Hose

Coalmaster Hydraulic Suction and Return Transportation Push-Lok[®]

Fittings

SteckO Hose Ends Offering Parkrimp (crimp) Field Attachable

Equipment

Parkrimp Crimpers Die Selection Charts Pumps Hose Assembly Equipment

Accessories

Flange Adapters and Kits Ball Valves O-Rings Hose Guards Clamps Workstations

Technical

Size Temperature Application Media Pressure Information

Safety Guide









When you order hose and fittings from Parker, remember the word "STAMP." That way you won't forget important information!

Size

Parker uses a system of measurement called Dash Numbers to indicate hose and fitting size. The Dash Number, or Dash Size, is the measure of a hose's Inner Diameter (I.D.) in sixteenths of an inch. (The exception to this is SAE 100R5 hose. See the chart below for complete details.)

This measuring system of the inside diameter of the hose is universally used by the fluid power industry today. Don't know the hose size? Check the layline. If the original printing has worn off, the original hose must be cut and the inside diameter measured. Be sure to measure the overall assembly length and fitting orientation before cutting the hose.

Outer Cover



The hose I.D. must be sized accurately to obtain the proper flow velocity. A flow that's too slow

	Hose I.D. (inches)									
	All e Transı and Refrig	except portation jerant Hoses	Transportation and Refrigerant Hoses							
Dash No.	Inches	Millimeters	Inches	Millimeters						
-3	3/16	5	-	-						
-4	1/4	6,3	3/16	5						
-5	5/16	8	1/4	6,3						
-6	3/8	10	5/16	8						
-8	1/2	12,5	13/32	10						
-10	5/8	16	1/2	12,5						
-12	3/4	19	5/8	16						
-16	1	25	7/8	22						
-20	1-1/4	31,5	1-1/8	29						
-24	1-1/2	38	1-3/8	35						
-32	2	51	1-13/16	46						
-40	2-1/2	63	2-3/8	60						
-48	_	-	3	76						

results in sluggish system performance, while a flow that's too high causes excessive pressure drops, system damage, and leaks.

Use the Flow Capacity Nomogram in Section E to determine the proper hose I.D. for your application's flow rate requirements.



When specifying hose, there are two temperatures you need to identify. One is the **ambient temperature**, which is the temperature that exists outside the hose where it is being used; the other is the **media temperature**, which is the temperature of the media conveyed through the hose.

Very high or low ambient temperatures can have adverse affects on the hose cover and reinforcement materials, resulting in reduced service life.

Media temperatures can have a much greater impact on hose life. For example, rubber loses flexibility if operated at high temperatures for extended periods.

Parker hoses carry different temperature ratings for different fluids. For example, 811HT hose has a temperature range of -40°F to + 257°F (-40°C to +125°C) for petroleum-based hydraulic fluids. However for water, water/glycol, and water/oil emulsion hydraulic fluids, the range drops to a rating of up to +185°F (+ 85°C). Air is rated even lower at up to 158°F (+ 70°C).

Some media can increase or decrease the effects of temperature on the hose. The maximum rated temperature of a hose is specific to the media. See the Minimum/ Maximum Temperature Chart in Section E for a full listing of all temperature ratings.

A pplication

Before selecting a hose, it is important to consider how the hose assembly will be used. Answering the following questions may help:

- What type of equipment is involved?
- What are the environmental factors?
- Are mechanical loads applied to the assembly?
- Will the routing be confined?
- What about hose fittings

 permanent or field attachable?
- Will the assembly be subjected to abrasion?

Sometimes specific applications require specific hoses. For example, applications where hoses will encounter rubbing or

Metal-to-Hose Abrasion Resistance Comparison

Hose Hint

A hose assembly should be routed so that the hose is not stretched, compressed, or kinked to assure maximum service life and safety.

abrasive surfaces would best be handled by our family of abrasion-resistant hoses with both Tough and Super Tough covers.

When application space is tight, bend radius is another important consideration. Parker offers a full line of hoses designed for onehalf SAE bend radius at full SAE-rated pressures. Our Compact™ hoses' increased flexibility and smaller outer diameter allows faster, easier routing in small spaces, reducing both hose length and inventory requirements.

