

TECHNICAL DOCUMENT

DOCUMENT TITLE: Operation and Maintenance Manual Ø80 API 17H 3rd edition

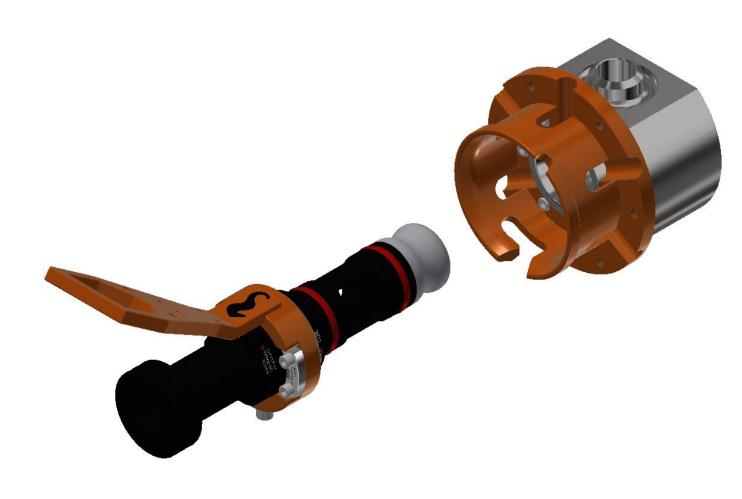
Type 4 Hot Stab Program

PROJECT TITLE: 600141 - Ø80 Hot Stab System

DOCUMENT NUMBER: 600141-TD-0003

REV: 09 NUMBER OF PAGES: 22

DATE: 28.05.2025



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OBJECTIVE

The objective of this document is to present an Operation and Maintenance Manual for the Ø80 Hot Stab Program delivered by Blue Logic AS. All relevant aspects with regards to safe and correct use, installation, operation, maintenance and storage are covered.

ABSTRACT

The Blue Logic Ø80 Type 4 Hot Stab program is a High Flow Hot Stab system designed according to API 17H 3rd edition Type 4, for operation by use of ROV. The system consists of Male Hot Stabs, Receptacles and related equipment and components. For full program overview and further technical details, please visit: http://e-sea.bluelogic.no/main.aspx

REVISION CHANGE/RECORD

REV	REASON FOR REVISION/ DESCRIPTION OF CHANGES
01	Document initiated, Prepared and Issued as general information
02	Updated with several options
03	Added options
04	Added manometer & Check Valve
05	Update
06	Removed test panel, added lock and dual entry
07	Update according to API 17H 3rd edition
08	Added BC1047 Ø80 SP Press Stab 10k Long-term J-Lock with Bleed Off Function
09	Added instructions for seal replacement tool, section 5.2



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BLUE LOGIC

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1. INTRODUCTION

The Blue Logic Ø80 Hot Stab Program is a very compact and light weight pressure balanced high-flow fluid connector system designed for ROV use where high flow and easy connection is required. The system design is based on API 17H 3rd edition Type 4

For a complete program overview, please visit: http://e-sea.bluelogic.no/main.aspx

1.1. DOCUMENT USE

This document shall be used as a guideline and reference document with regards to installation, operation and storage of the Ø80 Hot Stab System.

1.2. REFERENCES

Latest revision of the below listed drawings:

Latest revision of the below listed drawings:			
Dwg. No.	Drawing Title		
BA4826	Ø80 SP Stab 10k Interv Weco 1502 Female 2" ID 45 wJ-Lock		
BB7562	Ø80 SP Stab 740bar Interv 2" fig. 1502 Female wJ-Lock		
BA2363	Ø80 SP Press Stab 10k Long-Term w J-Lock		
BC1047	Ø80 SP Press Stab 10k Long-term J-Lock with Bleed Off Function		
BA5621	Ø80 SP Press Stab 10k Long-Term		
BA4609	Ø80 SP Prot Stab Vented Long-Term		
BA4772	Ø80 SP Rec 10k Interv 2" Full Bore wJ-Lock 2" Weco 1502 FM		
BA4658	Ø80 SP Rec 10k Interv 2" Weco 1502		
BA4822	Ø80 SP Rec 10k Long-term 2" Full Bore wJ-Lock 2" WN Sch 160		
BA4652	Ø80 SP Rec 10k Long-Term WN 2" Sch 160		
BA5849	Ø80 SP Rec 450Bar Long-Term 2" Full Bore wJ-Lock		
BA8204	Ø80 SP Rec 450Bar Long-term WN 2" Sch 80 wJ-Lock x2		
BA5754	Ø80 SP Rec 5k Interv 2" BSP w J-Lock		
BA9497	Ø80 SP Rec 5k Interv 2" BSP with J-Lock and Fishtail		
BB1527	Ø80 SP Rec 5k Long-term 2" Full Bore wJ-Lock 2" WN Sch 40 S		
BB1528	Ø80 SP Rec 5k Long-term WN 2" Sch 40 S		
BA1587	Ø80 SP Park Rec Vented Long-Term		
BA4845	Ø80 SP Park Rec w J-Lock		
BA1819	Ø80 SP Rec J-Lock Interface		
BA4727	Ø80 SP Rec J-Lock Interface version 2		

1.3. ABBREVIATIONS

ROV	Remotely Operated Vehicle	
HPU	Hydraulic Power Unit	
SP	SP Single Port	
REC Receptacle		
CW	Clockwise	
CCW	Counterclockwise	

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2. TECHNICAL DESCRIPTION

This section provides general technical details for all main components within the Ø80 Hot Stab program. For detailed information of specific products reference is made to drawings in **APPFNDIX 1**

2.1. **DESIGN AND TEST**

The Blue Logic Hot Stab program is designed, calculated, tested and documented in accordance with API6A(ISO10423) and API 17H. All Hot Stab equipment is hydrostatic pressure tested to 1.5 x Design Pressure accordingly. Optional gas test upon customer's request.

2.2. TECHNICAL PERFORMANCE

The Blue Logic Ø80 Hot Stabs are Based on API 17H 3rd edition Type 4. They can be delivered in different types and configuration. Hot Stabs for Permanent use, ROV use, and different pressure ratings. What is important to consider when selecting a Hot Stab is the flow capacity. As the flow increase you will experience pressure loss over the connection. This means that you will have less pressure available to do the hydraulic job.

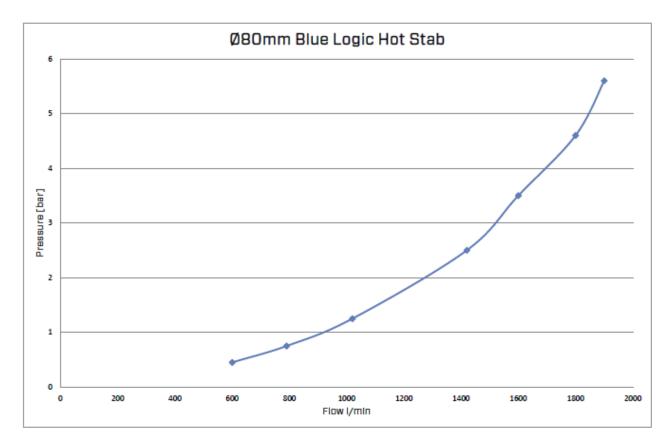


Figure 1 Typical Pressure vs Flow diagram Ø80 Hot Stab

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2.3. PROGRAM OVERVIEW

The Ø80 Hot Stab Program can be delivered with alternative ROV Handles, seal materials and hydraulic interfaces. Contact Blue Logic for further information, or visit: http://e-sea.bluelogic.no/main.aspx

2.4. HOT STAB

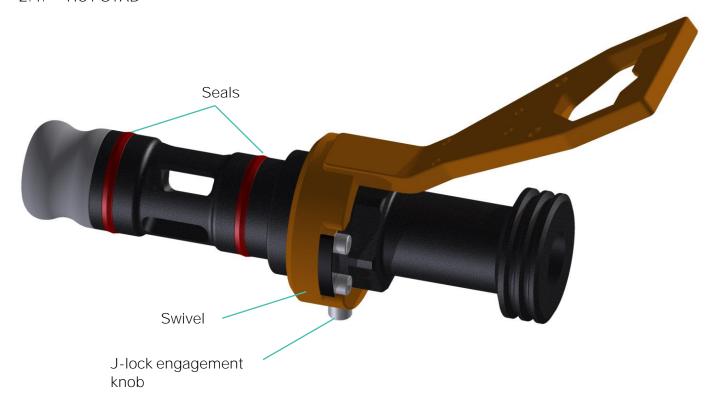


Figure 1 Ø80 Stab with J-Lock Interface and 2" fig. 1502 Weco connection

2.4.1. Hydraulic Ports

The Ø80 Hot Stab is delivered with 2" Fig 1502 as standard but can be delivered with other types of hydraulic connection on request.

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Please see product assembly drawing for further detailed information, ref. APPENDIX 1

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2.5. PRESSURE STABS

Pressure stabs can be delivered both for intervention and permanent installation.



Figure 2 Typical Ø80 Permanent Pressure Stab with J-Lock Interface



Figure 3 Typical Ø80 Permanent Pressure Stab for dual entry

Dual entry pressure stabs is typically used for pull-in heads and dual entry receptacles. The orange handles are flexible ropes to prevent damage to the seal areas when beeing stabbed. Because of the flexible handles the stab is not initially designed for beeing inserted into an receptacle by an ROV, only extracted/removed. It has O-rings outside the red seals to keep it secured inside the receptacle before it's intentionally removed.

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2.5.1. Pressure Stab with Bleed-Off

The Ø80 Pressure Stab with Bleed-Off is designed for long-term installation in the Ø80 receptacle to act as a pressure barrier.

This pressure stab is identical to the standard pressures stab but has a bleed-off feature to allow bleed-off prior to disconnection.

The bleed-off function is operated by simply pulling the spring-loaded handle by the ROV manipulator. Pressure will be bled off upon activation and the handle is self-retracting. Pressure bleed-off feasible up to 10 000Psi / 690Bar.

Pull to bleed off, approx.

200kg @ 690bar, 15mm stroke

Figure 4, Ø80 Pressure Stab with Bleed-Off

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2.6. PROTECTION STAB

Protection stab designed for permanent installation, both vented and non-vented versions available.



Figure 5, Typical Ø80 Permanent Protection Stab

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2.7. ADDITIONAL LOCK

The Ø80 Hot Stab system is locked on place by use of a J-lock function. The stab is inserted into receptacle and then rotated slightly clockwise to lock. This prevents the stab from being pulled from the receptacle. But if the hose with stab is twisted left then the stab might be freed from the J-lock. This is considered unlikely but as an extra safety we can provide a bolton spring loaded lock to the Hot Stab. With this add-on the ROV must pull the spring-loaded lock pin whilst rotating the stab towards left to release the stab from receptacle. There will be fitted a wire-loop, monkey-fist or similar, to the lock pin to make it operable by an ROV.

