

Secc

Oil & Gas Ltd



10K psi Max Flow Hot Stab and Receptacle

Technical Data Sheet



CYGNET GROUP
COMPANY

10K PSI MAX FLOW HOT STAB AND RECEPTACLE DATA SHEET

DESIGN BASICS

Coupling Type	Max Flow Hot Stab and Receptacle		
Coupling Size	1/4", 1/2", 1", 2" and 4"		
Pressure Rating	690 Bar (10,000 psi)	Test Pressure	1034 Bar (15,000 psi)
Max Operating Depth	3050 m (10,000 ft)	Operating Temperature	-18°C to +121°C
Flow Path	Straight-through full bore - zero head loss		
Design Code	API 6A 17D PSL3G PR2 for Other End Connectors (OEC) – PSL3G available on request		
Material Classification	API material class FF, HH available in accordance with NACE MR0175		
Certification Level	EN 10204 3.1		
Operational	Stab to connect, pull to disconnect		
Breakaway Control	J-Type latch. Pressure balanced stab design sees zero separation forces from receptacle up to full working pressure		
Load to Disconnect	≈ 50kg		
Mounting	Horizontal or vertical		
Installation	Via ROV handle (interface in-line with ISO 13628-8)		
Alignment Method	J-Type latch		
Design Life	25 years (metallic components)		
Additional Requirements	To be specified		

PERFORMANCE

Max. Bending Moment	TBC	Maximum Torque	TBC
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BASIC 1" WEIGHT AND DIMENSIONS

Stab Dimensions	435mm x 130mm x 100mm	Receptacle Dimensions	300mm x 230mm x 220mm
Stab Weight in Air	9kg	Receptacle Weight in Air	18kg

CONNECTION DETAILS

Connection Methods	Subsea - ROV - Fishtail, T-Bar or Grab Handle Topside - Manual
Male Stab/ Female Receptacle End Connections	Grayloc B20 Hub, Destec, API Flange, Threaded (JIC or NPT), H/P Autoclave, Weld Preparation (Other end connections available on request)

MATERIALS

Materials	Super Duplex 32760, Inconel and S316 Stainless Steels
Elastomeric Seals	HNBR, Viton (FKM) or Perfluoroelastomer (FFKM)

TESTING REQUIREMENTS

Pressure Test	API 6A PSL3 (3G Available)	Impact Testing	ASTM A370
Qualification Test	None	Hardness Testing	ASTME10 / ASTM E18
Ultrasonic	API 6A PSL3	Magnetic Particle	API 6A PSL 3
Dye Penetrant	API 6A PSL3	Radiography	As Required (weld)
Corrosion Testing	ASTM G48 Method A		

WITNESS REQUIREMENTS

Customer Witness	Available	Third Party Witness	Available at additional cost
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PAINTING REQUIREMENTS

Painting Specification	Norsok M501 System 7	Colour	Orange RAL2004
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NOTES / ADDITIONAL REQUIREMENTS

These figures are based on known and estimated data. Secc reserves the right to change specifications without notice.