Industry standards set specific requirements concerning construction type, size, tolerances, burst pressure, and impulse cycles of hoses. Parker hydraulic hoses meet or exceed standards such as:

- SAE (Society of
- Automotive Engineers)
- EN (European Norm)
- DIN (Deutsche Institute fur Normung)
- ISO (International for Standardization [see p. D-14] Organization)

Governmental agencies control additional standards for particular industries such as the United States Coast Guard and the American Bureau of Shipping. You must select a hose that meets the legal requirements as well as the functional requirements of your application.

Hose Hint

When considering the bend radius of a hose assembly, a minimum straight length of twice the hose's outside diameter should be allowed between the hose fitting and the point at which the bend starts.



Results from the ISO 6945 metal-to-hose abrasion test show that Tough Cover and Super Tough Cover hoses offer significantly greater abrasion resistance than standard rubber cover hose.







Selecting the Right Hose (continued)



Ariter NO-SKIVE 767 Darker 7638 285-12 W.P. 3.4. MP8 (500 p.s.)

M edia

What will the hose convey? Some applications require the use of specialized oils or chemicals. Consequently, the hose you order must be compatible with the medium being conveyed. Compatibility must cover not just the inner tube, but the cover, hose fittings, and O-rings as well. Use the Chemical Resistance Chart found in Section E to select the correct components of the hose assembly that will be compatible with your system's media. The chart contains the chemical resistance rating of a variety of fluids.



Hose Hint

For long service life and leak-free functionality, it is vital that the hose assembly be chemically compatible with both the fluid being conveyed through the hose as well as the environment of the hose.

CHE JOS

Eatter NO-SAVE TA-16 WP 215







4





P ressure

When considering hose pressure, it's important to know both the system working pressure and any surge pressures and spikes.

Hose selection must be made so that the published maximum working pressure of the hose is equal to or greater than the maximum system pressure. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the hose.

Each Parker hose has a pressure rating which can be found on the Hose Overview Chart on the next page and in Section E.

All Parker hydraulic hoses have passed the industry rated specifications for burst pressure and carry a 4:1 design factor unless otherwise noted. Burst pressure ratings for hose are for manufacturing test purposes only. They are not an indication that the product can be used above the published maximum working pressure. It is for this reason that the burst pressure ratings have been removed from the hose charts within the catalog.

Care must also be taken when looking at the "weakest link" of the hose assembly. A hose assembly is rated at the maximum working pressure of the hose and the fitting component. Therefore the maximum working pressure of the hose assembly is the lesser of the rated working pressure of the hose and the end connections used.

Here is an example: An F471TC0101040404-60" hose assembly (which consists of 471TC-4 hose and two 10143-4-4 fittings) would have a maximum working pressure of the lesser of the three components. In this case the fittings have a 12,000 psi rating. The hose has a 5,800



psi rating. Therefore the maximum pressure rating of the hose assembly would be 5,800 psi. Pressure ratings for each Parker end connection can be found on the Pressure Rating of Hose End Connections – PSI Chart in Section E.



Pressure spikes can occur during machine operation in an instant. They can occur so quickly in fact, that standard glycerin filled gages will never detect them. Using a pressure diagnostic system like Parker's Senso Control can help detect how often and how drastic these pressure spikes are.



