

# HOSES & LANCES

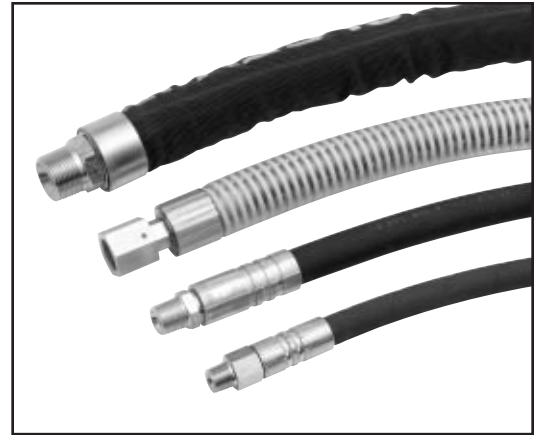
## UP TO 15,000 PSI (1000 BAR)



### RUBBER WATERBLAST HOSES

These high pressure hose assemblies combine rugged construction, dependability and safe performance.

- Designed specifically for waterblast applications
- Lightweight and flexible
- Available in sizes from 1/4" to 1" (6 mm to 25 mm)
- Standard hoses are uncovered with plated steel male pipe thread end fittings in lengths of 25 or 50 ft
- For other lengths, fittings or cover options, use the custom order instructions below and on page D-2
- See pages D-12 – D-13 for pressure drop charts



#### Standard Assemblies

Nominal Hose I.D.		Part No.	Length		End Fittings		Working Pressure**		Minimum Burst Pressure**		Bend Radius		Cover
in	mm		ft	m	Connection*	Material	psi	bar	psi	bar	in	mm	
1"	25	53235-0500707	50	15.2	1" NPTM	Plated Steel	10,000	700	25,000	1750	13.4	340	None
		53235-0250707	25	7.6	1" NPTM	Plated Steel	10,000	700	25,000	1750	13.4	340	None
3/4"	19	51118-0500606	50	15.2	3/4" NPTM	Plated Steel	10,000	700	25,000	1750	10.0	250	None
		51118-0250606	25	7.6	3/4" NPTM	Plated Steel	10,000	700	25,000	1750	10.0	250	None
1/2"	13	52241-0500505	50	15.2	1/2" NPTM	Plated Steel	15,000	1000	37,500	2500	9.0	230	None
		52241-0250505	25	7.6	1/2" NPTM	Plated Steel	15,000	1000	37,500	2500	9.0	230	None
		25513-0500505	50	15.2	1/2" NPTM	Plated Steel	10,000	700	25,000	1750	8.7	220	None
		25513-0250505	25	7.6	1/2" NPTM	Plated Steel	10,000	700	25,000	1750	8.7	220	None
3/8"	10	52178-0500404	50	15.2	3/8" NPTM	Plated Steel	15,000	1000	37,500	2500	9.0	230	None
		52178-0250404	25	7.6	3/8" NPTM	Plated Steel	15,000	1000	37,500	2500	9.0	230	None
		25576-0500404	50	15.2	3/8" NPTM	Plated Steel	10,000	700	25,000	1750	7.0	180	None
		25576-0250404	25	7.6	3/8" NPTM	Plated Steel	10,000	700	25,000	1750	7.0	180	None
1/4"	6	25914-0500303	50	15.2	1/4" NPTM	Plated Steel	10,000	700	25,000	1750	5.9	150	None
		25914-0250303	25	7.6	1/4" NPTM	Plated Steel	10,000	700	25,000	1750	5.9	150	None

\* See details on all connection types beginning on page I-2.

\*\* Maximum working pressure and minimum burst pressure may be greater than specified.

#### Ordering Custom Assemblies

Use the part numbering system below and charts on the following page to order hoses with other end fittings, fitting material, hose lengths, or covers:

**XXXXX - LLL AA BB C**

**SPECIFY HOSE SERIES (XXXXX)**

See Hose Series chart on page D-2

**HYPHEN**

Between series and length

**SPECIFY LENGTH IN FEET (LLL)**

Example: "050" for a 50 ft long hose

**SPECIFY END FITTINGS BY CODE (AA & BB)**

See End Fittings charts on page D-2. For a hose requiring two different end fittings, codes must be listed in numerical order.

**SPECIFY COVER OPTION BY CODE (C)**

See cover descriptions and codes on page D-2. Leave blank if no additional cover is desired.

#### Related Items

**THERMOPLASTIC HOSES** —

See page D-3

**HOSE CHECKS** — See page G-4

**SAFETY SHROUDS & WHIP HOSES** — See page G-3

**FLEX LANCE STRAIN RELIEF HOSES** — See page G-4

# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)



## RUBBER WATERBLAST HOSES

### CUSTOM ORDER

Use the information on this page to build part numbers for custom rubber hoses using the part numbering system described on the previous page.

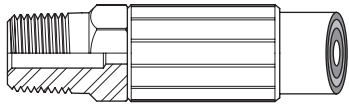
### Hose Series

Nominal Hose I.D.		Series	Maximum Working Pressure*		Minimum Burst Pressure*		Bend Radius		Weight	
in	mm		psi	bar	psi	bar	in	mm	lb/ft	kg/m
1"	25	53235	10,000	700	25,000	1750	13.4	340	1.94	2.89
3/4"	19	51118	10,000	700	25,000	1750	10.0	250	1.16	1.73
1/2"	13	52241	10,000	700	25,000	1750	8.7	220	.61	0.91
1/2"	13	25513	15,000	1000	37,500	2500	9.0	230	.76	1.13
3/8"	10	52178	10,000	700	25,000	1750	7.0	180	.50	0.74
3/8"	10	25576	15,000	1000	37,500	2500	9.0	230	.55	0.82
1/4"	6	25914	10,000	700	25,000	1750	5.9	150	.40	0.60

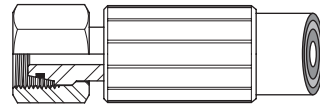
\* Maximum working pressure and minimum burst pressure may be greater than specified.

### End Fittings

#### MALE PIPE THREADS (NPTM)



#### METRIC FEMALE



#### BSP FEMALE



Hose I.D.		End Fitting Connection*	Fitting Code**	
in	mm		SS	PS
1"	25	1" NPTM	14	07
3/4"	19	3/4" NPTM	13	06
1/2"	13	1/2" NPTM	12	05
3/8"	10	3/8" NPTM	11	04
1/4"	6	1/4" NPTM	10	03

\* See details on all connection types beginning on page I-2.

\*\* **SS**: Stainless steel; **PS**: Plated carbon steel

Hose I.D.		End Fitting Connection*	Fitting Code**	
in	mm		SS	PS
1"	25	M42 x 2.0 Female	-	48
3/4"	19	M36 x 2.0 Female	-	47
1/2"	13	M24 x 1.5 Female	-	46
3/8"	10	M22 x 1.5 Female	-	45

\* See details on all connection types beginning on page I-2.

\*\* **SS**: Stainless steel; **PS**: Plated carbon steel

Hose I.D.		End Fitting Connection*	Fitting Code**	
in	mm		SS	PS
1/2"	13	1/2" BSP Female	-	61
3/8"	10	3/8" BSP Female	-	60

\* See details on all connection types beginning on page I-2.

\*\* **SS**: Stainless steel; **PS**: Plated carbon steel

### Cover Options

#### No Cover

(Omit Cover Option Code)



#### Cordura Cover

(Cover Option Code: 4)

Heavy-duty, braided nylon cover protects hose from abrasion damage caused by vibration or movement along a rough surface.



#### Abrasion Cover

(Cover Option Code: 1)

Constructed of clear PVC and reinforced with a rigid spiral coil, the Abrasion Cover protects the hose from external damage caused by vibration or movement along rough or uneven surfaces.

# HOSES & LANCES

## UP TO 15,000 PSI (1000 BAR)



### THERMOPLASTIC HOSES

These premium hoses provide the most durable and reliable means of connecting system components.

- Constructed of plastic core reinforced with high tensile steel wire and enclosed in a tough, flexible thermoplastic jacket
- Smooth core minimizes pressure loss and offers the maximum resistance to damage caused by aging, moisture absorption and changing environmental factors
- Available with plated or stainless steel end fittings
- Heavy-duty vinyl abrasion cover prevents damage caused by vibration and movement of hose on rough or uneven surfaces
- See pages D-13 – D-15 for pressure drop graphs
- For special lengths, end fittings, or cover options, see custom order instructions on pages D-5 – D-6



### Standard Assemblies

Nominal I.D.	Part No.	Inside Diameter		Length		End Fittings		Working Pressure**		Minimum Burst Pressure**		Bend Radius		Cover
		in	mm	ft	mm	Connection*	Material	psi	bar	psi	bar	in	mm	
3/4"	29313-0501313	.74	18.8	50	15.2	3/4" NPTM	Stainless Steel	15,000	1000	37,500	2500	9.8	250	None
	29313-0251313	.74	18.8	25	7.6	3/4" NPTM	Stainless Steel	15,000	1000	37,500	2500	9.8	250	None
1/2"	28524-0500505	.50	12.8	50	15.2	1/2" NPTM	Plated Steel	15,000	1000	37,500	2500	5.6	140	None
	28524-0250505	.50	12.8	25	7.6	1/2" NPTM	Plated Steel	15,000	1000	37,500	2500	5.6	140	None
	28524-0501212	.50	12.8	50	15.2	1/2" NPTM	Stainless Steel	15,000	1000	37,500	2500	5.6	140	None
	28524-0251212	.50	12.8	25	7.6	1/2" NPTM	Stainless Steel	15,000	1000	37,500	2500	5.6	140	None
5/16"	28673-0500404	.32	8.1	50	15.2	3/8" NPTM	Plated Steel	15,000	1000	37,500	2500	4.3	110	None
	28673-0250404	.32	8.1	25	7.6	3/8" NPTM	Plated Steel	15,000	1000	37,500	2500	4.3	110	None
	28673-0501111	.32	8.1	50	15.2	3/8" NPTM	Stainless Steel	15,000	1000	37,500	2500	4.3	110	None
	28673-0251111	.32	8.1	25	7.6	3/8" NPTM	Stainless Steel	15,000	1000	37,500	2500	4.3	110	None
1/4"	28490-0500303	.25	6.3	50	15.2	1/4" NPTM	Plated Steel	15,000	1000	37,500	2500	4.3	110	None
	28490-0250303	.25	6.3	25	7.6	1/4" NPTM	Plated Steel	15,000	1000	37,500	2500	4.3	110	None
	28490-0501010	.25	6.3	50	15.2	1/4" NP TM	Stainless Steel	15,000	1000	37,500	2500	4.3	110	None
	28490-0251010	.25	6.3	25	7.6	1/4" NPTM	Stainless Steel	15,000	1000	37,500	2500	4.3	110	None

\* See details on all connection types beginning on page I-2.

\*\* Maximum working pressure and minimum burst pressure may be greater than specified.

