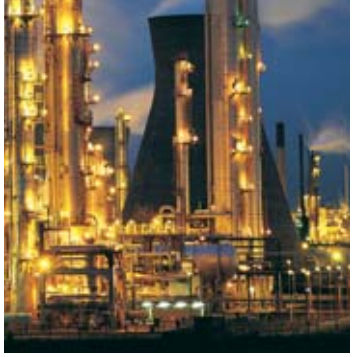


aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Fluoropolymer Hose & Fittings Products

Flexible Braided Hose Catalog

Parker

ENGINEERING YOUR SUCCESS.

PARKER/PAGE International is a leading manufacturer of Flexible Fluoroplastic Hose products. As an innovator in the design and production of seamless convoluted hoses and special application assemblies, PARKER/PAGE supplies products to a wide variety of customers around the world. Our experience extends into such diverse markets as chemical manufacturing, pharmaceutical processing, food handling and semiconductor production. From our manufacturing and fabrication facility in Fort Worth, Texas, we offer fluid transport solutions worldwide.

PARKER/PAGE PTFE Hose product materials are compliant with the following requirements:

FDA 21 CFR 177.1550, 177.2600

UPS XXIII Class VI Requirements

European Pharmacopoeia 3.1.9

ISO 10993 Sections 5, 6 10, 11

USDA Standards

3A Standards

TABLE OF CONTENTS

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

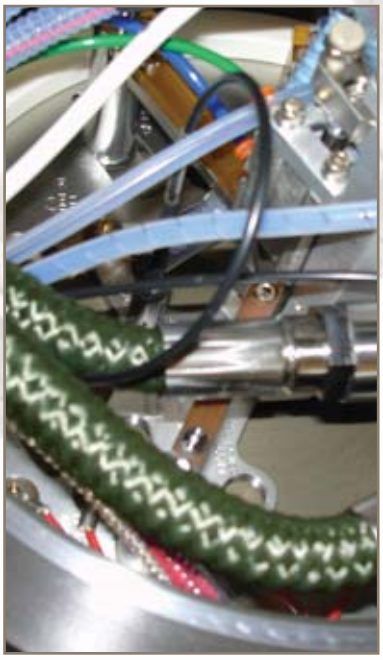
CUSTOM PRODUCTS

PARKER/PAGE International Hose has a reputation in the hose industry as being a leader in the design and development of application specific hoses that often increase the life of the hose without compromising the integrity of the hose. Many of our hose solutions have spawned new product lines, such as the PAGE-flex SBF™ that offers a smoothbore flexible hose with the same bend radius of a conventional convoluted hose.

In addition to hoses, PARKER/PAGE International Hose engineers customize fittings to solve the most challenging requirements. Revolutionary design answers our customer's demands for flexible products utilizing the entire PARKER/PAGE International Hose line of standard fittings.

WE MAKE CUSTOM HOSES & FITTINGS

CUSTOM PRODUCTS



This catalog contains standard and non-standard products.

(+) Non-Standard

- Non-standards are not typically stocked
- Minimum buys, runs, costs, lead times, and pricing will be quoted
- Overruns or excess inventories may exist (in-stock pricing will be quoted)
- In-stock pricing levels are sensitive to products available and are subject to prior sale
- Delivery or lead times quoted begin A. R. O. (after receipt of order)

The Part # Column for 91N Series Fittings indicates material type. There applicable, "B" indicates Brass and "C" indicates Stainless Steel. For detailed ordering information, contact PARKER/PAGE Int'l Hose.

INDUSTRIAL SMOOTHBORE - PTFE HOSE

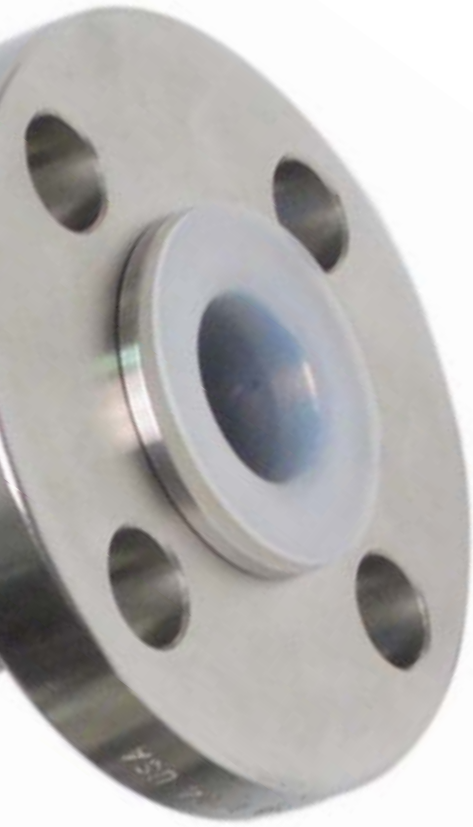
PARKER/PAGE International Smoothbore PTFE Hose is specified in many of the most challenging industrial applications. The extruded PTFE tube has excellent flex life, high temperature tolerance and superior chemical resistance. PARKER/PAGE PTFE is steam compatible and non adhesive, making it an excellent choice for applications requiring steam cleaning of an assembly or transfer of highly viscous media such as adhesives and paints.

PARKER/PAGE PTFE hose products are FDA compliant and an ideal choice for food and beverage applications. In addition to high temperature hydraulic and pneumatic systems, such as those found in steel mills, foundries, transit buses and air compressors are examples of industrial applications that showcase PARKER/PAGE hose as a problem solver.

PARKER/PAGE International Smooth Bore Hoses are available in both standard (.030) wall and heavy (.040) wall sizes.

Extra heavy wall hoses are available for special application requirements.

INDUSTRIAL SMOOTHBORE - PTFE HOSE



Non Conductive & Conductive

Some applications require conductivity of the tube in order to dissipate static build up. PARKER/PAGE International offers a full range of smooth bore hoses with non-conductive (natural) and conductive (black) inner core to meet today's most demanding applications. This tubing may be supplied with a fully conductive liner and also, a fully conductive tube.

Fully conductive tubes are available in PTFE and PFA. Industrial grade conductivity conforms to AMS-H-27267, having a minimum conductance of 10-20 micro amps with 1,000 vdc applied over a 14" length. Upon special request an ISO grade conforming to a maximum of a 1 mega ohm resistance over a one meter length when tested in accordance with ISO 8031 is available.

- PTFE is Extremely Chemical Resistant - (Non- Corrosive)
- Environmentally Safe - (Low Effusion)
- Non-Adhesive
- Easy Cleaning
- Long Life Expectancy
- Maximum Durability

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL SMOOTHBORE - PTFE HOSE

(**.030 Wall**) Standard Wall Smooth Bore PTFE Hose

The S30 Series hose is manufactured in natural or with an inner conductive static dissipating liner that provides continuity between the end fittings for applications where flow induced electrostatic charges could be a potential hazard. Use with Field Attachable fittings, page 46.

S30 (Natural) & S30B (Conductive)

PTFE with Stainless Steel Braid

S30 - NATURAL

S30B- CONDUCTIVE
(Static Dissipative)

Dash Number	Part Number		Hose ID	Hose OD	Bend Radius	PSI	Burst Pressure
	Natural	Conductive					
-03	03-S30	03-S30B	.125	.250	1.5	3000	12000
-04	04-S30	04-S30B	.187	.305	2.0	3000	12000
-05	05-S30	05-S30B	.250	.375	3.0	3000	12000
-06	06-S30	06-S30B	.312	.430	4.0	2500	10000
-08	08-S30	08-S30B	.406	.535	5.0	2000	8000
-10	10-S30	10-S30B	.500	.636	6.5	1750	7000
-12	12-S30	12-S30B	.625	.765	7.5	1500	6000
-16	16-S30	16-S30B	.875	1.030	9.0	1000	4000

NOTE: Temperature Range: -100°F to +450°F (-73°C to 232°C)

(**.040 Wall**) Heavy Wall Smooth Bore PTFE Hose

PAGE S40 Series hose is manufactured as above, however, with a minimum wall thickness of .040" resulting in 33% more PTFE than other manufacturers. The additional tubing thickness provides an improved bend radius, greater kink resistance and decreased gas permeation. Use with Field Attachable fittings, page 46.

S40 (Natural) & S40B (Conductive)

PTFE Heavy Wall with Stainless Steel Braid

S40 - NATURAL

S40B - CONDUCTIVE
(Static Dissipative)

Dash Number	Part Number		Hose ID	Hose OD	Bend Radius	PSI	Burst Pressure
	Natural	Conductive					
-03	03-S40	03-S40B	.125	.250	1.0	3000	12000
-04	04-S40	04-S40B	.187	.320	1.5	3000	12000
-05	05-S40	05-S40B	.250	.375	2.0	3000	12000
-06	06-S40	06-S40B	.312	.435	3.5	2500	10000
-08	08-S40	08-S40B	.406	.565	4.5	2000	8000
-10	10-S40	10-S40B	.500	.656	5.0	1750	7000
-12	12-S40	12-S40B	.625	.780	6.0	1500	6000
-16	16-S40	16-S40B	.875	1.050	9.0	1000	4000
-16Z	16Z-S40*	16Z-S40B*	.875	1.100	7.3	1250	5000
-20Z	20Z-S40*	20Z-S40B*	1.125	1.350	11.0	1000	4000

NOTE: Temperature Range: -100°F to +450°F (-73°C to 232°C) *Z indicates Double Braid

See page 6 for Part Numbering System

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL SMOOTHBORE - PTFE HOSE

S30 Standard Wall & S40 HeavyWall Part Numbering System

Assembly Code	Size Code	Hose Code	Fitting 1" End	Fitting Material 1" End	Fitting 2" End	Fitting Material 2" End	Flange Material	–	Length in Inches				–	Length in 1/8" increments	Accessory Code
								–					–		

Assembly Code

Permanently Attached	X
Field Attachable	FA

Size Code

1/8"	03
3/16"	04
1/4"	05
5/16"	06
13/32"	08
1/2"	10
5/8"	12
7/8"	16
1-1/8"	20

Hose Code

S30	S
S30B	SB
S40	H
S40B	HB
ZS40	R
ZS40B	RB
B40	A
MaxPac HiPSI**	W

Note: MaxPac Hose available with Black Conductive Tube and Female Stainless Steel 37° JIC Swivel Fittings only

Fitting Code

Pipe Thread Fittings	
Male Pipe NPT Hex	10
Male Pipe NPT Step Up	15
Male Pipe NPT Step Down	20
Male Union	11
Male Union 45°	14
Male Union 90°	19
Male Union Step Up	16
Male Union Step Down	21
Female Pipe NPT Hex	55
Female Pipe Step Up	58
Female Pipe Step Down	59
Female Union	80
Female Union Step Up	84
Female Union Step Down	88
JIC Fittings	
JIC Female Swivel	68
JIC Female 45° Elbow	66
JIC Female 90° Elbow	67
SAE Female Swivel	69
SAE Female 45° Elbow	70
SAE Female 90° Elbow	71
JIC Female Step Up	64
JIC Female Step Down	65
Tube Stub Fittings	
Tube Stub	91
Tube Stub Step Up	93
Tube Stub Step Down	95
PAGElok™ Female Compression	92
SAE Male Compression	96
SAE Female Compression	97
Laundry Flange Fittings	
Laundry Flange Fitting	72
Tire Mold Flange	
Tire Mold Flange #60	60
Tire Mold Flange #61	61
Tire Mold Flange #62	62
Sanitary Fittings	
Sanitary	40
Sanitary Mini	42
Paint Spray Fittings	
Paint Spray Swivel	99
Inverted Flare & Power Trim Fittings	
Male Straight	76
Male 45° Elbow	77
Male 90° Elbow	78
Male Straight Step Down	79
Special Ends	
Standard Cuff w/o Ends	00
Non Standard Fitting	XX

Fitting Material

Stainless (SS)	S
Brass	B
Carbon Steel	C

Flange

None	0
Carbon Steel Epoxy Coated	D
304SS	4
316SS	6
Kynar	K
CPVC	C
PVC	V
Polypropylene	P
Non Standard	X

Accessory Code*

None	
Spring Guard	S
Armour Guard	A
End Bend Restrictors	E
Fire Sleeve	F
Rubber Sleeve	H
FEP Heat Shrink	T
Polyolefin Heat Shrink	P
Silicone Sleeve	M
Internal Spring	I
Vacuum Spring Wire	W
Specials	X

*See Accessory Section for Details

= Optional

Example

X08H10S68S0-0300 = Industrial Smoothbore size 08 (13/32 ID) .040 Wall SS Single Braided Hose Coupled with 1/2 - 14 SS Male NPT on one end and 3/4 - 16 SS Female 37° Seat JIC Swivel on other end, with no flange, with a length of 300 inches from end of male pipe to seat of JIC

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

TRUE BORE - INDUSTRIAL SMOOTHBORE PTFE HOSE

With Stainless Steel Braid

PARKER/PAGE International TRUE BORE Smoothbore PTFE hose is constructed with an extruded virgin Fluoropolymer (PTFE) inner core reinforced with a tightly woven stainless steel braid. The braid serves a dual purpose, by (a) providing a protective covering and (b) allowing the hose to carry substantial operational pressure while maintaining a 4:1 safety factor.

PARKER/PAGE Smoothbore inner core is also available with special outer reinforcement braids. Special metal braids such as Monel®, Hastelloy® and non-metallic braids of Nomex®, KEVLAR®, Kynar®, PEEK™, polyester, and many others can be furnished on request.

STW (Natural) & STB (Conductive)

True Bore Smoothbore PTFE with Stainless Steel Braid

Part Number		Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (kg/sq.cm @ 22°C)	Inch (MM)	Lbs. (Kg/M)
03-STW	03-STB	0.125 (3.2)	0.250 (6.3)	3000 (207.0)	12000 (828.0)	29.9 (1.0)	1.5 (38.1)	.051 (0.076)
04-STW	04-STB	0.250 (6.3)	0.370 (9.4)	3000 (207.0)	12000 (828.0)	29.9 (1.0)	3.0 (76.2)	.084 (0.125)
06-STW	06-STB	0.375 (9.5)	0.510 (13.0)	2000 (138.0)	8000 (552.0)	29.9 (1.0)	5.00 (127.0)	.108 (0.161)
08-STW	08-STB	.500 (12.7)	.630 (16.0)	1750 (120.7)	7000 (483.0)	29.9 (1.0)	6.5 (165.1)	.159 (0.237)
10-STW	10-STB	.625 (15.9)	.760 (19.3)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	7.5 (190.5)	.196 (0.292)
12-STW	12-STB	.750 (19.0)	.880 (22.4)	1000 (69.0)	4000 (276.0)	29.9 (1.0)	8.0 (215.9)	.202 (0.301)
16-STW	16-STB	1.000 (25.4)	1.130 (28.7)	1000 (69.0)	4000 (276.0)	20.0 (0.8)	12.00 (304.8)	.327 (.487)
16Z-STW	16Z-STB	1.000 (25.4)	1.220 (31.0)	1200 (82.7)	4800 (331.0)	20.0 (0.8)	12.00 (304.8)	.557 (.829)
20Z-STW	20Z-STB	1.250 (31.7)	1.410 (35.8)	1000 (69.0)	4000 (276.0)	18.0 (0.6)	14.00 (355.6)	.682 (1.015)
24Z-STW	24Z-STB	1.500 (38.1)	1.730 (43.9)	900 (62.1)	3600 (248.4)	15.0 (0.5)	18.00 (381.0)	.790 (1.176)

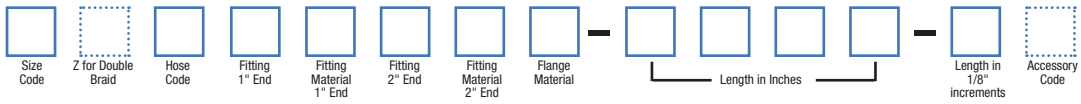
NOTE: Temperature Range: -100°F to +450°F (-73°C to +232°C) *Z indicates Double Braid

See page 8 for Part Numbering System.

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

FLUOROPOLYMER HOSE PRODUCTS

TRUE BORE & CONVOLUTED Part Numbering System



Size Code	
3/16"	03
1/4"	04
5/16"	05
3/8"	06
1/2"	08
5/8"	10
3/4"	12
7/8"	14
1"	16
1-1/4	20
1-1/2"	24
2"	32
2-1/2"	40
3"	48
4"	64

Hose Code	
ACW	A
NCW	M
NCB	MB
STW	S
STB	SB
CW	U
CB	UB
CWV	V
CBV	BV
SCW	T
SCB	TB
PCW	N
PCB	NB
RCTW	G
RCTB	GB
RCTW-GRY	L
SCWV	J
SCBV	JB
PCWV	P
PCBV	PB
KCWV	K
KCBV	KB
ZCWV	Z
ZCBV	ZB
PLH	H
PLH6	HL
PSG	O
KCW	R
KCB	RB
PMH	W
PMH6	WL

Fitting Code	
Industrial Thread	
Male Pipe NPT Hex	03
Female Pipe NPT Hex	06
Male Pipe NPT Step Down	13
Male Pipe NPT Step Up	23
Male Union Step Up	34
Male Union Step Down	35
JIC Female Swivel	30
Male JIC 37°	31
JIC Female Step Up	32
Male Union	33
Female Union	36
Female NPSH	27
Female ORFS Swivel	80
Male ORFS	81
Male O-Ring Boss	86
Flanges	
Flange Retainer	05
Flare-Seal Flange Retainer	29
Cam Lock	
Female Cam Lock	07
With Locking Handles	17
Male Cam Lock	08
Female Cam Lock Step Up	09
Sanitary	
Sanitary Tri Clamp	40
Sanitary Tri Clamp 45°	4K
Sanitary Tri Clamp 90°	4L
Sanitary 1-Step Up	4A
Sanitary 2-Step Up	4B
Sanitary 3-Step Up	4C
Sanitary Mini	42
Sanitary Mini Step Up	43
Schedule 5 Tri Clamp	44
I-Line Male	48
I-Line Female	49
Bevel Seat Female	45
Bevel Seat Male	46
Bevel Seat Female Step Up	47
Tube and Vacuum	
PAGElok™ Tube Adapter	38
PAGElok™ Tube Compression Fitting	39
PAGElok™ High Purity Male	MR
PAGElok™ High Purity Female	FR
Buttweld	
Buttweld for Tube	18
Buttweld for Pipe	19
Special Ends	
Standard Cuffed Ends	90
Non Standard Fitting	99

Fitting Material	
304 Stainless (SS 304)	4
316 Stainless (SS 316)	6
316 Stainless (SS 15Ra) Electropolished to 15Ra	E
Carbon Steel	C
PFA Encapsulated	T
Hastelloy	H
Monel	M
Polypropylene	P
PVDF	K
PFA (Solid)	F

Flange Material	
None	0
Carbon Steel Epoxy Coated	D
304SS	4
316SS	6
Kynar	K
CPVC	C
PVC	V
Polypropylene	P
Non Standard	X

Accessory Code*	
None	
Spring Guard	S
Armour Guard	A
End Bend Restrictors	E
Fire Sleeve	F
Rubber Sleeve	H
FEP Heat Shrink	T
Polyolefin Heat Shrink	P
Silicone Sleeve	M
Vacuum Spring Wire	W
Specials	X

*See Accessory Section for Details

= Optional

Example

32J08T17T0-0120-A = 2" Style SCWV, 316 SS Braided Heavy Wall Open Pitch Convoluted PTFE Hose coupled with 2" 316 SS PFA Encapsulated Male Cam & Groove Fitting on one end and a 2" 316 SS PFA Encapsulated Female Cam & Groove Fitting with an Encapsulated Gasket on one end, measuring 120" from the end of the Male Cam to the seat of the Female Cam

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

SEAMLESS CONVOLUTED PTFE HOSE

Outstanding Strength & Flexibility

PARKER/PAGE International designs and manufactures high quality seamless convoluted hoses that are open pitched and self draining. Standard seamless PTFE braided hoses are extremely lightweight, flexible and kink resistant. PARKER/PAGE Convoluted Fluoropolymer PTFE hoses are less susceptible to cracking from stress or flexing than metal hoses or other Fluoroplastic hoses when used within designated operating parameters.

PARKER/PAGE offers two types of PTFE inncercore, natural and conductive (static-dissipative). External hose reinforcements consist of stainless steel, polypropylene and many other metallic and non-metallic braid options including fire sleeve, wire guard and polyolefin heat shrinkable tubing.

- PTFE is Extremely Chemical Resistant - (Non- Corrosive)
- Environmentally Safe - (Low Effusion)
- Non-Adhesive
- Easy Cleaning
- Long Life Expectancy
- Maximum Durability

Identification labels are available for all of the PARKER/PAGE hose assemblies. Ask your representative for more details.

PARKER/PAGE Hose product materials are compliant with the following requirements: FDA 21 CFR 177.1550, 177.2600 • USP XXII Class VI Requirements • Pharmacopoeia 3.1.9 • ISO 1093 Sections 5, 6, 10, 11 • USDA Standards • 3A Standards

SEAMLESS CONVOLUTED PTFE HOSE

SCW (Natural) & SCB (Conductive)

316 Stainless Steel Braid

Part Number		Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
04-SCW	04-SCB	.250 (06.3)	.460 (11.7)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	0.750 (19.0)	.075 (.112)
06-SCW	06-SCB	.375 (09.5)	.540 (13.7)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	1.000 (25.4)	.140 (.208)
08-SCW	08-SCB	.500 (12.7)	.720 (18.3)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	1.500 (38.1)	.156 (.232)
12-SCW	12-SCB	.750 (19.0)	1.020 (25.9)	1200 (82.8)	4800 (331.2)	29.9 (1.0)	2.000 (50.8)	.266 (.396)
16-SCW	16-SCB	1.000 (25.4)	1.310 (33.3)	1000 (69.0)	4000 (276.0)	29.9 (1.0)	2.500 (63.5)	.370 (.551)
20-SCW	20-SCB	1.250 (31.7)	1.730 (43.9)	750 (51.7)	3200 (220.8)	29.9 (1.0)	3.000 (76.2)	.458 (.682)
24-SCW	24-SCB	1.500 (38.1)	1.930 (49.0)	650 (44.8)	2600 (179.4)	29.9 (1.0)	3.750 (95.2)	.545 (.811)
32-SCW	32-SCB	2.000 (50.8)	2.420 (61.5)	450 (31.0)	1800 (124.2)	29.9 (1.0)	4.750 (120.6)	.897 (1.335)

SCW - NATURAL

SCB - CONDUCTIVE
(Static Dissipative)

NOTE: Temperature Range: -100°F to +500°F (-73°C to +260°C)

PCW (Natural) & PCB (Conductive)

Polypropylene Braid

Part Number		Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
04-PCW	04-PCB	.250 (06.3)	.550 (13.9)	350 (59.1)	1400 (96.6)	29.9 (1.0)	0.750 (19.0)	.030 (.045)
06-PCW	06-PCB	.375 (09.5)	.640 (16.3)	350 (59.1)	1400 (96.6)	29.9 (1.0)	1.000 (25.4)	.060 (.089)
08-PCW	08-PCB	.500 (12.7)	.820 (20.8)	300 (20.7)	1200 (82.8)	29.9 (1.0)	1.500 (38.1)	.148 (220)
12-PCW	12-PCB	.750 (19.0)	1.150 (29.2)	250 (17.2)	1000 (69.0)	29.9 (1.0)	2.000 (50.8)	.180 (.268)
16-PCW	16-PCB	1.000 (25.4)	1.500 (38.1)	250 (17.2)	1000 (69.0)	29.9 (1.0)	2.500 (63.5)	.262 (.390)
20-PCW	20-PCB	1.250 (31.7)	1.920 (48.8)	200 (13.8)	800 (55.2)	29.9 (1.0)	3.000 (76.2)	.370 (.551)
24-PCW	24-PCB	1.500 (38.1)	2.120 (53.8)	200 (13.8)	800 (55.2)	29.9 (1.0)	3.750 (95.2)	.420 (.625)
32-PCW	32-PCB	2.000 (50.8)	2.650 (67.3)	200 (13.8)	800 (55.2)	29.9 (1.0)	4.750 (120.6)	.560 (.833)

PCW - NATURAL

PCB - CONDUCTIVE
(Static Dissipative)

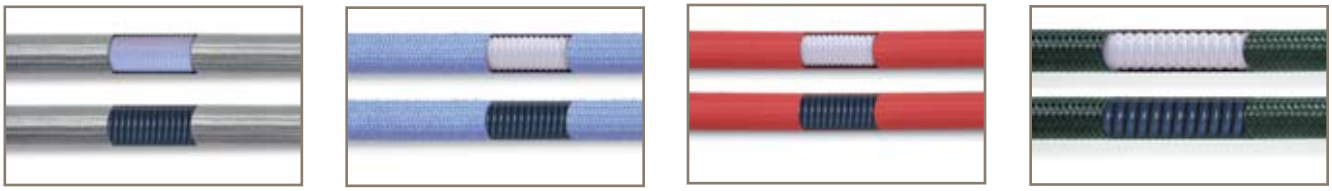
NOTE: Temperature Range: 0°F to +212°F (-18°C to +100°C)

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

SEAMLESS CONVOLUTED PTFE HOSE ASSEMBLIES

Heavy Wall Open Pitch Vacuum Hose



PARKER/PAGE Heavy Wall Open Pitch Vacuum Hose offers a heavier wall for vacuum applications at elevated temperatures. For 2.5", 3" and 4" sizes, a vacuum wire is recommended.