		Hose	Hose					Work	ing Pr	essure	e (psi)						Standard	SAE	ISO	EN	Page
5		Size	Reinforcement	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	Range °F				
		СМ	2-braids, wire		6500		5500	5500									-40/+212				A-6
		CM4H	4-spiral, wire							5000	5000	5000	4000	4000			-40/+250				A-6
	ter	CM4HP	4-spiral, wire							5000	5000	5000					-40/+250				A-6
Coalmas	almas	CM6H	6-spiral, wire										5000	5000			-40/+212				A-7
	ပိ	CM6HP	6-spiral, wire										5000	5000			-40/+212				A-7
		CMR	2-braids, wire											1000	1000		-40/+180				A-7
		421FS	high tensile wire braid		2750			2000		1250							-40/+257				A-7
•		AX	1-braid, wire		3000		3000	2500	1500	1250	1000						-40/+212				A-8
		426	1-braid, wire		2750		2250	2000	1500	1250	1000	625	500	375			-50/+302	100R1AT			A-8
		BXX	2-braids, wire		5000		4000	3500	2750	2250	2000	1625	1250	1125			-40/+212	100R2AT			A-8
		451TC/ST	1-braid, wire		3000		3000	3000	3000	3000	3000	3000					-40/+212	100R17			A-9
		471TC/ST	2-braids, wire		5800		5000	4250	3625	3125	2500						-40/+212		11237-1-2SC	857-2SC	A-9
		451TC Twin Tough	1 braid, steel wire				3000	3000									-40/+212	100R17	11237-1		A-10
:	aulic	471TC Twin Tough	2-braids, steel wire				5000	4250									-40/+212		11237-1-2SC	857	A-10
	Hydra	436	2-braids, wire				4000	3500	2750	2250	2000						-55/+302	100R16			A-10
		721/721TC	4-spiral, wire				4000	4000	4000	4000	4000	3000	2500	2500			-40/+257	100R12	3862-1-R12	856-R12	A-11
		721ST	4-spiral, wire					4000	4000	4000	4000	3000					-40/+257	100R12	3862-1-R12	856-R12	A-11
		781	4/6-spiral, wire							5000	5000	5000	5000				-40/+257	100R13	3862-1-R13	856-R13	A-11
		P35	4/6-spiral, wire											5000			-40/+257	100R13	3862-1-R13	856-R13	A-12
		791TC	4/6-spiral, wire							6000	6000	6000	6000				-40/+257	100R15	3862-1-R15		A-12
		761	6-spiral, wire							8000	8000						-40/+257				A-12
ion	turn	811/811HT with HC	1-braid, 1-spiral wire							100	70	50	50	50	62		-40/+212	100R4			A-13
Suc	& Re	811/811HT with 81	1-braid, 1-spiral wire							300	250	200	150	100	62		-40/+212	100R4			A13
Ļ	×	801	1-braid, fiber		250		250	250	250	250	175						-40/+212				A-16
Puls	2	836	1-braid, fiber		250		250	250	250								-55/+302				A-16
	c	213	1-braid, fiber		2000	1500	1500	1250	1000	750	400	300	300	200			-50/+212	J1402 A			A-14
	rtatio	271	1-braid. fiber				225	225									-50/+212	J1402 A			A-14
	anspo	SS25UL	1-braid, wire		350	350	350	350	350	350							-40/+250				A-15
1	F	285	1-braid, fiber		500		500	500	500	500							-22/+257	J2064 Type C			A-15

To make ordering Parker products easier, we have outlined the nomenclature for hose and fittings on this page. For information on ordering hose assemblies, see Section A.

How to Sel	lect Hose
Example	e: 451TC-8
	 451TC-8 - Hose type 451TC-8 - Indicates the special feature of the hose (in this case, 'Tough Cover') 451TC-8 - Hose inside diameter dash size (in this case, 8/16" or 1/2")
How to Sel	lect Parkrimp Hose Fittings
Example	e: 1JC43-12-8C
	 1JC43-12-8C - Fitting (1 = Crimp, 2 = Field Attachable, 3 = Push-Lok, Blank = Nipple with clamp or shell) 1JC43-12-8C - End connection (In this case, a female Seal-Lok – swivel – straight) 1JC43-12-8C - Fitting series 1JC43-12-8C - Size of fitting end connection (In this case, 12/16" or 3/4")
	1JC43-12-8C - Hose size (In this case, 8/16" or 1/2") 1JC43-12-8C - Fitting material: No Suffix = Steel B = Brass C = 316 Stainless Steel BA = Brass Nipple with Steel Nut and Socket BS = Brass Nipple with Brass Nut and Socket SM = Metric Hex
How to Sel	lect Two-Piece Field Attachable Fittings
When selectir broken down	ng a two-piece field attachable fitting, the fitting part number (found in Section B of this catalog) needs to be into two distinct numbers for the nipple and the socket.
Example Socket Par Example	e: 20120-16-16B rt Number e: 20020-16B
	20020-16B - Fitting (1 = Crimp, 2 = Field Attachable, 3 = Push-Lok, Blank = Nipple with clamp or shell) 20020-16B - End connection ("00" represents that it is a socket) 20020-16B - Fitting series 20020-16B - Hose size (In this case, 16/16" or 1") 20020-16B - Fitting material: No Suffix = Steel B = Brass C = 316 Stainless Steel BA = Brass Nipple with Steel Nut and Socket BS = Brass Nipple with Brass Nut and Socket SM = Metric Hex
Nipple Par	rt Number
Example	e: 0120-16-16B 0120-16-16B - Fitting (1 = Crimp, 2 = Field Attachable, 3 = Push-Lok, Blank = Nipple with clamp or shell) 0120-16-16B - End connection (In this case, a male NPTF Pipe – rigid – straight) 0120-16-16B - Fitting series 0120-16-16B - Size of fitting end connection (In this case, 16/16" or 1") 0120-16-16B - Hose size (In this case, 16/16" or 1") 0120-16-16B - Fitting material: No Suffix = Steel B = Brass C = 316 Stainless Steel BA = Brass Nipple with Steel Nut and Socket BS = Brass Nipple with Brass Nut and Socket SM = Metric Hex
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Parker Hose: Built to be Better.

