

FEDERAL HOSE®

Since 1921



PRODUCT CATALOG

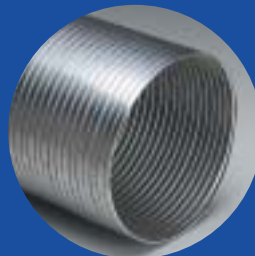


Table of Contents

Material Handling/Exhaust/Speciality

SuperFlex™ • Page 2



GalvaFlex™ • Page 4



Stainless Steel • Page 6



Galvanized Steel • Page 8



Medium Duty Aluminized Steel • Page 10



Flo-Master™ • Page 11



Armadillo • Page 12



Tar & Asphalt • Page 13



Fittings • Page 14



FEDERAL HOSE®

Since 1921

www.federalhose.com

Silicone

Sil 1 • Page 15



Sil 2 • Page 16



1-Ply Heater Hose • Page 17



2-Ply Coolant Hose - Wire Reinforced • Page 18



3-Ply Coolant Hose • Page 19



4-ply Coolant Hose • Page 20



Vacuum Tubing • Page 21



Turbocharger Hose • Page 22



CAC Hose • Page 23



Smooth Bore Metal Hose

Federal's SuperFlex metal hoses offer faster flow and less energy consumption due to their "Smooth Bore" interior surface. "Smooth Bore" hose virtually eliminates product damage and degradation so often attributed to the 'excess turbulence' caused by the internal roughness of other hoses.

Applications

Pneumatic and gravity feeding of bulk materials for: ships and barges, elevators, silos, rail cars, trucks, tanks, portable in-plant and off-site locations.

Temperature - Low/High	- 60°F to +1800°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Stiff
Pressure	15psi Packed (Cotton)
Chemical	Excellent
Standard Length	25'
Size - ID	1.50" to 16" ID



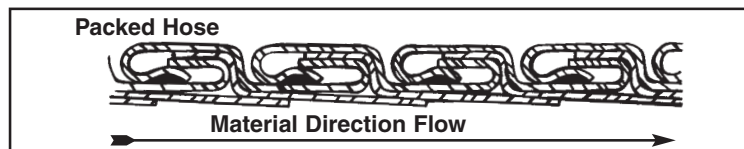
Catalog Order Code	Armor Material	Armor Thickness	Liner Material	Liner Thickness	Extension-Compression % of Length
SF300 Light Duty	Type 304 Stainless Steel	.015"	Type 304 Stainless Steel	.015"	±2%
SF400 Med. Duty	Type 304 Stainless Steel	.018"	Type 304 Stainless Steel	.015"	±1 ^{1/2} %
SF500 Heavy Duty	Type 304 Stainless Steel	.018"	Type 304 Stainless Steel	.018"	±1%



Temperature			
GT Packing:	-20° to 180°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
AP Packing:	-40° to 400°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
CC Packing:	-60° to 300°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SS Packing:	-60° to 1800°F	(Neg. 10 in. HG)	(Pos 15 P.S.I.)
SIL Packing:	-65° to 500°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
CPR Packing:	-40° to 500°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
Unpacked:	-60° to 1800°F	(No pressure rating)	

Packing Key

GT = Gas Tight
 AP = Apyrous Filament
 CC = Cotton Cord
 SS = Stainless Steel
 SIL = Silicone
 CPR = Copper



Customer Service
1-800-346-4673

FEDERAL HOSE®
 Since 1921

Fax- 1-800-322-8926

www.federalhose.com

SuperFlex 300 • Light Duty

Diameter	Superflex 300 Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	11626	9.2	1.29
1.75	11301	11.5	1.50
2.00	11628	13.0	1.71
2.25	11302	14.5	1.91
2.50	11630	15.0	2.12
2.75	10717	15.9	2.31
3.00	11633	18.0	2.52
3.50	10718	18.6	2.93
4.00	11635	19.1	3.35
4.50	10719	22.0	3.76
5.00	11637	25.0	4.18
6.00	11639	27.0	4.99
7.00	10387	29.0	5.82
8.00	11641	32.0	6.65

SuperFlex 400 • Medium Duty

Diameter	Superflex 400 Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	11449	12.4	1.45
1.75	11450	14.0	1.68
2.00	11453	16.5	1.92
2.25	10388	17.0	2.15
2.50	11487	18.1	2.37
2.75	10721	18.3	2.60
3.00	11460	20.0	2.82
3.50	10722	21.0	3.29
4.00	11462	22.5	3.75
4.50	11303	24.8	4.21
5.00	11489	26.9	4.68
6.00	11492	31.0	5.59
7.00	11304	32.5	6.52
8.00	11494	36.0	7.74
10.00	11500	50.0	9.65
12.00	11501	60.0	11.65
14.00	11305	70.0	13.47
16.00	11306	80.0	15.39

SuperFlex 500 • Heavy Duty

Diameter	Superflex 500 Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
2.00	13773	17.0	2.12
2.25	14817	17.5	2.35
2.50	13892	18.6	2.57
2.75	Consult Factory	19.0	2.80
3.00	11703	20.5	3.03
3.50	10725	21.3	3.52
4.00	10648	22.0	4.02
4.50	10726	25.0	4.51
5.00	10650	27.5	4.98
6.00	10651	33.0	5.99
7.00	10728	37.0	7.31
8.00	10652	39.0	8.36
10.00	10653	42.0	10.50
12.00	10729	47.0	12.48
14.00	10730	55.0	14.54
16.00	10731	62.5	16.56

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

www.federalhose.com

Fax- 1-800-322-8926

Smooth Bore Metal Hose

Federal's GalvaFlex metal hose offers faster flow and less energy consumption due to its "Smooth Bore" smooth interior surface. This promotes a low friction material flow. "Smooth Bore" hose virtually eliminates product damage and degradation so often attributed to the 'excess turbulence' caused by the internal roughness of other hoses.

Applications

Pneumatic and gravity feeding of bulk materials for: ships and barges, elevators, silos, rail cars, trucks, tanks, portable in-plant and off-site locations.

