BLACK EAGLE
FEATURES

Polyflex Black Eagle hoses are designed for oilfield applications. For each application different demands need to be considered:

- Composition of fluids
- Temperatures and pressures
- Short term pressure fluctuations
- Static and dynamic loads
- Safety requirements and standards

To be able to cover these requirements the construction of Black Eagle hose has the following functionality:

Thermoplastic core tube
The essential requirement for a hose is to contain and transmit a fluid or gas. The core tube of a thermoplastic hose is therefore in direct contact with that medium. The selection of the core tube material depends on fluid compatibility, service temperature, and diffusion rate under operating conditions. The available materials are:

- Polyamide (PA11): It is used in high-performance applications for oil and gas, flexible pipes and control fluid umbilicals. It can operate within a wide range of working temperatures (-40˚C up to +70˚C), has a high dimensional stability and is low in density.
- Fluoropolymer: It is designed for use in chemical injection systems at high temperature levels. The tubing has low permeation rates and excellent chemical resistance. Proven to handle methanol at 100˚C and up to 15,000 psi working pressure.

Thermoplastic core tubes are manufactured with an extremly smooth and clean inner surface. This provides minimum flow resistance and minimum pressure drop in service.

Spiralised wire reinforcement
Our reinforcement allows flexibility in service without compromising fluid transfer. Various layers of high tensile strength steel wires are used to achieve the best combination of pressure resistance, flexibility, and volumetric expansion. The basic function of the cover is to protect the wire reinforcement from the external environment.

ColorGard™ cover
ColorGard ™ is an extra thick dual layer Polyurethane sheath: a red inner layer and a black or golden outer layer. It offers both an abration resistant extra thick cover for long service life and acts as an additional safety feature. This concept is a visual early warning system for detection of excessive abrasion. This feature avoids possible injuries and reduction of downtime by anticipating failure.

Black Eagle Light

#													
	DN	size	mm	inch	mm	bar	psi	bar	psi	mm	kg/m	Collapse pressure bar	Max length mtr
2240N-32V10	50	-32	51.0	2	68.5	207	3,000	825	12,000	500	4.40	-	1,000
2248N-32V10	50	-32	51.0	2	68.5	345	5,000	862	12,500	500	4.40	-	1,000

Black Eagle

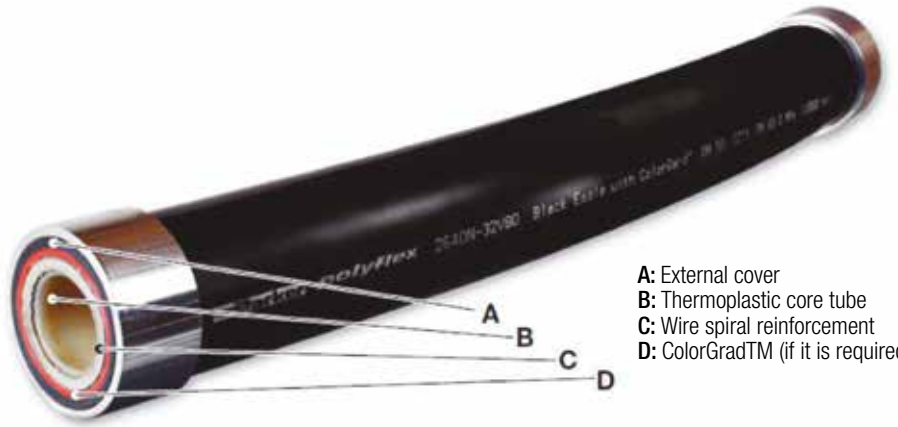
#													
	DN	size	mm	inch	mm	bar	psi	bar	psi	mm	kg/m	Collapse pressure bar	Max length mtr
2448N-20V80	32	-20	32.2	1 1/4	55.5	690	10,000	1725	25,000	400.0	3.80	57	1,500
2640N-24V80	40	-24	38.0	1 1/2	70.5	690	10,000	2300	33,350	500.0	7.20	65	1,000
2640N-24V80-15K	40	-24	38.0	1 1/2	66.0	1035	15,000	2330	33,750	500.0	6.50	66	1,000
2448N-32V80	50	-32	50.5	2	80.5	345	5,000	1380	20,000	500.0	8.50	49	1,000
2580N-32V80	50	-32	50.5	2	84.5	690	10,000	1725	25,000	800.0	9.40	57	1,000
2648N-32V80	50	-32	50.5	2	86.0	1035	15,000	2330	33,750	800.0	12.10	60	800
2240N-48V80	78	-48	75.0	3	114.0	345	5,000	862	12,500	1000.0	11.50	-	350
2440N-48V80	78	-48	75.0	3	122.0	690	10,000	1380	20,000	1100.0	18.70	66	300
2640N-48V80	78	-48	75.0	3	130.0	1035	15,000	2330	33,750	1200.0	27.50	80	250