The More We Put Into Our Hoses, the More You Get Out.





It's All in the Family

At Parker, we believe the best hose for your operation is the one that gets the job done right. That's why we offer you a comprehensive line of hoses, as well as all the options that go with it. Worried about price? We've got rubber hoses that are an exceptional value. Need hose that can take the heat? We've designed hoses for high temperatures. Looking for hose to handle the most demanding conditions? No problem. We have hoses made specifically for tight bending, abrasive environments, and more.

Not sure what hose you need? Talk to our experts. They're trained to know, and they're happy to help.

Hose Hint

Use the layline of the hose as a visual index when routing and tightening the assembly to ensure the hose is not twisted or kinked.

Abrasion? We've Got You Covered.

Our expanded line of abrasion-resistant hose offers you a world of protection, not to mention a choice of covers - Tough Cover (TC) for tough environments; and Super Tough (ST) for the really rough stuff. Our TCand ST-covered hoses can simplify your assemblies by eliminating the need for any additional protective sleeving.

EDIE

From the superior flexibility and tighter bend



Treeserie Marshall

Tover

IDER .

2 57-20 WP 21.0 MP 2 (2000 PSU)

radius of our wire-braided Compact[™] hoses ... to the wide fluid compatibility and high pressure performance of our No-Skive spiral hoses ... our expanded family of abrasion-resistant hoses gets the job done right, giving you the results you need in the construction, forestry, mining, injection molding, refuse and recycling, energy, and other industries.

Metal-to-Hose Abrasion Resistance Comparison



Results from the ISO 6945 metal-to-hose abrasion test show that Tough Cover and Super Tough Cover hoses offer significantly greater abrasion resistance than standard rubber cover hose.

Optional Covers

Туре	Features						
Tough Cover (TC)	Very good abrasion resistance. Fair resistance to ozone and cold flexibility.						
Super Tough (ST) Iron Clad	Excellent abrasion resistance. Very good resistance to ozone and cold flexibility.	/					



Braided

Braided vs. Spiral Hose

Hydraulic hose can be referred to by construction style, of which there are two main types: braided and spiral. The majority of "low pressure hoses" have a textile braided construction. They're commonly used to transmit petroleum-based fluids, diesel fuel, hot lubricating oil, air, ethylene glycol anti-freeze, and water. "Medium pressure hoses" typically feature one- and two-wire braided construction. These hoses are frequently found on construction equipment, heavy-duty trucks, and fleet vehicle applications. In general, braided hose is selected for its flexibility.

Spiral

At one time in the industry, two-wire braided hose was most commonly used in many applications. But the advent of larger, off-road specialty equipment drove the creation of spiral hose, which is very well suited for applications where extremely high impulse pressure is encountered.

Today, hydrostatic drives using four and six-wire spiral hoses can be found on everything from lawn tractors to earth movers. Because today's world demands faster, more powerful equipment requiring increased working pressures, Parker is responding with an expansive offering of spiral products.

Contact your local Parker distributor to see the full range of hose choices, and to discuss their various applications.

Parker Hose: Built to Solve Problems.

The Best Hose for Your Operation? The One That Gets the Job Done Right.



Bendable? You Bet!

Looking for flexible hose that can be routed in tight spaces?

Parker has a full line of Compact[™] hoses designed for one-half SAE bend radius at full SAE pressure. These hoses plumb and bend tighter than other SAE 100R1, 100R2, 100R4, and 100R12 type hoses, reducing hose length requirements by up to 47 percent. The tighter bend radius means fewer bent tube fittings, and longer life in applications where machinery movement causes



hoses to bend sharply. It also means reduced inventory requirements for you.

In addition to maximum flexibility and excellent bendability, Parker Compact hoses offer smaller outer diameters and abrasion resistant cover choices. Characteristics that make them the hoses of choice for mobile hydraulic systems, agricultural machinery, forestry equipment, fork lifts, construction, machinery, injection molding, automotive, and the paper industry.



