Material Handling
- LT** Low Temp
- S** Steam
- W** Water
- Primary Use



Hose Barb Fittings



2 Piece Full Port Ball Valves



Worm Gear Clamps



TBC, HTBC and HDTBC Clamps



Teflon Tape





- Why Midwest Hose?
- Leaflet Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACMPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

EDPM Steam 250 PSI

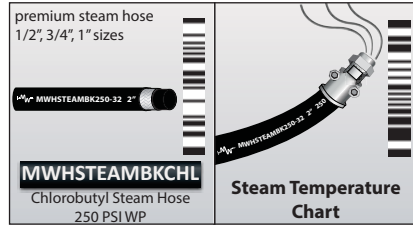
Wire braid steam hose for saturated and superheated steam up to 250 PSI and 450° F. Cover is pin pricked to allow venting to eliminate blistering and cover separation.

Steel wire braids can be utilized as a static wire to make the hose assembly electrically conductive.

NOT for use with detergents.
DRAIN AFTER USE!

Tube Nitrile (NBR)
Cover Neoprene (CR)
Reinforcement Multiple wire braids

-40° F to 450° F
temp range



Part Number MWHSTEAMBK250-XX **SPEC SHEET** **ORDER**



Part Number MWHSTEAMRD250-XX **SPEC SHEET** **ORDER**

S

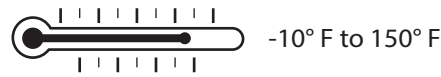
ID	OD	Max WP	Bend Radius	Weight	Coil Length
inch	inch	psi	inch	lbs./ft.	ft.
1/2	1.00	250	5.9	0.40	100
3/4	1.25		8.3	0.51	
1	1.50		11.0	0.67	
1-1/4	1.81		14.0	0.87	
1-1/2	2.13		16.5	1.11	
2	2.64		22.0	1.80	
2-1/2	3.21		25.0	2.32	
3	3.81		30.0	3.17	

TEST DOCUMENTATION

PVC Air 300 PSI

General purpose hose that can handle air, water, oil, mist, and mild chemical applications.

Tube PVC **Cover** PVC
Reinforcement 2 textile spirals
Safety Factor 3 to 1



Part Number MWHVPVCAIR300BUXX **SPEC SHEET** **ORDER**

A
W

ID	OD	Max WP	Bend Radius	Weight	Reel Quantity
inch	inch	psi	inch	lbs./ft.	ft.
1/4	0.5	300	1.5	.09	600
3/8	0.63		2.25	.14	
1/2	0.78		3.00	.18	

TEST DOCUMENTATION

Twin Line Welding Assemblies Grade R

Designed for portable or production line welding in factories, ships, construction, etc. Meets RMA and CGA (Compressed Gas Association) specifications for Type VD

Tube EPDM **Cover** Green (oxygen), Red (acetylene) EPDM
Reinforcement 2 textile spirals
Safety Factor 3 to 1



Part Number TWWR-XX-100FT **SPEC SHEET** **ORDER**

G&W

ID	OD	Max WP	Assembly Length	Assembly Weight
inch	inch	psi	feet	lbs.
3/16	7/16	200	25	5
			50	10
			100	20
1/4	17/32	200	25	6.8
			50	13.5
			100	27

TEST DOCUMENTATION





Multipurpose Air

Designed to handle oily mists used to lubricate pneumatic tools. Tube is good for air and oil. Suitable for light agricultural spraying such as diluted solutions of herbicides.

NOT for fuels.

Tube EPDM RMA Class C

Cover EPDM

Reinforcement 4 textile spirals

Safety Factor 3 to 1



Part Number MWHMP300-XX **SPECSHEET** **ORDER**

ID	OD	Max WP	Bend Radius	Weight	Reel Quantity
1/4	.62	300	1.50	.15	500
3/8	.71		2.25	.18	500
1/2	.84		3	.25	500
5/8	1.00		3.75	.30	400
3/4	1.15		4.5	.37	400
1	1.43		7	.50	300
1-1/4	1.75	200	8.75	.81	200
1-1/2	2.00		10.5	.94	200
2	2.55		14	1.12	200

TEST DOCUMENTATION

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge
Discharge Only

Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

- A Air
- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use

Air Tool and Jackhammer Assemblies

A	A	A	A
50 or 100 footlengths	50 or 100 footlengths	50 or 100 footlengths	50 or 100 footlengths
Air Tool Blue PVC	Air Tool Red EPDM	Jackhammer Red EPDM	Jackhammer Yellow EPDM
3/8" hose with 1/4" MPT ends (crimped)	3/8" hose with 1/4" MPT ends (crimped)	3/4" or 1" hose with crowsfeet (crimped)	3/4" or 1" hose with crowsfeet (crimped)

Contractors Water Assemblies

Coupled Male x Female with brass Garden Hose Threads. Designed for water transfer and wash down.

Tube EPDM

Cover EPDM

Working Pressure 150 PSI

Reinforcement 2 textile spirals



W	W
50 foot length 5/8" or 3/4"	12', 25', 50', or 100' lengths Tested to -42° F
Contractors Water Assembly	Heated Water Hose w/ Built-in heater to keep from freezing





- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

PVC Spray

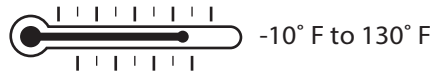
Spray lawns, trees, and similar applications with diluted solutions of water and oil based pesticides and herbicides. Can also handle compressed air.

Spray hose for fertilizers, herbicides, and insecticides in the agriculture and lawn care industries. Can also handle water and compressed air.

Tube PVC

Cover Ribbed PVC

Reinforcement Braided textile



Part Number PVCSPRAY570-XX **SPEC SHEET** **ORDER**



Part Number PVCSPRAY800-XX **SPEC SHEET** **ORDER**



Hose	ID inch	OD inch	Max WP psi	Burst inch	Weight lbs./300ft.	Coil Length ft.
Yellow	3/8	.39	570	1,710	35	300
	1/2	.52			47	
	3/4	.75			80	
Green	3/8	.69	800	3,700	41	300
	1/2	.84			54	
	3/4	1.14			91	
	1	1.47			135	

TEST DOCUMENTATION

Layflat Discharge

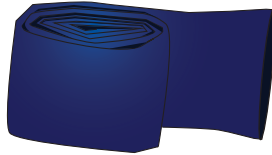
General purpose hoses for open end discharge. Non-absorbing, mildew proof, and rolls up flat for easy storage and handling. Common in construction, agriculture, irrigation, marine, and rental applications PVC hoses resistant to oils, grease.

Tube and cover are extruded simultaneously to achieve maximum bonding.

Reinforcement Polyester yarn

Blue PVC

Standard Duty
BD-XX



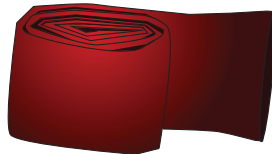
Gray PVC

Standard Duty
GD-XX



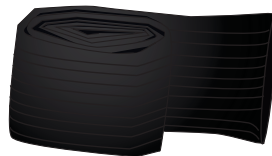
Red PVC

Standard Duty
REDHD-XX



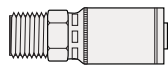
Black PVC/Nitrile

Super Duty
MWHWARFLEX-XX



Hoses	ID inch	Wall Thickness	Max WP psi	Burst psi	Roll Length ft.
Standard Duty	1	.052	110	Minimum 3 to 1	300
	1-1/4	.056	80		
	1-1/2	.059			
	2	.059	65		
	3	.063	80		
	4	.067	70		
	6	.075	60		
Heavy Duty	8	.087	35	Minimum 3 to 1	300
	1-1/2	.079	150		
	2	.087			
	3	.095	125		
	4	.102	115		
Super Duty	6	.119	70	Minimum 3 to 1	100/660
	8	.12	150		
	10	.14			
	12	.14	200		
	1-1/2	.08	175		
	2	.08	150		

TEST DOCUMENTATION



2WC Male Pipe Crimp Fittings for PVC Hose



Pin-Lug Hose Ends



Camlock C and Camlock E Camlocks



Bauers Style Quick Connects



Center Punch Clamps





Edible Oil FDA

Designed to handle edible liquids, vegetable oils, salad dressings, vinegar, mustard and meat products requiring a sanitary hose which will not impair taste. Great for service with hot oil fat filters and fryers.

- Tube** Sanitary white nitrile (NBR), meets FDA standards
- Cover** Nitrile, (NBR), meets FDA standards
- Reinforcement** One wire braid for additional resistance from mechanical damage, kinking
- Safety Factor** Minimum 3 to 1



-30° F to 275° F constant
350° F intermittent

PVC Braided FDA (Polybraid)

Designed for food and beverage dispensing, potable water, air breathing lines, packaging and equipment, lube lines, and other visual flow applications.

- Tube** Clear non-toxic PVC, meets FDA standards
- Cover** Clear non-toxic PVC, meets FDA standards
- Reinforcement** Nylon braid



-10° F to 130° F

PVC Suction FDA (Polywire)

For suction/discharge use and allows visual flow inspection. Designed for industrial vacuum pumps, food and beverage dispensing, air and water supply, car wash, coolant lines, and deionized water systems. Meets FDA, USDA, and 3A standards

- Tube** Clear non-toxic PVC, meets FDA standards
- Cover** Clear non-toxic PVC, meets FDA standards
- Reinforcement** Electro-galvanized steel wire, can be used for static dissipation
- Safety Factor** 3 to 1



-20° F to 150° F



Part Number EDIBLEOIL-XX **SPECSHEET** **ORDER**

F&B

ID	OD	Max WP	Bend Radius	Weight	Reel Quantity
inch	inch	psi	inch	lbs./ft.	ft.
1/2	1.02	250	6	0.48	225
5/8	1.14		7	0.53	275
3/4	1.27		8	0.60	250

TEST DOCUMENTATION



Part Number PB-XX **SPECSHEET** **ORDER**

A

F&B

W

ID	OD	Max WP	Burst	Weight	Coil Length
inch	inch	psi	inch	lbs./100ft.	ft.
1/4	.469	250	1000	6.5	300
3/8	.625			10.7	
1/2	.75			12.7	
5/8	.875	200	800	15.0	
3/4	1.03			150	
1	1.31	125	500	32.0	
1-1/4	1.75	100	400	63.0	
1-1/2	2			74.0	
2	2.5	75	300	95.0	

TEST DOCUMENTATION



Part Number PW-XX **SPECSHEET** **ORDER**

F&B

ID	OD	Max WP	Suction	Bend Radius	Weight	Coil Length
inch	inch	psi	in./HG	inch	lbs./ft.	ft.
3/8	.625	180	30 Full Vacuum	0.8	12	100
1/2	.81	150		1	21	
5/8	1	100		1.2	32	
3/4	1.125			1.3	36	
1	1.375	84		1.7	47	
1-1/4	1.75			2	78	

TEST DOCUMENTATION

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge
Discharge Only

Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

Steel Adapters

Brass Fittings

- A Air
- C Chemical
- F Fracking
- F&B Food and Bev
- G&W Gas and Welding
- V Ventilation
- O&G Oil and Gas
- MH Material Handling
- LT Low Temp
- S Steam
- W Water
- Primary Use



Industrial Hose Ends



Single, Double Ear Clamp



Hose Barb Fittings



Garden Hose Fittings



PVC Fittings





- Why Midwest Hose?
- Layout Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACMPV, Filter Carts
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- Valves
- Instrumentation
- Gauges
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- Steel Adapters
- Brass Fittings

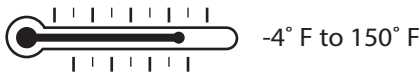
PVC Tubing FDA

Clear polyvinyl chloride tubing provides fullview of flowing product. PVC is good to excellent for acids, fair to excellent for alkalis, and excellent for most solvents.

NOT for ketones, esters, and some aromatic hydrocarbons.

Used for general use, sight gauges on storage tanks, air conditioning drainage, refrigeration drainage, air line, and printing press equipment.

Tube Clear non-toxic, meets FDA standards



Part Number CVTXXxXX

SPECSHEET ORDER

- A
- C
- F&B
- W

Hoses	ID inch	OD inch	Wall Thickness inch	Max WP psi	Weight lbs./ft.	Coil Length ft.
02x04	1/8	1/4	1/16	70	2.65	100
03x05	3/16	5/16	1/16		3.07	
04x06	1/4	3/8	1/16	60	3.4	
04x07	1/4	7/16	3/32		5.38	
04x08	1/4	1/2	1/8	70	8.37	
05x07	5/16	7/16	1/16	50	4.63	
05x08	5/16	1/2	3/32	60	7.16	
06x08	3/8	1/2	1/16	50	5.58	
06x09	3/8	9/16	3/32	55	8.18	
06x10	3/8	5/8	1/8	60	11.55	
08x10	1/2	5/8	1/16	40	7.39	
08x12	1/2	3/4	1/8	50	13.14	
09x14	9/16	7/8	5/32	45	18.73	
10x14	5/8	7/8	1/8		15.81	
12x16	3/4	1	1/8	35	18.6	
14x18	7/8	1-1/8	1/8		21.1	
16x20	1	1-1/4	1/8	30	23.8	
20x28	1-1/4	1-3/4	1/4	50	67.2	
24x32	1-1/2	2	1/4	40	85.8	
32x38	2	2-3/8	3/16	25	76.4	
						50

TEST DOCUMENTATION



SPECSHEET ORDER

Polyethylene Tubing FDA

Linear low density polyethylene food grade tubing for standard industrial applications such as the transfer of air and liquids, water lines, water softener lines, pneumatic logic control lines, and vending equipment.

Excellent resistance to solvents and stress cracking.



Safety Factor 3 to 1

Colors Natural off white (NA), Black (BK), Yellow (YW), Orange (OR), Blue (B), Red (R), Green (G), or FDA colors upon request.

Fittings Push-Connect, Self-Align, Mini Barb, and Compression with 2030 inserts.

- A
- F&B
- W

Hoses	ID inch	OD inch	Wall Thickness inch	Max WP psi	Weight lbs./100ft.
PE-04NA-500	.125	0.25	.0625	350	1.24
PE-44NA-500	.170	0.25	.040	150	1.2
PE-06NA-500	.250	0.375	.0625	150	3.0
PE-08NA-500	.375	0.5	.0625	125	3.4
PE-10NA-500	.500	0.625	.0625	100	5.0
PE-12NA-100	.625	0.75	.0625	100	5.5
PE-04MMNA-500	.106	4mm	.025	180	0.6
PE-06MMNA-500	4mm	6mm	1mm	150	1.1
PE-08MMNA-500	.236	8mm	.038	150	1.5
PE-10MMNA-500	8mm	10mm	1mm	125	2.1
PE-12MMNA-500	9mm	12mm	1.5mm	100	2.5

TEST DOCUMENTATION



Push-Connect Male Connector



Push-Connect Male Elbow Swivel



Polyline Flareless Female Elbow



Needle Valve Compression Double



Needle Valve Polyline Straightway





Single Jacket Mill Hose



Designed for open end discharge applications. Uses include connections to fire hydrants, dust control water trucks, water spraying, and water discharge. Immune to mildew.

Tube Single ply synthetic rubber
Cover Polyester
Length up to 100 feet

W

Item	ID	SP psi	Bowl Size	Weight Per 50' Uncpld.
MILL-24	1.5"	250	1-3/4"	10 lbs.
MILL-32	2"		2-1/4"	11.5 lbs.
MILL-40	2.5"		2-11/16"	17 lbs.
MILL-48	3"		3-1/4"	21 lbs.
MILL-64	4"		4-3/8"	40 lbs.

SPEC SHEET ORDER

Double Jacket Mill Hose



Double jacket for rugged environment. Immune to mildew.

Tube Single ply synthetic rubber
Cover Double jacket polyester
Length up to 100 feet

W

Item	ID	SP psi	Bowl Size	Weight Per 50' Uncpld.
MILLDJ-24	1.5"	300	1-13/16"	12.95 lbs
MILLDJ-32	2"		2-5/16"	17.95 lbs
MILLDJ-40	2.5"		2-7/8"	23.6 lbs

SPEC SHEET ORDER

Fire Assemblies



Light weight single-jacket hose. High tear strength and oil and grease resistant. Used in fire brigades. Immune to mildew.

Tube single ply synthetic rubber
Cover polyester
UL Listed

W

Item	ID	SP psi	Bowl Size	Length	Weight Per 50' Uncpld.
FH1.5X50IPT	1.5"	225	13/14"	50	12 lbs.
FH1.5X50NST				50	
FH1.5X75NST				75	
FH1.5X100NST				100	
FH2.5X50NST	2.5"	225	2-13/16"	50	20 lbs.
FH2.5X75NST				75	
FH2.5X100NST				100	

SPEC SHEET ORDER

Booster Hose

Preconnected to pump of an engine (and the booster tank) for putting out small fires near the tank without having to connect to a fire hydrant (brush pumper).

Tube EPDM with non-porous lining
Cover Red synthetic rubber
Reinforcement 2 textile braids
Safety Factor 4 to 1
Up to 200' lengths



W

Item	ID	Coupling Binder Size (OD)	SP psi	Weight Per 50' Uncpld.
Booster800-12	3/4"	1-1/4"	800	24 lbs.
Booster800-16	1"	1-19/32"		32 lbs.

SPEC SHEET ORDER

Why Midwest Hose?

Layflat Hose Program

Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
Rotary

Hydraulic Hose Program
Rubber
Thermoplastic
Teflon
Crimp Fittings
Crimp Machines

Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose

Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

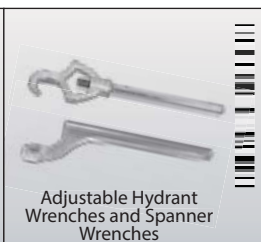
Quick Couplings

Steel Adapters

Brass Fittings



Brass Hydrant Adapters



Adjustable Hydrant Wrenches and Spanner Wrenches



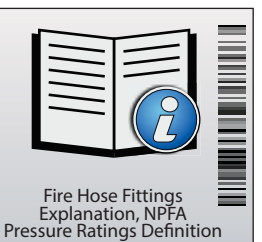
Nozzles



Fire Hose Rack Assembly Diagram



Fire Truck Accessories Diagram



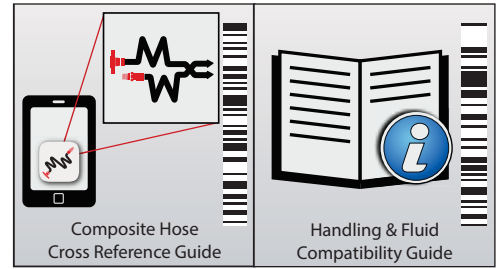
Fire Hose Fittings Explanation, NPFA Pressure Ratings Definition

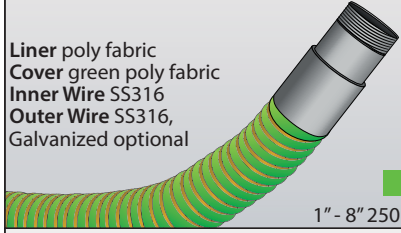
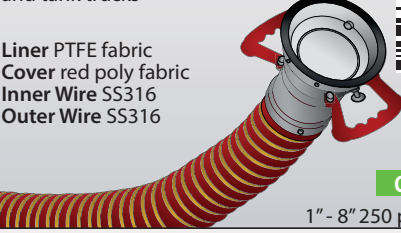
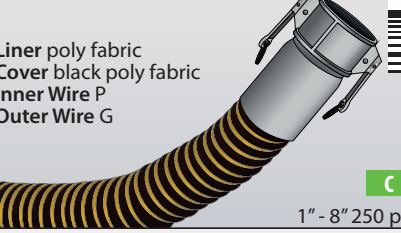

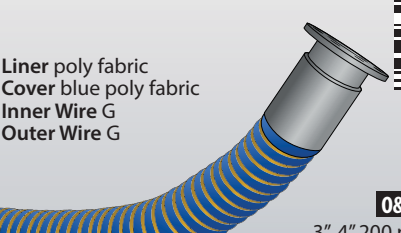
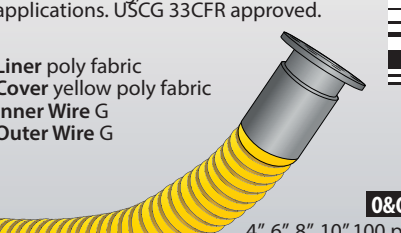


- Why Midwest Hose?
- Layout Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

Why Composite Hose?

