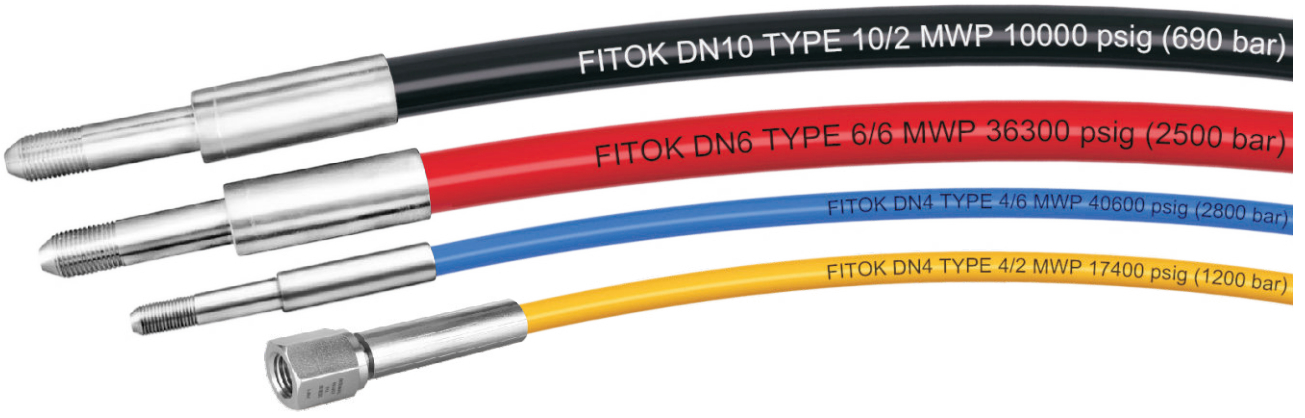
Medium and High Pressure Hoses

HHP Series



FITOK

Medium and High Pressure Hoses

HHP Series

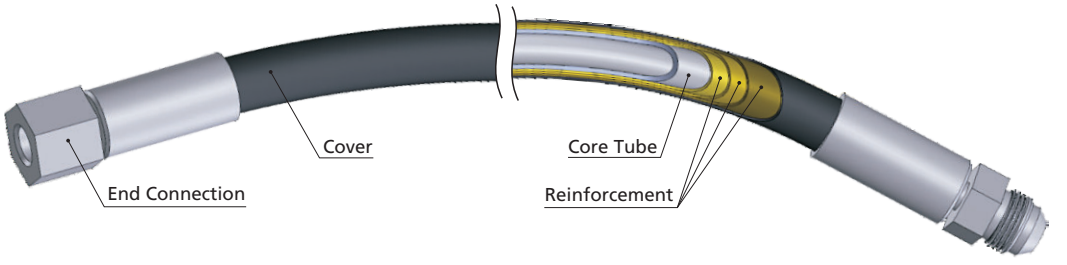
Introduction

HHP series medium and high pressure hoses are designed with core tubes made of polymer material, multi-layer steel wire winded reinforcement, and a cover coating structure, featuring low bending, high pressure, long service life, weather resistance, aging resistance and wear resistance. They are widely used in high-pressure water jetting, oil drilling, chemical transportation, shipbuilding, engineering machinery, rubber compound, and other fields.
When used in gas media, the cover needs to be pin-pricked. The ratio of working pressure to burst pressure is up to 1:4. Not recommended for use in gas service requiring low permeation rates or quick pressure relief. For more details, please contact FITOK Group.

Features

- Core tube materials: POM or Nylon
- Reinforcement: Multi-layers of steel wire
- Cover materials: Polyurethane
- Working pressure up to: 46400 psig (3200 bar)
- Nominal hose sizes: DN4 ~ DN25
- Working temperature: -22 °F ~ 176 °F (-30 °C ~ 80 °C)
- Custom lengths and wide range of end connections available