Temperature - Low/High	- 60°F to +450°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Stiff
Pressure	15psi Packed (Cotton)
Chemical	Good
Standard Length	25'
Size - ID	1.50" to 16" ID

Standard construction unpacked



Catalog Order Code	Armor Material	Armor Thickness	Liner Material	Liner Thickness	Extension-Compression % of Length
150C Light Duty	Hot Dip Galvanized Steel	.015"	Galvanized Steel	.015"	±2%
150S Light Duty	Hot Dip Galvanized Steel	.015"	Stainless Steel	.015"	±2%
250C Med. Duty	Hot Dip Galvanized Steel	.018"	Galvanized Steel	.015"	±1 1/2%
250S Med. Duty	Hot Dip Galvanized Steel	.018"	Stainless Steel	.015"	±1 1/2%
350C Heavy Duty	Hot Dip Galvanized Steel	.018"	Galvanized Steel	.018"	±1%
350S Heavy Duty	Hot Dip Galvanized Steel	.018"	Stainless Steel	.018"	±1%

Temperature			
GT Packing:	-20° to 180°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
AP Packing:	-40° to 400°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
CC Packing:	-60° to 300°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SS Packing:	-60° to 1800°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SIL Packing:	-65° to 500°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
CPR Packing:	-40° to 500°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
Unpacked:	-60° to 1800°F	(No pressure rating)	

Packing Key

GT = Gas Tight
 AP = Apyrous Filament
 CC = Cotton Cord
 SS = Stainless Steel
 SIL = Silicone
 CPR = Copper

GalvaFlex 150C / 150S • Light Duty

Diameter	GalvaFlex 150-C Part #	GalvaFlex 150-S Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	10036	10540	9.2	1.29
1.75	10732	10788	11.5	1.50
2.00	10039	10790	13.0	1.71
2.25	10776	10741	14.5	1.91
2.50	10044	10742	15.0	2.12
2.75	10779	10744	15.9	2.31
3.00	10046	10542	18.0	2.52
3.50	10782	10745	18.6	2.93
4.00	10047	10545	19.1	3.35
4.50	10783	10547	22.0	3.76
5.00	10048	10549	25.0	4.18
6.00	10050	10550	27.0	4.99
7.00	10787	10747	29.0	5.82
8.00	10051	10749	32.0	6.65

GalvaFlex 250C / 250S • Medium Duty

Diameter	GalvaFlex 250-C Part #	GalvaFlex 250-S Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	19892	Consult Factory	12.4	1.45
1.75	18841	Consult Factory	14.0	1.68
2.00	10751	12104	16.5	1.92
2.25	10752	12105	17.0	2.15
2.50	10560	11578	18.1	2.37
2.75	12783	12106	18.3	2.60
3.00	12100	11579	20.0	2.82
3.50	10564	12107	21.0	3.29
4.00	10566	11582	22.5	3.75
4.50	10567	12108	24.8	4.21
5.00	10570	11590	26.9	4.68
6.00	10571	12109	31.0	5.59
7.00	12101	11591	32.5	6.52
8.00	10573	11596	36.0	7.74
10.00	10574	12110	50.0	9.65
12.00	10575	12111	60.0	11.65
14.00	12102	12112	70.0	13.47
16.00	12103	12113	80.0	15.39

GalvaFlex 350C / 350S • Heavy Duty

Diameter	GalvaFlex 350-C Part #	GalvaFlex 350-S Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
3.00	10584	11610	20.5	3.03
3.50	12114	12122	21.3	3.52
4.00	10585	12123	22.0	4.02
4.50	12115	12124	25.0	4.51
5.00	12116	12125	27.5	4.98
6.00	10586	12126	33.0	5.99
7.00	12117	12127	37.0	7.31
8.00	12118	12128	39.0	8.36
10.00	12119	12129	42.0	10.50
12.00	10311	12130	47.0	12.48
14.00	12120	12131	55.0	14.54
16.00	12121	12132	62.5	16.56

Customer Service
1-800-346-4673



Fax- 1-800-322-8926

Stainless Steel

Rough Bore Metal Hose

Packed or Unpacked stainless steel unlined hose available in a variety of metal thicknesses from .010 to .030. Used for longevity and corrosive atmospheres.

Applications

- Exhaust Systems • Conduit • Spouts • Casing
- Chimney Liners • Dry Bulk Product Transfer

Temperature - Low/High	- 60°F to +2100°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Medium Flexibility
Pressure	Low 5psi Unpacked / 15psi Packed
Chemical	Excellent
Standard Length	25'
Size - ID	.750" to 16" ID



Packing Key

GT = Gas Tight
 AP = Apyrous Filament
 CC = Cotton Cord
 SS = Stainless Steel
 SIL = Silicone
 CPR = Copper

R-200-S .010" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	10555	6.8	0.49
1.75	10556	7.0	0.57
2.00	10558	7.5	0.64
2.25	10562	7.8	0.72
2.50	10563	8.5	0.80
2.75	12159	9.2	0.87
3.00	10565	10.0	0.95
3.50	10569	10.5	1.10
4.00	10572	14.5	1.40
4.50	10577	16.3	1.50
5.00	10579	18.0	1.70
6.00	10583	21.8	2.00

Temperature

GT Packing:	-20° to 180°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
AP Packing:	-40° to 400°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
CC Packing:	-60° to 300°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SS Packing:	-60° to 1800°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SIL Packing:	-65° to 500°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
CPR Packing:	-40° to 500°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
Unpacked:	-60° to 1800°F	(No pressure rating)	

Packed Hose



Unpacked Hose



Customer Service
1-800-346-4673

FEDERAL HOSE®
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

R-300-S
.015" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	10315	6.9	0.75
1.75	12165	7.0	0.86
2.00	10308	8.0	0.98
2.25	10320	9.0	1.09
2.50	10322	10.0	1.21
2.75	12166	11.0	1.33
3.00	10323	12.0	1.45
3.50	10328	16.5	1.68
4.00	10329	18.0	1.91
4.50	12167	19.0	2.14
5.00	10335	19.5	2.39
6.00	10337	23.5	2.85
7.00	10339	26.4	3.32
8.00	10340	27.0	3.78
10.00	N/A	N/A	N/A
12.00	N/A	N/A	N/A
14.00	N/A	N/A	N/A
16.00	N/A	N/A	N/A

R-360-S
.018" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.50	10402	7.3	0.94
1.75	10403	7.5	1.10
2.00	10404	7.8	1.23
2.25	12169	8.8	1.40
2.50	10405	9.7	1.53
2.75	12632	10.7	1.67
3.00	10406	11.7	1.82
3.50	10411	12.2	2.11
4.00	10414	14.1	2.40
4.50	10423	16.0	2.70
5.00	10424	17.8	2.99
6.00	10427	21.0	3.57
7.00	12170	24.5	4.16
8.00	10434	27.5	4.64
10.00	10442	28.0	5.79
12.00	10444	34.0	6.94
14.00	10446	42.0	8.08
16.00	12172	48.0	9.20

R-500-S
.024" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
2.00	12173	8.3	1.62
2.25	12174	9.4	1.80
2.50	10513	10.0	2.00
2.75	12175	11.5	2.18
3.00	10514	12.5	2.38
3.50	12176	12.7	2.77
4.00	10515	14.5	3.15
4.50	12181	16.3	3.53
5.00	10521	18.1	3.92
6.00	12182	25.0	4.68
7.00	12183	29.2	5.45
8.00	12184	28.0	6.22
10.00	12185	35.0	6.98
12.00	12186	42.0	7.75
14.00	12188	49.0	9.29
16.00	12187	56.0	10.60