SCWV (Natural) & SCBV (Conductive)

316 Stainless Steel Braid - Heavy Wall Open Pitch

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-SCWV	08-SCBV	.500 (12.7)	.720 (18.3)	1500 (103.5)	6000 (441.0)	29.9 (1.0)	2.00 (50.8)	.173 (0.257)
12-SCWV	12-SCBV	.750 (19.0)	1.040 (26.4)	1200 (82.8)	4800 (331.2)	29.9 (1.0)	2.75 (69.8)	.330 (0.491)
16-SCWV	16-SCBV	1.000 (25.4)	1.250 (31.7)	1000 (69.0)	4300 (296.7)	29.9 (1.0)	4.00 (101.6)	.368 (.548)
20-SCWV	20-SCBV	1.250 (31.7)	1.660 (42.2)	750 (51.7)	3200 (220.8)	29.9 (1.0)	5.50 (139.7)	.560 (.833)
24-SCWV	24-SCBV	1.500 (38.1)	1.920 (48.8)	650 (44.8)	2600 (179.4)	29.9 (1.0)	7.00 (177.8)	.641 (.954)
32-SCWV	32-SCBV	2.000 (50.8)	2.490 (63.2)	450 (31.0)	2100 (144.9)	29.9 (1.0)	8.50 (215.9)	.835 (1.243)
40-SCWV	40-SCBV	2.500 (63.5)	3.250 (82.5)	200 (13.8)	800 (55.2)	29.9 (1.0)	12.00 (304.8)	1.520 (2.262)
48-SCWV	48-SCBV	3.000 (76.2)	3.800 (96.5)	175 (12.0)	700 (48.3)	29.9 (1.0)	14.00 (355.6)	1.820 (2.709)
64-SCWV	64-SCBV	4.000 (101.6)	4.760 (120.9)	150 (10.3)	600 (41.4)	29.9 (1.0)	16.00 (406.4)	2.100 (3.125)

SCWV - NATURAL

SCWV - CONDUCTIVE
(Static Dissipative)

NOTE: Temperature Range: -100°F to +500°F (-73°C to +260°C)

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

SEAMLESS CONVOLUTED PTFE HOSE ASSEMBLIES

Heavy Wall Open Pitch Vacuum Hose

PCWV (Natural) & PCBV (Conductive)

Polypropylene Braid - Heavy Wall Open Pitch

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-PCWV	08-PCBV	.500 (12.7)	.810 (20.6)	300 (20.7)	1200 (82.8)	29.9 (1.0)	3.00 (76.2)	.136 (.202)
12-PCWV	12-PCBV	.750 (19.0)	1.100 (27.9)	250 (17.2)	1000 (69.0)	29.9 (1.0)	3.50 (88.9)	.215 (.320)
16-PCWV	16-PCBV	1.000 (25.4)	1.440 (35.6)	250 (17.2)	1000 (69.0)	29.9 (1.0)	4.50 (114.3)	.313 (.466)
20-PCWV	20-PCBV	1.250 (31.7)	1.860 (47.2)	200 (13.8)	800 (55.2)	29.9 (1.0)	5.00 (127.0)	.396 (.589)
24-PCWV	24-PCBV	1.500 (38.1)	2.100 (53.3)	200 (13.8)	800 (55.2)	29.9 (1.0)	6.00 (152.4)	.492 (.732)
32-PCWV	32-PCBV	2.000 (50.8)	2.660 (67.6)	200 (13.8)	800 (55.2)	29.9 (1.0)	8.50 (215.9)	.662 (.985)
40-PCWV	40-PCBV	2.500 (63.5)	3.420 (86.9)	150 (10.3)	600 (41.4)	29.9 (1.0)	12.00 (304.80)	1.206 (1.795)
48-PCWV	48-PCBV	3.000 (76.2)	3.920 (99.6)	125 (8.6)	500 (34.5)	29.9 (1.0)	14.00 (355.6)	1.452 (2.161)
64-PCWV	64-PCBV	4.000 (101.6)	4.920 (124.9)	100 (6.9)	400 (27.6)	29.9 (1.0)	16.00 (406.4)	1.678 (2.497)

NOTE: Temperature Range: 0°F to +212°F (-18°C to +100°C)

PCWV - NATURAL

PCBV - CONDUCTIVE
(Static Dissipative)

KCWV (Natural) & KCBV (Conductive)

Kynar® (PVDF) Braid - Heavy Wall Open Pitch

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-KCWV	08-KCBV	.500 (12.7)	.810 (20.5)	500 (34.4)	2000 (137.9)	29.9 (1.0)	3.00 (76.2)	.136 (0.202)
12-KCWV	12-KCBV	.750 (19.0)	1.120 (28.4)	410 (28.2)	1640 (113.1)	29.9 (1.0)	3.50 (88.9)	.215 (0.320)
16-KCWV	16-KCBV	1.000 (25.4)	1.310 (33.2)	380 (26.2)	1520 (104.8)	29.9 (1.0)	4.50 (114.3)	.313 (.466)
20-KCWV	20-KCBV	1.250 (31.7)	1.710 (43.4)	300 (20.6)	1200 (82.7)	29.9 (1.0)	5.00 (127.0)	.396 (.589)
24-KCWV	24-KCBV	1.500 (38.1)	2.010 (51.0)	225 (15.5)	900 (62.0)	29.9 (1.0)	6.00 (152.4)	.492 (.732)
32-KCWV	32-KCBV	2.000 (50.8)	2.530 (64.2)	175 (12.1)	710 (48.9)	29.9 (1.0)	8.50 (215.9)	.662 (.985)

NOTE: Temperature Range: -40°F to +280°F (-40°C to +138°C)

KCWV - NATURAL

KCBV - CONDUCTIVE
(Static Dissipative)

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

SEAMLESS CONVOLUTED PTFE HOSE ASSEMBLIES

Increased Abrasion Resistance

PEEK™ (Polyetheretherketone) BRAID - HEAVY WALL OPEN PITCH

PARKER/PAGE PEEK™ Reinforced Convoluted Hoses offer increased abrasion resistance for applications where handling high temperatures is critical to the success of the application.

PEEK™ Reinforced Hoses stand apart from other braided hoses, such as Polypropylene or Kynar®, because they offer excellent abrasion resistance and operate in temperatures up to 500°F/260°C. Also, they have an extremely low coefficient of friction making them ideal for applications where the hose must snake through a corrosive environment. Typical applications are high temperature cabling, underground cables and any application where confines require a light weight hose to handle the load of a heavy duty hose.

ZCWV - NATURAL

ZCBV - CONDUCTIVE
(Static Dissipative)

ZCWV (Natural) & ZCBV (Conductive)

PEEK™ Braid - Heavy Wall Open Pitch

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-ZCWV	08-ZCBV	.500 (12.7)	.750 (19.0)	325 (22.4)	1300 (89.7)	29.9 (1.0)	3.00 (76.2)	.136 (0.202)
12-ZCWV	12-ZCBV	.750 (19.0)	1.060 (26.9)	250 (17.2)	1000 (69.0)	29.9 (1.0)	3.50 (88.9)	.215 (0.320)
16-ZCWV	16-ZCBV	1.000 (25.4)	1.260 (32.0)	225 (15.5)	900 (62.1)	29.9 (1.0)	4.50 (114.3)	.313 (.466)
20-ZCWV	20-ZCBV	1.250 (31.7)	1.660 (42.2)	175 (12.1)	700 (48.3)	29.9 (1.0)	5.00 (127.0)	.396 (.589)
24-ZCWV	24-ZCBV	1.500 (38.1)	1.920 (48.8)	150 (10.3)	600 (41.4)	29.9 (1.0)	6.00 (152.4)	.492 (.732)
32-ZCWV	32-ZCBV	2.000 (50.8)	2.470 (62.7)	125 (8.7)	500 (34.5)	29.9 (1.0)	8.50 (215.9)	.662 (.985)

NOTE: Temperature Range: -65°F to +500°F (-54°C to +260°C)

PEEK™ is a registered trademark of Victrex

- PEEK™ offers outstanding wear resistance
- Excellent strength to weight ratio
- Excellent steam resistance
- Excellent chemical resistance
- Excellent outgassing characteristic
- Self extinguishing
- Exceptional tensile strength

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

SEAMLESS CONVOLUTED PTFE HOSE ASSEMBLIES Without Braid

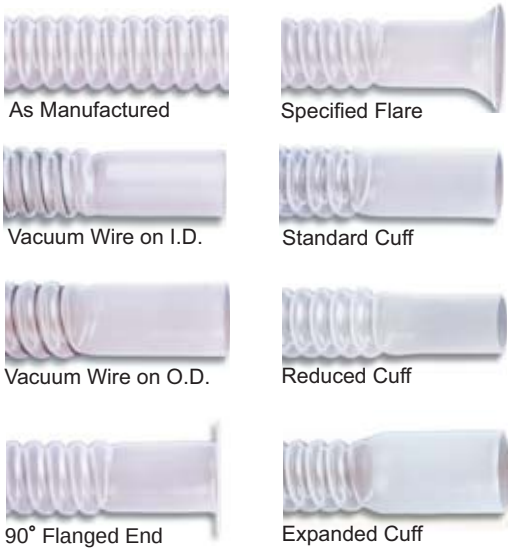
PTFE - Heavy Wall Open Pitch

LOW PRESSURE VENT AND VACUUM TUBING

PARKER/PAGE manufactures high quality PTFE convoluted tubing from thick walled PTFE that is open pitched and self draining. CWV/CBV tubing is manufactured with smooth, rounded, helical-shaped convolutions which help to promote easy cleaning and self draining for ultimate high purity, convoluted tubing.

PARKER/PAGE Heavy Wall Open Pitch tubing is offered in natural (non-conductive) or black (conductive-static dissipating). CWV and CBV tube can be provided with standard smooth cuffs, Flare Seal style, flanged or a variety of crimp style end fittings. For vacuum applications, at elevated temperatures and for 2.5", 3" and 4" sizes, a vacuum wire is recommended.

PARKER/PAGE CWV and CBV is widely used in high temperature and chemical resistant applications for industries such as semiconductor, automotive, chemical, petrochemical and pharmaceutical industries.



CWV (Natural) & CBV (Conductive)

PTFE - Heavy Wall Convoluted Tubing

Page Number	Order ID	Min./Max. Inside Diameter		Maximum Outside Diameter	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Weight per foot	Minimum Bend Radius*
Natural (Conductive)	Inch (MM)	Inch (MM)		Inch (MM)	psi @ 72°F (Bars @ 22°C)	ps@ 72°F (Bars@ 22°C)	In. Hg. @72°F (Kg/Sq.CM @22°C)	Lbs. KG/M	Inch (MM)
08-CWV (08-CBV)	.500 (12.7)	.454 (11.5)	.466 (11.8)	.700 (17.8)	50 (3.4)	100 (6.9)	29.9 (1.0)	0.087 (0.129)	1.50 (38)
12-CWV (12-CBV)	.750 (19.0)	.683 (17.4)	.701 (17.8)	1.010 (25.7)	50 (3.4)	100 (6.9)	29.9 (1.0)	0.165 (0.246)	1.88 (48)
16-CWV (16-CBV)	1.000 (25.4)	.841 (21.4)	.859 (21.8)	1.510 (30.7)	50 (3.4)	100 (6.9)	29.9 (1.0)	0.184 (0.274)	2.50 (64)
20-CWV (20-CBV)	1.250 (31.7)	1.125 (28.6)	1.145 (29.1)	1.610 (40.9)	40 (2.8)	80 (5.5)	29.9 (1.0)	0.280 (0.417)	3.13 (79)
24-CWV (24-CBV)	1.500 (38.1)	1.420 (36.1)	1.480 (37.6)	1.880 (47.8)	40 (2.8)	80 (5.5)	29.9 (1.0)	0.320 (0.476)	3.75 (95)
32-CWV (32-CBV)	2.000 (50.8)	1.770 (45)	1.830 (46.5)	2.432 (61.8)	30 (2.0)	60 (4.1)	29.9 (1.0)	0.417 (0.621)	4.75 (120)
40-CWV (40-CBV)	2.500 (63.5)	2.460 (62.5)	2.540 (64.5)	3.210 (81.5)	20 (1.4)	40 (2.8)	29.9 (1.0)	0.760 (1.131)	5.00 (127)
48-CWV (48-CBV)	3.000 (76.2)	2.940 (74.7)	3.060 (77.7)	3.750 (95.2)	15 (1.0)	30 (2.0)	29.9 (1.0)	0.910 (1.354)	7.00 (178)
64-CWV (64-CBV)	4.000 (101.6)	3.940 (100)	4.060 (103)	4.750 (121)	10 (0.7)	20 (1.3)	29.9 (1.0)	1.050 (1.563)	9.00 (229)


CWV - NATURAL


CBV - CONDUCTIVE
(Static Dissipative)

NOTE: Temperature Range: -100°F to +500°F (-73°C to +260°C)
*Bend Radius based on 36" length piece

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

PTFE FLARE-SEAL™ PRODUCTS

Convoluted and Smoothbore

PARKER/PAGE Flare-Seal™ PTFE hose products are designed and manufactured to provide the ultimate in high purity, corrosion/chemical resistance and sanitary applications. PARKER/PAGE Flare-Seal™ PTFE hose products are available in convoluted or smooth True Bore with stainless steel braid or as polypropylene braided convoluted assemblies. They can be manufactured in natural (non-conductive) or black (conductive-static dissipating) assemblies.

One unique benefit offered by PARKER/PAGE Flare-Seal™ hoses is that the PTFE hose liner actually passes through the inside of the fitting and it is then flared over the face of the fitting. This special process is a significant improvement over conventional fitting assembly procedures, where the fitting normally passes through the inside of the liner, creating flow restrictions and bacterial entrapment. PARKER/PAGE Flare-Seal™ products solve these problems with the benefit of unrestricted flow leaving no area for bacterial entrapment while providing 100% PTFE coverage on all wetted surfaces. Flare-Seal™ products can be provided with flanged ends or sanitary tri-clamp end connections.

PARKER/PAGE Hose product materials are compliant with the following requirements: FDA 21 CFR 177.1550, 177.2600 • USP XXII Class VI Requirements • Pharmacopoeia 3.1.9 • ISO 1093 Sections 5, 6, 10, 11 • USDA Standards • 3A Standards

PTFE FLARE-SEAL™ PRODUCTS

Industrial True-Bore PTFE Hose

STW-FS (Natural) & STB-FS (Conductive)

True Bore PTFE 316 Stainless Braid

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-STW-FS	08-STB-FS	.500 (12.7)	.670 (17.0)	425 (29.3)	1700 (117.2)	29.9 (1.0)	6.5 (165.1)	.191 (0.284)
12-STW-FS	12-STB-FS	.750 (19.0)	.970 (24.6)	400 (27.6)	1600 (110.3)	29.9 (1.0)	8.5 (215.9)	.252 (0.375)
16-STW-FS	16-STB-FS	1.000 (25.4)	1.160 (29.5)	350 (24.1)	1400 (96.5)	20.0 (0.8)	12.0 (304.8)	.393 (0.585)
20-STW-FS	20-STB-FS	1.125 (28.6)	1.500 (38.1)	300 (20.7)	1200 (82.7)	18.0 (0.6)	15.0 (381.0)	.682 (1.015)
24-STW-FS	24-STB-FS	1.500 (28.6)	1.700 (43.2)	300 (20.7)	1200 (82.7)	15.0 (0.5)	18.0 (457.2)	.790 (1.175)

STW-FS- NATURAL

STB-FS- CONDUCTIVE (Static Dissipative)

NOTE: Temperature Range: 0°F to +212°F (-18°C to +100°C)

- SEAMLESS INNER CORE
- UNINTERRUPTED FLOW
- EASY TO CLEAN

Flare-Seal™
Female Cam & Groove

Flare-Seal™
Sanitary

Flare-Seal™
Male Cam & Groove

Flare-Seal™
with Flange

These end fittings also available

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PTFE FLARE-SEAL™ PRODUCTS

Seamless Convoluted - 316 Stainless Steel Braid

SCWV-FS (Natural) & SCBV-FS (Conductive)

PTFE Convoluted 316 Stainless Braid with Flare Seal Fitting

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-SCWV-FS	08-SCBV-FS	.500 (12.7)	.720 (18.3)	500 (34.5)	2000 (137.9)	29.9 (1.0)	2.00 (50.8)	.173 (0.257)
12-SCWV-FS	12-SCBV-FS	.750 (19.0)	1.040 (26.4)	425 (29.3)	1700 (117.2)	29.9 (1.0)	2.75 (69.8)	.330 (0.491)
16-SCWV-FS	16-SCBV-FS	1.000 (25.4)	1.250 (31.7)	350 (24.1)	1400 (96.5)	29.9 (1.0)	4.00 (101.6)	.368 (.548)
20-SCWV-FS	20-SCBV-FS	1.250 (31.7)	1.660 (42.2)	325 (22.4)	1300 (89.6)	29.9 (1.0)	5.50 (139.7)	.560 (.833)
24-SCWV-FS	24-SCBV-FS	1.500 (38.1)	1.920 (48.8)	300 (20.7)	1200 (82.7)	29.9 (1.0)	7.00 (177.8)	.641 (.954)
32-SCWV-FS	32-SCBV-FS	2.000 (50.8)	2.490 (63.2)	250 (17.2)	1000 (69.0)	29.9 (1.0)	8.50 (215.9)	.835 (1.243)
40-SCWV-FS	40-SCBV-FS	2.500 (63.5)	3.250 (82.5)	200 (13.8)	800 (55.2)	29.9 (1.0)	12.00 (304.8)	1.520 (2.262)
48-SCWV-FS	48-SCBV-FS	3.000 (76.2)	3.800 (96.5)	175 (12.0)	700 (48.2)	29.9 (1.0)	14.00 (355.6)	1.820 (2.709)
64-SCWV-FS	64-SCBV-FS	4.000 (101.6)	4.760 (120.6)	150 (10.3)	600 (41.4)	29.9 (1.0)	16.00 (406.4)	2.100 (3.125)

NOTE: Temperature Range: -100°F to +500°F (-73°C to +260°C)

SCWV-FS - NATURAL

SCBV-FS - CONDUCTIVE (Static Dissipative)

All ratings based on 72°F (22°C). All dimensions nominal. Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

PCWV-FS (Natural) & PCBV-FS (Conductive)

PTFE Convoluted Polypropylene Braid with Flare Seal Fitting

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-PCWV-FS	08-PCBV-FS	.500 (12.7)	.810 (20.6)	300 (20.7)	1200 (82.8)	29.9 (1.0)	3.00 (76.2)	.136 (0.202)
12-PCWV-FS	12-PCBV-FS	.750 (19.0)	1.100 (27.9)	250 (17.2)	1000 (69.0)	29.9 (1.0)	3.50 (88.9)	.215 (0.320)
16-PCWV-FS	16-PCBV-FS	1.000 (25.4)	1.440 (35.6)	250 (17.2)	1000 (69.0)	29.9 (1.0)	4.50 (114.3)	.313 (.466)
20-PCWV-FS	20-PCBV-FS	1.250 (31.7)	1.860 (47.2)	200 (13.8)	800 (55.2)	29.9 (1.0)	5.00 (127.0)	.396 (.589)
24-PCWV-FS	24-PCBV-FS	1.500 (38.1)	2.100 (53.3)	200 (13.8)	800 (55.2)	29.9 (1.0)	6.00 (152.4)	.492 (.732)
32-PCWV-FS	32-PCBV-FS	2.000 (50.8)	2.660 (67.6)	200 (13.8)	800 (55.2)	29.9 (1.0)	8.50 (215.9)	.662 (.985)
40-PCWV-FS	40-PCBV-FS	2.500 (63.5)	3.420 (86.9)	150 (10.3)	600 (41.4)	29.9 (1.0)	12.00 (304.8)	1.206 (1.795)
48-PCWV-FS	48-PCBV-FS	3.000 (76.2)	3.920 (99.6)	125 (8.6)	500 (34.5)	29.9 (1.0)	14.00 (355.6)	1.452 (2.161)
64-PCWV-FS	64-PCBV-FS	4.000 (101.6)	4.920 (124.9)	100 (6.9)	400 (27.6)	29.9 (1.0)	16.00 (406.4)	1.678 (2.497)

NOTE: Temperature Range: 0°F to +212°F (-18°C to +100°C)

PCWV-FS - NATURAL

PCBV-FS - CONDUCTIVE (Static Dissipative)

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PLATINUM CURED SILICONE PRODUCTS

As a compliment to our successful Fluoropolymer and Sanitary Food Grade Hoses, PARKER/PAGE has expanded its hose and tubing line to include Platinum Cured Silicone Products. These high quality hoses continue our tradition of total customer satisfaction. PARKER/PAGE Fluoropolymer and Platinum Cured hoses meet or exceed the following requirements:

FDA 21 CFR 177.1550, 177.2600

UPS XXIII Class VI Requirements

European Pharmacopoeia 3.1.9

ISO 10993 Sections 5, 6 10, 11

USDA Standards

3A Standards

SP

Platinum Cured Silicone Tubing

Part Number	Tube ID	Tube OD	Wall
Natural	Inch (MM)	Inch (MM)	Inch (MM)
SP-04X062	.250 (6.3)	.375 (9.5)	.062 (1.5)
SP-04X125	.250 (6.3)	.500 (12.7)	.125 (3.1)
SP-06X062	.375 (9.6)	.500 (12.7)	.062 (1.5)
SP-06X125	.375 (9.6)	.625 (15.9)	.125 (3.1)
SP-08X062	.500 (12.7)	.625 (15.9)	.062 (1.5)
SP-08X125	.500 (12.7)	.750 (19.0)	.125 (3.1)
SP-10X062	.625 (15.9)	.750 (19.0)	.062 (1.5)
SP-10X125	.625 (15.9)	.875 (22.2)	.125 (3.1)
SP-12X062	.750 (19.0)	.875 (22.2)	.062 (1.5)
SP-12X125	.750 (19.0)	1.000 (25.4)	.125 (3.1)
SP-14X062	.875 (22.2)	1.000 (25.4)	.062 (1.5)
SP-14X125	.875 (22.2)	1.125 (28.5)	.125 (3.1)
SP-16X062	1.000 (25.4)	1.125 (28.5)	.062 (1.5)
SP-16X125	1.000 (25.4)	1.250 (31.7)	.125 (3.1)

NOTE: Temperature Range:
-80°F to +450°F (-62°C to +232°C)
All ratings based on 72°F (22°C)

PLATINUM CURED SILICONE PRODUCTS

Available with Double Braid

Note: Uses SIL300 Crimp Collar

SBP

Platinum Cured Braided Silicone Tubing

Part Number	Tubing ID	Tubing OD	Wall Thickness	Working Pressure	Working Pressure	Weight per Foot
	Inch (MM)	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 320°F (Bars @ 160°C)	Lbs. (Kg/M)
04-SBP	0.250 (6.4)	0.500 (12.7)	0.125 (3.18)	156 (10.6)	78 (5.3)	.080 (0.118)
06-SBP	0.375 (9.5)	0.625 (15.9)	0.125 (3.18)	136 (9.3)	68 (4.6)	.117 (0.174)
08-SBP	.500 (12.7)	0.875 (22.2)	0.187 (4.75)	126 (8.6)	64 (6.3)	.159 (0.236)
10-SBP	.625 (15.9)	1.000 (25.4)	0.187 (4.75)	106 (7.2)	53 (3.6)	.221 (0.328)
12-SBP	.750 (19.1)	1.125 (28.6)	0.187 (4.75)	90 (6.1)	45 (3.1)	.264 (0.394)
14-SBP	875 (22.2)	1.250 (31.8)	0.187 (4.75)	70 (4.8)	39 (2.7)	.310 (0.463)
16-SBP	1.000 (25.4)	1.375 (34.9)	0.187 (4.75)	60 (4.1)	35 (2.4)	.347 (0.515)

