

Product datasheet

Standard Funnel SSF.xxx1.xxxx.xxx

1 General			Note
1.1	Model name	ClampOn Standard Funnel	
1.2	Service description	Non-invasive, non-intrusive mounting fixture for a ClampOn DSP Subsea Instrument	1
1.3	Model number	See section 8 for model nomenclature	1
1.4	Serial number	YY-MM-XXXX-SF, unique for each unit	2

2 Physical			
2.1	Dimensions	See section 7 for typical dimensions	1
2.2	Funnel material	Carbon steel (S355) and PEHD	3
2.3	Fastener material	A4-80 (ISO 3506-1/-2)	4
2.4	Surface area	0.5 m ² [5.4 ft ²]	1
2.5	Surface area, coated	0.37 m ² [4.0 ft ²]	1
2.6	Weight	11 kg [24.3 lb]	1
2.7	Coating	NORSOK M-501, system 7B	5
2.8	Cathodic protection	Anode, or connection to client CP	6
2.9	Equipment marking	Stainless steel marking plate	7
2.10	U-slot jumper exit	Parallel or perpendicular to pipe direction	



3 Environmental			Note
3.1	Maximum installation depth	3 048 m [10 000 ft]	8
3.2	Pipe surface temperature	-40 °C to +50 °C / +150 °C [-40 °F to +122 °F / +322 °F]	9
3.3	Storage temperature	-18 °C to +50 °C [0 °F to +122 °F]	

4 Operation			
4.1	Suitable for pipe size	5" NPS (OD 141.3 mm) to 36" NPS (OD 914.4 mm)	
4.2	Vibration	Endurance tested to API 17F:2017	
4.3	Design life	30 years	10

5 Installation			
5.1	Principle of installation	Clamped to the outside of the pipe	11, 12
5.2	Location	Straight section or in a bend	11, 12
5.3	Installation torque	M16 nut: 60 N m [44.3 ft lb] (damage >90 N m [66.4 ft lb]), M16 locking nut: 100 N m [73.8 ft lb] (damage >160 N m [118 ft lb])	12

6 Notes			
1.	This product datasheet describes a Standard Funnel with anode suitable for installation on a 6" NPS pipe (OD 168.3 mm), with standard mechanical envelope for installation of a ClampOn DSP Subsea Instrument. Key dimensions for this configuration of the Standard Funnel is shown in section 7. Various configurations of the funnel to accommodate other pipe sizes and instrument versions will affect dimensions, weight, and model number.		
2.	Serial number breakdown: YY (year of manufacture), MM (month of manufacture), XXXX (unique sequential ID), SF (standard funnel).		
3.	The Standard Funnel is manufactured from carbon steel S355 (tube and clamp) and PEHD (top). Stainless steel 316L funnel also available.		
4.	The A4-80 fasteners are suitable for non-insulated installations. For insulated installations, typical fastener material is L7M/7M (ASTM A320/A194).		
5.	Typical coating to NORSOK M-501 system 7B (carbon steel for ambient temperature <+50 °C), colour golden yellow (RAL 1004).		
6.	The Standard Funnel is fitted with M8 bolt for earth connection to subsea structure CP, various length earth straps available. For installations where it is not practical to connect the funnel to subsea structure CP, the funnel can be fitted with an anode.		
7.	A laser engraved stainless steel marking plate is bolted to the funnel.		
8.	Maximum installation depth is not limited by the funnel, but rather the instrument that it will host. The maximum installation depth for the ClampOn DSP Subsea Instrument is 3 048 m [10 000 ft].		
9.	The coating system used will limit what the maximum pipe surface temperature can be. For funnels coated to NORSOK M-501 system 7B or 7C, the maximum pipe surface temperature is +50 °C [+122 °F] or +150 °C [+322 °F] respectively. When considering the installation temperature limits, the instrument product datasheet must also be consulted to verify suitable temperature for the complete funnel and instrument installation.		
10.	The 30-year design life requires the funnel to be connected to CP, or that the funnel is supplied with a suitably sized anode. The funnel must also be coated to applicable NORSOK M-501 system (or similar coating system).		
11.	The Standard Funnel is primarily designed for mounting on a straight section of pipe but may also be custom designed for installation in a bend. Preferred installation location is determined by the function of the installed instrument. A funnel for a PIG Detector should be installed on a section of straight pipe, while a funnel for a Particle Monitor should be installed just downstream of a bend.		
12.	See funnel user manual for details on funnel installation.		