R-600-S
.030" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
2.00	12177	10.5	1.92
2.25	12178	10.8	2.12
2.50	12179	12.0	2.36
2.75	12180	12.8	2.60
3.00	12189	14.0	2.83
3.50	12190	15.5	3.28
4.00	12191	16.5	3.74
4.50	12192	18.0	4.19
5.00	12193	20.0	4.65
6.00	12194	26.0	5.56
7.00	12195	29.2	6.47
8.00	10524	33.5	7.38
10.00	12196	41.5	9.20
12.00	12197	50.0	11.02
14.00	12198	58.5	12.84
16.00	12199	66.8	14.70

Customer Service
1-800-346-4673



Fax- 1-800-322-8926

Galvanized Steel

Rough Bore Metal Hose

Packed or Unpacked galvanized steel unlined hose available in .010 to .030 thicknesses. Used where a more economical hose is required.

Applications

- Exhaust Systems • Conduit • Spouts
- Casing • Dry Bulk Product Transfer

Temperature - Low/High	- 40°F to +400°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Medium Flexibility
Pressure	Low 5psi Unpacked / 15psi Packed
Chemical	Good
Standard Length	25' Feet
Size - ID	1.25" inch ID to 16" inch ID



Packing Key

- GT = Gas Tight
- AP = Apyrous Filament
- CC = Cotton Cord
- SS = Stainless Steel
- SIL = Silicone
- CPR = Copper

Temperature

GT Packing:	-20° to 180°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
AP Packing:	-40° to 400°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
CC Packing:	-60° to 300°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SS Packing:	-60° to 1800°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
SIL Packing:	-65° to 500°F	(Neg. 20 in. HG)	(Pos 20 P.S.I.)
CPR Packing:	-40° to 500°F	(Neg. 15 in. HG)	(Pos 15 P.S.I.)
Unpacked:	-60° to 1800°F	(No pressure rating)	

R-200-G .010" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.25	10033	5.5	0.42
1.50	12204	6.8	0.49
1.75	12205	7.0	0.57
2.00	10035	7.5	0.64
2.25	12206	7.8	0.72
2.50	10038	8.5	0.80
2.75	12207	9.2	0.87
3.00	10040	10.0	0.95
3.50	10045	10.5	1.10
4.00	10049	14.5	1.40
4.50	10052	16.3	1.50
5.00	10053	18.0	1.70
6.00	10056	21.8	2.00

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

R-300-G
.015" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.25	12214	5.6	0.63
1.50	10073	6.9	0.75
1.75	12215	7.0	0.86
2.00	10074	8.0	0.98
2.25	12216	9.0	1.09
2.50	12217	10.0	1.21
2.75	12218	11.0	1.33
3.00	10076	12.0	1.45
3.50	10080	16.5	1.68
4.00	10081	18.0	1.91
4.50	12219	19.0	2.14
5.00	10085	19.5	2.39
6.00	10086	23.5	2.85
7.00	10088	26.4	3.32
8.00	10089	27.0	3.78

R-360-G
.018" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.25	10133	6.0	.78
1.50	10135	7.3	.94
1.75	12554	7.5	1.10
2.00	10136	7.8	1.23
2.25	12220	8.8	1.40
2.50	10138	9.7	1.53
2.75	10140	10.7	1.67
3.00	10142	11.7	1.82
3.50	10146	12.2	2.11
4.00	10148	14.1	2.40
4.50	10155	16.0	2.70
5.00	10156	17.8	2.99
6.00	10163	21.0	3.57
7.00	10168	24.5	4.16
8.00	10170	27.5	4.64
10.00	10177	28.0	5.78
12.00	10181	34.0	6.94
14.00	10185	42.0	8.08
16.00	12221	48.0	9.20

R-500-G
.024" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
2.00	10227	8.3	1.62
2.25	12222	9.4	1.80
2.50	10230	10.0	2.00
2.75	12223	11.5	2.18
3.00	10231	12.5	2.38
3.50	10234	12.7	2.77
4.00	10235	14.5	3.15
4.50	12224	16.3	3.53
5.00	10238	18.1	3.92
6.00	10240	25.0	4.68
7.00	12225	29.2	5.45
8.00	12226	30.0	6.22
10.00	12227	35.0	6.98
12.00	10242	42.0	7.75
14.00	10244	49.0	9.29
16.00	12228	56.0	10.60

R-600-G
.030" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
2.00	12229	10.5	1.92
2.25	12230	10.8	2.12
2.50	10265	12.0	2.36
2.75	12231	12.8	2.60
3.00	10266	14.0	2.83
3.50	12232	15.5	3.28
4.00	10267	16.5	3.74
4.50	12233	16.3	4.19
5.00	10271	20.0	4.65
6.00	10274	26.0	5.56
7.00	12234	30.0	6.47
8.00	12235	33.5	7.38
10.00	12236	41.5	9.20
12.00	12237	50.0	11.02
14.00	12238	58.5	12.84
16.00	12239	66.8	14.70

Customer Service
1-800-346-4673



Fax- 1-800-322-8926

Medium Duty Aluminized Steel —

Rough Bore Metal Hose

Packed or Unpacked aluminized steel unlined hose available in .018 thickness. Used where a more economical hose is required.

Applications

- Exhaust Systems • Conduit • Spouts
- Casing • Dry Bulk Product Transfer

Temperature - Low/High	- 40°F to +850°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Medium Flexibility
Pressure	Low 5psi Unpacked / 15psi Packed
Chemical	Excellent
Standard Length	25'
Size - ID	3" to 10" ID



Packing Key

GT = Gas Tight
 AP = Apyrous Filament
 CC = Cotton Cord
 SS = Stainless Steel
 SIL = Silicone
 CPR = Copper

R-360-AS .018" Strip Thickness

Diameter	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
3.00	12784	14.0	1.82
3.50	12785	15.5	2.11
4.00	12786	16.5	2.40
4.50	12787	18.0	2.70
5.00	12788	20.0	2.99
6.00	12789	26.0	3.57
7.00	12790	27.0	4.16
8.00	12791	27.5	4.64
10.00	12792	28.0	5.78

Consult factory for additional sizes.