NOTE: Temperature Range: -80°F to +450°F (-62°C to +232°C)

Note: Uses SIL300 Crimp Collar

SWP

Platinum Cured 4 Ply Silicone Wrapped Hose

Part Number	Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-SWP	.500 (12.7)	.900 (22.8)	180 (12.4)	550 (37.9)	29.0 (1.0)	1.50 (38.1)	.230 (0.341)
12-SWP	.750 (19.0)	1.150 (29.2)	165 (11.4)	500 (34.5)	25.0 (0.9)	2.50 (63.5)	.315 (0.469)
16-SWP	1.000 (25.4)	1.400 (35.6)	150 (10.3)	450 (31.0)	22.0 (0.8)	3.00 (76.2)	.400 (0.594)
24-SWP	1.500 (38.1)	1.900 (48.3)	130 (9.0)	400 (27.6)	17.0 (0.6)	n/a	.569 (0.846)
32-SWP	2.000 (50.8)	2.400 (61.0)	100 (6.9)	300 (20.7)	14.0 (0.5)	n/a	.738 (1.100)

NOTE: Temperature Range: -80°F to +450°F (-62°C to +232°C)

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PLATINUM CURED SILICONE PRODUCTS

SWPV

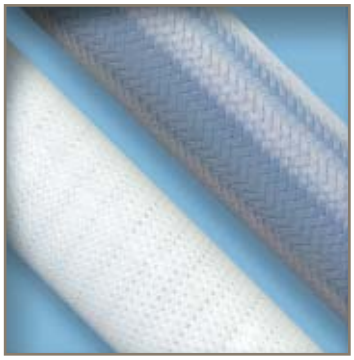
Platinum Cured 4 Ply Silicone Hose with Stainless Steel Wire Helix

Part Number	Hose ID	Hose OD	Working Pressure	Minimum Burst	Vacuum Rating	Minimum Bend Radius	Weight per Foot
	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
08-SWPV	.500 (12.7)	.900 (22.8)	250 (17.2)	750 (51.7)	29.0 (1.0)	1.50 (38.1)	.266 (0.397)
12-SWPV	.750 (19.0)	1.150 (29.2)	250 (17.2)	750 (51.7)	29.9 (1.0)	2.50 (63.5)	.366 (0.545)
16-SWPV	1.000 (25.4)	1.400 (35.6)	250 (17.2)	750 (51.7)	29.9 (1.0)	3.00 (76.2)	.462 (0.689)
24-SWPV	1.500 (38.1)	1.900 (48.3)	250 (17.2)	750 (51.7)	29.9 (1.0)	4.00 (101.6)	.658 (0.978)
32-SWPV	2.000 (50.8)	2.400 (61.0)	230 (15.8)	700 (48.3)	29.9 (1.0)	5.50 (139.7)	.854 (1.270)

NOTE: Temperature Range: -80°F to +450°F (-62°C to +232°C)

Sizes 2.5", 3" and 4" are available upon request

Note: Uses SIL300 Crimp Collar



All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

PLATINUM CURED SILICONE PRODUCTS

Extruded Platinum Cured Silicone Covers

PARKER/PAGE SSTW and SSCW hoses are the same great hose products that have been in use for years with the added benefit of Platinum Cured Silicone extruded over the outer Stainless Steel Braid. The smooth outer layer of Silicone provides many functional and safety benefits while still maintaining the same working pressure and broad temperature range of the braided fluoropolymer hose.

Benefits include: Easy to clean cover - will not allow contaminants into the braid - Safer operator handling due to contained braid fray and insulation from heat - Autoclavable, SIP (Steam in Place), CIP (Clean in Place) - Single piece crimp collar allows full working pressure potential and Silicone weather seal - Reduced burn potential from hot media transferred through the hose.

SSTW Smooth True-Bore PTFE

316 Stainless Steel Braid with Platinum Cured Silicone Cover

Part Number	Hose ID	Hose OD	Working Pressure	Minimum Burst	Vacuum Rating	Minimum Bend Radius	Weight per Foot
	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
04-SSTW	0.250 (6.3)	0.500 (12.7)	3000 (207.0)	12000 (828.0)	29.9 (1.0)	2.5 (63.5)	.124 (0.185)
06-SSTW	0.375 (9.5)	0.635 (16.1)	2000 (138.0)	8000 (552.0)	29.9 (1.0)	3.50 (88.9)	.178 (0.265)
08-SSTW	.500 (12.7)	.760 (19.3)	1750 (120.7)	7000 (483.0)	29.9 (1.0)	4.00 (101.6)	.259 (0.385)
12-SSTW	.750 (19.0)	1.015 (25.8)	1000 (69.9)	4000 (276.0)	29.9 (1.0)	7.00 (177.8)	.292 (0.435)
16-SSTW	1.000 (25.4)	1.255 (31.8)	1000 (69.9)	4000 (276.0)	20.0 (0.7)	12.00 (304.8)	.417 (.621)

NOTE: Temperature Range: -65°F to +450°F (-54°C to +232°C) NOTE: Uses ST302 Crimp Collar

SSCW Convoluted PTFE

316 Stainless Steel Braid with Platinum Cured Silicone Cover

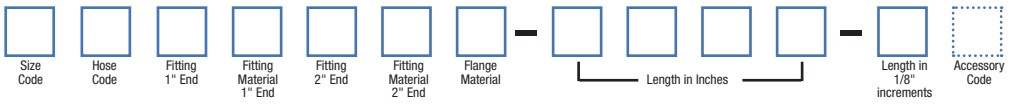
Part Number	Hose ID	Hose OD	Wall	Minimum Burst	Vacuum Rating	Minimum Bend Radius	Weight per Foot
	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
04-SSCW	0.250 (6.3)	0.580 (14.7)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	.750 (19.5)	.130 (0.193)
06-SSCW	0.375 (9.5)	0.670 (17.0)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	1.000 (25.4)	.190 (0.283)
08-SSCW	.500 (12.7)	.840 (21.3)	1500 (103.5)	6000 (414.0)	29.9 (1.0)	1.500 (38.1)	.256 (0.381)
12-SSCW	.750 (19.0)	1.135 (28.8)	1200 (82.8)	4800 (331.2)	29.9 (1.0)	2.000 (50.8)	.360 (0.536)
16-SSCW	1.000 (25.4)	1.445 (36.7)	1000 (69.9)	4000 (276.0)	29.9 (1.0)	2.500 (63.5)	.475 (0.707)

NOTE: Temperature Range: -65°F to +450°F (-54°C to +232°C) NOTE: Uses SC301 Crimp Collar

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

SILICONE TUBING PRODUCTS

SILICONE TUBING Part Numbering System



Size Code	
3/16"	03
1/4"	04
5/16"	05
3/8"	06
1/2"	08
5/8"	10
3/4"	12
7/8"	14
1"	16
1-1/4	20
1-1/2"	24
2"	32
2-1/2"	40
3"	48
4"	64

Hose Code	
SP	O
SBP	C
SZBP	ZC
SWP	D
SWPV	E
SSTW	SM
SSTB	SMB
SSCW	TM
SSCB	TMB

Fitting Code	
Industrial Thread	
Male Pipe NPT Hex	03
Female Pipe NPT Hex	06
Male Pipe NPT Step Down	13
Male Pipe NPT Step Up	23
Male Union Step Up	34
Male Union Step Down	35
JIC Female Swivel	30
JIC Female Step Up	32
Male Union	33
Female Union	36
Female NPSH	37
Female ORFS Swivel	80
Male ORFS	81
Male O-Ring Boss	86
Flanges	
Flange Retainer	05
Flare-Seal Flange Retainer	29
Cam Lock	
Female Cam Lock	07
With Locking Handles	17
Male Cam Lock	08
Sanitary	
Sanitary Tri Clamp	40
Sanitary Tri Clamp 45°	4K
Sanitary Tri Clamp 90°	4L
Sanitary 1-Step Up	4A
Sanitary 2-Step Up	4B
Sanitary 3-Step Up	4C
Sanitary Flare Seal™	4F
Sanitary Mini	42
Sanitary Mini Step Up	43
Schedule 5 Tri Clamp	44
I-Line Male	48
I-Line Female	49
Bevel Seat Female	45
Bevel Seat Male	46
Tube and Vacuum	
PAGElok™ Tube Adapter	38
PAGElok™ Tube Compression Fitting	39
PAGElok™ High Purity Male	MR
PAGElok™ High Purity Female	FR
Buttweld	
Buttweld for Tube	18
Buttweld for Pipe	19
Special Ends	
Standard Cuffed Ends	90
Non Standard Fitting	99

Fitting Material	
304 Stainless (SS 304)	4
316 Stainless (SS 316)	6
316 Stainless (SS Electropolished to 15Ra	E
Carbon Steel	C
Teflon Encapsulated	T
Hastelloy	H
Monel	M
Polypropylene	P
PVDF	K
Teflon (Solid)	F
Alloy 20	2

Flange Material	
None	0
Carbon Steel Epoxy Coated	D
304SS	4
316SS	6
Kynar	K
CPVC	C
PVC	V
Polypropylene	P
Non Standard	X

Accessory Code*	
None	
Spring Guard	S
Armour Guard	A
End Bend Restrictors	E
Fire Sleeve	F
Rubber Sleeve	H
FEP Heat Shrink	T
Polyolefin Heat Shrink	P
Silicone Sleeve	M
Vacuum Spring Wire	W
Specials	X

*See Accessory Section for Details

= Optional

Example

16E4064L60-0060-4 = 1" Id Style SWPV Wrapped Platinum Cured Silicone Hose with Stainless Steel Vacuum wire coupled with 1" 316SS Sanitary Tri Clamp Fitting one end and 1" 316SS Sanitary Tri Clamp 90° Elbow Fitting one end, measuring 60-1/2" from the end of the Straight Fitting to the center line of the 90° Elbow Fitting

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

SPECIALTY HOSE

PAGE-flex SBF™
PAGE-flex™
SIGHT FLOW INDICATORS
RUBBER COVERED HOSE
FOOD TRANSFER HOSE
NOMEX HOSE

PARKER/PAGE is recognized as a world leader in the design and manufacture of custom hoses and fittings. Supreme flexibility, superior bend radius, improved vacuum resistance and increased hose life are just a few of the improvements we have made in our hoses over the last couple of years. As demands in the industry change, so do our products. Our engineers are continually surveying the demands of the market and creating specialty hoses and fittings to ensure our customers success.

SIGHT FLOW INDICATORS

PSG - Sight Gauge Fluoropolymer

PARKER/PAGE Sight Flow Indicators allow for visual inspection and continuous monitoring of flow, aeration, turbulence and cleanliness. The smooth, nonstick surface is easily cleaned, promotes minimal pressure drop, is unaffected by ultraviolet or sunlight and will not discolor in most applications. Sight Indicators are designed to perform in the highest purity applications over a broad temperature range.

PARKER/PAGE Sight Flow Indicators are manufactured from a safe, 100% fluoropolymer tube. The result is a light weight, sturdy product that is less susceptible to breakage. Assemblies can be supplied with a wide variety of 316 Stainless Steel high purity internal fitments. These include Sanitary, Flange, Instrumentation and many other industrial connectors which are readily available from PARKER/PAGE International.

Contact your PARKER/PAGE Sales Rep for Details at 1.800.847.7280 or by email - page@parker.com

PSG

Smoothbore PTFE Sight Flow

Part Number	Size	Inside Diameter	Outside Diameter	Wall Thickness	Working Pressure	Burst Pressure
	Inches	Inch (MM)	Inch (MM)	Inch (MM)	PSI @ 72°F (Bars @ 22°C)	PSI @ 72°F (Bars @ 22°C)
08-PSG	½"	.500	.700	.100	200	800
		(12.7)	(17.7)	(2.5)	(13.8)	(55.2)
12-PSG	¾"	.750	1.000	.125	175	700
		(19.0)	(25.4)	(3.2)	(12.1)	(48.3)
16-PSG	1"	1.000	1.250	.125	125	500
		(25.4)	(31.7)	(3.2)	(8.6)	(34.5)
24-PSG	1 ½"	1.500	1.750	.125	80	320
		(38.1)	(44.4)	(3.2)	(5.5)	(22.1)
32-PSG	2"	2.000	2.250	.125	65	260
		(50.8)	(57.1)	(3.2)	(4.9)	(17.9)
40-PSG	2 ½"	2.500	2.800	.150	50	200
		(63.5)	(71.1)	(3.8)	(3.4)	(13.8)
48-PSG	3"	3.000	3.360	.180	40	160
		(76.2)	(85.3)	(4.6)	(2.8)	(11.0)
64-PSG	4"	4.000	4.420	.210	30	120
		(101.6)	(112.2)	(5.3)	(2.0)	(8.3)

NOTE: Temperature Range: -100°F to +400°F (-73°C to +204°C)

PARKER/PAGE Hose product materials are compliant with the following requirements: FDA 21 CFR 177.1550, 177.2600 • USP XXII Class Vi Requirements • Pharmacopoeia 3.1.9 • ISO 1093 Sections 5, 6, 10, 11 • USDA Standards • 3A Standards

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PAGE-flex SBF™ HOSE ASSEMBLIES

Smoothbore With Convoluted Hose Flexibility

PAGE-flex SBF™ utilizes a smoothbore PFA tube, a bonded, wire braid - silicone - textile braided composite, giving this product a superior bend radius, kink and vacuum resistance. This proprietary tube technology can then be additionally reinforced with any application specific braid for working pressure and abrasion resistance. The revolutionary design answers our customer's demands for a flexible smoothbore product utilizing the entire PARKER/PAGE International Hose line of standard fittings.

PAGE-flex SBF™ Advantages

- Easily cleaned
- Very flexible
- PPIH full line of optional reinforcement types
- Standard - Stainless Steel reinforced
- -65°F to +325°F operating temperature range (dependent on reinforcement type)
- Cooler outside temperatures reduces operator burns
- Reduces environment temperatures in confined areas

PAGE-flex SBF™ is available in true bore sizes ⅜", ½", ¾", 1" and 1 ½" with the complete line of standard PPIH crimp style fittings.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PAGE-flex SBF™ HOSE SPECIFICATIONS

SBFW - Non-Conductive
SBFB - Conductive - Special Order Only

Part Number		Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius
Non Conductive	Conductive	Inch (MM)	Inch (MM)	PSI @ 72°F (Bars @ 22°C)	PSI @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inches (MM)
06-SBFW	06-SBFB	0.375 (9.52)	0.625 (15.9)	300 (20.7)	1200 (82.7)	29.9 (1.0)	2.00 (50.8)
08-SBFW	08-SBFB	0.500 (12.7)	0.755 (19.2)	300 (20.7)	1200 (82.7)	29.9 (1.0)	2.50 (63.5)
12-SBFW	12-SBFB	0.750 (19.0)	1.040 (26.4)	250 (17.2)	1000 (69)	29.9 (1.0)	3.00 (76.2)
16-SBFW	16-SBFB	1.000 (25.4)	1.290 (32.8)	250 (17.2)	1000 (69)	29.9 (1.0)	4.00 (101.6)
24-SBFW	24-SBFB	1.500 (38.1)	1.850 (47.0)	200 (13.8)	800 (55.2)	29.9 (1.0)	7.00 (177.8)

NOTE: Temperature range: -65°F to +325°F (-54°C to +163°C). All ratings based upon 72°F (22°C).

Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters. All dimensions nominal. Specifications are subject to change without notice.

Conductive and Non-Conductive Inner Tubing Available

Assemblies Only

Polypropylene, Kynar®, PEEK™ or Para-Aramid Assemblies

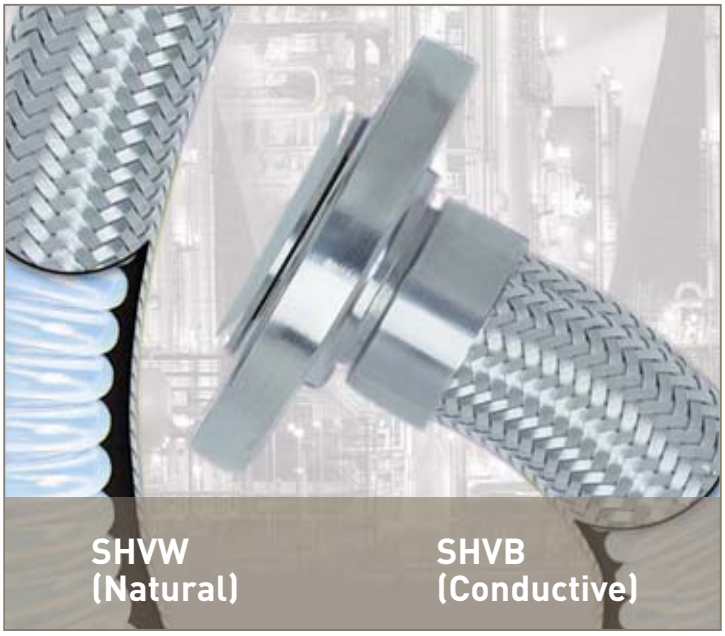
Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PAGE-flex™ HOSE ASSEMBLIES

Increased Flexibility, Vacuum Resistance & Safety

PARKER/PAGE International Hose, a leader in the design and manufacture of engineered Fluoropolymer Hose, introduces an advanced design in Convoluted PTFE for use in the Chemical, Pharmaceutical, Biotech, and Food Processing industries.

The PAGE-flex™ System utilizes a stainless steel helix wire that is mechanically fixed to each end fitting. This provides end-to-end electrical continuity while enhancing hose stability. The innovative design offers users improved flexibility, bend radius, kink, and vacuum resistance while increasing the hose's overall strength. The combination of these features maximizes the safety margins and reliability of the hose assembly; especially when working at elevated pressures, high vacuum levels, and raised temperatures.



The PAGE-flex™ system is available in PTFE Flare-Seal™ Sanitary and PTFE Flare-Seal™ Swivel Flanges. Sizes range from ½" up to 4" ID.

PAGE-flex™ Advantages

- End-to-End Electrical Continuity
- Enhanced Hose Stability
- Increased Flexibility
- Reduced Minimum Bend Radius
- Increased Kink and Vacuum Resistance
- Increased Safety Margins and Reliability

Available with Stainless Steel, Kynar®, or Polypropylene Braid.

Available in Conductive and Non-Conductive Inner Tubing.

Available with Page-Ident™ Label

PARKER/PAGE Hose product materials are compliant with the following requirements: FDA 21 CFR 177.1550, 177.2600 • USP XXII Class Vi Requirements • Pharmacopoeia 3.1.9 • ISO 1093 Sections 5, 6, 10, 11 • USDA Standards • 3A Standards

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

PAGE-flex™ Hose Specifications

SHVW - (Natural) & SHVB - (Conductive)

Part Number		Order ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight
Natural	Conductive	Inch (MM)	Inch (MM)	PSI @ 72°F (Bars @ 22°C)	PSI @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs./Ft. (Kgs/M)
08-SHVW-FS	08-SHVB-FS	0.500 (12.7)	0.72 (18.3)	500 (34.5)	2000 (138.0)	29.9 (1.0)	2.00 (50.8)	0.173 (0.257)
12-SHVW-FS	12-SHVB-FS	0.750 (19.0)	1.040 (26.4)	425 (29.3)	1700 (117.2)	29.9 (1.0)	2.75 (69.8)	0.330 (0.491)
16-SHVW-FS	16-SHVB-FS	1.000 (25.4)	1.250 (31.7)	350 (24.0)	1400 (96.5)	29.9 (1.0)	4.00 (101.6)	0.368 (0.548)
20-SHVW-FS	20-SHVB-FS	1.250 (31.7)	1.660 (42.2)	325 (22.4)	1300 (89.6)	29.9 (1.0)	5.50 (139.7)	0.560 (0.833)
24-SHVW-FS	24-SHVB-FS	1.500 (38.1)	1.920 (48.8)	300 (20.7)	1200 (82.7)	29.9 (1.0)	7.00 (177.8)	0.641 (0.954)
32-SHVW-FS	32-SHVB-FS	2.000 (50.8)	2.490 (63.2)	250 (17.2)	1000 (69.0)	29.9 (1.0)	8.50 (215.9)	0.835 (1.243)
40-SHVW-FS	40-SHVB-FS	2.500 (63.5)	3.250 (82.5)	200 (13.8)	800 (55.2)	29.9 (1.0)	12.00 (304.8)	1.520 (2.262)
48-SHVW-FS	48-SHVB-FS	3.000 (76.2)	3.800 (96.5)	175 (12.0)	700 (48.2)	29.9 (1.0)	14.00 (355.6)	1.820 (2.709)
64-SHVW-FS	64-SHVB-FS	4.000 (101.6)	4.760 (120.6)	150 (10.3)	600 (41.4)	29.9 (1.0)	16.00 (406.4)	2.100 (3.125)

NOTE: Temperature Range: -100°F to +500°F (-73°C to +260°C)

TYPICAL APPLICATIONS

- Food
- Beverage
- Pharm / Bio Pharm
- Semicon
- High Purity Water
- Cosmetics / Soaps
- Chemical Processing
- General Industrial

PAGE-flex™ allows for increased live-length of the hose, providing a more flexible hose in shorter hose assemblies.

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

FOOD TRANSFER HOSES

Sanitary Transfer Solutions From PARKER/PAGE

PARKER/PAGE International's Butyl and Nitrile tube hoses offer reliable solutions for the sanitary transfer of your food and beverage products. Both the FTHB (Butyl) and the FTHN (Nitrile) hose feature a white, seamless, mirror finish tube that resists the collection of bacteria and is very easy to clean. For added strength and durability each hose has a synthetic reinforcement that withstands internal pressures, a helical wire for full vacuum capabilities and a high grade weather and abrasion resistant cover for longevity.

These hoses are excellent choices for applications where preservation of taste, aroma and color are crucial. Typical uses for FTHB include milk, beer, wine, pharmaceuticals, cosmetics and fruit juice. For applications with edible oils such as peanut, canola, vegetable or animal fat, the FTHN Nitrile hose is an ideal solution. PARKER/PAGE FTHN products are designed for use with a multitude of high quality crimp fittings from the PARKER/PAGE International product line.

PARKER/PAGE Hose product materials are compliant with the following requirements:

- PMPO (Grade A Pasteurized Milk Ordinance)
- CFIA (Canadian Food Inspection Agency
- USDA's Dairy Division
- 3A Class II
- FDA
- NSF




PARKER/PAGE Hose product materials are compliant with the following requirements: FDA 21 CFR 177.1550, 177.2600 • USP XXII Class Vi Requirements • Pharmacopoeia 3.1.9 • ISO 1093 Sections 5, 6, 10, 11 • USDA Standards • 3A Standards

FTHN - White
Nitrile Tube with Gray
Nitrile Cover and White Stripe
Temperature Range:
FTHN -40°F to +225°F (-18°C to +107°C)

FTHB -White Butyl Tube
with Gray EPDM
Cover and Blue Stripe
Temperature Range:
FTHB -40°F to +250°F (-18°C to +121°C)

FTHN & FTHB

Part Number	Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight
Nitrile Tube (Butyl Tube)	Inch (MM)	Inch (MM)	PSI @ 72°F (Bars @ 22°C)	PSI @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs./Ft. (Kgs/M)
08-FTHN	0.50	0.95	350	1400	29.9	2.00	0.37
(08-FTHB)	(12.7)	(24.1)	(24.1)	(96.5)	(1.0)	(50.8)	(0.55)
12-FTHN	0.75	1.25	350	1400	29.9	3.00	0.55
(12-FTHB)	(19.0)	(31.7)	(24.1)	(96.5)	(1.0)	(76.2)	(0.81)
16-FTHN	1.00	1.53	300	1200	29.9	4.00	0.68
(16-FTHB)	(25.4)	(38.8)	(20.6)	(82.7)	(1.0)	(101.6)	(1.01)
20-FTHN	1.25	1.74	250	1000	29.9	5.00	0.95
(20-FTHB)	(31.7)	(41.2)	(17.2)	(68.9)	(1.0)	(127.0)	(1.41)
24-FTHN	1.50	2.13	250	1000	29.9	6.00	1.22
(24-FTHB)	(38.1)	(54.1)	(17.2)	(68.9)	(1.0)	(152.4)	(1.81)
32-FTHN	2.00	2.68	250	1000	29.9	7.00	1.68
(32-FTHB)	(50.8)	(68.0)	(17.2)	(68.9)	(1.0)	(177.8)	(2.50)
40-FTHN	2.50	3.30	150	600	29.9	8.00	2.42
(40-FTHB)	(63.5)	(83.8)	(10.3)	(41.4)	(1.0)	(203.2)	(3.60)
48-FTHN	3.00	3.88	150	600	29.9	9.00	3.15
(48-FTHB)	(76.2)	(98.6)	(10.3)	(41.4)	(1.0)	(228.6)	(4.68)
64-FTHN	4.00	4.98	150	600	29.9	12.00	4.67
(64-FTHB)	(101.6)	(126.5)	(10.3)	(41.4)	(1.0)	(1.0)	(6.95)

NOTE: Temperature Range: FTHB -40°F to +250°F (-18°C to +121°C) * FTHN -40°F to +225°F (-18°C to +107°C)

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

RUBBER COVERED FLUOROPOLYMER

Smoothbore with EPDM Rubber Cover

RCTW - NATURAL

RCTB - CONDUCTIVE

PARKER/PAGE International Rubber Covered Fluoropolymer hoses consist of an inner tube reinforced with multi-layered rubber, polyester cord and double helix wire for support. PARKER/PAGE hose can be grounded via it's internal helical wires and is available with a natural fluoropolymer or a conductive black static dissipative fluoropolymer inner core for applications where electrostatic dissipation is required. The wire helix supports full vacuum service in all areas.

