



# Wellhead / Fire Guarded System

## BOP Control Lines



### Blow-Out Preventor Hose

This product is a preventative hydraulic blow out control line for sub floor service and fire control on drilling, workover and coil tubing rigs. The fire resistant Neoprene composite cover provides superior flexibility and excellent resistance to oil, abrasion, cuts and ozone. The fire guarded boots on the hose ends ensures that even the fittings are Protected.

The Reliance BOP hose has been verified by an independent engineer to meet and exceed "Lloyds Register Fire Tests (700 degrees Celsius for 5 minutes) and EUB Directive 36

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
3/8	9.53	1.11	28.19	0.76	1.13	6	152.4	3000	20.68
1/2	12.70	1.19	30.23	0.82	1.22	8	203.2	3000	20.68
3/4	19.05	1.49	37.85	1.23	1.83	11	279.4	3000	20.68
1	25.40	1.84	46.74	1.73	2.57	15	381.0	3000	20.68

## End Connections

#### Fittings

Male NPT  
Female JIC, 45, 90

#### Quick Couplers

Farley Twist-Lok  
Hydraulic Quick Couplers



### Reliance Eliminator Kill Line

This product is used for kill applications on drilling rigs where fire protection is required.

The Reliance Eliminator Kill Line has been verified by an independent engineer to meet and exceed EUB Directive 36 (700°C for 5 minutes).

Minimum Temperature (3000psi): -40°F  
 Minimum Temperature (5000psi): -40°F

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
2	50.8	2.93	74.42	3.25	4.84	30	762.0	3000	20.68
2	50.8	3.30	83.82	4.90	7.29	28	711.2	5000	34.47

### End Connections

**Fittings (Global TTC Crimp)**

- Male NPT
- Male NPT (Extended Nut)
- FIG602 Integral
- FIG607 Integral
- FIG1502 Integral

**Hammer Unions**

- FIG400
- FIG602
- FIG607
- FIG1002
- FIG1502



## Copperstate Master Driller Choke & Kill Hose

The Copperstate Master Driller is a leader in Choke & Kill Hose technology. The forged steel, one piece body is built into the permanently bonded carcass. A stainless steel expansion ring protects the rubber face of the hose and prevents leakage at the coupling head. The built-in coupling body is completely enclosed within the hose wall and is securely anchored to the fabric and wire reinforcement. There is unrestricted flow the entire length of the hose. The cover is rated at 700°C for 25 minutes as per Lloyds OSG-1000/499 Section II

Temperature Range: -40°F to 266°F (-40°C to 130°C)

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP		Coupling Weight	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa	lbs	kg
3	76.2	5.35	135.89	20	29.76	36	914.4	5000	34.47	75	34.1

## End Connections

### Flanges

R35 - 3-1/8 5000# 4130 Alloy API Type 6B

R31 - 3-1/8 3000# 4130 Alloy API Type 6B

**STANDARD LENGTHS IN STOCK - 8FT, 10FT, 12FT & 15FT**



**Reliance Eliminator Choke & Kill  
3000 PSI**

This hose can be used as a choke hose which connects the BOP stack to the bleed-off manifold or a kill hose which connects the mud stand pipe to the BOP kill valve.

The Reliance Eliminator Choke & Kill hose contains a specially bonded compounded cover that replaces rubber covered Asbestos, Fibreglass and other fire retardant materials which are prone to damage. This high cut and gouge resistant cover overcomes costly repairs and downtime associated with older designs.

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
3	76.2	4.53	115.06	8.99	13.31	30	762.0	3000	20.68
3-1/2	88.9	5.00	127	11.01	16.29	36	914.4	3000	20.68

**End Connections**

**Fittings**

- RC4X5055
- RC3X5055
- RC4X5575

**Flanges**

- R35 - 3-1/8 5000# API Type 6B
- R31 - 3-1/8 3000# API Type 6B

**Hammer Unions**

- All Union Configurations

**Other**

- LP Threaded Connection
- Graylock
- Custom Ends



# Wellhead / Fire Guarded System

## Choke & Kill



### Reliance Eliminator Choke & Kill 5000 PSI

This hose can be used as a choke hose which connects the BOP stack to the bleed-off manifold or a kill hose which connects the mud stand pipe to the BOP kill valve.

The Reliance Eliminator Choke & Kill hose contains a specially bonded compounded cover that replaces rubber covered Asbestos, Fibreglass and other fire retardant materials which are prone to damage. This high cut and gouge resistant cover overcomes costly repairs and downtime associated with older designs.