### Related Items

**RUBBER HOSES** — See pages D-1 – D-2

**HOSE CHECKS** — See page G-4

**SAFETY SHROUDS & WHIP HOSES** — See page G-3

**FLEX LANCE STRAIN RELIEF HOSES** — See page G-4

# HOSES & LANCES

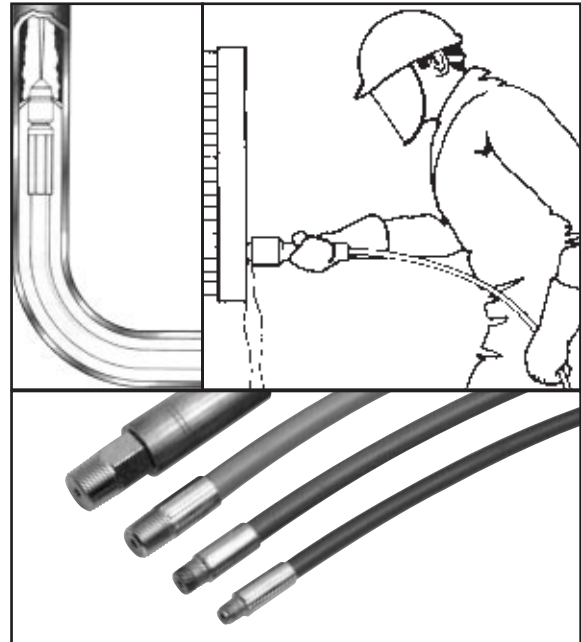
UP TO 15,000 PSI (1000 BAR)



## THERMOPLASTIC FLEX LANCES

Flex lances are uncovered hoses used for the cleaning of small diameter tubes such as those found in heat exchangers, condensers and boilers.

- Small minimum bend radius allows easy passage through bends
- Constructed of plastic core reinforced with high tensile steel wire and enclosed in a tough, flexible thermoplastic jacket
- Smooth plastic core minimizes pressure loss and offers the maximum resistance to damage caused by aging, moisture absorption and changing environmental factors
- Standard flex lances include plated steel end fittings. Stainless steel fittings available upon request. See pages D-5 – D-6.
- See pages D-13 – D-15 for pressure drop graphs
- Standard lengths are 25, 35 and 50 feet. Other lengths or end fitting combinations can be ordered using the instructions on pages D-5 – D-6



### Standard Assemblies

Nominal I.D.	Part No.	Inside Diameter		Length		Max. Outside Diameter*		End Fittings		Max. Working Pressure***		Bend Radius	
		in	mm	ft	mm	in	mm	Connection**	Material	psi	bar	in	mm
5/16"	28673-0500404	.32	8.0	50	15.2	.86	21.8	3/8" NPTM	Plated Steel	15,000	1000	4.3	110
	28673-0350404	.32	8.0	35	10.7	.86	21.8	3/8" NPTM	Plated Steel	15,000	1000	4.3	110
	28673-0250404	.32	8.0	25	7.6	.86	21.8	3/8" NPTM	Plated Steel	15,000	1000	4.3	110
1/4"	28490-0500303	.25	6.3	50	15.2	.57	14.5	1/4" NPTM	Plated Steel	15,000	1000	4.3	110
	28490-0350303	.25	6.3	35	10.7	.57	14.5	1/4" NPTM	Plated Steel	15,000	1000	4.3	110
	28490-0250303	.25	6.3	25	7.6	.57	14.5	1/4" NPTM	Plated Steel	15,000	1000	4.3	110
	26108-0500303	.25	6.3	50	15.2	.53	13.5	1/4" NPTM	Plated Steel	12,500	850	4.3	110
	26108-0350303	.25	6.3	35	10.7	.53	13.5	1/4" NPTM	Plated Steel	12,500	850	4.3	110
	26108-0250303	.25	6.3	25	7.6	.53	13.5	1/4" NPTM	Plated Steel	12,500	850	4.3	110
3/16"	26106-0500202	.20	5.0	50	15.2	.47	11.9	1/8" NPTM	Plated Steel	15,000	1000	3.8	95
	26106-0350202	.20	5.0	35	10.7	.47	11.9	1/8" NPTM	Plated Steel	15,000	1000	3.8	95
	26106-0250202	.20	5.0	25	7.6	.47	11.9	1/8" NPTM	Plated Steel	15,000	1000	3.8	95
5/32"	26104-0500101	.16	4.0	50	15.2	.39	9.9	1/16" NPTM	Plated Steel	15,000	1000	3.0	75
	26104-0350101	.16	4.0	35	10.7	.39	9.9	1/16" NPTM	Plated Steel	15,000	1000	3.0	75
	26104-0250101	.16	4.0	25	7.6	.39	9.9	1/16" NPTM	Plated Steel	15,000	1000	3.0	75

\* Outside diameter of end fitting sleeve.

\*\* See details on end fittings for these assemblies on page D-6 and specifications for all connection types beginning on page I-2.

\*\*\* Maximum working pressure may be greater than specified.

### Related Items

**TUBE CLEANING NOZZLES** — See pages E-19 – E-27

**STEEL BRAIDED FLEX LANCES** — See page E-7

**DURASAFE™ FOOT CONTROL GUNS** — See pages C-7 – C-8

**STINGERS (NIPPLES – PIPE THREAD (NPT))** — See pages F-8

**FLEX LANCE STRAIN RELIEF HOSES** — See pages G-4

**FLEX LANCE SAFETY GRIP** — See page G-5

# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)

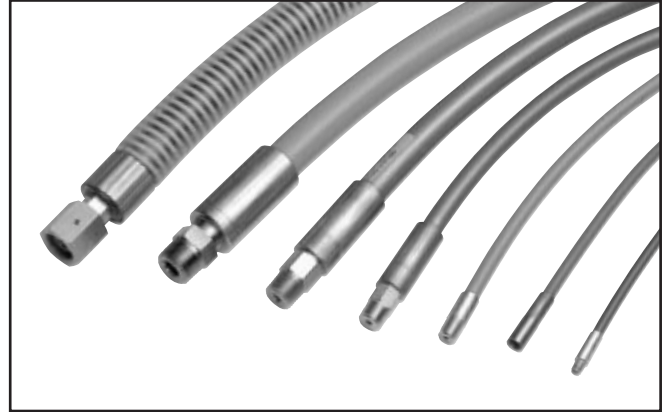


## THERMOPLASTIC HOSES & FLEX LANCES

### CUSTOM ORDER

Thermoplastic hoses and flex lances are available in custom lengths or with special end fitting combinations or covers. Common lengths and configurations are available on the two preceding pages.

- Constructed of plastic core reinforced with high tensile steel wire and enclosed in a tough, flexible thermoplastic jacket
- Smooth plastic core minimizes pressure loss and offers the maximum resistance to damage caused by aging, moisture absorption, and changing environmental factors
- See pages D-13 – D-15 for pressure drop graphs



Nominal I.D.	Series	Jacket Color	Inside Diameter		Outside Diameter*		Maximum Working Pressure**		Minimum Burst Pressure**		Bend Radius		Weight	
			in	mm	in	mm	psi	bar	psi	bar	in	mm	lb/ft	kg/m
3/4"	29313	Gray	.74	18.8	1.17	29.6	15,000	1000	37,500	2500	9.8	250	.91	1.35
1/2"	28524	Black	.50	12.8	.87	22.2	15,000	1000	37,500	2500	5.6	140	.40	0.60
1/2"	28481	Green	.50	12.8	.76	19.3	10,000	700	25,000	1720	7.9	200	.29	0.44
3/8"	70364	Black	.40	10.0	.69	17.4	11,600	800	29,000	2000	4.9	125	.32	0.47
5/16"	28673	Gray	.32	8.0	.63	16.0	15,000	1000	37,500	2500	4.3	110	.26	0.39
5/16"	27560	Blue	.32	8.0	.53	13.3	11,600	800	29,000	2000	5.1	130	.13	0.20
1/4"	28490	Green	.25	6.3	.49	12.5	15,000	1000	37,500	2500	4.3	110	.19	0.28
1/4"	26108	Green	.25	6.3	.46	11.5	12,500	850	31,250	2125	4.3	110	.12	0.19
3/16"	26106	Blue	.20	5.0	.37	9.4	15,000	1000	37,500	2500	3.8	95	.08	0.13
5/32"	26104	Red	.16	4.0	.32	8.0	15,000	1000	37,500	2500	3.0	75	.07	0.11
1/8"	28596	Green	.13	3.4	.27	6.9	15,000	1000	36,200	2500	2.4	60	.05	0.07

\* Outside diameter of hose material (end fitting diameter will be greater).

\*\* Maximum working pressure and minimum burst pressure may be greater than specified.

### Ordering Custom Assemblies

Use the part numbering system below and the information on this page and the next to order thermoplastic hoses and flex lances with other end fittings, fitting material, hose lengths, or covers:

**XXXXX - LLL AA BB C**

**SPECIFY HOSE SERIES (XXXXX)**

See Hose Series chart above

**HYPHEN**

Between series and length

**SPECIFY LENGTH IN FEET (LLL)**

Example: "050" for a 50 ft long hose

**SPECIFY END FITTINGS BY CODE (AA & BB)**

See End Fittings charts on page D-6. For a hose requiring two different end fittings, codes must be listed in numerical order.

**SPECIFY COVER OPTION BY CODE (C)**

See cover descriptions and codes on page at right. Leave blank if no additional cover is desired.

### Cover Options

**No Cover**

(Omit Cover Option Code)

**Abrasion Cover**

(Cover Option Code: 1)



Constructed of clear PVC and reinforced with a rigid spiral coil, the Abrasion Cover protects the hose from external damage caused by vibration or movement along rough or uneven surfaces.

**Burst Shield Cover**

(Cover Option Code: 2)



Constructed of steel wire reinforced heavy-duty synthetic rubber, the Burst Shield Cover protects the user from hose failure while preventing external damage to hose.

# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)



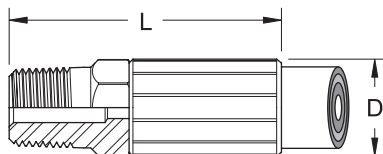
## THERMOPLASTIC HOSES & FLEX LANCES

### CUSTOM ORDER

Use the information on this page to select the connections desired for custom thermoplastic hoses and flex lances.