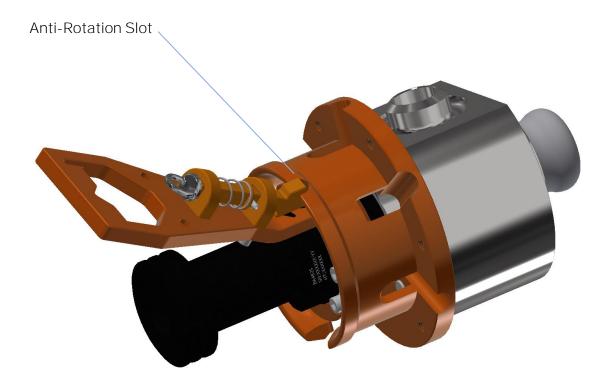


Figure 6, Typical Ø80 Hot Stab w. Additional lock installed and inserted into receptacle

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2.8. RECEPTACLE

Receptacles are delivered in alternative materials with different hydraulic ports. See product assembly drawing for detailed information, ref. APPENDIX 1

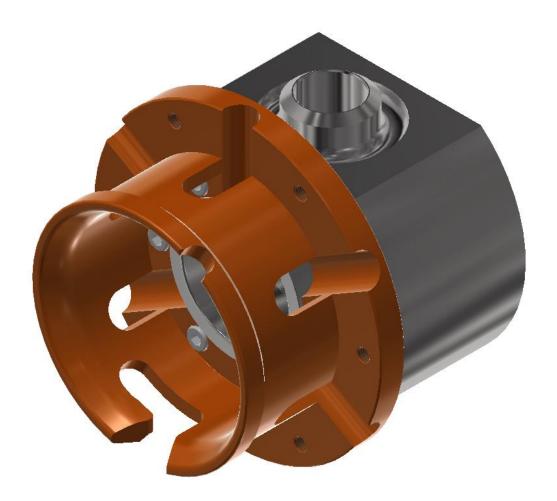


Figure 7, Typical Ø80 Single Port Receptacle with J-Lock Interface and Weld Neck

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2.9. PRESSURE GAUGE

The pressure gauge unit is **based on a 2" fig. 1502 Weco** coupling. The unit can be mounted to a Blue Logic Ø80 Hot Stab with fig. 1502 Weco as shown below. The pressure gauge is fully pressure balanced; this means the gauge will show how much greater the pressure is relative to ambient. Scaling and pressure rating on each gauge are custom for each delivery.

 P_1

 P_2

$$\Delta P = P_1 - P_2$$

Pressure in system=

Pressure in surrounding environment=

Pressure shown on gauge= ΔP



Figure 8 & 9 Pressure Gauge unit with 0-700Bar scale



Figure 10 Pressure Gauge fitted on an Ø80 Hot Stab

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2.10. CHECK VALVE

One-way check valve for connection to stab or receptacle thru 2" fig. 1502 Weco. The Check Valve will let you extrude the contents without anything returning. Cracking pressure is 2 bar to ambient as standard. Other cracking pressure available on request.



Figure 11 2" One-way check valve w. fig. 1502 Weco

2.11. FLOW METER

Blue Logic can also provide a flow meter which can be fitted to an Ø80 Hot Stab with 2" fig. 1502 Weco coupling. The flowmeter is battery powered and completely standalone so the stab with flowmeter can be flown freely without any power/com. cables attached to it. The display is resettable subsea by ROV. More info in dedicated manual: 500193-TD-0019



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- 3. INSTALLATION
- 3.1. RECEPTACLE
- 3.1.1. Installation of Receptacle

It is recommended to bolt the Ø80 Receptacle onto the subsea structure by use of the predrilled and threaded mechanical interface.

The receptacles may have different interfaces for installing. Interface details for each receptacle is available thru the individual Product drawings.

All Ø80 receptacles are symmetrical and can be mounted and stabbed from both sides. Depending on material selection; electrical connection between the receptacles and structure should be verified as part of the installation. Serrated washers or dedicated earth cables to be considered.

A variety of hydraulic port interface can be delivered upon customers' request. Examples shown in below figures.



Figure 14 Ø80 Receptacle with 2"BSP connection



Figure 15 Ø80 Receptacle with 2" WN and J-Lock interface



Figure 16 Ø80 Receptacle with 3/8" BSP connection, mainly for On-Deck pressure testing



Figure 17 Ø80 Receptacle with 2" WN and 2x J-Lock interface for dual entry

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4. OPERATION

4.1. PRE-DIVE CHECK

4.1.1. Stab

No.	Description	Chk/Verified
O1	Verify all fittings and hoses correct installed and secured	
02	Verify no leakages from hoses and connections	
03	Inspect all seals for damage. Replace if required	
04	Inspect Hot stab nose and body for mechanical damages and harmful scratches	
05	Inspect ROV handle for damages	
06	Inspect flex joint properly secured to stab body and ROV handle (if present)	
07	Verify functionality of flex joint. Ensure free to bend in all directions (if present)	
08	Inspect all hydraulic connectors, seals and valves	
09	Inspect all check valves for leakage (if relevant)	
10	Verify functionality of the locking system (Optional equipment)	

4.1.1.1. Dual Entry Pressure Stab

No.	Description	Chk/Verified
O1	Inspect all seals and O-rings for damage. Replace if required	
02	Inspect ROV handles (rope and orange hose) for damages and all knots	
03	Inspect all pressure relief ports and fittings (if applicable)	

4.1.2. Receptacle

No.	Description	Chk/Verified
O1	Visual inspect receptacle internal surface finish and entrance area if possible.	
02	Ensure correct installation of the receptacle and free distance for hot stab guide nose at the backside of the receptacle.	
03	Verify no leakages from hoses, piping and receptacle check valves.	
04	Verify ROV access and free space in front of receptacle and panel.	

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4.2. CONNECTION

Stabs without J-lock system can be inserted directly into the receptacle without special preparations independent of axial rotation.

Stabs with J-lock system must be aligned with the corresponding J-lock slot in the receptacle prior to insertion. When fully inserted into the receptacle and J-lock groove, the stab handle shall be rotated clockwise 30 degrees (until full stop) to lock the stab into the receptacle.

During insertion of the Hot Stab into the Receptacle there will be friction between Receptacle and stab seal system. Approximate stab force is 200N. This will however vary depending on temperature, seal material, lubrication etc.

Dual entry pressure stabs are only made to be extracted by an ROV, not inserted/stabbed. Installation by hand on deck before subsea installation. When inserting, make sure stab is placed fairly in centre. Outer O-rings to be fully visible from both sides.

4.3. DISCONNECTION

Note:

Prior to disconnection, hydraulic pressure in the system should be bled off to reduce leakages to the environment. Since the Hot Stab system is a pressure balanced connection system, disconnection can be performed independently of system pressure.

Note:

Stab pull-out force will increase significantly if the system is pressurised, and damage to seals might occur.

Stab with J-lock to be rotated CCW to end stop to allow pull-out. Stab without J-lock to be pulled out directly.

4.4. POST DIVE CHECK

No.	Description	Chk/Verified
O1	Inspect all fittings and hoses for damages and loose connection	
02	Inspect all seals for damage. Replace if required	
03	Inspect Hot stab nose and body for mechanical damages and harmful scratches	
04	Inspect ROV handle for damages	
05	Inspect flex joint (if present), verify functionality	
06	Clean all equipment and flush thoroughly with fresh water	
07	Dry the Hot Stab by use of pressurised air or by use of dry clean rags	
08	Apply preservation oil and secure in storage box.	

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5. MAINTENANCE

5.1. SEAL REPLACEMENT

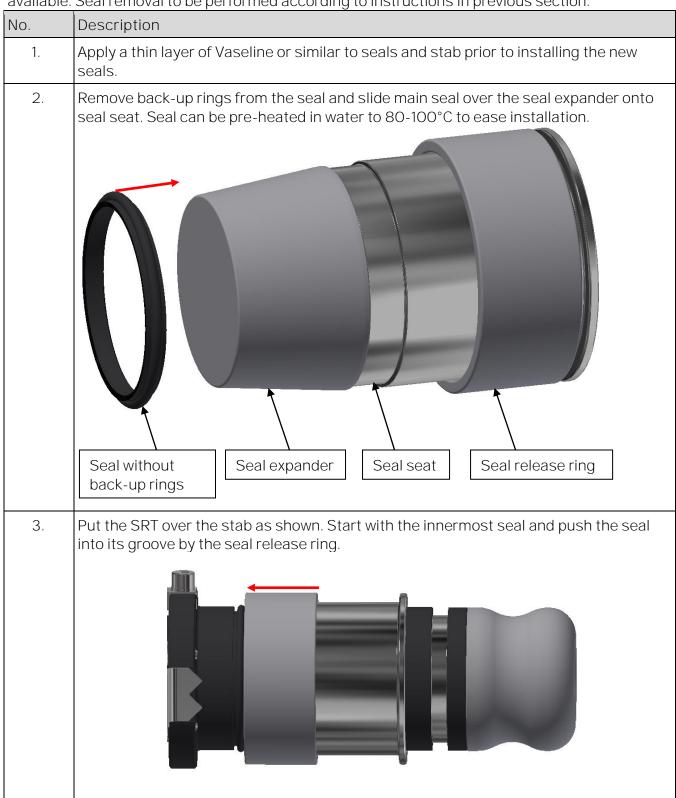
Replacement of the stab seals is feasible to perform in field as described in the below section. The procedure covers both stab and pressure stab as the seals are identical. Is Seal Replacement Tool being available, see section 5.2 for installation instructions.

No.	Description			
1.	Place the stab upside down in a vice or similar.			
2.	Gently remove the back-up rings in PEEK (if present), avoid damage as they will be reused. Blow the split of the ring with compressed air to ease removal.			
3.	Start with the seal closest to the D-handle. Use a long nose plier to grab the top of the seal and pull out of the seal groove.			
4.	Push the seal along the stab and over the other seals to remove from stab. If re-use not an option; cut the seal for quick removal.			
5.	Repeat until all seals have been removed. Clean stab and seal grooves thoroughly to remove all debris and foreign objects. Inspect seal groove surfaces for damage.			
6.	Apply a thin layer of Vaseline or similar to seals and stab prior to installing the new seals.			
7.	Install the seals starting with the one closest to the stab-nose. The following seals can then be pushed over the first seal. The seals are bi-directional, thus installable both ways.			
8.	Finally install two back-up rings (if present) per seal according to figure. The back-up rings <u>must</u> be installed as shown:			



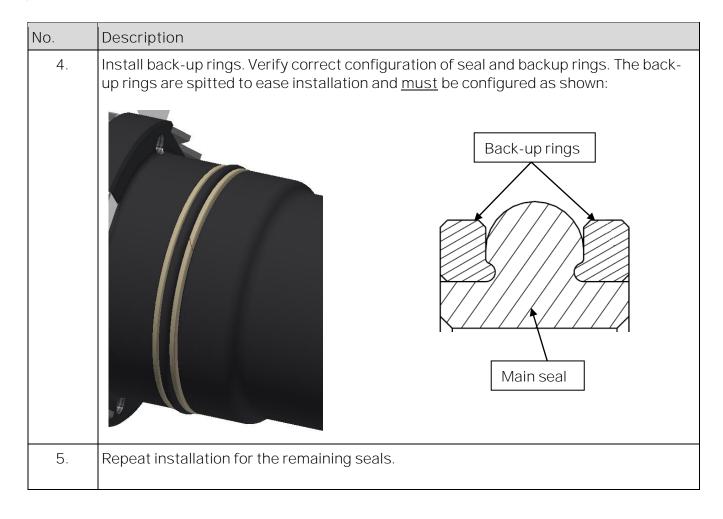
5.2. SEAL INSTALLATION USING SEAL REPLACEMENT TOOL

The below sequence describes seal replacement if Blue Logic Seal Replacement Tool, SRT, is available. Seal removal to be performed according to instructions in previous section.





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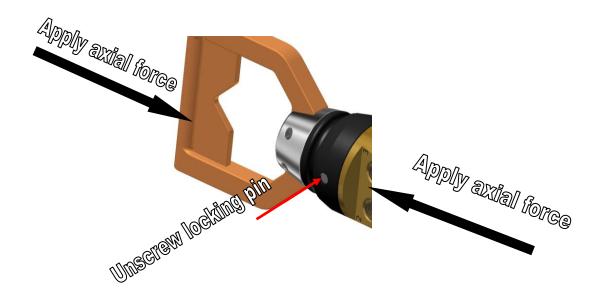
5.3. ROVINTERFACE

No special maintenance is required for the ROV handle/ ROV interface. Inspect for damages and replace if required.