STANDARD COLORS - Custom Colors available upon request

Purple w/Silver Stripe.....½" - 4"
Lt. Gray w/Silver Stripe.....½" - 2"
Conductive ID - Purple w/Yellow Stripe....½" - 2"

RCTW (Natural) & RCTB (Conductive)

Part Number		Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight
Natural	Conductive	Inch (MM)	Inch (MM)	PSI @ 72°F (Bars @ 22°C)	PSI @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs./Ft. (Kg/M)
08-RCTW	08-RCTB	0.500 (12.7)	0.950 (24.1)	500 (34.5)	2000 (138.0)	29.9 (1.0)	2.50 (63.5)	0.360 (0.535)
12-RCTW	12-RCTB	0.750 (19.0)	1.250 (31.7)	500 (34.5)	2000 (138.0)	29.9 (1.0)	3.00 (76.2)	0.550 (0.819)
16-RCTW	16-RCTB	1.000 (25.4)	1.530 (38.8)	450 (31.0)	1800 (124.2)	29.9 (1.0)	4.00 (101.6)	0.600 (0.892)
20-RCTW	20-RCTB	1.250 (31.7)	1.740 (41.2)	375 (25.9)	1500 (103.5)	29.9 (1.0)	7.00 (177.8)	0.930 (1.384)
24-RCTW	24-RCTB	1.500 (38.1)	2.130 (54.1)	375 (25.9)	1500 (103.5)	29.9 (1.0)	9.00 (228.6)	1.080 (1.607)
32-RCTW	32-RCTB	2.000 (50.8)	2.680 (68.0)	300 (20.7)	1200 (82.7)	29.9 (1.0)	10.50 (266.7)	1.330 (1.979)
40-RCTW	40-RCTB	2.500 (63.5)	3.300 (83.8)	200 (13.8)	1000 (69.0)	29.9 (1.0)	15.00 (381.0)	1.680 (2.500)
48-RCTW	48-RCTB	3.000 (76.2)	3.880 (98.6)	200 (13.8)	1000 (69.0)	29.9 (1.0)	18.00 (457.2)	2.020 (3.006)
64-RCTW	64-RCTB	4.000 (101.6)	4.980 (126.5)	150 (10.3)	750 (51.7)	29.9 (1.0)	22.5 (571.5)	2.830 (4.211)

NOTE: Temperature range: -40°F to +300°F (-40°C to +149°C). Decrease working pressure one percent for every 2°F above 212°F.

Note: Also available in Gray

Note: Add -GRY to Suffix to Part Number

EXAMPLE: 16-RCTW = Purple

16-RCTW GRY = Gray

PARKER/PAGE Hose product materials are compliant with the following requirements: FDA 21 CFR 177.1550, 177.2600 • USP XXII Class VI Requirements • Pharmacopoeia 3.1.9 • ISO 1093 Sections 5, 6, 10, 11 • USDA Standards • 3A Standards

NOMEX BRAIDED HOSE

Seamless Convoluted PTFE with Nomex Braid

NCW & NCB seamless convoluted PTFE is Nomex braided for extreme light weight, flexibility and kink resistance that operates over a wide temperature range. Nomex braided hoses are light weight alternatives to stainless steel braided products with nearly the same temperature resistance. These hoses have superior flexibility and eliminate RFI issues seen in many applications having stainless steel reinforcements.

Standard non-conductive and optional conductive, static dissipative ID are available to the following specifications.

NCW (Natural) & NCB (Conductive)

Part Number		Hose ID	Hose OD	Working Pressure	Minimum Burst Pressure	Vacuum Rating	Minimum Bend Radius	Weight per Foot
Natural	Conductive	Inch (MM)	Inch (MM)	psi @ 72°F (Bars @ 22°C)	psi @ 72°F (Bars @ 22°C)	In. Hg. @ 72°F (Kg/Sq.CM @ 22°C)	Inch (MM)	Lbs. (Kg/M)
04-NCW	04-NCB**	.260 (6.6)	.460 (11.7)	725 (50)	2900 (200)	29.9 (1.0)	1.0 (2.54)	.016 (.024)
06-NCW	06-NCB*	.370 (9.4)	.560 (14.2)	400 (28)	1600 (110)	29.9 (1.0)	1.5 (38.1)	.060 (.089)
08-NCW	08-NCB*	.500 (12.7)	.740 (18.8)	280 (19)	1125 (77.6)	29.9 (1.0)	2.0 (50.8)	.080 (.119)
12-NCW	12-NCB**	.750 (19.1)	1.010 (25.7)	200 (14)	800 (55.0)	29.9 (1.0)	2.5 (63.5)	.140 (.208)
16-NCW	16-NCB**	1.000 (25.4)	1.290 (32.8)	200 (14)	800 (55.0)	20.0 (1.0)	4 (101.6)	.216 (.321)

NOTE: Temperature range: -100°F to +400°F (-73°C to +204°C)

NCW – available in all sizes

NCB – * In Stock, ** Available on request

NOTE 1: NCB Conductive (Static Dissipative) tube ID Surface Only
NOTE 2: NCB Conductive Spec - Must conduct 20 microamps 1000 VDC potential 14" sample
NOTE 3: Working pressures may vary depending on end connections.

All ratings based on 72°F (22°C) - All dimensions nominal - Working pressures and vacuum ratings may vary depending upon end connections and process and temperature parameters.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

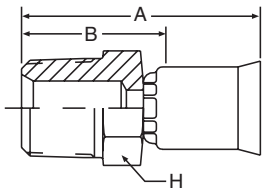
INDUSTRIAL SMOOTHBORE ADAPTERS

for JIC to NPT

PARKER/PAGE JIC (SAE) to NPT Adapters are designed to be used with any PARKER/PAGE Field Attachable Fittings that have Female JIC (SAE) 37° swivels. PARKER/PAGE adapters allow an effortless connection between Industrial smoothbore PTFE Hose assemblies with Female JIC (SAE) 37° swivels connecting to Pipe Threads (NPT). These adapters can simplify the most difficult assembly routing problems by eliminating the need to rotate the hose assembly in order to make a threaded connection. By simply loosening the swivel ends and extracting the old assembly, a replacement assembly with swivel ends can be installed in minutes. PARKER/PAGE Adapters are available in most common industrial configurations in 316 Stainless Steel, Carbon Steel and Brass.

INDUSTRIAL 91N FITTINGS

10191N Male Taper Pipe Rigid



91N Series Permanent

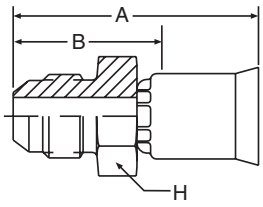
*Part Number	B	C	NPTF Thread Size		A		Cutoff Allow. B		H Hex
				Inch	Inch	MM	Inch	MM	Inch
10191N-2-4			1/8-27	-4	1.27	32	3/4	19	7/16
10191N-4-4	+		1/4-18	-4	1.50	38	15/16	24	9/16
10191N-4-5	+		1/4-18	-5	1.55	39	15/16	24	9/16
10191N-4-6	+		1/4-18	-6	1.60	41	15/16	24	9/16
10191N-6-6	+		3/8-18	-6	1.65	58	1	25	11/16
10191N-6-8	+		3/8-18	-8	1.71	43	1	25	11/16
10191N-8-8	+		1/2-14	-8	1.94	49	1-1/4	32	7/8
10191N-8-10	+		1/2-14	-10	1.96	50	1-1/4	32	7/8
10191N-8-12 (+)	+	+	1/2-14	-12	2.42	61	1-1/4	32	7/8
10191N-12-12	+		3/4-14	-12	2.19	56	1-3/8	35	1-1/8
10191N-16-16	+		1-11-1/2	-16	2.46	62	1-1/2	38	1-3/8
10191-20-20			1-1/4-11-1/2	-20	3.05	77	2-1/16	52	1-3/4

* Brass nipple, steel shell.

B – Brass nipple, brass shell.

C – All components 303 stainless steel.

10391N Male (JIC) 37°



91N Series Permanent

*Part Number	B	C	NPTF Thread Size		A		Cutoff Allow. B		H Hex
				Inch	Inch	MM	Inch	MM	Inch
10391N-4-4	+	+	7/16-20	-4	1.37	35	13/16	21	1/2
10391N-5-5	+	+	1/2-20	-5	1.48	38	7/8	22	9/16
10391N-6-6 (+)	+	+	9/16-18	-6	1.64	42	1	25	11/16
10391N-8-8	+	+	3/4-16	-8	1.79	35	1-1/8	29	7/8
10391N-8-6	+	+	3/4-16	-6	1.73	44	1-1/16	27	7/8
10391N-10-10	+	+	7/8-14	-10	2.07	53	1-3/8	35	7/8
10391N-12-12	+	+	1-1/16-12	-12	2.10	53	1-5/16	33	1-1/8
10391N-16-16	+	+	1-5/16-12	-16	2.43	62	1-1/2	38	1-3/8

* Brass nipple, steel shell.

B – Brass nipple, brass shell.

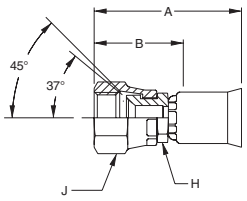
C – All components 303 stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

10691N SAE (JIC) 37° Swivel



91N Series Permanent

*Part Number	S	B	C	Thread Size		Tube Size	A		Cutoff Allow. B		H Hex	J Hex
					Inch	Inch	Inch	MM	Inch	MM	Inch	Inch
10691N-4-4 ~				7/16-20	-4	1/4	1.43	36	7/8	22	3/8	9/16
10691N-5-5 ~		+		1/2-20	-5	5/16	1.56	40	15/16	24	7/16	5/8
10691N-6-6				9/16-18	-6	3/8	1.63	41	1	25	1/2	11/16
10691N-6-8	+	+	+	9/16-18	-8	1/2	1.69	43	1	25	9/16	11/16
10691N-8-8 ~		+		3/4-16	-8	1/2	1.89	48	1-3/16	30	11/16	7/8
10691N-8-10 ~	+	+		3/4-16	-10	5/8	1.86	58	1-1/8	29	3/4	7/8
10691N-10-		+		7/8-14	-10	5/8	2.03	52	1-5/16	33	13/16	1
10691N-12-12		+		1-1/16-12	-12	3/4	2.12	54	1-5/16	33	1	1-1/4
10691N-16-16		+		1-5/16-12	-16	1	2.45	62	1-9/16	40	1-1/4	1-1/2
10691-20-20	+	+		1-5/8-12	-20	1-1/4	2.98	76	1-13/16	46	1-11/16	2

* Brass nipple, steel nut, shell.

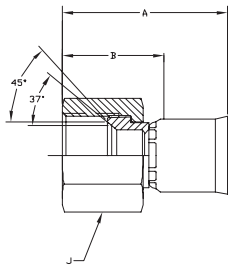
S – Steel nipple, nut and shell.

B – Brass nipple, brass nut, shell.

C – All components 303 stainless steel.

These fittings contain a dual seat that accepts both the JIC (37 deg.) and SAE (45 deg.) male configurations. The size -6 and -12 swivel fittings are shown under part number 10891N.

10691NRD



91N Series Permanent

*Part Number	B	C	Thread Size		Tube Size	A		Cutoff Allow. B		J Hex
				Inch	Inch	Inch	MM	Inch	MM	Inch
10691N-4-4-RD ~ (+)	+	+	7/16-20	-4	1/4	1.34	34	13/16	21	9/16
10691N-5-5-RD ~ (+)	+	+	1/2-20	-5	5/16	1.51	38	7/8	22	5/8
10691N-6-6-RD (+)	+	+	9/16-18	-6	3/8	1.60	41	15/16	24	11/16
10691N-8-8-RD ~ (+)	+	+	3/4-16	-8	1/2	1.79	45	1-1/16	27	7/8
10691N-10-10-RD ~	+	+	7/8-14	-10	5/8	1.91	49	1-3/16	30	1
10691N-12-12-RD	+	+	1-1/16-12	-12	3/4	2.09	58	1-5/16	33	1-1/4
10691N-16-16-RD ~ (+)	+	+	1-5/16-12	-16	1	2.27	58	1-5/16	33	1-1/2

* Brass nipple, steel nut, shell.

B – Brass nipple, brass nut, shell.

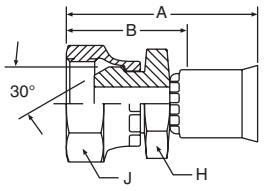
C – All components 303 stainless steel.

These fittings contain a dual seat that accepts both the JIC (37 deg.) and SAE (45 deg.) male configurations. The size -6 and -12 swivel fittings are shown under part number 10891N.

(+) Non Standard. See page 2 for information on non-standard products.

INDUSTRIAL 91N FITTINGS

10791N Female Pipe Swivel



91N Series Permanent

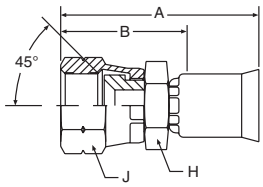
*Part Number	B	C	Thread Size		Tube Size	A		Cutoff Allow. B		H Hex	J Hex
				Inch	Inch	Inch	MM	Inch	MM	Inch	Inch
10791N-4-4	+		1/4-18	-4	1/4	1.50	38	15/16	24	9/16	11/16
10791N-6-6	+		3/8-18	-6	3/8	1.67	42	1	25	5/8	7/8
10791N-8-8	+		1/2-14	-8	1/2	1.83	46	1-1/8	29	3/4	1
10791N-12-12	+		3/4-14	-12	3/4	2.09	53	1-5/16	33	1	1-1/4
10791N-16-16	+		1-11-1/2	-16	1	2.26	57	1-5/16	33	1-3/16	1-3/8

* Brass nipple, steel nut and shell.

B – Brass nipple, brass nut and shell.

C – All components 300 series stainless steel.

10891N SAE 45° Swivel



91N Series Permanent

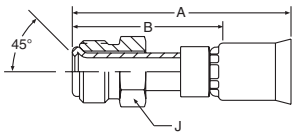
*Part Number	S	C	Thread Size		Tube Size	A		Cutoff Allow. B		H Hex	J Hex
				Inch	Inch	Inch	MM	Inch	MM	Inch	Inch
10891N-6-6		+	5/8-18	-6	3/8	1.69	43	1-1/16	27	5/8	3/4
10891N-12-12	+	+	1-1/16-14	-12	3/4	2.12	54	1-5/16	33	1	1-1/4

* Brass nipple, steel nut and shell.

S – Steel nipple, nut and shell.

C – All components 300 series stainless steel.

12891N Male Inverted Swivel–Straight



91N Series Permanent

*Part Number	B	C	Thread Size		Tube Size	A		Cutoff Allow. B		J Hex
				Inch	Inch	Inch	MM	Inch	MM	Inch
12891N-4-4	+	+	7/16-24	-4	1/4	2.09	53	1-1/2	38	7/16
12891N-5-5	+	+	1/2-20	-5	5/16	2.15	55	1-9/16	40	1/2
12891N-5-6	+	+	1/2-20	-6	3/8	2.23	57	1-9/16	40	1/2
12891N-6-6	+	+	5/8-18	-6	3/8	2.23	57	1-9/16	40	5/8
12891N-8-8	+	+	3/4-18	-8	1/2	2.31	59	1-5/8	41	3/4
12891N-10-10	+	+	7/8-18	-10	5/8	2.43	58	1-3/4	44	7/8
12891N-12-12	+	+	1-1/16-16	-12	3/4	2.50	64	1-11/16	43	1-1/16

* Steel nipple, tube, nut and shell.

B – Steel nipple, tube, nut and shell.

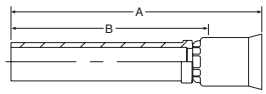
C – All components 300 series stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

13491N Straight Tube



91N Series Permanent

*Part Number	B	C	Inch	Tube Size	A		Cutoff Allow. B	
				Inch	Inch	MM	Inch	MM
13491N-8-8	+	+	-8	1/2	2.80	71	2-1/8	54
13491N-8-10	+	+	-10	1/2	2.80	71	2-1/8	54
13491N-10-10	+	+	-10	5/8	2.96	75	2-1/4	58
13491N-12-12	+	+	-12	3/4	3.37	86	2-9/16	65

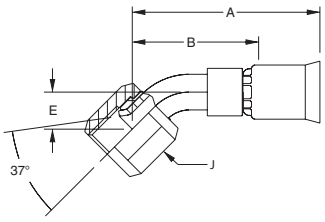
The 16T91N fitting includes 13491N with the 60HAB sleeve and 61HAB nut.

* Brass nipple, steel shell.

B – Brass nipple, brass nut, shell.

C – All components 303 stainless steel. C – All components 303 stainless steel.

13791N JIC 37° Swivel 45° Elbow



91N Series Permanent

*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
13791N-4-4		7/16-20	-4	1/4	1.74	44	1-3/16	30	0.33	8	9/16
13791N-5-5	+	1/2-20	-5	5/16	1.87	47	1-1/4	32	0.36	9	5/8
13791N-6-6		9/16-18	-6	3/8	1.94	49	1-5/16	33	0.39	10	11/16
13791N-8-8		3/4-16	-8	1/2	2.28	58	1-9/16	37	0.55	14	7/8
13791N-10-10		7/8-14	-10	5/8	2.42	61	1-11/16	43	0.64	43	1
13791N-12-12	+	1-1/16-12	-12	3/4	2.83	58	2-1/16	52	0.78	20	1-1/4
13791N-16-16	+	1-5/16-12	-16	1	3.18	81	2-1/4	57	0.89	23	1-1/2
13791-20-20	+	1-5/8-12	-20		3.67	93	2-9/16	65	1.10	28	2

* Steel tube, nipple, nut and shell.

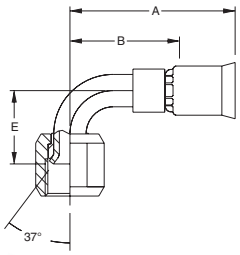
B – Brass nipple, brass shell.

C – All components 303 stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

INDUSTRIAL 91N FITTINGS

13991N JIC 37° Swivel 90° Elbow



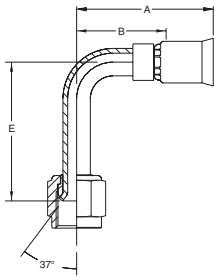
91N Series Permanent

*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
13991N-4-4		7/16-20	-4	1/4	1.62	41	1-1/16	37	0.68	17	9/16
13991N-5-5	+	1/2-20	-5	5/16	1.71	43	1-1/8	29	0.77	20	5/8
13991N-6-6	+	9/16-18	-6	3/8	1.91	49	1-1/4	32	0.85	22	11/16
13991N-8-8		3/4-16	-8	1/2	2.03	52	1-5/16	33	1.09	28	7/8
13991N-10-10		7/8-14	-10	5/8	2.27	58	1-9/16	37	1.23	43	1
13991N-12-12	+	1-1/16-12	-12	3/4	2.75	58	1-15/16	49	1.82	46	1-1/2
13991N-16-16	+	1-5/16-12	-16	1	3.15	80	2-3/16	56	2.14	52	1-1/2
13991-20-20	+	1-5/8-12	-20	1-1/4	3.53	90	2-7/16	62	1.18	30	2

* Steel tube, nipple, nut and shell.

C – All components 303 stainless steel.

14191N JIC 37° Swivel 90° Long Elbow



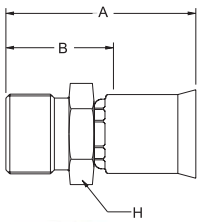
91N Series Permanent

*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
14191N-4-4		7/16-20	-4	1/4	1.66	42	1-1/8	29	1.80	46	9/16
14191N-5-5	+	1/2-20	-5	5/16	1.72	44	1-1/8	29	1.77	45	5/8
14191N-6-6	+	9/16-18	-6	3/8	1.93	49	1-5/16	33	2.18	55	11/16
14191N-8-8	+	3/4-16	-8	1/2	2.11	54	1-3/8	35	2.43	62	7/8
14191N-10-10	+	7/8-14	-10	5/8	2.34	59	1-5/8	41	2.57	43	1
14191N-12-12	+	1-1/16-12	-12	3/4	2.63	58	1-7/8	48	3.73	95	1-1/4
14191N-16-16	+	1-5/16-12	-16	1	3.15	80	2-3/16	56	4.33	110	1-1/2
14191N-20-20 (+)	+	1-5/8-12	-20	1-1/4	4.00	102	2-15/16	75	5.28	134	2

* Steel tube, nipple, nut and shell.

C – All components 303 stainless steel.

16191N Compression Air Brake



91N Series Permanent

*Part Number	B	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		J Hex
					Inch	Inch	MM	Inch	MM	Inch
16191N-8-8	+	+	11/16-20	-8	1/2	1.61	41	15/16	24	3/4
16191N-8-10	+	+	11/16-20	-10	5/8	1.61	41	15/16	24	7/8
16191N-10-10	+	+	13/16-18	-10	5/8	1.82	46	1-1/8	29	15/16
16191N-12-12	+	+	1-18	-12	3/4	1.93	49	1-1/8	29	1-1/4

* Brass nipple, steel shell.

B – Brass nipple, brass shell.

C – All components 303 stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

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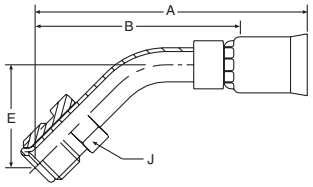
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

16791N Male Inverted Swivel 45° Elbow



91N Series Permanent

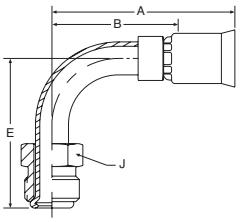
*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
16791N-4-4	+	7/16-24	-4	1/4	2.05	52	1-1/2	38	0.63	16	7/16
16791N-5-5	+	1/2-20	-5	5/16	2.48	63	1-7/8	48	0.71	18	1/2
16791N-6-6	+	5/8-18	-6	3/8	2.60	66	1-15/16	49	0.96	24	5/8
16791N-8-8	+	3/4-18	-8	1/2	2.85	72	2-1/8	54	0.90	23	3/4
16791N-10-10	+	7/8-18	-10	5/8	3.30	84	2-5/8	67	1.02	43	7/8
16791N-12-12	+	1-1/16-16	-12	3/4	3.64	58	2-13/16	71	1.15	29	1-1/16

* Steel tube, nipple, nut and shell.

B – Brass nipple, brass shell.

C – All components 303 stainless steel.