#### End Fittings

#### MALE PIPE THREADS (NPTM)

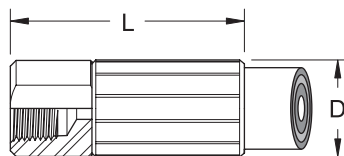


Hose I.D.	Series	End Fitting Connection*	Fitting Length (L)		Fitting O.D. (D)		Fitting Code**	
			in	mm	in	mm	SS	PS
3/4"	29313	1" NPTM	4.70	119.4	1.45	36.8	14	-
		3/4" NPTM	4.50	114.3	1.45	36.8	13	-
1/2"	28524	1/2" NPTM	3.60	91.4	1.14	29.0	12	05
1/2"	28481	1/2" NPTM	3.35	85.1	1.02	25.9	12	05
3/8"	70364	3/8" NPTM	3.27	83.1	.86	21.8	-	04
5/16"	28673	3/8" NTPM	2.90	73.7	.86	21.8	-	04
		1/4" NPTM	2.90	73.7	.86	21.8	-	03
5/16"	27560	3/8" NPTM	1.60	40.6	.69	17.5	-	04
		1/4" NPTM	1.57	39.9	.69	17.5	-	03
1/4"	28490	1/4" NPTM	1.39	35.3	.57	14.5	10	03
		1/8" NPTM	2.21	56.1	.57	14.5	-	02
1/4"	26108	1/4" NPTM	1.40	35.6	.53	13.5	10	03
		1/8" NPTM	2.25	57.2	.55	14.0	-	02
3/16"	26106	1/4" NPTM	2.43	61.7	.51	13.0	-	03
		1/8" NPTM	1.30	33.0	.47	11.9	09	02
5/32"	26104	1/8" NPTM	1.20	30.5	.39	9.9	-	02
		1/16" NPTM	1.20	30.5	.39	9.9	-	01
1/8"	28596	1/8" NPTM	1.96	49.8	.55	14.0	09	-
		1/16" NTPM	1.17	29.7	.36	9.1	08	01

\* See details on all connection types beginning on page I-2.

\*\* SS: Stainless steel; PS: Plated carbon steel

#### FEMALE PIPE THREADS (NPTF)

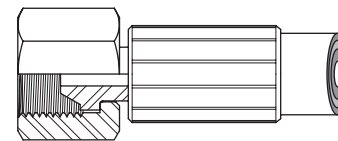


Hose I.D.	Series	End Fitting Connection*	Fitting Length (L)		Fitting O.D. (D)		Fitting Code**	
			in	mm	in	mm	SS	PS
1/4"	28490	1/4" NPTF	2.70	68.6	.85	21.6	20	17
1/4"	26108	1/4" NPTF	2.70	68.6	.55	14.0	20	17
3/16"	26106	1/8" NPTF	1.70	43.2	.47	11.9	-	16
5/32"	26104	1/16" NPTF	1.58	40.1	.39	9.9	-	15

\* See details on all connection types beginning on page I-2.

\*\* SS: Stainless steel; PS: Plated carbon steel

#### TYPE M FEMALE



Hose I.D.	Series	End Fitting Connection*	Fitting Code**	
			SS	PS
3/4"	29313	1-5/16" Type M Female	44	38
1/2"	28524	1" Type M Female	42	37
1/2"	28481	1" Type M Female	42	37
3/8"	70364	3/4" Type M Female	40	36
5/16"	28673	3/4" Type M Female	40	36
5/16"	27560	3/4" Type M Female	40	36
1/4"	26108	9/16" Type M Female	39	35
1/4"	28490	9/16" Type M Female	39	35
3/16"	26106	9/16" Type M Female	-	35
5/32"	26104	9/16" Type M Female	-	35
1/8"	28596	9/16" Type M Female	-	35

\* See details on all connection types beginning on page I-2.

\*\* SS: Stainless steel; PS: Plated carbon steel

#### BSP FEMALE



Hose I.D.	Series	End Fitting Connection*	Fitting Code**	
			SS	PS
1/2"	28524	1/2" BSP Female	-	61
1/2"	28481	1/2" BSP Female	-	61
3/8"	70364	1/2" BSP Female	-	61
5/16"	28673	3/8" BSP Female	-	60
5/16"	27560	3/8" BSP Female	-	60
1/4"	28490	1/4" BSP Female	-	59
1/4"	26108	1/4" BSP Female	-	59
3/16"	26106	1/4" BSP Female	-	59
5/32"	26104	1/4" BSP Female	-	59

\* See details on all connection types beginning on page I-2.

\*\* SS: Stainless steel; PS: Plated carbon steel

#### METRIC FEMALE



Hose I.D.	Series	End Fitting Connection*	Fitting Code**	
			SS	PS
3/4"	29313	M36 x 2.0 Female	-	47
1/2"	28524	M24 x 1.5 Female	50	46
1/2"	28481	M24 x 1.5 Female	-	46
5/16"	28673	M24 x 1.5 Female	-	46

\* See details on all connection types beginning on page I-2.

\*\* SS: Stainless steel; PS: Plated carbon steel

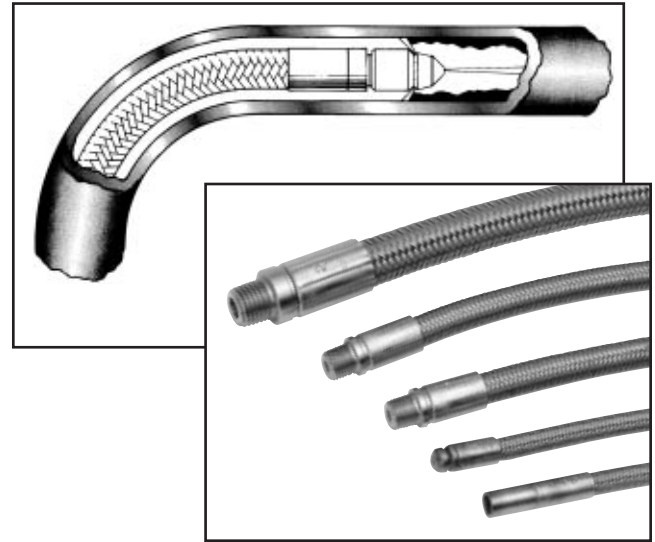
# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)



## STAINLESS STEEL BRAIDED FLEX LANCES

- Abrasion resistant, braided stainless steel cover
- Teflon® core ensures minimal pressure loss
- Small minimum bend radius allows easy passage through elbows, U-tubes and other sharp bends
- Stainless steel braid-anchored end fittings
- See pages D-15 – D-16 for pressure drop graphs
- Available in 25' and 50' lengths (7.6 m and 15.2 m)
- See dimensions for all end fittings and nozzle flow information for Mini-Mole nozzles on the following page



Nominal I.D.	Part No.	Inside Diameter		Length		End Fitting Diameter*		End Fittings**		Maximum Operating Pressure		Min. Bend Radius	
		in	mm	ft	mm	in	mm	Inlet End	Nozzle End	psi	bar	in	mm
5/16"	25571-50	.300	7.6	50	15.2	.721	18.31	1/4" NPTM	1/4" NPTM	8,000	550	5.0	125
	25571-25	.300	7.6	25	7.6	.721	18.31	1/4" NPTM	1/4" NPTM	8,000	550	5.0	125
1/4"	25570-50	.229	5.8	50	15.2	.575	14.61	1/8" NPTM	1/8" NPTM	10,000	700	3.0	75
	25570-25	.229	5.8	25	7.6	.575	14.61	1/8" NPTM	1/8" NPTM	10,000	700	3.0	75
	50752-50	.229	5.8	50	15.2	.565	14.35	1/8" NPTM	5/16" UNEF Male	10,000	700	3.0	75
	50752-25	.229	5.8	25	7.6	.565	14.35	1/8" NPTM	5/16" UNEF Male	10,000	700	3.0	75
1/4"	25568-50	.229	5.8	50	15.2	.500	12.70	1/8" NPTM	1/8" NPTM	8,000	550	3.0	75
	25568-25	.229	5.8	25	7.6	.500	12.70	1/8" NPTM	1/8" NPTM	8,000	550	3.0	75
	50673-50	.229	5.8	50	15.2	.500	12.70	1/8" NPTM	5/16" UNEF Male	8,000	550	3.0	75
	50673-25	.229	5.8	25	7.6	.500	12.70	1/8" NPTM	5/16" UNEF Male	8,000	550	3.0	75
1/8"	50559-50	.125	3.2	50	15.2	.340	8.64	1/16" NPTM	1/16" NPTM	8,000	550	2.0	50
	50559-25	.125	3.2	25	7.6	.340	8.64	1/16" NPTM	1/16" NPTM	8,000	550	2.0	50
	51162-50	.125	3.2	50	15.2	.325	8.26	1/16" NPTM	1/4" UNEF Female	8,000	550	2.0	50
	51162-25	.125	3.2	25	7.6	.325	8.26	1/16" NPTM	1/4" UNEF Female	8,000	550	2.0	50
	51498-50	.125	3.2	50	15.2	.335	8.51	1/16" NPTM	Mini-Mole	8,000	550	2.0	50
	51498-25	.125	3.2	25	7.6	.335	8.51	1/16" NPTM	Mini-Mole	8,000	550	2.0	50

\* Outside diameter of end fitting sleeve.

\*\* See end fitting dimensions on page D-8 and specifications for all connection types beginning on page I-2.

### Related Items

**TUBE CLEANING NOZZLES** — See pages E-19 – E-29

**THERMOPLASTIC FLEX LANCES** — See page D-4

**DURASAFE™ FOOT CONTROL GUNS** — See pages C-7 – C-8

**STINGERS (NIPPLES – PIPE THREAD (NPT))** — See pages F-8

**FLEX LANCE STRAIN RELIEF HOSES** — See pages G-4

**FLEX LANCE SAFETY GRIP** — See page G-5

# HOSES & LANCES

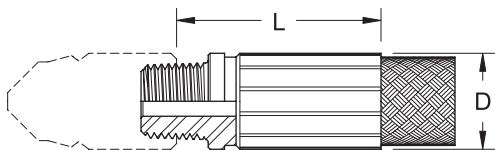
UP TO 15,000 PSI (1000 BAR)



## STAINLESS STEEL BRAIDED FLEX LANCES END FITTINGS

### NPTM MALE

For use with female pipe threaded tube cleaning nozzles (see pages E-19 to E-22 and E-24 to E-27).



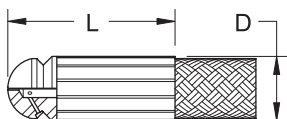
Hose I.D.	Series	End Fitting Connection*	Fitting Length** (L)		Fitting O.D. (D)	
			in	mm	in	mm
5/16"	25571	1/4" NPTM	1.48	37.5	.721	18.31
1/4"	25570	1/8" NPTM	1.25	31.8	.575	14.61
1/4"	25568	1/8" NPTM	1.10	27.9	.500	12.70
1/8"	50559	1/16" NPTM	.97	24.7	.340	8.64

\* See details on all connection types beginning on page I-2.

\*\* Add length of nozzle to "L" dimension to determine total rigid length.

### MINI-MOLE

- Special end fitting with permanently attached nozzle
- Provides the shortest possible rigid length at the end of the lance to allow navigation through very sharp bends
- One standard nozzle pattern available
- Two standard flow ratings available, one for each flex lance length. See nozzle flow chart below.
- Contact a Jetstream sales representative for custom lengths, patterns or flow rates



Hose I.D.	Series	Fitting Length** (L)		Fitting O.D. (D)	
		in	mm	in	mm
1/8"	51498	.87	22.1	.335	8.51

### MACHINE SCREW THREAD FEMALE

For use with MS2 nozzles (see page E-28).



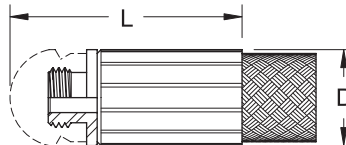
Hose I.D.	Series	End Fitting Connection*	Rigid Length** (L)		Fitting O.D. (D)		Nozzle Type/Size
			in	mm	in	mm	
1/8"	51162	1/4" UNF Female	2.09	52.1	.325	8.26	MS2

\* See details on all connection types beginning on page I-2.