721TC Extreme hose has one-half the minimum bend radius of SAE 100R12 hose.

Inner Beauty

The inner tube of a hose is offered in several different rubber compounds. Each rubber compound can react differently to the media being conveyed. The inner tube must also resist effects of high or low temperatures and environmental elements. The table on the right highlights popular rubber compounds used for hose inner tubes:

Inner Tube Compounds

Туре	Features
PKR [®] Rubber	Excellent resistance to ozone and weathering; good heat resistance. Good resistance to petroleum-based fluids.
Nitrile Rubber	Excellent resistance to petroleum-based fluids and environmentally friendly fluids.
Synthetic Rubber	Good resistance to petroleum-based fluids. Poor resistance to water-based glycol fluids.
Butyl Rubber	Very good weathering resistance. Good physical properties. Poor resistance to petroleum-based fluids.
EPDM Rubber	Excellent resistance to phosphate esther fluids and dry air. Poor resistance to petroleum-based fluids.

Hose Hint

The layline, or printing along the length of a hose, contains a wealth of useful information about that product. Inside diameter, maximum working pressure, part number, industry standards that the hose meets, and even manufacturing date are among the information supplied.





Make the Right Connection

For more than half a century, Parker Hannifin has been both a pioneer and leader in the hose and fitting market. Parker's Hose Products Division gives you more choices than any other hose manufacturer. Abrasion resistant covers? Ironclad, TC (Tough Cover) and ST (Super Tough Cover). High temperature hose? We have it. Tight bend radius? No problem. Parker will keep you running longer.













Parker Fittings. The Products of Choice for Custom and Standard Applications.

Parker Hose Offers You More Fitting Sizes and Configurations Than Any Other Manufacturer.

Crimpable Fittings Parker Parkrimp assemblies consist of No-Skive hose and fittings, permanently joined by one of our seven Parkrimp machines. The teeth in Parker's crimped fittings bite down to the hose wire for a metal-to-metal grip with maximum integrity. Our one-piece fittings can be combined with more than 40 No-Skive hose types to cover low, medium, and high-pressure applications, as well as special application categories that can also be used with permanent crimped fittings.

We offer steel, brass, and stainless steel fittings from 3/16" to 3", with our steel fittings featuring a corrosion resistant plating that exceeds SAE standards. Styles include O-ring face seal, flare, male pipe, metric designs and many more. All are compatible with the easyto-use Parkrimp system of crimping machines.

When combined with our No-Skive hose, Parker Parkrimp fittings provide factory-quality hose assemblies quickly and cost effectively.



manufactured from a single piece of steel. First introduced in ultrahigh pressure hydraulic applications, their lack of brazed or soldered joints provides the utmost in leak protection, eliminating any potential leak paths. Parker Monoblok fittings are now available in a wide variety of end configurations and fitting series. These fittings also feature No-Skive, bite-the-wire, full-length crimp, corrosion resistant plating, weather seal, and a low-profile design.

Metric Fittings

Parker's metric fittings are available in a full range of DIN, BSP, BSPP, French GAZ, and JIS configurations to meet worldwide applications. Parker's metric fittings are available in a wide range of sizes to meet your requirements.



Hose Hint

Never mix and match one manufacturer's fittings with hose from another manufacturer. Parker hose, fittings, and crimpers are designed to work together as a system. This ensures optimum product performance, reliability, and safety.

Custom Fittings for Short-Run or **Special Applications**



Custom tube and hose fittings are available from Parker. Configurations include NPTF, JIC, SAE, GAZ, ISO, DIN, JIS, and BSP in a wide range of sizes. Material options include steel, stainless steel, brass, aluminum, and monel. All products are manufactured to world-class standards.

Hose Hint

How tight is tight enough? Differences in platings and other variables can affect the amount of torgue required to ensure a proper connection. Always refer to this catalog or go to www. parkerhose.com for proper assembly procedures.