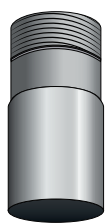
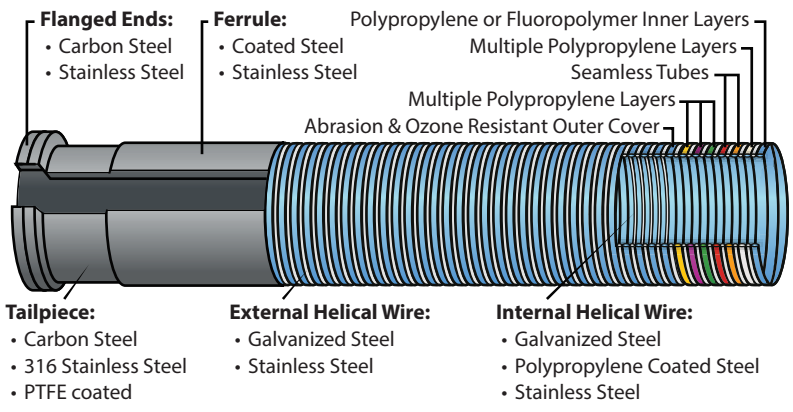
- Light weight and flexible for easier handling
- Flexibility retained at low, even cryogenic temperatures (below -238° F)
- Excellent resistance to kinking or crushing
- Suction and Discharge use
- Up to 100% aromatics, no permeation of gases
- All assemblies tested to 1.5 x working pressure
- 4 to 1 safety factor
- Temp Range -40 to 212° F
- Not for dry material service
- **10, 20 and 25 foot lengths**



<p>Chemical (aggressive) Applications chemicals, inks, paints, plant processing, rail cars, and tank trucks</p> <p>Liner poly fabric Cover green poly fabric Inner Wire SS316 Outer Wire SS316, Galvanized optional</p>  <p style="text-align: right;">1" - 8" 250 psi</p>	<p>Chemical (premium) Superior chemical resistance with PTFE liner. Applications chemical, inks, paints, pharmaceuticals, plant processing, rail cars and tank trucks</p> <p>Liner PTFE fabric Cover red poly fabric Inner Wire SS316 Outer Wire SS316</p>  <p style="text-align: right;">1" - 8" 250 psi</p>	<p>Chemical Applications chemicals, inks, paints, plant processing, rail cars, and tank trucks</p> <p>Liner poly fabric Cover black poly fabric Inner Wire P Outer Wire G</p>  <p style="text-align: right;">1" - 8" 250 psi</p>
<p>Petroleum Applications marine, plant processing, rail cars, ship-to-shore, and tank trucks</p> <p>Liner poly fabric Cover blue poly fabric Inner Wire G Outer Wire G</p>  <p style="text-align: right;">1" - 8" 250 psi 10" 150 psi</p>	<p>Petroleum, Bottom Loading Applications Bottom Loading at bulk distribution and production refinery facilities.</p> <p>Liner poly fabric Cover blue poly fabric Inner Wire G Outer Wire G</p>  <p style="text-align: right;">3", 4" 200 psi</p>	<p>Vapor Recovery Used in petroleum and petrochemical vapor recovery systems in ship-to-shore, bottom loading, and tank truck applications. USCG 33CFR approved.</p> <p>Liner poly fabric Cover yellow poly fabric Inner Wire G Outer Wire G</p>  <p style="text-align: right;">4", 6", 8", 10" 100 psi</p>

DESIGN OPTIONS	
Liner	Polypropylene PTFE
Inner Wire	G Galvanized Steel P Polypropylene Coated Steel 6 Stainless Steel 316
Outer Wire	G Galvanized Steel 6 Stainless Steel 316
Fittings	Carbon Steel Stainless Steel Aluminum Polypropylene

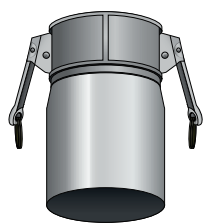
Hose Cross Section



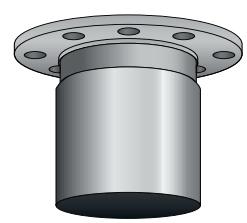
Male Pipe Threads



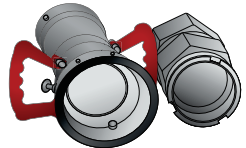
Male Camlock



Female Camlock



ANSI 150# & 300# Fixed/Floating Flanges



Dry Break Couplings



Safety Breakaway Couplings





S Size- ID, OD, and length
T Temperature of material running through the hose and temperature of the environment
A Application the hose is used in
M Media running through the hose- type and concentration
P Pressure is positive (psi), negative (Inches Hg.) and/or Inches w.g.



A

Air

- Heating or Cooling
- Drying
- Dehumidifying
- Cleaning
- Dust Covers
- Supply
- Connectors
- Air Filter Intakes



F

Fume

- Chemicals
- Laboratory
- Industrial
- Automotive
- Painting
- Welding
- Soldering
- Plating



D

Dust

- Filtering
- Movement
- Exhaust
- Duct Cleaning
- Textile Fiber Collection
- Vacuum Cleaning
- Lint Collection
- Loading (containment)
- Cutting
- Grinding
- Lawn Vacuum
- Sawdust Collection









M

Materials

- Light Weight Material Handling*
- Chips
 - Powders
 - Debris
 - Street Sweeping
 - Slurries
 - Drains
 - Packing Popcorn

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 - Steel Adapters
 - Brass Fittings

Hoses	Description	Features
 <p>Thermoplastic Rubber General Service</p>	<p>Black thermoplastic rubber reinforced with spring steel wire helix. Most versatile ducting hose on the market.</p> <p>Diameter Range: 1½" to 24" 25 and 50 foot lengths</p>	<ul style="list-style-type: none"> • Superior chemical resistance • Air tight construction • UV and moisture resistant • Bi-directional flow • Resistant to flex fatigue • Temp. range: -60°F to +275°F <p>A F D</p>
 <p>2-Ply Neoprene General Service</p>	<p>Double-ply bonded construction. Neoprene coated polyester, reinforced with steel wire helix.</p> <p>Diameter Range: 1" to 36" 25 and 50 foot lengths</p>	<ul style="list-style-type: none"> • Flame retardant (UL94VO) • Better tear resistance • Good chemical resistance • Bi-directional flow • Handles higher pressures • Temp. range: -40°F to 250°F <p>A F D</p>
 <p>Thermoplastic Urethane High Abrasion</p>	<p>Clear thermoplastic urethane reinforced with spring steel wire helix.</p> <p>Diameter Range: 2" to 24" 25 and 50 foot lengths</p>	<ul style="list-style-type: none"> • Best abrasion/tear resistance • Clear wall is FDA acceptable for dry food and powders • Excellent resistance to oils • Bi-directional flow • Also available in black • Temp. range: -65°F to +200°F <p>F D M</p>
 <p>Silicone Fiberglass High Temperature Air</p>	<p>Hand-built 2-ply silicone fiberglass, reinforced with steel wire helix.</p> <p>Diameter Range: 2" to 24" 25 and 50 foot lengths</p>	<ul style="list-style-type: none"> • Best for hot air and high temperature fume extraction • Air tight construction • Resistant to oils, solvents, water and fungus • Not recommended for constant flexing • Temp. range: -60°F to 500°F <p>A F</p>
 <p>U-Lok 1000 Ultra-High Temperatures</p>	<p>Highly compressible E-Glass and ceramic fabric, reinforced with external steel helix.</p> <p>Diameter Range: 2" to 24" 25 and 50 foot lengths</p>	<ul style="list-style-type: none"> • Best for extreme hot air and vehicle exhaust applications • Crimped construction uses no adhesives or glues • Available with extra plies for heat resistance • 6 to 1 compression ratio • Temp. range: -200°F to 1000°F <p>A F</p>
 <p>YellowJack Liquids/Suction Hose</p>	<p>Rugged polyethylene copolymer, reinforced with rigid black polyethylene helix.</p> <p>Available Diameters: 1½", 2", 2½", 3", 4" 25 and 50 foot lengths</p>	<ul style="list-style-type: none"> • All-plastic, extruded heavy-wall construction • Handles full vacuum (all IDs) • Best for liquid waste transfer • Puncture and tear resistant • Cuffed assemblies • Temp. range: -40°F to +140°F <p>M</p>

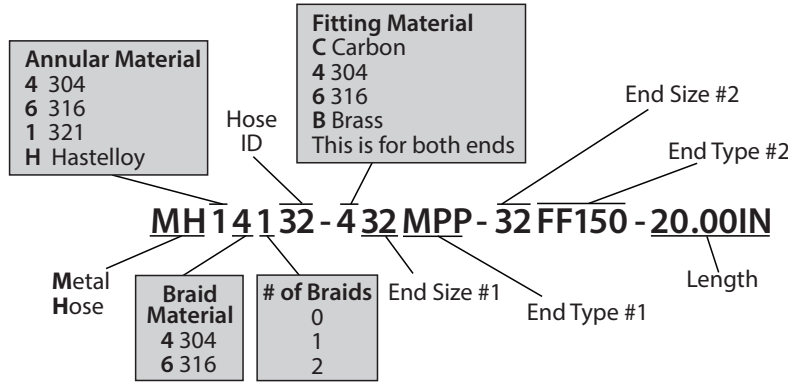
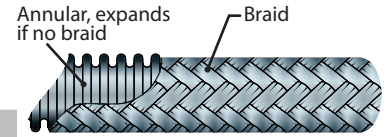
- FAQs
 - Ducting FAQ
- A-Z Glossary
 - Ducting Glossary
- Ducting Applications



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 - Metal Hose & Exp Joints**
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Stainless Steel Metal Hose

- Available in sizes 1/4" - 12"
- Operates in high/low temperatures
- Fire safety up to 1200° F
- No permeation of gases
- Full vacuum
- Annular is hydroformed, a process that enhances flexibility and extends life of hose
- Suitable for oils, chemicals, gases, exhaust gases, water, steam, vacuum, etc.



End Types

Code	Description
FJX	Female JIC Swivel
MPP	Male pipe/pipe nipple
MPH	Male pipe hex
TBE	Imperial Tube End
MTBE	Metric Tube End
GRV	Grooved (Victaulic)
FL150	Slip-on Flange 150#
FL300	Slip-on Flange 300
WF150	Weld-neck flange 150#
WF300	Weld-neck flange 300#
FF150	Floating Flange 150#
FF300	Floating Flange 300#
TTMA	TTMA Flange#
BW150	Pipe Stub end 150#
BW300	Pipe stub end 300#

Metal Hose Care and Installation Guide, Glossary

Fluid Compatibility Guide

Helpful Hose Routing Calculations

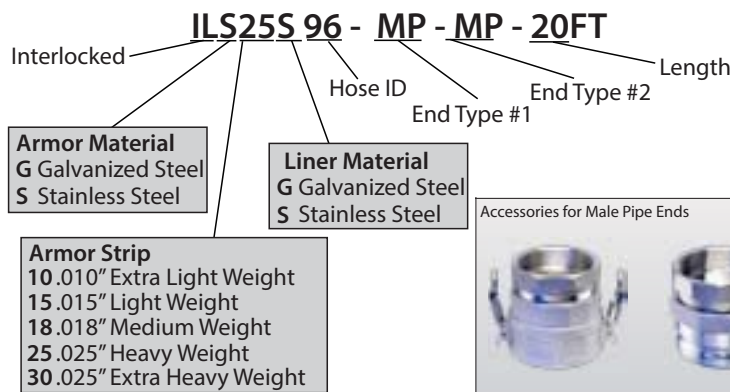
Metal Hose Applications Guide

Interlocked Metal Hose

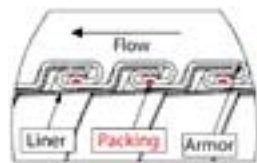
DESIGNED FOR hot air blower lines and dry bulk material transfer/transport. Up to 100' lengths in sizes 1.5" to 10".

Smooth Bore (lined) is stronger, more flexible, and used for Brewing, Cement, Food Processing, Mining, and Plastic Pellets. DO NOT twist

Rough Bore (unlined) is used for Agriculture, Lumber, Chemical, Tank Truck, Petroleum Refining, and Municipalities.



Accessories for Male Pipe Ends



Packing Material
Pressure and vacuum capabilities are enhanced by selecting appropriate packing material

Type	Features	Max Temp
LE Low-Temp Elastomeric	Max Pressure and Vacuum	200°F
HE High-Temp Elastomeric	Max Pressure and Vacuum	400°F
LF Low-Temp Fiber	Economical	180°F
HT High-Temp Fiber	High-Temp Filament	1000°F
M Metal	Extreme Temp	800-1200°

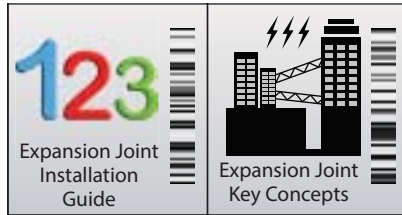
Packed hose adds 10% to weight and minimum bend radius

Interlocked Metal Hose Applications Guide



Expansion Joints

Expansion joints are used to accommodate the movement of pressurized piping systems caused by thermal growth, pressure contraction, machine vibration, seismic disturbances and installation irregularities. The expansion joint will carry numerous types of media including steam, emission gases, water, acids, alkalies and hydrocarbons.



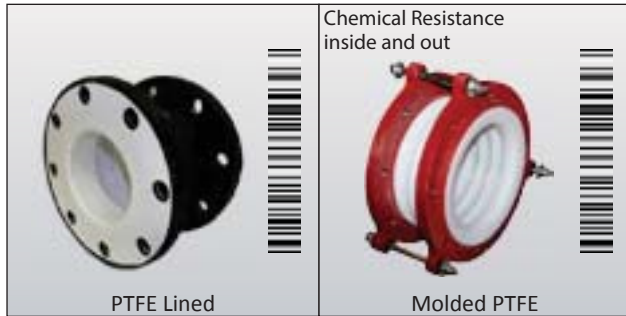
Purchasing Questionnaire

- Pipe size
- Pumped medium: type of liquid, gas, or vapor used
- Temperature range, type of environment
- Pressure/Vacuum Range
- Movements Needed
- Degree of pipe misalignment
- Installed face-to-face dimensions
- Need retaining rings?
- Need for control units? Recommended for use with most expansion joints, must be used in cases of insufficient pipe support
- End connections

Applications

- Fossil Fuel Power Generation
- Gas Turbines
- Petroleum Refining
- Chemical Processing
- Hot Metal Industries
- Ship Building
- Absorb Vibration
- Reduce Noise
- Steam Distribution
- HVAC
- Pulp & Paper Processing
- Heat Exchangers
- Fume Exhaust

- PTFE**
- Rated for full vacuum
 - More economical than metal
 - Excellent chemical resistance



Comes with a **Control Unit** which extends the life span by limiting movement

- Rubber**
- Lighter weight than metal
 - Greater recovery from movement
 - Reduced heat loss
 - More corrosion and erosion resistant
 - Insulates sound better than metal
 - No gaskets required
 - Most economical



- Metal**
- Rated for full vacuum to 3,000 psi
 - Less flexible - a lot of movement can cause stress cracks
 - 2" to 120" diameters
 - Extreme hot/cold applications
 - -450° to 2,000° F temp range



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- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
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Brake Hose *for brake fluids*

Designed as a hydraulic brake hose for vehicles and motorcycles. The average life of a brake hose is six years. Brake hoses swell with age and restrict flow. Generally all brake hoses on a vehicle deteriorate at the same rate.

All assemblies pressure tested to 3,000 psi



brake hose crimper and tester

Checking and Testing for Faulty Brake Hoses	Brakequip Dealer Catalog
Fitting Nomenclature	Brakequip Fittings and Accessories
Brakequip Automotive Plumbing Catalog	General Automotive Fittings



SPEC SHEET

Rubber Brake BQ101

Handles most non-petroleum based break fluids including silicone.

- DOT 3, DOT 4 approved
- Meets FMVSS-106 and SAE 1401 specs

ID 1/8", tolerance from .130" to .138" (3.3mm to 3.5mm)

OD .406" to .421" (10.3mm to 10.7mm)

Tube and Cover EPDM

Reinforcement two braid PVA (poly vinyl alcohol fibers)



SPEC SHEET

Stainless Steel Brake Jacketed BQ303

Compatible with all brake fluids.

