SIDE-POWER
Thruster Systems

Product Specifications sheet SH320

UPGRADED MODEL 06/2018

1. Performance:

Light duty thrust: (kg / lbs)	320 / 705
Heavy duty thrust: (kg / lbs)	290 / 639
Hydraulic power: (kW / hp)	21,2 / 28,4
Oil flow: (l/min / US g/min)	45,6 / 12,05
Δ P: (bar / PSI)	279 / 4047
Preferred motor option:	16ccm piston

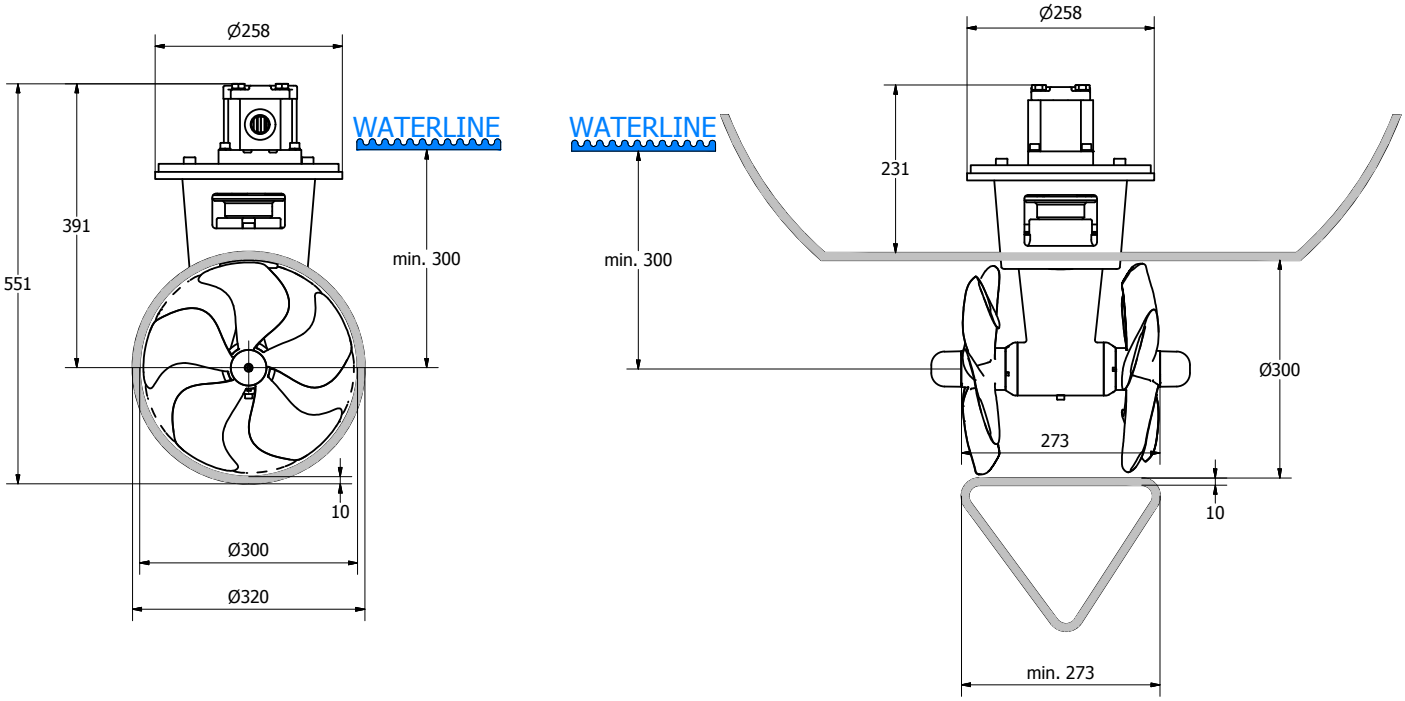
- Actual performances will vary for each installation depending on several factors.
- Light duty: Typical leisure boat use. Docking mainly. Heavy duty: Commercial vessels with extended run times and in rougher condition.