Temperature		
GT Packing:	-20° to 180°F	(Neg. 20 in. HG) (Pos 20 P.S.I.)
AP Packing:	-40° to 400°F	(Neg. 15 in. HG) (Pos 15 P.S.I.)
CC Packing:	-60° to 300°F	(Neg. 15 in. HG) (Pos 15 P.S.I.)
SS Packing:	-60° to 1800°F	(Neg. 15 in. HG) (Pos 15 P.S.I.)
SIL Packing:	-65° to 500°F	(Neg. 20 in. HG) (Pos 20 P.S.I.)
CPR Packing:	-40° to 500°F	(Neg. 15 in. HG) (Pos 15 P.S.I.)
Unpacked:	-60° to 1800°F	(No pressure rating)

Customer Service
1-800-346-4673

FEDERAL HOSE®
 Since 1921

Fax- 1-800-322-8926

www.federalhose.com

Smooth and Rough Bore Metal Hose

Federal's Flo-Master is an unpacked, torque resistant stripwound metal hose developed for superior sealability. It is similar in performance to a cotton packed hose but without the threat of burnt out packing.

Applications

- Exhaust Applications • Vacuum Systems
- Dry Bulk Conveying • Air Handling
- Rubber Hose Armor • Ducting Systems
- Exhaust for Heaters • Blower / Evacuators
- Elbows and Bends for Rigid Pipe Systems
- Conduit for Wires or Pipes

Temperature Range	-60°F to +2100°F
Standard Length	25' and 50'
Standard ID Size	1.50" to 16"
Material Available	Stainless Steel, Galvanized Steel



Flo-Master™

Type	Temp Range	Flexibility	Internal Abrasion Resist.	Extension / Compression
R360S*	-40° to +2100°	6	7	±8%
R360G*	-60° to +400°	6	5	±8%
SF400*	-60° to +2100°	2.5	8	±1.5%
Unpacked				

- * Material Thickness - .018"
- * Consult customer service for other options.

NOTES:

1. Flexibility 1 to 10. 10 is best - 1 is least.
2. Abrasion Resistance 1 to 10. 10 is best - 1 is least.

Temperature		
GT Packing:	-20° to 180°F	(Pos 20 P.S.I.)
SIL Packing:	-65° to 500°F	(Pos 20 P.S.I.)

Packing Key

GT = Gas Tight
SIL = Silicone

Armadillo - Armor/B.O.P. Hose

Flexible Protective Metal Casing

Federal's Armadillo Hose uses a new high-wall design to create the perfect dual-purpose hose for both armor and blow-out protection. The casing provides very reliable armor for hose and tubing assemblies when it is desired to protect from crushing, abrasion, chemical contact, over-bending and other abuse. "Armadillo" is a high-strength, low cost hose alternative.

Applications

- Metal • Rubber • Teflon
- Hydraulic Hose • Tubing Assemblies
- Conduit for Wires or Pipes

Size - ID	1" to 5" ID
Standard Length	25' and 50'
Bend Radius	Approx. 8 times diameter for 90° Bends
Retractibility	To 80% of fully extended length



Armadillo - Armor/B.O.P. Hose is manufactured from loose wound interlocked metal hose formed from a single strip of corrosion resistant stainless steel.



Armadillo - Armor/B.O.P.

Diameter	Thickness	Part #	Bend Radius (Inches)	Hose Weight (Lbs./Foot)
1.000	.010	10596	5.0	.40
1.250	.010	13985	5.5	.50
1.375	.010	19619	6.0	.55
1.500	.010	13874	6.0	.60
1.750	.010	14440	7.0	.70
1.875	.010	13171	8.0	.75
2.000	.010	10598	8.0	.80
2.250	.010	14387	9.0	.90
2.375	.010	19616	9.5	.95
2.500	.010	13811	10.0	1.00
3.000	.015	10393	12.0	1.45
4.000	.015	12629	16.0	1.80
5.000	.015	13345	20.0	2.20

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

Tar & Asphalt Hose

When it comes to temperature-resistance and overall durability, this hose stands with the best.

This hose is built to specifically convey hot tar and asphalt on patching units, tankers, and from container to container. It has good flexibility and is made from high quality hot dip galvanized steel with a durable long lasting packing to prevent leakage.

Federal builds this exceptional hose for conveying high-temperature/high-pressure liquids.

Federal Hose can provide you with a full line of N.P.T. fittings for the Heavy Duty Tar & Asphalt Hose.

Applications

- **Industrial**
 - Patching Units
 - Tankers
 - Container to Container
- **Material Handling**
 - Convey Hot Tar
 - Convey Asphalt
 - Convey Any High Temperature / High Pressure Liquids



Temperature - Low/High	- 20°F to +450°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Good
Pressure	Tested to 150 psi
Chemical	Excellent
Standard Length	15', 30' and 60'
Size - ID	3" ID

Tar & Asphalt Hose

I.D. (Inches)	Part #	Minimum Coiling Diameter (Inches)	Hose Weight (Lbs./Foot)	Male Fitting Part #	Female Fitting Part #
3.00	12585	25.00	2.83	18878	18879



Close-up of Hose Packing



Male Fitting Tar/Asphalt Heavy Duty

Description - Connect between Patching unit and tanker. For use conveying hot tar and asphalt/high pressure liquids.



Female Fitting Tar/Asphalt Heavy Duty

Description - Connect between Patching unit and tanker. For use conveying hot tar and asphalt/high pressure liquids.

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

www.federalhose.com

Fax- 1-800-322-8926

Fittings



Female Coupler

Part # - D/*DW

Description - Quick disconnect affixed with epoxy or weld.



Floating Flange

Part # - FL/*FLW

Description - Special Order Affix with epoxy or weld.



Male Adapter

Part # - A/*AW

Description - Matched to female coupler. Affix with epoxy or weld.



Flange Assembly

Part # - FA/*FAW

Description - Special Order Affix with epoxy or weld.



Hose Shank Coupler

Part # - C

Description - Quick disconnect. Used with UC Compensators.



Flange

Part # - F

Description - Special Order Weld



Hose Shank Adapter

Part # - E

Description - Quick disconnect. Used with UC Compensators.



Farm Flange

Part # - FF

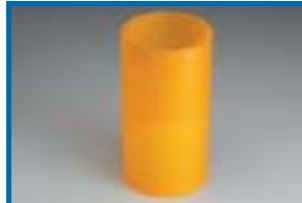
Description - Specify Hose O.D. when ordering. Weld



Plain Tube (Thin Wall)

Part # - T/*TW

Description - ALWAYS ATTACH INSIDE HOSE. Used as coupler. Affix with epoxy or weld.



Compensator

Part # - UC

Description - To connect metal hose with C & E fittings. (Clamped On)



Victaulic Nipple

Part # - VN/*VNW

Description - Hose fits into nipple. Affix with epoxy or weld.



Female Fitting Tar/Asphalt Heavy Duty

Part # - 18879

Description - Connect between Patching unit and tanker. For use conveying hot tar and asphalt/high pressure liquids.



