

The Spoked Solutions DPDT-DU GEN 4 Prototype is designed to expand upon its basic technology to fit the demanding needs of ongoing deepwater operations.

The unit has been doubled in capacity to provide filtration to two independent locations with primary, backup, and bypass capabilities. In addition, the unit is outfit with capabilities for backflushing to reachieve capacity without disassembling or retesting.

The GEN 4 Prototype is still rated to 15ksi and is capable of 18bpm pump rates.

The following hypothetical information is provided to paint the direction which Spoked and Superior Performance are driving to meet the needs of our clients.

This information is provided with the intent of receiving immediate feedback to improve the development of the prototype.

With the fundamentals of the protype being proven in the field, Spoked will then work toward optimization before multiple units are produced with the intent of deployment.

Pup Joint (Barrel) Characteristics:

Size: 7.625" Casing
 Weight: 45.30 lbs/ft
 Material: Q-125
 Pup Joint ID: 6.435"
 Thread Type: Stub ACME 7.562-4-2G Pin X Pin
 Body Yeild Strength: 1,643,000 lbs
 Burst Strength: 17,080 psi
 Collapse Strength: 17,090 psi

Screen Characteristics:

Type: 4.500" DeltaDirect Wire Wrap Screen
 Base Pipe Weight: 13.50 lbs/ft
 Base Pipe Material / Thread: 4.500" P-110 API 8RD LTC Box X Pin
 Base Pipe Collapse Strenth: 10,670 psi
 Base Pipe Burst Strength: 12,410 psi
 Base Pipe Tensile Strength: 338,000 lbs
 Screen Material: 316L Stainless Steel
 Screen OD: 5.29"
 Base Pipe ID: 3.92"
 Screen Max Collapse Rating: 5,700psi

3-Way Adapter Characteristics:

Nominal OD: 8.530"
 Nominal ID: 3.187"
 Material: A-519 4140 Grade 125
 Upper Thread Type: Stub ACME 7.562-4-2G Box
 Lower Thread Type: ACME 5.375-3.5-2G Box
 Internal Thread Type: 4.500" API 8RD LTC 13.50 lbs/ft Box

Pup Joint (Barrel) Crossover Compliments:

Applicable to each Barrel Inlet
 Thread Type: 3" 1502 Hammer Union 15K F
 Thread Locking Lug: Yes
 Thread Locking Screw: Yes
 Thread Type: 0.312"-24UNF-2A

Applicable to each Barrel Outlet
 Thread Type: 3" 1502 Hammer Union 15K M
 Thread Locking Lug: Yes
 Thread Locking Screw: Yes
 Thread Type: 0.312"-24UNF-2A

Pup Joint (Barrel) Internal Configuration:

Bull Plug: Yes - Single direction capture
 OD: 5.050"
 Thread Type: 4.500" API 8RD LTC Pin
 Screen Wire Gauge: 6 GA - Client Customization
 Screen Joint OAL: 6.0 ft
 Screen Length: 5.0 ft
 Pup Joint Length: 7.8 ft

Bypass Lines:

One bypass line dedicated for every two Barrels
 Type: 3" 1502 WECO FxM

Backflush Compliments:

Pump: Burks
 Pump Type: Centrifugal Pump
 Max Flush Rate: 9.5bpm
 Power Requirements: 3 phase; 230/460V; 70amp
 Reservoir: 225 gal
 Screen Basin 1: 0.125"
 Screen Basin 2: 0.030"
 Screen Basin 3: 0.006"

Pup Joint (Barrel) Capacities:

Single Barrel Hydrated Capacity: 13 gal
 Single Barrel Dehydrated Capacity: 0.99 ft³
 Unit Hydrated Capacity: 52 gal
 Unit Dehydrated Capacity: 3.9 ft³

General Features

Backflush on the fly (one Barrel at a time)
 Content capture and inspection point
 Re-pressure testing not required unless overhaul is performed
 2 Zone Independent Barrel system with primary and backup (4 banks)
 2 Zone bypass capability
 Secondary containment for Barrel capacity
 Remote pressure digital readout

Specifications

15,000psi HP rating
 200psi LP rating (double valve isolation per Barrel)
 5,700psi Δp across screens
 Greater than 18bpm per Barrel
 3" bypass line per zone
 Nitril Seals are default elastomer
 Outlet ID restriction is 3.187"

* - time dependant feature