\*\* Combined length of nozzle and end fitting.

### MACHINE SCREW THREAD MALE

For use with Series C nozzles (see page E-29).

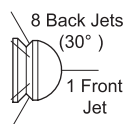


Hose I.D.	Series	End Fitting Connection*	Rigid Length** (L)		Fitting O.D. (D)		Nozzle Type/Size
			in	mm	in	mm	
1/4"	50752	5/16" UNEF Male	1.34	34.04	.565	14.35	C2
1/4"	50673	5/16" UNEF Male	1.38	34.93	.500	12.70	C1

\* See details on all connection types beginning on page I-2.

\*\* Combined length of nozzle and end fitting.

### MINI-MOLE NOZZLE FLOW



Lance Length		Flow (gpm) at specified pressures (psi)							Flow (lpm) at specified pressures (bar)						
ft	m	3,000	4,000	5,000	6,000	7,000	8,000	200	250	300	350	400	450	500	550
25'	15.2	2.2	2.5	2.8	3.1	3.3	3.5	8.1	9.0	9.9	10.7	11.4	12.1	12.8	13.4
50'	7.6	1.6	1.9	2.1	2.3	2.5	2.7	6.1	6.8	7.5	8.1	8.7	9.2	9.7	10.2

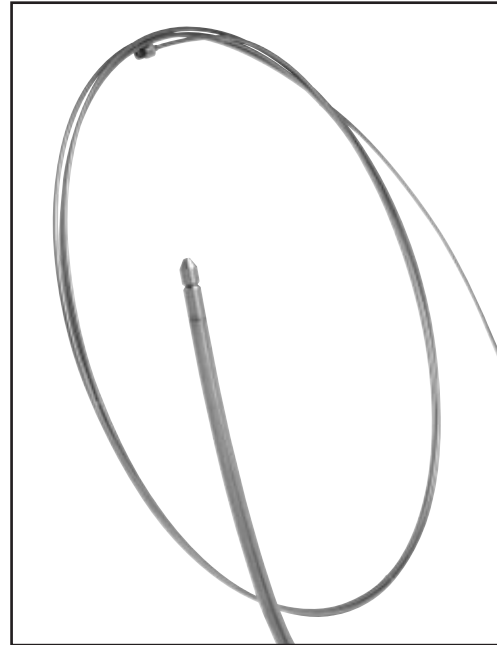
# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)



## STEELFLEX LANCES

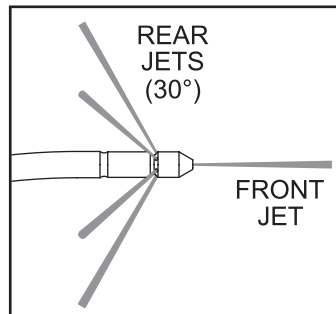
- Smallest outside diameters of any commercially available lances
- Special spring temper stainless steel can be used as either flex or rigid lance in very small tubes
- Integral nozzle and inlet fitting
- High strength material permits large inside to outside diameter
- Unlike normal rigid lances, the flexibility of SteelFlex permits use in confined space applications
- Two sizes available in lengths up to 50 ft (15 m)
- Coiled for transport and storage
- See page D-16 for pressure drop graphs



Part No. XX = length (ft)	Standard Lengths ft	Outside Diameter		Inside Diameter		Inlet Connection*	Maximum Operating Pressure		Bend Radius A**		Bend Radius B***	
		in	mm	in	mm		psi	bar	in	mm	in	mm
51015-XX	5, 10, 15, 20, 25, 35, 50	.170	4.32	.140	3.56	1/8" NPTM	10,000	700	19	483	10	254
51020-XX	5, 10, 15, 20, 25, 35	.140	3.56	.110	2.79	1/8" NPTM	10,000	700	16	406	7	178

\* See details on all connection types beginning on page I-2.  
 \*\* Bend Radius A: Radius beyond which permanent set condition may occur.  
 \*\*\* Bend Radius B: Radius beyond which kinking may occur.

## STANDARD PATTERNS



Length (ft)	Series 51015 .170" O.D.	Series 51020 .140" O.D.
5'	1 Front 6 Back 30° 7 Jets Total	1 Front 6 Back 30° 7 Jets Total
10'	1 Front 5 Back 30° 6 Jets Total	1 Front 6 Back 30° 7 Jets Total
15'	1 Front 5 Back 30° 6 Jets Total	1 Front 5 Back 30° 6 Jets Total
20'	1 Front 5 Back 30° 6 Jets Total	1 Front 6 Back 30° 7 Jets Total
25'	1 Front 5 Back 30° 6 Jets Total	1 Front 5 Back 30° 6 Jets Total
35'	1 Front 5 Back 30° 6 Jets Total	1 Front 4 Back 30° 5 Jets Total
50'	1 Front 5 Back 30° 6 Jets Total	Not Available

### Related Items

**DURASAFE™ FOOT CONTROL GUNS** — See pages C-7 – C-8  
**FLEX LANCE STRAIN RELIEF HOSES** — See pages G-4

# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)



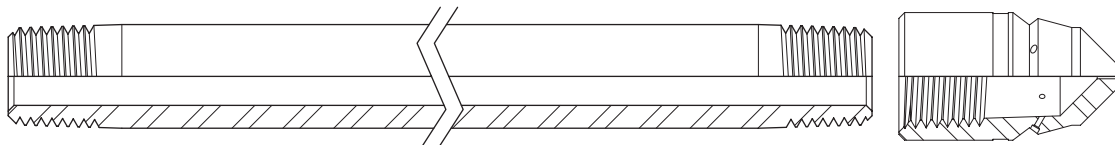
## RIGID LANCES

- For use in manual or automatic tube cleaning applications
- To order, use five digit part number followed by a dash (-) and length in feet (up to 25 ft)
- Available in a range of sizes and connections
- See pages D-16 – D-18 for pressure drop graphs



### NPT MALE x NPT MALE

For use with female pipe threaded tube cleaning nozzles (see pages E-19 to E-22 and E-24 to E-27).

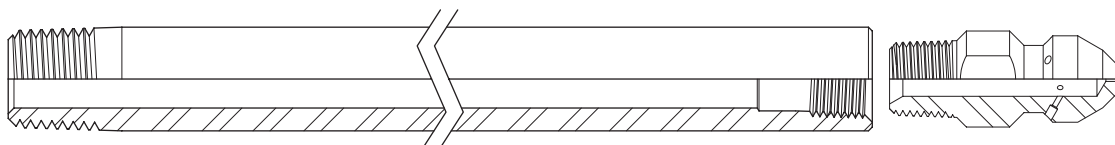


Part No. XX = length (ft)	Connection Type*		Outside Diameter		Inside Diameter		Material	Maximum Operating Pressure	
	Inlet End	Nozzle End	in	mm	in	mm		psi	bar
54299-XX	1" NPTM	1" NPTM	1.315	33.40	.599	15.21	Stainless Steel	10,000	700
53731-XX	3/4" NPTM	3/4" NPTM	1.050	26.67	.614	15.60	Stainless Steel	10,000	700
51082-XX	1/2" NPTM	1/2" NPTM	.840	21.34	.546	13.87	Stainless Steel	15,000	1000
50596-XX	3/8" NPTM	3/8" NPTM	.675	17.15	.423	10.74	Stainless Steel	15,000	1000
50594-XX	1/4" NPTM	1/4" NPTM	.540	13.72	.302	7.67	Stainless Steel	15,000	1000
50592-XX	1/8" NPTM	1/8" NPTM	.405	10.29	.215	5.46	Stainless Steel	15,000	1000
51081-XX	1/16" NPTM	1/16" NPTM	.312	7.92	.182	4.62	Stainless Steel	15,000	1000

\* See details on all connection types beginning on page I-2.

### NPT MALE x NPT FEMALE

For use with Series MP nozzles (see page E-23).



Part No. XX = length (ft)	Connection Type*		Outside Diameter		Inside Diameter		Material	Maximum Operating Pressure		Nozzle Type/Size
	Inlet End	Nozzle End	in	mm	in	mm		psi	bar	
51069-XX	1/2" NPTM	3/8" NPTF	.840	21.34	.546	13.87	Stainless Steel	15,000	1000	MP4
51068-XX	3/8" NPTM	1/4" NPTF	.675	17.15	.423	10.74	Stainless Steel	15,000	1000	MP3
51067-XX	1/4" NPTM	1/8" NPTF	.540	13.72	.302	7.67	Stainless Steel	15,000	1000	MP2
51066-XX	1/8" NPTM	1/16" NPTF	.405	10.29	.215	5.46	Stainless Steel	15,000	1000	MP1

\* See details on all connection types beginning on page I-2.

# HOSES & LANCES

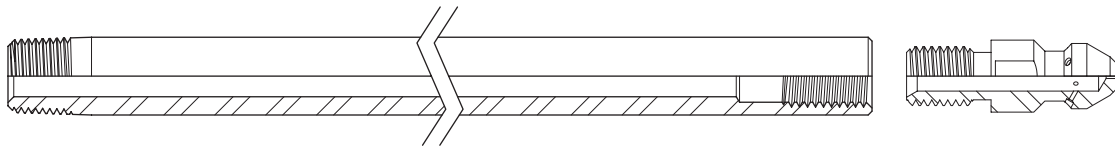
UP TO 15,000 PSI (1000 BAR)



## RIGID LANCES

### NPT MALE x MACHINE SCREW THREAD FEMALE

For use with Series MS nozzles (see page E-28).

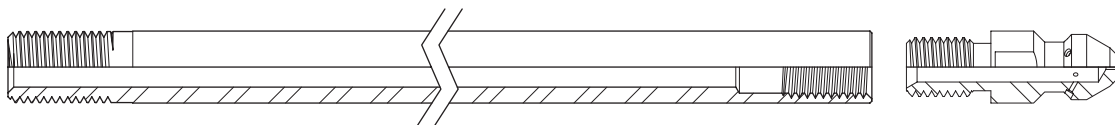


Part No. XX = length (ft)	Connection Type*		Outside Diameter		Inside Diameter		Material	Maximum Operating Pressure		Nozzle Type/Size
	Inlet End	Nozzle End	in	mm	in	mm		psi	bar	
	54411-XX	1/8" NPTM	5/16" UNF Female	.405	10.29	.215		5.46	Stainless Steel	

\* See details on all connection types beginning on page I-2.

### MACHINE SCREW THREAD MALE x MACHINE SCREW THREAD FEMALE

For use with Series MS nozzles (see page E-28).



Part No. XX = length (ft)	Connection Type*		Outside Diameter		Inside Diameter		Material	Maximum Operating Pressure		Nozzle Type/Size
	Inlet End	Nozzle End	in	mm	in	mm		psi	bar	
	51062-XX	3/8" UNF Male	5/16" UNF Female	.375	9.53	.209		5.31	Alloy Steel	
51061-XX	5/16" UNF Male	1/4" UNF Female	.312	7.92	.182	4.62	Stainless Steel	10,000	700	MS2
51059-XX	1/4" UNF Male	#12 UNF Female	.250	6.35	.120	3.05	Alloy Steel	10,000	700	MS1

\* See details on all connection types beginning on page I-2.