Figure 1: Max Flow Hot Stab Possible Configurations

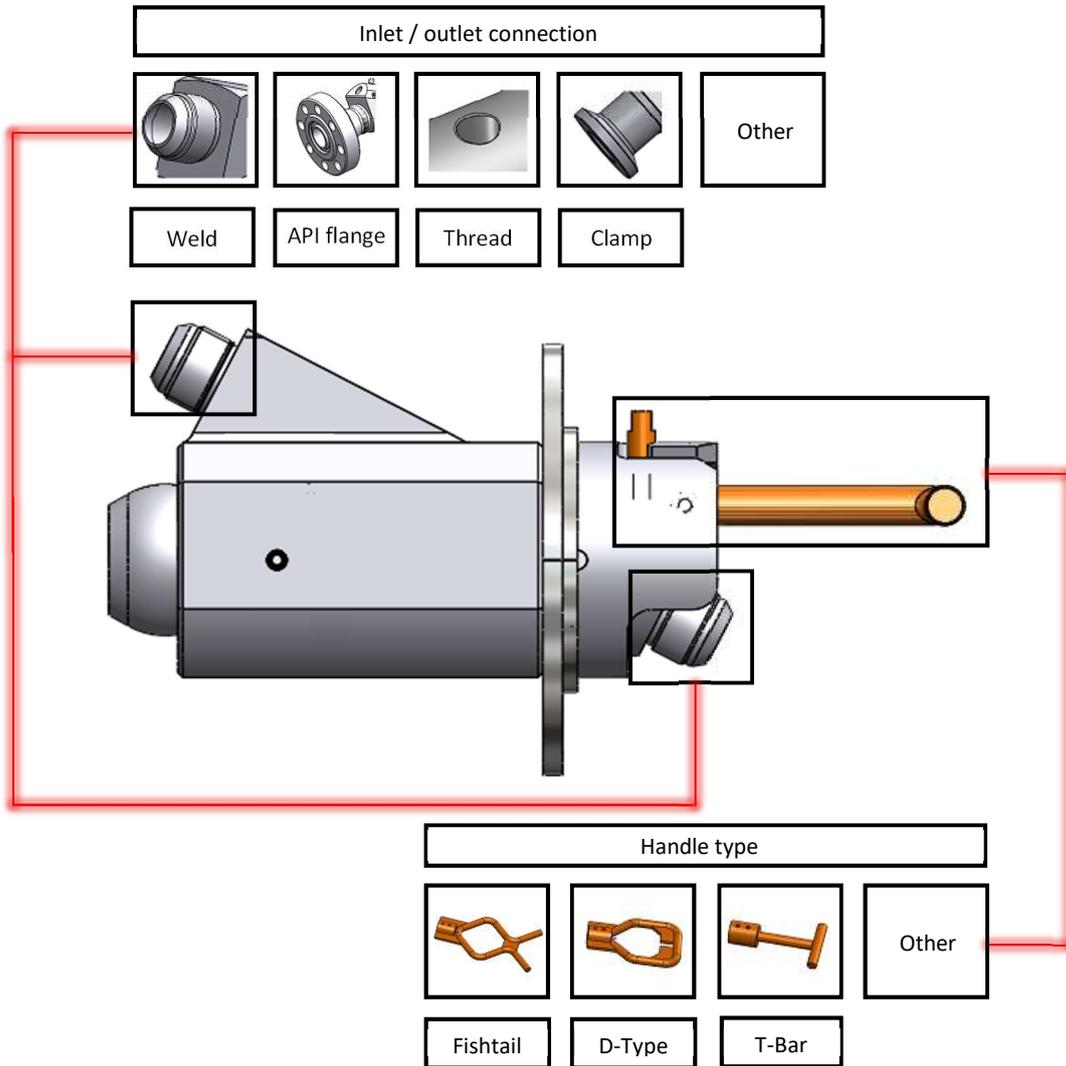
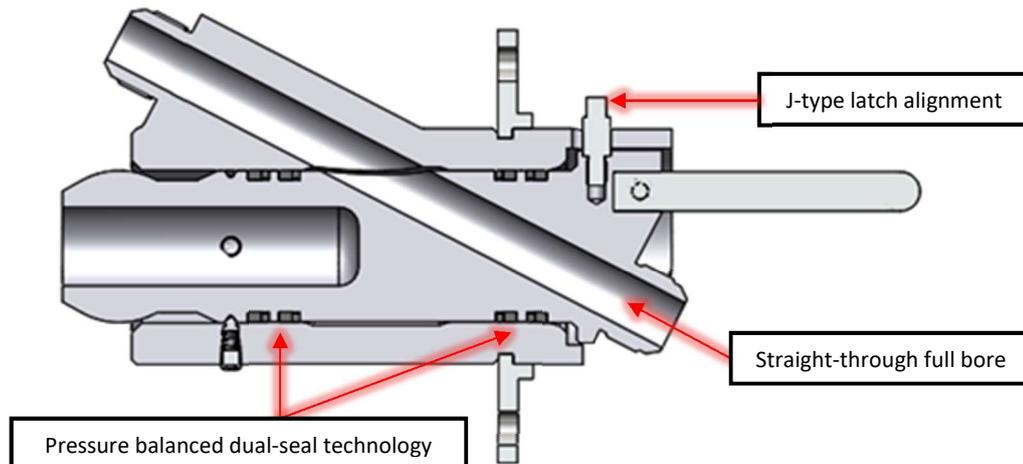


Figure 2: Max Flow Hot Stab and Receptacle Cross-section



Flow Data for Secc Max Flow vs Conventional Hot Stabs

Secc's Max Flow is a patented design that conforms to API 17H. The straight-through, full bore provides maximum flow at minimal pressure.

The charts below show the relationship between Flow Rate and Pressure Drop for conventional hot stabs of various bore sizes and compares these to Secc's Max Flow. A 1" Max Flow performs the same as a 2" conventional hot stab and a 2" Max Flow the same as a 4" conventional hot stab.

Utilising the Max Flow, engineers are able to consider reducing the bore size or pressure rating of the subsea infrastructure. Additionally pumps, valves and other pressure related equipment can be appropriately sized. All of this can lead to significant cost and weight savings on subsea projects.