5.4. FLEX JOINT

The flex joint can be removed and replaced by the following sequence:

- Secure the Stab in a vice thus applying axial force between the Stab body and ROV Interface according to figure 18
- 2. Unscrew the securing pin by use of a standard screwdriver
- 3. Remove the securing pin
- 4. Remove the Hot Stab from the vice
- 5. Remove the Flex element and ROV handle from Hot Stab body
- 6. Insert the new flex joint
- 7. Secure the Hot Stab in a vice and apply force between the Hot Stab body and ROV interface until the securing pin can be easily inserted by hand.
- 8. Apply a thin layer of Loctite 243 on threads and rotate the securing pin by use of a screwdriver and secure by applying approx. 3Nm torque.
- 9. Remove the Hot Stab from the Vice
- 10. Inspect Hot Stab and verify functionality of flex joint.



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Figure 18 Flex joint installation

5.5. SPARE PARTS

For available spare parts, please visit: http://e-sea.bluelogic.no/main.aspx



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6. STORAGE AND TRANSPORT

6.1. PRESERVATION FOR STORAGE

No.	Description	Chk/Verified
O1	Visual inspect the Hot Stab for damages and wear.	
02	Ensure correct post dive sequence followed (se above sections)	
03	Apply preservation oil and secure in storage box.	

6.2. TRANSPORT

No special precautions are needed for transport. However, the following should be verified:

Correct packing; preferably by use of aluminium transport box

Verify the following:

- 1. Sender Name and Address clearly visible
- 2. Receiver Name and address clearly visible
- 3. Inventory list correct filled out

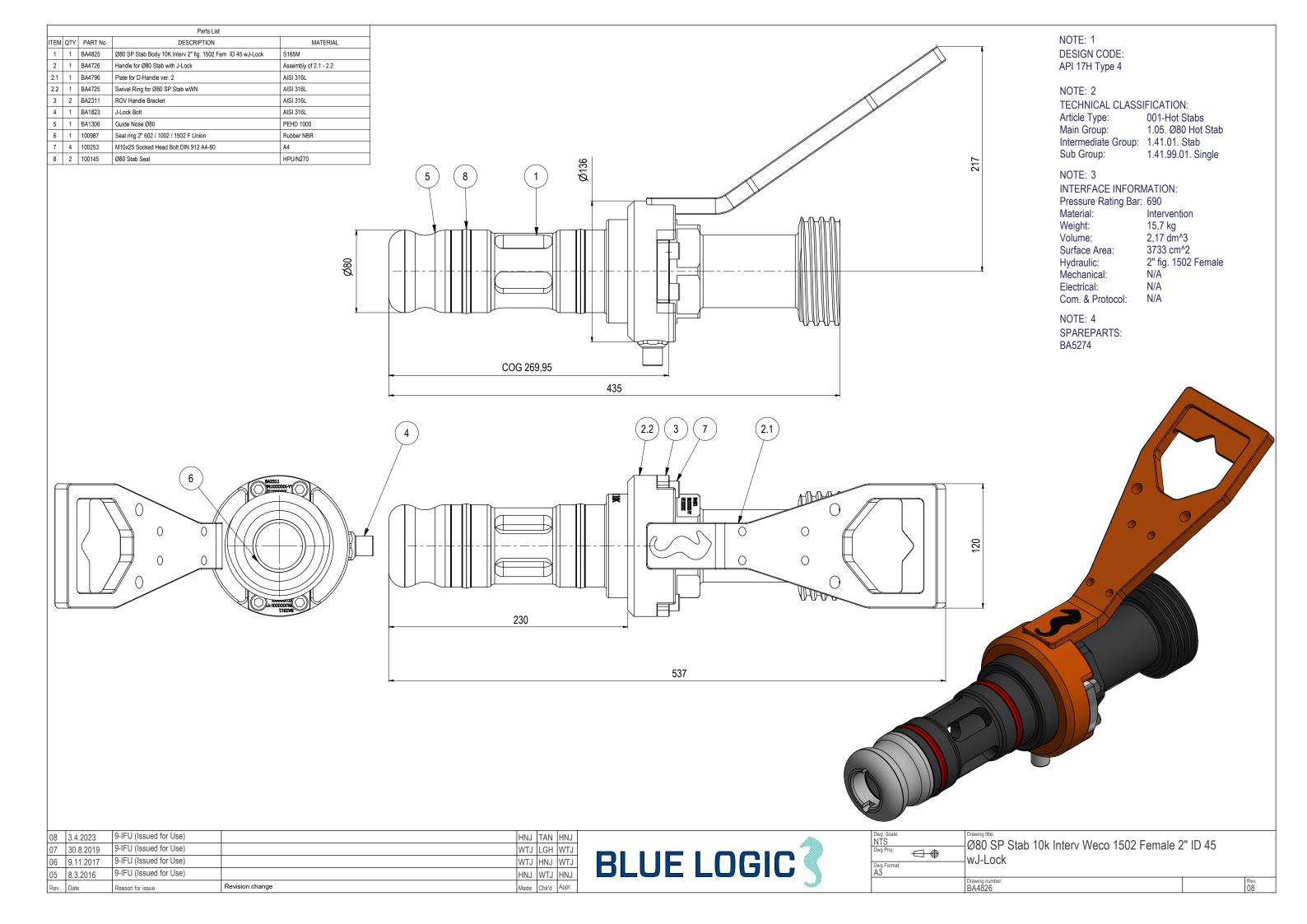
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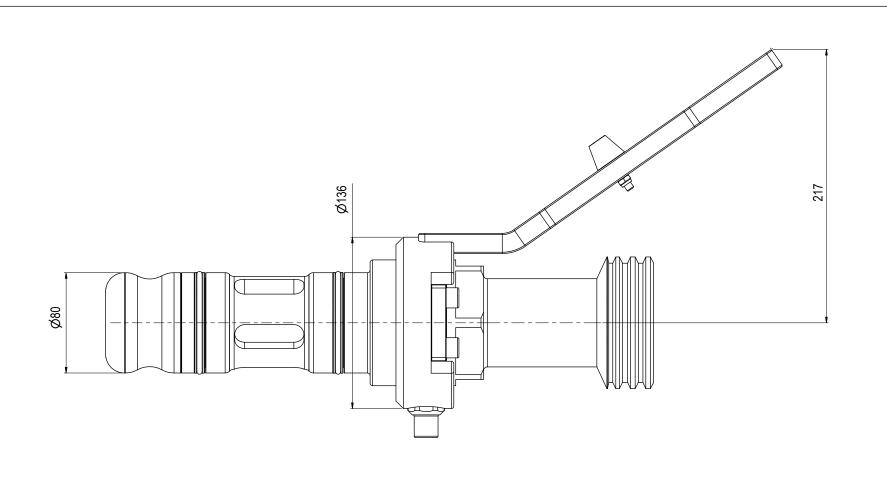
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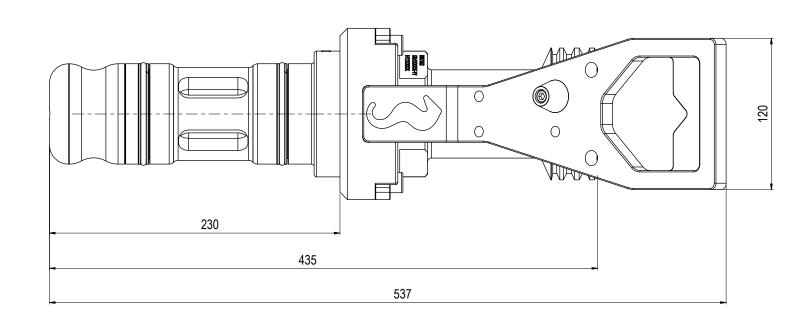
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APPENDIX 1 DRAWINGS

Dwg. No.	Drawing Title
BA4826	Ø80 SP Stab 10k Interv Weco 1502 Female 2" ID 45 wJ-Lock
BB7562	Ø80 SP Stab 740bar Interv 2" fig. 1502 Female wJ-Lock
BA2363	Ø80 SP Press Stab 10k Long-Term w J-Lock
BC1047	Ø80 SP Press Stab 10k Long-term J-Lock with Bleed Off Function
BA5621	Ø80 SP Press Stab 10k Long-Term
BA4609	Ø80 SP Prot Stab Vented Long-Term
BA4772	Ø80 SP Rec 10k Interv 2" Full Bore wJ-Lock 2" Weco 1502 FM
BA4658	Ø80 SP Rec 10k Interv 2" Weco 1502
BA4822	Ø80 SP Rec 10k Long-term 2" Full Bore wJ-Lock 2" WN Sch 160
BA4652	Ø80 SP Rec 10k Long-Term WN 2" Sch 160
BA5849	Ø80 SP Rec 450Bar Long-Term 2" Full Bore wJ-Lock
BA8204	Ø80 SP Rec 450Bar Long-term WN 2" Sch 80 wJ-Lock x2
BA5754	Ø80 SP Rec 5k Interv 2" BSP w J-Lock
BA9497	Ø80 SP Rec 5k Interv 2" BSP with J-Lock and Fishtail
BB1527	Ø80 SP Rec 5k Long-term 2" Full Bore wJ-Lock 2" WN Sch 40 S
BB1528	Ø80 SP Rec 5k Long-term WN 2" Sch 40 S
BA1587	Ø80 SP Park Rec Vented Long-Term
BA4845	Ø80 SP Park Rec w J-Lock
BA1819	Ø80 SP Rec J-Lock Interface
BA4727	Ø80 SP Rec J-Lock Interface version 2







NOTE: 1 DESIGN CODE: API 17H Type 4 API 6A

NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.01. Stab
Sub Group: 1.41.99.01. Single

NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: 740
Material: Intervention
Weight: 16,3 kg
Volume: 2,24 dm^3
Surface Area: 3862 cm^2

Hydraulic: Weco Fig. 1502 Female 2"

Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A

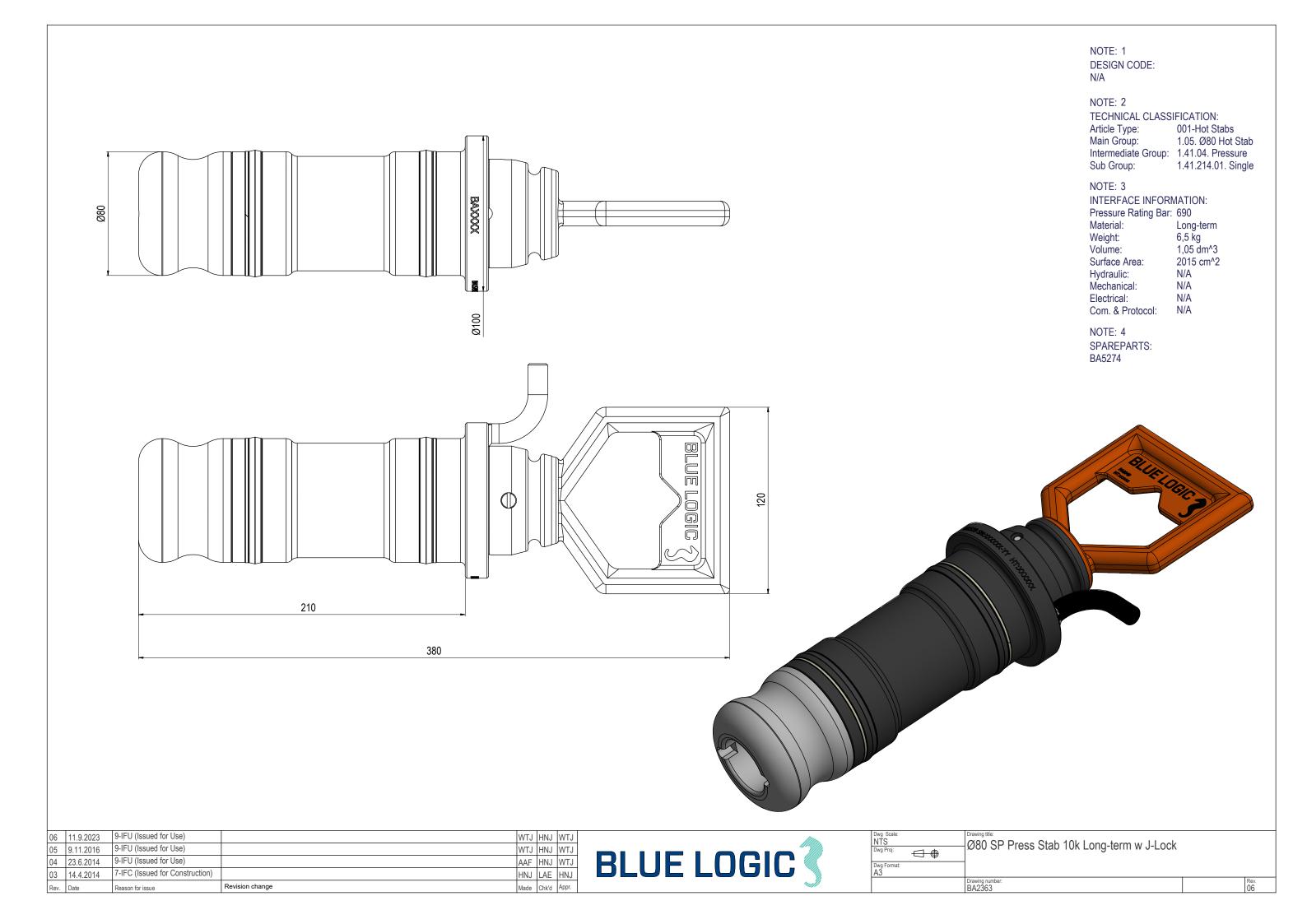
NOTE: 4 SPAREPARTS: BA5274

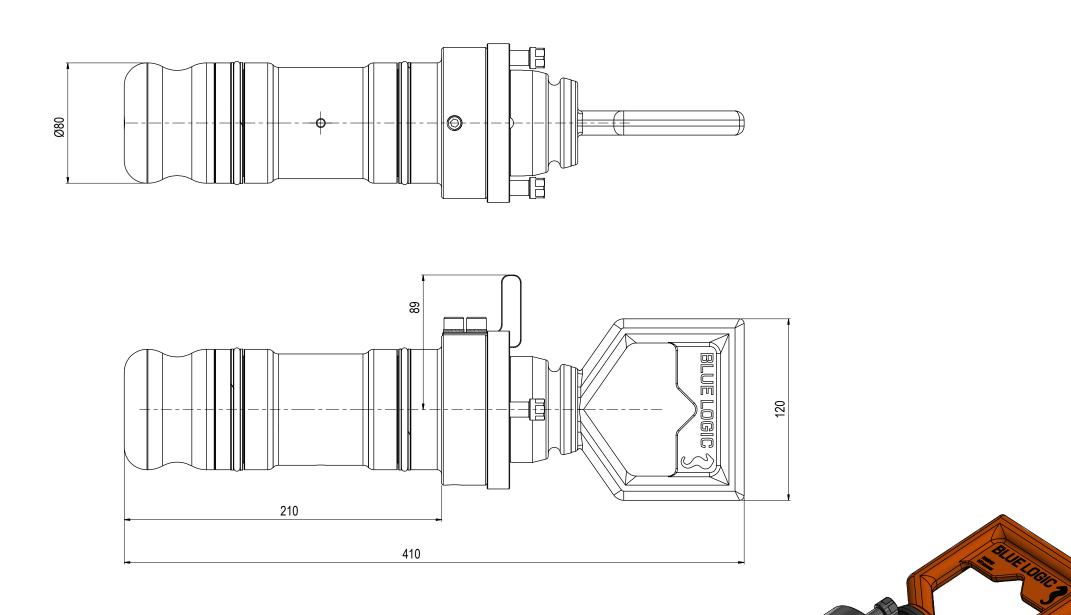


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01	1.2.2022	7-IFC (Issued for Construction)		HNJ	SNA	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



Scale:		Drawing title: $ \varnothing 80 \text{ SP Stab } 740 \text{bar Interv 2" fig. } 1502 \text{ Fema}$	ام	
^{) Proj:} - {	⇒	wJ-Lock	1302 I Giliale	
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		Drawing number: BR7562		Rev.





NOTE: 1 DESIGN CODE: API 17H Type 4 API 6A

NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.04. Pressure
Sub Group: 1.41.214.01. Single

NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: 690
Material: Long-term
Weight: 9,3 kg
Volume: 1,4 dm^3
Surface Area: 3157 cm^2
Hydraulic: N/A
Mechanical: N/A
Electrical: N/A

NOTE: 4

Com. & Protocol:

ADDITIONAL INFORMATION:

N/A

Ø80 Single Port Pressure Stab (blind stab) designed according to API 17H Type 4.

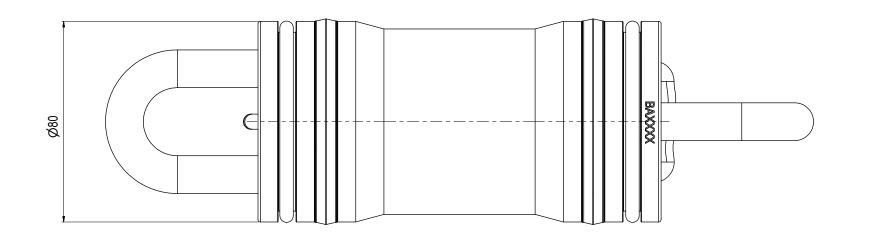
Fabricated in Super Duplex (S32750/S32760) material with Xylan coating and intended for long-term subsea service. Integrated, manipulator-operated J-lock mechanism to lock the Stab into the Receptacle after connection. The pressure stab is equipped with a ROV operated pressure relief function, to ensure pressure bleed off prior to disconnection of the stab. Bleed off function is activated by pulling the ROV handle prior to de-activation of the main J-Lock function.

Bleed off pull out force max approx. 200kg @ 690bar Stab nose in PEHD 1000 for gentle guiding of Stab into Receptacle. Seal material is RU15 (HNBR) with back up rings in PEEK.

R	Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.
0)1	11.4.2024	2-IFT (Issued for Tender)		HNJ	NA	NA
0)2	28.5.2024	7-IFC (Issued for Construction)		HNJ	TAN	HNJ
0)3	21.8.2024	7-IFC (Issued for Construction)		WTJ	KOS	LGH
0)4	17.9.2024	9-IFU (Issued for Use)		HNJ	TAN	HNJ
1							



Dwg Scale: NTS	Drawing title:	1005	e.
Dwg Proj:	Ø80 SP Press Stab 10k Long-term J-Lock wE	wBleed Off Functio	
Dwg Format:			
	Drawing number: BC1047		Rev. 04



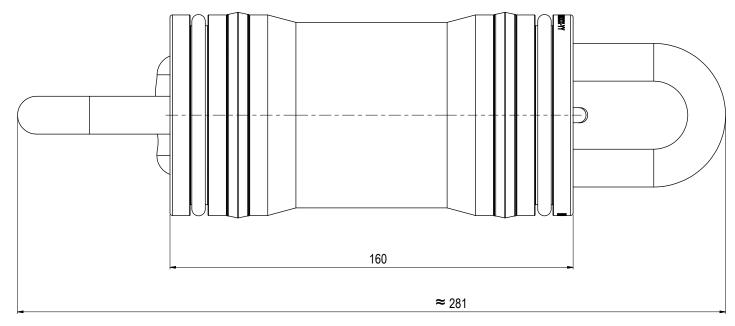
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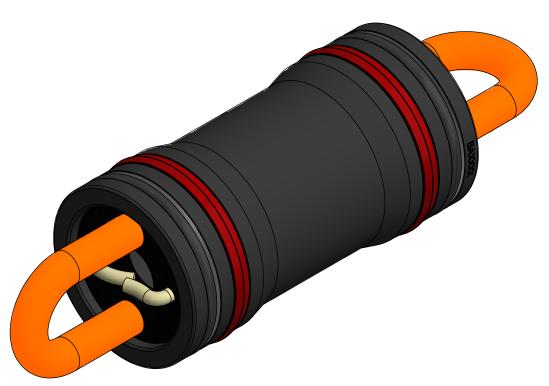
NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.04. Pressure
Sub Group: 1.41.214.01. Single

NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: 690
Material: Long-term
Weight: 3 kg
Volume: 0,51 dm^3
Surface Area: 1556 cm^2
Hydraulic: N/A
Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A



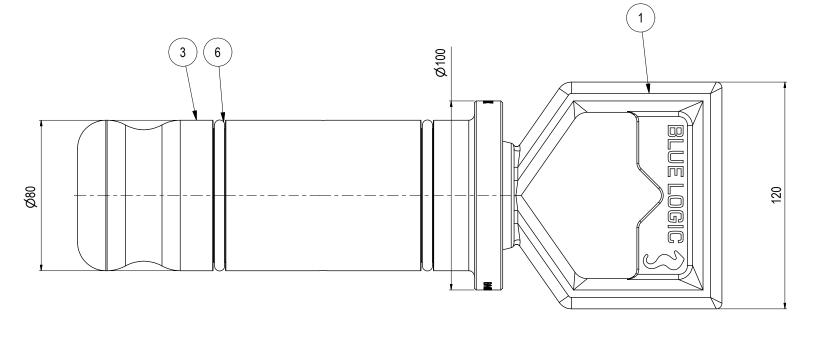


03	14.11.2017	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
02	2.12.2014	9-IFU (Issued for Use)		HNJ	WTJ	HNJ
01	18.9.2014	9-IFU (Issued for Use)		WTJ	LGH	HNJ
Rev	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



Scale:	Drawing title:	
	Ø80 SP Press Stab 10k Long-term	
roj: 🔲 🌐	200 St. 1 1633 Stab Tok Long-term	
ormat:		
	Drawing number:	Rev.