Construction



Technical Data

Nominal Hose Size (DN)	Inside Diameter in. (mm)	Outside Diameter in. (mm)	Core Tube Material	Reinfor-cement	Cover Material	Max. Working Pressure psig (bar)	Burst Pressure psig (bar)	Min. Inside Bend Radius in. (mm)	Weight lbs/ft (kg/m)	Color
4	0.16 (4.1)	0.39 (9.8)	POM	2 steel layers	TPU	17400 (1200)	43500 (3000)	2.95 (75)	0.141 (0.21)	Yellow
	0.16 (4.0)	0.47 (12.0)	POM	4 steel layers	TPU	26100 (1800)	65300 (4500)	2.56 (65)	0.276 (0.41)	Red
	0.16 (4.0)	0.46 (11.8)	POM	6 steel layers	TPU	40600 (2800)	101500 (7000)	5.51 (140)	0.403 (0.6)	Blue
5	0.2 (5.2)	0.43 (10.8)	POM	2 steel layers	TPU	15100 (1040)	37700 (2600)	2.76 (70)	0.188 (0.28)	Black
	0.2 (5.1)	0.5 (12.8)	POM	4 steel layers	TPU	26100 (1800)	65300 (4500)	3.74 (95)	0.235 (0.35)	Red
	0.2 (5.0)	0.58 (14.8)	POM	6 steel layers	TPU	36300 (2500)	90600 (6250)	7.87 (200)	0.37 (0.55)	Red
6	0.24 (6.0)	0.45 (11.5)	POM	2 steel layers	TPU	16000 (1100)	39900 (2750)	4.33 (110)	0.168 (0.25)	Yellow
	0.24 (6.0)	0.56 (14.3)	POM	4 steel layers	TPU	23800 (1640)	59500 (4100)	6.1 (155)	0.47 (0.7)	Yellow
	0.25 (6.3)	0.63 (16.0)	POM	6 steel layers	TPU	36300 (2500)	90600 (6250)	7.87 (200)	0.578 (0.86)	Red
	0.25 (6.3)	0.75 (19.0)	POM	8 steel layers	TPU	46400 (3200)	116000 (8000)	9.06 (230)	0.827 (1.23)	Blue
8	0.31 (7.9)	0.53 (13.4)	POM	2 steel layers	TPU	15100 (1040)	37700 (2600)	3.94 (100)	0.282 (0.42)	Black
	0.32 (8.2)	0.65 (16.6)	POM	4 steel layers	TPU	21750 (1500)	54400 (3750)	4.13 (105)	0.45 (0.67)	Yellow
	0.31 (7.9)	0.75 (19.0)	POM	6 steel layers	TPU	36300 (2500)	90600 (6250)	8.66 (220)	0.665 (0.99)	Red
10	0.39 (9.9)	0.65 (16.4)	POM	2 steel layers	TPU	10000 (690)	25000 (1725)	6.3 (160)	0.343 (0.51)	Black
	0.39 (10.0)	0.72 (18.2)	POM	4 steel layers	TPU	16000 (1100)	39900 (2750)	4.92 (125)	0.417 (0.62)	Yellow
	0.39 (9.9)	0.82 (20.8)	POM	6 steel layers	TPU	30000 (2070)	75000 (5175)	9.84 (250)	0.578 (0.86)	Red
12	0.5 (12.8)	0.8 (20.4)	PA	2 steel layers	TPU	10000 (690)	25000 (1725)	7.87 (200)	0.464 (0.69)	Black
	0.51 (13.0)	0.87 (22.1)	PA	4 steel layers	TPU	16000 (1100)	32600 (2250)	3.94 (100)	0.578 (0.86)	Yellow
	0.5 (12.8)	1.06 (27.0)	PA	6 steel layers	TPU	26100 (1800)	60000 (4140)	11.42 (290)	0.961 (1.43)	Red
	0.5 (12.8)	1.13 (28.7)	PA	8 steel layers	TPU	43500 (3000)	108800 (7500)	13.78 (350)	1.257 (1.87)	Blue
20	0.75 (19.0)	1.16 (29.5)	PA	4 steel layers	TPU	11000 (760)	27600 (1900)	8.66 (220)	1.317 (1.96)	Black
	0.75 (19.0)	1.13 (28.8)	PA	4 steel layers	TPU	15100 (1040)	37700 (2600)	9.84 (250)	1.425 (2.12)	Black
	0.74 (18.8)	1.38 (35.0)	PA	6 steel layers	TPU	23200 (1600)	60000 (4140)	13.78 (350)	1.579 (2.35)	Yellow
25	0.98 (24.9)	1.43 (36.3)	PA	4 steel layers	TPU	13100 (900)	32600 (2250)	11.81 (300)	1.566 (2.33)	Black
	0.98 (24.9)	1.57 (40.0)	PA	6 steel layers	TPU	17400 (1200)	43500 (3000)	15.75 (400)	1.935 (2.88)	Yellow

Notes: Hose colors are in correspondence with maximum working pressure (MWP).

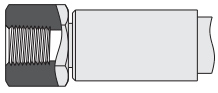
- Black 10000 psig (690 bar)≤MWP≤15100 psig (1040 bar)
- Yellow 15100 psig (1040 bar)<MWP≤24950 psig (1720 bar)
- Red 24950 psig (1720 bar)<MWP≤36300 psig (2500 bar)
- Blue 36300 psig (2500 bar)<MWP≤46400 psig (3200 bar)

Testing

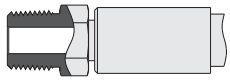
Each hose assembly is pressure tested with pure water at 1.5 times the maximum working pressure.