- DOT 3, DOT 4 approved
- Less expansion provides more stopping power
- Gives immediate brake pedal response
- Great for show cars and motorcycles. Jacket choice of clear, black, blue, and red

ID 1/8" (3.4mm)

Braid OD 1/4" (6.3mm)

Jacket OD 0.295" (7.5mm)

Tube PTFE

Reinforcement 304 stainless steel braid

Cover PVC



People Also Buy

Banjo Bolts	Inverted Flare Fittings





Hoses	Applications	Description	People Also Buy
 <p>Air Brake Tubing</p>	<ul style="list-style-type: none"> Air brake systems on trucks, trailers and buses Resists heat and oil aging Meets DOT FMVSS 106 Meets DOT SAE J844 <p>A W</p>	<p>This polyimide product has a longer service life than nylon11. Sizes 3/8" and above are reinforced with a polyester yarn.</p> <p>Colors Black, blue, red, orange, green, yellow</p> <p>Sizes 1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4"</p>	 <p>Push-Connect Air Brake Compression Air Brake</p>
 <p>Steel Brake Line Tubing Assemblies</p>	<ul style="list-style-type: none"> For brake fluids Brake systems on cars and trailers Premade assemblies from 8" to 60" Meets SAE specs 	<p>Plated to resist rust and road salt. Easy to bend. Can be cut to length and reflared. Double and bubble flared available for American, British, European, and Japanese vehicles.</p> <p>Sizes 3/16", 1/4", 5/16", 3/8"</p>	 <p>Inverted Flare Fittings</p>
 <p>Steel Brake Line Tubing Coils</p>	<ul style="list-style-type: none"> For brake fluids Brake systems on cars and trailers Meets SAE specs 	<p>Seamless and tin coated. Comes uncoupled in 25' coils making it ideal for use on trailers that require longer length assemblies. Must be double flared or bubble flared.</p> <p>Sizes 3/16", 1/4", 5/16", 3/8"</p>	 <p>Inverted Flare Fittings</p>
 <p>Rubber Air Brake Hose</p>	<ul style="list-style-type: none"> Air brake systems on trucks and trailers DOT FMVSS 106 SAE J1402A <p>A</p>	<p>A synthetic EDPM tube and cover. Reinforced with multi-fiber braids. Designed for conveying air in truck and trailer brake systems.</p> <p>Temperature Range -40 F to 200 F</p> <p>Sizes 3/8" and 1/2"</p>	 <p>Crimped and Reusable Brass Ends</p>
 <p>Silicone Coolant Hose</p>	<ul style="list-style-type: none"> Radiator hoses on cars and trucks Industrial and oilfield applications <p>W</p>	<p>For heavy duty pressure connections in hostile engine environments. Ideal for extreme temperatures and various pressure ranges where high performance levels are required.</p> <p>Temperature Range -65 F to 350 F</p> <p>Size Range 1/4" to 10"</p>	 <p>Constant Torque Clamp TBC Clamps</p>
 <p>Silicone Heater Hose</p>	<ul style="list-style-type: none"> Heater hoses on cars, trucks, buses, and RV's SAE J20 R3 Class A <p>W</p>	<p>For the most extreme temperatures and hostile engine environments. Longer service life than rubber. Resistant to coolants, cold leaks, cracking, peeling, aging, and ozone.</p> <p>Temperature Range -65 F to 350 F</p> <p>Lengths 25', 50', 100', and reels</p> <p>Size Range 3/16" to 1-1/4"</p>	 <p>Constant Torque Clamp TBC Clamps</p>
 <p>GPR Radiator Hose</p>	<ul style="list-style-type: none"> Radiator hoses on cars, trucks, buses, and RV's <p>W</p>	<p>Designed for use in engine cooling systems. Intended for use as an upper radiator hose. Can be used in many automotive, marine, and industrial applications.</p> <p>Size Range 3/4" to 5-1/2"</p>	 <p>Worm Gear Clamps TBC Clamps</p>
 <p>Rubber Heater Hose</p>	<ul style="list-style-type: none"> Heater hoses on cars, trucks, buses, and RV's <p>W</p>	<p>A replacement hose for cars and light trucks. Resistant to coolants and weathering.</p> <p>Temperature Range -40 F to 212 F</p> <p>Sizes 3/8", 1/2", 5/8", 3/4", and 1"</p>	 <p>Worm Gear Clamps Brass Beaded Barbs</p>
 <p>Garage Exhaust Hose</p>	<ul style="list-style-type: none"> Exhaust automotive fumes from shop to outside <p>V</p>	<p>Exhaust hose comes in 11' sections and is made with a flared end which allows multiple hoses to be connected without additional parts.</p> <p>Temperature Range up to 400 F</p> <p>Sizes 2", 2-1/2", 3", 3-1/2", and 4"</p>	 <p>Door Ports Y Connectors</p>
 <p>Air Conditioning Hose</p>	<ul style="list-style-type: none"> Industrial and automotive applications Used with R134A Barrier and reduced barrier <p>G&W</p>	<p>Made with rubber/nylon tube and a butyl (perforated) cover. Has a fiber braid reinforcement. Custom made assemblies.</p> <p>Temperature Range -22 F to 248 F</p> <p>Sizes 5/16", 13/32", 1/2", and 5/8"</p>	 <p>Air Conditioning Fittings</p>

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 - Crimp Machines
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 - Brake, Automotive Hose
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- Prod, Drill & Well Serv Products
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<h2 style="margin: 0;">Camlocks</h2>	1/2" - 10" A,B,D,P,SS	1/2" - 10" A,B,D,P,SS	1/2" - 10" A,B,D,P,SS	1/2" - 10" A,B,D,P,SS	1/2" - 10" A,B,D,P,SS	
	CAM••A Adapter x FP	CAM••B Coupler x MP	CAM••C Coupler x Hose Shank	CAM••D Coupler x FP	CAM••E Adapter x Hose Shank	
	1/2" - 10" A,B,D,P,SS	1/2" - 10" A,B,D,P,SS	1/2" - 10" A,B,D,P,SS	1" - 6" A,B,D,SS	1" - 6" A,B,D,P,SS	3/4" - 6"
	CAM••F Adapter x MP	CAM••DC Dust Cap	CAM••DP Dust Plug	CAM••A••A Adapter x Adapter	CAM••C••A Coupler x Adapter Short	CAM••C••A Coupler x Adapter Long
	1-1/2" - 4" A,B,D,SS	1-1/4" - 6" A,B,D,SS	1-1/2" - 6" A,B,D,P,SS	1" - 5" Pin Clip Locks A,B,D,SS	1" - 6" Pin Clip Locks A,B,D,SS	1" - 6" Pin Clip Locks A,B,D,SS
	CAM••C••C Coupler x Coupler	CL Coupler x Hose Shank 90°	LD Coupler x FP 90°	B STA-LOK II Coupler x MP	C STA-LOK II Coupler x Hose Shank	D STA-LOK II Coupler x FP
	1" - 6" Pin Clip Locks A,B,D,SS	2" - 4" Pin Clip Locks A,B,D,SS	1" - 5" Pin Clip Locks A,B,D,SS	1-1/2" - 6" A,SS	1-1/2" - 6" A,SS	1-1/2" - 6" A,SS
DC STA-LOK II Dust Cap	CxS STA-LOK II Coupler x Coupler	CxS STA-LOK II Coupler x Adapter (short or long)	ASV Adapter-Swivel x FP	BSV Coupler-Swivel x MP	CSV Coupler-Swivel x Shank	
1-1/2" - 6" A,SS	1-1/2" - 6" A,SS	1-1/2" - 6" A,SS	2" - 8" For dry bulk A	relieve pressure on hose before detachment A,SS	relieve pressure on hose before detachment SS	
DSV Coupler-Swivel x FP	ESV Adapter-Swivel x Shank	FSV Adapter-Swivel x MP	A Hopper Tee Groove x Groove x FL150	A,SS Coupler x Adapter with Relief Nipple	SS Spool Adapter with Relief Nipple	
		<h2 style="margin: 0;">Petroleum Handling</h2>				
2" - 4" P	3" - 6" A,B,D,SS	3" - 6" A,B,D,SS	3" - 6" A,B,D,SS	3" - 6" A,B,D,SS	3" - 4" A	
TTFNPT FP x TTMA Flange	TTF Sightglass All Styles	UTF40 or UVR300 Tight Fill or Vapor Elbow	UVR400A UVR400 Coaxial Delivery Vapor Elbow	GV4440 API Dust Cap	DA/DC/DA-SG API Coupler x Adapter, API Coupler x Coupler, API Coupler x Adapter w/Sight Glass	
3" - 4" A	3" - 4" A	3" - 4" A	4" A	4" A	3" - 4" A	
				<h2 style="margin: 0;">Industrial and Oilfield Hose Ends</h2>		
API Coupler Gasket & Chain Fuel Resistant Buna Gasket & 18 Inch Chain	MD-A Maxi Dry Adapter x FP	MDD Maxi Dry Coupler x FP	A Safety Breakaway Coupling	3" - 8" D		
FIG206-•• Figure 206 Integral Union						

- A** Aluminum
- B** Brass
- D** Ductile (Iron)
- CI** Cast Iron
- MI** Malleable Iron
- S** Carbon Steel
- SS** Stainless Steel

- Camlocks Max WP**
- 250psi 1/2" - 2"
 - 200psi 2 1/2", 3"
 - 450psi 4"
 - 75psi 5", 6"
 - 50psi 8", 10", 12"



Industrial Hose Connections

2" - 4" D FIG100•• Figure 100 Integral Union	2" - 4" S STNHD•• Heavy Duty Notched KC Nipple	2" - 8" S NF••••• Notched Ferrule	1/2" - 12" A,B,S,SS ST••, STC••, RST•• KC Nipples	1/2" - 12" A S SS STB•• Beveled End KC Nipple	1" - 12" S,SS STV•• Grooved End KC Nipple
1-1/2" - 6" A,B,MI CAB-MA-FAB Pin-Lugs	1/4" - 12" S,SS DM•• Steel Hose Mender	2" - 4" S Ferrules Light Duty and Heavy Duty	1" - 6" S IXM•• Internal Expansion MP	1-1/4" - 4" S IXV•• Internal Expansion Grooved	1-1/2" - 5" B,S IXCB•• Internal Expansion California Style End <small>Popular w/ concrete pumping hose</small>
A,B,S,SS IXF••••• Internal Expansion Ferrule	1-1/2" - 5" S California Style Coupling	4" MI 150# Flange X Figure 206 Adapters	External Swage Hose Ends (Holedale) →		2" - 12" S,SS 4100+•••• MP Thread
2" - 12" S,SS 4200+•• Beveled	2" - 12" S,SS 4300+•• Grooved	2" - 8" S,SS Fixed or Floating Flanged End	2" - 12" S,SS 4000+••A,B Ferrules	Crowsfoot Couplings →	
1/4"-1" 150psi B,MI,SS AMB 2 Lug MP End	1/4"-1" 150psi B,MI,SS AMC 2 Lug FP End	150psi MI AM••WF Crimp-On	150psi B,MI,SS AM0 AM10 2 Lug Air King Blank End	1.25"-2" 150psi B,MI AM16, AM21, AM26 4 Lug Air King Hose End	1.25"-2" 150psi B,MI AM18, AM23, AM28 4 Lug Air King FP
 Washers, Safety Clips	Sand Blast Couplings →		3/4"-1.5" 110psi A,B _SB Quick Coupling	3/4"-1.5" 110psi A,B _NH Nozzle Holder	1.25"-1.5" 110psi A,B _SC Threaded Coupling
Ground Joint Couplings →		3/4"-2" MI,S _GF Complete Female	Bauers Style Quick Connects →		2"-12" S MC Male x Barb
2"-8" S MCM Male x MP	2"-8" S FCM Female x MP	S Female, Male, Double Spuds	2"-12" S FC Female x Barb	2"-12" S EL Female x ASA Flange	2"-12" S FMR Female x Male Reducers
2"-8" S RG Rubber or EDPM Gasket					

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Used for 10"-12" only S ACB304 Level Assist Tool	Ringlock Fittings →	4"-10" A P1842-•• Female x Barb	4"-10" A P1843-•• Male x Barb	4"-12" A Elbow's x Tee's	4"-12" A P2123-•• Clamps
Storz →	1-1/2" - 6" FSA & SFSA Storz x Female	1" - 6" MSA - Storz x Rigid Male	4" - 6" NCS-CSF - Storz x Flange	4" - 6" Storz Adapters	4" - 5" Storz Valves
 Storz Accessories	Foot Valves & Strainers →	1.5" - 8" CI DFVS-•• Complete Foot Valve	1.5" - 8" S,SS RHS and SHS Round and Square Hole Strainers	1-1/2" - 4" P,S RSS and TSS Long, Thin, and Polyethylene Strainer	1.5" - 3" S DSB and DST Bottom and Top Skimmers
3"-4" SS WHA and SD Witches Hat and Plate Strainer	1.5" - 6" P Sight Glass	1/4" - 2" B Strains trash 59-00• Y Strainer	Airline Accessories →	1/4" S Lever Blow Guns	1/4" SS Trigger Blow Guns
1/4" B,S 690, 698, 699 Air Chucks	1/4" S S506 Inflator	1/4" S S685-4 Manifold	1/8" - 1/4" B 684 Tank Valve	1/4" B S1090 Pop-Off	1/8" - 1" B,S Breather Vents, Mufflers
 Tire Gauges	 Inline Air Filters and Regulators	Industrial Accessories →	 Hose Reels Manual or Retractable	 Hose Floats	 Cushion Clamps
Universal, Tractor Hydraulic Oils	 Wrenches	 Duct Tape	 Teflon Coating	 Teflon Tape	 Service Plug
Clamps →	1" - 17" S Single & Double Bolt Clamp	1/4" - 4" S 2, 4, and 6 Bolt Clamp	1-1/2" - 12" S Spiral Clamp	7/32" - 24-7/8" S,SS Worm Gear Clamp	5/8" - 5" S,SS Lined Worm Gear Clamp

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Safety & Protection Products


9/16" - 8-1/4" S,SS Constant Torque Clamp	1" - 13" TBC, HTBC, and HDTBC Clamps	3/16" - 2" S,SS Single, Double Ear Clamp	13/16" - 8" S,SS Center Punch Clamp	3/8" - 1-1/4" S,SS Band & Buckles	S Clamping Tools
Pressure Washer → Safety and Protection Products →	 Nozzles	18", 24", 36", 48" Wands	1/4" Spray Tips	1/4", 3/8" Euro Style Couplers	1/4", 3/8" High Pressure Swivels
	 Bolted Safety Clamp with Cable or Chain	 Hinged Safety Clamp with Cable or Chain	 Lifting Collar	 Hose Handle (carry hose easier)	2", 300 feet max Similar to mill hose but without liner Polyester Cable Cover YELLOWJACKET-32
.090" - 4.5" MWHSSNAKESKIN Nylon Hose Sleeve	1/2" - 6" MWHSP Plastic Spiral Wrap	.515" - .230" Steel Spring Guard	1.5" - 8" Layflat Hose	1/4" - 8" Protects from heat and abrasion Stainless Braid	1/4" - 6" Armor & Tetraglass Sock
1/4" - 4" Fire Sleeve	2" - 8" Hose Sleeve with Velcro	1/4" - 2" Abrasion Shields (hot dog buns)	1/4", 3/8" Prevents overbending at fitting Bend Restrictor	Easily tears off Heat-Shrinkable Clean Seal Capsule	.32" - 6.37" Hose Straps
Hose ID 1/2" - 4" Whip Checks	for Hose ID 1/2" - 4" Whip Sock	for Hose ID 1/2" - 4" use in water Kevlar Whip Sock	 Watch video to see the superior quality of whip socks over whip checks.	Put on all rotary assemblies Safety Clamp Sticker	Threaded industrial hose assemblies Back-Up Wrench Sticker
2" - 8" Fig 100 Plastic Cap & Plug	1" - 10" Fig 206 Plastic Cap & Plug	1" - 6" Fig 400 & 602 Plastic Cap & Plug	1" - 4" Fig 1002 Plastic Cap & Plug	3", 4" Fig 1003 Plastic Cap & Plug	1" - 5" Fig 1502 Plastic Cap & Plug
3" - 20" Hammer Seals Cap	1/4" - 8" Threaded Plastic Caps & Plugs	3/4" - 3" Code 61, Code 62 Aluminum Caps	S, M, L, XL, XXL Wearable Gear	Popular as BOP hose restraints Nylon Hose Halter	 Lifting Slings

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Flowline (Coming Summer 2015)



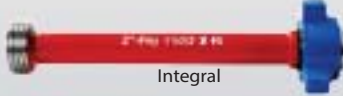
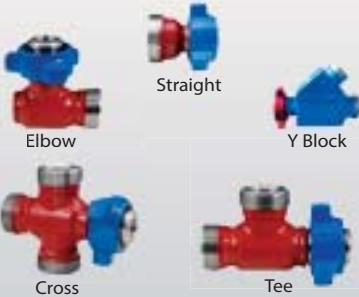



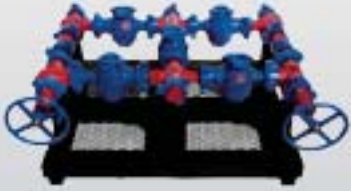

MTRs and Hydrostatic Test Reports available through phone app.



Utility to Retrieve MTRs and Test Certificates



Immediately verifies chemical properties
Mobile Spectrometer

<p>Repair Kits Plug, Insert Set, Seal Kit</p>  <p>Plug Valves</p> <p>Handle Operated 1" x 1", 1" x 2", 2" x 2", 3" x 3" Gear Operated 2" x 2", 3" x 3"</p>	<p>Repair Kits Balls, Ball Plugs, Ball Cover, Ball O-Rings, Snap Rings, Grease O-Rings, Packing Seals</p>  <p>Swivel Joints</p> <p>Fig 1502 Style 10, 20, 30, 50, 80, 100; Sizes 2", 3" Fig 602 Style 10, 30, 50; Sizes 2", 3"</p>	<p>Replacements Nuts, Segments, Snap Rings</p>  <p>J-55, N-80 Pup Joints</p> <p>NPST & Integral Sizes 2-3/8", 2-7/8", 3-1/2" Lengths (Feet) 2, 3, 4, 5, 6, 8, 10, 12</p>	
 <p>Integral Fittings</p> <p>Elbows Straight, Single Cushion, Double Cushion in 2", 3" Tees 2", 3"; Crosses 2", 3"; Y Block 2", 3"</p>	 <p>Steel Hose Loops</p> <p>Sizes 2", 3"</p>	 <p>Crossover Adapters & Swages</p> <p>Hammer Union Ends 2", 3", 4" EUE Ends LP, 2 3/4", 2 7/8"</p>	
 <p>Blast Joints</p> <p>Sizes 2", 3"</p>	 <p>Manifolds</p> <p>Types 4 Valves, 5 Valves, 9 Valves Sizes 2"</p>	 <p>Bull Plugs & Caps</p> <p>Blind Plugs Male/Female 2", 3" Tapped Plugs Male/Female 1/2" Tap, 9/16" Tap</p>	

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Frac Tank Supplies Sizes 6" and 8", Figure 100 Connectivity