The Reliance Eliminator Choke & Kill hose has been verified by an independent engineer to meet and exceed EUB Directive 36 (700°C for 5 minutes).

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
3	76.2	5.11	129.79	14.5	21.46	48	1219.2	5000	34.47
3-1/2	88.9	5.79	147.06	20.14	29.80	54	1371.6	5000	34.47

## End Connections

**Fittings**  
RC4X5055  
RC3X5055  
RC4X5575

**Flanges**  
R35 - 3-1/8 5000# API Type 6B  
R31 - 3-1/8 3000# API Type 6B

**Hammer Unions**  
All Union Configurations

**Other**  
LP Threaded Connection  
Graylock  
Custom Ends



**NRP Powerflex Gold Stripe Choke & Kill Hose**

This product is an integral part of the surface blowout prevention equipment required for drilling well control. The kill line provides a means of pumping fluid into the well bore when normal circulation through the drill string cannot be employed. The choke line and manifold provide a means of applying back pressure on the formation while circulating out formation fluid influx into the bore following a “kick”.

Temperature Range: -40°F to 200°F (-40°C to 93°C)

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
3	76.2	5.1	129.54	16.10	23.96	52	1320.8	5000	34.47

**End Connections**

**Flanges**

- R35 - 3-1/8 5000# 4130 Alloy API Type 6B
- R31 - 3-1/8 3000# 4130 Alloy API Type 6B

**Hubs**

- 3" Threaded
- 4" Threaded



# Wellhead / Fire Guarded System

## Degasser Hose



### Reliance Degasser Hose

This product is used in degasser applications for working pressures up to and including 2000 psi. It features a blue neoprene cover with four alternating plies of high tensile carbon steel braid wire for reinforcement.

The 3" version of this hose features a black cover with blue layline

Temperature Range: -20°F to 200°F (-28°C to 93°C)

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
3	76.2	4.19	106.40	7.04	10.47	30	762	2000	13.79
4	101.6	5.19	131.83	8.71	12.96	40	1016	2000	13.79

## End Connections

### Fittings

- RSB 3x3 3" Hose x 3" MNPT
- RSB 4x3 3" Hose x 4" MNPT
- RSB 4x4 4" Hose x 4" MNPT

### Hammer Unions

- FIG200
- FIG400



**Reliance Fire Guarded Diverter Hose**

This hose is used to connect the BOP to the flare pit or flare tank.

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
6	152.4	7.89	200.41	13.097	19.49	36	914.4	250	1.72

**End Connections**

**Fittings**

Crimped on 6" Threaded NPT  
6" Stainless Over Ferrule

**Hammer Unions**

FIG100





# Fire-Rated Coupling



**The Fire-Rated Coupling (HKFR)** is a quick disconnect coupling for high temperature applications where safety is a concern. Designed for blow-out preventer (BOP) applications in the Oil & Gas industry, it exceeds all requirements for API and EUB compliance.



CERTIFICATION

- Lloyd's Register Certification
- Individual Certification on 1", ¾" and ½" sizes
- Certified to 700° C/1300° F
- Exceeds API 16D and EUB Directive 36 requirements

FEATURES

- Easy visual verification:
  - BOP designation clearly marked on socket and plug
  - Red socket sleeve and red plug wrench flats
- Compact design is ideal for building panels where space is limited
- Easy connect/disconnect without risk of cross threading
- The only BOP coupling based on a proven design
- Supports standardization of inventory for all coupling applications
- Sleeve lock is standard

# Fire-Rated Coupling



**TUTHILL**  
Coupling Group



Part Number	4HFR26	4KFR26	6HFR31	6KFR31
Description	Socket	Plug	Socket	Plug
Body Size	1/2" (12.7 mm)		3/4" (19.0 mm)	
Material	Steel		Steel	
Rated Pressure	7,000 PSI/482 bar		5,000 psi/344 bar	
Min Burst Pressure	28,000 psi/1931 bar		18150 psi/1251 bar	
Certification*	NAO 0601070/4		NAO 0601070/3	

Part Number	8HFR36	8KFR36	ML8HFR36	ML8KFR36
Description	Socket	Plug	Socket	Plug
Body Size	1" (25.4 mm)		1" (25.4 mm)	
Material	Steel		Stainless Steel	
Rated Pressure	5,000 psi/344 bar		5,000 psi/344 bar	
Min Burst Pressure	20,000 psi/1,379 bar		20,000 psi/1,379 bar	
Certification*	NAO 0601070/1		NAO 0601070/2	