16991N Male Inverted Swivel 90° Elbow



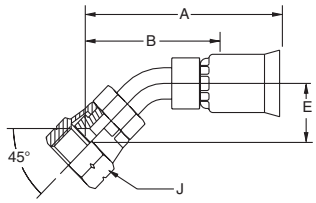
91N Series Permanent

*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
16991N-4-4	+	7/16-24	-4	1/4	1.72	44	1-3/16	30	1.19	30	7/16
16991N-5-5	+	1/2-20	-5	5/16	1.98	50	1-3/8	35	1.65	42	1/2
16991N-5-6 (+)	+	1/2-20	-6	3/8	2.03	52	1-7/16	37	1.65	42	1/2
16991N-6-6	+	5/8-18	-6	3/8	2.08	53	1-7/16	37	1.70	43	5/8
16991N-8-8	+	3/4-18	-8	1/2	2.18	55	1-1/2	38	1.87	43	3/4
16991N-10-10	+	7/8-18	-10	5/8	3.02	58	2-5/16	59	2.18	55	7/8
16991N-12-12	+	1-1/16-16	-12	3/4	3.36	85	2-9/16	64	2.51	64	1-1/16

* Steel tube, nipple, nut and shell.

C – All components 303 stainless steel.

17791N SAE 45° Swivel 45° Elbow



91N Series Permanent

*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
17791N-6-6	+	5/8-18	-6	3/8	2.06	52	1-5/16	33	0.39	10	3/4
17791N-12-12	+	1-1/16-14	-12	3/4	3.07	78	2-7/16	62	0.78	20	1-1/4

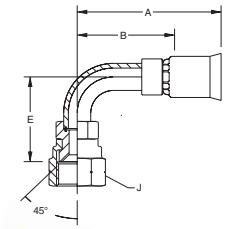
* Steel tube, nipple, nut and shell.

C – All components 303 stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

INDUSTRIAL 91N FITTINGS

17991N SAE 45° Swivel 90° Elbow



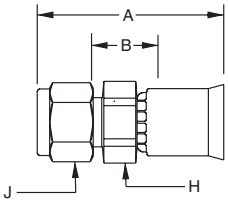
91N Series Permanent

*Part Number	C	Thread Size	Inch	Tube Size	A		Cutoff Allow. B		E		J Hex
				Inch	Inch	MM	Inch	MM	Inch	MM	Inch
17991N-6-6	+	5/8-18	-6	3/8	2.06	52	1-5/16	49	1.19	30	3/4
17991N-12-12	+	1-1/16-14	-12	3/4	2.92	74	2-1/8	54	1.82	46	1-1/4

* Steel tube, nipple, nut and shell.

C – All components 303 stainless steel.

1AL91N A-LOK® Compression



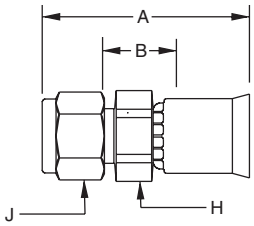
91N Series Permanent

Part Number (w/nut/ferrules)	Part Number (w/o nut/ferrules)	C	Inch	Tube Size Inch	A Inch	A MM	Cutoff Allow. B Inch	Cutoff Allow. B MM	H Hex Inch	J Hex Inch
1AL91N-4-4 (+)	1AL91N-4-4N (+)		-4	1/4	1.30	33	7/16	11	1/2	9/16
1AL91N-4-5 (+)	1AL91N-4-5N (+)		-5	1/4	1.35	34	7/16	11	1/2	9/16
1AL91N-6-6 (+)	1AL91N-6-6N (+)		-6	3/8	1.53	39	1/2	13	5/8	11/16
1AL91N-8-8 (+)	1AL91N-8-8N (+)		-8	1/2	1.61	41	7/16	11	13/16	7/8
1AL91N-12-12 (+)	1AL91N-12-12N (+)		-12	3/4	1.86	47	1/2	13	1-1/8	1-1/8
1AL91N-16-16 (+)	1AL91N-16-16N (+)		-16	1	2.11	58	7/16	11	1-3/8	1-1/2

C – 316 stainless steel nipple, nut and ferrules; 303 stainless steel shell.
Note: Nut part no. is XNUX-316; front ferrule part no. is XFFX-316; back ferrule part no. is XBFX-316.
X Denotes dash size.

Please reference Instrument Tubing Selection Guide, Bulletin 4200-TS, or contact the Instrumentation Connectors Division in Huntsville, Alabama, (Phone: 256-881-2040) directly for correct installation and application information.

1P691N CPI® Compression (With Nut and Ferrule)



91N Series Permanent

Part Number	Inch	Tube Size Inch	A Inch	A MM	Cutoff Allow. B Inch	Cutoff Allow. B MM	H Hex Inch	J Hex Inch
1P691N-4-4C (+)	-4	1/4	1.30	33	7/16	11	1/2	9/16
1P691N-4-5C (+)	-5	1/4	1.35	34	7/16	11	1/2	9/16
1P691N-6-6C (+)	-6	3/8	1.53	39	1/2	13	5/8	11/16
1P691N-8-8C (+)	-8	1/2	1.61	41	7/16	11	13/16	7/8
1P691N-12-12C (+)	-12	3/4	1.86	47	1/2	13	1-1/8	1-1/8
1P691N-16-16C (+)	-16	1	2.06	58	7/16	14	1-3/8	1-1/2

C – 316 stainless steel nipple, nut and ferrule; 303 stainless steel shell.

Note: Nut part No. is XBZ-SS; ferrule part No. is XTZ-SS. X Denotes dash size.

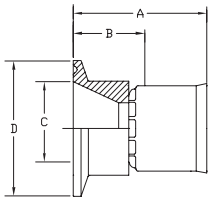
Please reference Instrument Tubing Selection Guide, Bulletin 4200-TS, or contact the Instrumentation Connectors Division in Huntsville, Alabama, (Phone: 256-881-2040) directly for correct installation and application information.

(+) Non Standard. See page 2 for information on non-standard products.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

1FN91N Sanitary Flange

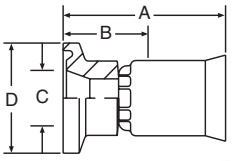


91N Series Permanent

Part Number		Flange Size D	A		Cutoff Allow. B		C	
Hose Fitting	Inch	Inch	Inch	MM	Inch	MM	Inch	MM
1FN91N-16-8C (+)	-8	1.98	1.69	43	1	25	0.87	22
1FN91N-16-10C (+)	-10	1.98	1.72	44	1-1/16	27	0.87	22
1FN91N-16-12C (+)	-12	1.98	1.82	46	1-1/16	27	0.87	22
1FN91N-16-16C (+)	-16	1.98	1.96	50	1-1/16	27	0.87	22
1FN91N-24-8C (+)	-8	1.98	2.33	59	1-5/8	41	1.37	43
1FN91N-24-12C (+)	-12	1.98	1.73	58	7/8	22	1.37	35
1FN91-24-20C (+)	-20	1.98	2.20	56	15/16	24	1.37	35

C – 316L stainless steel nipple, 303 stainless steel shell.

1FV91N Mini Sanitary Flange

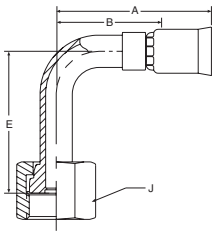


91N Series Permanent

Part Number		Flange Size D	A		Cutoff Allow. B		C	
Hose Fitting	Inch	Inch	Inch	MM	Inch	MM	Inch	MM
1FV91N-8-8C (+)	-8	0.99	1.37	35	11/16	17	0.50	13
1FV91N-12-12C (+)	-12	0.99	1.59	40	13/16	21	0.75	19

C – 316L stainless steel nipple, 303 stainless steel shell.

1J191N Female Seal-Lok™ Swivel 90° Elbow Long Drop



91N Series Permanent

*Part Number				Tube Size	A		Cutoff Allow. B		E		J Hex
Hose Fitting	C	Thread Size	Inch	Inch	Inch	MM	Inch	MM	Inch	MM	Inch
1J191N-4-4 (+)		9/16-18	-4	1/4	1.66	42	1-1/16	27	1.80	46	11/16
1J191N-4-5	+	9/16-18	-5	5/16	1.78	45	1-1/16	27	1.80	46	11/16
1J191N-6-5 (+)	+	11/16-16	-5	5/16	1.92	49	1-3/16	30	2.13	54	13/16
1J191N-6-6	+	11/16-16	-6	3/8	1.92	49	1-3/16	30	2.13	54	13/16
1J191N-8-6 (+)	+	13/16-16	-6	3/8	2.00	51	1-9/16	40	2.51	43	15/16
1J191N-8-8	+	13/16-16	-8	1/2	2.15	58	1-7/16	37	2.51	64	15/16
1J191N-10-10	+	1-14	-10	5/8	1.25	32	1-9/16	40	2.76	70	1-1/8
1J191N-12-12	+	1-3/16-12	-12	3/4	2.65	67	1-13/16	46	3.78	96	1-3/8
1J191N-16-16	+	1-7/16-12	-16	1	3.15	80	2-1/4	57	4.50	114	1-1/2

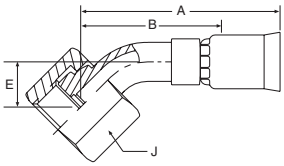
* Steel tube, nipple, nut, and shell.

C – All components 303 stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

INDUSTRIAL 91N FITTINGS

1J791N Seal-Lok™ Swivel 45° Elbow



91N Series Permanent

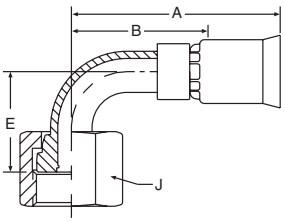
*Part Number				Tube Size	A		Cutoff Allow. B		E		J Hex
Hose Fitting	C	Thread Size	Inch	Inch	Inch	MM	Inch	MM	Inch	MM	Inch
1J791N-4-4	+	9/16-18	-4	1/4	1.73	44	1-1/4	32	0.41	10	11/16
1J791N-4-6	+	9/16-18	-6	3/8	1.91	49	1-5/16	33	0.41	10	11/16
1J791N-6-6	+	11/16-16	-6	3/8	2.02	51	1-3/8	35	0.43	11	13/16
1J791N-8-8	+	13/16-16	-8	1/2	2.18	55	1-1/2	38	0.59	15	15/16
1J791N-8-10	+	13/16-16	-8	1/2	2.39	61	1-11/16	43	0.59	15	15/16
1J791N-10-10	+	1-14	-10	5/8	2.47	63	1-3/4	44	0.59	43	1-1/8
1J791N-12-12	+	1-3/16-12	-12	3/4	2.74	58	1-15/16	49	0.81	21	1-3/8
1J791N-16-16	+	1-7/16-12	-16	1	3.50	89	2-1/2	64	0.94	24	1-5/8

* Steel tube, nipple, nut, and shell.

C – All components 303 stainless steel.

PARKER/PAGE International offers Industrial, Sanitary and Field Attachable Fittings

1J991N Seal-Lok™ Swivel 90° Elbow



91N Series Permanent

*Part Number				Tube Size	A		Cutoff Allow. B		E		J Hex
Hose Fitting	C	Thread Size	Inch	Inch	Inch	MM	Inch	MM	Inch	MM	Inch
1J991N-4-4	+	9/16-18	-4	1/4	1.79	45	1-1/4	32	0.82	21	11/16
1J991N-6-6	+	11/16-16	-6	3/8	1.87	47	1-1/4	32	0.90	23	13/16
1J991N-8-8	+	13/16-16	-8	1/2	2.07	53	1-3/8	35	1.15	29	15/16
1J991N-10-10	+	1-14	-10	5/8	2.23	57	1-1/2	38	1.27	32	1-1/8
1J991N-12-12	+	1-3/16-12	-12	3/4	2.63	67	1-7/8	48	1.85	43	1-3/8
1J991N-16-16	+	1-7/16-12	-16	1	3.45	58	2-9/16	65	2.21	56	1-5/8
1J991N-20-20	+	1-11/16-12	-20	1-1/4	3.91	99	2-7/8	73	2.51	64	1-7/8

* Steel tube, nipple, nut, and shell.

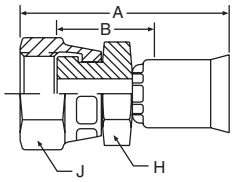
C – All components 303 stainless steel.

(+) Non Standard. See page 2 for information on non-standard products.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

1JC91N Seal-Lok™ Straight



91N Series Permanent

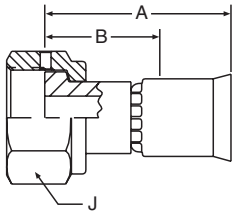
*Part Number					A		Cutoff Allow. B		H Hex	J Hex
Hose Fitting	B	C	Thread Size	Inch	Inch	MM	Inch	MM		Inch
1JC91N-4-4	+		9/16-18	-4	1.46	37	5/8	16	9/16	11/16
1JC91N-6-6	+		11/16-16	-6	1.62	41	11/16	17	5/8	13/16
1JC91N-8-8	+		13/16-16	-8	1.93	49	13/16	21	3/4	15/16
1JC91N-10-10	+		1-14	-10	2.05	52	7/8	22	15/16	1-1/8
1JC91N-12-10	+		1-3/16-12	-10	2.05	52	1-1/4	32	15/16	1-3/8
1JC91N-12-12	+		1-3/16-12	-12	2.05	58	1-1/4	32	15/16	1-3/8
1JC91N-16-16	+		1-7/16-12	-16	2.56	65	1-1/16	27	1-3/8	1-5/8
1JC91N-20-16	+	+	1-11/16-12	-16	2.30	58	1-3/8	35	1-5/8	1-7/8
1JC91-20-20	+	+	1-11/16-12	-20	2.68	68	1-11/16	43	1-11/16	1-7/8

* Steel nipple, nut, and shell.

B – Brass nipple, brass nut, shell.

C – All components 303 stainless steel.

1Q191N Ultra Seal



91N Series Permanent

Part Number	Thread Size			A		Cutoff Allow. B		J Hex
Hose Fitting		Inch	Inch	Inch	MM	Inch	MM	Inch
1Q191N-4-4C (+)	9/16-18	-4	1/4	1.63	41	3/4	19	11/16
1Q191N-6-6 C (+)	3/4-20	-6	3/8	1.81	46	7/8	22	7/8
1Q191N-8-8C (+)	7/8-20	-8	1/2	1.62	41	15/16	24	1
1Q191N-12-12C (+)	1-15/16-20	-12	3/4	1.93	49	1-1/8	29	1-1/2

C – 316L stainless steel nipple and nut; 303 stainless steel shell .

(+) Non Standard. See page 2 for information on non-standard products.

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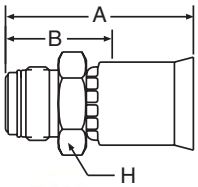
PARKER/PAGE International
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

1HV91N Male VacuSeal

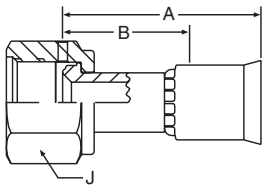


91N Series Permanent

Part Number	Thread Size	Inch	Inch	A		Cutoff Allow. B		H Hex
Hose Fitting				Inch	MM	Inch	MM	Inch
1HV91N-4-4C (+)	9/16-18	-4	1/4	1.59	40	1	25	3/4
1HV91N-6-6C (+)	7/8-14	-6	3/8	1.80	46	1	24	1-1/16
1HV91N-8-8C (+)	7/8-14	-8	1/2	1.89	48	1-1/16	27	1-1/16

C – 316L stainless steel nipple and nut; 303 stainless steel shell.

1VH91N Female VacuSeal

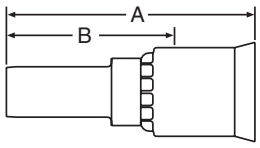


91N Series Permanent

Part Number	Thread Size	Inch	Inch	A		Cutoff Allow. B		H Hex
Hose Fitting				Inch	MM	Inch	MM	Inch
1VH91N-4-4C (+)	9/16-18	-4	1/4	1.59	40	1-1/16	27	3/4
1VH91N-8-6C (+)	7/8-14	-6	3/8	1.83	46	1-3/16	30	1-1/16
1VH91N-8-8C (+)	7/8-14	-8	1/2	1.94	49	1-3/16	30	1-1/16

C – 316L stainless steel nipple and nut; 303 stainless steel shell.

1TU91N Universal Tube Stub Fitting



91N Series Permanent

Part Number	Inch	Inch	A		Cutoff Allow. B	
Hose Fitting			Inch	MM	Inch	MM
1TU91N-2-3C	-3	1/8	1.33	34	7/8	22
1TU91N-3-3C	-3	3/16	1.33	34	7/8	22
1TU91N-4-4C	-4	1/4	1.63	41	1-1/16	27
1TU91N-4-5C	-5	1/4	1.70	43	1-1/16	27
1TU91N-6-6C	-6	3/8	1.81	46	1-3/16	30
1TU91N-8-8C	-8	1/2	2.72	58	1-7/16	37
1TU91N-8-10C	-10	1/2	2.14	54	1-7/16	37
1TU91N-10-10C (+)	-10	5/8	2.14	54	1-7/16	37
1TU91N-12-12C (+)	-12	3/4	2.24	57	1-7/16	37
1TU91N-16-16C	-16	1	2.73	69	1-3/4	44

C – 316 stainless steel nipple, 303 stainless steel shell.

(+) Non Standard. See page 2 for information on non-standard products.

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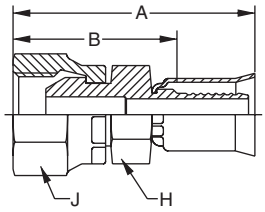
Fort Worth, Texas

INDUSTRIAL 91N FITTINGS

19291N Female BSP Swivel



91N Series Permanent

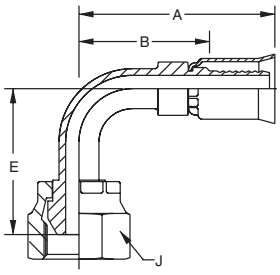
*Part Number			Thread		Tube Size	A		Cutoff Allow. B		H Hex	J Hex
Hose Fitting	B	C	Size	Inch	Inch	Inch	MM	Inch	MM	MM	MM
19291N-8-8	+	+	1/2-14	8	1/2	1.99	51	1-5/16	33	27	27
19291N-12-12	+	+	3/4-14	12	3/4	2.35	60	1-9/16	40	36	36

* Steel nipple, nut and shell.

B – Brass nipple, brass nut, shell.

C – All components 303 stainless steel.

1B291N Female BSP Swivel 90° Elbow



91N Series Permanent

*Part Number			Thread		Tube Size	A		Cutoff Allow. B		H Hex	J Hex	J Hex
Hose Fitting	B	C	Size	Inch	Inch	Inch	MM	Inch	MM	MM	MM	MM
1B291N-8-8	+	+	1/2-14	8	1/2	2.04	52	1-3/8	35	1.57	40	27
1B291N-12-12	+	+	3/4-14	12	3/4	2.93	74	2-1/8	54	2.54	65	36

* Steel nipple, tube, nut and shell.

B – Brass nipple, brass nut, shell.

C – All components 303 stainless steel.

1	03	55	8	6	N/A
Type	End Configuration Code	Series of Fitting	End Size	Hose Size	Material
1=Crimp 2=Field Attachable					Blank=Steel B=All Brass C=Stainless Steel S= All Carbon Steel-Used only with PTFE fittings

This example describes a permanent crimp 1/2" Male SAE JIC 37° hose end with a 3/8" hose end-this commonly referred to as a "jump size". This fitting is constructed from carbon steel since the designated material is blank.

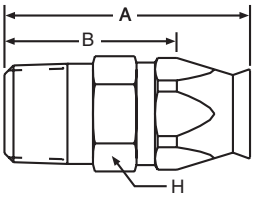
The callout is: **10355-8-6**

(+) Non Standard. See page 2 for information on non-standard products.

FIELD ATTACHABLE FITTINGS

PARKER/PAGE engineers design and manufacture Field Attachable Fittings to accommodate our Industrial Smoothbore PTFE S30 and S30B (.030" wall) hose styles. Expensive assembly equipment is not required to build a custom hose assembly with PARKER/PAGE Field Attachable Fittings. They can be assembled with common bench tools, for example, a clamping vise and an adjustable wrench. This convenience allows lower volume users and those working in remote locations both the accessibility and availability to fabricate Industrial Smoothbore PTFE hose assemblies. Most commonly used industrial configurations, including Male Pipe (NPT) and Female JIC (SAE) 37° swivel fittings, are available in 300 Series Stainless Steel and Carbon Steel.

20190 - Male Pipe Rigid



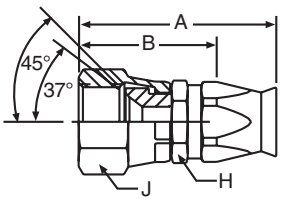
90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04*	20190-2-4	1/8" - 27	29/32"
-04*	20190-4-4	1/4" - 18	1-1/16"
-05*	20190-4-5	1/4" - 18	1-1/8"
-06	20190-4-6	1/4" - 18	1-1/8"
-06 *	20190-6-6	3/8" - 18	1-1/8"
-08	20190-6-8	3/8" - 18	1-5/32"
-08 *	20190-8-8	1/2" - 14	1-15/32"
-10	20190-8-10	1/2" - 14	1-7/16"
-12*	20190-12-12	3/4" - 14	1-19/32"
-16	20190-12-16	3/4" - 14	1-21/32"
-16	20190-16-16	1" - 11 1/2	1-27/32"
-20	20190-20-20	1-1/4" - 11 1/2	2-3/16"

NOTE: Brass nipple & ferrule and steel nut and socket

*Denotes availability in stainless steel. Add suffix S for 303 SS nipple, ferrule and socket. Consult factory for availability

20690 - 37° Female Swivel



90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04*	20690-4-4	7/16" -20	1-1/8"
-05*	20690-5-5	1/2" -20	1-3/32"
-06 *	20690-6-6	9/16" -18	1-1/4"
-06	20690-8-6	3/4" -16	1-11/32"
-08 *	20690-8-8	3/4" -16	1-3/8"
-10 *	20690-8-10	3/4" -16	1-7/16"
-10 *	20690-10-10	7/8" -14	1-9/16"
-12*	20690-12-12	1-1/16" -12	1-11/16"
-16 *	20690-16-16	1-5/16" - 12	1-15/16"
-20	20690-20-20	1-5/8" - 12	2-5/16"

NOTE: Brass nipple & ferrule and steel nut and socket

*Denotes availability in stainless steel. Add suffix S for 303 SS nipple, ferrule and socket. Consult factory for availability

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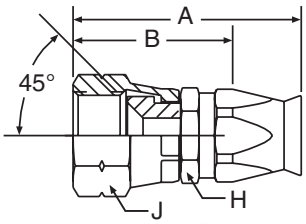
Fort Worth, Texas

FIELD ATTACHABLE FITTINGS

20890 - 45° SAE Female Swivel

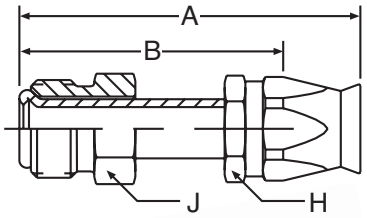


90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-06	20890-6-6	5/8" -18	1-5/16"
-12	20890-12-12	1-1/16" -14	1-11/16"

NOTE: Brass nipple, ferrule, steel nut & socket.

22890 - Male Inverted Flare Swivel

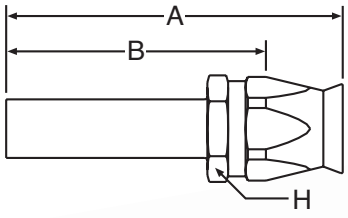


90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04	22890-4-4	7/16" - 24	1-5/8"
-05	22890-5-5	1/2" - 20	1-11/16"
-06	22890-5-6	1/2" - 20	1-11/16"
-06	22890-6-6	5/8" - 18	1-3/4"
-08	22890-8-8	3/4" - 18	1-3/4"
-10	22890-10-10	7/8" - 18	2-1/8"
-12	22890-12-12	1-1/16" - 16	2-3/8"

NOTE: Brass ferrule, steel tube, nut & socket.

23490 - Straight Tube



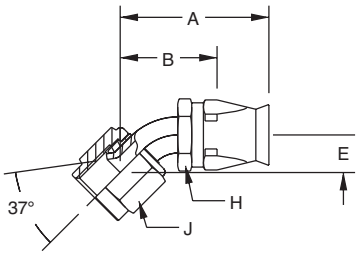
90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-08	23490-8-8	1/2"	2-7/16"
-10	23490-8-10	1/2"	2-1/2"
-08	23490-10-8	5/8"	2-11/16"
-10	23490-10-10	5/8"	2-5/8"
-12	23490-12-12	3/4"	3-1/16"

NOTE: Brass nipple and ferrule, steel socket.