<p>ASTM A536 Grade 65-45-12</p>  <p>FIG100-00/FEMALE</p> <p>Frac Hose Sub</p>	<p>ASTM A216 Grade WCB HDNUT alternative</p>  <p>FIG100-00/SLIPON</p> <p>Nut or HX Nut</p>	<p>ASTM A216 Grade WCB with O-Ring optional</p>  <p>FIG100-00/SLIPON</p> <p>Slip On (Threaded)</p>	<p>ASTM A216 Grade WCB</p>  <p>FIG100-00/BLIND</p> <p>Threaded Blind</p>	<p>ASTM A216 Grade WCB</p>  <p>FIG100-00/FWELDON</p> <p>Female Weld Stub</p>	<p>ASTM A216 Grade WCB</p>  <p>FIG100-00/TEE</p> <p>Tee</p>	<p>ASTM A216 Grade WCB</p>  <p>FIG100-00/SPLITTER</p> <p>Union Splitter Valve</p>
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 Dimensions, Weights, and Test Pressures	Schedule 40 Pipe Fittings 		 S40BNIP-...-IN Nipple	 S40HBHU-.. Hex Bushing	 S40BCAP-.. Cap	 S40BCP-.. Coupling
	 S40BRCP-.. Bell Reducer	 S40BCRO-.. Cross	 S40BE45-.. Elbow 45	 S40BE90-.. Elbow 90	 S40BR90-.. Reducing Elbow	 S40BS45-.. Street Elbow 45
 S40BS90-.. Street Elbow 90	 S40BSOE-.. Side Outlet Elbow	 S40BEXT-.. Extension	 S40BFHH-.. Floor Flange	 S40BLOC-.. Lock Nut	 S40BSHP-.. Square Head Plug	
 S40BSSP-.. Square Socket Plug	 S40BTEE-.. Tee	 S40BSOT-.. Side Outlet Tee	 S40BSTE-.. Street Tee	 S40BBHT-.. Bull Head Tee	 S40BRTE-.. Reducing Tee	
 S40BUNI-.. Union	Schedule 80 Pipe Fittings Lower pressure than forged steel		 S80BNIP-...-IN Nipple	 S80BCAP-.. Cap	 S80BCP-.. Coupling	 S80BRCP-.. Bell Reducer
 S80BE45-.. Elbow 45	 S80BE90-.. Elbow 90	 S80BS90-.. Street Elbow 90	 S80BTEE-.. Tee	 S80BRTE-.. Reducing Tee	 S80BUNI-.. Union	

Schedule 40 and Schedule 80 Pipe Fittings are also available in Galvanized

Custom Made Nipples

- Any length up to 21 feet
- Threaded, Grooved, or Plain End





<p>Merchant Steel Pipe Fittings</p> <p>→</p> <p>Use on lower pressure systems. Easy to weld.</p>	 <p>S40BMHBU-●● Merchant Hex Bushing</p>	 <p>S40BMCAP-●● Merchant Cap</p>	 <p>S40BMCPL-●● Bonded Merchant Coupling</p>	 <p>S40BMHCP-●● Merchant Half Coupling</p>	 <p>S40BMHHP-●● Merchant Hex Head Plug</p>
 <p>S40BMHSP-●● Merchant Hex Socket Plug</p>	 <p>S40BMSHP-●● Merchant Square Head Plug</p>	<p>XXH Nipples & Schedule 160 Nipples</p> <p>→</p>	 <p>XXHBNIP-●●-●●IN XXH Nipples</p>	 <p>S160BNIP-●●-●●IN SCH160 Nipples</p>	<p>Forged Steel 2K, 3K, 6K</p> <p>→</p> <p>Threaded fittings</p>
 <p>FSBT•KHHB-●● Hex Bushing</p>	 <p>FSBT•KCAP-●● Cap</p>	 <p>FSBT•KCP-●● Coupling</p>	 <p>FSBT•KHCP-●● Half Coupling</p>	 <p>FSBT•KRCP-●● Bell Reducer</p>	 <p>FSBT•KCRO-●● Cross</p>
 <p>FSBT•KE45-●● Elbow 45</p>	 <p>FSBT•KE90-●● Elbow 90</p>	 <p>FSBT•KS90-●● Street Elbow 90</p>	 <p>FSBT•KBHP Bull Head Plug</p>	 <p>FSBT•KHHP-●● Hex Head Plug</p>	 <p>FSBT•KSHP-●● Square Head Plug</p>
 <p>FSBT•KTEE-●● Tee</p>	 <p>FSBT•KRTE-●● Reducing Tee</p>	 <p>FSBT•KUNI-●● Union</p>	<p>Stainless 304/316 Schedule 40</p> <p>→</p> <p>Use in salt water, chemical and other harsh environments.</p>	 <p>S40•NIP-●●-●●IN Nipple</p>	 <p>S40•HBU Hex Bushing</p>
 <p>S40•CAP Cap</p>	 <p>S40•CP Coupling</p>	 <p>S40•HCP Half Coupling</p>	 <p>S40•RCP Bell Reducer</p>	 <p>S40•CRO Cross</p>	 <p>S40•E45 Elbow 45</p>
 <p>S40•E90 Elbow 90</p>	 <p>S40•S90 Street Elbow 90</p>	 <p>S40•LOC Lock Nut</p>	 <p>S40•HHP Hex Head Plug</p>	 <p>S40•SHP Square Head Plug</p>	 <p>S40•TEE Tee</p>
 <p>S40•UNI Union</p>	<p>We also carry stainless tubing, ball valves, and hammer unions</p>	<p>Grooved Nipples, Fittings & Couplings</p> <p>→</p> <p>Comparable to Victaulic & Gruvlok</p>	 <p>S40BGG-●●-●●IN Groove x Groove</p>	 <p>S40BGT Groove x Threaded</p>	 <p>S40BGP-●●-●●IN Groove x Plain</p>

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Pipe Fittings & Flanges



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 GRVRA-•••OD Reducing Adapter	 GRVCAP-•••OD Cap	 GRVTCA-•••OD Tapped Cap	 GRVCRO-•••OD Cross	 GRVE45-•••OD Elbow 45	 GRVE90-•••OD Elbow 90
 GRVFA-•••OD Flange Adapter	 GRVSF-•••OD Split Flange	 GRVTEE-•••OD Tee	 GRV RTE Reducing Tee	 GRVRCP Standard Coupling	 GRVFCP Flexible Coupling
 GRVQRC Quick Release	 GRVSRC Standard Reducing	 GRVHRC HD Reducing	 GRVHPC High Pressure	 GRVGSK Gasket	Swage Nipples Carbon, 304SS, 316SS Schedule 40, Schedule 80, Schedule 160
 Ends have same center line ••••CTT Concentric Threaded x Threaded	 Not the same center line ••••ETG Eccentric Threaded x Groove	 ••••CGT Concentric Groove x Threaded	 ••••CGG Concentric Groove x Groove	Oil Country Swage Nipples Threads 8RD, 10RD, 8V, 10V, 11-12V Materials J55, K55, N80, L80	 SCH40 Swage Nipples
 SCH80 Swage Nipples	 XXH Swage Nipples	Bull Plugs NPT Threads Carbon Steel, 304SS or 316SS	 S40•BPL SCH40 Bull Plugs	 S80•BPL SCH80 Bull Plugs	 XXH•BPL XXH Bull Plugs
Oil Country Bull Plugs Tubing, Casing & Line Pipe Threads - 8RD, 8V, 11-1/2V, LP Materials - J55, K55, N80, L80	 SCH40 Oil Country Bull Plugs	 SCH80 Oil Country Bull Plugs	 XXH Oil Country Bull Plugs	Merchant API Couplings 300# Black or Galvanized	 APIBCP Line Pipe Coupling (Casing)
Bolted Sleeve Couplings Flexible connection for plain end pipe	 BSCPLG-••••IN Coupling	ANSI Flanges Class 150, 300, 400, 600, 900, 1500, 2500 Carbon, 304SS, 316SS	 FL150CTHR-•• Threaded	 FL150CSON-•• Slip-On	 FL150CWNE-•• Weld Neck
 FL150CSWE-•• Socket Weld	 FL150CBLT-•• Blind	 FL150CCOM-•• Companion	 Flange Gaskets	 Bolts/Studs	API Flanges Carbon Steel and SS




















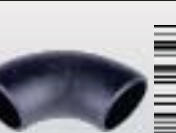






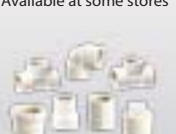





If you have a 6" pipe and 2" pipe laid on the ground end to end and need a reducer to join them without raising either one, use an **eccentric swage nipple**.

Vented Bull Plugs are used to bleed the pressure out of a system.

BSCPLG-64-12IN Bolted Sleeve Coupling 4" ID, 12" long



Pipe Fittings & Flanges

 <p>FL2K 2000#</p>	 <p>FL3K 3000#</p>	 <p>FL5K 5000#</p>	 <p>FL10K 10,000#</p>	 <p>FL15K 15,000#</p>	 <p>R Ring Joint Gasket Type R</p>
 <p>BX Ring Joint Gasket Type BX</p>	 <p>RX Ring Joint Gasket Type RX</p>	<p>Most economical</p>  <p>B7B2N-6IN Black Bolts/Studs</p>	 <p>B7P2N-6IN Plated Bolts/Studs</p>	 <p>B762N-6IN 316SS Stainless Bolts/Studs</p>	<p>Best corrosion resistance</p>  <p>B7T2N-6IN Teflon Bolts/Studs</p>
<p>Orifice Plates</p> <p>Measure Flow Rate, reduce pressure, or restrict flow</p>	<p>AGA #3 & APJ 14.3</p>  <p>Orifice Plate 304SS</p>	<p>AWA Plate Flanges</p> <p>Lightweight 150# Flange Carbon, 304SS, 316SS Raised or Flat Surface</p>	 <p>FLAWCSN Slip-On Plate Flange</p>	 <p>FLAWCLJO Lap Joint Plate Flange</p>	 <p>FLAWCSWE Socket Weld Plate Flange</p>
 <p>FLAWCBLI Blind Plate Flange</p>	<p>Schedule 40 & Schedule 80 Butt Weld Fittings</p>	 <p>S40BWCAP Cap</p>	 <p>S40BWE45 Elbow 45</p>	 <p>S40BWE90 Elbow 90</p>	 <p>S40BWE90SR Elbow 90 Short</p>
 <p>S40BWE90LR Elbow 90 Long</p>	 <p>S40BWCRED Concentric Reducer</p>	 <p>S40BWERED Eccentric Reducer</p>	 <p>S40BWTEE Tee</p>	 <p>S40BWRTE Reducing Tee</p>	<p>Miscellaneous</p>
<p>Available at some stores</p>  <p>PVC Fittings</p>	<p>Available but not in stock</p>  <p>Bronze Fittings</p>	<p>Available but not in stock</p>  <p>Red Brass Nipples</p>	<p>Available but not in stock</p>  <p>Olets</p>	 <p>Difference between similar lightweight flanges</p>	 <p>ANSI and API Flanges Chart</p>

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This product line was started in Williston, North Dakota. **We don't call on drilling rigs or production companies direct.** Customer pick up only!

Drill Slips, Elevators, & Tong Dies 	 Drill Slips	 Type C Safety Clamp	 Slip Elevators	 Slip Handles	 Tong Dies
Gate Valves, Shear Relief, & Float Valves 	 Mud Gate Valve	 Shear Relief Valve	 Float Valves		
Swivel Joints & Specialty Unions 	 Swivel Joints	 Seal & Grip Union	 Hammer Seal Union	 Pup Joints	
Flow Tees & Stuffing Boxes 	 Flow Tee	 Stuffing Box	Drill Collar & Drill Pipe Dope 	 Drill Collar & Drill Pipe Dope	
Check Valves 	 Grooved End Check Valve	 Threaded Check Valve	 Wafer Check Valve		
Ring Gaskets 	 Ring Gaskets	Stud Bolts 	 B7 Stud Bolts	 Tap End Studs	
Tubing Couplings 	 J55	 L80	 Tubing Pup Joints	Miscellaneous Pump Modules, Liners for Mud Pumps, Urethane and Rubber Diaphragms for Pulsation, Packing Elements 11" & 13 5/8" for GK and Spherical, Weld Fittings, Liquid Filled Gauges, Gaging Tapes, Pipe Nipples 2"-10" Sch 40, Sch 80, XXH, Full Line of Swages and Crossovers in J-55 and L-80, Full Line of 2"-4" Forged Steel Fittings in 2M, 3M, 6M Pressure Ratings, BOP Ram Rubbers 7/16" Type 61 & 81, Parts for Gardner-Denver PAH Mud Pumps	
Pulsation, Dampener, Bladders, RAM Rubbers, & Pipe Wipers 	 Pulsation Dampener Bladders	 Pipe Wipers	 RAM Rubbers		



Hydraulic Repair Facilities

We rebuild components at our repair facilities from nearly all major OEMs. All testing is datalogged. Test results are available through the phone app (Summer 2015).

Some of the product lines that we commonly work on:

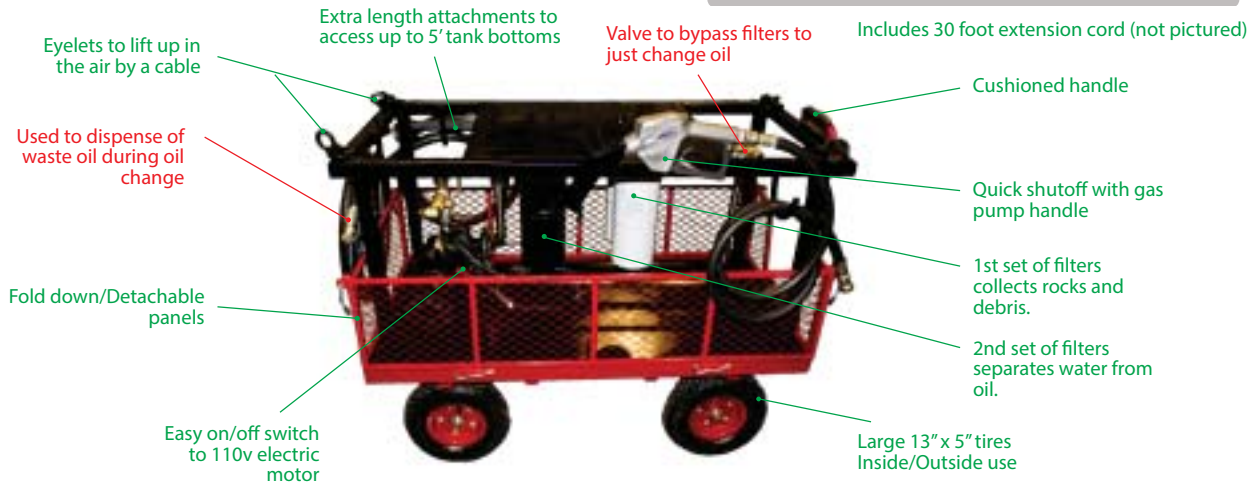
Accumulators	Actuators	Cylinders	Motors	Pumps	Valves
Accumulators, Inc.	Moog	Parker	Char-lynn	Rexroth	Bosch
Hydac	Parker	Hanna	Staffa	Vickers	Rexroth
Bosch	Rotork	Hydro-line	Eaton	Eaton	Vickers
Parker	Tolomatic	Miller	Vickers	Denison	Denison
Olaer	Morin	Vickers	Danfoss	Parker	Moog
Eaton	Keystone	Yates	Permco	Oil Gear	Parker
		Welded Style	Rexroth	Racine	
		Mill-Duty	Denison	Continental	
			Hagglunds	Casappa	
			Parker	Permco	



Filter Carts

Portable filter carts are the most economical way to protect your system from contamination.

- Extends fluid life and system performance
- Ready to use as received
- Use to transfer fluid from drums or storage tanks to system reservoirs
- For use with fluids such as hydraulic, gear, and lube oils



New Components

Wide Range of Components available to fit customers specific application.

Pumps & Motors Axial Piston, Bent Axis, Gear, Gerotor, Gerolor, LSHT, Radial Piston, Vane	Valves Wide Range of DCVs, Relief, Reducing, Sequence, Check Valves, Needle Valves, Flow Controls, Ball Valves	Pressure Storage & Dampening Piston & Bladder, Accumulators, Accumulator Gauging & Charging, Noise & Shock Suppression	Cylinders Single Acting, Multi Acting, Smart Cylinders, Cylinder Accessories	Fluid Distribution Manifolds, Subplates, Cover Plates, Tapping Plates, Valve Adapters, Flanges
Interface Components Gauges, Pressure and Temp Switches, Pressure Transducers, Temp Sensors, Speed Sensors	Sealing O-rings, Backups, Cylinder Seal kits, Gland, Piston, Wiper, Thread Sealing, Caps and Plugs, Pump and Motor Seals, Retaining Rings	Reservoir Reservoirs, Customization Options, Pump and Motor Adapters, Tank Accessories	Engine Starters Air starters, Starter Head Assembly, Piston Starters	Fluid Conditioning Pressure, Return, Spin on Filters, Strainers, Elements, Filter Carts, Fluid Analysis Kits

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Thermoplastic
Teflon
Crimp Fittings
Crimp Machines
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Discharge Only
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Composite Hose
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Pipe Fittings, Flanges
Prod, Drill & Well Serv Products
Hyd ACMPV, Filter Carts
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Valves
Instrumentation
Gauges
Quick Couplings
Steel Adapters
Brass Fittings

Proactive maintenance can lengthen component life and greatly reduce problems and failures.



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Belts

	Classical	A, B, C, D	The most practical, economical, and dependable belts for most industrial drives.
	Narrow	3V, 5V, 8V	Narrow design enables a smaller belt to carry up to 3 times as much horsepower. The narrow profile allows sheave face width to be reduced 30 to 50 percent
	Cogged	AX, BX, CX, DX, 3VX, 5VX	Provides higher horsepower in a given space compared to classical—perfect where weight or sheave size is restricted. Can increase energy efficiency by 10%.
	Kevlar	5VK, 8VK	Super tough, designed for high tension, high horsepower, and severe shock load applications. Kevlar cords have far more heat resistance and stretch less.
	Banded	B, C, D, 3V, 5V, 8V	Individual belts that are tied together with high strength transverse tensile cords help guide the belts into sheave grooves and eliminates the whipping, flip over, or jumping out of sheave grooves.

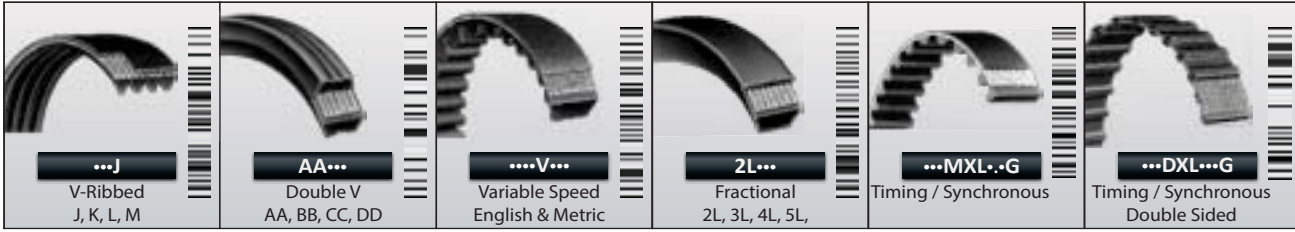
	Belts Installation, Tensioning, and Maintenance Guidelines		Helpful Belt Calculations
	Life Cycle Test Results		Belts RGA Procedure and Warranty
	Belts Cross Reference Guide		Sheaves Cross Reference Guide
	Belt Tension Tester		Sheave, Groove, and Belt Gauges

<p>A18 to A180 AX19 to AX180</p> <p>A, AX</p>	<p>B25 to B472 BX31 to BX240</p> <p>B, BX</p>	<p>C38 to C480 CX51 to CX240</p> <p>C, CX</p>	<p>D105 to D600</p> <p>D</p>
<p>Wedge Style Nomenclature</p> <p>5VX750</p> <p>Top Width in 8ths of inches Type Outside Circumference in 10ths of an inch (75.0")</p>	<p>3V250 to 3V1400 3VX250 to 3VX1400</p> <p>3V 3VX</p>	<p>5V500 to 5V3550 5VX450 to 5VX2000</p> <p>5V 5VX</p>	<p>8V1000 to 8V5600 8VK1250 to 8VK6600</p> <p>8V 8VK</p>

Dimensions on this page are for single belts. Banded belts may be taller. Scan for dimensions on banded belts



Kevlar belts are designed for as much as 50% more horsepower than standard banded belts. Kevlar belts are also more heat resistant and stretch far less than other cords.



