

PureFlex Product Integration



DEMAND PUREFLEX QUALITY

# SmoothFlex™ Series

PTFE Smooth-Bore Hoses



www.pureflex.com

# SmoothFlex™



## SmoothFlex™ Hose

SmoothFlex™ is a flexible smooth bore PTFE hose with stainless steel braid reinforcement that is designed for long trouble free service in a wide range of applications that may involve pressure, temperature and chemical extremes. The hose is available in virgin PTFE for high purity applications and anti-static conductive black PTFE where electrostatic dissipation is required. SmoothFlex™ is an excellent choice for pharmaceuticals, food and beverage applications, the transfer of viscous media such as paints and adhesives, fluid transfer of corrosive chemicals, and high temperature hydraulic applications.

- Zero Corrosion Rate**
- Non-Stick Properties**
- FDA Approved**
- Meets Pharmacopoeia Class VI**
- SIP & CIP**
- 65°F to 450°F Temp. Range**
- Long Life Cycles**

## SmoothFlex™ Nominal Bore (SN) Dash Size

DASH SIZE	NOMINAL I.D. (inch)	NOMINAL O.D. (inch)	WORKING PRESSURE (psi)	MINIMUM BURST (psi)	MINIMUM BEND RADIUS (in)	WEIGHT (lbs / ft)
- 3	.125	.250	3,000	12,000	2.0	.047
- 4	.187	.312	3,000	12,000	2.0	.077
- 5	.250	.375	3,000	12,000	3.0	.098
- 6	.312	.445	2,500	10,000	4.0	.110
- 7	.375	.503	2,250	9,000	4.5	.124
- 8	.405	.549	2,000	8,000	5.0	.124
- 10	.500	.648	1,500	6,000	6.5	.154
- 12	.625	.778	1,200	4,800	8.0	.170
- 14	.750	.885	1,100	4,400	8.0	.198
- 16	.875	1.030	1,000	4,000	9.0	.273
- 18	1.000	1.135	900	3,600	10.00	.305
- 20	1.125	1.290	750	3,000	16.00	.350

Ratings are based at 70°F (21°C)  
Temperature range -65°F (-54°C) to 450°F (232°C)

## SmoothFlex™ True Bore (ST) Full I.D. Size

ACTUAL I.D. (inch)	NOMINAL O.D. (inch)	WORKING PRESSURE (psi)	MINIMUM BURST (psi)	VACUUM RATING (In Hg)	MINIMUM BEND RADIUS (in)	WEIGHT (lbs / ft)
1/4	.375	3,000	12,000	29.9	3.0	.098
3/8	.503	2,250	9,000	29.9	4.5	.124
1/2	.648	1,500	6,000	29.9	6.5	.154
3/4	.885	1,100	4,400	20.0	8.2	.198
1	1.135	900	3,600	14.0	10.0	.305

Ratings are based at 70°F (21°C)  
Temperature range -65°F (-54°C) to 450°F (232°C)

## Hose Cover Options



1



2

3

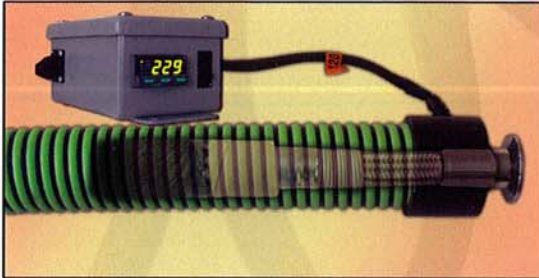
4

5

6

- 1 Silicone Cover
- 2 Anti Scuff Sock
- 3 Fire Sleeve
- 4 Polyolefin Heat Shrink (other colors available)
- 5 Anti Kink Guard
- 6 Spring Guard