### Related Items

**RIGID LANCE ADAPTERS** — See page F-20

# HOSES & LANCES

## UP TO 15,000 PSI (1000 BAR)



### PRESSURE DROP DATA

The charts on this page and the next are used to approximate how much pressure will be lost through a particular hose or lance at a given flow rate. Because of frictional forces, the water exiting a hose or lance could be at a significantly lower pressure than at entry. In some cases, especially when using smaller hoses and lances, the flow rate that can be used is determined by pressure drop through a lance rather than the pump's maximum output.

#### PRESSURE DROP & NOZZLE SIZING

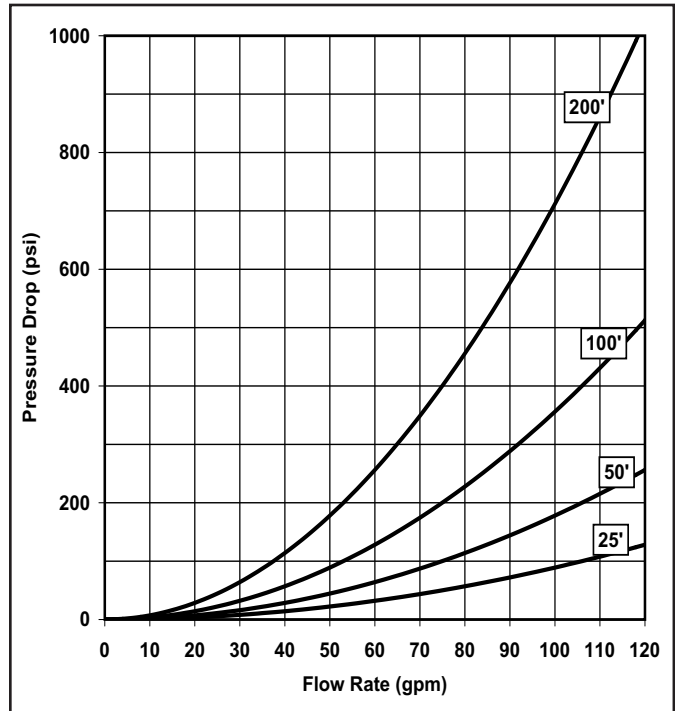
Pressure drop is especially important to understand when sizing nozzles. Use the following procedure for correct nozzle sizing:

1. Determine the pressure needed for a particular cleaning operation and subtract that amount from the desired pump operating pressure. The result is the permissible pressure drop.
2. Consult pressure drop chart for the hose to be used to determine what flow rate will result in the permissible pressure drop.
- 3a. If this flow rate exceeds the maximum flow of the pump, use the chart to find the pressure drop at the maximum pump flow and subtract that amount from the desired pump operating pressure to get the pressure at the nozzle. Then use the flow charts provided for the desired nozzle to select a nozzle, or nozzles, matching the desired flow and pressure.
- 3b. If this flow rate is within the capability of the pump, use the flow charts provided for the desired nozzle to select a nozzle, or nozzles, matching the desired flow and pressure.

**Note:** Doubling the length of a hose or lance will result in approximately twice the pressure drop at the same flow rate.

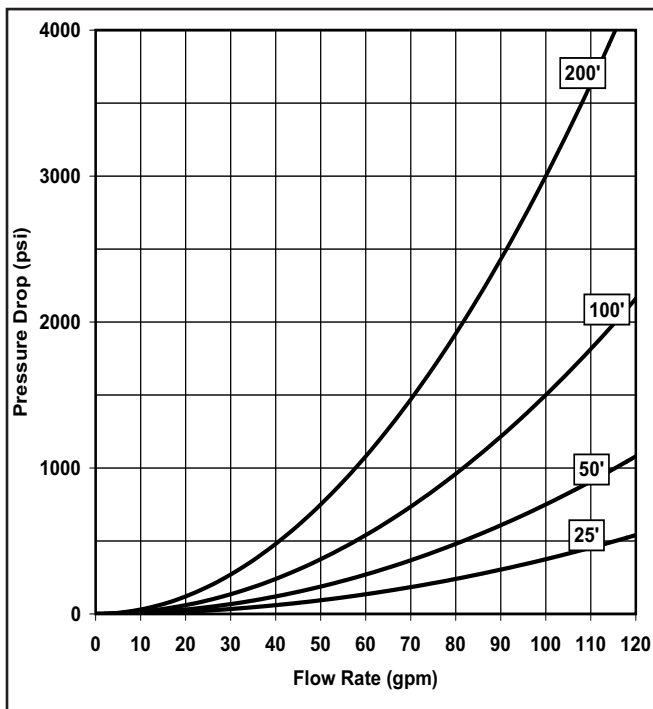
#### 1" RUBBER WATERBLAST HOSE

Series 53235



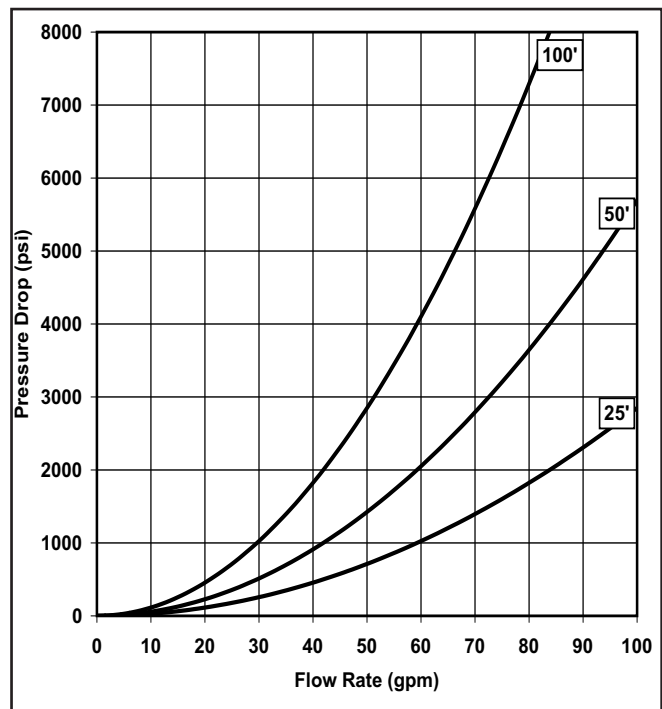
#### 3/4" RUBBER WATERBLAST HOSE

Series 51118



#### 1/2" RUBBER WATERBLAST HOSE

Series 25513 & 52241



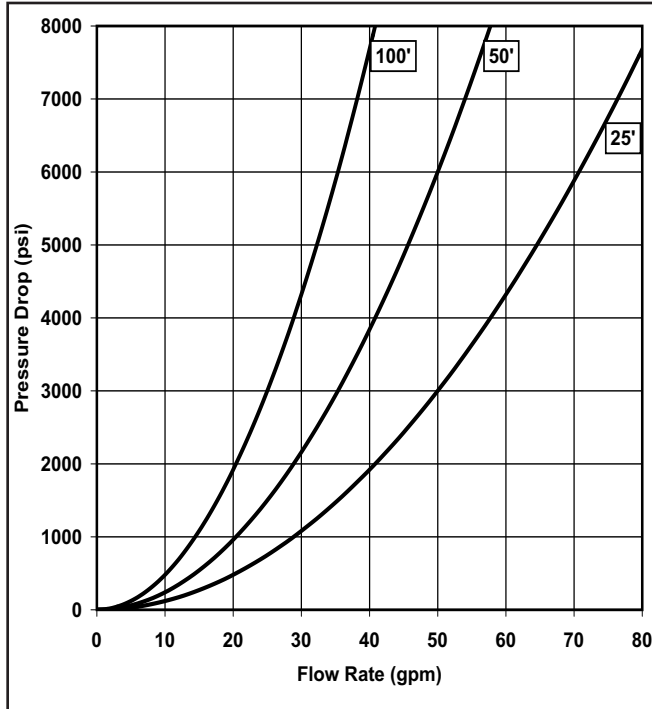
# HOSES & LANCES

## UP TO 15,000 PSI (1000 BAR)

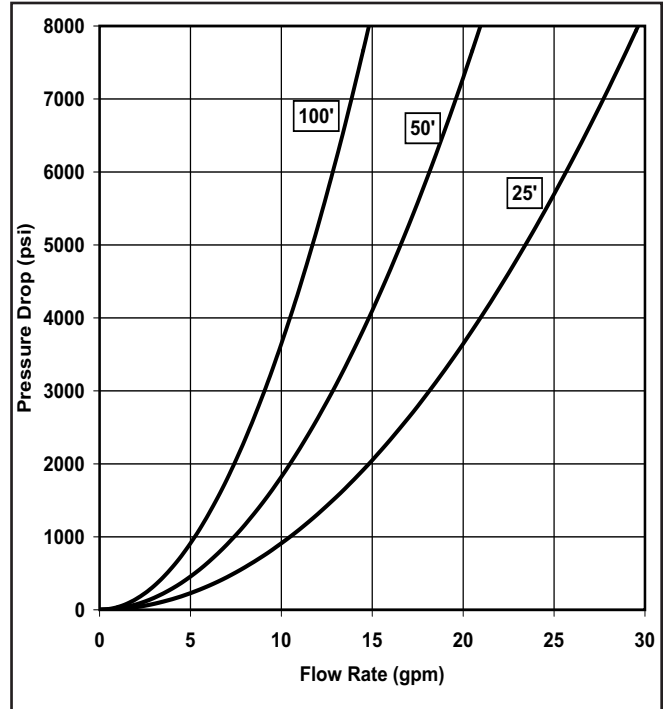


### PRESSURE DROP DATA

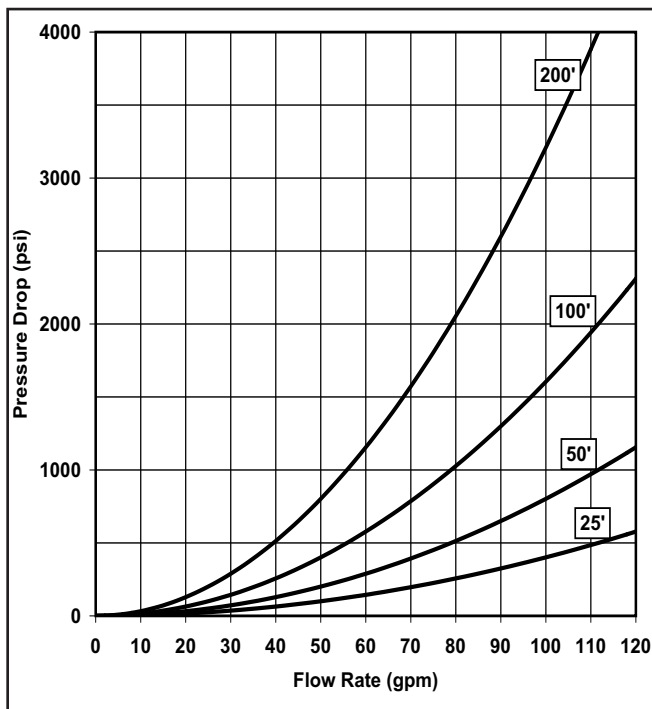
**3/8" RUBBER WATERBLAST HOSE**  
Series 25576 & 52178