Classical Sheaves

Designed for use with QD bushing and corresponding belts.

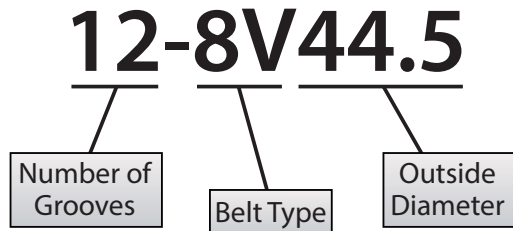
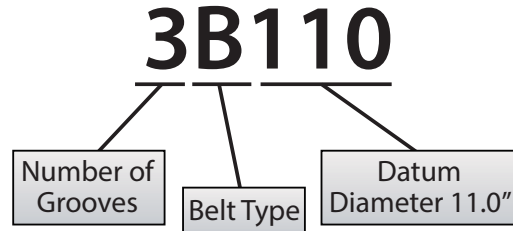
Sheaves	Grooves	O.D. Range
A/B	1-6, 8, 10	3.75" – 38.35"
C	1-10, 12	5.4" – 58.6"
D	3-10, 12	12.6" – 58.6"



Narrow Sheaves

- Designed for use with QD bushings.
- Higher horsepower than Classical.

Sheaves	Grooves	O.D. Range
3V	1-6, 8, 10	2.2" – 33.5"
5V	2-6, 8, 10	4.4" – 50"
8V	4-6, 8, 10, 12	12.5" – 71"



QD Bushings

 Installation and Removal of QD Bushings	$\frac{1}{2}$ " to $1\frac{13}{16}$ " w Keyseat $1\frac{1}{4}$ " no Keyseat JA	$\frac{1}{2}$ " to $1\frac{13}{16}$ " w Keyseat SH	
$\frac{1}{2}$ " to $1\frac{15}{16}$ " w Keyseat 2" no Keyseat SDS or SD	$\frac{1}{2}$ " to $2\frac{1}{2}$ " w Keyseat 2 $\frac{3}{8}$ ", 2 $\frac{1}{2}$ " no Keyseat SK	$\frac{1}{2}$ " to $2\frac{3}{4}$ " w Keyseat 2 $\frac{7}{8}$ ", 2 $\frac{15}{16}$ " no Keyseat SF	
$\frac{7}{8}$ " to $3\frac{1}{8}$ " w Keyseat 3 $\frac{1}{2}$ " no Keyseat E	1" to $3\frac{15}{16}$ " w Keyseat 4" no Keyseat F	$1\frac{7}{16}$ " to $4\frac{1}{2}$ " w Keyseat J	$1\frac{15}{16}$ " to 7" w Keyseat M, N, P



Special Applications and Made-To-Order Products

- Air Compressor
- Agricultural
- Oilfield Machinery
- Construction
- Air Handling
- We can provide kits of V-Belt drive components

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Ball Valves

VBA 2F B 600 - 16

Ball

Style
 1F 1 Piece Full Port
 1R 1 Piece Reduced Port
 2F 2 Piece Full Port
 2R 2 Piece Reduced Port
 4F 4 Bolt Full Port
 4R 4 Bolt Reduced Port
 6F 6 Bolt Full Port
 6R 6 Bolt Reduced Port
 SR Spring Return
 MI Mini
 DY Dual Y
 DV Dual Y Vented
 3D 3 Way Diverting
 3L 3 Way L Pattern
 ST Steam
 HB Hex Bar Body

Body Material
 B Brass
 N Nickel Plated Ductile Iron
 Z Bronze
 4 304SS
 C Carbon
 6 316SS
 P PVC
 M Monel
 H Hastaloy
 D Ductile Iron

PSI
 125
 150
 200
 300
 600
 750
 1K
 15C
 2K
 3K
 5K
 6K
 10K

Size
 04 1/4"
 06 3/8"
 08 1/2"
 12 3/4"
 16 1"
 20 1 1/4"
 24 1 1/2"
 32 2"
 48 3"
 64 4"

 VBA2FB600 2 Piece Full Port Brass 600 WOG	 VBA2FC2K 2 Piece Full Port Carbon 2,000 psi	 VBA2RC2K 2 Piece Reduced Port Carbon 2,000 psi	 VBA2FC3K 2 Piece Full Port Carbon 3,000 psi	 VBA2FC6K 2 Piece Full Port Carbon 6,000 psi	 VBA2R61K 2 Piece Reduced Port 316SS 1,000 psi
 VBA2F62K 2 Piece Full Port 316SS 2,000 psi	 VBA2F63K 2 Piece Full Port 316SS 3,000 psi	 VBA2F66K 2 Piece Full Port 316SS 6,000 psi	 VBA2RD 2 Piece Reduced Port Ductile Iron	 VBA2RD750 2 Piece Reduced Port Ductile Iron 750 psi	 VBA2RD750 2 Piece Reduced Port Ductile Iron 750 psi

Butterfly Valves

200 PSI WP
 All compatible with ANSI 125/150 Flanges
 All have 5/8" square stem

Style
 W Wafer
 L Lug
 T Threaded
 G Grooved
 F Flanged

Body Material
 D Ductile Iron
 6 316SS
 I Cast Iron
 C Carbon
 P PVC

Stem Material
 1 416SS
 4 304SS
 6 316SS
 M Monel
 P PVC

Connection
 L Hand Lever
 G Gear
 A Actuator

Size
 04 1/4"
 06 3/8"
 08 1/2"
 12 3/4"
 16 1"
 20 1 1/4"
 24 1 1/2"
 32 2"
 48 3"
 64 4"

VBFW SN - ND1BL - 64




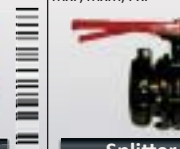

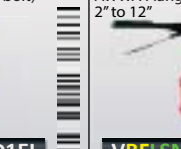

Butterfly

Body Style
 SN Short Neck, Notched Body
 SA Short Neck, Alignment Holes
 SB Short Neck, Basic Valve
 SR Short Neck, Round Body
 S8 Short Neck, Notched, 8 Bolts
 LB Long Neck, Basic Valve
 LP Long Neck, Pinless Disc
 LA Long Neck, Alignment Holes

Disc Material
 A Aluminum/Bronze
 D Ductile Iron Nickel Plated
 N Nylon Coated (Ductile Iron)
 4 304SS (CF8)
 6 316SS (CF8M)
 M Monel
 T Teflon

Seat Material
 B Buna
 E EPDM
 V Viton
 T Teflon
 N Neoprene
 H Hypalon

- Replacement Handles,
- Stem Extensions,
- Gear Operators,
- Spring Return Actuators,
- Double Acting Actuators

 VBFWSN-DD1EL Wafer Notched, Short Neck EPDM Seat	 VBFWSN-6D1TL Wafer Notched, Short Neck Teflon Seat	 VBFW8-DD1EL Wafer Notched, Short Neck EPDM Seat	 Splitter Union Splitter Valve with Fig 206 or 100	 VBFLSN-DD1EL Lug Style, Short Neck, EPDM Seat	 VBFLSN-6D1TL Lug Style, Short Neck, Teflon Seat	 All Other Butterfly Valves
--	---	--	--	---	--	---



Check Valves

Poppet design
Prevents reversed flow

VCK SB 6 400 - 16 FF

Check

Open/Close Style SW Swing SP Spring SB Spring Ball Cone	Body Material B Brass 6 SS316 C Carbon Steel	PSI 200 300 400 1K 3K 6K	Size 08 1/2" 12 3/4" 16 1" 20 1 1/4" 24 1 1/2" 32 2" 48 3" 64 4"	Connections FF Female x Female MM Male x Male FM Female x Male MF Male x Female
---	--	---	---	--

1/4" to 2" VCKSB400FF Spring Ball Cone Brass or SS316	1/2" to 4" VCKSPB400FF Spring Brass	1/2" to 4" Horizontal or Vertical Use VCKSWB200FF Swing Brass	1/8" to 2"; PSI 2K-6K VCKSPC Swing Carbon Steel	1/8" to 2" VCKSPB200FF Spring Brass	3K Brass 1/8", 1/4" 6K SS316 1/8" to 1" VCKSB66K Spring Ball Cone Brass or SS316
--	--	--	--	--	--

Gate Valves

Gate valves are fully open or fully closed, not designated to regulate flow.

VG 8 B 400 - 16

Gate

Style 8 Normal Gate D Normal Gate Domestic S Steam Q Quick Opening	Body Material B Brass 6 SS316 C Carbon Steel	PSI 125 150 200 300 600	Size 08 1/2" 12 3/4" 16 1" 20 1 1/4" 24 1 1/2" 32 2" 48 3" 64 4"
---	--	---	---

1/2" to 4" VG8B200 Normal Full Port Brass Gate Valve	2" to 6" VGQB200 Quick Opening Brass FP x FP
---	---

Needle Valves / Flow Control Valves

6,000 psi at 200° F - Delrin Soft Seat
 10,000 psi at 200° F - Metal Hard Seat
 Available in A105 Carbon Steel and SS316
 NACE MR0175 Approved

VNP 6 10K - 16 MF

Needle

Style P Plug A Angle L Long Body M Multi-Port Gauge F Flow Control	Body Material C Carbon Steel 6 316SS	PSI 6K 10K	Size 08 1/2" 12 3/4" 16 1" 20 1 1/4" 24 1 1/2" 32 2" 48 3" 64 4"	Connections FF FP x FP MF MP x FP AA ALOK x ALOK AF ALOK x FP AM ALOK x MP CC Sweat x Sweat FL Flange x Flange
--	---	-------------------------	---	--

10K SS316 1/2" VNL6 Long Body Style
--

6K & 10K in CS & SS316 1/4", 1/2", 3/4", 1" VNP Needle Plug Type	6K & 10K in CS & SS316 1/2", 3/4", 1" VNP Plug Type with Bleed Screw	6K & 10K in CS & SS316 1/2" 3/4", 1" VNM Multi Port Gauge Valve	6K & 10K in CS & SS316 1/4", 1/2" VNA Angle Style	6K CS & SS316 1/4" VNP Round Handle	6K CS & SS316 1/4" VNP Tee Bar Handle
---	---	--	--	--	--

Instrument Manifold Valves 6,000 psi SS316; 1/2" only

Pipe to Pipe, Pipe to Flange, Flange to Flange 2 Way	 3 Way	 5 Way	 5 Way	 2 Valve Block & Bleed	Prevents over pressure Relief Popoff Valves	Can regulate flow Steam service Globe Valves
---	-----------	-----------	-----------	---------------------------	--	---

- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves**
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings



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Tylok's CBC-LOK® Double Ferrule Tube Fittings

- Double ferrule swaging action
- Heat code traceable
- 316 Stainless Steel
- ASTM F1387-99 (2005) material standards
- Total component interchangeability
- **Made in the U.S.A.**

Instrumentation Nomenclature






Installation Instructions

<p>Tubing Selection and Preparation</p>	<p>Tubing Working Pressure Chart</p>	<p>Tube Insertion Chart</p>	<h3>Unions</h3>	<p>DU Union</p>	<p>DRU Reducing Union</p>
<p>DBHU Bulkhead Union</p>	<h3>Connectors</h3>	<p>DMC Male Connector</p>	<p>DFC Female Connector</p>	<p>DBHMP Bulkhead x Male Pipe</p>	<p>DBHFP Bulkhead x Female Pipe</p>
<p>DBUANF Bulkhead x JIC</p>	<h3>Elbows</h3>	<p>DELU Union Elbow</p>	<p>DME45 Male Elbow 45</p>	<p>DME Male Elbow 90</p>	<p>DFE Female Elbow 90</p>
<h3>Tees</h3>	<p>DTTT Union Tee</p>	<p>DTTM Male Branch Tee</p>	<p>DTMT Male Run Tee</p>	<p>DTTF Female Branch Tee</p>	<p>DTFT Female Run Tee</p>
<h3>Stub Tube Connectors</h3>	<p>DATPM Stub x Male Pipe</p>	<p>DATPF Stub x Female Pipe</p>	<p>DATANF Stub x JIC</p>	<h3>Caps and Plugs</h3>	<p>DCAP Cap</p>
<p>DF PLUG Plug</p>	<h3>Miscellaneous</h3>	<p>DN Nut</p>	<p>DFC Front Collet</p>	<p>DCR Rear Collet</p>	<p>DCSET Collet Set</p>
<p>Can be tightened at any location on tube</p> <p>Thermocouple Bore Through</p>	<p>Ensures nut properly tightened</p> <p>Gap Gage</p>	<p>Anti-gall for stainless steel, steel, and nickel</p> <p>Tylube</p>	<p>Detects gas leaks</p> <p>Tyspy</p>	<p>Steel Instrumentation Fittings</p>	<p>Brass Instrumentation Fittings</p>



Gauges

Commonly used with the test adapters on page 92.

					
	CDS Series	CF Series	CFC Series	PDLC Series	PDSS Series
Dial Size	1.5", 2", 2.5"	1.5", 2", 2.5"	4"	4"	1.5", 2", 2.5", 4", 6"
Dial Range	Vac - 6,000 PSI	Vac - 10,000 PSI	Vac - 10,000 PSI	Vac - 10,000 PSI	Vac - 30,000 PSI
Fill Type	Dry	Glycerine	Glycerine	Glycerine	Dry or Glycerine
Thread Size	1/8", 1/4"	1/8", 1/4", 7/16"	1/4", 1/2"	1/4"	
Case Type	Steel	Stainless	Stainless	Stainless	Stainless
Accuracy	1.6% FSD	1.6% FSD	1.6% FSD	2% FSD	1.6% FSD
Mount Options	Center Back Bottom Panel Flange	Center Back Bottom Panel Flange	Bottom Lower Back Panel Flange	Center Back Bottom Panel	Center Back Bottom Lower Back Panel/Flange
	Economy gauge pneumatic systems with minimal vibration.	Glycerine filled to resist vibration and pressure surges. Ideal for most all applications.	Same construction as the CF only with a larger 4" dial	A more economical version of the CFC	All stainless construction, case, internals, and connection

Bi-Metal Thermometers

Gauges Temperature. Available in back mount, bottom mount, or adjustable mount.



Dial Size 3" or 5"
Range -50 to 550
Stem Length 2.5", 4", 6", 9", 12"



Thermowells

Used to protect the thermometer from the process media.



Connections 1/2" Female, 1/2" or 3/4" MPT
Lengths 2.5", 4", 6", 9"
Material 316 SS



Tubing

Industrial Grade is welded together and WP range is up to 5,000 psi. It's rolled, welded and then drawn on a mandrel which makes the OD consistent and provides a smooth tube by cleaning the weld.

Instrumentation Grade is seamless and WP range is up to 10,000 psi. Made from an extrusion process.



Stainless Steel Bulk Quantities

Material	OD	WP psi	Wall Thickness	20' Sticks	Coil Lengths
SS304 Seamless	0.25"	5100	0.35" wall annealed conforms to ASTM A269	800'	150 or 300 foot coils
	0.375"	3300		400'	
	0.5"	2600		200'	
SS316 Seamless	0.25"	5100		800'	
	0.375"	3300		400'	
	0.5"	2600		200'	
SS304 Welded	0.25"	5100		800'	
	0.375"	3300		400'	
	0.5"	2600		200'	



Free of scratches, ready for bending/flaring

Custom Made Assemblies

- Pricing by the foot and number of bends
- Fabricated and shipped from Oklahoma City or Dallas
- Samples are always our best guides, but drawings with detailed instructions are gladly accepted
- Tube kits are popular as well

Size	Wall Thickness	WP psi	Carbon Steel Welded	SS304 Welded	
1/8"	.028"	5,000			
3/16"	.035"		✓		
1/4"	.035"		✓		
5/16"	.035"		✓		
3/8"	.035"		✓		
1/2"	.049"		✓		
5/8"	.065"		✓		
3/4"	.065"		✓		
7/8"	.065"		✓		
1"	.095"		✓		
1 1/4"	1.20"		✓		
1 1/2"	1.20"		✓		
				✓	

Copper Tubing
Bulk quantities or custom made assemblies up to 50 foot coils



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- Rotary Hose Program
Info, Fittings
Choke & Kill, BOP
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Thermoplastic
Teflon
Crimp Fittings
Crimp Machines
- Industrial Hose Program
Suction & Discharge
Discharge Only
Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
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- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
- Gauges
- Quick Couplings
- Steel Adapters
- Brass Fittings

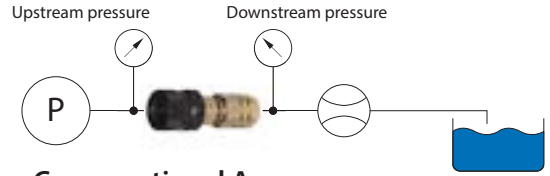


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Quick Couplings Selection Guide

- Fluid and its Temperature
- Fluid Pressure
- Valve Type
- Operating Environment
- Size and End Type

Pressure Loss $\text{Pressure Loss} = \text{Upstream pressure} - \text{Downstream pressure}$
Shows the loss of pressure when fluid runs through quick couplings.

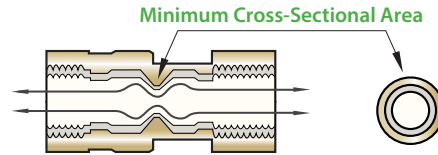


Valve Structure

Two-Way Shut-Off		Automatic shut-off valves are mounted in both plug and socket. The valves prevent leakage of fluid from the lines on disconnection.
Two-Way Shut-Off (Non-Spill)		"Two-way shut-off" non-spill design allows extremely little admixture of air on connection and prevents fluid leakage on disconnection.
Straight Through		No valving. Fluid flows out from both sides on disconnect.

Minimum Cross-sectional Area

This shows the minimum cross-sectional area of the fluid path when connected. This impacts flow rates.