Please Note: Variety of fittings in mild steel or stainless steel available, other fittings available on request.
We reserve the right to make technical changes without notice.

BLACK EAGLE
FEATURES

Golden Eagle

#													
	DN	size	mm	inch	mm	bar	psi	bar	psi	mm	kg/m	Collapse pressure bar	Max length mtr
2640M-24V88	40	-24	38.0	1 1/2	70.5	690	10,000	2300	33,350	500.0	7.20	65	600
2448M-32V88	50	-32	51.0	2	82.0	345	5,000	1380	20,000	500.0	8.50	49	600
2580M-32V88	50	-32	51.0	2	84.5	690	10,000	1725	25,000	800.0	9.40	57	600



A: External cover
B: Thermoplastic core tube
C: Wire spiral reinforcement
D: ColorGradTM (if it is required)

ACCESSORIES

Support grips
Black Eagle accessories available in the accessories section from page 205.

Containment grip
Black Eagle accessories available in the accessories section from page 205.

Reel and winch systems

1502 Hammer Unions

API 6A Flanges

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BLACK EAGLE
TENSILE LOADING & WEIGHTS

Data for tensile loading and weights of Polyflex hoses
Note that all below values of tensile forces include the own weight of the hoses.

Pressurised hoses can take higher tensile load, it will elongate less. All values below have been confirmed by testing. In all cases the hoses will not elongate more than 10%.

2448N-32V80	Pressure (bar)	0	100 and above		
	Max. tensile force (kN)	15	20		
2580N-32V80	Pressure (bar)	0	100	200	300 and above
	Max. tensile force (kN)	25	30	35	40
2240N-48V80	Pressure (bar)	0	100 and above		
	Max. tensile force (kN)	15	20		
2440N-48V80	Pressure (bar)	0	100	200 and above	
	Max. tensile force (kN)	30	40	50	
2640N-48V80	Pressure (bar)	0	100	200	350 and above
	Max. tensile force (kN)	30	40	50	100

The below table includes information on hose weights.

#	 mm	 mm	Hose weight in air empty kg/m	Hose weight in air, full of water kg/m	Hose weight in water empty kg/m	Hose weight in water full of water kg/m
2448N-32V80	50.5	80.5	8.5	10.5	3.3	5.3
2580N-32V80	50.5	84.5	9.4	11.5	3.7	5.7
2240N-48V80	75.0	114.0	11.5	16.0	1.1	5.6
2440N-48V80	75.0	122.0	18.7	23.2	6.7	11.3
2640N-48V80	75.0	130.0	27.5	32.0	14.0	18.4

1st example: No pressure. 300m length of 2240N-48V80 shall be deployed. Hose weight in water, full of water, 5.6 kg/m x 300m = 1680kg. Max tensile force is 15kN, therefore a 300m length is too heavy to deploy in these conditions.

2nd example: Pressure 100 bar. 300m length of 2240N-48V80 shall be deployed. Hose weight in water, full of water, 5.6 kg/m x 300m = 1680kg max. tensile force is 20kN, so a 300m length of 2240N-48V80 is OK to deploy when pressurized at 100bar, and an additional weight of 2000-1680 = 320kg may be added.

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