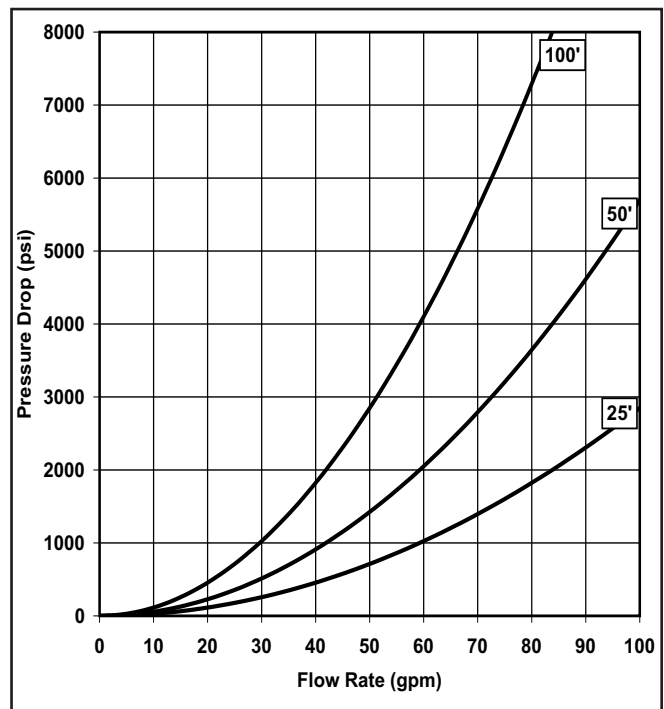
**1/4" RUBBER WATERBLAST HOSE**  
Series 25914



**3/4" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 29313



**1/2" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 28481 & 28524



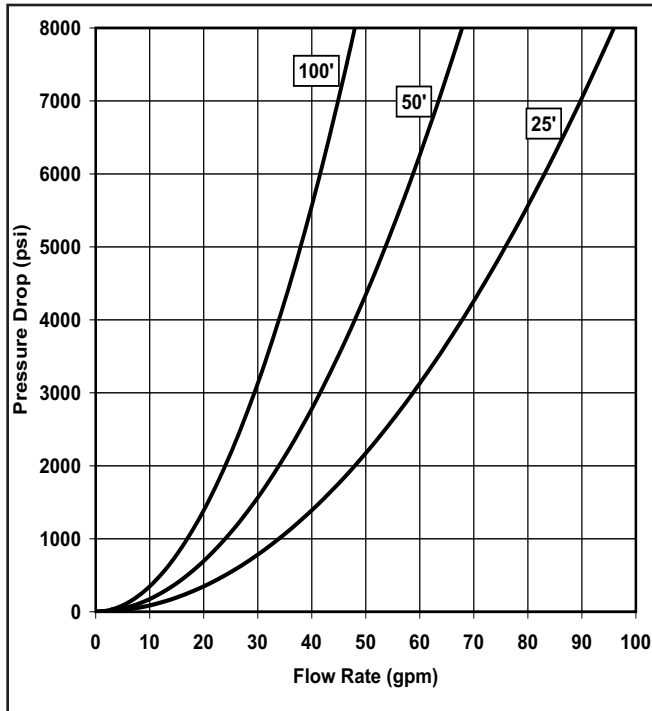
# HOSES & LANCES

UP TO 15,000 PSI (1000 BAR)

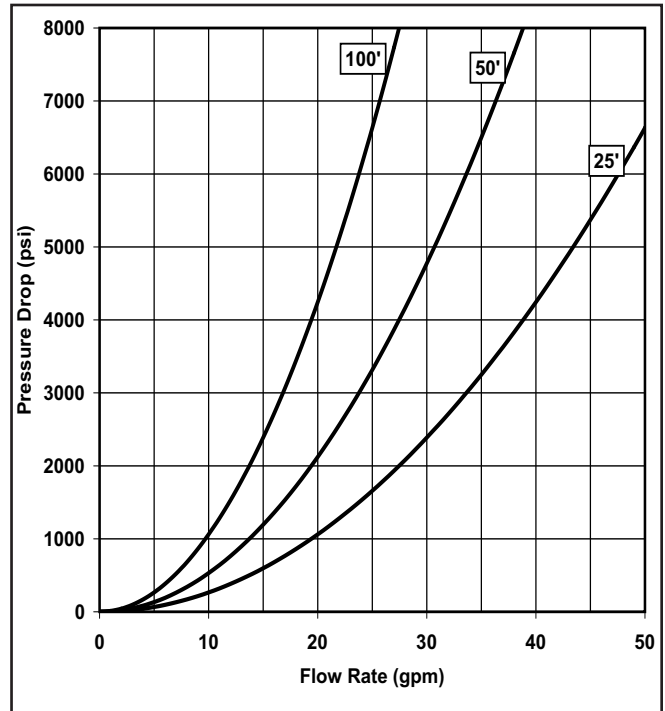


## PRESSURE DROP DATA

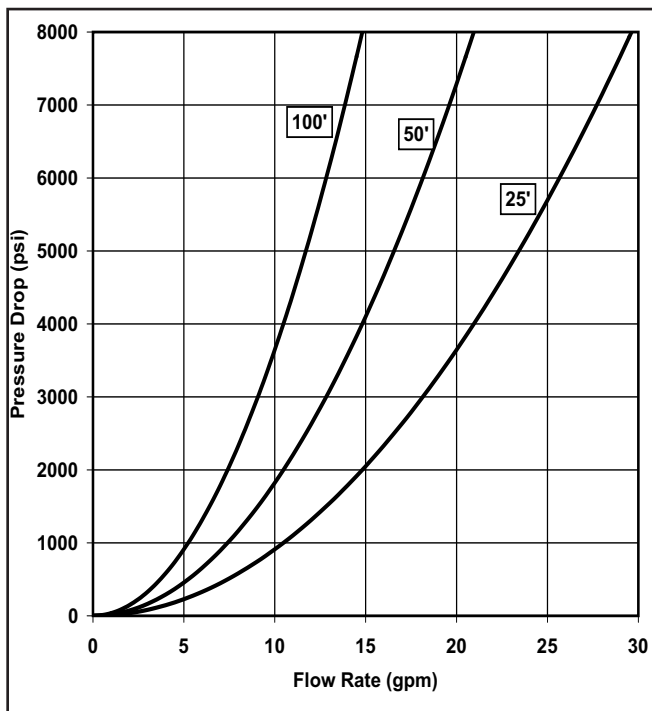
**3/8" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 70364



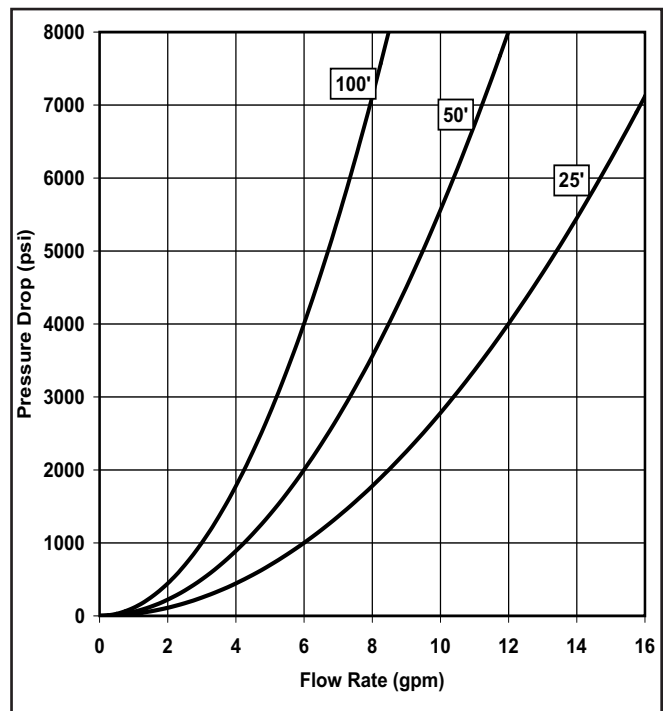
**5/16" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 27560 & 28673