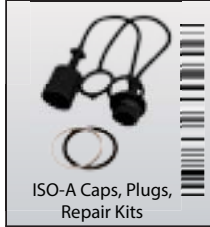
Interchange		ISO-A		ISO-B		Agricultural		ISO 16028		Wing		Wing 5000	
Body Material	Brass				✓						✓		
	Steel		✓		✓		✓		✓				✓
	SS304				✓								
	SS316				✓				✓				✓
Body Surface Treatment		Trivalent Chrome		Trivalent Chrome		Trivalent Chrome		Zinc Nickel				Zinc Nickel	
Size, Working Pressure, and Flow Rate (GPM) (standard configuration)	1/8"			4,000	3.1								
	1/4"	5,000	2.9	5,000	4.5	4,000	4	5,000	3.2				
	3/8"	4,000	7	4,000	12	4,000	6	5,000	11				
	1/2"	4,000	12	4,000	18	4,000	12	5,000	18				
	3/4"	4,000	28	4,000	29	3,000	28	5,000	28	3,000	31	5,000	35
	1"	4,000	50	4,000	50	3,000	48	5,000	50	4,000	52	5,000	65
	1-1/4"	3,000	70	2,500	90					3,000	85	5,000	105
	1-1/2"	3,000	90	2,500	120			3,000		2,500	110	5,000	160
2"	1,450	120	1,500	195			3,000				5,000	270	
Working Temp Range (with std seal)		-40° to 250° F		-40° to 250° F		-40° to 250° F		-40° to 250° F		-40° to 250° F		-40° to 250° F	
Standard Seal		Nitrile		Nitrile		Nitrile		Nitrile		Nitrile		Nitrile	
Latch Style	Ball		✓		✓		✓		✓		✓		✓
	Threads										✓		✓
End Connections	Female Pipe		✓		✓		✓		✓		✓		✓
	Male Pipe				✓				✓				
	Female O-Ring Boss		✓		✓		✓		✓		✓		✓
	Male O-Ring Boss								✓				
	JIC Male								✓				
	Metric Male O-Ring												
	Hose Barb												
	Female BSPP		✓		✓		✓		✓		✓		✓
Mounting Method	Bulkhead								✓		✓		
	Flange												
Valve Structure	Non-spill Valving								✓				
	Valved Male		✓		✓		✓		✓		✓		✓
	Valved Female		✓		✓		✓		✓		✓		✓
	Straight Through												
Connect Under Pressure											✓		✓
Caps/Plugs			✓		✓		✓		✓		✓		✓
Interchangeable with other brands			✓		✓		✓		✓		✓		✓
Repair Kit			✓		✓				✓		✓		✓
Minimum Salt Spray Hours Before Rust													
API 16D Approved Maintains pressure when exposed to 1300° F for 5 minutes													



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- Steel Adapters
- Brass Fittings

ISO-A Series

- Poppet valve designed to prevent uncoupled leakage
- Double shut-off
- Meets or exceeds ISO 7241-A
- Known for general usages such as mobile hydraulics, test equipment, and machine tool applications
- **Minimal leakage on disconnection**



Alternatives

- O-Ring Boss style
- Female BSPP

Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	5,000	2.9	2KF2	2KF1	K2F2	K2F1
3/8"	4,000	7	3KF3		K3F3	
1/2"	4,000	12	4KF4	4KF6	K4F4	K4F6
3/4"	4,000	28	6KF6		K6F6	
1"	4,000	50	8KF8		K8F8	
1-1/4"	3,000	70	10KF10		K10F10	
1-1/2"	3,000	90	12KF12		K12F12	
2"	1,450	120	16KF16		K16F16	



ISO-B Series

- Poppet valve designed to prevent uncoupled leakage
- Double shut-off
- Meets or exceeds ISO 7241-B
- Known for general usages such as mobile hydraulics, test equipment, and machine tool applications
- **Minimal leakage on disconnection**



Alternatives

- Brass, 303SS, or 316SS version
- O-Ring Boss style
- Female BSPP
- Food grade

Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/8"	4,000	3.1	1HF1		H1F1	
1/4"	5,000	4.5	2HF2		H2F2	
3/8"	4,000	12	3HF3		H3F3	
1/2"	4,000	18	4HF4		H4F4	
3/4"	4,000	29	6HF6		H6F6	
1"	4,000	50	8HF8		H8F8	
1-1/4"	2,500	90	10HF10		H10F10	
1-1/2"	2,500	120	12HF12		H12F12	
2-1/2"	1,500	195	20HF16	20HF24	H20F16	H20F24



Agricultural Series

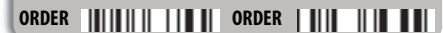
- Heavy duty knurled sleeves are built to resist brinneling
- Primarily for applications where interchangeability with equipment is necessary and popular in construction, agriculture, steel mills, and with oil tools
- **Minimal leakage on disconnection**



Alternatives

- O-Ring Boss style
- Female BSPP
- Standard offering is the ball valve, which generally provides greater longevity, while the poppet valve improves flow while in operation.
- Push pull coupler

Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	4,000	4	2AGF2		AG2F2	
3/8"	4,000	6	3AGF3		AG3F3	
1/2"	4,000	12	4AGF4	4AGF6	AG4F4	AG4F6
3/4"	3,000	28	6AGF6		AG6F6	
1"	3,000	48	8AGF8		AG8F8	



Dry Break Series



- Designed to transfer LPG in liquid and vapor
- Handles LPG (liquid and vapor), ink, adhesives, fatty acids, pharmaceuticals, liquid soaps, petroleum, chemicals, LNG, fuels, and drinking water
- 316SS connection (wetted parts)
- **Quick and spill free connection and disconnection of hoses and pipelines**

Used when your product

- is of high value
- requires costly environmental methods of cleaning up
- is expensive to reproduce or dispose
- is hazardous
- can cause a health risk

Alternatives

- Steel, aluminum, or brass
- Female Pipe or 150# ANSI connections



ISO 16028 Series

- Meets or exceeds ISO 16028 standards
- Ideal for bulkhead mounting
- Popular anywhere no spillage is required for cleanliness or where thermal expansion occurs
- **Non-spill flush-face style valve eliminates spills and air inclusion**



ISO 16028 Caps, Plugs, Repair Kits

Alternatives

- Brass, 303SS, or 316SS version
- O-Ring Boss style, BSPP style, or JIC Bulkhead style
- Operating pressure reduces with 316 SS version

Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple		Male Coupler	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	5,000	3.2	2HTF2		HT2F2			
3/8"		11	3HTF3	3HTF4	HT3F3	HT3F4	3HTM3	3HTM4
1/2"		18	4HTF4	4HTF6	HT4F4	HT4F6	4HTM4	4HTM6
5/8"		27		5HTF6		HT5F6		5HTM6
3/4"		28	6HTF6	6HTF8	HT6F6	HT6F8	6HTM6	6HTM8
1"		50	8HTF8	8HTF10	HT8F8	HT8F10	8HTM8	8HTM10
1-1/2"	3,000	140	12HTF12		HT12F12			
2"	3,000	225	16HTF16		HT16F16			

ORDER

ORDER

ORDER

Wing Series

- Brass construction
- Ideal for oilfield equipment like power tongs, dump trailers, swivels and mobile drilling rigs
- **Minimal leakage on disconnection**



Wing Caps, Plugs, Repair Kits

Alternatives

- BSPP style
- Hex-Nut Coupler (instead of wingnut) style
- Female Nipple with flange, nipple mounting flange



Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
3/4"	3,000	31	6WF6-B	6WF4-B	W6F6-B	W6F4-B
1"	4,000	52	8WF8-B		W8F8-B	
1-1/4"	3,000	85	10WF10-B		W10F10-B	
1-1/2"	2,500	110	12WF12-B		W12F12-B	

ORDER

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Wing 5000 Series

- High flow capacity with low pressure drop
- Primarily for rugged hydraulic applications such as offshore drilling, power tools, and cranes
- **Minimal leakage on disconnection**



Wing 5000 Caps, Plugs, Repair Kits

Alternatives

- SS version
- O-Ring Boss style
- View Port option provides visual confirmation of correct installation



Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
3/4"	5,000	35	6WSF6	6WSF4	WS6F6	WS6F4
1"		65	8WSF8		WS8F8	
1-1/4"		105	10WSF10		WS10F10	
1-1/2"		160	12WSF12		WS12F12	
2"		270	16WSF16		WS16F16	

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Protection

Hammer Unions

Flow Iron,
Frac Tank Supplies

Pipe Fittings, Flanges

Prod, Drill &
Well Serv Products

Hyd ACPV, Filter Carts

Belts, Sheaves, Bushings

Valves

Instrumentation

Gauges

Quick Couplings

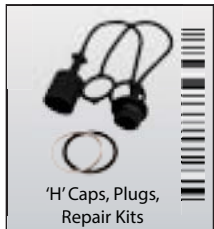
Steel Adapters

Brass Fittings

- Why Midwest Hose?
- Layflat Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
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 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
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- Valves
- Instrumentation
- Gauges
- Quick Couplings**
- Steel Adapters
- Brass Fittings

Snap-Tite 'H' Series

- Special two-piece body permits a high flow rate while maintaining a low pressure drop
- Built for heavy duty applications
- **Minimal leakage on disconnection**



Size	Steel Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple		Male Coupler		Male Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	6,500	5.5	2VF2	2VF1	V2F2	V2F1	2VM2		V2M2	
3/8"	4,500	9.5	3VF3	3VF4	V3F3	V3F4	3VM3		V3M3	
1/2"	4,000	13	4VF4	4VF6	V4F4	V4F6	4VM4		V4M4	
3/4"	3,500	30	6VF6		V6F6		6VM6		V6M6	
1"	2,000	48	8VF8		V8F8		8VM8		V8M8	
1-1/4"	1,750	82	10VF10		V10F10		10VM10		V10M10	
1-1/2"	1,500	120	12VF12		V12F12		12VM12		V12M12	
2"	1,500	185	16VF16		V16F16		16VM16		V16M16	

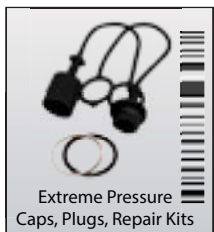
Alternatives

- Brass or 316SS version
- JIC style connection
- Straight Throughy version
- Single valved version
- Female Boss O-ring
- Female BSPP



Extreme Pressure Series

- Commonly found on hydraulic jacks, rams, power rams, and other ultra-high pressure equipment
- Nitrile seal resists high-pressure extrusion
- **Minimal leakage on disconnection**



Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple		Male Coupler	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	10,000	3.8			T2F2		2TM2	
3/8"		4.2	3TF3		T3F3		3TM3	

Alternatives

- 316SS version in some items
- Poppet style



Straight-Through Series

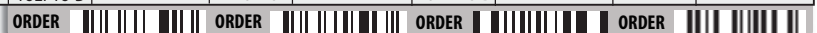
- Smooth, straight-through bore (no valves) to allow maximum flow
- Primarily used in hot water supply lines for pressure washers and steam washers
- **DO NOT disconnect under pressure (no valves)**



Size	Brass Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple		Male Coupler		Male Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	5,500	6	2EF2-B		E2F2		2EM2-B		E2M2	
3/8"	4,500	14	3EF3-B		E3F3		3EM3-B		E3M3	
1/2"	3,500	24	4EF4-B		E4F4		4EM4-B		E4M4	
3/4"	3,100	58	6EF6-B		E6F6		6EM6-B		E6M6	
1"	2,500	100	8EF8-B		E8F8		8EM8-B		E8M8	
1-1/4"	2,500	150	10EF10-B		E10F10		10EM10-B		E10M10	
1-1/2"	2,500	250	12EF12-B		E12F12		12EM12-B		E12M12	
2"	2,500	350	16EF16-B		E16F16		16EM16-B		E16M16	

Alternatives

- Brass nipples
- 303 SS version
- Coupler x Push-lock





VEP BOP

- API 16D Fire Test approved - maintains pressure when exposed to 1300° F for 5 minutes
- Patented internal valve allows connection and disconnection under high residual pressure
- Thread-to-connect eliminates premature wear found on couplers due to brinelling
- 360° rotation feature eliminates hose twist
- **Non-spill flush-face style valve eliminates spills and air inclusion**

Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4"	8,700	6.36	806501008		806501009	
3/8"	7,975	12.19	806501002	806501014	806501003	806501015
1/2"	7,975	23.85	806501000	806501016	806501001	806501017
3/4"	7,975	39.2	806501004		806501005	
1"	7,250	53	806501006		806501007	
1-1/4"	6,815	100.1	806501010		806501011	
1-1/2"	5,800	198.7	806501012		806501013	
2"	5,075	265	806501018		806501019	



VEP Connectivity Under Pressure

VEP Caps, Plugs, Repair Kits

Anti-corrosive plating all the way to the port
API 16D approved

VEPHD

Auto-lock feature upon connecting
Proprietary profile
API 16D approved

VP

Wing 5000 BOP

- API 16D Fire Test approved - maintains pressure when exposed to 1300° F for 5 minutes
- Internal valve allows connection and disconnection under pressure
- Red wing-nuts and o-ring identifies for BOP service
- **Minimal leakage on disconnection**

Wing 5000 Caps, Plugs, Repair Kits

Size	Operating Pressure	Flow Rate (GPM)	Female Coupler		Female Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
3/4"	5,000	35	6WSF6-BOP	6WSF4-BOP	WS6F6-BOP	WS6F4-BOP
1"		65	8WSF8-BOP		WS8F8-BOP	
1-1/4"		105	10WSF10-BOP		WS10F10-BOP	
1-1/2"		160	12WSF12-BOP		WS12F12-BOP	
2"		270	16WSF16-BOP		WS16F16-BOP	



Multi-Coupler Plates and Saturn Block

- Designed to reduce downtime
- Both have auto safety lock features and can be operated with one hand
- Plates eliminate crossing of lines
- Ensures no more partially connected lines



- Simultaneous connect/disconnect 2 to 10 hydraulic and/or electrical lines
- Dust cover and Parking Station available

- Simultaneous connect/disconnect 6, 12, or 18 lines
- Guidance pin system prevents connection errors
- Dust cover and Parking Station available

- Connect or disconnect with residual pressure after draining the pressure with the knob
- ISO 16028 1/2", 5/8", and 3/4" and drain line is 3/8" or 1/2"
- Replaces other connect under pressure systems

2 to 10 Lines
Multi-Coupling Plate

6, 12, and 18 Lines
Multi-Coupling Plate

Saturn Block

Multi-Coupler Plates and Saturn Block Installation Instructions

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- Rotary Hose Program
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Teflon
Crimp Fittings
Crimp Machines
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Fire Hose
Composite Hose
Ducting Hose
Metal Hose & Exp Joints
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- Quick Couplings**
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Quick Couplings for Air

- Primarily used to connect air lines but also used with low pressure fluids. Use brass or stainless steel for water.
- All sizes have zinc plated steel valves, stainless steel springs and stainless balls.
- Standard seal material is Nitrile (NBR) which has a temperature range of -40° to 250° F.
- Default style connection is NPT.
- Manual couplers are easy to connect and disconnect but two hands are required.
- Automatic couplers connect with one hand if the coupler half is firmly mounted. Automatic couplers are single shut-off.
- Common applications include compressed air, water, grease, paint, limited vacuum, and limited gas.

Industrial Series

Flange design minimizes accidental disconnection | ISO 6150B

Size	Operating Pressure	Flow Rate (CFM)	Female Coupler		Female Nipple		Male Coupler		Male Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4" Steel	500	27	2FF2		D2F2	D2F1, D2F3	2FM2		D2M2	D2M1, D2M3
3/8" Steel		45	3FF3	3FF4	D3F3	D3F2, D3F4	3FM3	3FM2, 3FM4	D3M3	D3M2, D3M4
1/2" Steel		91	4FF4	4FF6	D4F4	D4F3, D4F6	4FM4	4FM3, 4FM6	D4M4	D4M3, D4M6
1/4" Brass	500	27	2FF2-B	2FF1-B, 2FF3-B	D2F2-B		2FM2-B	2FM2-B	D2M2-B	D2M3-B
3/8" Brass	500	45	3DF3-B	3DF4-B	D3F3-B		3DM3-B	3DM4-B	D3M3-B	D3M2-B
1/2" Brass	500	91	4DF4-B	4DF6-B	D4F4-B		4DM4-B	4DM6-B	D4M4-B	D4M6-B

Alternatives

- BSPP style connection
- 303 SS version
- Coupler x Hose Barb
- Nipple x Hose Barb
- Automatic Male Coupler
- Coupler x Push-Lock
- Nipple x Push-Lock
- Automatic Female Coupler

Tru-Flate Series

Size	Operating Pressure	Flow Rate (CFM)	Female Coupler		Female Nipple		Male Coupler		Male Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4" Steel	500	26			J2F2	J2F1, J2F3			J2M2	J2M1, J2M3
3/8" Steel		58	3JF3	3JF2, 3JF4	J3F3	J3F2, J3F4	3JM3	3JM2, 3JM4	J3M3	J3M2, J3M4
1/2" Steel		91	4FF4	4FF3, 4FF6	J4F4	J4F3, J4F6	4FM4	4FM3, 4FM6	J4M4	J4M3, J4M6
1/4" Brass	500	26	J2F2-B	2JF1-B, 2JF3-B	J2F2-B		2JM2-B	2JM1-B, 2JM3-B	J2M2-B	

Alternatives

- Coupler x Push-Lock
- Nipple x Push-Lock
- Coupler x Hose Barb
- Nipple x Hose Barb

ARO 210 Series

ARO nipples are identified easily by the shapes of their noses

Size	Operating Pressure	Flow Rate (CFM)	Female Coupler		Female Nipple		Male Coupler		Male Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4" Steel	300	25	2MF2-PL	2MF3-PL	M2F2	M2F3	2MM2-PL	2MM3-PL	M2M2	M2M1, M2M3
3/8" Steel		42	3MF3-PL		M3F3		3MM3-PL		M3M3	
1/4" Brass	300	22	2MF2-B	2MF3-B	M2F2-B	M2F3-B	2MM2-B	2MM3-B	M2M2-B	

Alternatives

- BSPP style connection
- 303 SS version
- Automatic Female Coupler
- Automatic Male Coupler
- Automatic Coupler x Push-Lock
- Manual Coupler x Push-Lock
- Nipple x Push-Lock
- Automatic Coupler x Hose Barb
- Manual Coupler x Hose Barb
- Nipple x Hose Barb



Lincoln Series

Lincoln Nipples are identified easily by the shapes of their noses

Size	Operating Pressure	Flow Rate (CFM)	Female Coupler		Female Nipple		Male Coupler		Male Nipple	
			Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes	Std. Sizes	Jump Sizes
1/4" Steel	300	21			L2F2				L2M2	
1/4" Brass	300	21	2LF2-B				2LM2-B			



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Ind Hose Connections,
Protection

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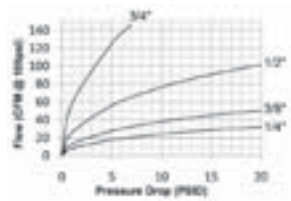
Quick Couplings