н	ose End Type	Pressure	Seal Reliability	Vibration Resistance	Ease of Installation	Reusability	Temperature
Se Fa	eal-Lok – O-Ring ace Seal	Excellent	Excellent	Very Good	Excellent	Excellent	Limited by Seal
37	7° Flare	Very Good	Good	Good	Good	Good	Excellent
Ta NI M	apered – (NPT, PTF, BSPT and etric Taper)	Good*	Poor	Poor	Good	Poor	Excellent
Fo	our Bolt Flange	Excellent	Good	Excellent	Very Good	Excellent	Limited by Seal

*Rated 'Poor' for dynamic pressure systems

and is

Environmentally Friendly Plating Process

Beginning in 2006, Parker switched the manufacturing of its steel fittings to use trivalent chromate (Chromium-6 Free) plating. This new process enhances the corrosion resistance of the fittings,

more environmentally friendly than the previous hexavalent chromate plating. The new plating process is being implemented worldwide at all Parker facilities. While the fitting function will not change,

the fitting color will. Fittings plated with trivalent chromate will be silver in color, not gold.

Field Attachable Fittings

Parker field attachable fittings enable you to make hose assemblies right at the job site without special tools or machines.

Our wide range of No-Skive hose — hose that does not require the removal of the outer cover or inner tube prior to assembly - works with

a variety of field attachable steel, stainless steel, and brass fittings quickly and easily.

Parker field attachable fittings include the popular Push-Lok[®] style, as well as two- and three-piece series fittings that use an interchangeable nipple with one- and two-wire braided hose.

Chromium-6

Parkrimp Crimpers

Hose Assemblies Are Easy With the Parkrimp System.

Since its introduction in 1980, the Parkrimp family of crimping machines has led the industry in ease of use and rugged durability. With Parkrimp, you benefit from a full length crimp.

> Our low profile design makes routing hose assemblies easy.

No-Skive hoses and fittings combine with the Parkrimp system to create high quality, reliable hydraulic hose assemblies every time.



When it comes to hose assemblies, no one puts it all together like Parker. From high-volume productivity to portable on-site assembly, we offer a variety of crimping machines, No-Skive hoses, and No-Skive fittings to meet your needs.

With Parkrimp equipment,

anyone can make factoryquality hose assemblies quickly, easily, and cost effectively. Parkrimp machines are simple to operate. And, they're built to provide years of dependable service. Seven Parkrimp models – an entire family of crimpers – are available to meet your bench-mounted or portable needs, crimping straight or bent-stem fittings from 1/4" to 2" in diameter. Just use our No-Skive hoses and fittings to create leak-free hose assemblies whenever and wherever you need them.

The complete system from one source: No-Skive hose, No-Skive fittings, and crimping machines with worldwide availability and service.

Hose Hint

The Parkrimp system is designed to crimp fittings to the proper diameter every time. Parker recommends using calipers to measure the first, fiftieth and last hose assemblies produced to ensure proper crimp dimensions. The proper minimum / maximum crimp diameters can be found on your Parkrimp crimper's decal or online at www.parker.com/crimpsource.

Portable Crimpers

Parker

Minikrimp™



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Karrykrimp

Eight segment crimp dies provide a smooth, even, 360-degree crimp.

Our linked crimp dies keep die segments / together. No loose parts to mismatch or misplace.

> Dies are color-coded by size for easy identification and reduced set-up time.

Parker Hose Products Division also offers a full line of crimping accessories, including conversion kits, cabinets, cutoff saws, push-on tables, die racks, and mandrel tool kits.

Bottom-loading operation makes it easy to handle long hose assemblies.

> Parker's exclusive Parkalign™ feature positions the fitting in the dies perfectly every time.

> > **Bench/Floor Mounted Crimpers**









Parkrimp 2

There's More to Parker Hose Than Just Hose.

We're constantly updating our customer service options to help you work smarter, faster, and better.

Need the Latest? Check Out Our Web site. From complete product information on hose, to 3D-CAD models of our complete fitting line, you'll find everything you need at <u>www.parkerhose.com</u>.

We've redesigned our Web site around you. Whether you take advantage of our new product announcements ... or search our site by part number ... you'll find our site easy to navigate and understand. Our site also provides: • A listing of government and industry-related approvals.

• Contact technical support.

 Find out about our custom manufactured products, including customized leakfree tube assemblies.

• Download a wealth of product literature ranging from bulletins and equipment manuals to reference guides and wall charts.

Whatever you do, be sure to visit our site often. It's the fastest and easiest way to keep up with changing technology.

Also Online … Parker Crimpsource™

Crimpsource enables you to choose your crimper and select the hose, fittings, and current crimping specifications needed to make hose assemblies. You can even print a simple-to-follow data specification sheet.