## Electrically Heated Option



## SmoothFlex™ High Pressure (SH)

SIZE	NOMINAL I.D. (inch)	NOMINAL O.D. (inch)	WORKING PRESSURE (psi)	MINIMUM BURST (psi)	MINIMUM BEND RADIUS (in)	WEIGHT (lbs / ft)
1/4	.222	.375	5,000	16,000	1.5	.108
3/8	.308	.473	5,000	16,000	2.5	.180
1/2	.401	.600	5,000	16,000	2.9	.240
5/8	.495	.710	5,000	16,000	3.3	.324
3/4	.617	.970	5,000	16,000	4.0	.660
1	.867	1.250	5,000	16,000	5.0	1.020
1 1/4	1.125	1.600	4,000	16,000	12.0	1.680
1 1/2	1.375	1.920	4,000	12,000	14.0	2.280

Ratings are based at 70°F (21°C)

Temperature range -65°F (-54°C) to 400°F (204°C)

Reduce working pressure on all sizes to maximum of 3,000psi @ 400°F (204°C)

For impulse services reduce working pressures by 1,000psi

## SmoothFlex™ Ultra-High Pressure (SU)

SIZE	NOMINAL I.D. (inch)	NOMINAL O.D. (inch)	WORKING PRESSURE (psi)	MINIMUM BURST (psi)	MINIMUM BEND RADIUS (in)	WEIGHT (lbs / ft)
1/4	.229	.495	6,000	24,000	3.00	.24
3/8	.300	.615	6,000	24,000	5.00	.40
1/2	.395	.725	6,000	24,000	5.75	.49
5/8	.525	.885	4,000*	12,000	6.25	.67
3/4	.650	1.060	4,000*	12,000	7.75	.93
1	.875	1.370	4,000*	12,000	9.63	1.45

Ratings are based at 70°F (21°C)

Temperature range -65°F (-54°C) to 400°F (204°C)

\*Reduce working pressure to maximum of 3,000psi @ 400°F (204°C)

## FITTINGS

PureFlex fittings and collars are manufactured specifically for plastic-lined hoses. Applying the highest quality standards, they are designed for compatibility with most manufacturers' true-bore plastic hoses including smooth bore, convoluted, cuffed, and rubber-covered plastic lined.

In addition, PureFlex has designed and manufactured the most diverse fitting and collar selection in the industry.

**All fitting styles may not be available for all hose types.**

## FITTING MATERIALS

A wide range of fitting materials include carbon steel, 304 S.S., 316 S.S., Mone!, Hastelloy, solid Kynar (PVDF), or solid polypropylene. Other materials available upon request.

To achieve maximum plastic hose performance, specify PureFlex encapsulated fittings available in PFA. Advantages include zero corrosion rates and lower lifecycle costs.

