

5.125" 20,000 PSI Revolution Powerplus Valve (IL-0141)



SHEAR AND SEAL VALVE DESIGNED WITH HIGH CUTTING PERFORMANCE AND RELIABLE POST CUT SEALING. PRIMARY HYDRAULIC OPERATION PROVIDES FAIL-AS-IS FUNCTIONALITY. AN INTEGRAL ACCUMULATOR AND CONTROLS ARRANGEMENT PROVIDE EVENT DRIVEN FAIL-SAFE-CLOSED FUNCTIONALITY.

Features:

- ▷ Unidirectional valve with pump through capability.
- ▷ Integral accumulator and control system.
- ▷ Provides rapid cutting and closure (<1 s).</p>
- > Separate cutting and sealing components in a single device.
- ▷ Fewer, simpler components and stronger fit-for-purpose design.
- ▷ Compact & lightweight.
- ▷ Resilient Wellbore Sealing.

DESIGN DATA	
Design Standard	ISO 13628-7 2006 (API 17G 2nd Ed), API 17TR8 2nd Ed, NACE MR 0175
Nominal Bore Diameter	5 ¼8" (130.2 mm)
Design Pressure	WORKING: 20,000 psi (137.9 MPa) TEST: 30,000 psi (206.8 MPa)
Temperature Class	V+, Non-Standard (35°F to 275°F / +2°C to +135°C)
Service Specification Level	SSL-Liquid
Safety Class	Safety Function Class
Service Class	Sand Class I (2%)
Shear Class	Wireline / Coiled Tubing

PERFORMANCE DATA	
Maximum Hydraulic Pressure	Valve – 10,000 psi (68.9 MPa), Accumulator – 15,000 psi (103.4 MPa)
Actuator Volume (Approx.)	0.4 U.S. gallons (1.5 litres)
Acceptable Hydraulic Fluid	Any water or oil based control fluid
Cutting Capabilities	All typical Slickline grades up to & including 0.160" UHT API 9A Brite All typical Eline/Braided grades up to & including 0.520" Hepta Cable Up to & including 2.0" OD x 0.203" WT QT 1300 Coil Tubing
Hydraulic Ports	12 off ¼" @ 10ksi MWP + 7 off ¼" @ 20ksi MWP
Hydraulic Interfaces	Metal sealing interface c/w Anti-Vibration capability
Electrical Interface	1 off ¼" pass through conduit

WEIGHT AND DIMENSIONS	
Overall Height (Nominal)	34.0" (864 mm) – Overall length of main body
Overall Height (Nominal)	43.5" (1 105 mm) – Collar Shoulder to Collar Shoulder
Overall Diameter (Nominal)	18.625" (470 mm)
Gross Dry Weight (Approx.)	1,903 lb (863 kg) – Not including end adapters and associated collars

STANDARD INTERFACES	
Upper End Connection	Proprietary Threaded Connection c/w Resilient Seal Stack
Lower End Connection	Proprietary Threaded Connection c/w Resilient Seal Stack

REFERENCE CODES & STANDARDS	
API 17G 3rd Ed (Ballot Draft)	Design & Manufacture of Subsea Well Intervention Equipment
ISO 13628-7 2006 (API 17G 2nd Ed)	Design and Operation of Subsea Production Systems
API 17TR8 2nd Ed	HP/HT Design Guidelines
NACE MR-0175	Materials for use in H2S containing environments in oil and gas production

STRUCTURAL CAPACITIES*		
Maximum Tension @ RWP	600 kip (2 669 kN)	
Maximum Moment @ RWP	300 ft kip (407 kN m)	
Maximum Tension @ 0 ksi	1,400 kip (6 228 kN)	
Maximum Moment @ 0 ksi	750 ft kip (1 017 kN m)	
Maximum Torsion	35 ft kip (47 kN m)	* Not including end connections

TESTING	
Product Verification (FAT)	API 17G, Annex G, Section G.3
Product Validation (Qualification)	API 17G, Annex G, Section G.4
Cutting Samples	Manufacturer Specified

NOTABLE EXCEPTIONS

All gas testing shall be removed from the validation test program with the exception of thermal cycles.

PRODUCT LAYOUT DRAWING



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