Steel Adapters

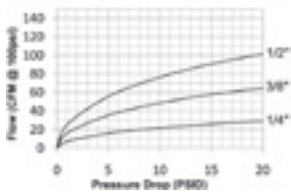
Brass Fittings

Flow Charts

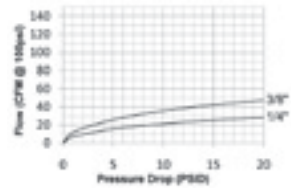
Industrial



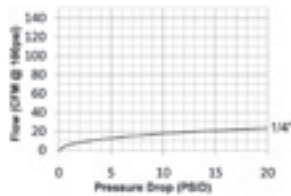
Tru-Flate



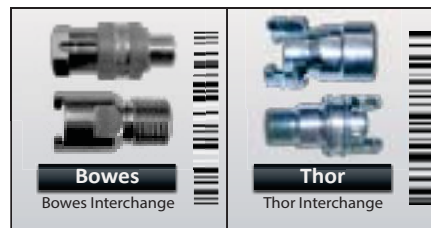
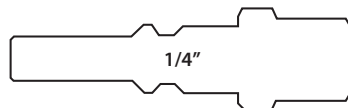
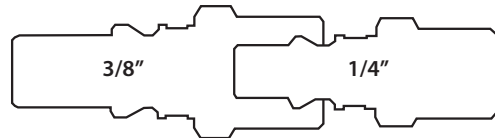
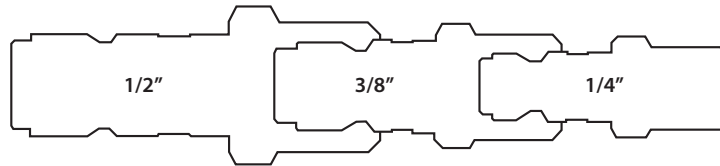
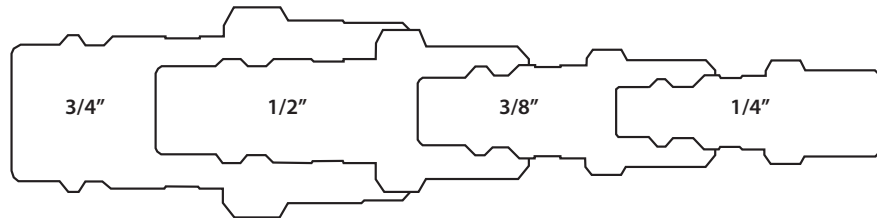
ARO 210



Lincoln



Shadow Charts





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<p>Request Steel Adapter Poster</p>	<p>Request Thread ID Poster</p>	<p>How to Identify Parts and Connectors PDF</p>	<p>Thread and O-Ring Shadow Chart Utility</p>	<p>Cross Reference Utility</p>	<p>Our Steel Adapters are Trivalent Zinc Plated. Salt Spray testing is available upon request, comparing our plating vs a competitors' plating.</p>
<p>37° JIC</p>	<p>0302- JIC Short Nut</p>	<p>0304- JIC Standard Nut</p>	<p>0304-C- JIC Cap Nut</p>	<p>0306- JIC Bulkhead Lock Nut</p>	<p>0318- JIC Tube Nut</p>
<p>0319- JIC Tube Sleeve</p>	<p>0403- Bore x MJ</p>	<p>0406- Bore x MJ Bulkhead</p>	<p>0500- Bore x Male JIC 90°</p>	<p>0600- Bore x Bore x Male JIC Tee Branch</p>	<p>0702- Bore x Male JIC x Male JIC Tee Branch</p>
<p>0900- Bore x Female JIC Swivel</p>	<p>2403- Male JIC x Male JIC</p>	<p>2404- Male JIC x Male Pipe Straight</p>	<p>2404-L- Male JIC x Male Pipe Straight Long</p>	<p>2404-LL- Male JIC x Male Pipe Straight Extra Long</p>	<p>2405- Male JIC x Female Pipe Straight</p>
<p>2406- Female JIC x Male JIC Straight Reducer</p>	<p>2408- Male JIC Plug</p>	<p>2500- Male JIC x Male JIC 90°</p>	<p>2501- Male JIC x Male Pipe 90°</p>	<p>2501-L- Male JIC x Male Pipe 90° Long</p>	<p>2501-LL- Male JIC x Male Pipe 90° Extra Long</p>
<p>2501-LLL- Male JIC x Male Pipe 90° Extra Extra Long</p>	<p>2502- Male JIC x Female Pipe 90°</p>	<p>2503- Male JIC x Male Pipe 45°</p>	<p>2504- Male JIC x Male JIC 45°</p>	<p>2505- Male JIC x Female Pipe 45°</p>	<p>2601- Male JIC x Male JIC x Male Pipe Branch Tee</p>
<p>2602- Male JIC x Male JIC x Female Pipe Branch Tee</p>	<p>2603- Male JIC Union Tee</p>	<p>2605- Male JIC x Male Pipe x Male JIC Run Tee</p>	<p>2606- Male JIC x Female Pipe x Male JIC Run Tee</p>	<p>2611- Male JIC x Male Pipe x Female Pipe Tee</p>	<p>2650- Male JIC Cross</p>
<p>2700- Male JIC x Male JIC Bulkhead</p>	<p>2701- Male JIC x Male JIC Bulkhead 90°</p>	<p>2702- Male JIC x Male JIC Bulkhead 45°</p>	<p>2703- Male JIC Bulkhead Branch Tee</p>	<p>2704- Male JIC Bulkhead Run Tee</p>	<p>2705- Female Pipe x Male JIC Bulkhead</p>



Steel Adapters

<p>2706- Male Pipe x Male JIC Bulkhead</p>	<p>6400- -O Male JIC x Male Boss O-Ring</p>	<p>6400-L -O Male JIC x Male Boss O-Ring Long</p>	<p>6402- -O Male Boss O-Ring x Female JIC Swivel Straight</p>	<p>6500- Male JIC x Female JIC Swivel 90°</p>	<p>6500-L- Male JIC x Female JIC Swivel 90° Long</p>
<p>6501- Male Pipe x Female JIC Swivel 90°</p>	<p>6502- Male JIC x Female JIC Swivel 45°</p>	<p>6503- Female Pipe x Female JIC Swivel 90°</p>	<p>6504- Male JIC x Female JIC Swivel</p>	<p>6505- Male Pipe x Female JIC Swivel</p>	<p>6506- Female Pipe x Female JIC Swivel</p>
<p>6507- Female Pipe x Female JIC Swivel 45°</p>	<p>6565- Female JIC Swivel x Female JIC Swivel</p>	<p>6600- Male JIC x Male JIC x Female JIC Swivel Branch Tee</p>	<p>6602- Male JIC x Female JIC Swivel x Male JIC Run Tee</p>	<p>6603- Female JIC Swivel x Female JIC Swivel x Male JIC Branch Tee</p>	<p>6606- Female JIC Swivel Union Tee</p>
<p>6701- Male JIC x Female JIC Swivel Bent Tube 90°</p>	<p>6701-L- Male JIC x Female JIC Swivel Bent Tube 90° Long</p>	<p>6801- -NWO Male JIC x Male Boss O-Ring 90°</p>	<p>6801-L- -NWO Male JIC x Male Boss O-Ring 90° Long</p>	<p>6801-LL- -NWO Male JIC x Male Boss O-Ring 90° Extra Long</p>	<p>6801-LLL- -NWO Male JIC x Male Boss O-Ring 90° Extra Extra Long</p>
<p>6802- -NWO Male JIC x Male Boss O-Ring 45°</p>	<p>6803- -NWO Male JIC x Male JIC x Male Boss O-Ring Branch Tee</p>	<p>6804- -NWO Male JIC x Male Boss O-Ring x Male JIC Run Tee</p>	<p>6809- -NWO Male Boss O-Ring x Female JIC Swivel 90°</p>	<p>6810- -NWO Male Boss O-Ring x Female JIC Swivel 45°</p>	<p style="text-align: center;">Pipe</p>
<p>0404- Bore x Male Pipe</p>	<p>0405- Bore x Female Pipe</p>	<p>0501- Bore x Male Pipe 90°</p>	<p>5000- Female Pipe x Female Pipe Straight</p>	<p>5404- Male Pipe x Male Pipe Hex Nipple</p>	<p>5404-N- Male Pipe x Male Pipe Straight Nipple Long</p>
<p>5405- Male Pipe x Female Pipe Straight Expander</p>	<p>5406- Male Pipe x Female Pipe Reducer Bushing</p>	<p>5406-C- Pipe Cap</p>	<p>5406-HP- Socket Hex Pipe Plug</p>	<p>5406-P- External Hex Pipe Plug</p>	<p>5406-SHP- Square Hex Pipe Plug</p>
<p>5500- Male Pipe x Male Pipe 90°</p>	<p>5501- Male Pipe x Male Pipe 45°</p>	<p>5502- Male Pipe x Female Pipe 90°</p>	<p>5503- Male Pipe x Female Pipe 45°</p>	<p>5504- Female Pipe x Female Pipe 90°</p>	<p>5505- Female Pipe x Female Pipe 45°</p>

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- 37° JIC
- Pipe
- Pipe Swivel
- O-Ring
- Split Flange
- Face Seal
- Hose Barb
- Bite Type
- Metric
- BSPP
- BSPT

Steel Adapters



- Why Midwest Hose?
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- Rotary Hose Program
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 - Rotary
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 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
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 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
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- Gauges
- Quick Couplings
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- Brass Fittings

 5600- Male Pipe Union Tee	 5601- Male Pipe x Male Pipe x Female Pipe Branch Tee	 5602- Male Pipe x Female Pipe x Female Pipe Run Tee	 5603- Male Pipe x Female Pipe x Male Pipe Run Tee	 5604- Female Pipe x Female Pipe x Male Pipe Branch Tee	 5605- Female Pipe Union Tee
 5652- Female Pipe Union Cross	 6401- -O Male O-Ring x Male Pipe	 6404- Female Boss O-Ring x Male Pipe	 6405- -O Male Boss O-Ring x Female Pipe	 6420- Female Boss O-Ring x Female Pipe	 6805- -NWO Male Boss O-Ring x Female Pipe 90°
 6805-L- -NWO Male Boss O-Ring x Female Pipe 90° Long	 6806- -NWO Male Boss O-Ring x Male Pipe 90°	Pipe Swivel →	 1404- Male Pipe x Female Pipe Swivel	 1405- Female Pipe x Female Pipe Swivel	 1501- Male Pipe x Female Pipe Swivel 90°
 1501-L- Male Pipe x Female Pipe Swivel 90° Long	 1502- Female Pipe x Female Pipe Swivel 90°	 1503- Male Pipe x Female Pipe Swivel 45°	 1504- Female Pipe x Female Pipe Swivel 45°	 1601- Male Pipe x Female Pipe Swivel Branch Tee	 1602- Female Pipe x Female Pipe Swivel Branch Tee
 1603- Female Pipe Swivel Union Tee	 1604- Male Pipe x Female Pipe Swivel Cross	 6900- -O Male Boss O-Ring x FP Swivel	 6901- -NWO Male Boss O-Ring x Female Pipe Swivel 90°	 6902- -NWO Male Boss O-Ring x Female Pipe Swivel 45°	O-Ring Kits →
 Boss O-Ring Kit	 Face Seal O-Ring Kit	 Flange O-Ring Kit	 Boss, Face Seal, Flange O-Ring Kit	O-Ring →	 3474- -NWO Male Boss O-Ring x Male Boss O-Ring
 4000- Buna O-Ring	 4001- Viton O-Ring	 6408- -O Male Boss O-Ring External Hex Plug	 6408-H- -O Male Boss O-Ring Socket Hex Plug	 6410- -O Male Boss O-Ring x Female Boss O-Ring Reducer	 6425- Female Boss O-Ring x Female Boss O-Ring
 6807- -NWO Male Boss O-Ring x Male Boss O-Ring 90°	 6808- -NWO Male Boss O-Ring x Male Boss O-Ring 45°	 6815- -NWO Male Boss O-Ring x Female Boss O-Ring 45°	Split Flange →	 4005- Flange O-Ring	 1700- Male JIC x Code 61 Flange



<p>1703- -TUBE Male JIC x Code 61 Flange 45°</p>	<p>1704- -TUBE Male JIC x Code 61 Flange 90°</p>	<p>1710- Male Boss O-Ring x Code 61 Flange</p>	<p>1724- Code 61 Flange Plug</p>	<p>FS1700- Male O-Ring Face Seal x Code 61 Flange</p>	<p>FS1703- Male O-Ring Face Seal x Code 61 Flange 45°</p>	
<p>FS1704- Male O-Ring Face Seal x Code 61 Flange 90°</p>	<p>1800- Male JIC x Code 62 Flange</p>	<p>1803- -TUBE Male JIC x Code 62 Flange 45°</p>	<p>1804- -TUBE Male JIC x Code 62 Flange 90°</p>	<p>1810- Male Boss O-Ring x Code 62 Flange</p>	<p>1824- Code 62 Flange Plug</p>	
<p>FS1800- Male O-Ring Face Seal x Code 62 Flange</p>	<p>FS1803- Male O-Ring Face Seal x Code 62 Flange 45°</p>	<p>FS1804- Male O-Ring Face Seal x Code 62 Flange 90°</p>	<p>1901- Code 61 Split Flange Kit</p>	<p>1902- Code 62 Split Flange Kit</p>	<p>SFK-CAT- Code 62 x CAT Flange Converter</p>	
<p>SFSLUG- Steel Slug</p> <p>Fits C61, C62, CAT handles pressure, install under halves</p>	<p>SFCAP Aluminum Cap Reduces contamination</p> <p>Fits C61, C62, CAT NOT for pressure</p>	<p>Steel Split Flange Cap Reduces contamination</p> <p>Fits C61, C62, CAT Handles pressure</p>	<p>Threaded Split Flange Pad</p>	<p>Threaded Elbow Split Flange Pad</p>	<p>Butt Weld Split Flange Pad</p>	
<p>Socket Weld Split Flange Pad</p>	<p>Face Seal</p>		<p>FS0304-C- Face Seal Cap Assembly Insert</p>	<p>FS0306- Face Seal Bulkhead Lock Nut</p>	<p>FS0318- Face Seal Nut</p>	<p>FS0319- Face Seal Sleeve</p>
<p>FS0403- Bore x Male O-Ring Face Seal</p>	<p>FS2403- Male O-Ring Face Seal x Male O-Ring Face Seal</p>	<p>FS2404- Male O-Ring Face Seal x Male Pipe</p>	<p>FS2406- Female O-Ring Face Seal x Male O-Ring Face Seal Reducer</p>	<p>FS2408- O-Ring Face Seal Plug</p>	<p>FS2500- Male O-Ring Face Seal x Male O-Ring Face Seal 90°</p>	
<p>FS2501- Male O-Ring Face Seal x Male Pipe 90°</p>	<p>FS2503- Male O-Ring Face Seal x Male Pipe 45°</p>	<p>FS2601- Male O-Ring Face Seal x Male O-Ring Face Seal x Male Pipe Branch Tee</p>	<p>FS2603- Male O-Ring Face Seal Union Tee</p>	<p>FS2605- Male O-Ring Face Seal x Male Pipe x Male O-Ring Face Seal Run Tee</p>	<p>FS2650- Male O-Ring Face Seal Union Cross</p>	
<p>FS2700 Male O-Ring Face Seal x Male O-Ring Face Seal Bulkhead</p>	<p>FS2701- Male O-Ring Face Seal Bulkhead 90°</p>	<p>FS2702- Male O-Ring Face Seal Bulkhead 45°</p>	<p>FS2703- Male O-Ring Face Seal Bulkhead Branch Tee</p>	<p>FS2704- Male O-Ring Face Seal Bulkhead Run Tee</p>	<p>FS6400- -O Male O-Ring Face Seal x Male Boss O-Ring</p>	

Why Midwest Hose?
Layflat Hose Program
Rotary Hose Program Info, Fittings Choke & Kill, BOP Rotary
Hydraulic Hose Program Rubber Thermoplastic Teflon Crimp Fittings Crimp Machines
Industrial Hose Program Suction & Discharge Discharge Only Fire Hose Composite Hose Ducting Hose Metal Hose & Exp Joints Brake, Automotive Hose
Ind Hose Connections, Protection
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Hyd ACPV, Filter Carts
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Steel Adapters
Brass Fittings

- 37° JIC
- Pipe
- Pipe Swivel
- O-Ring
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 FS6400-L -O Male O-Ring Face Seal x Male Boss O-Ring Long	 FS6402- Male O-Ring Face Seal x Female JIC Swivel	 FS6403- Male O-Ring Face Seal x Male JIC	 FS6500- Male O-Ring Face Seal x Female O-Ring Face Seal Swivel 90°	 FS6501- Male O-Ring Face Seal x Female O-Ring Face Seal Swivel	 FS6503- Female Pipe x Female O-Ring Face Seal Swivel 90°
 FS6504- Female O-Ring Face Seal x Male JIC	 FS6505- Male Pipe x Female O-Ring Face Seal	 FS6540- Female O-Ring Face Seal x Male Boss O-Ring	 FS6600- Male O-Ring Face Seal x Male O-Ring Face Seal x Female O-Ring Face Seal Swivel Branch Tee	 FS6602- Male O-Ring Face Seal x Female O-Ring Face Seal Swivel x Male O-Ring Face Seal Run Tee	 FS6801- -NWO Male O-Ring Face Seal x Male Boss O-Ring 90°
 FS6802- -NWO Male O-Ring Face Seal x Male Boss O-Ring 45°	 FS6803- -NWO Male O-Ring Face Seal x Male O-Ring Face Seal x Male Boss O-Ring Branch Tee	 FS6804- -NWO Male O-Ring Face Seal x Male Boss O-Ring x MORFS Run Tee	 FS6809- -NWO Female O-Ring Face Seal x Male Boss O-Ring 90°	 FS7002- -BS Male Boss O-Ring x Male British Standard Pipe Parallel W/ Bonded Seal	 FS7005- -BS Male O-Ring Face Seal x Male Boss O-Ring x Male O-Ring Face Seal Run Tee W/ Bonded Seal
Hose Barb 	 4404- Hose Barb x Male Pipe	 4501- Hose Barb x Male Pipe 90°	 4503- Hose Barb x Male Pipe 45°	 4601- -NWO Hose Barb x Male Boss O-Ring 90°	 4603- -NWO Hose Barb x Male Boss O-Ring 45°
 4604- -O Hose Barb x Male Boss O-Ring	Flareless Bite Type 	 C0304-C- Bite Type Cap Nut	 C0318- Bite Type Nut	 C0319- Bite Type Ferrule	 C2402- Bite Type x Male JIC
 C2403- Bite Type x Bite Type Tube Union	 C2404- Bite Type x Male Pipe	 C2405- Bite Type x Female Pipe	 C2406- Tube x Bite Type Reducer	 C2408- Bite Type Plug	 C2500- Bite Type x Bite Type 90°
 C2501- Bite Type x Male Pipe 90°	 C2502- Bite Type x Female Pipe 90°	 C2503- Bite Type x Male Pipe 90°	 C2601- Bite Type x Bite Type x Male Pipe Branch Tee	 C2602- Bite Type x Bite Type x Female Pipe Branch Tee	 C2603- Bite Type Union Tee
 C2605- Bite Type x Male Pipe x Bite Type Run Tee	 C6801- -NWO Bite Type x Male O-Ring 90°	Metric 		 7001- Male JIC x Male Metric w/ O-Ring and Retaining Ring	 7005- -BS Male JIC x Male Metric w/ Bonded Seal
		 Metric Thread Guide			



