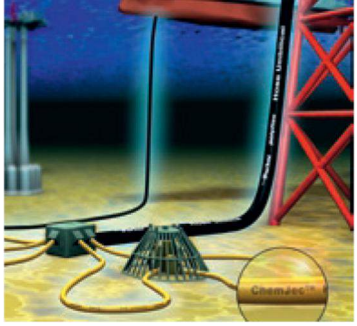
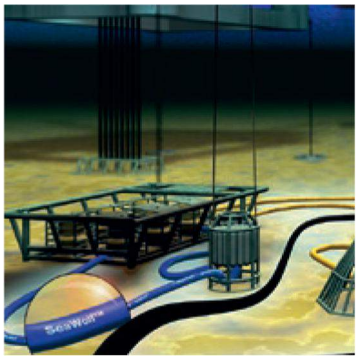
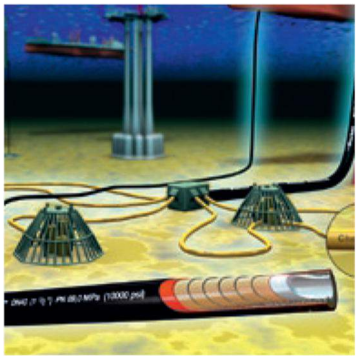






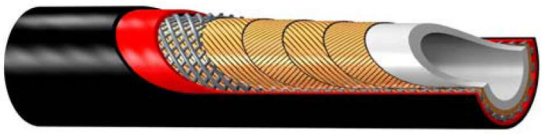
Black Eagle Product Manual

Parker

Flexiflo
The Hose & Fitting Specialists

ENGINEERING YOUR SUCCESS.

ISSUED: H. Krapp 23. July 2007	PARKER ENGINEERING MANUAL Parker Hannifin Corporation Polyflex Division Europe	SPEC: HS-2580N-32V80
REVISED / CHECKED M. Levin 20. Nov. 2012		REVISION G
SUBJECT: Hose Specification 2580N-32V80 2" BLACK EAGLE with ColorGard™		PAGE: 1 of 2



Construction	Material
Inner core:	Plasticized Nylon 11
Bond:	Special adhesive
Pressure reinforcement:	Four closed- and two open spiral layers of high tensile steel wire
Bond:	Special adhesive
Outer cover:	TPU inner sheath (red) plus extra thick TPU outer sheath (black)
Fitting series:	BL (DNV certified see assembly instruction PFDE-C2580N-32-OF) 5X (without DNV certificate see assembly instruction PFDE-C2580N-32-OF-1)

Dimensions	SI units	*(imperial units)*
Inner diameter:	50,5 mm ±1,0 mm	*(1.988 in ±0.04 in)*
Outer diameter:	84,5 mm ±1,0 mm	*(3.327 in ±0.04 in)*
Min. bend radius:	800 mm	*(31.493 in)*
Max. manufacturing length	1000 m	*(3280 ft)*
Hose weight empty in air:	9,4 kg/m	*(6.319 lb/ft)* see page 2 for other conditions

Performances	SI units *(imperial units)*
Min. burst pressure:	172,5 MPa *(25000 psi)*
Max. working pressure (WP):	69,0 MPa *(10000 psi)*
Safety factor:	1:2,5
Working temperature:	-40°C to +70°C *(-40°F to 158°F)*
Change in length:	±2% acc. to API 7K
Volumetric expansion:	Typical value 8% at max. WP
Impulse strength:	≥ 75000 cycles acc. to Polyflex work standard at 75,0 MPa *(10875 psi)*
Chemical resistance:	See PFDE-ES28
Electrical conductivity:	Yes
External collapse resistance:	Typical values: 6,5 MPa *(942.5 psi)* straight 5,7 MPa *(826.5 psi)* at min. bend radius acc. to ISO 13628-5
Max. tensile loading:	See PFDE-ES28

Application and Approvals

Acc. to DNV Type Approval P-14038 (API 17J, API 7K):
Cementing, chemical injection (see certificate), water jetting, air and nitrogen.

Remarks

Extra thick, dual color, abrasion resistant ColorGard™ sheath improves durability and acts as an early warning system to prevent hose failure due to excessive abrasion.

The above hose performance data is only relevant if used with the specified fittings and assembled according to the approved Parker Polyflex assembly procedure.

Instructions for storage, handling, maintenance, inspection and repair see PFDE-ES28.

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Qualification Test Results Summary

SI-units *(imperial units)*

Test	Standard	Nominal value	Test result	Test report
Burst test	API 7K 9.6.7.2	172,5 MPa *(25000 psi)*	191,0 MPa *(27695 psi)*	LTR-2103-B
Impulse test	Polyflex internal standard PFDE-TS07	30000 pressure cycles from zero to 69,0 MPa *(10000 psi)*	No failures after 75000 pressure cycles at 75,0 MPa *(10875 psi)*	LTR-1220-I
Collapse resistance test	API RP 17B 9.6.4 (straight) ISO 13628-5 7.3.7.9 (at min. bend radius)	-	Straight: 6,48 MPa *(939.6 psi)* At min. bend radius: 5,70 MPa *(826 psi)*	LTR-1152-AU LTR-1379-1-AU
Tensile test	Similar to API RP 17B 9.6.3	-	No failures at 40 kN (8992 lb_F) tensile force	ER-110221
Sour gas exposure	The assessment followed procedures and recommendations laid down in API 17J and RP17B	-	The performance of Black Eagle hoses in sour environments up to 2% concentration should not be affected by deterioration to reinforcement or any embrittlement that would affect long-term operation	MERL Report No. PPOLY/4
Ambient temperature bending test	API 7K 9.6.10.3.1	-	The tests acc. to API 7K were all performed with hose 2640N-48V80 (3" 15 k hose). The test results automatically qualify all 2- and 3 inch Black Eagle hoses. All tests have been passed.	SwRI Report No. 18142.01.330
Cold bend test	API 7K 9.6.10.3.2	-		
Hydrostatic pressure test after bending tests	API 7K 9.6.10.6	-		
Burst pressure test after hydrostatic pressure test	API 7K 9.6.10.7	-		

Hose weights	SI units	*(imperial units)*
Hose weight in air (empty)	9,4 kg/m	*(6.319 lb/ft)*
Hose weight in air (full of water)	11,5 kg/m	*(7.728 lb/ft)*
Hose weight in water (empty)	3,7 kg/m	*(2.486 lb/ft)*
Hose weight in water (full of water)	5,7 kg/m	*(3.830 lb/ft)*