Unthreaded Nipple

Part # - PN/*PNW

Description - Hose fits into nipple. Affix with epoxy or weld.



Male Fitting Tar/Asphalt Heavy Duty

Part # - 18878

Description - Connect between Patching unit and tanker. For use conveying hot tar and asphalt/high pressure liquids.



Threaded Nipple

Part # - P

Description - Standard pipe threads. Hose fits into nipple. Affix with epoxy or weld.

We reserve the right to change specifications without notice.

* Welded to hose

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

Sil 1

Silicone Air Duct LD

A lightweight non-kinking flexible silicone ducting that is chemically treated & helically-wound. Sil 1 has a spring steel wire reinforcement with silicone-coated woven fiberglass fabric covering.

Applications

Recommended for low pressure handling of higher and lower temperature air, dust or fumes. Ideal for heating applications where minimum weight is required, and where air flow and friction requirements are not severe. Good for heater applications. Not recommended for handling liquid or abrasive materials.



Temperature - Low/High	- 65°F to +450°F
Abrasion - Interior/Exterior	Fair/Fair
Flexibility	Good
Pressure	Positive/Negative
Chemical	Good
Standard Length	12'
Size - ID	1" to 8" ID

Hose Specifications

No. of Plies	Wearstrip	Color	Wire
1	No	Ironoxide Red	Steel Wire Helix

Sil Air Duct LD

Diameter (I.D.)	Part#	P.S.I.	Burst Pressure CFM	Maximum Leakage P.S.I.	Maximum Negative (Lbs./Foot)	Hose Weight	Wall Thickness
1.00	11585	19	40	.02	12	.106	.040
1.25	11586	18	40	.02	12	.131	.040
1.50	11587	18	30	.03	10	.156	.040
1.75	11588	16	30	.03	10	.188	.040
2.00	11589	15	20	.04	8	.213	.045
2.25	11592	14	20	.05	8	.238	.045
2.50	11593	14	20	.05	7	.269	.045
2.75	11594	13	20	.06	7	.294	.045
3.00	11595	13	20	.065	6	.319	.050
3.25	11597	12.8	18	.065	6	.331	.050
3.50	11598	12.6	18	.07	6	.375	.050
3.75	10158	12	18	.08	5	.406	.050
4.00	11599	11	15	.10	5	.438	.055
4.50	11600	10.5	14	.10	4	.481	.055
5.00	11601	9.1	10	.125	4	.544	.055
5.50	11602	9.1	10	.13	3	.581	.055
6.00	11603	7.7	10	.15	3	.663	.060
8.00	19654	4.0	8	.18	1	.830	.060

Compressibility: 3 to 1

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921
www.federalhose.com

Fax- 1-800-322-8926

Silicone Air Duct Std.

A lightweight non-kinking hose consisting of a smooth inner ply and cover ply of silicone-coated, woven fiberglass. Chemically treated helically-wound spring steel wire for flexibility.

Applications

Designed for medium pressure handling of air, dust, fumes, and light powders where higher temperatures are required.
Not recommended for handling liquids or abrasive materials.



Temperature - Low/High	- 80°F to +600°F
Abrasion - Interior/Exterior	Fair/Fair
Flexibility	Good
Pressure	Positive/Negative
Chemical	Good
Standard Length	12'
Size - ID	1" to 12" ID

Hose Specifications

No. of Plies	Wearstrip	Color	Wire
2	No	Ironoxide Red	Steel Wire Helix

Sil Air Duct Std.

Diameter (I.D.)	Part#	P.S.I.	Burst Pressure CFM	Maximum Leakage P.S.I.	Maximum Negative (Lbs./Foot)	Hose Weight	Wall Thickness
1.00	11559	28	180	.015	15	.125	.070
1.25	11560	26	180	.015	15	.156	.070
1.50	11562	25	165	.015	13	.188	.070
1.75	11563	23	165	.02	13	.219	.070
2.00	11564	22	150	.02	10	.250	.070
2.25	11565	21	150	.02	10	.281	.070
2.50	11566	21	135	.025	8	.313	.070
2.75	11567	20	135	.025	8	.375	.070
3.00	11568	19	135	.03	7	.388	.070
3.25	11569	18.5	135	.03	6	.419	.070
3.50	11570	18	120	.035	6	.450	.070
3.75	10157	17	120	.035	5	.488	.070
4.00	11571	16	120	.04	5	.525	.080
4.50	11572	15	105	.05	4	.600	.080
5.00	11573	13	105	.06	4	.669	.080
5.5	11574	13	90	.08	3	.738	.080
6.00	11575	11	90	.10	3	.813	.090
8.00	11580	7	45	.15	3	1.113	.110
10.00	11581	5	24	.20	2	1.413	.120
12.00	11583	4	12	.30	2	1.694	.120

Compressibility: 2 to 1
Customer Service
1-800-346-4673

FEDERAL HOSE
 Since 1921
www.federalhose.com

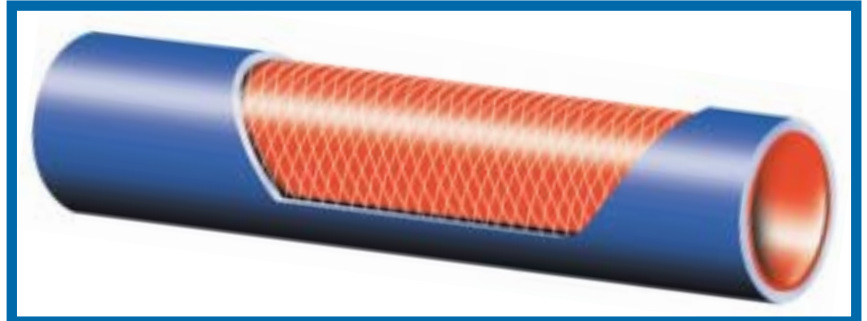
Fax- 1-800-322-8926

Silicone Hose

1-Ply Silicone Heater Hose

Extruded heater hoses meet or exceed the requirements of the SAE J20 R3 Class A specification. The silicone hoses are reinforced with polyester fabric. An aramid fiber reinforcement is available for high temperature applications up to +500°F. Heater hoses are resistant to coolant solutions, cold leaks, cracking, peeling, aging and ozone.

Color blue.



Applications

Standard equipment on trucks, cars and buses
Not recommended for fuel or oil transfer use.