### THREADED FITTINGS



**STYLE 03** Male Pipe (NPT) Hex



**STYLE 04** Male Pipe (NPT)



**STYLE 06** Female Pipe (NPT)



**STYLE 30** JIC Female Swivel



**STYLE 33** Male Union (NPT)



**STYLE 36** Female Union (NPT)



**STYLE 37** Female Swivel NPSH



JIC/NPT Adapter with PTFE Seal

### CAM LOCK



**STYLE 07** Female CAM Lock 'D'



**STYLE 17** Female CAM Lock 'D' Reducer



**STYLE 27** Female CAM Lock 'D' (PFA Encapsulated)



**STYLE 08** Male CAM Lock 'E'



**STYLE 28** Male CAM Lock 'E' (PFA Encapsulated)



**STYLE 20** Male Flange Adapter (PFA Encapsulated)



**STYLE 21** Female Flange Adapter (PFA Encapsulated)



**STYLE 02** CAM Spool Adapter



**STYLE 22** CAM Spool Adapter (PFA Encapsulated)



**COMPRESSION,  
SPLICE,  
BUTTWELD**

**SANITARY**

**FLANGES**



**STYLE 31** O-Ring Female Swivel 'D'



**STYLE 40** Sanitary (Tri-Clamp)



**STYLE 45** Bevel Seat Female



**STYLE 05** Flange Retainer  
**STYLE 15** P Series Flange Retainer



**STYLE 38** Compression Adapter



**STYLE 40F** Sanitary Flare Thru (FlexChem hose only)



**STYLE 46** Bevel Seat Male



**STYLE 25** Flange Retainer (PFA Encapsulated)



**STYLE 39** Compression Connector with Nut and Ferrule



**STYLE 40U** Sanitary Flare Thru (UltraFlex hose only)



**STYLE 48** I-Line Male



**STYLE 29** Flare Thru Flange (UltraFlex hose only)



**STYLE 18** Tube Buttweld



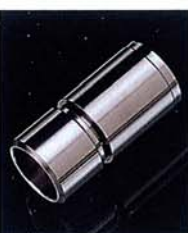
**STYLE 41** Sanitary Step-Up



**STYLE 49** I-Line Female



**STYLE 29F** Flare Thru Flange (FlexChem hose only)



**STYLE 19** Pipe Buttweld



**STYLE 42** Sanitary Mini



**STYLE 44** Sanitary X Male Cam



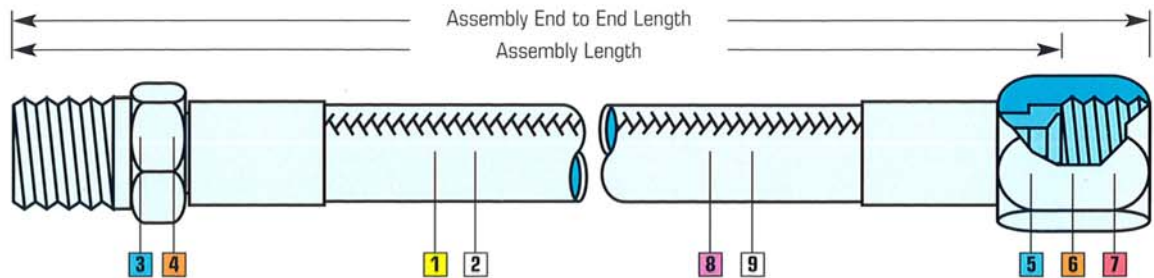
**STYLE 11** Splice



PureFlex world class fitting manufacturing



## HOW TO ORDER



### PUREFLEX,™ INC. HOSE ASSEMBLY NUMBERING SYSTEM

Steps to order a 1" SmoothFlex High Pressure assembly with a length of 12", 316SS Male NPT one end, 316SS JIC other end. No options.

Sample part number: **SH16036306001200**



#### STEP 1 Determine Product Code

SN = Nominal Bore (Dash Size)  
ST = True Bore  
SH = High Pressure  
SU = Ultra-High Pressure

#### STEP 2 Determine size

**SmoothFlex SN**  
Nominal Dash Size Only

03 = -3  
04 = -.4  
05 = -5  
06 = -6  
07 = -7  
08 = -8  
10 = -10  
12 = -12  
14 = -14  
16 = -16  
18 = -18  
20 = -20

**SmoothFlex ST, SH, SU**

04 = 1/4"  
06 = 3/8"  
08 = 1/2"  
10 = 5/8"  
12 = 3/4"  
16 = 1"  
20 = 1 1/4"  
24 = 1 1/2"

*Actual I.D. may vary  
check specifications  
on pages 2 & 3  
for your hose choice.*

#### STEP 3 Determine fitting style of 1st end: 03 = Male NPT

**Threaded**  
03 = Male pipe hex NPT  
04 = Male pipe NPT  
06 = Female pipe NPT  
30 = JIC female swivel  
33 = Male union (NPT)  
36 = Female union (NPT)  
37 = Female swivel NPSH

#### Flanges

05 = Flange retainer  
15 = Flange retainer P-series  
25 = Enc. flange retainer  
29F = Flare thru flange

#### Camlock

07 = Female cam lock "D"  
27 = Enc. female cam lock "D"  
08 = Male cam lock "E"  
28 = Enc. male cam lock "E"

#### Compression

31 = O-ring female swivel "D"  
28 = Compression adapter  
39 = Compression connector  
w/nut & ferrule

#### Buttweld

18 = Tube buttweld  
19 = Pipe buttweld

#### Sanitary

40 = Sanitary tri-clamp  
40F = Sanitary flare thru  
41 = Sanitary step-up  
42 = Sanitary mini  
48 = I-line male  
49 = I-line female  
45 = Bevel seat female  
46 = Bevel seat male