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7 Key dimensions

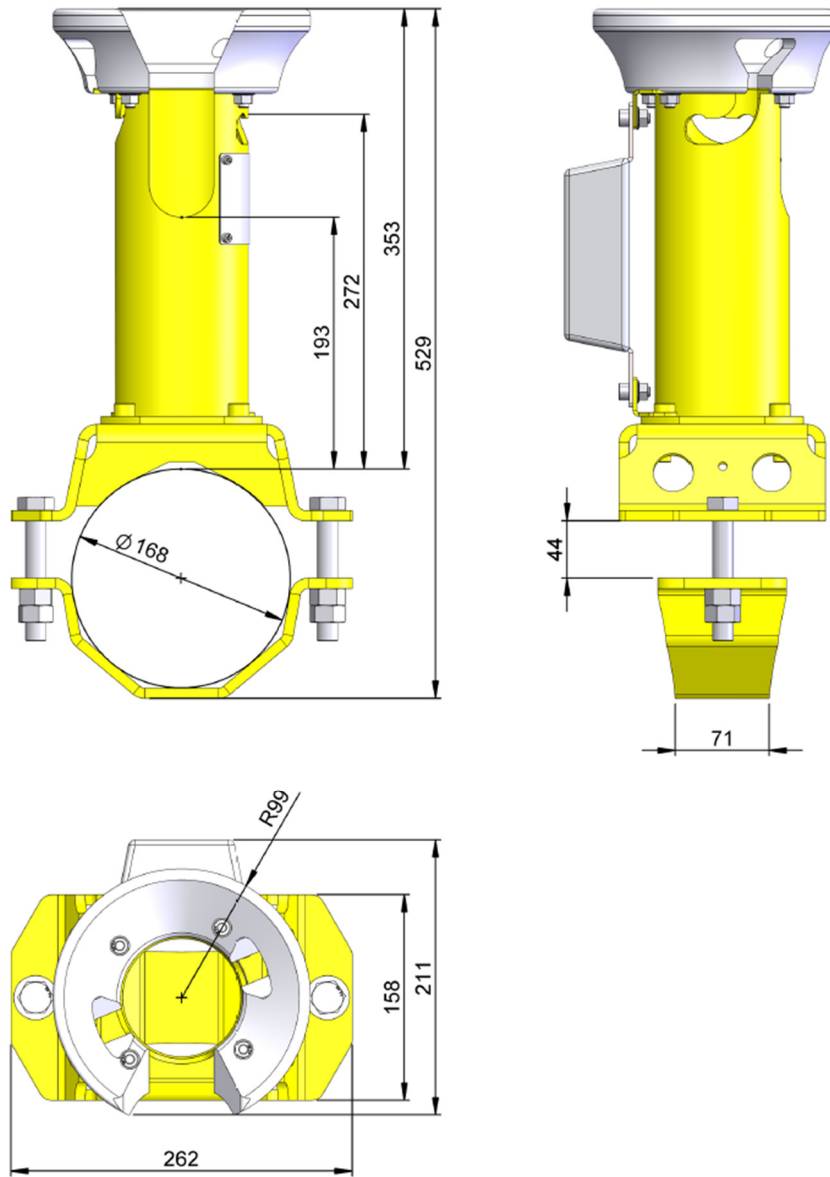


Figure 1: Key dimensions, Standard Funnel for 6" NPS pipe (OD 168.3 mm), with anode

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8 Model number nomenclature

Table 1: Nomenclature matrix for product category SSF, Subsea Standard Funnel

Product category		Mechanical																
AAA 1	BB 2 NPS, OD	B 3 J-slot height	B 4 Top	C 5 Jumper direction	C 6 Anode	C 7 Material: funnel and clamps	C 8 Material: fasteners	DD 9 Coating system	D 10 Colour									
SSF Subsea Standard Funnel	00	Not applicable	0	Not applicable	0	Not applicable	0	Not applicable	00	Not applicable								
	05	5" NPS, OD 141.3 mm	1	Standard 272 mm	1	Cone	1	Parallel (standard)	1	1 off A-19-1 anode for <0.6 m ²	1	Carbon steel S355 (standard)	1	A4-80 (standard) ISO 3506-1/-2	7B	NORSOK M-501 sys 7B (carbon steel <50 °C)	1	Golden yellow (RAL 1004)
	06	6" NPS, OD 168.3 mm	2	Standard extended, 272 mm + 63.5 mm			2	Perpendicular			2	Stainless steel 316L	2	ASTM A320 L7M (bolts) ASTM A194 7M (nuts)	7C	NORSOK M-501 sys 7C (carbon steel >50 °C)	2	Pure orange (RAL 2004)
	07	7" NPS, OD 193.7 mm									3	A4-50 ISO 3506-1/-2	7E	NORSOK M-501 sys 7E (stainless steel <50 °C)	3	Light grey (RAL 7035)		
	08	8" NPS, OD 219.1 mm									4	A4-70 ISO 3506-1/-2	7F	NORSOK M-501 sys 7F (stainless steel >50 °C)				
	09	9" NPS, OD 244.5 mm									5	ASTM A453 660D	FP	PTFE coating (Xylan)				
	10	10" NPS, OD 273.1 mm									6	Inconel 625						
	12	12" NPS, OD 323.9 mm																
	14	14" NPS, OD 355.6 mm																
	16	16" NPS, OD 406.4 mm																
	18	18" NPS, OD 457.2 mm																
	20	20" NPS, OD 508.0 mm																
	XX	Refer to NPS pipe size table for larger ODs																

Examples based on Table 1:

- 1) **SSF.0611.1111.7B1** is a Standard Funnel for a 6" NPS pipe (OD 168.3 mm), with standard J-slot height (272 mm), cone, jumper exit parallel to pipe direction, 1 off anode, carbon steel funnel, A4-80 fasteners, NORSOK M-501 system 7B coating, golden yellow colour.
- 2) **SSF.2611.2012.7C3** is a Standard Funnel for a 26" NPS pipe (XX in table = 26), with standard J-slot height (272 mm), cone, jumper exit perpendicular to pipe direction, no anode, carbon steel funnel, A4-80 fasteners, NORSOK M-501 system 7C coating, light grey colour.