End Connections

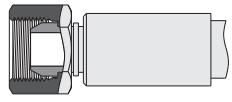
Female NPT (FNS)



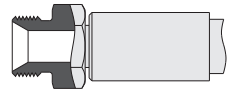
Male NPT (NS)



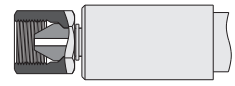
Female BSPP Swivel (SBP)



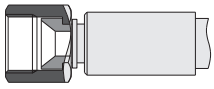
Male BSPP (HBP)



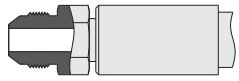
Female Type "M" Swivel (TMF)



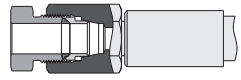
Female JIC (JF)



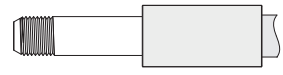
Male JIC (JM)



20D Series Tube Fittings (DFF)



20M/60H Series Coned and Threaded Nipple Fittings (MCT/HCT)



Hose Assembly Ordering Information

Hose Information		End Connection Type and Size	Basic Ordering Number	Pressure at 100 °F (38 °C) ① psig (bar)
Specification	Reinforcement			
DN4	2 steel layers	∅1/8 Tube Fittings	-HHP-4-2-DFF2-	17400 (1200)
	4 steel layers	9/16 Female Type "M" Swivel	-HHP-4-4-TMF9-	26100 (1800)
	6 steel layers	1/4 60H Series Coned and Threaded Nipple Fittings	-HHP-4-6-HCT4-	40600 (2800)
DN5	2 steel layers	1/4 Female NPT	-HHP-5-2-FNS4-	15000 (1034)
		1/4 Female BSPP	-HHP-5-2-HSBP4-	15100 (1040)
	4 steel layers	9/16 Female Type "M" Swivel	-HHP-5-4-TMF9-	26100 (1800)
	6 steel layers	1/4 60H Series Coned and Threaded Nipple Fittings	-HHP-5-6-HCT4-	36300 (2500)
DN6	2 steel layers	∅1/4 Tube Fittings	-HHP-6-2-DFF4-	16000 (1100)
		3/8 Female BSPP	-HHP-6-2-HSBP6-	16000 (1100)
		1/4 20M Series Coned and Threaded Nipple Fittings	-HHP-6-2-MCT4-	16000 (1100)
	4 steel layers	1/4 60H Series Coned and Threaded Nipple Fittings	-HHP-6-4-MCT4-	23800 (1640)
	6 steel layers	1/4 60H Series Coned and Threaded Nipple Fittings	-HHP-6-6-HCT4-	36300 (2500)
	8 steel layers	1/4 60H Series Coned and Threaded Nipple Fittings	-HHP-6-8-HCT4-	46400 (3200)

Hose Assembly Ordering Information (Continued)

Hose Information		End Connection Type and Size	Basic Ordering Number	Pressure at 100 °F (38 °C)① psig (bar)
Specification	Reinforcement			
DN8	2 steel layers	3/8 20D Series Tube Fittings	-HHP-8-2-DFF6-	15100 (1040)
	4 steel layers	3/4 Female Type "M" Swivel	-HHP-8-4-TMF12-	21800 (1500)
		1/2 Female JIC	-HHP-8-4-JF8-	21800 (1500)
	6 steel layers	3/8 60H Series Coned and Threaded Nipple Fittings	-HHP-8-6-HCT6-	36300 (2500)
DN10	2 steel layers	3/8 Male NPT	-HHP-10-2-NS6-	10000 (690)
	4 steel layers	1/2 Series Tube Fittings	-HHP-10-4-DFF8-	16000 (1100)
		1/2 Female BSPP Swivel	-HHP-10-4-HSBP8-	16000 (1100)
	6 steel layers	7/8 Female Type "M" Swivel	-HHP-10-6-TMF14-	30000 (2070)
DN12	2 steel layers	1/2 Female NPT	-HHP-12-2-FNS8-	10000 (690)
	4 steel layers	1/2 Series Tube Fittings	-HHP-12-4-DFF8-	16000 (1100)
		3/4 Female BSPP Swivel	-HHP-12-4-HSBP12-	16000 (1100)
	6 steel layers	1" Female Type "M" Swivel	-HHP-12-6-TMF16-	26100 (1800)
	8 steel layers	9/16 60H Series Coned and Threaded Nipple Fittings	-HHP-12-8-HCT9-	43500 (3000)
DN20	4 steel layers	1" Female JIC	-HHP-20-4-JF16-	11000 (760)
	4 steel layers (High strength)	3/4 Series Tube Fittings	-HHP-20-4H-DFF12-	15100 (1040)
		1" Female BSPP Swivel	-HHP-20-4H-HSBP16-	15100 (1040)
	6 steel layers	9/16 60H Series Coned and Threaded Nipple Fittings	-HHP-20-6-HCT9-	23200 (1600)
DN25	4 steel layers	1" 20D Series Tube Fittings	-HHP-25-4-DFF16-	12500 (862)
	6 steel layers	1" 20M Series Coned and Threaded Nipple Fittings	-HHP-25-6-MCT16-	17400 (1200)

① For other available end connections not listed, please contact FITOK.
② Pressure depends on the lower one of the maximum working pressures of the end connection and the hose.