FIELD ATTACHABLE FITTINGS

23790 - 37° JIC Female Swivel - 45° Elbow

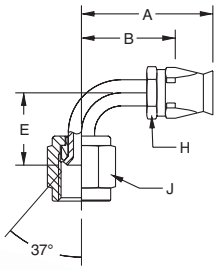


90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04	23790-4-4	7/16" -20	1-3/8"
-05	23790-5-5	1/2" -20	1-1/8"
-06	23790-6-6	9/16" -18	1-3/16"
-06	23790-8-6	3/4" -16	1-19/32"
-08	23790-8-8	3/4" -16	1-5/8"
-10	23790-10-10	7/8" -14	1-25/32"
-12	23790-12-12	1-1/16" -12	2-7/32"
-16	23790-16-16	1-5/16" - 12	2-1/2"

NOTE: Brass ferrule, steel tube, nut & socket.

23990 - 37° JIC Female Swivel - 90° Elbow

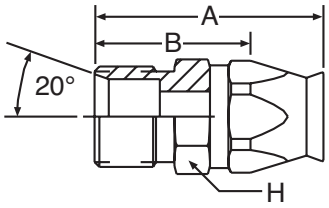


90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04	23990-4-4	7/16" -20	1-1/4"
-05	23990-5-5	1/2" -20	1-1/4"
-06	23990-6-6	9/16" -18	1-3/32"
-06	23990-8-6	3/4" -16	1-1/4"
-08	23990-8-8	3/4" -16	1-1/2"
-10	23990-10-10	7/8" -14	1-1/2"
-12	23990-12-12	1-1/16" -12	2-5/16"
-16	23990-16-16	1-5/16" - 12	2-1/2"

NOTE: Brass ferrule, steel tube, nut & socket.

26190 - SAE Compression Air Brake



90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-08	26190-8-8	11/16" - 20	1-1/16"
-10	26190-8-10	11/16" - 20	1-5/32"
-10	26190-10-10	13/16" - 18	1-15/16"
-10	26190-12-10	1" - 18	1 -5/16"
-12	26190-12-12	1" - 18	1-13/16"

NOTE: Brass Nipple & Ferrule, Carbon Steel Socket.
Use with 61HAB nut and 60HAB sleeve, nut included.

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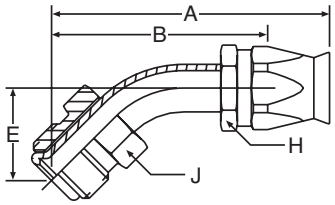
PARKER/PAGE International
Fort Worth, Texas

FIELD ATTACHABLE FITTINGS

26790 - SAE Male Inverted Flare Swivel - 45° Elbow

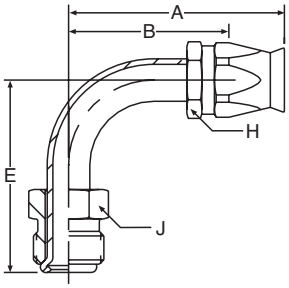


90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04	26790-4-4	7/16" - 24	1-11/16"
-05	N/A	7/16" - 24	1-11/16"
-05	26790-5-5	1/2" - 20	2"
-06	26790-5-6	1/2" - 20	2-1/16"
-06	26790-6-6	5/8" - 18	2-1/8"
-08	26790-8-8	3/4" - 18	2-1/16"
-12	26790-12-12	1-1/16" - 16	2-15/32"

NOTE: Brass ferrule, steel tube, nut & socket.

26990 - SAE Male Inverted Flare Swivel - 90° Elbow

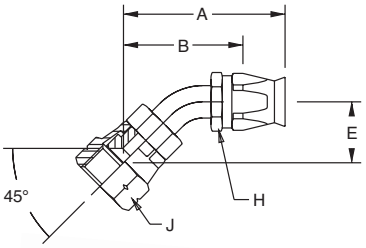


90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-04	26990-4-4	7/16" - 24	1-9/16"
-05	26990-4-5	7/16" - 24	1-5/8"
-05	26990-5-5	1/2" - 20	1-1/2"
-06	26990-5-6	1/2" - 20	1-9/16"
-06	26990-6-6	5/8" - 18	1-1/2"
-08	26990-8-8	3/4" - 18	1-11/16"
-12	26990-12-12 *NS	1-1/16" - 16	2-3/16"

NOTE: Brass ferrule, steel tube, nut & socket.

27790 - 45° SAE Female Swivel - 45° Elbow



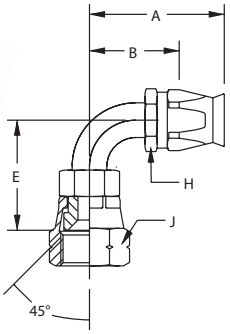
90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-06	27790-6-6	5/8" -18	1-3/16"
-12	27790-12-12	1-1/16" -14	2-7/32"

NOTE: Brass ferrule, steel tube, nut & socket

FIELD ATTACHABLE FITTINGS

27990 - 45° SAE Female Swivel - 90° Elbow



90 Series Field Attachable

Hose Number	Part Number	Thread Size	Deduct Length
-06	27990-6-6	5/8" -18	1-3/16"
-12	27990-12-12	1-1/16" -14	2-3/16"

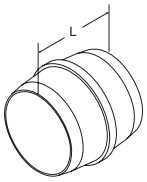
NOTE: Brass ferrule, steel tube, nut & socket.

60HAB

SAE Compression Airbrake Ferrule

Hose Size	Part Number	Tube Size
-08	60HAB-08	1/2"
-10	60HAB-10	5/8"
-12	60HAB-12	3/4"

NOTE: Use with Compression Airbrake Fittings

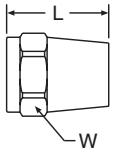


61HAB

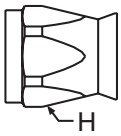
SAE Compression Airbrake Nut

Hose Size	Part Number	Thread Size	Tube Size
-08	61HAB-08	1-1/16"-20	1/2"
-10	61HAB-10	1-3/16"-18	5/8"
-12	61HAB-12	1"-18	3/4"

NOTE: Use with Compression Airbrake Fittings



20090 - Replacement Socket-Field Attachable Fittings

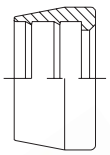


90 Series Field Attachable

Hose Number	Part Number
-04*	20090-4
-05*	20090-5
-06 *	20090-6
-08 *	20090-8
-10 *	20090-10
-12*	20090-12
-16 *	20090-16

NOTE: * Denotes availability in stainless steel.
Add-S suffix for 303 SS Socket

090 - Replacement Ferrule-Field Attachable Fittings



90 Series Field Attachable

Hose Number	Part Number
-04*	090-4B
-05*	090-5B
-06 *	090-6B
-08 *	090-8B
-10 *	090-10B
-12*	090-12B
-16 *	090-16B

NOTE:* Denotes availability in stainless steel.
Add-S suffix for 303 SS Socket

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

CRIMP FITTINGS

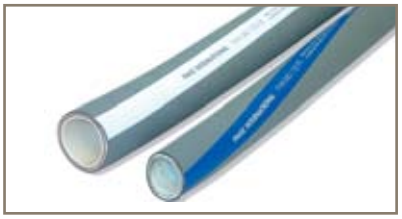
Two Piece 316 Stainless Steel Fittings

Works on the following hose types

Smooth True Bore

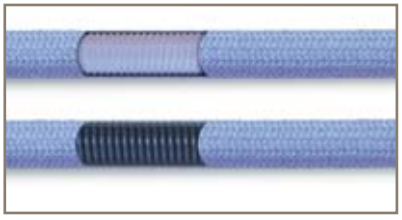
Rubber Covered Fluoropolymer

Silicone Hose & Tubing



FDA Food Grade Rubber

Convoluted SS Braid



Convoluted Non-Metallic Braid

Sanitary Fittings

SAN-S - Sanitary Tri Clamp

316 Stainless Steel

Dash Number	Part Number
-08	08-08SAN-S
-12	12-12SAN-S
-16	16-16SAN-S
-24	24-24SAN-S

Dash Number	Part Number
-32	32-32SAN-S
-40	40-40SAN-S
-48	48-48SAN-S
-64	64-64SAN-S

SAN-S - Sanitary Tri Clamp Step Up

316 Stainless Steel

Dash Number	Part Number
-06	06-24SAN-S
-08	08-16SAN-S
-08	08-24SAN-S
-12	12-24SAN-S
-16	16-24SAN-S

Dash Number	Part Number
-24	20-24SAN-S
-24	24-32SAN-S
-32	32-40SAN-S
-40	40-48SAN-S
-48	48-64SAN-S

CRIMP FITTINGS
Sanitary Fittings

MSAN-S - Mini - Sanitary Fittings

316 Stainless Steel

Dash Number	Part Number
-04	04-04MSAN-S
-04	04-08MSAN-S
-06	06-06MSAN-S
-06	06-08MSAN-S
-06	06-12MSAN-S

Dash Number	Part Number
-08	08-08MSAN-S
-08	08-12MSAN-S
-12	12-12MSAN-S
-16	16-12MSAN-S

FBS-S Female Bevel Seat Sanitary

316 Stainless Steel

Part Number
16-16FBS-S
24-24FBS-S
32-32FBS-S
40-40FBS-S
48-48FBS-S
64-64FBS-S

MBS-S Male Bevel Seat Sanitary

316 Stainless Steel

Part Number
16-16MBS-S
24-24MBS-S
32-32MBS-S
40-40MBS-S
48-48MBS-S
64-64MBS-S

FIL-S Female I-Line Sanitary

316 Stainless Steel

Part Number
16-24FIL-S
24-32FIL-S
32-32FIL-S
40-40FIL-S
48-48FIL-S

MIL-S Male I-Line Sanitary

316 Stainless Steel

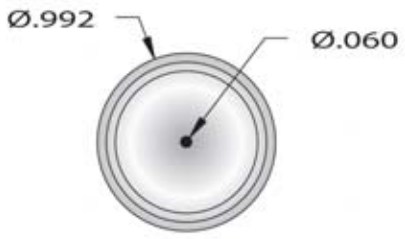
Part Number
16-24MIL-S
24-32MIL-S
32-32MIL-S
40-40MIL-S
48-48MIL-S

CRIMP FITTINGS

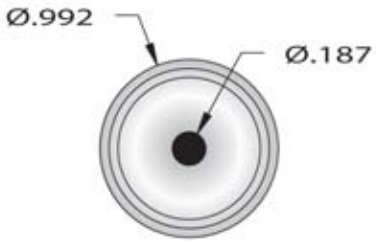
Sanitary Fittings

Dimensions for Sanitary Fittings

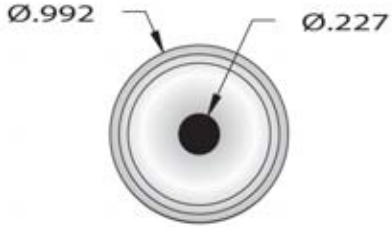
These actual size drawings are provided to eliminate sizing errors when specifying sanitary fittings. The outside diameter is the same for 1/8", 1/4", 3/8", 1/2" and the 3/4" (mini) styles. For your convenience and ordering accuracy, all of these drawings may be used as sizing, I.D. and O.D. patterns.



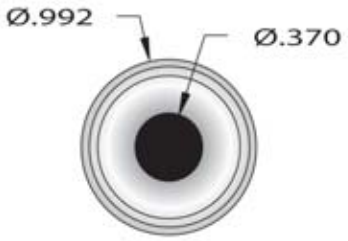
1/8" MINI T.C.



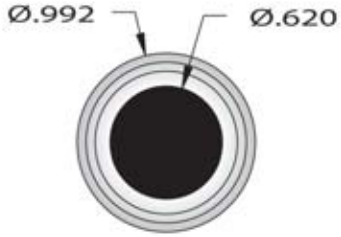
1/4" MINI T.C.



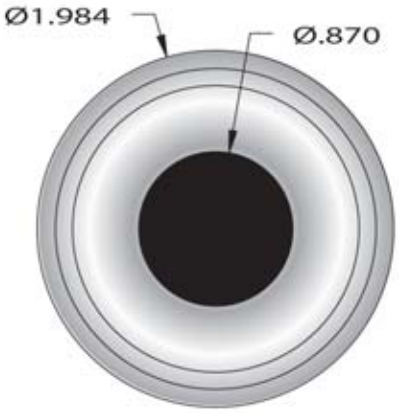
3/8" MINI T.C.



1/2" MINI T.C.



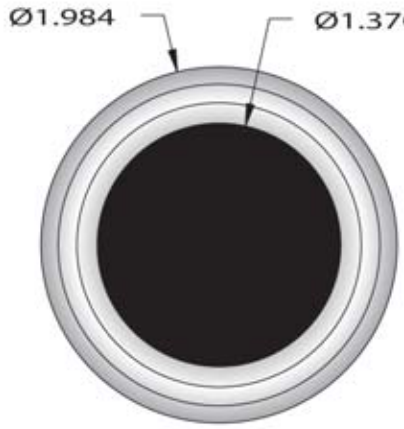
3/4" MINI T.C.



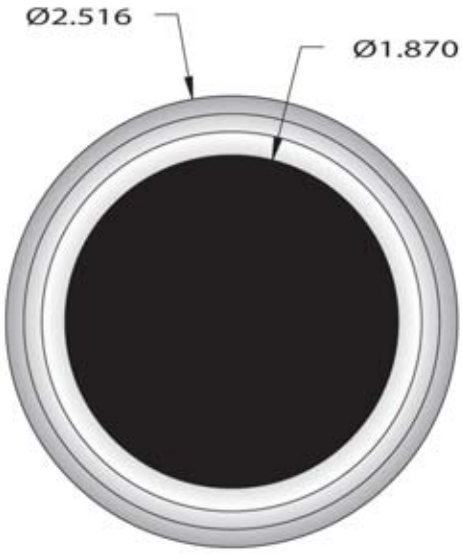
1" T.C.

CRIMP FITTINGS

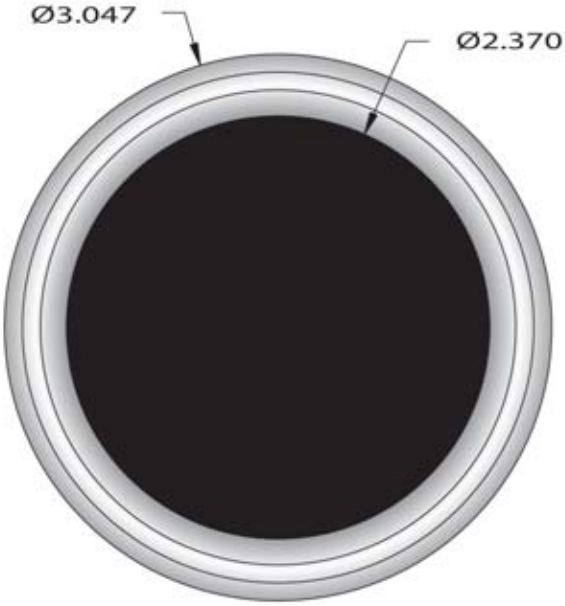
Dimensions For Sanitary Fittings



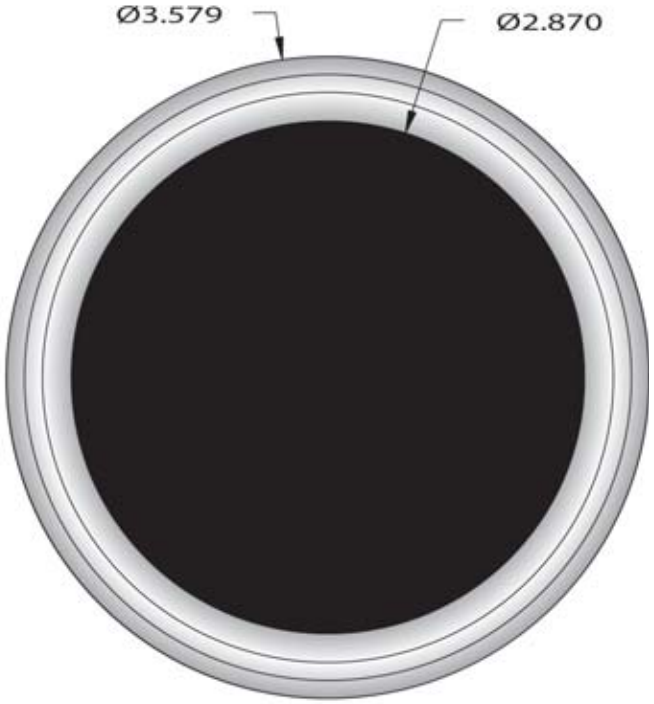
1 1/2" T.C.



2" T.C.



2 1/2" T.C.



3" T.C.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

Catalog Number 5162D

CRIMP FITTINGS

Flange Fittings

SFR-S

Flange Retainer

Part Number
08-08SFR-S
12-12SFR-S
16-16SFR-S
20-20SFR-S
24-24SFR-S

Part Number
32-32SFR-S
40-40SFR-S
48-48SFR-S
64-64SFR-S

NOTE: Flange retainers do not include Flanges.

TEFR-S

Encapsulated Flange Retainer

Part Number
12-12TEFR-S
16-16TEFR-S
20-20TEFR-S
24-24TEFR-S

Part Number
32-32TEFR-S
40-40TEFR-S
48-48TEFR-S
64-64TEFR-S

PF

150# Flanges for Flange Retainer

Carbon Steel (Epoxy Coated)
08-PF150
12-PF150
16-PF150
20-PF150
24-PF150
32-PF150
40-PF150
48-PF150
64-PF150

316 Stainless Steel
08-PF156
12-PF156
16-PF156
20-PF156
24-PF156
32-PF156
40-PF156
48-PF156
64-PF156

304 Stainless Steel
08-PF154
12-PF154
16-PF154
20-PF154
24-PF154
32-PF154
40-PF154
48-PF154
64-PF154

NOTE: Also available - 300# Flanges.

Available in: Kynar® - Polypropylene - Monel®
Hastelloy® - CPVC

CRIMP FITTINGS

Cam & Groove Fittings

C-S and CL-S

Female Cam and Groove Swivel

Part Number
08-12C-S
12-12C-S
16-16CL-S
20-20CL-S
24-24CL-S

Part Number
32-32CL-S
40-40CL-S
48-48CL-S
64-64CL-S

NOTE: CL Supplied w/locking arms only.

E-S

Male Cam Lock

Part Number
08-12E-S
12-12E-S
16-16E-S
20-20E-S
24-24E-S

Part Number
32-32E-S
40-40E-S
48-48E-S
64-64E-S

TEC-S and TECL-S

Encapsulated Female Cam

Part Number
12-12TEC-S
16-16TECL-S
20-20TECL-S
24-24TECL-S

Part Number
32-32TECL-S
40-40TECL-S
48-48TECL-S

NOTE: CL Supplied w/locking arms only. Also available w/conductive encapsulated insert. Call for available sizes. This product is a Non-Standard item.

TEE-S

Encapsulated Male Cam

Part Number
12-12TEE-S
16-16TEE-S
20-20TEE-S
24-24TEE-S

Part Number
32-32TEE-S
40-40TEE-S
48-48TEE-S

NOTE: This product is a Non-Standard item.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

CRIMP FITTINGS

Cam & Groove Fittings

TEFLA-S

Encapsulated Flange X Male Cam Adapter

Part Number
12-12TEFLA-S
16-16TEFLA-S
20-20TEFLA-S
24-24TEFLA-S
32-32TEFLA-S
48-48TEFLA-S

NOTE: Does not include Flange. To order as a complete unit use XX-TEFLA-316 (316 Stainless Flange only)

TESA-S

Encapsulated Male Cam Spool Adapter

Part Number
12-12TESA-S
16-16TESA-S
24-24TESA-S
20-20TESA-S
24-24TESA-S
32-32TESA-S

TESG

Encapsulated Silicone Gasket

Part Number
08TESG
12TESG
16TESG
20TESG
24TESG

Part Number
32TESG
40TESG
48TESG
64TESG

CRIMP FITTINGS

Industrial Fittings

MP

Male Pipe (NPT) Hex

Part Number	Part Number
04-02MP-S	16-16MP-S, C
04-04MP-S, C	20-20MP-S, C
06-04MP-S	24-24MP-S, C
06-06MP-S, C	32-32MP-S, C
08-06MP-S	40-40MP-S, C
08-08MP-S, C	48-48MP-S, C
12-12MP-S, C	64-64MP-S, C

NOTE: S= 316L Stainless Steel C= Plated Carbon Steel

FJX

Female JIC Swivel

Part Number	Part Number
04-04FJX-S, C	20-20FJX-S, C
06-06FJX-S, C	24-24FJX-S, C
08-08FJX-S, C	32-32FJX-S, C
12-12FJX-S, C	40-40FJX-S
16-16FJX-S, C,	

NOTE: S= 316L Stainless Steel C= Plated Carbon Steel

FP

Female Pipe (NPT) Hex

Part Number	Part Number
04-04FP-S	16-16FP-S
06-06FP-S	20-20FP-S
08-08FP-S	24-24FP-S
12-12FP-S	32-32FP-S

FORFS

Female O-Ring Face Seal

Part Number	Part Number
04-04F0RFS-S	16-16F0RFS-S
06-06F0RFS-S	20-20F0RFS-S
08-08F0RFS-S	24-24F0RFS-S
12-12F0RFS-S	

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

CRIMP FITTINGS

Weld Fittings

BWT-S

Buttweld Tube

Part Number
08-08BWT-S
12-12BWT-S
16-16BWT-S
20-20BWT-S
24-24BWT-S

Part Number
24-32BWT-S
32-32BWT-S
40-40BWT-S
48-48BWT-S

NOTE: Standard wall thickness 0.065" (1.65mm)

BWP40-S

Buttweld Pipe (Schedule 40)

Part Number
08-08BWP40-S
12-12BWP40-S
16-16BWP40-S
16-24BWP40-S
24-24BWP40-S

Part Number
24-32BWP40-S
32-32BWP40-S
40-40BWP40-S
48-48BWP40-S
64-64BWP40-S

NOTE: Schedule 5 and 10 also available.

Instrumentation Fittings

TUBE-S

Pagelok™ Tube Adapter

Part Number
04-04-TUBE-S
06-06-TUBE-S
08-08-TUBE-S
12-12-TUBE-S
16-16-TUBE-S
20-20-TUBE-S

PLCF-S

Pagelok™ Compression (2 Ferrule Designs)

Part Number
04-04PLCF-S
06-06PLCF-S
08-08PLCF-S
12-12PLCF-S
16-16PLCF-S

NOTE: Metric tube sizes available

CRIMP FITTINGS

Adapters

2404

Male Pipe Adapter

NOTE: Please add S, C or B to Denotes material.
B = Brass
C = Carbon Steel
S = Stainless Steel

2404 Series Permanent

Hose Number	Part Number	Brass Carbon Steel Stainless Steel	JIC Thread Size	Pipe Thread Size
-03	2404-03-02-	B, C, S	3/8" - 24	1/8" - 27
-04	2404-04-02-	B, C, S	7/16" - 20	1/8" - 27
-04	2404-04-04-	B, C, S	7/16" - 20	1/4" - 18
-05	2404-05-04-	B, C, S	1/2" - 20	1/4" - 18
-06	2404-06-04-	B, C, S	9/16" - 18	1/4" - 18
-06	2404-06-06-	B, C, S	9/16" - 18	3/8" - 18
-08	2404-08-06-	B, C, S	3/4" - 16	3/8" - 18
-08	2404-08-08-	B, C, S	3/4" - 16	1/2" - 14
-10	2404-10-08-	B, C, S	7/8" - 14	1/2" - 14
-12	2404-12-12-	B, C, S	1-1/16" - 12	3/4" - 14
-16	2404-16-16-	B, C, S	1-5/16" - 12	1" - 11-1/2
-20	2404-20-20-	B, C, S	1-5/8" - 12	1-1/4" - 11-1/2

2405

Female Pipe Adapter

NOTE: Please add S, C or B to Denotes material.
B = Brass
C = Carbon Steel
S = Stainless Steel

2405 Series Permanent

Hose Number	Part Number	Brass Carbon Steel Stainless Steel	JIC Thread Size	Pipe Thread Size
-04	2405-04-02-	B, C, S	7/16" - 20	1/8" - 27
-04	2405-04-04-	B, C, S	7/16" - 20	1/4" - 18
-05	2405-05-04-	B, C, S	1/2" - 20	1/4" - 18
-06	2405-06-04-	B, C, S	9/16" - 18	1/4" - 18
-06	2405-06-06-	B, C, S	9/16" - 18	3/8" - 18
-08	2405-08-06-	B, C, S	3/4" - 16	3/8" - 18
-08	2405-08-08-	B, C, S	3/4" - 16	1/2" - 14
-10	2405-10-08-	B, C, S	7/8" - 14	1/2" - 14
-12	2405-12-12-	B, C, S	1-1/16" - 12	3/4" - 14
-16	2405-16-16-	B, C, S	1-5/16" - 12	1" - 11-1/2

2501

Male Pipe Adapter 90º Elbow

2501 Series Permanent

Part Number
2501-04-04 - (S, C, B)
2501-06-06 - (S, C, B)
2501-08-08 - (S, C, B)
2501-12-12 - (S, C, B)
2501-16-16 - (S, C, B)

NOTE: Please add S, C or B to Denotes material.
B = Brass
C = Carbon Steel
S = Stainless Steel

Accessories

Harsh environments sometimes require assemblies with silicone fire sleeves, fluoropolymer heat shrink, polyolefin shrinkable chafe guard, spring guards or interlocked casings to prolong the life of the hose. PARKER/PAGE manufactures every hose style with these options available.