**1/4" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 26108 & 28490



**3/16" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 26106



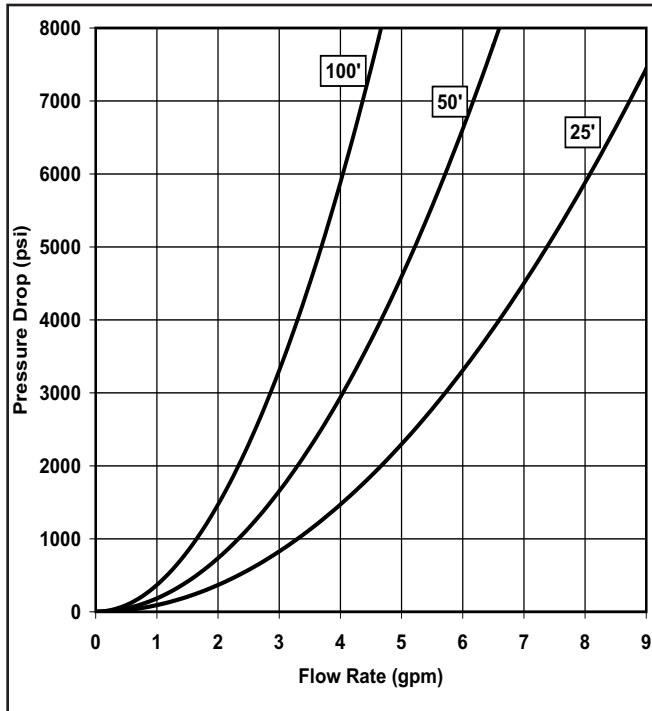
# HOSES & LANCES

## UP TO 15,000 PSI (1000 BAR)

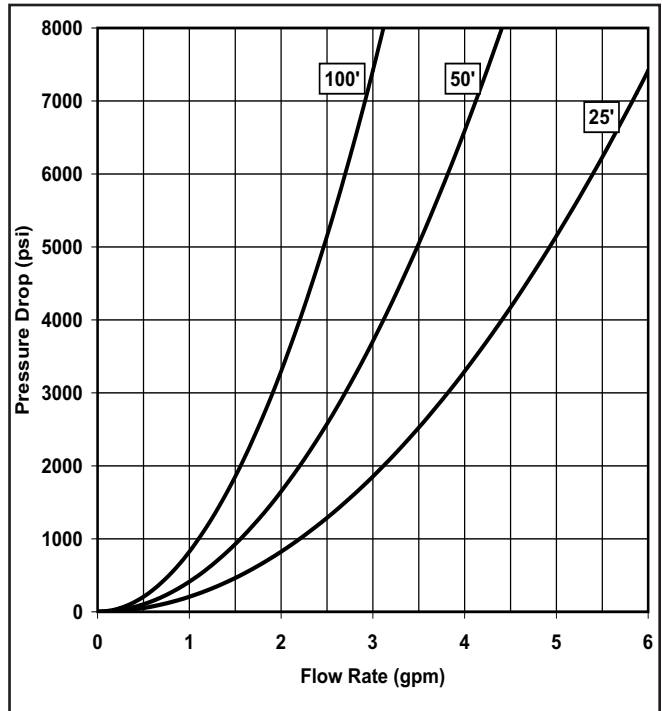


### PRESSURE DROP DATA

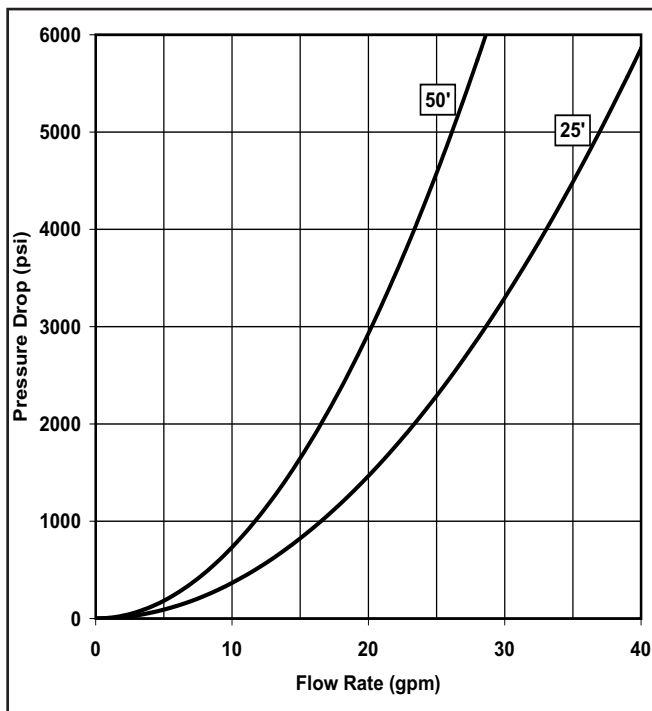
**5/32" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 26104



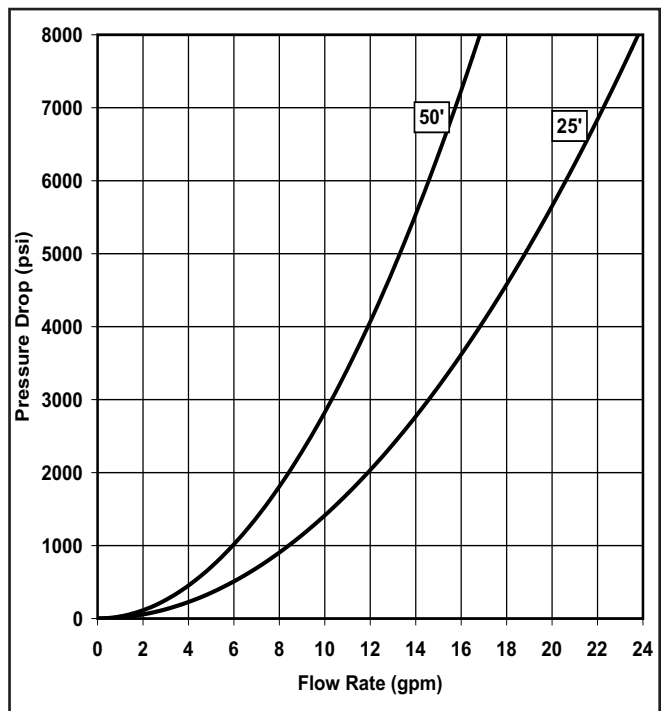
**1/8" THERMOPLASTIC HOSE & FLEX LANCE**  
Series 28596



**5/16" STAINLESS STEEL BRAIDED FLEX LANCE**  
Series 25571



**1/4" STAINLESS STEEL BRAIDED FLEX LANCE**  
Series 25568, 25570, 50673 & 50752



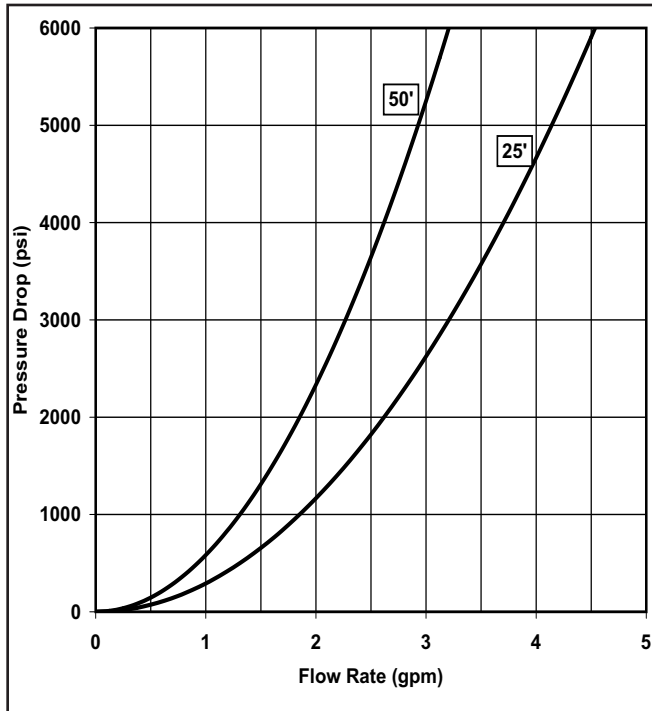
# HOSES & LANCES

## UP TO 15,000 PSI (1000 BAR)

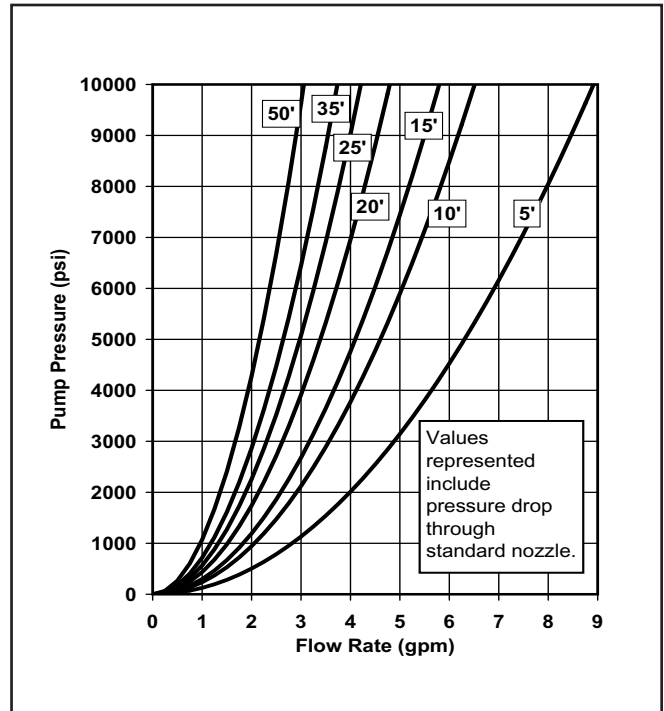


### PRESSURE DROP DATA

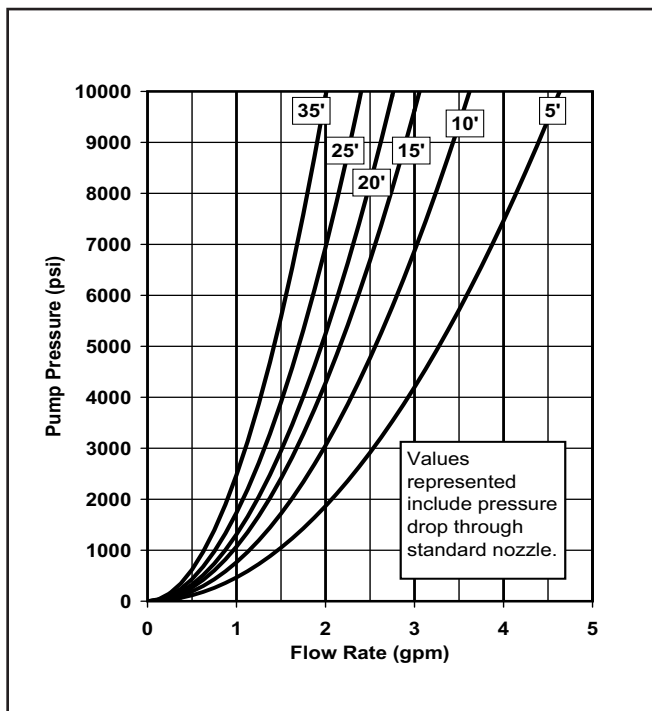
**3/16" STAINLESS STEEL BRAIDED FLEX LANCE**  
Series 50559, 51162 & 51498



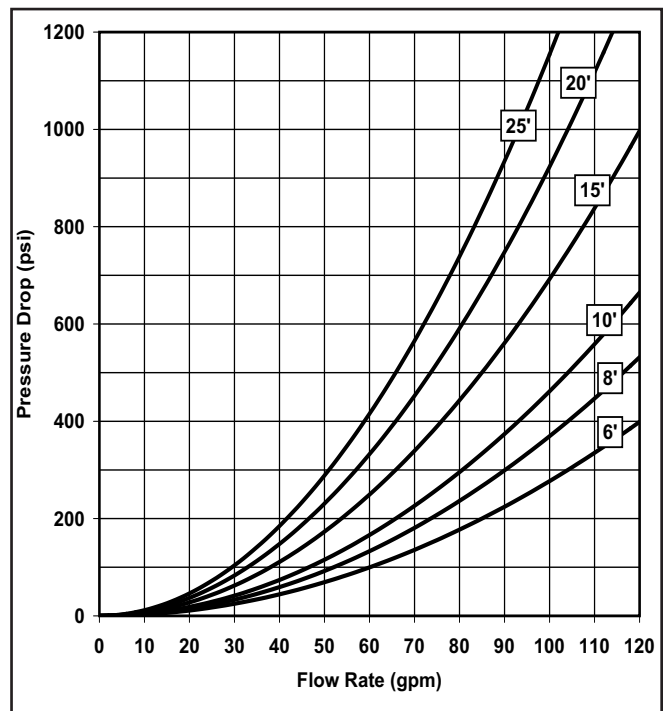
**.170" O.D. STEELFLEX LANCE**  
Series 51015