Options

PVC Sleeves

Transparent PVC sleeve provides effective protection for the hose to prevent surface abrasion or scratches. PVC sleeve is not a hose anti-burst layer thus can not be used as burst protection device for the operator.

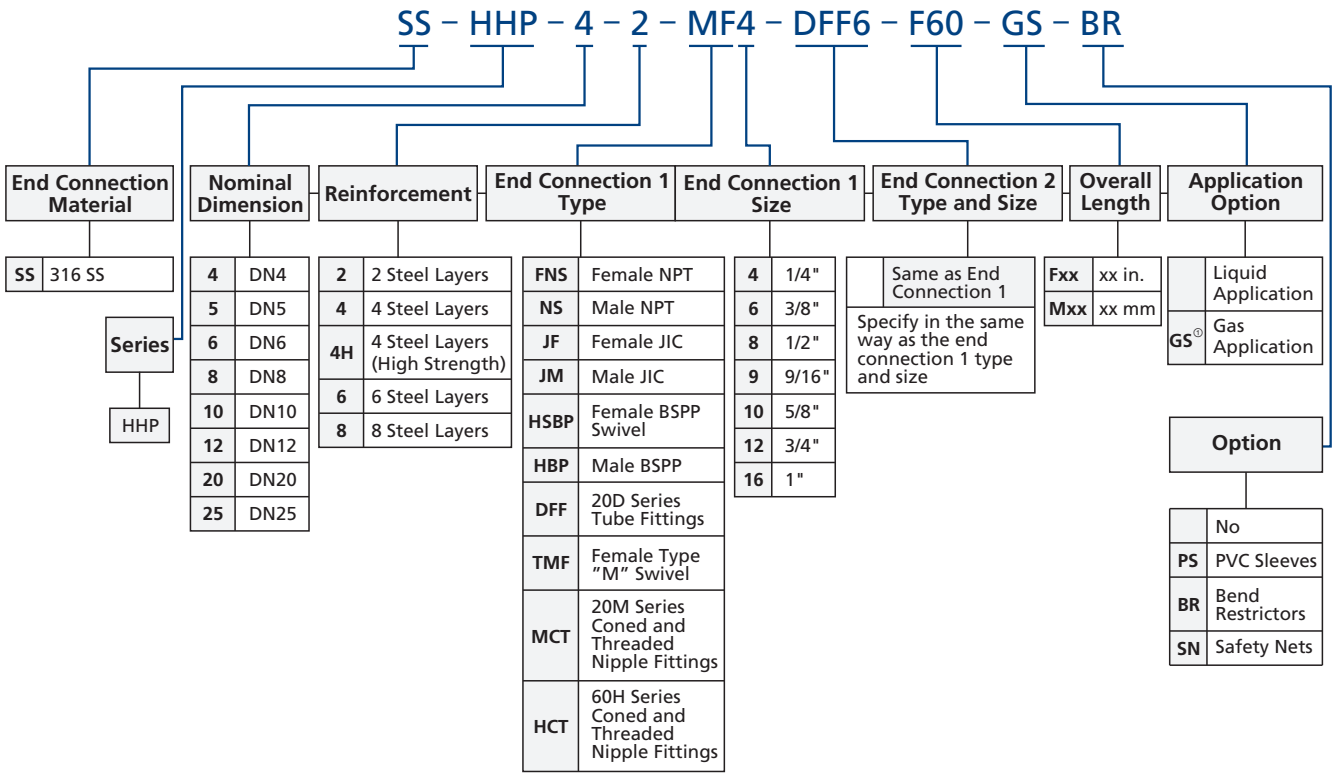
Bend Restrictors

Bend restrictors can avoid connection twisting or bending between hoses and hose connectors in harsh working conditions.

Safety Nets

When the high pressure hoses burst, safety nets can limit hose whipping to protect the operator and the surrounding equipment.

Ordering Number Description



Note: ① Not recommended for use in gas service requiring low permeation rates or quick pressure relief. For use in gas applications requiring low permeation rates and quick presure relief, please contact FITOK Group.

* "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

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