	Parts List					
ITEM	QTY	PART No.	DESCRIPTION	MATERIAL		
1	1	PA0049	D-Handle	UNS J93404 Casted Super Duplex		
2	1	BA5244	Casted Fastening Bracket with Rod for D-handle 165mm	S32750 SUPER DUPLEX		
3	1	BA4608	Ø80 SP Prot Stab Body Vented Long-term	PEHD 1000		
4	1	BA3032	Lock Nut for Prot Stabs	S32750 SUPER DUPLEX		
5	1	BA2958	Lock Bolt for D-Handle	S32760 SUPER DUPLEX		
6	2	101158	O-Ring	Rubber		



NOTE: 1 DESIGN CODE: API 17H Type 4

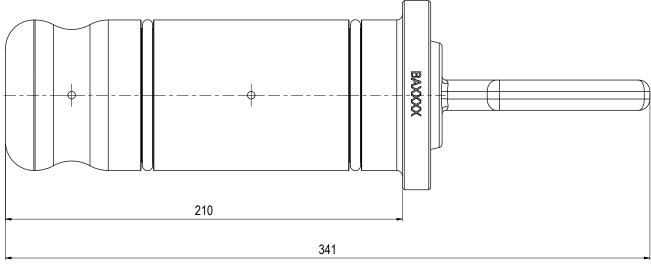
NOTE: 2

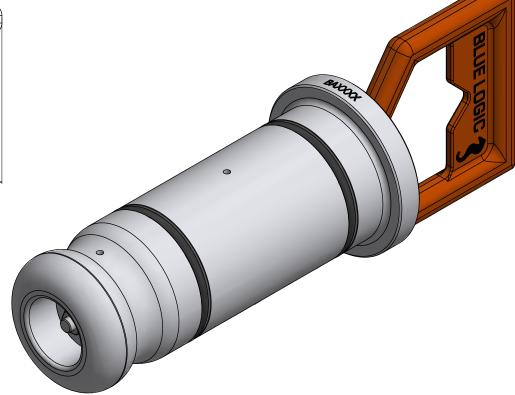
TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.03. Protection
Sub Group: 1.41.213.01. Single

NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: Vented
Material: Long-term
Weight: 2,2 kg
Volume: 1,19 dm^3
Surface Area: 1394 cm^2
Hydraulic: N/A
Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A

NOTE: 4 SPAREPARTS: BA5274

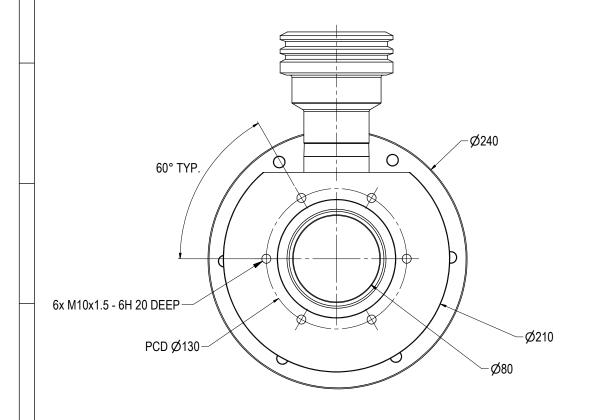


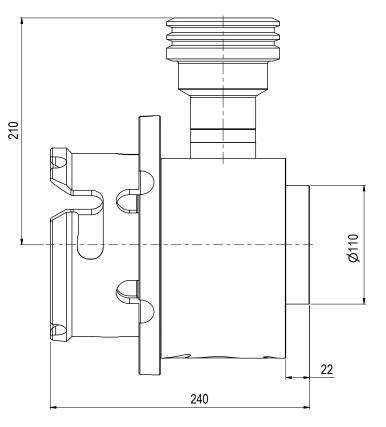


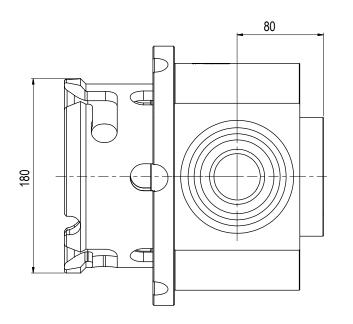
06	3.2.2025	9-IFU (Issued for Use)		HNJ	TAN	HNJ
05	7.9.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
04	21.3.2018	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
03	10.11.2016	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



g Scale: TS	Drawing title:	
g Proj:	Ø80 SP Prot Stab Vented Long-term	
g Format: }		
	Drawing number:	Rev.







NOTE: 1 **DESIGN CODE:** N/A

NOTE: 2

TECHNICAL CLASSIFICATION: Article Type: 001-Hot Stabs 1.05. Ø80 Hot Stab Main Group: Intermediate Group: 1.41.02. Receptacle 1.41.100.01. Single Sub Group:

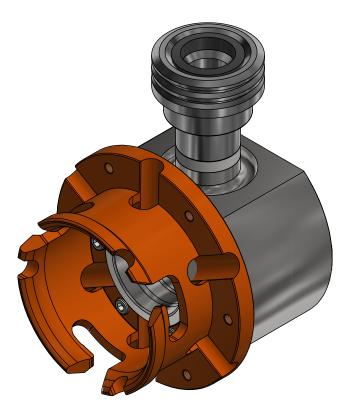
NOTE: 3

INTERFACE INFORMATION: Pressure Rating Bar: 690 Material: Intervention Weight: 35,5 kg 4,54 dm³ 4650 cm² Volume: Surface Area: N/A Hydraulic:

6x M10 @ PCD130 N/A Mechanical:

Electrical: Com. & Protocol:

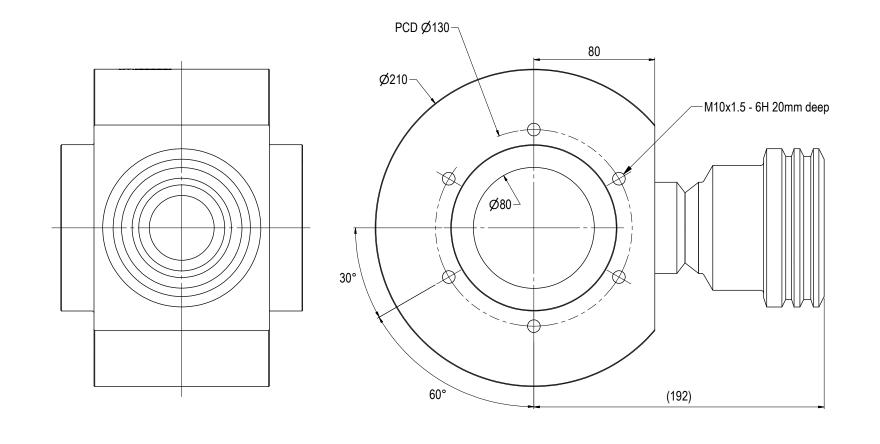
NOTE: 4 SPAREPARTS: BA5275



Rev	Date	Reason for issue	Revision change	Made	Chk'd	Appr.	
05	7.3.2016	9-IFU (Issued for Use)		HNJ	WTJ	HNJ	
06	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ	1
07	14.12.2021	9-IFU (Issued for Use)		WTJ	LGH	WTJ]
80	21.2.2025	9-IFU (Issued for Use)		WTJ	LGH	WTJ	
							_



	Drawing title:
NTS Dwg Proj:	Ø80 SP Rec 10k Interv 2" Full Bore
	wJ-Lock 2" Weco 1502 FM
Dwg i oilliat.	
A 2	



NOTE: 1 DESIGN CODE: N/A

NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hotstabs
Main Group: 1.05. Ø80-Hotstabs
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION:

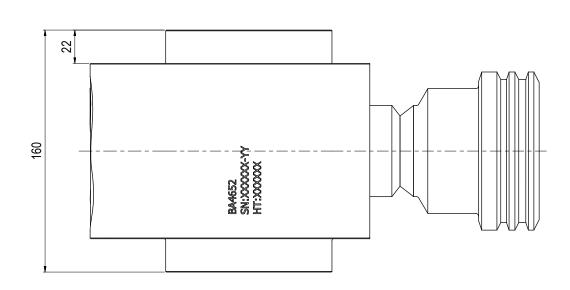
Pressure Rating Bar: 690 Material: Interve

Material: Intervention
Weight: 28,1 kg
Volume: 3,58 dm^3
Surface Area: 2574 cm^2
Hydraulic: 2" Weco 1502

Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A

NOTE: 4 SPAREPARTS:

N/A





OR INFORMATION ONLY

02	11.1.2019	3-IFI (Issued for Information)		AAF	WTJ	HNJ
01	3.1.2014	3-IFI (Issued for Information)		LGH	N/A	N/A
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.

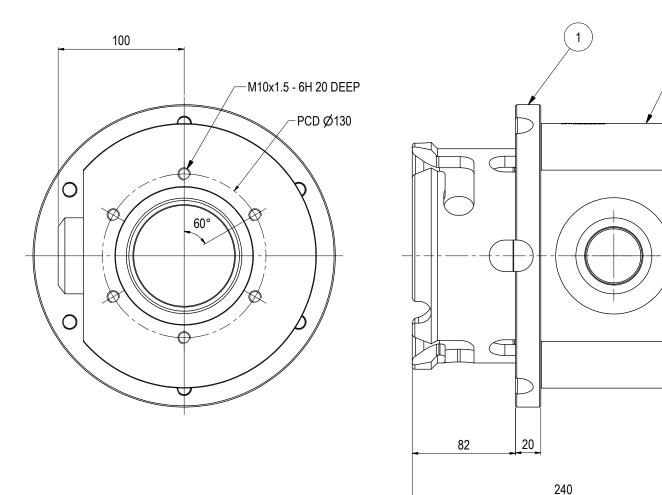
BLUE LOGIC \$\frac{3}{2}

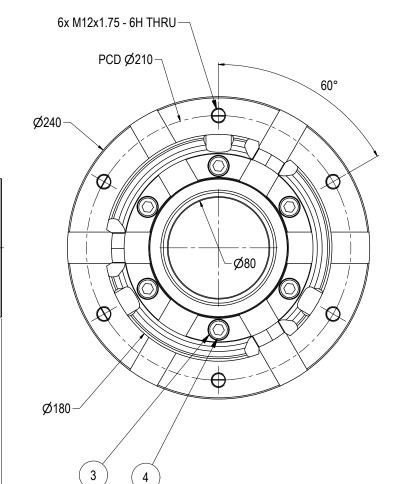
Dwg Scale:	Drav
NTS	
Dwg Proj:	a
Dwg Format:	ω
A3	

Ø80 SP Rec 10k Interv 2" Weco 1502

me: Drawing number:

	Parts List						
ITEM	QTY	PART No.	DESCRIPTION	MATERIAL			
1	1	BA4727	Ø80 SP Rec J-Lock Interface version 2	AISI 316L			
2	1	BA4652	Ø80 SP Rec 10k Long-term WN 2" Sch 160	S32760 SUPER DUPLEX			
3	6	101020	Washer	UNS S31254 6MO			
4	6	100594	Bolt	A4			





NOTE: 1 DESIGN CODE: Interface: API 17H

Material/Testing: API 6A/ISO 10423/NORSOK MDS 57

NOTE: 2

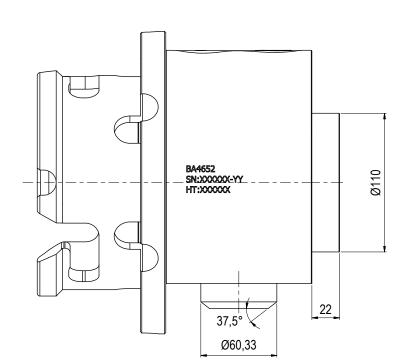
TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

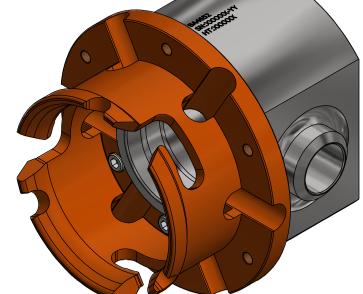
NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: 690
Material: Long-term
Weight: 32,3 kg
Volume: 4,12 dm^3
Surface Area: 3938 cm^2
Hydraulic: 2" WN Sch 160
Mechanical: 6 X M12 @ PCD 210
Electrical: N/A

Com. & Protocol: N/A

NOTE: 4 SPAREPARTS: BA5275

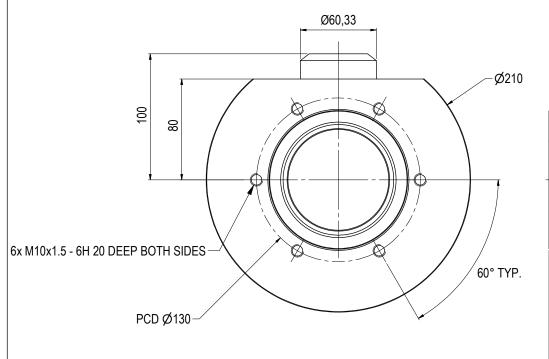


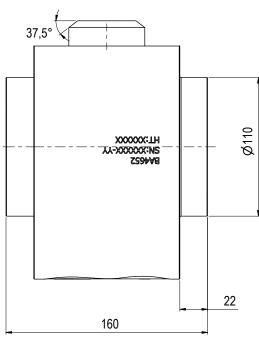


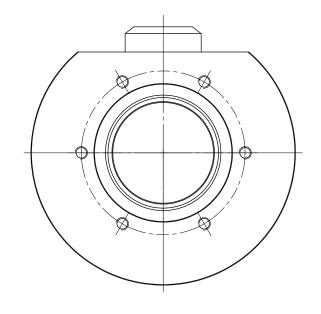
09	22.3.2024	9-IFU (Issued for Use)		HNJ	TGU	HNJ
08	14.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
07	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
06	5.3.2018	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



vg Scale: TS	Drawing title: Ø80 SP Rec 10k Long-term 2" Full Bore wJ-L	ook 2"
·9···0j.	WN Sch 160	UCK Z
vg Format: 3	VVIV GGII 100	
	Drawing number: BA4822	