#### STEP 4 Determine fitting material: 6 = 316SS

4 = 304SS  
6 = 316SS  
C = Carbon steel  
T = TFE encapsulated  
H = Hastelloy  
M = Monel  
A = Alloy 20  
K = Kynar  
P = Polypropylene

#### STEP 5 Determine fitting style of 2nd end: 30 = JIC

**Threaded**  
03 = Male pipe hex NPT  
04 = Male pipe NPT  
06 = Female pipe NPT  
30 = JIC female swivel  
33 = Male union (NPT)  
36 = Female union (NPT)  
37 = Female swivel NPSH

#### Flanges

05 = Flange retainer  
15 = Flange retainer P-series  
25 = Enc. flange retainer  
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#### Camlock

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48 = I-line male  
49 = I-line female  
45 = Bevel seat female  
46 = Bevel seat male

#### STEP 6 Determine fitting material: 6 = 316SS

4 = 304SS  
6 = 316SS  
C = Carbon steel  
T = TFE encapsulated  
H = Hastelloy  
M = Monel  
A = Alloy 20  
K = Kynar  
P = Polypropylene

#### STEP 7 Determine flange material: 0 = None

0 = None  
D = Ductile iron  
C = Carbon steel  
4 = 304SS  
6 = 316SS  
K = Kynar  
P = Polypropylene

#### STEP 8 Determine overall length of UltraFlex hose in inches: 0120 = 12"

Last digit in 1/8th increments.

#### STEP 9 Determine options: 0 = None

0 = None  
B = Conductive  
Z = 300# Flg  
L = Locking female cam  
S = Spring guard  
A = Armor guard  
F = Firesleeve  
P = Polyolefin  
T = TFE shrink  
H = Hypalon  
N = Nylon scuff guard



**Silicone**  
Ultra-Pure  
Validated  
Platinum cured  
Silicone hose &  
tubing.



**PVC**  
Crystal clear  
FDA approved  
hose and  
tubing.



**Heated Hoses**  
Electrically  
heat any  
PureFlex  
hose up  
to 450°F

**In-house integration  
of design, hose manufac-  
turing,  
fitting manufacturing,  
assembly and testing  
from a single company.**

# ONE SOURCE FOR ALL YOUR NEEDS



**UltraFlex™**  
Ultra-flexible heavy  
duty convoluted  
hose.



**MultiFlex™**  
Superior flexibility  
for higher pres-  
sure applications.



**MTH™ (Metal  
PTFE Lined Hose)**  
Flexible metal  
hose with smooth  
bore PTFE liner.



**FlexChem™**  
Rubber covered  
smooth bore FEP  
Lined hose.



**ProFlex™**  
Industrial grade,  
high quality, low  
priced convoluted  
PFA hose.



**SmoothFlex™**  
Smooth bore  
PTFE hose with  
stainless steel  
braid.



**PureSite™**  
Unbreakable  
translucent FEP  
sight gages.



**Task-Line® Gaskets**  
PTFE gaskets  
with encapsulated  
stainless steel  
insert.



**Task-Line®  
Grounding Paddles**  
Pipe static-dissi-  
pating paddles.



## MARKETS

Chemical Process  
Pharmaceutical  
Steel  
Food Processing  
Automotive  
Agriculture  
Pulp and Paper  
Petroleum  
Mining  
Railroad  
Dairy  
Textile  
Semiconductor

## APPLICATIONS

Acid Transfer  
Pickling  
Reverse Osmosis  
Steam Transfer  
Molding Equipment  
Adhesives  
Air Actuation  
Sanitary Transfer  
Purification Systems  
Centrifuges  
Extrusion Presses  
Caustic Wash  
High Purity  
Hydraulics

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4617 East Paris S.E., Kentwood, MI 49512  
Phone: (616) 554-1100 Fax: (616) 554-3633  
Web: [www.pureflex.com](http://www.pureflex.com)