Temperature - Low/High	- 65°F to +350°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Excellent
Pressure	Positive
Chemical	Good
Standard Length	25' to 50' (Heater)
Size - ID	.250" to 1.25" ID

1-Ply Silicone Heater Hose

Diameter (I.D.)	Diameter (O.D.)	Length (Feet)	Part #	Minimum Burst Pressure P.S.I.	Minimum Operating Pressure P.S.I.	Weight Lb/ft
.250	.56	25	5526-0001	250	60	.12
.250	.56	50	5526-0002			
.313	.63	25	5526-0003	250	60	.15
.375	.69	25	5526-0005	250	60	.18
.375	.69	50	5526-0006			
.500	.81	25	5526-0009	250	60	.24
.500	.81	50	5526-0010			
.625	.93	25	5526-0013	250	60	.28
.625	.93	50	5526-0014			
.750	1.06	25	5526-0017	200	50	.34
.750	1.06	50	5526-0018			
.875	1.24	25	5526-0021	175	40	.40
.875	1.24	50	5526-0022			
1.00	1.36	25	5526-0025	175	40	.46
1.00	1.36	50	5526-0026			
1.25	1.58	25	5526-0029	175	40	.49
1.25	1.58	50	5526-0030			

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

www.federalhose.com

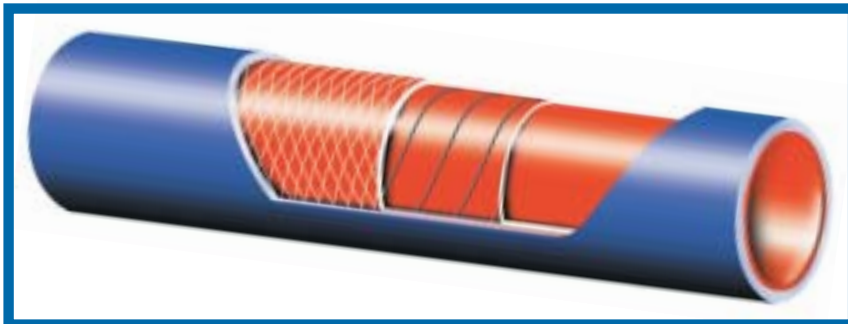
Fax- 1-800-322-8926

Silicone Hose

2-Ply Silicone Coolant - Wire Reinforced

2-Ply Silicone Coolant Hose reinforced with helically-wound wire to increase burst pressure and resist kinking during installation.

Color blue.



Applications

Low pressure coolant and heat connections in hostile engine environments. Resists aging, ozone, chemicals, lubricants, hardening and cracking.

Ideal for extreme temperature and various pressure ranges where high performance levels are required.

Temperature - Low/High	- 65°F to +350°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Excellent
Pressure	Positive
Chemical	Good
Standard Length	3' to 12' (Coolant)
Size - ID	.50" to 6" ID (Coolant)

2-Ply Silicone Coolant - Wire Reinforced

Diameter (I.D.)	Part #	Operating Pressure (P.S.I.G.)	Burst (P.S.I.G.)	Weight Lb/ft
.50	5579-0500	200	600	.20
.75	5579-0750	200	600	.25
1.00	5579-1000	175	550	.30
1.25	5579-1250	160	525	.37
1.50	5579-1500	160	500	.43
1.75	5579-1750	150	475	.50
2.00	5579-2000	140	450	.56
2.25	5579-2250	125	400	.64
2.50	5579-2500	100	350	.71
2.75	5579-2750	100	325	.78
3.00	5579-3000	100	300	.83
3.50	5579-3500	85	275	.97
4.00	5579-4000	75	250	1.11
5.00	5579-5000	40	150	1.38
6.00	5579-6000	35	125	1.65

Customer Service
1-800-346-4673

FEDERAL HOSE®
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

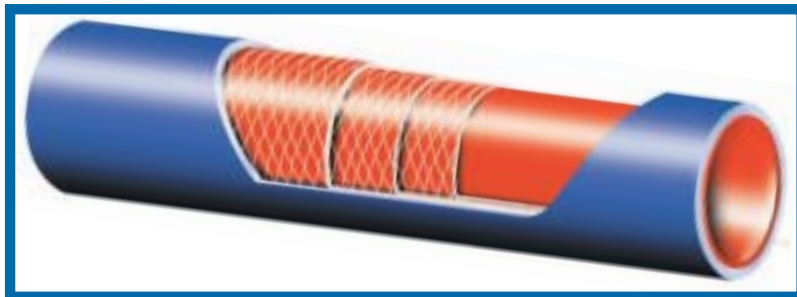
Silicone Hose

3-Ply Silicone Coolant Hose

Specially coated silicone elastomer with woven polyester fabric vulcanized and post cured for maximum ply adhesion and service life, also available in two-ply and four-ply.

Meets SAE J20R1 Class A Standard Wall.

Color blue.



Applications

Low pressure coolant and heat connections in hostile engine environments. Resists aging, ozone, chemicals, lubricants, hardening and cracking.

Ideal for extreme temperature and various pressure ranges where high performance levels are required.

Temperature - Low/High	- 65°F to +350°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Excellent
Pressure	Positive
Chemical	Good
Standard Length	3' to 12' (Coolant)
Size - ID	.50" to 6" ID (Coolant)

3-Ply Silicone Coolant Hose

Diameter (I.D.) Inch/mm	Diameter (O.D.) Inch/mm	Part #	Minimum Burst Pressure P.S.I.	Minimum Operating Pressure P.S.I.	Weight Lb/ft KG/m
.500/12.7	.87/22.2	5515-0500	425	115	.15/0.22
.625/15.9	1.00/25.4	5515-0625	375	90	.19/0.28
.750/19.1	1.12/28.5	5515-0750	325	80	.24/0.36
.875/22.2	1.25/31.7	5515-0875	325	80	.28/0.42
1.000/25.4	1.37/34.9	5515-1000	300	75	.32/0.48
1.125/28.6	1.50/38.1	5515-1125	300	75	.37/0.55
1.250/31.8	1.62/41.2	5515-1250	275	65	.42/0.62
1.375/34.9	1.75/44.4	5515-1375	275	65	.47/0.70
1.500/38.1	1.87/47.6	5515-1500	250	60	.53/0.79
1.625/41.3	2.00/50.8	5515-1620	250	60	.58/0.86
1.750/44.5	2.12/53.9	5515-1750	225	55	.63/0.94
2.000/50.8	2.37/60.3	5515-2000	200	50	.74/1.00
2.125/54.0	2.50/63.2	5515-2125	200	50	.77/1.14
2.250/57.2	2.62/66.6	5515-2250	175	40	.80/1.19
2.375/60.3	2.75/69.8	5515-2375	175	40	.86/1.28
2.500/63.5	2.87/73.0	5515-2500	150	35	.92/1.37
2.625/66.7	3.00/76.2	5515-2625	150	35	.95/1.41
2.750/69.9	3.12/79.3	5515-2750	125	30	.98/1.46
3.000/76.2	3.37/85.7	5515-3000	100	25	1.04/1.55
3.250/82.6	3.62/92.0	5515-3250	100	25	1.10/1.64
3.500/88.9	3.87/98.4	5515-3500	75	15	1.15/1.71
3.750/95.25	4.12/104.6	5515-3750	50	10	1.18/1.75
4.000/101.6	4.37/111.1	5515-4000	50	10	1.21/1.80
4.500/114.3	4.87/123.8	5515-4500	50	10	1.27/1.89
5.000/127.0	5.37/136.5	5515-5000	50	10	1.33/1.98
6.000/152.4	6.32/160.5	5515-6000	40	8	1.92/2.85

