



## 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.

Thruster model	Motor type	60 %		80 %		100 %	
		Flow	Pressure	Flow	Pressure	Flow	Pressure

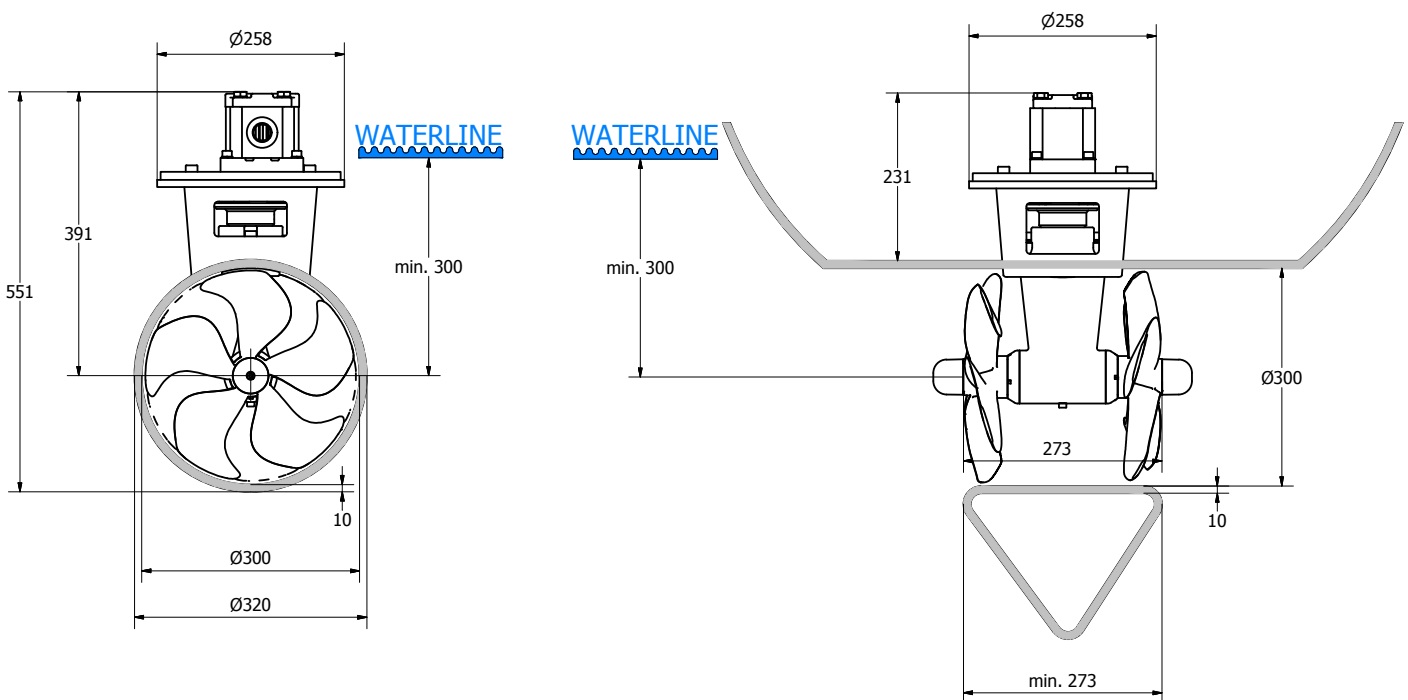
SH320	Motor type	L/min -Bar	25.1	243	26.7	275			*)Max thrust: 217 kg
		U11	USG-PSI	6.63	3524	7.05	3989		
U14	L/min -Bar	31.8	191	36.7	254	38.1	275	*)Max thrust: 276 kg	
	USG-PSI	8.40	2770	9.70	3684	10.06	3989		
U16	L/min -Bar	36.5	167	42.2	222	46.9	275	*)Max thrust: 317 kg	
	USG-PSI	9.64	2422	11.15	3220	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-prop™
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 rotating propeller. Gear oil is flammable and gasses from a fire is generally toxic.
- See Installation and User manual for more information.