NOTE: 1 DESIGN CODE: API 17H Type 4 API 6A

NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

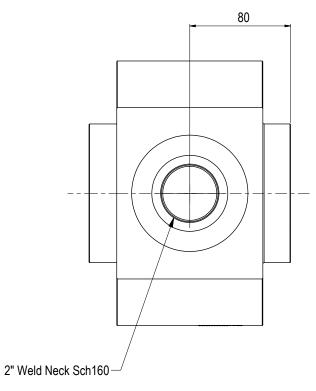
INTERFACE INFORMATION: Pressure Rating Bar: 690

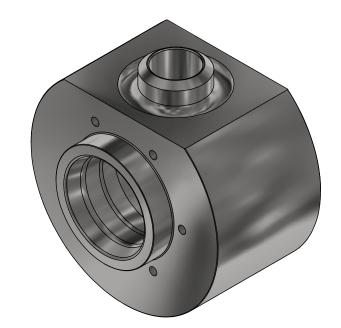
Material: S32760 SUPER DUPLEX

Weight: 25,1 kg
Volume: 3,2 dm^3
Surface Area: 2016 cm^2

Hydraulic: 2" Weld Neck Sch 160

Mechanical: N/A
Electrical: NA
Com. & Protocol: NA

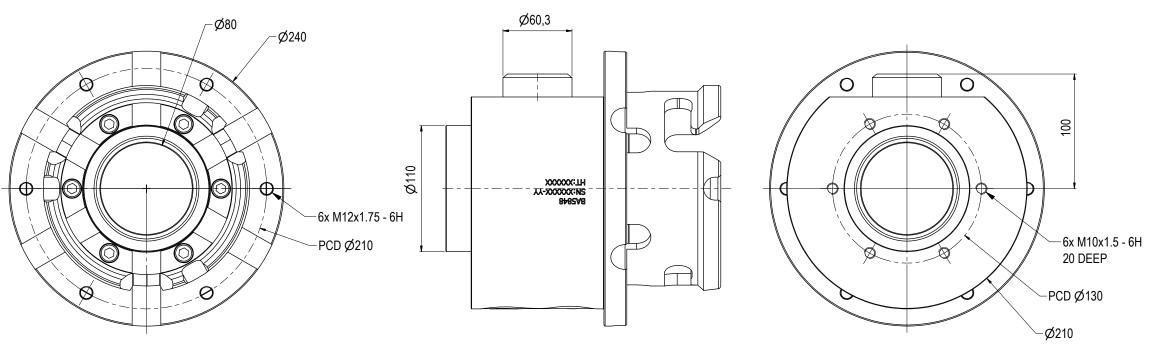




1						
07	22.3.2024	9-IFU (Issued for Use)		HNJ	TGU	HNJ
06	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
05	5.3.2018	7-IFC (Issued for Construction)		WTJ	HNJ	WTJ
04	16.3.2016	9-IFU (Issued for Use)		HNJ	LAE	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



	Unless Noted Otherwise:	Dwg Scale: NTS	Drawing title: Ø80 SP Rec 10k Long-term WN 2)" Sch 160	
	Dim. Tol: NS-ISO 2768-1	Dwg Proj:	Soo St. Nec Tok Long-term Wiv 2	. 3011 100	
	Roughness:	Dwg Format: A3			
n	Fillet Rad: Corner Rmax:	Break Edges: (R. Alt. 45°) R= 0.1-0.5	Drawing number: BA4652		Rev. 07



NOTE: 1 DESIGN CODE: API 17H

NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION: Pressure Rating Bar: 450 Material: Long-term 32,1 kg Weight: 4,09 dm^3 Volume: 3944 cm^2 Surface Area: 2" WN Sch 80 Hydraulic: Mechanical: N/A Electrical: N/A

N/A

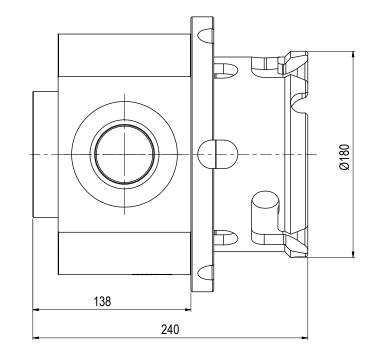
NOTE: 4 SPAREPARTS: BA5275

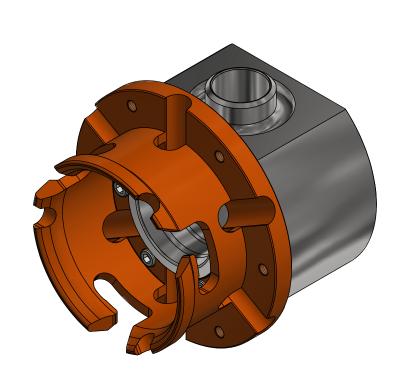
Com. & Protocol:

NOTE: 5

ADDITIONAL INFORMATION:

J-Lock made in 316L and Receptacle in Super duplex.

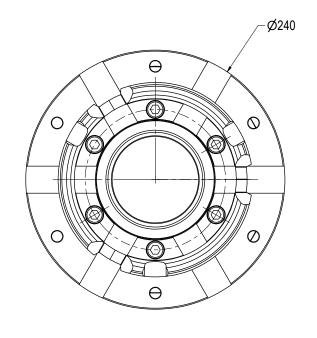


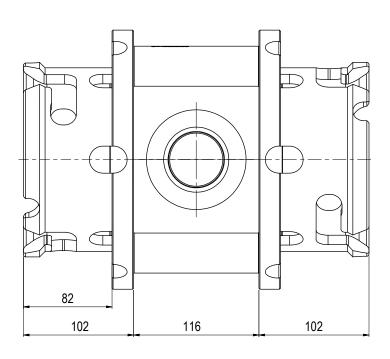


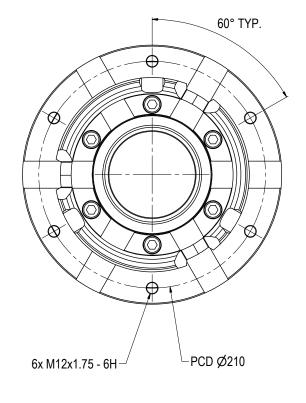
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.
04	12.7.2016	9-IFU (Issued for Use)		HNJ	LAE	HNJ
05	26.10.2018	9-IFU (Issued for Use)		HNJ	LAE	HNJ
06	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
07	14.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ



lwg Scale: NTS	Ø80 SP Rec 450Bar Long-term 2" Full B wJ-Lock 2" WN Sch 80		
g			
lwg Format: \3	WIN GOIL GO		
_	Drawing number: BA5849		







NOTE: 1 DESIGN CODE: API 17H

NOTE: 2

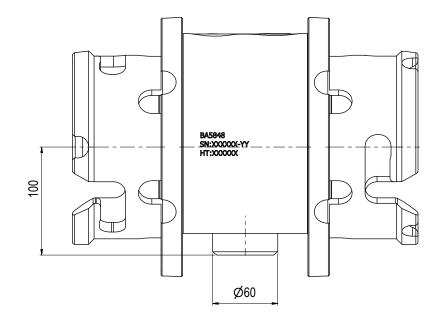
TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

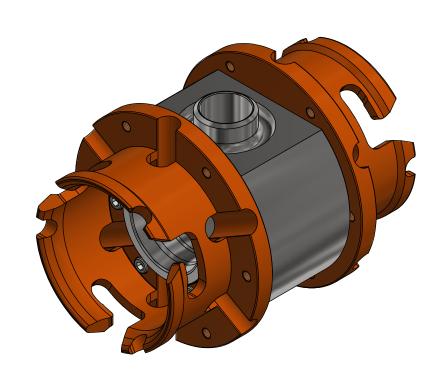
NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: 450
Material: Long-term
Weight: 39,3 kg
Volume: 5,01 dm^3
Surface Area: 5866 cm^2
Hydraulic: WN 2" Sch 80

Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A

NOTE: 4 SPAREPARTS: BA5275

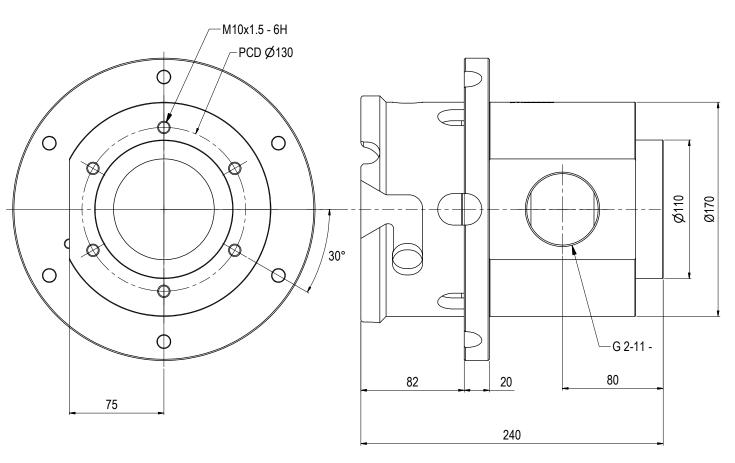


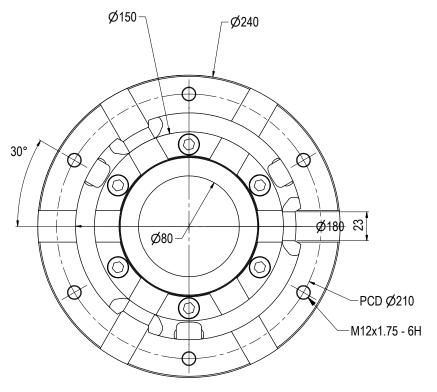


07	15.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
06	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
05	26.10.2018	9-IFU (Issued for Use)		HNJ	LAE	HNJ
04	12.7.2016	9-IFU (Issued for Use)		HNJ	LAE	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



wg Scale:	Drawing title:		
IŤS	Ø80 SP Rec 450Bar Long-term WN 2" Sch 80)	
gsj. <u>F ////</u>	wJ-Lock x2	,	
wg Format: N3	WO-LOOK AZ		
	Drawing number:		





NOTE: 1

DESIGN CODE: N/A

NOTE: 2

TECHNICAL CLASSIFICATION:

Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION:

Pressure Rating Bar: 345

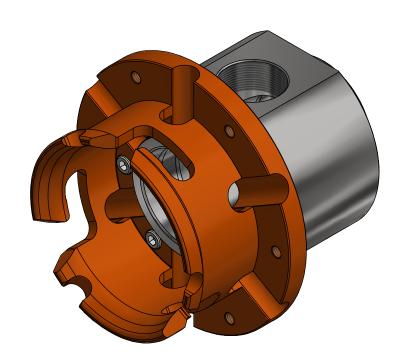
Material: Intervention
Weight: 22,8 kg
Volume: 2,91 dm^3
Surface Area: 3523 cm^2
Hydraulic: 2" BSP
Mechanical: N/A

Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A

NOTE: 4 SPAREPARTS: N/A

NOTE: 5
ADDITIONAL INFORMATION:

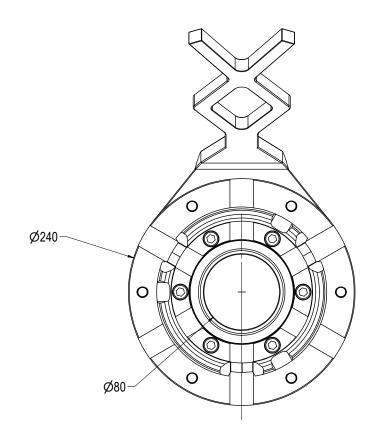
J-Lock made in 316L and Receptacle in Super duplex.