Maximizing hose performance by adding cost reducing accessories such as Armor Guard, to increase the abrasion resistance of the hose, or a Fire Sleeve, to maintain an outer hose temperature for operator handling, can add weeks, months, and in some cases, even years to hose life. Cost for hose enhancing accessories is minimal compared to the savings you gain by keeping the hose operating longer in the field. Most of these product enhancements are available for hoses sized from ¼" up to 4" and can be provided on almost any hose. In addition, several of the value added accessories may be purchased separately, allowing customers to value-up their existing hoses.

Available products include:

- Silicone Covers
- Stainless Steel Spring Guard
- Armor Guard
- Polyolefin Heat Shrink
- Fire Sleeve

PARKER/PAGE International offers extra protection for most harsh environments. Hose assemblies are available with custom options such as Silicone Fire Sleeve, Fluoropolymer Heat Shrink, Polyolefin Shrinkable Chafe Sleeve, External Spring Guard or Stainless Steel Interlocking Casings (Armor Guard). These protective coverings not only extend hose life, but also provide an extra measure of safety to personnel working with them.

SFS Series Silicone Fire Sleeve

Hose Number	Fire Sleeve Number
-03	SFS-08
-04	SFS-08
-05	SFS-08
-06	SFS-12
-08	SFS-12
-10	SFS-12
-12	SFS-16
-16	SFS-20
-16Z	SFS-20
-20Z	SFS-24

TESTED in accordance with:
UL-73, NFPA-250, ASTM-E84

PARKER/PAGE Fire Sleeve has a coating of specially compounded silicone rubber bonded to a low density high bulk fiberglass sleeve. This unique combination offers a temporary barrier to flame penetration and provides long term mechanical and environmental protection. Applications include steel manufacturing plants, foundries, glass factories and welding/cutting shops.

OPERATING TEMPERATURES:
Continuous: -65˚F to +500°F (-18˚C to +260˚C)
Intermittent: -65˚F to +2000°F (-18˚C to +1093˚C)

SG Series Spring Guard

Dash Number	Part Number	Hose Number	Spring Guard Number
-04	SG-04	-12	SG-12
-05	SG-05	-16	SG-16
-06	SG-06	-16Z	SG-16Z
-08	SG-08	-20Z	SG-20Z
-10	SG-10	-	-

PARKER/PAGE Spring Guard is available in hot dipped galvanized carbon steel. This method of protection is well suited for applications where hose assemblies are subjected to rough handling, abrasion and severe flexing. A stainless steel internal support spring is also available for vacuum applications.

B2 Polyolefin Heat Shrink

Hose Number	Polyolefin HS
-03	B2-08-XXX
-04	B2-08-XXX
-05	B2-08-XXX
-06	B2-12-XXX
-08	B2-12-XXX
-10	B2-12-XXX
-12	B2-16-XXX
-16	B2-24-XXX
-16Z	B2-24-XXX
-20Z	B2-24-XXX

PARKER/PAGE offers Polyolefin heat shrink to aid in the identification of hoses through color coding and also, protect surfaces from dirt and grim.

COLORS AVAILABLE

RED= Red
WHI=White
YEL=Yellow
BLK= Black
BLU=Blue
GRY=Grey

Custom Printing Available
Fluoropolymer Heat Shrink Available

NOTE: Replace XXX with 3 letter indicator for color. See color chart.
Example: B2-08-BLU = 1/2" Blue

OPERATING TEMPERATURES: Continuous: -65˚F to +275°F (-18˚C to +135˚C)

SAG Armour Guard

Non Standard Product
Please contact Customer Service for sizing, delivery and pricing. 817.624.1329 • 800.847.7280 • email: page@parker.com

PAGE-Ident™

Hose Identification System

Introducing PAGE-Ident™ an improved method for managing and tracking your hose installations.

PAGE-Ident™ is a hose identification system offering clear and easily identifiable information molded directly to the hose.

This is an excellent means of improving your hose inventory, installation, and maintenance programs. PAGE's system aids in efficient hose management by reducing wasted hose life and under utilized assemblies. No more relying on old fashioned, inefficient methods for the removal of aged hoses.

Using PAGE-Ident™ can also reduce the risk of contamination and hose failures; thereby reducing costly waste and production stoppages. This product offers an effective means for manufacturing and maintenance personnel to monitor hose assembly cleaning intervals, usage rates, and replacement dates.

Available on Factory Manufactured Hoses only

Use for Displaying:

- Color codes
- Date of Manufacture
- Replacement Dates
- Part Number
- Compliancy Information
- Lot Number
- Location Number
- Content

Hose Identification System Advantages

A wide variety of information can be displayed on the marker. PAGE-Ident™ allows you to make your hose assemblies application specific, thus eliminating the likelihood of using the wrong hose for the wrong application. Hoses can be marked with date of manufacture, part number, compliancy, lot or location number, content, or any other text or color identification you require. For electronic tracking, we can also encapsulate supplied RFID tags.

PAGE-Ident™ is permanent identification that does not affect hose performance, has zero entrapment, and is easy to clean. The marker and information is contained within an encapsulated silicone sleeve, offering protection from chemicals and other potential hazards.

Advantages:

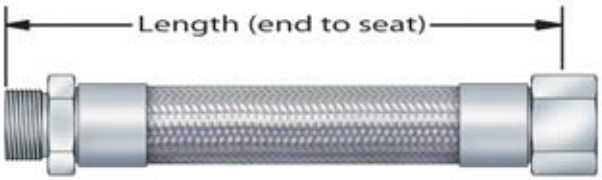
- Easy to read
- Quick identification of content or application
- Application specific
- Uniquely identifies hoses
- Reduces likelihood of contamination, hose failures, and related work stoppages
- Markings are Secure - marker identification is contained in platinum cured silicone and permanently molded to the hose cover
- Hoses can be identified with customized information
- Information is protected from chemicals and other potential hazards
- Permanently attached, preventing lost identification and potential hose identification problems.
- Idents are free of metal and resistant to cleaning methods (including sterilization, steam-in-place, chemical clean-in-place or autoclave)
- No product contact

The marker can be applied over a variety of hose covers. Examples include:

- Silicone
- Rubber
- Polypropylene
- Stainless Steel
- Kynar®
- PEEK™

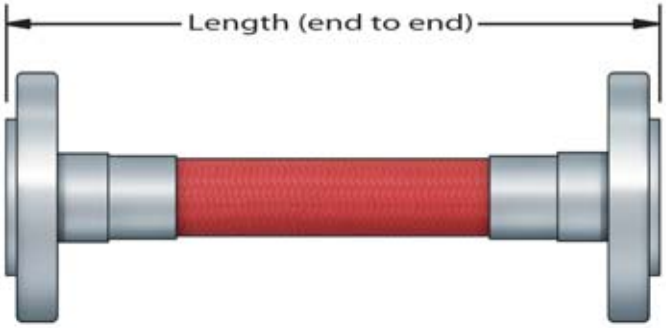
Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

MEASURING ASSEMBLY LENGTH

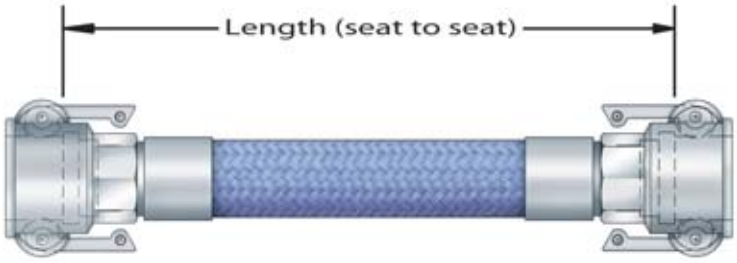


Male Pipe x Female JIC Assembly

Female JIC x Female JIC Assembly



Flange x Flange assembly



Cam & Groove x
Cam & Groove Assembly

Sanitary x Sanitary Assembly

PARKER/PAGE BRAIDING CHARACTERISTICS

BRAID TYPE	CHARACTERISTICS	POOR	FAIR	GOOD	EXCELLENT
STAINLESS STEEL Temperature Rating on Hose -100°F to + 500°F (-73°C to +260°C)	Tensile Strength				●
	Abrasion Resistance				●
	Chemical Resistance			●	
	Corrosion Resistance			●	
	High Temperature Capabilities				●
	Durability			●	
	Personal Handling Safety		●		
POLYPROPYLENE Temperature Rating on Hose 0°F to + 212°F (-18°C to +100°C)	Tensile Strength		●		
	Abrasion Resistance			●	
	Chemical Resistance			●	
	Corrosion Resistance				●
	High Temperature Capabilities	●			
	Durability			●	
	Personal Handling Safety				●
Kynar® (PVDF) Temperature Rating on Hose -40°F to + 280°F (-40°C to +138°C)	Tensile Strength			●	
	Abrasion Resistance			●	
	Chemical Resistance				●
	Corrosion Resistance				●
	High Temperature Capabilities			●	
	Durability			●	
	Personal Handling Safety				●
PEEK™ Temperature Rating on Hose -65°F to + 500°F (-54°C to +260°C)	Tensile Strength				●
	Abrasion Resistance				●
	Chemical Resistance				●
	Corrosion Resistance				●
	High Temperature Capabilities				●
	Durability				●
	Personal Handling Safety				●
KEVLAR® Temperature Rating on Hose -100°F to + 350°F (-73°C to +177°C)	Tensile Strength				●
	Abrasion Resistance			●	
	Chemical Resistance		●		
	Corrosion Resistance				●
	High Temperature Capabilities			●	
	Durability		●		
	Personal Handling Safety				●
Nomex® Temperature Rating on Hose -100°F to + 400°F (-73°C to +204°C)	Tensile Strength		●		
	Abrasion Resistance			●	
	Chemical Resistance			●	
	Corrosion Resistance				●
	High Temperature Capabilities				●
	Durability			●	
	Personal Handling Safety				●

Other braid materials available such as Polyester, Monel and Hastelloy. Consult Customer Service for minimum quantities and special quotes.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

SUMMARY OF PROPERTIES

	PROPERTY	ASTM	UNITS	PTFE	FEP	PFA	ETFE	PDVF	PEEK
Mechanical	Tensile Strength	D 1708	PSI	2,500-4,000	3,500	4,000	7,500	D 638 5,000	D 638 13,300
	Specific Gravity	D 792		2.13-2.24	2.15	2.15	1.70	1.8	1.32
	Coefficient of Friction	Dynamic (<10ft/min)		0.1	0.2	0.2	0.4	0.14 0.17	0.18
	Compressive Strength	D 695	PSI	3,500	2,200		7,100	11,600	17,100
	Impact Strength 73°F	D 256	Ft-Lb/in	3.5	No Break	No Break	No Break	3-6	655
	Flexural Modulus 73°F	D 790	PSI	27,000	95,000	95,000	200,000		530,800
	Tensile Modulus	D 638	PSI	80,000	60,000	40,000	120,000	348,000	522,100
	Hardness-Durometer	D 2240		D-50-65	D-55	D-60	D-75	D-76-80	
	Elongation	D 1708	%	200-400	300	300	100-300	D 630 150	D 638 50
	Flexural Strength	D 790	PSI	No Break	No Break	No Break	37.9 5,500	10,750	24,700
	Water Absorption	D 570	%	<0.01	<0.01	<0.03	<0.03	<0.04	<0.05
	Deformation Under Load (73°F, 1000 PSI, 24 HR)	D 621		3.5	1.8	2.0	0.6		
	Linear Coefficient of Expansion (70-212°F) (212-300°F) (300-408°F)	D 696	in/in/°F	 3.8 5 x 10^5 4.2 5 x 10^5 5.0 5 x 10^5	4.5-5.8 x 10^5	 6.7 x 10^5 9.4 x 10^5 11.1 x 10^5	 5.0 x 10^5 7.0 x 10^5	7.1 x 10^5	2.6 x 10^5
	Flex Life (MIT)			>1,000,000	15,000	15,000	12,000		
	Creep Resistance	D 674	LB/Sq In			40,000			
Electrical	Dielectric Strength (Short Term) 10Mil Film	D 149	V/Mil	>1,400	>2,000	>2,000	>2,000	>1080	>500
	Volume Resistivity	D 257	ohm-cm	>10^{18}	>10^{18}	>10^{18}	>10^{18}	>10^{13}	>4.9 10^{16}
	Surface Resistivity	D 257	ohm/Sq	>10^{18}	>10^{16}	>10^{17}	>10^{14}		
Thermal	Continuous Service Temperature		°F	500	400	500	302	235	482
	Melting Point	DTA	°F	635-650	500-530	575-590	490-535	352	633
	Thermal Conductivity	C-177	BTU/hr/ft²/°F.in	1.7	1.4	1.32	1.65	1.31	1.2
	Heat of Fusion		BTU/lb	29-37	11	13	20		
	Specific Heat 25°C 100°C 200°C 275°C	C-177	Cal/g/°C	 0.23 0.25 0.27 0.29	0.26	 0.256 0.283 0.334 0.391	0.46-0.47	.30-.34	
	Low Temperature Embrittlement		°F				-150°		
	Deflection Temperature 66 PSI 264 PSI		°F	 252 131	 138 134	 166 118	 220 160	 235	 285
	Heat of Combustion		BTU/lb	2,200		2,200	8,100		
Other	Flammability Rating	UL 94		VO	VO	VO	VO	VO	VO
	Retractive Index	D 542		1.35	1.338	1.35	1.40		
	Limiting Oxygen Index			>95	>95	>95	30-31		

PARKER/PAGE INTERNATIONAL HOSE

Product Application Guide

Product	Description	Industrial / Paint / Adhesives	Chemical	Semi - Conductor	Cosmetics	Pharm & Biotech	Food & Beverage	Temp Range
PAGE-flex™ SBF SBFW SBFB	Smoothbore, extremely flexible, PFA - silicone - wire - textile composite tube with SS wire braiding standard		●	●	●	●	●	**-65°F ~+325°F**
PAGE-flex™ SHVW SHVB	Convoluted PTFE heavy wall tube - SS wire braiding - true-bore sizing w/helix wire - flare through fitting capable **(SHVB conductive ID)**	●	●	●				**-100°F ~+500°F**
PAGE-flex™ PHVW PHVB	Convoluted PTFE heavy wall tube - Polypropylene braiding - true-bore sizing w/helix wire - flare through fitting capable **(PHVB conductive ID)**	●	●	●				**0°F ~+212°F**
RCTW	Smoothbore flexible FEP tube - wire helix - textile reinforced EPDM cover	●	●	●	●	●	●	**-40°F ~+300°F**
RCTB	Smoothbore flexible PFA conductive tube - wire helix - textile reinforced EPDM cover	●	●	●	●	●	●	**-40°F ~+300°F**
STW STB	Smoothbore PTFE tube with SS wire braiding true-bore sizing **(STB conductive ID)**	●	●	●	●	●	●	**-65°F ~+450°F**
SSTW SSTB	STW or STB product with Platinum Silicone jacket	●	●	●	●	●	●	**-65°F ~+450°F**
NCW NCB	Convoluted PTFE tube with Nomex braiding true-bore sizing **(NCB conductive ID)**			●				**-100°F ~+400°F**
SCW SCB	Convoluted PTFE tube with SS wire braiding true-bore sizing **(SCB conductive ID)**	●	●	●				**-100°F ~+500°F**
SCWV SCBV	Convoluted PTFE heavy wall tube with SS wire braiding true-bore sizing - flare through fitting capable **(SCBV conductive ID)**	●	●	●				**-100°F ~+500°F**
PCW PCB	Convoluted PTFE tube with polypropylene braiding true-bore sizing **(PCB conductive ID)**	●	●					**0°F ~+212°F**
PCWV PCBV	Convoluted PTFE heavy wall tube with polypropylene braiding true-bore sizing - flare through fitting capable **(PCBV conductive ID)**	●	●					**0°F ~+212°F**
KCW KCB	Convoluted PTFE tube with Kynar braiding true-bore sizing **(KCB Conductive ID)**	●	●	●				**-40°F ~+280°F**
KCWV KCBV	Convoluted PTFE heavy wall tube with Kynar braiding true-bore sizing - flare through fitting capable **(KCBV conductive ID)**	●	●					**-40°F ~+280°F**
CWV CBV	Convoluted PTFE heavy wall tubing true-bore sizing - flare through fitting capable **(CBV Conductive ID)**	●	●	●	●	●	●	**-100°F ~+500°F**
SGT	FEP sight glass tubing	●	●	●	●	●	●	**-100°F ~+500°F**
SBP	Platinum Silicone textile single braiding hose				●	●	●	**-80°F ~+450°F**
SWP	Platinum Silicone textile single wrap reinforced hose				●	●	●	**-80°F ~+450°F**
SWPV	Platinum Silicone textile single wrap reinforced hose w/single helix wire				●	●	●	**-80°F ~+450°F**
FTHB	Food Grade Rubber Hose with Butyl tube - textile reinforcing - EPDM cover						●	**-40°F ~+250°F**
FTHN	Food Grade Rubber Hose with Nitrile tube - textile reinforcing - Nitrile cover				●		●	**-40°F ~+225°F**

Hose Assembly Guide

1 MEASURE & CUT HOSE TO LENGTH

Verify the type and size hose printed on layline match work order.

NOTE:

When calculating hose length, take into consideration the change in hose length (expansion/contraction) that may occur during pressurization.

Using a flexible or rigid measuring tape, measure the length of hose required as follows:

a. Verify required length of hose assembly with fittings.

b. Subtract "Cutoff Allowance" of each fitting from hose assembly length. (Refer to Hose Fittings Tables in Catalog 4660 for proper cutoff allowances)

EXAMPLE:

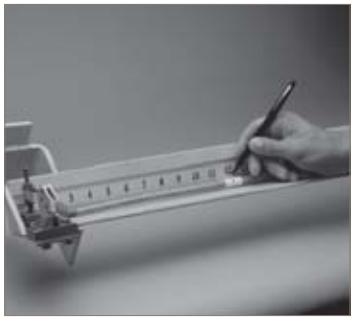
Hose assembly length with fittings = 12"	
Fitting Cutoff Allowance (10191N-4-4)	1 1/2"
Fitting Cutoff Allowance (10191N-4-4)	1 1/2"
Total Cutoff Allowance	3"
12"- 3" = 9"	
Length of hose required = 9"	

NOTE: Cut-off allowance is determined by each fitting. See Fitting Charts.

2 MEASURE & CUT HOSE TO LENGTH

Secure hose in some type of fixture to ensure straightness.

Measure and mark hose.



Tape hose securely so mark is in center of tape and mark tape. 919U hoses can not be taped.

CAUTION:

Do not use abrasive wheels to cut hose. Abrasive wheels will damage core tube.

3 MEASURE & CUT HOSE TO LENGTH

Using a Parker Model 316 cutoff tool, Parflex PHC hand cutter or other sharp cutter, cut hose squarely to correct length.

Using a Parker Model 332-T-115V Hose Cutoff Machine or fine-toothed hacksaw, cut hose squarely to length.

A power hose cutoff saw should always be used on PTFE and wire reinforced thermoplastic and hybrid hoses.

4 INSPECT HOSE

5 INSPECT FITTINGS

Verify fitting part number(s) match work order. Visually inspect fitting(s) for a through -hole, threads and damage.

6 ASSEMBLE HOSE

Mark hose end with proper insertion depth line. For 919U hoses, use a sharp knife and light pressure to cut back the urethane cover at least the length of the insertion depth of the fitting.

7 ASSEMBLE HOSE

Push fitting onto hose slightly and then remove tape. Continue pushing fitting onto hose until fitting reaches depth insertion mark. (If fitting does not readily slide onto hose, perform the next step.)

8 ASSEMBLE HOSE

Select proper Parkrimp die set. (Refer to Assembly Tool Selection Chart in Catalog 4660 or 4690 for proper Parkrimp die part number.)

9 ASSEMBLE HOSE

Using a molybdenum disulfide type grease, apply a thin layer of grease on bowl of crimper base plate.

10 ASSEMBLE HOSE

Place die set into bowl.

CAUTION: The silver die ring must be used for all Parflex fittings. Failure to do so will result in improperly crimped fittings and hose assemblies.

11 ASSEMBLE HOSE

Place silver die ring on top of die. Position ring so it is centered on die. **CAUTION:** When positioning fitting in die, ensure fitting skirt rests on die step. Failure to do so will result in an improperly

12 ASSEMBLE HOSE

crimped or damaged fitting. Position ring so it is centered on die. Place silver die ring on top of die.

13 ASSEMBLE HOSE

Turn on crimper.

NOTE

Pump on crimper should not exceed 3000 PSI. Parker Hannifin will not accept responsibility for the operation of or provide warranty coverage for a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating the crimper.

14 ASSEMBLE HOSE

While holding hose and fitting in position on die step, pull down on handle to activate crimper.

WARNING

Keep fingers and hands away from die-pusher area.

Failure to do so may result in personal injury.

15 ASSEMBLE HOSE

Crimp fitting onto hose until die ring contacts base plate.

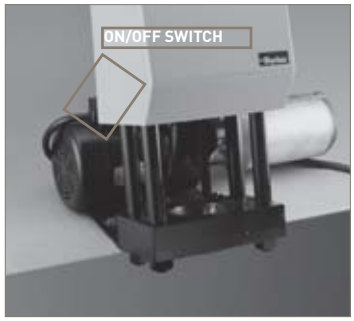
16 ASSEMBLE HOSE

Push handle to retract pusher.

17 ASSEMBLE HOSE

Remove hose assembly and die set.

18 ASSEMBLE HOSE



Repeat Steps 13-20 for the other end of hose if required.

Turn off crimper.

19 MEASURE & INSPECT

Measure and verify hose assembly length matches work order.

20 MEASURE & INSPECT

Inspect insertion depth mark at fitting ends. Insertion mark must be visible and within 1/8" of bottom of fitting shell.

21 MEASURE & INSPECT

Measure crimp diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify crimp diameter is within tolerances. (Refer to Crimp Specification & Tool Selection Chart for proper crimp diameters.)

Pressure test hose assembly if required.

1 2 3 See Measuring & Cutting Hose pg. 69

4 INSPECT HOSE

Visually inspect both ends of hose for squareness, loose wires and burrs on core tube. Trim any loose wires flush with tube and remove any burrs on tube with a sharp knife.

5 INSPECT FITTINGS

Verify fitting part number(s) match work order.

Visually inspect fitting(s) as follows:Inspect socket for a through-hole, threads in shell and damage.

6 INSPECT FITTINGS

Inspect nipple for a through-hole, threads, hex and damage. Ensure swivel nut is properly crimped, has threads and turns freely.

7 INSPECT FITTINGS

Inspect sleeve for scratches and damage.

8 ASSEMBLE HOSE

Slide two sockets over end of hose with bottom of sockets back to back.