## 7. Declaration of conformity:

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

### DECLARATION OF CONFORMITY



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



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Confidence by Control

[SIDE-POWER.com](http://SIDE-POWER.com)



## 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:

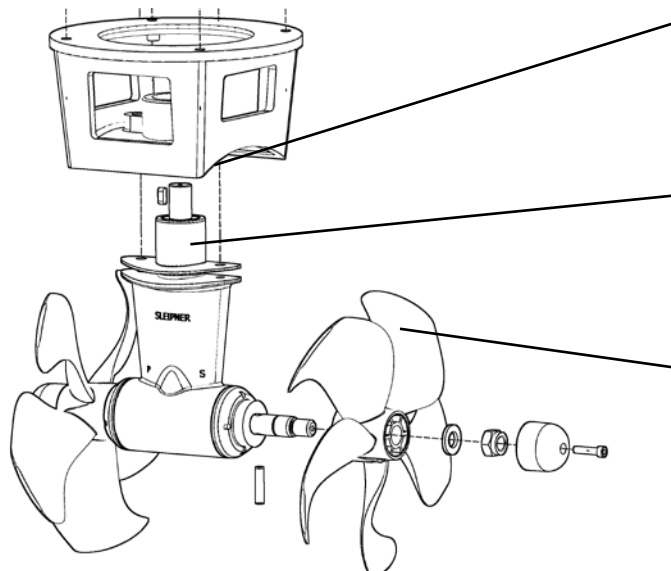
The proprietary Q-prop design provide a significant noise reduction in most installations, while having a very high thrust efficiency as they are designed for the specific thruster application they are used for. NEW on these larger composite propellers is that they are made in a new high-tech composite material that are less brittle than the material used on the smaller Q-prop products. They are simultaneously 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 braiding causing risk of extra galvanic corrosion load in case of other "electric leaks" in anything connected to the hydraulic system.

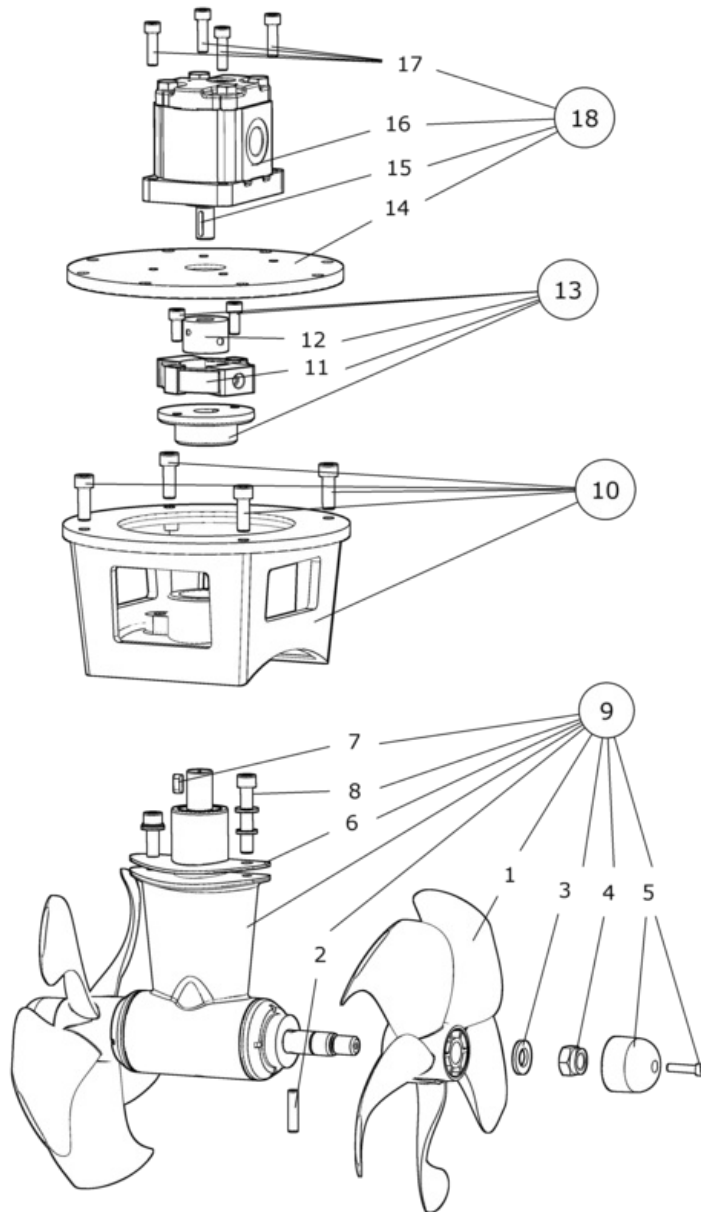
## BENEFITS SUMMARY:

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



**SH320/300TC-U19**  
**SH320 Tunnel bow/stern thruster**  
**hydraulic U19**

**Spare parts (valid from 2018-08-30)**



#	Name	Item Code	Description
1.	Propeller LH	SM-130943	Thruster propeller SE300,Q/LH prop
1b.	Propeller RH	SM-130945	Thruster propeller SE300,Q/RH prop
2.	Propeller key	9 1241	Drive pin SE120-170
3.	Propeller washer	20 1181	Flat washer M16 A4
4.	Locknut	10 1260	DIN985 M16 CZ132
5.	Anode	20 1180 A	Anode kit, aluminium, SE120/130/150/170/250
6.	Gasket	20 1312	Gasket for gearleg installation in tunnel, SP220
7.	Drive shaft key	10 1440	Key for drive shaft SP95/125++
8.	Gearleg bolt	20 1080	Bolt M10 x 60 Unbraco
9.	Complete gearleg	20 0602	Complete gearleg SE250/300/SH320
10.	Complete motor bracket	20 0502	Complete motor bracket SE300
11.	Rubber element	20 1452	Rubber element for flexible coupling SP285/20HP
12.	Hub flexible coupling	20 1453	Cylindrical boss N1,Ø15,L-30mm
13.	Complete flexible coupling	20 1450	Flexible coupling SP220/285
14.	Adaptor plate	20 21301	Adaptor plate SP300
15.	Drive shaft key	7 1440	Drive shaft key for hydraulic motors
16	Hyd. Motor options:		
16a	U-10 (10ccm)		72100/U10
16b	U-11 (11ccm)	72100/U-11	Hydraulic motor 11ccm ultra
16c	U-14 (14ccm)	72100/U-14	Hydraulic motor 14ccm ultra
16d	U-16 (16ccm)	72100/U-16	Hydraulic motor 16ccm ultra
16e	U-19 (19ccm)	72100/U-19	Hydraulic motor 19ccm ultra
16f	U-23 (23ccm)	72100/U-23	Hydraulic motor 23ccm ultra
17	Hydraulic motor bolts	6 1360	Bolt M8 x 30 Unbraco
18	Hyd. Motor assembly options:		
18a	SH320 motor, U-10, complete	102100UL1	Hydraulic motor SP300-10ccm U
18b	SH320 motor, U-11, complete	102100UL4	Hydraulic motor SP300-11ccm U
18c	SH320 motor, U-14, complete	102110UL3	Hydraulic motor SP300-14ccm U
18d	SH320 motor, U-16, complete	102115UL3	Hydraulic motor SP300/SH320 16ccm U
18e	SH320 motor, U-19, complete	102120UL3	Hydraulic motor SP300/SH320-19ccm U
18f	SH320 motor, U-23, complete	102123UL2	Hydraulic motor SP300-23ccm U

The installer alone has responsibility for the installation of the spare parts. Side-Power only warranty the spare parts supplied only.

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