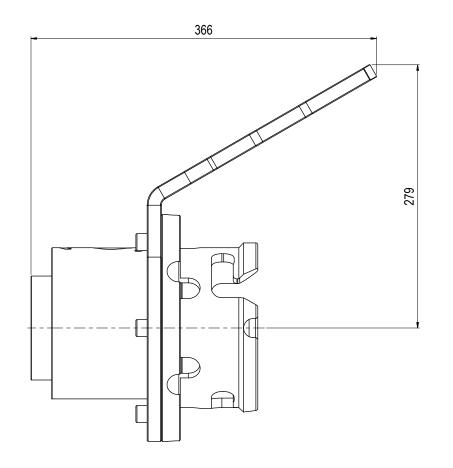


	30.10.2014	Reason for issue	Revision change	1		Appr.
01	30.10.2014	7-IFC (Issued for Construction)		ТВА	IAE	ТВА
02	7.3.2016	7-IFC (Issued for Construction)		HNJ	WTJ	HNJ
03	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
04	14.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ



Scale:	Drawing title:	
S	Ø80 SP Rec 5k Interv 2" BSP with J-Lock	
Proj:	200 SI TREC SK IIILEIV 2 DSI WILII 3-LOCK	
Format:		
	Drawing number:	Rev.







DESIGN CODE:

NA

NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION:

Pressure Rating Bar: 345

Material: Intervention
Weight: 26,9 kg
Volume: 3,43 dm^3
Surface Area: 4691 cm^2
Hydraulic: 2" BSP
Mechanical: N/A
Electrical: N/A
Com. & Protocol: N/A

NOTE: 4

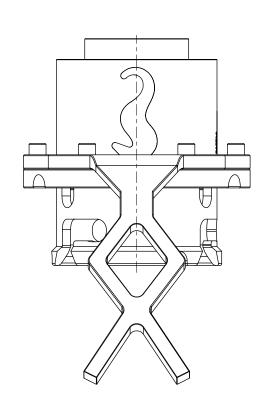
SPAREPARTS:

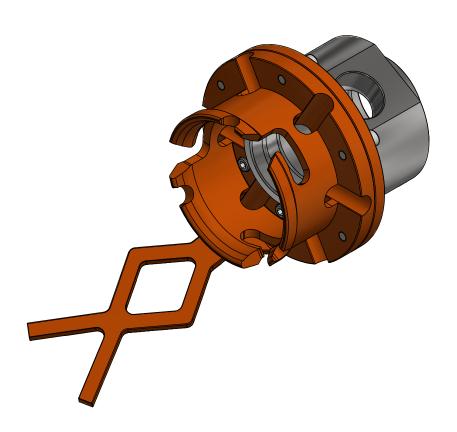
N/A

NOTE: 5

ADDITIONAL INFORMATION:

J-Lock made in 316L and Receptacle in Super duplex.

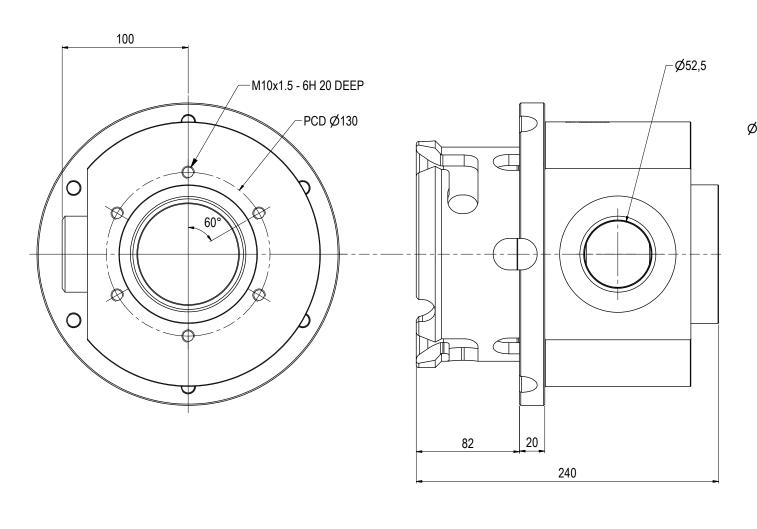


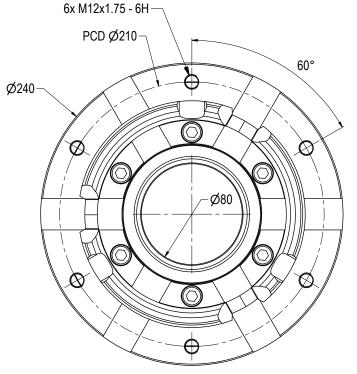


Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.
01	9.1.2017	2-IFT (Issued for Tender)		HNJ	NA	NA
02	10.3.2017	9-IFU (Issued for Use)		HNJ	LGH	HNJ
03	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
04	14.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ



Dwg Scale: NTS	Drawing title:	
Dwg Proj:	Ø80 SP Rec 5k Interv 2" BSP with J-Lock and	d Fishtail
Dwg Format: A3		
	Drawing number: BA9497	





NOTE: 1 DESIGN CODE: N/A

NOTE: 2

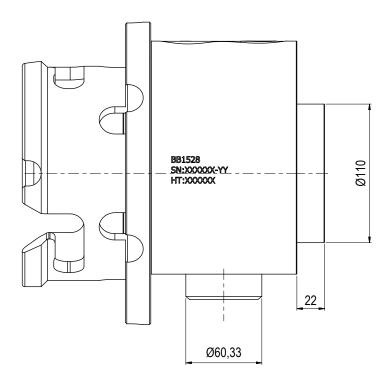
TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: 345
Material: Long-term
Weight: 32 kg
Volume: 4,08 dm^3
Surface Area: 3947 cm^2
Hydraulic: 2" WN Sch 40 S
Mechanical: 6 X M12 @ PCD 210

Electrical: N/A Com. & Protocol: N/A

NOTE: 4 SPAREPARTS: BA5275

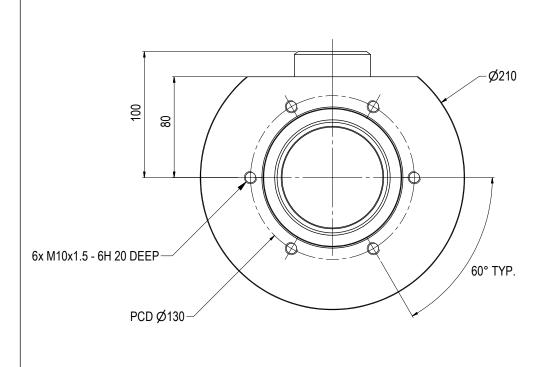


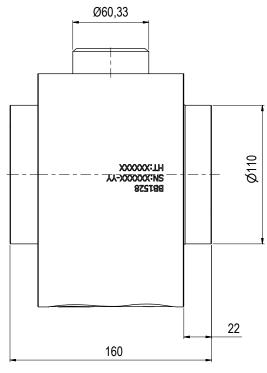


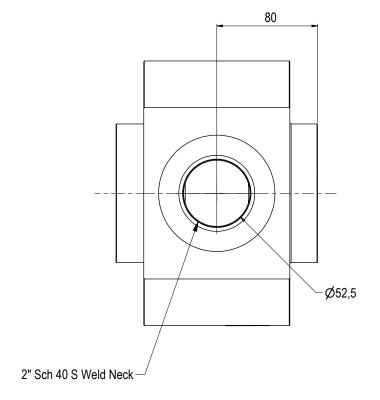
03	15.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
02	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
01	19.3.2018	9-IFU (Issued for Use)		HNJ	WTJ	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



Scale: S Proj:	Ø80 SP Rec 5k Long-term 2" Full Bore wJ-Lo WN Sch 40 S	ck 2"
	Drawing number: BB1527	









N/A

NOTE: 2

TECHNICAL CLASSIFICATION: Article Type: 001-Hot Stabs Main Group: 1.05. Ø80 Hot Stab Intermediate Group: 1.41.02. Receptacle Sub Group: 1.41.100.01. Single

NOTE: 3

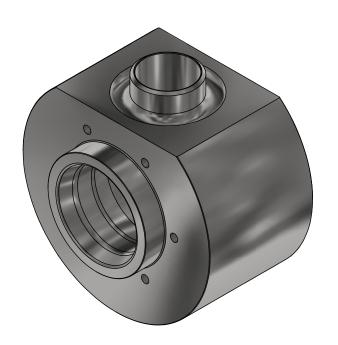
INTERFACE INFORMATION:

Pressure Rating Bar: 345
Material: F53/F55 SUPER DUPLEX

24,8 kg 3,16 dm^3 Weight: Volume: 2025 cm^2 Surface Area:

Hydraulic: 2" Weld Neck Sch 40 S

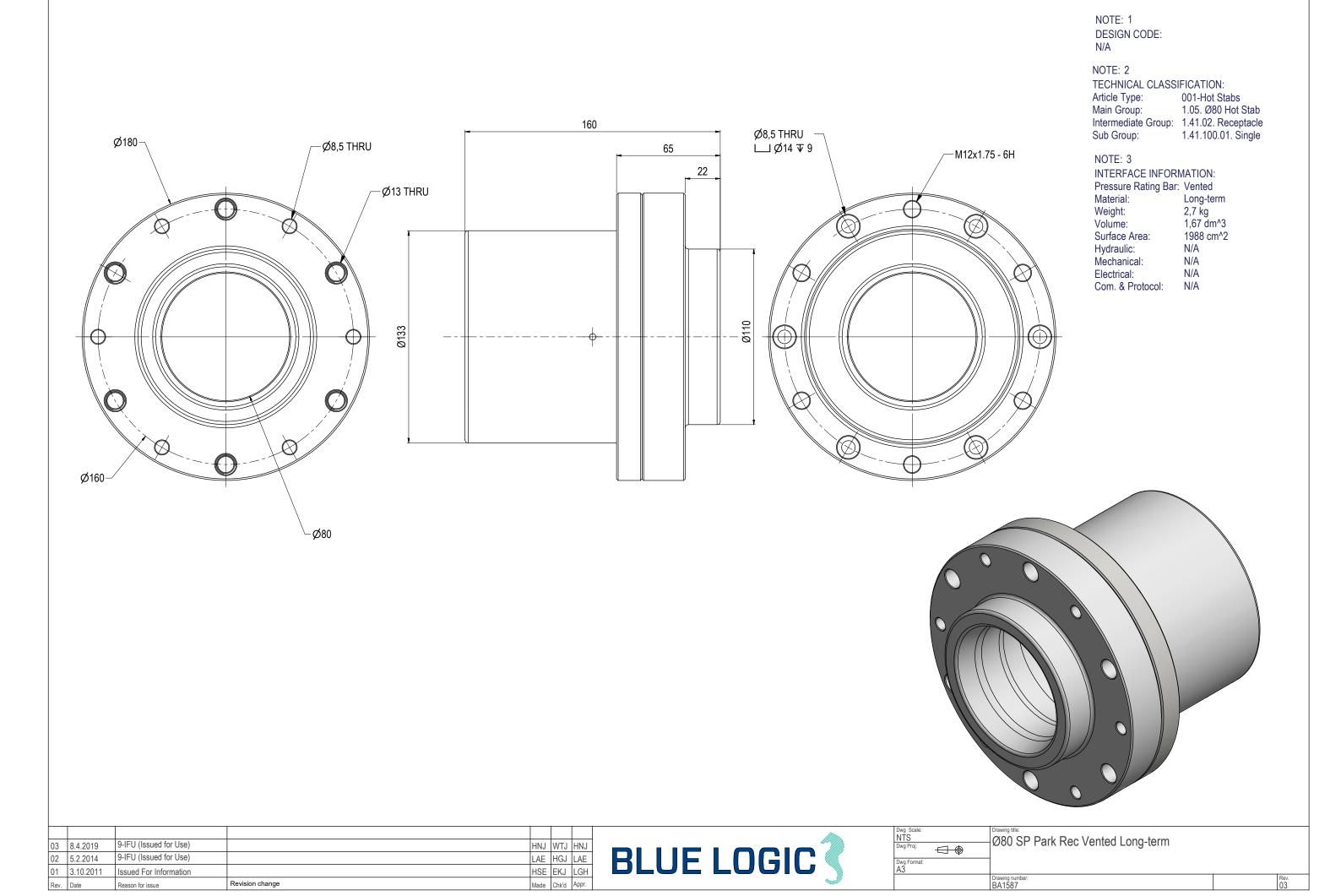
Mechanical: N/A Electrical: NA Com. & Protocol: NA