**.140" O.D. STEELFLEX LANCE**  
Series 51020



**RIGID LANCES – 1" PIPE**  
Series 54299



# HOSES & LANCES

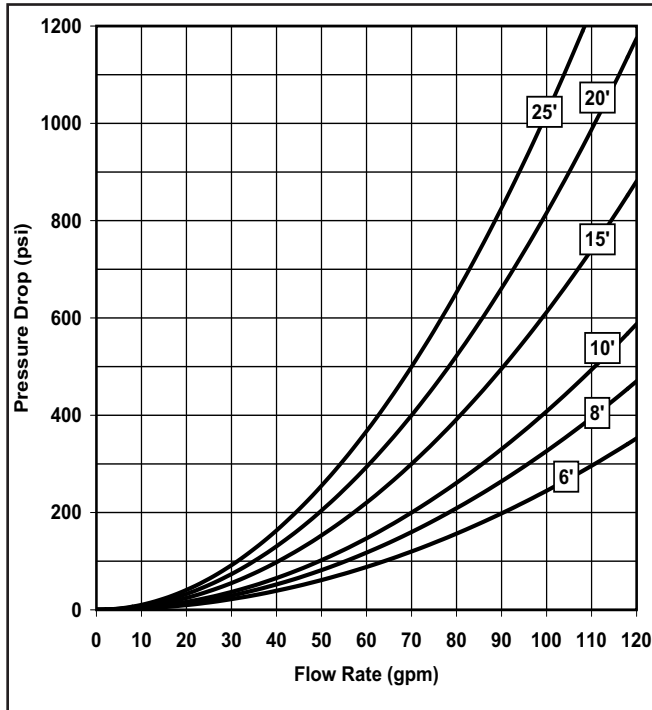
UP TO 15,000 PSI (1000 BAR)



## PRESSURE DROP DATA

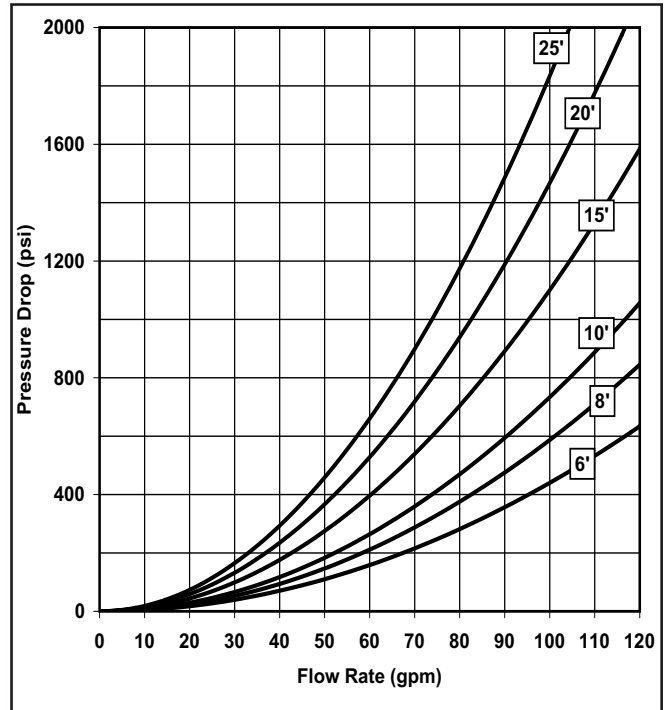
### RIGID LANCES – 3/4" PIPE

Series 53731



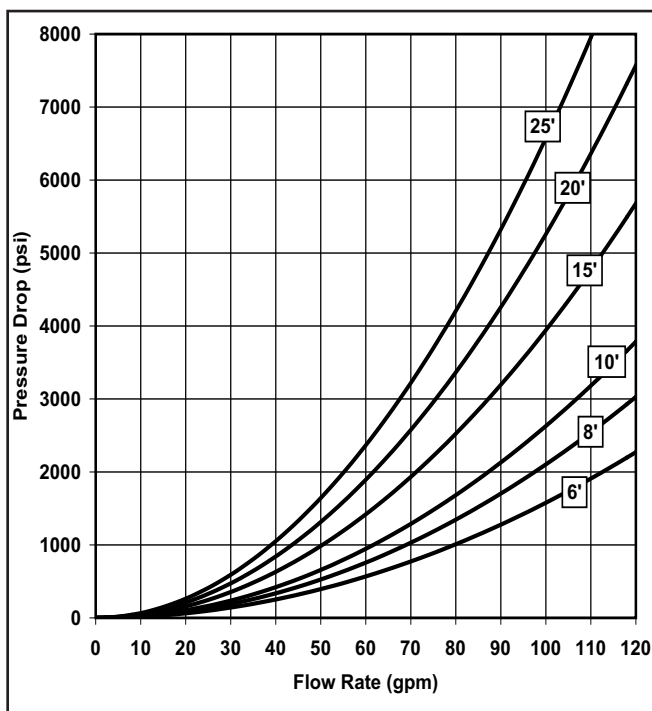
### RIGID LANCES – 1/2" PIPE

Series 51069 & 51082



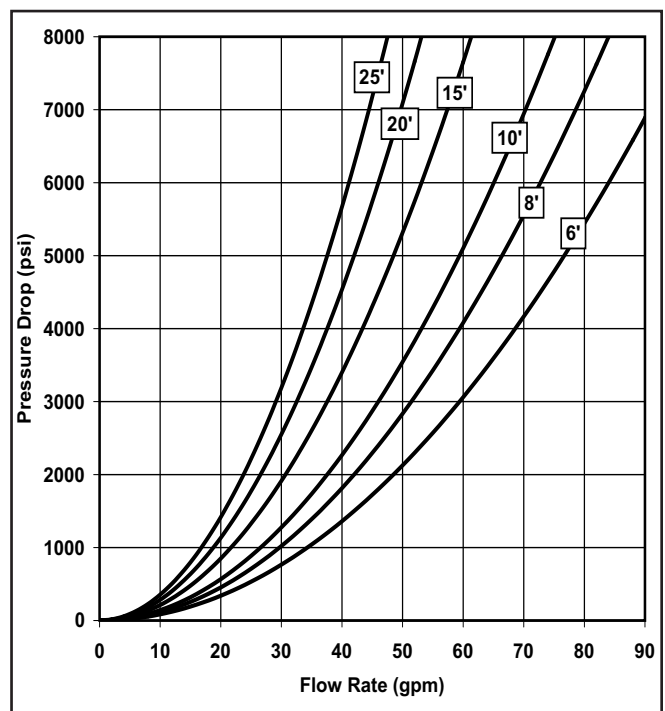
### RIGID LANCES – 3/8" PIPE

Series 50596 & 51068



### RIGID LANCES – 1/4" PIPE

Series 50594 & 51067



# HOSES & LANCES

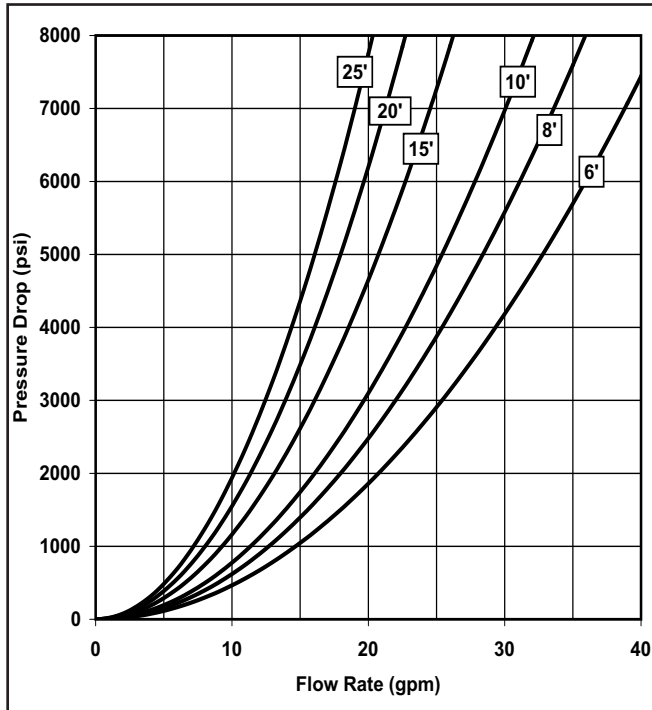
UP TO 15,000 PSI (1000 BAR)



## PRESSURE DROP DATA

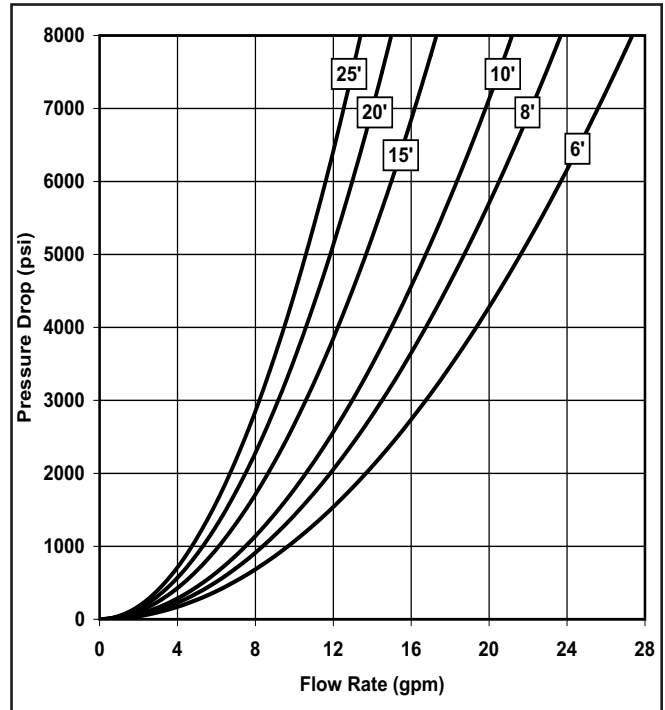
### RIGID LANCES – 1/8" PIPE

Series 50592, 51066 & 54411



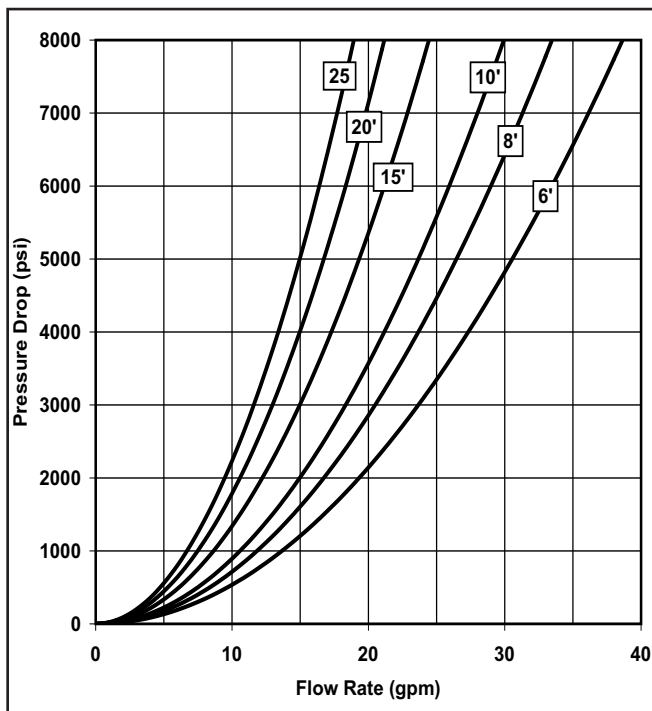
### RIGID LANCES – 1/16" PIPE

Series 51061 & 51081



### RIGID LANCES – 3/8" O.D. MECHANICAL TUBING

Series 51062



### RIGID LANCES – 1/4" O.D. MECHANICAL TUBING

Series 51059