Steel Adapters

 7005-L- Male JIC x Male Metric Light	 7005-S- Male JIC x Male Metric Heavy	 7007-L- Male JIC x Female Metric Light	 7007-S- Male JIC x Female Metric Heavy	 7009- Male JIC x Male Komatsu Union	 7009-F- Male JIC x Female Komatsu
 7025-BS Female JIC x Male Metric w/ Bonded Seal	 7045-BS Female Pipe x Male Metric w/ Bonded Seal	 7205-BS Male JIC x Male Metric 90° w/ Bonded Seal	 7599-P- Komatsu Plug	 7699-C- Komatsu Cap	 7802-BS Male JIC x Male Metric 45° w/ Bonded Seal
 8055-BS Male Metric x Male Metric w/ Bonded Seal	 8555-H-BS Metric Hex Socket Plug w/ Bonded Seal	 8555-P-BS Metric Hex Head Plug w/ Bonded Seal	 8800-BS Metric Bonded Seal	BSPP ➔	
 7002-BS Male JIC x Male British Standard Pipe Parallel W/ Bonded Seal	 7003- Male JIC x Female British Standard Pipe Parallel	 7004- Male JIC x Female British Standard Pipe Parallel Swivel	 7022-BS Female JIC x Male British Standard Pipe Parallel w/ Bonded Seal	 7023- Female JIC x Female British Standard Pipe Parallel	 7032-BS Male Pipe x Male British Standard Pipe Parallel w/ Bonded Seal
 7033- Male Pipe x Female British Standard Pipe Parallel	 7034- Male Pipe x Female British Standard Pipe Parallel Swivel	 7042-BS Female Pipe x Male British Standard Pipe Parallel w/ Bonded Seal	 7062-BS Male Boss O-Ring x Male British Standard Pipe Parallel w/ Bonded Seal	 7102-BS Male JIC x Male British Standard Pipe Parallel 45° w/ Bonded Seal	 7202-BS Male JIC x Male British Standard Pipe Parallel 90° w/ Bonded Seal
 7204- Male JIC x Female British Standard Pipe Parallel Swivel 90°	 7222-BS Female JIC Swivel x Male British Standard Pipe Parallel 90° w/ Bonded Seal	 9020-BS Male British Standard Pipe Parallel x Male British Standard Pipe Taper w/ Bonded Seal	 9522-P-BS British Standard Pipe Parallel Hex Head Plug w/ Bonded Seal	BSPT ➔	
 9522-H-BS British Standard Pipe Parallel Hex Socket Plug w/ Bonded Seal	 7000- Male JIC x Male British Standard Pipe Taper	 7030- Male Pipe x Male British Standard Pipe Taper	 7040- Female National Pipe Thread x Male British Standard Pipe Taper	 7100- Male JIC x Male British Standard Pipe Taper 45°	 7200- Male JIC x Male British Standard Pipe Taper 90°
 7220- Female JIC x Male British Standard Pipe Taper 90°	 8080- Male Japanese Industrial Standard x Male British Standard Pipe Taper	 8180- Male Japanese Industrial Standard x Male British Standard Pipe Taper 45°	 8280- Male Japanese Industrial Standard x Male British Standard Pipe Taper 90°	 9000- Male British Standard Pipe Taper x Male British Standard Pipe Taper	 9001- Male British Standard Pipe Taper x Female British Standard Pipe Taper
 9002- Male British Standard Pipe Taper x Female British Standard Pipe Taper 90°					

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- 37° JIC
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Inline Live Swivels 	 LS5000- Female Pipe x Female Pipe	 LS5405- Male Pipe x Female Pipe	 LS2404- Male JIC x Male Pipe	 LS2405- Male JIC x Female Pipe	90° Live Swivels
 LS2502- Male JIC x Female Pipe 90°	 LS5502- Female Pipe x Male Pipe 90°	 LS5504- Female Pipe x Female Pipe 90°	 LS6805- Male Boss O-Ring x Female Pipe 90°	90° Dual Plane Live Swivels 	
 LSS5504- Female Pipe x Female Pipe 90°	Test Points 		 TPBH Test Point to Test Point Bulkhead with nut	 TPBP BSPP to Test Point	 TPBT BSPT to Test Point
 TPFF ORFS Swivel to Test Point with Seal Retainer	 TPFJ JIC Swivel to Test Point	 TPJBH JIC to Test Point Bulkhead with nut	 TPM Metric to Test Point	 TPO O-Ring to Test Point	 TPP Pipe to Test Point
 TPSP Metric Standpipe to Test Point	Thread ID Kits 		 BSP and Metric		



Why Brass?

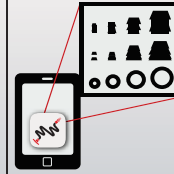
Brass is less expensive than steel, used in lower pressure applications, rust proof, a great option if worried about sparks, and commonly used in the automotive industry.



Assembly Instructions and Tubing Selection



Brass Cross Reference Utility



Brass Fitting Shadow Chart Utility

Inverted Flare

Hosing/Tubing Used Hydraulic Brake Hose, Power Steering Hose, Steel Brake Lines

Typical Application Hydraulic Brake, Power Steering, Transmission Cooler Lines

Max WP 2,000 psi

Vibration Excellent Resistance

Temperature -65° to 250°F

Material CA360 Brass



Double Flare Required



100x

Tube Nut (Brass)

Double Flare Required



105x

Tube Nut (Steel)



131x

Plug (Steel)



202x

Male Connector



252x

Female Connector



302x

Union



352x

45° Male Elbow



402x

Male Elbow



452x

Female Elbow



502x

Union Elbow



602x

Male Branch Tee



652x

Female Branch Tee



702x

Union Branch Tee



752x

Male Run Tee

Double Flare Required



7896x

Tube Nut Long (Steel)



Steel Brake Tubing
Use with Inverted Flare

3/16"-1/4" ID
up to 25 foot coils

SAE 45° Flare

Hosing/Tubing Used Hydraulic Brake Hose, Power Steering Hose, Steel Brake Lines

Typical Application LP and Natural Gas, Instrumentation, Refrigeration, Power Steering, Hydraulic and Pneumatic Systems

Max WP 2,000 psi

Vibration Good Resistance

Temperature -65° to 250°F

Material CA360 Brass



39x

Plug



40x

Cap



41x

Long Nut



42x

Union



43x

Ball Check Connector



44x

Union Tee



45x

Male Branch Tee



46x

Female Connector



48x

Male Connector



49x

Male Elbow



50x

Female Elbow



51x

Male Run Tee



54x

45° Male Elbow



55x

Union Elbow



1110x

Nut

1/4"-5/8" ID
up to 50 foot coils



Copper Tubing
Use with Inverted Flare,
Compression, or Self Aligned

Compression 60s

Compression fitting with a rounded ferrule. Must put nut and sleeve on tubing first.

Hosing/Tubing Used Copper and other soft metal tubings. Can be used on plastic tubings with tube insert (2030).

Vibration Fair Resistance. Use long nut when greater vibration resistance is needed.

Self Aligned 600s

Compression fitting, same body, but nut and sleeve are different which allows one to push in the tubing because it's already aligned.

Hosing/Tubing Used Plastic tubings, requires tube insert (2030).

Vibration Good Resistance.

Typical Application Instrumentation, Hydraulic and Pneumatic Systems, Water and Soap Lines

Max WP 2,000psi

Temperature -65° to 250°F

Material CA360 Brass



60x

Sleeve



601x

Sleeve

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Metal Hose & Exp Joints
Brake, Automotive Hose

Ind Hose Connections,
Protection

Hammer Unions

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Hyd ACPV, Filter Carts

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Valves

Instrumentation

Gauges

Quick Couplings

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Double Flare Required

Soft tubings, such as copper and steel brake line will crack if only single flared. A double flare rolls the flare over itself and forms a double walled flare that can provide a leak proof seal.



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Metric sizes shown after scanning the barcode where applicable.

 61x 611x Nut	 62x 621x Union	 63x 631x Male Ball Check Connector	 64x 641x Union Tee	 65x 651x Union Elbow	 66x 661x Female Connector
 68x 681x Male Connector	 69x 691x Male Elbow	 70x 701x Female Elbow	 71x 711x Male Run Tee	 72x 721x Male Branch Tee	 74x 741x Bulkhead Union
 76x Adapter Tee	 2030x Tube Support for Plastic Tubing	<p>Polyline Flareless Hosing/Tubing Used Polyethylene, Nylon Typical Application Instrumentation, Hydraulic and Pneumatic Systems, Water and Soap Lines Max WP 500 psi Vibration Excellent Resistance Temperature -40° to 150°F Material CA360 Brass</p> <p><i>This style is similar to compression, most have advanced to push-connect.</i></p>		 1260x Plastic Sleeve	 1261x Brass Nut
 1261x-Ax Brass Nut/Plastic Sleeve Assembly	 1262x Union	 1264x Female Elbow	 1266x Female Connector	 1268x Male Connector	 1269x Male Elbow
 1270x Female Elbow	 1271x Male Run Tee	 1272x Male Branch Tee	 1274x Bulkhead Union	<p>Push-Connect Hosing/Tubing Used Polyethylene, Nylon Typical Application Instrumentation, Hydraulic and Pneumatic Systems, Water and Soap Lines - Push-to-Connect for fast and easy assembly Max WP 150 psi Vibration Fair Resistance Temperature -40° to 200°F Material CA360 Brass</p> <p><i>Not DOT approved</i></p>	
 1107x Union "Y"	 1108x Male "Y"	 1162x Union	 1164x Union Tee	 1165x Union Elbow	 1166x Female Connector
 1168x Male Connector	 1169x Male Elbow	 1169x-S Male Elbow Swivel	 1171x-S Male Run Tee Swivel	 1172x Male Branch Tee Swivel	 1174x Bulkhead Union
<p>Push-Connect Air Brake Hosing/Tubing Used DOT Air Brake Tubing. Do not install where battery acid can drip on tubing and keep temperature under 200°F Typical Application DOT approved for air brake systems. Push-to-Connect for fast and easy assembly. Max WP 150 psi Vibration Fair Resistance Temperature -40° to 200°F Material CA360 Brass</p>		 1829x Pressure Plug	 1862x Union	 1864x Union Tee	 1865x Union Elbow


































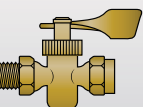






 1866x Female Connector	 1868x Male Connector	 1869x 90° Male Elbow	 1869x-S Swivel Male 90° Elbow	 1870x Female Elbow	 1871x Male Run Tee	
 1871x-S Swivel Male Run Tee	 1872x Male Branch Tee	 1872x-S Swivel Male Branch Tee	 1873x Female Bulkhead Union	 1874x Bulkhead Union	 1880x 45° Male Elbow	
 1880x-S Swivel Male 45° Elbow	<p>Compression for DOT Hosing/Tubing Used Air Brake Copper Tubing (not for use on refrigeration copper tubing) Typical Application DOT approved for air brake system. Compression style nut and sleeve Max WP 150 psi Vibration Fair Resistance Temperature -40° to 200°F Material CA360 Brass No Flaring</p> <p style="text-align: right;"><i>Not much copper tubing is used for air brake applications anymore</i></p>			 1460x Sleeve	 1461x Nut	 1462x Union
 1464x Union Tee	 1465x Union Elbow	 1466x Female Elbow	 1468x Male Connector	 1469x 90° Male Elbow	 1470x 90° Female Elbow	
 1472x Male Branch Tee	 1474x Bulkhead Union	 1480x 45° Male Elbow	 1484x Insert	<p>Compression for Air Brake Copper Tubing Hosing/Tubing Used Air Brake Copper Tubing (may be used with nylon tubing replacing long nut and spherical sleeve with rigid sleeve and nut) Typical Application DOT approved for air brake system. Compression style nut and sleeve Max WP 150 psi Vibration Fair Resistance Temperature -65° to 250°F Material CA360 Brass</p> <p style="text-align: right;"><i>Not much copper tubing is used for air brake applications anymore</i></p>		
 1360x Sleeve	 1361x Nut	<p>Threaded Sleeve Hosing/Tubing Used Aluminum or copper tubing. No steel tubing. Typical Application Oil, air, water, and lubrication systems Max WP 250-500 psi depending on size Vibration Fair resistance Temperature -65° to 250°F Material CA360 Brass</p>		 6100x Nut	 6200x Male Connector	
 6400x Male Elbow	<p>Pipe Fittings Hosing/Tubing Used None. Used with pipe. Typical Application Pneumatic, hydraulic, grease, water, refrigeration, instrumentation systems Max WP 1200 psi Vibration Fair resistance Temperature -65° to 250°F Material CA360 Brass</p>			 3129x Cap	 3150x Slotted Plug	 3151x Square Head Plug
 3152x Hex Head Plug	 3153x Hex Socket Plug	 3200x Adapter	 3220x Bushing	 3300x Reducer Coupling	 3325x Hex Nipple	

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- Brass Fittings



- Why Midwest Hose?
- Layout Hose Program
- Rotary Hose Program
 - Info, Fittings
 - Choke & Kill, BOP
 - Rotary
- Hydraulic Hose Program
 - Rubber
 - Thermoplastic
 - Teflon
 - Crimp Fittings
 - Crimp Machines
- Industrial Hose Program
 - Suction & Discharge
 - Discharge Only
 - Fire Hose
 - Composite Hose
 - Ducting Hose
 - Metal Hose & Exp Joints
 - Brake, Automotive Hose
- Ind Hose Connections, Protection
- Hammer Unions
- Flow Iron, Frac Tank Supplies
- Pipe Fittings, Flanges
- Prod, Drill & Well Serv Products
- Hyd ACPV, Filter Carts
- Belts, Sheaves, Bushings
- Valves
- Instrumentation
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 3326x Close & Long Nipples	 1344 Bulkhead Coupling (Brass)	 3350x 45° Street Elbow	 3400x 90° Street Elbow	 3500x 90° Elbow	 3600x Male Branch Tee
 3700x Tee	 3750x Male Run Tee	 3950x Cross	<h3>Needle Valves</h3> <p>Hosing/Tubing Used Copper, aluminum, steel and plastic tubing Typical Application Instrumentation, hydraulic, and pneumatic systems. Only for automotive or industrial use. Stem has metal to metal seat. Max WP 150 psi Temperature -65° to 250°F -40° to 150°F with plastic sleeve Material Brass with steel handle</p>		 A6765 Compression Double
 A690 Compression Straightway	 A6860 Compression Angle	 6815 Male Pipe Double	 6825 Male to Female Pipe	 6809 Female Pipe Double	 6700 SAE 45° Flare Straightway
 330 SAE 45° Flare Angle	 A6760P Polyline Straightway	 A6860P Polyline Angle	<h3>Drain Cocks</h3> <p>Hosing/Tubing Used Copper, aluminum, steel and plastic tubing Typical Application Instrumentation, hydraulic, and pneumatic systems. Only for automotive or industrial use. Stem has metal to metal seat. Max WP 150 psi Temperature -65° to 250°F Material Brass with steel handle (water) Steel with steel handle (hydraulics)</p>		 145 External Seat
 6788 External Seat	 140 Internal Seat	 1425A Internal Seat Drain Valve	 6660 Angle Bib Drain	<h3>Truck Valves</h3> <p>Hosing/Tubing Used Any rubber hose with worm gear clamp. Typical Application Cooling and fuel line applications for the trucking industry. Max WP 200 psi Temperature -40° to 250°F Material Forged brass with steel handle</p>	
 7506 Pipe to Hose Shut-Off	 7509 Male Pipe x Female Pipe	<h3>Ground Plugs, Multiple Shut-Offs</h3> <p>Hosing/Tubing Used Aluminum, copper, steel, and plastic tubing Typical Application Air and water for automotive and industrial systems Max WP 30 psi Temperature -65° to 250°F Material Brass bodies and brass handles</p>		 W15310 Draincock	 6892 Ground Plug Drain
 6719 SAE 45° Flare Double	 703 SAE 45° Flare Straightway	 A6769 Compression Double	 A6754 Compression Straightway	 6829 Male to Female Pipe	 W20332 Truck Shut-Off Male to Female Pipe
 6809 Female Pipe Double	 6749 3-Way Multiple Shut-Off	<h3>Hose Barbs</h3> <p>Hosing/Tubing Used Use with crimp ferrule or clamp. Typical Application Low pressure air hose, water hose Temperature -65° to 250°F</p>		 HB-----MP Barb x Male Pipe	 HB-----MPX Barb x Male Pipe Swivel



 HB...FP Barb x Female Pipe	 HB...FPX Barb x Female NPSM Ball End Swivel	 HB...FPGX Barb x Female NPSM Gasket Seat Swivel	 HB...MP Barb x Male Pipe	 HB...MP Barb x Male Pipe	 HB...MJ Barb x Male JIC
 HB...FJX Barb x Female JIC Swivel	 HB...HB Barb x Barb	 HB...TEE Tee	 FBL... Hose Ferrule	Push-On Hose Barbs Hosing/Tubing Used Push-On Hose Typical Application Air lines, low pressure lube and oil lines. No clamp needed. Temperature -65° to 250°F	
 PHB...MP Barb x Male Pipe	 PHB...MPX Barb x Male Pipe Swivel	 PHB...MS Barb x Male SAE	 PHB...MJ Barb x Male JIC	 PHB...MIX Barb x Male Inverted Flare Swivel	 PHB...FP Barb x Female Pipe
 PHB...FPX Barb x Female Pipe Swivel	 PHB...FSX Barb x Female SAE Swivel	 PHB...FJX Barb x Female JIC Swivel	 PHB...FI Barb x Female Inverted Flare	 PHB...PHB Barb x Barb	 PHB...NASP Barb x I.D. Tube Shank
 PHB...MP90 Barb x Male Pipe Elbow	Garden Hose Fittings Hosing/Tubing Used Air and water hoses Typical Application Commercial and residential water hoses. Use with crimp ferrule or clamp		 HB...GK Garden Hose Barb Set	 HB...FGX Barb x Female Hose (Swivel)	 HB...MG Barb x Male Hose
 FGX...FP Female Hose (Swivel) x Female Pipe	 FG...FGX Female Hose x Female Hose (Swivel)	 FG...CAP Hose Cap	 FG...WASHER Garden Hose Washer	 FG...NUT Garden Hose Nut	 FG...PLUG Garden Hose Plug
 MG...MP Male Hose x Male Pipe	 MG...FP Male Hose x Female Pipe	 FG...FP Female Hose x Female Pipe	 FG...MP Female Hose x Male Pipe	 MG...MG Male Hose x Male Hose	 MG...MJ Male Hose x Male JIC
 FGX...MJ Female Hose Swivel x Male JIC	 FGH...MP Female Hose x Male Pipe	 G...Y "Y" Coupling (Zinc or Brass)	 Garden Hose Nozzles	 Air Brake Crimp and Reusable Fittings	 Brass Beaded Barbs

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