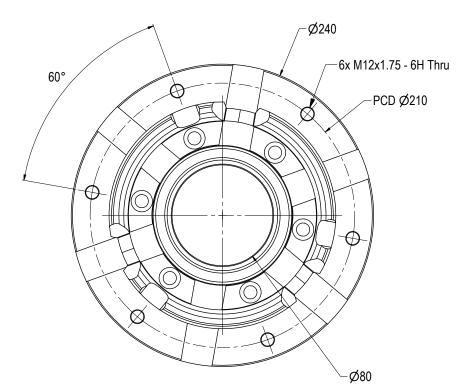
02	9.1.2019	7-IFC (Issued for Construction)		WTJ	HNJ	WTJ
01	19.3.2018	7-IFC (Issued for Construction)		HNJ	WTJ	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.

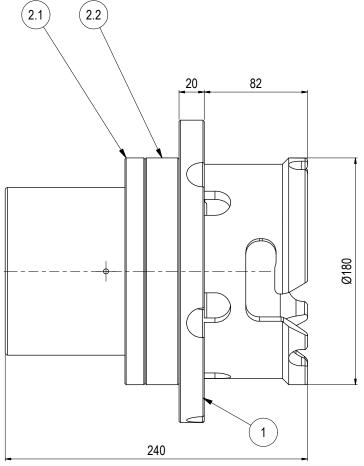


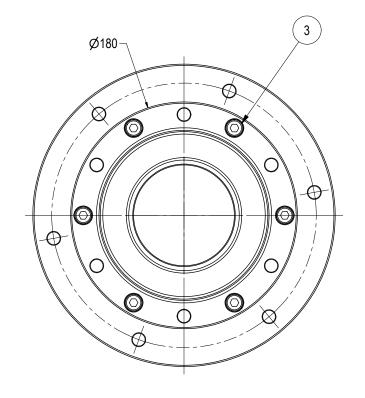
wg Scale:	Drawing title:	
IŤS	Ø80 SP Rec 5k Long-term WN 2" Sch 40 S	
wg Proj:	200 SI Nec 3k Long-term WN 2 3cm 40 3	
wg Format: N3		
	Drawing number:	Rev.



	Parts List					
ITEM	QTY	PART No.	DESCRIPTION	MATERIAL	APPEARANCE	
1	1	BA4727	Ø80 SP Receptacle J-Lock Interface version 2	AISI 316L	Xylan Coated Orange	
2	1	BA1587	2" SP Parking Receptacle	Assy of 2.1 to 2.2	N/A	
2.1	1	BA1585	Ring for Ø80 Park Rec	S32750 SUPER DUPLEX	Bare Material	
2.2	1	BA1583	Ø80 SP Park Rec	PEHD 1000	PEHD White	
3	6	100173	M8x45 Socked Head Bolt DIN 912 A4-80	A4	Bare Material	







NOTE: 1 DESIGN CODE: API 17H Type 4

NOTE: 2

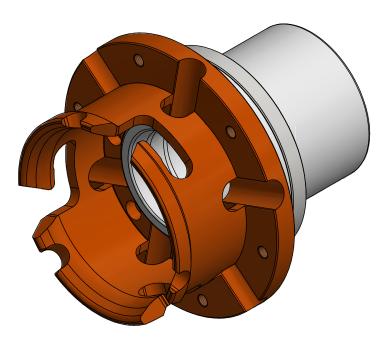
TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION: Pressure Rating Bar: Vented Material: Long-term 9,8 kg Weight: Volume: 2,58 dm^3 3870 cm^2 Surface Area: Hydraulic: N/A N/A Mechanical: N/A Electrical: N/A Com. & Protocol:

NOTE -

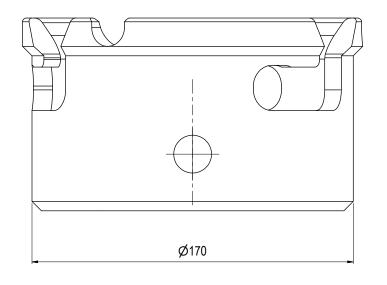
Electrical continuity to be measured after assermbled into structure. Max 0,1 Ohm

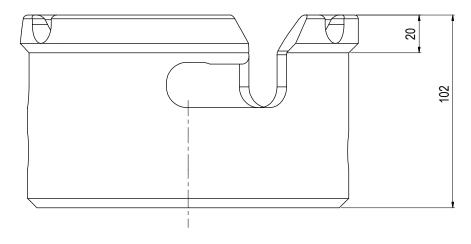


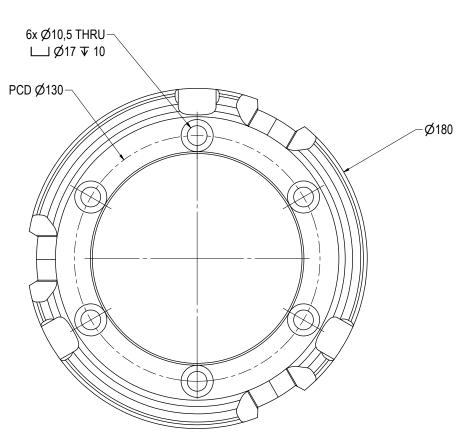
06	14.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
05	8.4.2019	9-IFU (Issued for Use)		HNJ	WTJ	HNJ
04	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
03	7.3.2016	9-IFU (Issued for Use)		HNJ	WTJ	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



Dwg Scale:	Drawing title:	
NTS	Ø80 SP Park Rec Vented with J-Lock	
Dwg Proj:	boo of Tark Nec Vented with 5-Lock	
Dwg Format: A3		
	Drawing number: BA4845	Rev. 06









NOTE: 2

TECHNICAL CLASSIFICATION:
Article Type: 001-Hot Stabs
Main Group: 1.05. Ø80 Hot Stab
Intermediate Group: 1.41.02. Receptacle
Sub Group: 1.41.100.01. Single

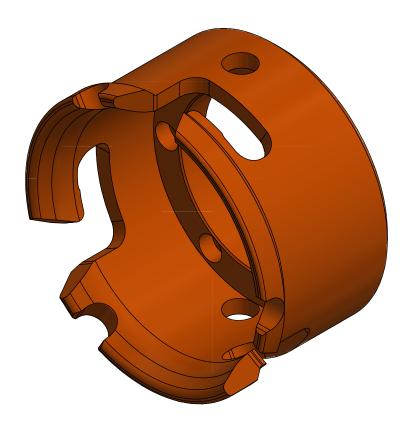
NOTE: 3

Mechanical:

INTERFACE INFORMATION:
Pressure Rating Bar: N/A
Material: AISI 316L
Weight: 4,5 kg
Volume: 0,58 dm^3
Surface Area: 1198 cm^2
Hydraulic: N/A

J-Lock Interface

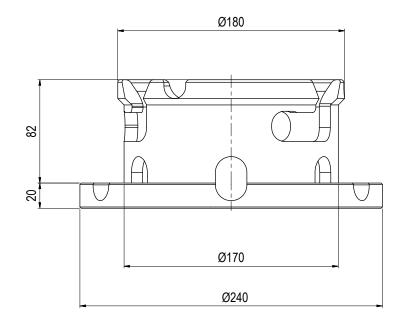
Electrical: N/A Com. & Protocol: N/A

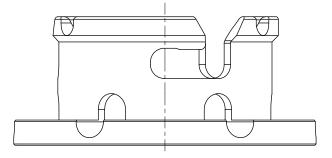


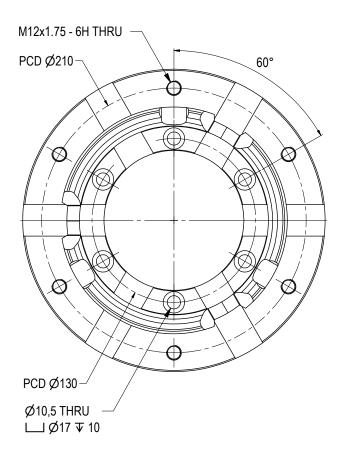
04	14.12.2021	7-IFC (Issued for Construction)		WTJ	HNJ	WTJ
03	2.1.2018	7-IFC (Issued for Construction)		HNJ	WTJ	HNJ
02	8.3.2012	7-IFC (Issued for Construction)		LGH	N/A	N/A
01	3.10.2011	3-IFI (Issued for Information)		LGH	N/A	N/A
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



Unless Noted Otherwise:		Ø80 SP Rec J-Lock Interface	
Dim. Tol: NS-ISO 2768-1M	Dwg Proj:	SP Nec 3-Lock Interface	
Roughness: Ra3,2	Dwg Format: A3		
	Break Edges: (R. Alt. 45°) R= 0,1-0,5	Drawing number: BA1819	Rev. 04









NOTE: 2

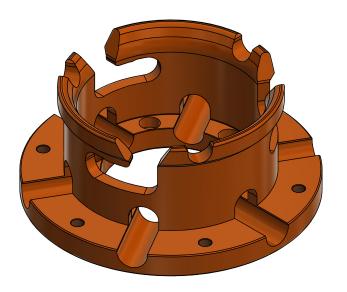
TECHNICAL CLASSIFICATION: Article Type: Main Group: 001-Hot Stabs 1.05. Ø80 Hot Stab Intermediate Group: 1.41.02. Receptacle Sub Group: 1.41.100.01. Single

NOTE: 3

INTERFACE INFORMATION:
Pressure Rating Bar: N/A
Material: AISI 316L
Weight: 7 kg
Volume: 0,89 dm^3 1775 cm^2 Surface Area: Hydraulic: N/A

6 X M12 @ PCD 210 N/A Mechanical:

Electrical: Com. & Protocol: N/A



06	14.12.2021	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
05	9.1.2019	9-IFU (Issued for Use)		WTJ	HNJ	WTJ
04	12.7.2016	9-IFU (Issued for Use)		HNJ	LAE	HNJ
03	7.3.2016	9-IFU (Issued for Use)		HNJ	LGH	HNJ
Rev.	Date	Reason for issue	Revision change	Made	Chk'd	Appr.



Unless Noted Otherwise: Dim. Tol: NS-ISO 2768-1 Roughness:	Dwg Scale: NTS Dwg Proj: Dwg Format:	Drawing title: Ø80 SP Rec J-Lock Interface version 2		
Ra Fillet Rad:	A3 Break Edges:	Drawing number:		Rev.
Corner Rmax:	(R. Alt. 45°) R= 0.1-0.5	BA4727		06