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

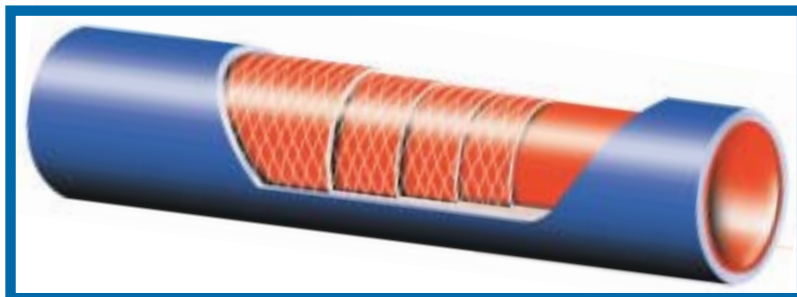
Silicone Hose

4-Ply Silicone Coolant Hose

4-Ply Silicone Coolant Hose reinforced with polyester fabric coated with specially compounded silicone elastomer. Resists chemicals, steam, ozone, coolants, and aging conditions found in the engine environment.

Meets SAE J20R1 Class A Heavy Wall.

Color blue.



Applications

For heavy duty pressure connections in hostile engine environments. Resists hardening, cracking, cold leaks, aging, steam and many chemicals. Ideal for extreme temperature and various pressure ranges where high performance levels are required.

Temperature - Low/High	- 65°F to +350°F
Abrasion - Interior/Exterior	Good/Good
Flexibility	Excellent
Pressure	Positive
Chemical	Good
Standard Length	3' to 12' (Coolant)
Size - ID	.50" to 6" ID (Coolant)

4-Ply Silicone Coolant Hose

Diameter (I.D.) Inch/mm	Diameter (O.D.) Inch/mm	Part #	Minimum Burst Pressure P.S.I.	Minimum Operating Pressure P.S.I.	Weight Lb/ft KG/m
.500/12.7	.89/22.7	5581-050	425	115	.15/0.22
.625/15.9	1.02/25.9	5581-062	375	90	.19/0.28
.750/19.1	1.14/29.1	5581-075	325	80	.24/0.36
.875/22.2	1.27/32.2	5581-087	325	80	.28/0.42
1.000/25.4	1.37/34.9	5581-100	300	75	.32/0.48
1.250/31.8	1.64/41.8	5581-125	275	65	.42/0.62
1.375/34.9	1.77/44.9	5581-138	275	65	.47/0.70
1.500/38.1	1.89/48.1	5581-150	250	60	.53/0.79
1.625/41.3	2.02/51.3	5581-162	250	60	.58/0.86
1.750/44.5	2.14/54.5	5581-175	225	55	.63/0.94
2.000/50.8	2.37/60.3	5581-200	200	50	.74/1.00
2.250/57.2	2.64/67.2	5581-225	175	40	.80/1.19
2.375/60.3	2.77/70.3	5581-238	175	40	.86/1.28
2.500/63.5	2.89/73.5	5581-250	150	35	.92/1.37
2.625/66.7	3.00/76.2	5581-262	150	35	.95/1.41
2.750/69.9	3.14/79.9	5581-275	125	30	.98/1.46
3.000/76.2	3.39/86.2	5581-300	100	25	1.04/1.55
3.250/82.6	3.64/92.6	5581-325	100	25	1.10/1.64
3.500/88.9	3.89/98.9	5581-350	75	15	1.15/1.71
3.750/95.2	4.14/105.1	5581-375	50	10	1.18/1.75
4.000/101.6	4.37/111.1	5581-400	50	10	1.21/1.80
4.500/114.3	4.89/124.3	5581-450	50	10	1.271/1.89
5.000/127.0	5.37/136.5	5581-500	50	10	1.33/1.98
6.000/152.4	6.39/162.3	5581-600	40	8	1.92/2.85

Customer Service
1-800-346-4673

FEDERAL HOSE®
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

Vacuum Tubing

Vacuum Tubing is an unreinforced extruded construction of silicone rubber.

Applications

Used for vacuum advance, windshield washers, coolant overflow, emission control and other applications. It can be supplied cut to length or in continuous reel format for cutting to fit in the shop.



Vacuum Tubing

Diameter (I.D.) Inch/mm	Diameter (O.D.) Inch/mm	Length (Feet)	Part #	Minimum Burst Pressure P.S.I.	Minimum Operating Pressure P.S.I.	Weight Lb/ft KG/m
.125/3.20	.225/5.72	25	5531-012	100	25	.015/.022
.125/3.20	.225/5.72	50	5531-012			
.156/4.00	.286/7.28	25	5531-015	100	25	.025/.038
.156/4.00	.286/7.28	50	5531-015			
.187/4.80	.348/8.84	25	5531-018	100	25	.045/.068
.187/4.80	.348/8.84	50	5531-018			
.250/6.40	.450/11.43	25	5531-025	100	25	.065/.097
.250/6.40	.450/11.43	50	5531-025			
.312/7.94	.563/14.65	25	5531-031	100	25	.098/.146
.312/7.94	.563/14.65	50	5531-031			
.375/9.53	.675/17.15	25	5531-038	100	25	.152/.225
.375/9.53	.675/17.15	50	5531-038			

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921
www.federalhose.com

Fax- 1-800-322-8926

Turbocharger Hose

Turbocharger hoses are used to make connections to the engine air intake manifold, lubricating oil return path to engine crank case and sump.

These hoses are often mounted in inaccessible locations and provide highly durable and reliable connection. Also used for wastegate valve to the source of operating air. Can be supplied cut to length or in continuous reel format for cutting to length on the shop floor. Available in straight, shaped and stepped bore configurations.

Reinforced with meta-aramid fabric for excellent resistance to vibrational fatigue and are suitable for operation at temperatures up to +500F (+260C).