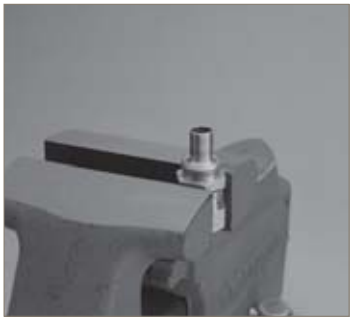
9 ASSEMBLE HOSE

Position sockets at each end of hose.

NOTE

When installing sockets on hose, check hose ends to determine if wire braid "necks down" (bends inward). If one end "necks down" use this end to slide sockets onto hose

10 ASSEMBLE HOSE

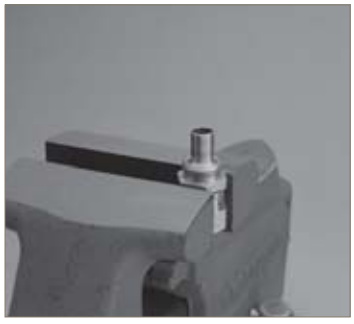


Mount nipple hex in vise. Ensure nipple end extends beyond vise jaws sufficiently to allow installation of hose.

11 ASSEMBLE HOSE

Push hose bore onto nipple to size tube and to aid in separating braid before fitting sleeve.

12 ASSEMBLE HOSE



Remove hose from nipple.

13 ASSEMBLE HOSE

By hand, push sleeve over end of TFE core tube and under wire braid.

14 ASSEMBLE HOSE

To complete positioning of sleeve, push hose end with sleeve, against a solid flat surface.

15 ASSEMBLE HOSE

Verify tube butts against inside shoulder of sleeve.

16 ASSEMBLE HOSE

Using a tapered punch, push punch into end of sleeve and tube to set sleeve barbs into tube.

WARNING

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose is used.

17 ASSEMBLE HOSE

Using a SAE 20 lubricating oil, lubricate nipple and socket threads. For stainless steel fittings use Parker 702 Oil or a molybdenum type lubricant. For hose used in oxygen service lubricate using a non-oil based soap solution.

18 ASSEMBLE HOSE

Using a twisting motion, push hose over nipple until hose is seated against nipple chamfer.

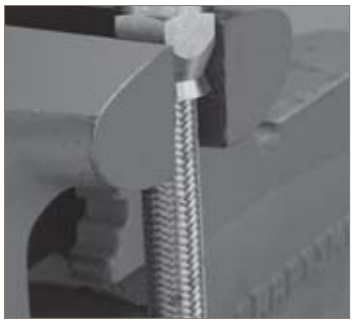
19 ASSEMBLE HOSE

Push socket forward and hand-start threading of socket to nipple.

CAUTION

When tightening socket in vise, do not over tighten vise jaws. Over tightening vise jaws will distort internal threads of socket and hamper installation of nipple.

20 ASSEMBLE HOSE



Remove assembly from vise and reposition with socket in vise jaws. Ensure socket extends beyond vise jaws far enough to allow nipple to be completely tightened.

21 ASSEMBLE HOSE

Wrench tighten nipple hex until clearance between hex and socket hex is 1/32" or less.

22 ASSEMBLE HOSE

Tighten further to align corners of nipple and socket hexes if necessary.

Repeat Steps 11-23 for other end of hose.

23 MEASURE & INSPECT

Measure and verify hose assembly length matches work order.

Pressure test hose assembly if required.

Hose Diameter/Flow Rate/Velocity Guide

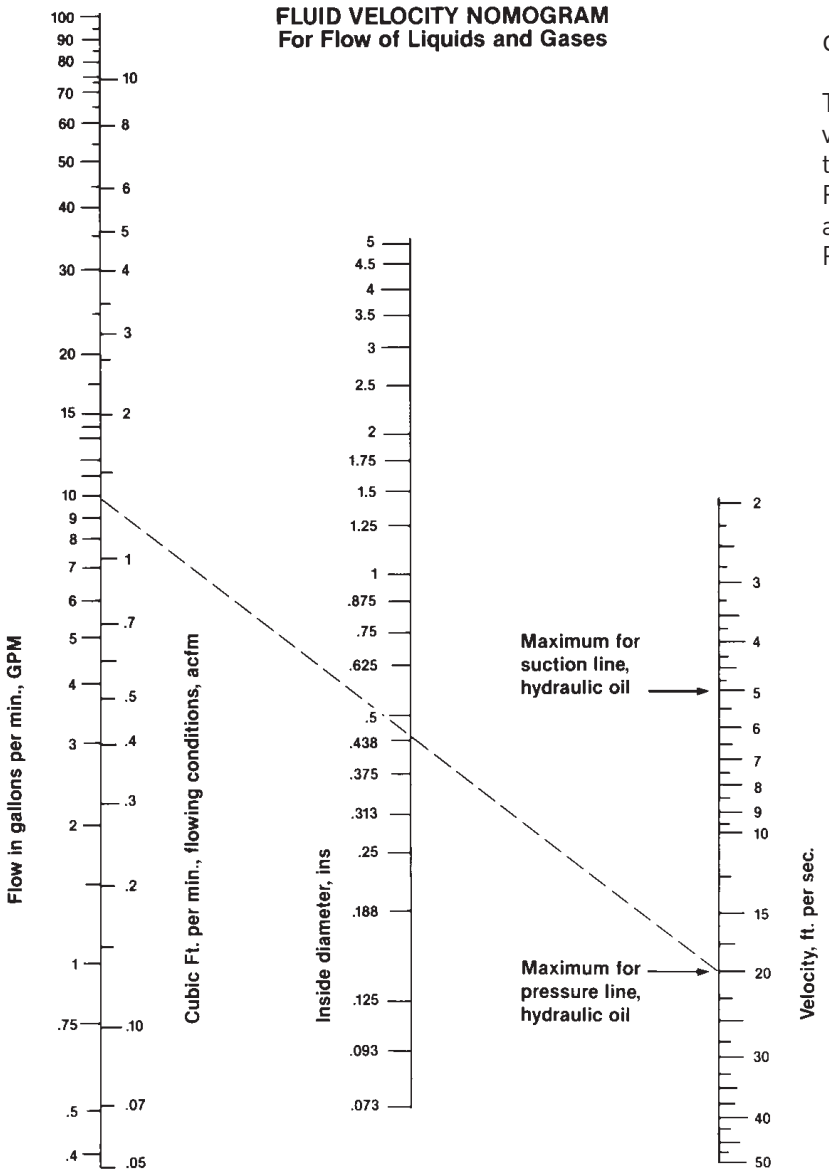
Selection of Hose Diameter from Flow Rate and Velocity

The Fluid Velocity Nomogram gives the velocity of a liquid or gas as a function of flow rate and inside diameter of the fluid line. The commonly recommended maximum velocities for hydraulic oil systems at 200°F or less are indicated for guidance.

Example: At 10 gpm, what is the minimum size within the recommended velocity range for a hydraulic pressure line?

The dashed line drawn from the 10 gpm mark on the left hand line to the maximum velocity of 20 fps intersects the middle line at .438 " (7/16" I. D. hose or tubing).
For a hose application, use 1/2" I. D., the nearest common standard size.

This chart is based on the following formulas: $v_{fps} = \frac{.321Q}{\frac{\pi d^2}{4}}$, Q = gal per min
d = hose or tube I. D. (inch)



cu. ft./min. = .1337 Q

The cu. ft. per min. value is the actual volume flow rate under flowing conditions.
For air, standard cfm of free air = 7.81 actual cfm when the inlet air is at 100 PSIg, 68°F.

Parker Hannifin, Parflex Division
PARKER/PAGE International
Fort Worth, Texas

TECHNICAL INFORMATION- WARRANTY

⚠ Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings, and Related Accessories

Parker Publication No. 4400-B.1

Revised: May 2002

WARNING: Failure or improper selection or improper use of hose, tubing, fittings, assemblies or related accessories ("Products") can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Products include but are not limited to:

- Fittings thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Electrocution from high voltage electric power lines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- Dangerously whipping Hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion while spraying paint or flammable liquids.
- Injuries resulting from inhalation, ingestion or exposure to fluids.

Before selecting or using any of these Products, it is important that you read and follow the instructions below. Only Hose from Parker's Stratoflex Products Division is approved for in flight aerospace applications, and no other Hose can be used for such in flight applications.

1.0 GENERAL INSTRUCTIONS

1.1 Scope: This safety guide provides instructions for selecting and using (including assembling, installing, and maintaining) these Products. For convenience, all rubber and/or thermoplastic products commonly called "hose" or "tubing" are called "Hose" in this safety guide. All assemblies made with Hose are called "Hose Assemblies". All products commonly called "fittings" or "couplings" are called "Fittings". All related accessories (including crimping and swaging machines and tooling) are called "Related Accessories". This safety guide is a supplement to and is to be used with, the specific Parker publications for the specific Hose, Fittings and Related Accessories that are being considered for use.

1.2 Fail-Safe: Hose, and Hose Assemblies and Fittings can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of the Hose or Hose Assembly or Fitting will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person that is responsible for selecting or using Hose and Fitting products. Do not select or use Parker Hose or Fittings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.4 User Responsibility: Due to the wide variety of operating conditions and applications for Hose and Fittings, Parker and its distributors do not represent or warrant that any particular Hose or Fitting is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the Hose and Fitting.
- Assuring that the user's requirements are met and that the application presents no health or safety hazards.
- Providing all appropriate health and safety warnings on the equipment on which the Hose and Fittings are used.
- Assuring compliance with all applicable government and industry standards.

1.5 Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2.0 HOSE AND FITTING SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the Hose be nonconductive to prevent electrical current flow. Other applications require the Hose and the Fitting and the Hose/Fitting interface to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting Hose and Fittings for these or any other applications in which electrical conductivity or nonconductivity is a factor.

The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the Hose and the Fittings, Fitting finish (some Fitting finishes are electrically conductive while others are nonconductive), manufacturing methods (including moisture control), how the Fittings contact the Hose, age and amount of deterioration or damage or other changes, moisture content of the Hose at any particular time, and other factors.

The following are considerations for electrically nonconductive and conductive Hose. For other applications consult the individual catalog pages and the appropriate industry or regulatory standards for proper selection.

2.1.1 Electrically Nonconductive Hose: Certain applications require that the Hose be nonconductive to prevent electrical current flow or to maintain electrical isolation. For these applications that require Hose to be electrically nonconductive, including but not limited to applications near high voltage electric lines, only special nonconductive Hose can be used. The manufacturer of the equipment in which the nonconductive Hose is to be used must be consulted to be certain that the Hose and Fittings that are selected are proper for the application. Do not use any Parker Hose or Fitting for any such application requiring nonconductive Hose, including but not limited to applications near high voltage electric lines, unless (i) the application is expressly approved in the Parker technical publication for the product, (ii) the Hose is marked "nonconductive", and (iii) the manufacturer of the equipment on which the Hose is to be used specifically approves the particular Parker Hose and Fitting for such use.

2.1.2 Electrically Conductive Hose: Parker manufacturers special Hose for certain applications that require electrically conductive Hose.

Parker manufactures special Hose for conveying paint in airless paint spraying applications. This Hose is labeled "Electrically Conductive Airless Paint Spray Hose" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in all airless paint spraying applications. Do not use any other Hose for airless paint spraying, even if electrically conductive. Use of any other Hose or failure to properly connect the Hose can cause a fire or an explosion resulting in death, personal injury, and property damage.

Parker manufactures a special Hose for certain compressed natural gas ("CNG") applications where static electricity buildup may occur. Parker CNG Hose assemblies comply with AGA Requirements 1-93, "Hoses for Natural Gas Vehicles and Fuel Dispensers". This Hose is labeled "Electrically Conductive for CNG Use" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in, for example, high velocity CNG dispensing or transfer. Do not use any other Hose for CNG applications where static charge buildup may occur, even if electrically conductive. Use of other Hoses in CNG applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury, and property damage. Care must also be taken to protect against CNG permeation through the Hose wall. See section 2.6, Permeation, for more information. Parker CNG Hose is intended for dispenser and vehicle use at a maximum temperature of 180°F. Parker CNG Hose should not be used in confined spaces or unventilated areas or areas exceeding 180°F. Final assemblies must be tested for leaks. CNG Hose Assemblies should be tested on a monthly basis for conductivity per AGA 1-93.

Parker manufacturers special Hose for aerospace in flight applications. Aerospace in flight applications employing Hose to transmit fuel,

TECHNICAL INFORMATION-WARRANTY

lubricating fluids and hydraulic fluids require a special Hose with a conductive inner tube. This Hose for in flight applications is available only from Parker's Stratoflex Products Division. Do not use any other Parker Hose for in flight applications, even if electrically conductive. Use of other Hoses for in flight applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury , and property damage. These Hose assemblies for in flight applications must meet all applicable aerospace industry, aircraft engine, and aircraft requirements.

2.2 Pressure: Hose selection must be made so that the published maximum recommended 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. Surge pressures and peak pressures can usually only be determined by sensitive electrical instrumentation that measures and indicates pressures at millisecond intervals. Mechanical pressure gauges indicate only average pressures and cannot be used to determine surge pressures or peak transient pressures. Published burst pressure ratings for Hose is for manufacturing test purposes only and is no indication that the Product can be used in applications at the burst pressure or otherwise above the published maximum recommended working pressure.

2.3 Suction: Hoses used for suction applications must be selected to insure that the Hose will withstand the vacuum and pressure of the system. Improperly selected Hose may collapse in suction application.

2.4 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the Hose. Temperatures below and above the recommended limit can degrade Hose to a point where a failure may occur and release fluid. Properly insulate and protect the Hose Assembly when routing near hot objects (e.g. manifolds). Do not use any Hose in any application where failure of the Hose could result in the conveyed fluids (or vapors or mist from the conveyed fluids) contacting any open flame, molten metal, or other potential fire ignition source that could cause burning or explosion of the conveyed fluids or vapors.

2.5 Fluid Compatibility: Hose Assembly selection must assure compatibility of the Hose tube, cover, reinforcement, and Fittings with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used. This information is offered only as a guide. Actual service life can only be determined by the end user by testing under all extreme conditions and other analysis.
Hose that is chemically compatible with a particular fluid must be assembled using Fittings and adapters containing likewise compatible seals.

2.6 Permeation: Permeation (that is, seepage through the Hose) will occur from inside the Hose to outside when Hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that this permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose Assembly.
Permeation of moisture from outside the Hose to inside the Hose will also occur in Hose assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

2.7 Size: Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.8 Routing: Attention must be given to optimum routing to minimize inherent problems (kinking or flow restriction due to Hose collapse, twisting of the Hose, proximity to hot objects or heat sources).

2.9 Environment: Care must be taken to insure that the Hose and Fittings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, sunlight, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure.

2.10 Mechanical Loads: External forces can significantly reduce Hose life or cause failure. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type Fittings or adapters may be required to insure no twist is put into the Hose. Unusual applications may require special testing prior to Hose selection.

2.11 Physical Damage: Care must be taken to protect Hose from wear, snagging, kinking, bending smaller that minimum bend radius, and cutting, any of which can cause premature Hose failure. Any Hose that has been kinked or bent to a radius smaller than the minimum bend radius, and any Hose that has been cut or is cracked or is otherwise damaged, should be removed and discarded.

2.12 Proper End Fitting: See instructions 3.2 through 3.5. These recommendations may be substantiated by testing to industry standards such as SAE J517 for hydraulic applications, or MIL-A-5070, AS1339, or AS3517 for Hoses from Parker's Stratoflex Products Division for aerospace applications.

2.13 Length: When establishing a proper Hose length, motion absorption, Hose length changes due to pressure, and Hose and machine tolerances and movement must be considered.

2.14 Specifications and Standards: When selecting Hose and Fittings, government, industry, and Parker specifications and recommendations must be reviewed and followed as applicable.

2.15 Hose Cleanliness: Hose components may vary in cleanliness levels. Care must be taken to insure that the Hose Assembly selected has an adequate level of cleanliness for the application.

2.16 Fire Resistant Fluids: Some fire resistant fluids that are to be conveyed by Hose require use of the same type of Hose as used with petroleum base fluids. Some such fluids require a special Hose, while a few fluids will not work with any Hose at all. See instructions 2.5 and 1.5. The wrong Hose may fail after a very short service. In addition, all liquids but pure water may burn fiercely under certain conditions, and even pure water leakage may be hazardous.

2.17 Radiant Heat: Hose can be heated to destruction without contact by such nearby items as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the Hose.

2.18 Welding or Brazing: When using a torch or arc-welder in close proximity to hydraulic lines, the hydraulic lines should be removed or shielded with appropriate fire resistant materials. Flame or weld spatter could burn through the Hose and possibly ignite escaping fluid resulting in a catastrophic failure. Heating of plated parts, including Hose Fittings and adapters, above 450°F (232°C) such as during welding, brazing, or soldering may emit deadly gases.

2.19 Atomic Radiation: Atomic radiation affects all materials used in Hose assemblies. Since the long-term effects may be unknown, do not expose Hose assemblies to atomic radiation.

2.20 Aerospace Applications: The only Hose and Fittings that may be used for in flight aerospace applications are Hose available from Parker's Stratoflex Products Division. Do not use any other Hose or Fittings for in flight applications. Do not use any Hose or Fittings from Parker's Stratoflex Products Division with any other Hose or Fittings, unless expressly approved in writing by the engineering manager or chief engineer of Stratoflex Products Division and verified by the user's own testing and inspection to aerospace industry standards.

2.21 Unlocking Couplings: Ball locking couplings or other couplings with disconnect sleeves can unintentionally disconnect if they are dragged over obstructions or if the sleeve is bumped or moved enough to cause disconnect. Threaded couplings should be considered where there is a potential for accidental uncoupling.

3.0 HOSE AND FITTING ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1 Component Inspection: Prior to assembly, a careful examination of the Hose and Fittings must be performed. All components must be checked for correct style, size, catalog number, and length. The Hose must be examined for cleanliness, obstructions, blisters, cover looseness, kinks, cracks, cuts or any other visible defects. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance.

3.2 Hose and Fitting Assembly: Do not assemble a Parker Fitting on a Parker Hose that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Do not assemble a Parker Fitting on another manufacturers Hose or a Parker Hose on another manufacturers Fitting unless (i) the engineering manager or chief engineer of the appropriate Parker division approves the Assembly in writing or that combination is expressly approved in the appropriate Parker literature for the specific Parker product, and (ii) the user verifies the Assembly and the application through analysis and testing. For Parker Hose that does not specify a Parker Fitting, the user is solely

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responsible for the selection of the proper Fitting and Hose Assembly procedures. See instruction 1.4.
The Parker published instructions must be followed for assembling the Fittings on the Hose. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

3.3 **Related Accessories:** Do not crimp or swage any Parker Hose or Fitting with anything but the listed swage or crimp machine and dies in accordance with Parker published instructions. Do not crimp or swage another manufacturers Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager of chief engineer of the appropriate Parker division.

3.4 **Parts:** Do not use any Parker Fitting part (including but not limited to socket, shell, nipple, or insert) except with the correct Parker mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.5 **Field Attachable/Permanent:** Do not reuse any field attachable (Field Attachable) Hose Fitting that has blown or pulled off a Hose. Do not reuse a Parker permanent Hose Fitting (crimped or swaged) or any part thereof. Complete Hose Assemblies may only be reused after proper inspection under section 4.0. Do not assemble Fittings to any previously used hydraulic Hose that was in service, for use in a fluid power application.

3.6 **Pre-Installation Inspection:** Prior to installation, a careful examination of the Hose Assembly must be performed. Inspect the Hose Assembly for any damage or defects. Do NOT use any Hose Assembly that displays any signs of nonconformance.

3.7 **Minimum Bend Radius:** Installation of a Hose at less than the minimum listed bend radius may significantly reduce the Hose life. Particular attention must be given to preclude sharp bending at the Hose to Fitting juncture. Any bending during installation at less than the minimum bend radius must be avoided. If any Hose is kinked during installation, the Hose must be discarded.

3.8 **Twist Angle and Orientation:** Hose Assembly installation must be such that relative motion of machine components does not produce twisting.

3.9 **Securement:** In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

3.10 **Proper Connection of Ports:** Proper physical installation of the Hose Assembly requires a correctly installed port connection insuring that no twist or torque is transferred to the Hose when the Fittings are being tightened or otherwise during use.

3.11 **External Damage:** Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.

3.12 **System Checkout:** All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Hose maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.

3.13 **Routing:** The Hose Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame, or sparks, a fire or explosion may occur. See section 2.4.

4.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1 Even with proper selection and installation, Hose life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a possible Hose failure, and experience with any Hose failures in the application or in similar applications should determine the frequency of the inspection and the replacement for the Products so that Products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.7.

4.2 **Visual Inspection Hose/Fitting:** Any of the following conditions require immediate shut down and replacement of the Hose Assembly:
- Fitting slippage on Hose,
- Damaged, cracked, cut or abraded cover (any reinforcement exposed);
- Hard, stiff, heat cracked, or charred Hose;
- Cracked, damaged, or badly corroded Fittings;
- Leaks at Fitting or in Hose;
- Kinked, crushed, flattened or twisted Hose; and
- Blistered, soft, degraded, or loose cover.

4.3 **Visual Inspection All Other:** The following items must be tightened, repaired, corrected or replaced as required:
- Leaking port conditions;
- Excess dirt buildup;
- Worn clamps, guards or shields; and
- System fluid level, fluid type, and any air entrapment.

4.4 **Functional Test:** Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potential hazardous areas while testing and using the system. See section 2.2.

4.5 **Replacement Intervals:** Hose assemblies and elastomeric seals used on Hose Fittings and adapters will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hose Assemblies and elastomeric seals should be inspected and replaced at specific replacement intervals, based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk. See section 1.2.

4.6 **Hose Inspection and Failure:** Hydraulic power is accomplished by utilizing high-pressure fluids to transfer energy and do work. Hoses, Fittings, and Hose Assemblies all contribute to this by transmitting fluids at high pressures. Fluids under pressure can be dangerous and potentially lethal and, therefore, extreme caution must be exercised when working with fluids under pressure and handling the Hoses transporting the fluids. From time to time, Hose Assemblies will fail if they are not replaced at proper time intervals. Usually these failures are the result of some form of misapplication, abuse, wear, or failure to perform proper maintenance. When Hoses fail, generally the high-pressure fluids inside escape in a stream which may or may not be visible to the user. Under no circumstances should the user attempt to locate the leak by "feeling" with their hands or any other part of their body. High-pressure fluids can and will penetrate the skin and cause severe tissue damage and possibly loss of limb. Even seemingly minor hydraulic fluid injection injuries must be treated immediately by a physician with knowledge of the tissue damaging properties of hydraulic fluid.
If a Hose failure occurs, immediately shut down the equipment and leave the area until pressure has been completely released from the Hose Assembly. Simply shutting down the hydraulic pump may or may not eliminate the pressure in the Hose Assembly. Many times check valves, etc., are employed in a system and can cause pressure to remain in a Hose Assembly even when pumps or equipment are not operating. Tiny holes in the Hose, commonly known as pinholes, can eject small, dangerously powerful but hard to see streams of hydraulic fluid. It may take several minutes or even hours for the pressure to be relieved so that the Hose Assembly may be examined safely.
Once the pressure has been reduced to zero, the Hose Assembly may be taken off the equipment and examined. It must always be replaced if a failure has occurred. Never attempt to patch or repair a Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information.
Never touch or examine a failed Hose Assembly unless it is obvious that the Hose no longer contains fluid under pressure. The high-pressure fluid is extremely dangerous and can cause serious and potentially fatal injury.

4.7 Elastomeric seals: **Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Elastomeric seals should be inspected and replaced.**

4.8 **Refrigerant gases:** Special care should be taken when working with refrigeration systems. Sudden escape of refrigerant gases can cause blindness if the escaping gases contact the eye and can cause freezing or other severe injuries if it contacts any other portion of the body.

4.9 **Compressed natural gas (CNG):** Parker CNG Hose Assemblies should be tested after installation and before use, and at least on a monthly basis per AGA 1-93 Section 4.2 "Visual Inspection Hose/Fitting". The recommended procedure is to pressurize the Hose and check for leaks and to visually inspect the Hose for damage.
Caution: **Matches, candles, open flame or other sources of ignition shall not be used for Hose inspection. Leak check solutions should be rinsed off after use.**

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Parker Hannifin, Parflex Division
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Fort Worth, Texas

Offer of Sale

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4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. **THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.**

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8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property, Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. Patents, U.S. Trademarks, copyrights, trade dress and trade secrets (hereinafter 'Intellectual Property Rights'). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter 'Events of Force Majeure'). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

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