Crimpsource includes hydraulic rubber hose, industrial hose, and thermoplastic hose products, and contains all the crimp specifications approved for Parker crimpers. Crimpsource is available at www.parker.com/ crimpsource.

19/5-2Q04 www.parker.co

www.parker.com

Parker

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PHastkrin

State-of-the-Art Lab Testing

Our world-class lab can assure you of world-class quality. Parker engineers recreate a whole host of physical and environmental conditions to accurately evaluate hose and fitting performance. Multiple test stations and the latest testing technology combine to assure the integrity of Parker products and meet specialized needs. In addition, we certify products for compliance with the latest U.S. and European governmental and agency standards.

Downloadable CAD Drawings

Downloadable CAD drawings of Parker fittings are available online at <u>parkerhose.com</u>. They will allow you to check the form, fit, and function of the fitting before specifying the actual part.

Custom Manufacturing Capabilities

Markets are shifting to replacing sections of hose with hard plumbing. These custom projects can include tube fabrication and fittings not found anywhere else. Using custom tube and compound assemblies can reduce your overall costs and eliminate warranty issues.

Completely custom products are available from a dedicated Parker Hose Products Division facility.Using standard Parker hoses, fittings and tubing, our experts create custom tube and compound assemblies that exactly match your specifications to provide increased durability and reliability.

Organized to provide fast quotes and highly responsive service, our Custom Manufacturing department can produce a single critical piece or production quantities to meet your needs, quickly and efficiently. Contact our staff to talk about creating the best in customized, leak-free products. Call 888-882-1202.

Dedicated Hose Assembly Plants

All Parker Hose assemblies are manufactured in facilities solely dedicated to hose assembly production and premier customer service. Our dedicated hose assembly plants offer our customers unique benefits, including:

- Competitive hose assembly pricing levels due to our LEAN manufacturing initiatives.
- A more diverse range of hose assembly capabilities and accessory options.
- A larger selection of hose and fitting inventory for assemblies.
- The quality assurance that comes with manufacturing in a TS-16949-certified facility.

Online 3D-CAD models help designers work faster, smarter.

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Here's How You Can Benefit From our Connections.

Need help with the big picture? Turn to Parker. As part of the Fluid Connectors Group, we have everything to keep the ideas flowing.

More Products

Nobody offers you more than Parker. We have the largest selection of hose, and more fitting sizes and configurations than any other manufacturer. Our products deliver the exceptional quality and reliability you've come to expect from us, meeting or exceeding market standards. Plus they're available in a wide choice of materials, designs, sizes, covers, and capabilities for your specific leak-free performance requirements. But more parts are only

part of what we offer you.

Mobile Services

Parker is your best bet for on-the-job help. Our mobile services operate 24 hours a day, 7 days a week, to arrive at the plant or job site fast. Complete with factorytrained professionals to troubleshoot your problem, our mobile vans carry a full complement of hose, all major fitting configurations, and a complete set of metrics - everything that's needed to create a replacement. It's like having your Parker distributor come to you!

More People

Our 2100 worldwide distributors give you plenty of places to go for help, and quickly. Which means when your equipment is down, we're there for you, right near the job site.

Nobody else can equal that kind of convenient service.





Parker Store

ParkerStores

ParkerStores provide walk-in customers with the ability to select the parts they need in a retail environment. Customers can see and touch the parts they're considering, and talk directly with professionallytrained sales staff when advice is needed. With more than 1,200 locations in 58 countries, ParkerStores are yet another way customers can get back up and running again quickly and easily.

Custom Kits

Want to speed up assembly on the factory floor? Parker custom kits might be just what you're looking for. From fittings and adapters to pre-made assemblies, custom kits can hold a wide range of materials, in the exact order and quantities you need. What's the advantage? Streamlined procedures. Quicker assembly. Lower costs. And a single part number for easier processing.

Technical Support, Education, and Training Need help? Don't hesitate to ask. Our technicians and market-specific engineers can be found across the U.S. and throughout the world to offer you engineering support, fluid connector system design, and product selection assistance. Phone consultation, as well as on- or off-site sessions are available virtually anywhere for all customers, distributors, and employees. Topics range

from hose routing tips and troubleshooting to critical safety procedures. These Parker experts reflect our extensive commitment to training and education, and are an important part of our value-added services.

Want to enlist their help? Call 1-800-C-PARKER, or check with your local distributor. Don't know who that is? Go to www.parker.com to find out.