\* Lloyd's Register Certification Number

## BOP Coupling



The Right Connection™

- Fire tested and certified to 700°C for 5 minutes in accordance with EUB Directive 36: Drilling Blowout Prevention
- Designed for hazardous area service where couplings are required to operate under fire conditions in an emergency.
- Sleeve is cast using a unique process that provides better surface finishes, tighter tolerance control, and excellent repeatability.
- Blowout Prevention Couplings are individually marked with the BOP series designation and manufacturing date code.

Performance Specifications	Flow Rate		Max WP		Coupled Burst Pressure	
	LPM	GPM	psi	Mpa	psi	Mpa
3/4" Steel	102	27	5000	34.47	20,000	137.90
1" Steel	170	45	5000	34.47	20,000	137.90
1-1/4" Steel	265	70	5000	34.47	15,000	103.42
1-1/2" Steel	416	110	5000	34.47	15,000	103.42
2" Steel	908	240.0	5000	34.47	15,000	103.42

## Dust Cap & Dust Plug



Body Size	Body Material	Weight (LB)
3/4"	Aluminum	0.31
1"	Aluminum	0.48
1-1/4"	Aluminum	0.61
1-1/2"	Aluminum	0.86
2"	Aluminum	1.05



**BOP Coupling**



*The Right Connection™*



Part #	Body Size	Thread Size	Body Material	Part #
6WSF6-BOP	3/4"	3/4" - 14 NPTF	Steel	WS6FS6-BOP
6WSF6-SS-BOP	3/4"	3/4" - 14 NPTF	316SS	WS6F6-SS-BOP
6WSBF6-BOP	3/4"	G3/4"	Steel	WS6BF6-BOP
8WSF8-BOP	1"	1" - 11 1/2 NPTF	Steel	WS8FS8-BOP
8WSF8-SS-BOP	1"	1" - 11 1/2 NPTF	316SS	WS8F8-SS-BOP
8WSBF8-BOP	1"	G1"	Steel	WS8BF8-BOP
10WSF10-BOP	1-1/4"	1-1/4" - 11 1/2 NPTF	Steel	WS10FS10-BOP
10WSF10-SS-BOP	1-1/4"	1-1/4" - 11 1/2 NPTF	316SS	WS10F10-SS-BOP
10WSBF10-BOP	1-1/4"	G1-1/4"	Steel	WS10BF10-BOP
12WSF12-BOP	1-1/2"	1-1/2" - 11 1/2 NPTF	Steel	WS12FS12-BOP
12WSF12-SS-BOP	1-1/2"	1-1/2" - 11 1/2 NPTF	316SS	WS12F12-SS-BOP
12WSBF12-BOP	1-1/2"	G1-1/2"	Steel	WS12BF12-BOP
16WSF16-BOP	2"	2" - 11 1/2 NPTF	Steel	WS16FS16-BOP
16WSF16-SS-BOP	2"	2" - 11 1/2 NPTF	316SS	WS16F16-SS-BOP
16WSBF16-BOP	2"	G2"	Steel	WS16BF16-BOP

**Quick Couplers**

**ISO-B**





Stucchi VEP Quick Coupler



## Stucchi VEP & VP Quick Coupler

These couplings are a solution to hydraulic circuit applications subject to high pressure impulses and circuits which experience high residual or trapped pressure in a line. The VEP thread to connect design eliminates premature wear or brinelling associated with locking ball designs subjected to high impulse pressures.

The Flat-Face design avoids loss of hydraulic fluid during connection / disconnection and is easy to clean, limiting contamination into the circuit.

- High working pressures: 400 – 600 bar range based on size.
- Connect / disconnect under residual pressure up to 300 bar.
- Low connection force required.
- The VP series utilizes an Auto-Lock feature upon connecting

The VEP & VP Quick Coupler has been certified by Lloyd's Register to meet the fire testing requirements (700C for 5 minutes) in accordance with API Specification 16 D (Spec 16D), Second Edition, July 2004 and EUB Directive 36.

### VEP Quick Coupler

Nominal Size INCH	ISO Size MM	Max WP	
		bar	PSI
1/2	12.5	550	7857
3/4	16.0	550	7857
1	19.0	500	7142
1-1/4	25.0	470	6714