			60 %		80 %		100 %		
Thruster model	**Motor type**		**Flow**	**Pressure**	**Flow**	**Pressure**	**Flow**	**Pressure**	
SH320	U11	L/min -Bar	25.1	243	26.7	275			*)Max thrust: 217 kg
		USG-PSI	6.63	3524	7.05	3989			
	U14	L/min -Bar	31.8	191	36.7	254	38.1	275	*)Max thrust: 276 kg
		USG-PSI	8.40	2770	9.70	3684	10.06	3989	
	U16	L/min -Bar	36.5	167	42.2	222	46.9	275	*)Max thrust: 317 kg
		USG-PSI	9.64	2422	11.15	3220	12.39	3989	
	BA16	L/min -Bar	35.3	168	40.8	223	45.6	279	
		USG-PSI	9.33	2437	10.78	3234	12.05	4047	
	U19	L/min -Bar	43.3	140	50	187	55.9	234	
		USG-PSI	11.44	2031	13.21	2712	14.77	3394	
	BA19	L/min -Bar	42	141	48.5	188	54.2	235	
		USG-PSI	11.10	2045	12.81	2727	14.32	3408	
	U23	L/min -Bar	52.2	118	60.3	157	67.4	196	
		USG-PSI	13.79	1711	15.93	2277	17.81	2843	

2. Technical details:

Motor type:	Hydraulic
Gear leg material:	Seawater resistant bronze
Gears:	Hardend precision gears
Lubrication:	Pre-filled long-life gear oil, sealed gear leg, no change or inspection needed.
Bearings:	Angular contact ball bearing at propeller shaft and combination of ball bearing and needle bearing at driveshaft.
Galvanic protection:	Galvanic separation from hull + anode outside protection
Motor bracket material:	Seawater resistant aluminium
Propellers:	5-blade low noise skew Q-propTM
Mechanical safety:	Flexible coupling between hydraulic motor and driveshaft protects gear system if propeller gets jammed.

3. Measurements:



4. Maintenance:

- Seasonal service should include change of anodes and checking that all bolts are tighten(motor/ motor bracket - propeller). See User and Installation manual for more detailed information.
- Hydraulic motor: See User and Installation manual for more information.

5. Material hazards:

- Hydraulic Motor: There are no hazardous materials in this product, ref material declaration.
- Gearleg: Gear oil that needs to be kept away from fire.
- General precautionary measures must be taken during installation and inspections.

6. Health and safety:

- Gearleg and Hydraulic motor: The gearleg and Hydraulic motor is very powerful and precautionary measures must be taken considering rotationing propeller. Gear oil is flamable and and gasses from a fire is generally toxic.
- See Installation and User manual for more information.

7. Declaration of conformity:

Sleipner Motor AS hearby decleare that following Side-Power SH thruster products complies with the EC Directives and Standards:

DECLARATION OF CONFORMITY

CE

Sleipner Motor AS
P.O. Box 519, Arne Svendsensgt. 6-8
N-1612 Fredrikstad, Norway

Declare that this product with accompanying standard control systems complies with the essential health and safety requirements according to:

DIRECTIVE 2013/53/EU
DIRECTIVE 2014/30/EU
DIRECTIVE 2014/35/EU

Arne K Skauen
Managing Director, Sleipner Motor AS

Sleipner Motor AS
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CE

SIDE-POWER
Thruster Systems

Product upgrade information

- benefits of SH320 vs. discontinued model SP300

1. New gear leg:
The gear leg has been redesigned to be slimmer and without bolt-ears to further improve the water flow and reduce the water turbulence resulting in better performance and efficiency. There are also some production oriented improvements internally to further safeguard the very high tolerance level in the machining and assembly processes of a Side-Power thruster.

2. Sealed gear leg:
The gear leg now has ceramic axial shaft seals improving lifetime and durability, thereby allowing them to also be pre-filled with a special long life gear oil, not needing an over pressure oil reservoir. This simplifies the installation and service of these products.

3. Now with Q-prop 5 bladed propellers:
The propriatary Q-prop design provide a significant noise reduction in most installations, while having a very high thrust efficiency as they are designed for the spesific thruster application they are used for. NEW on these larger composite propellers is that they are made in a new high-tech composite material that are less brittle than the material used on the smaller Q-prop products. They are simultanously rigid and true to the slim shape also under load, while still having a high resistance to extreme impact loads.

4. Galvanic insulation:
The gear leg is now fully galvanically insulated from the rest of the thruster, so that any current leaks or short circuiting onto the parts inside the boat will not affect the underwater parts of the thruster. Mostly a benefit on electric thrusters, this is actually also a real benefit for hydraulic thrusters, as high-pressure oil hoses typically conduct through their metal brading causing risk of extra galvanic corrosion load in case of other “electric leaks” in anything connected to the hydraulic system.

BENEFITS SUMMARY:

- **MORE THRUST**
- **LESS NOISE**
- **LESS INSPECTION**
- **QUICKER INSTALLATION**
- **IMPROVED CORROSION PROTECTION**