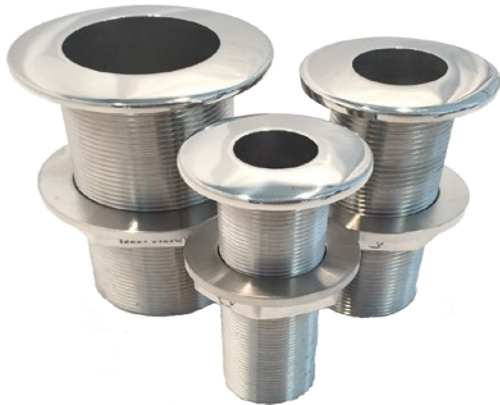


DATA SHEET

Thru Hull Skin Fittings



Specifically designed for underwater applications, the Arctic Steel Thru Hull fittings are cast in duplex 2205 stainless steel. These are unique in the marine market, providing much higher resistance to corrosion than regular 316, they are also significantly stronger than 316 and bronze making them ideal for a critical hull penetration fitting.



Applications

- Underwater applications
- Marine exhaust outlet

Sizes

- 1/2" to 4"

Features

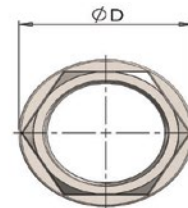
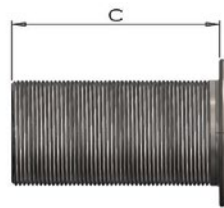
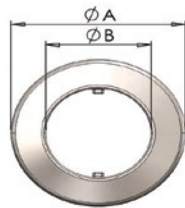
- BSP Thread
- Mirror polished outside flange

Approvals

- 3.1 Certificate available on request

Options

- Long reach fittings available in 3/4", 1", 1 1/2"
- Standard sizes from 1/2" to 4"
- Suitable for high temperature applications (up to 60°C)



Thread BSP (inch)	Size				Fits Inlet Scoops	Part #
	A (mm)	B (mm)	C (mm)	D (mm)		
1/2"	38	12	53	38	ISS140-100, IRS-90	TH/SF-050A
3/4"	45	18.5	65	45	ISS140-100, IRS-90	TH/SF-075A
1"	51.5	24	85	51.5	ISS140-100, IRS-90	TH/SF-100A
1 1/4"	63.5	32	85	63.5	ISS210-115, IRS-150	TH/SF-125A
1 1/2"	70	40	85	70	ISS210-115, IRS-150	TH/SF-150A
2"	84	50.8	100	84	ISS315-160, IRS-150	TH/SF-200A
2 1/2"	105	63	100	105	ISS315-160, IRS-150	TH/SF-250A
3"	116	75.5	124	116	ISS315-160, IRS-150	TH/SF-300A
4"	145	94	150	145	ISS410-206	TH/SF-400A
Long Reach 3/4"	45	18.5	110	45	ISS140-100	TH/SF-LR-075A
Long Reach 1"	51.5	24	110	51.5	ISS140-100	TH/SF-LR-100A
Long Reach 1 1/2"	70	40	114	70	ISS210-115	TH/SF-LR-150A





Thru Hull Skin Fittings

Technical Information

Duplex 2205 Stainless Steel

Australian Stainless Steel Development Association¹ recommends the following general rules:

- 304 may be used for fully exposed components, frequently washed with fresh water
- 316 may be used for all hull and deck fitting applications above the water line
- 2205 offers higher strength and therefore lighter weight components for the same applications as 316 and can additionally be used up to 60°C for wet exhaust systems and fully submersed applications

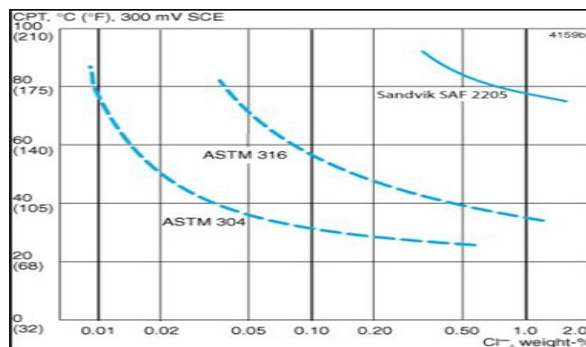
Duplex stainless steels consist of a microstructure of approximately 50% austenite and 50% ferrite grains - the most common is 2205.

The following properties of 2205 make it a better choice of stainless steel for Thru Hull fittings:

- Yield strength, twice that of 304 or 316 - offering added security for critical hull penetration fittings
- Much higher resistance to pitting and crevice corrosion in seawater than 316 (see PREN table below)
- Twice the fatigue and corrosion strength of 316

Metal Performance Chart²

Graph shows metal performance in relation to Temperature and chloride concentration (seawater salinity)



Pitting Resistance Table³

Table shows metal resistant to pitting in a saline or seawater environment

Grade	EN No/UNS	Type	Typical PREN
430	1.4016/ S43000	Ferritic	18
304	1.4301/ S30400	Austenitic	19
441	1.4509/ S43932	Ferritic	19
RDN 903	1.4482/ S32001	Duplex	22
316	1.4401/ S31600	Austenitic	24
444	1.4521/ S44400	Ferritic	24
316L 2.5 Mo	1.4435	Austenitic	26
2101 LDX	1.4162/ S32101	Duplex	26
2304	1.4362/ S32304	Duplex	26
DX2202	1.4062/ S32202	Duplex	27
904L	1.4539/ N08904	Austenitic	34
2205	1.4462/ S31803/ S32205	Duplex	35
Zeron 100	1.4501/ S32760	Duplex	41
2507	1.4410/ S32750	Super Duplex	43

¹ www.assda.asn.au/43-applications/marine/170-corrosion-resistance-in-marine-environments

² www.materials.sandvik/en-au/materials-center/material-datasheets/

³ British Stainless Steel Association - www.bssa.org.uk/