Turbo Charger Hose

Part #	I.D. (Inches)	Operating Pressure (PSIG)	Burst (PSIG)	Weight (Lb/ft)
7701-100	1.00	45	135	0.50
7701-125	1.25	40	125	0.55
7701-150	1.50	40	120	0.60
7701-200	2.00	35	105	0.70
7701-225	2.25	30	95	0.75
7701-250	2.50	30	90	0.80
7701-375	2.75	25	80	0.85
7701-300	3.00	25	75	0.90
7701-325	3.25	20	65	0.95
7701-350	3.50	20	60	1.00
7701-375	3.75	15	50	1.05
7701-400	4.00	15	45	1.10
7701-600	6.00	10	25	1.30

Customer Service
1-800-346-4673

FEDERAL HOSE®
Since 1921

Fax- 1-800-322-8926

www.federalhose.com

CAC Hose

Charge Air Coolant hoses are the complete sets of ducting which connect the turbocharger outlet to the charge cooler inlet and the charge cooler outlet to the engine manifold. Charge air cooling increases the power available from a given engine displacement and also forms a major part of engine control strategy aimed at meeting ever more stringent exhaust gas emission regulations.

CAC hoses are available in straight, shaped, stepped and convoluted forms.

Convoluted forms are the most commonly used and provide excellent performance and economy.



Hot Side CAC Hose 4-ply Aramid reinforced with high strength restrictor rings

Part #	I.D. (Inches)	I.D. (mm)	O.D. (Inches)	O.D. (mm)	Length (Inches)
20069	2.50	63.50	2.71	68.83	6
20070	3.00	76.20	3.21	81.53	6
20071	3.00/3.50	76.20/88.90	3.21/3.71	81.53/94.23	6
20072	3.50	88.90	3.71	94.23	6
20073	3.50/4.00	88.90/101.60	3.71/4.21	94.23/106.93	6
20074	4.00	101.60	4.21	106.93	6

Cold Side CAC Hose 4-ply Polyester reinforced with high strength restrictor rings

Part #	I.D. (Inches)	I.D. (mm)	O.D. (Inches)	O.D. (mm)	Length (Inches)
20075	2.50	63.50	2.71	68.83	6
20076	3.00	76.20	3.21	81.53	6
20077	3.00/3.50	76.20/88.90	3.21/3.71	81.53/94.23	6
20078	3.50	88.90	3.71	94.23	6
20079	3.50/4.00	88.90/101.60	3.71/4.21	94.23/106.93	6
20080	4.00	101.60	4.21	106.93	6

Customer Service
1-800-346-4673

FEDERAL HOSE
Since 1921
www.federalhose.com

Fax- 1-800-322-8926

GENERAL TERMS AND CONDITIONS OF SALE

No order shall be binding on Seller unless acknowledged in writing by an authorized officer or agent of Seller, and all orders shall be subject to these general terms and conditions.

Prices are subject to change without notice. Seller will notify the purchaser of any change in price before acceptance. Prices quoted by the seller are exclusive of all city, state or federal taxes. Any such taxes paid by the seller will be charged to the purchaser.

All invoices will be dated the date of shipment. Minimum invoice charges of \$100.00 Net or \$250.00 on manufactured items. Terms of sale are Net 30 days, payable in U.S. funds and F.O.B. shipping point.

Any order canceled by the Buyer after acceptance will be subject to a cancellation charge up to an amount equal to 25% of the sales value of the item canceled.

Seller's products are manufactured to the seller's standard specifications with allowable variations. Product data listed represents current information available and is subject to change without notice. Any particular product requirement of purchaser should be communicated to seller in writing, and must be acknowledged in writing by seller in order to become part of the contract of sale.

Failure by the Buyer to object or reject products or materials delivered hereunder within 90 days from the date of shipment of the products or materials shall constitute an acceptance and waiver by Buyer of all claims hereunder on account of alleged errors, shortages, defective workmanship or materials, breach of warranty or otherwise Seller shall not be liable to Buyer or any third party for any special, secondary, incidental or consequential damages however arising on equipment and materials furnished by Seller but manufactured by others. Buyer shall accept in lieu of any liabilities or guarantees on the part of the Seller the benefits or guarantees as are obtained by Seller from such manufacturers or vendors. Liability for claims arising out of tort, contract for any other reason is limited solely to repair or at Seller's option replacing the goods at the factory. All claims must be filed in writing with Seller within 90 days after shipment from the factory.

RETURNED GOODS POLICY: All shipments returned to Federal must have approval from the Customer Service Department. A returned goods authorization number will be assigned. All shipments must be returned within 45 days and prepaid or the shipment will be refused. Freight charges will be credited and replacement made if Seller's product is found to be defective. A restocking charge will be applied to each line item for returns, for any reason other than defective product. Consult the factory for the amount of restocking charge.

WARRANTY EXCLUSION AND DISCLAIMER: SELLER WARRANTS ITS PRODUCTS TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF 90 DAYS FROM THE DATE OF PURCHASE. THE OBLIGATION OF SELLER AND THE PURCHASER'S REMEDY PURSUANT TO THIS WARRANTY ARE LIMITED TO REPAIR OR REPLACEMENT AT SELLER'S OPTION, F.O.B. FACTORY, OF PRODUCTS WHICH, WHEN USED NORMALLY AND PURSUANT TO THE SELLER'S PUBLISHED INSTRUCTIONS, PROVE TO BE DEFECTIVE WITHIN THE PERIOD STATED. IF SELLER IS UNABLE TO REPAIR OR REPLACE THE NONCONFORMING GOODS, IT WILL REFUND ANY PORTION OF THE PURCHASE PRICE PAID UPON RETURN OF THE NONCONFORMING GOODS. SELLER MAKES NO WARRANTY TO BUYERS WHO ACQUIRE PRODUCTS FOR PERSONAL, FAMILY OR HOUSEHOLD PURPOSES. EXCEPT AS SPECIFICALLY SET FORTH, NO OTHER WARRANTY EITHER EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS) IS MADE BY THE SELLER TO THE BUYER. SELLER SHALL HAVE NO LIABILITY WHATSOEVER FOR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATIONS, INSTALLATION COSTS, DELAY IN SHIPMENT OR DELIVERY OF ANY ORDER. AND DAMAGES FOR PERSONAL INJURY AND PROPERTY.

Disclaimer: The correct maintenance and use of hose and/or ducting manufactured by Federal Hose is the sole responsibility of the purchaser and end-user of the product. The information printed in this catalog is presented as a general guide only. External and environmental variables which may occur in any application make firm recommendations impossible. Adequate testing under actual service conditions is necessary to properly establish suitability. We welcome any comments and suggestions from our customers.

Customer Service
1-800-346-4673

FEDERAL HOSE®
Since 1921
www.federalhose.com

Fax- 1-800-322-8926



Made in U.S.A.

FEDERAL HOSE[®]
Since 1921

www.federalhose.com



Corporate Headquarters
25 Florence Avenue • Painesville, OH • 44077
Customer Service 1-800-346-4673 • Fax 1-800-322-8926

Catalog 10-03 • Printed in U.S.A.

