

# SANDERMARINE

MARINE + OFFSHORE EQUIPMENT

## Sander hydraulic actuator SHA/D double acting type

Figure 800.1

**Working pressure:**

6.0 MPa to 12.5 MPa

**Working temperature:**

NBR o-rings (standard) -20°C to 70°C  
 viton o-rings (optional) -40°C to 145°C

**Hydraulic oil:**

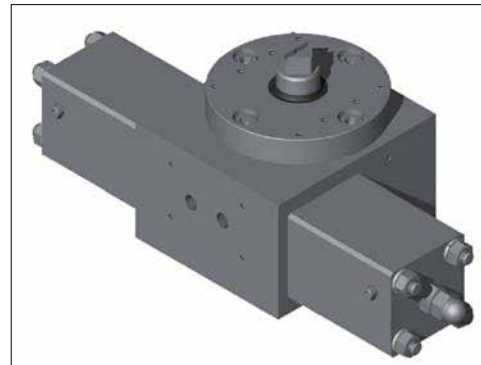
Viscosity range 15 to 64 cSt. acc. to thermal environment

**Technical datas:**

Rotation: 90° ± 3°  
 Closing direction: clockwise  
 Painting 32-63: 2-comp. epoxy primer  
 Painting 80: 1-comp. thick film epoxy coat.  
 Male stud coupl.: OD8 to OD12  
 Two pcs. quick couplings for emerg. operation  
 Two pcs. throttle valve for speed regulation

**Options:**

- male stud coupling in stainl. steel
- electric limit switches IP 65, IP 68 or IP 67 Eex
- proximity switches IP 68
- position indication by analog transmitter or potentiometer
- set for submerged installation
- electro-hydraulic aggregate (Fig. 916.1-10)
- special coating for wet conditions

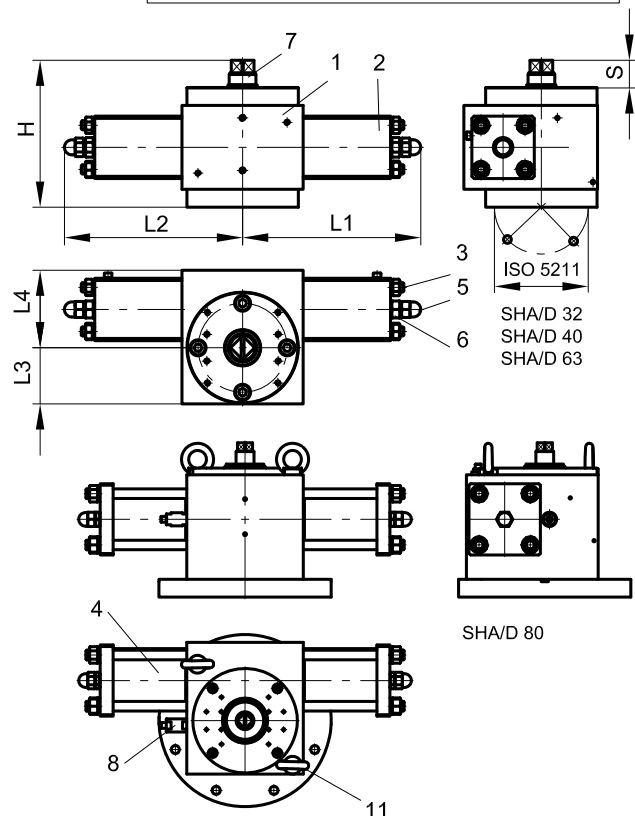
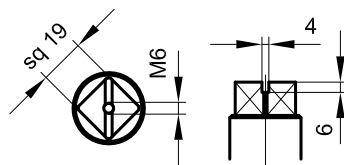


Item	Description	Material 1	Material 2
1	Body*	EN-GJL250 / GG 25*	EN-GJS400-18 / GGG 40.3**
2	Cover*	EN-GJL250 / GG 25*	EN-GJS400-18 / GGG 40.3**
3	Tie bolts	Stainl. steel	42CrMo4
4	Cylinder	Steel	Stainl. steel
5	Cap nuts	Stainl. steel	Stainl. steel
6	Hexagon nuts	Stainl. steel	Stainl. steel
7	Shaft	Stainl. steel	Stainl. steel
8	Check valve	Stainl. steel	Stainl. steel
9			
10			
11	Lifting eyes**	Steel	Steel

\* Body and cover for SHA/D 32: 9S20K

\*\* Only SHA/D 80

All shaft ends:

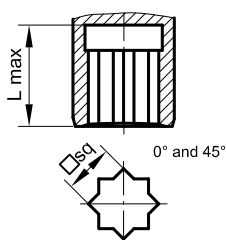


For mounting on flanges according to ISO 5211

Size	Torque [Nm] <sup>1)</sup>	Stroke volume [cm³]	L1	L2	L3	L4	H	S	ISO 5211	Weight [kg]
32	120	30	143	143	40	72	137	46	F05/F07	9
40	400	68	196	196	63	88	165	36,5	F07/F10 or F12	25
63	1000	169	196	196	63	94	174	36,5	F10/F14 or F12 or F16	30
80	2600	473	280	280	90	132	261	36	F14 or F16	90

<sup>1)</sup> for control pressure 10.5 MPa

For valves with square shaft end



Shaft connection

Size	□ sq						L max
32	9	10	11	12	14		34
40	14	16	17	19	22	27	40
63	22	24	27	30			40
80	24	27	30	36	40		60

Other dimension on request

**SANDER MARINE**

Wilhelm Sander Fertigung GmbH · Zum Panrepel 41 · 28307 Bremen · Germany

Fon +49 (0) 421 4 86 03-0 · Fax+49 (0) 421 4 86 03-89 · info@sander-marine.com · www.sander-marine.com

Working pressure:

6.0 MPa to 12.5 MPa

Working temperature:

NBR o-rings (standard) -20°C to 70°C  
viton o-rings (optional) -40°C to 145°C

Hydraulic oil:

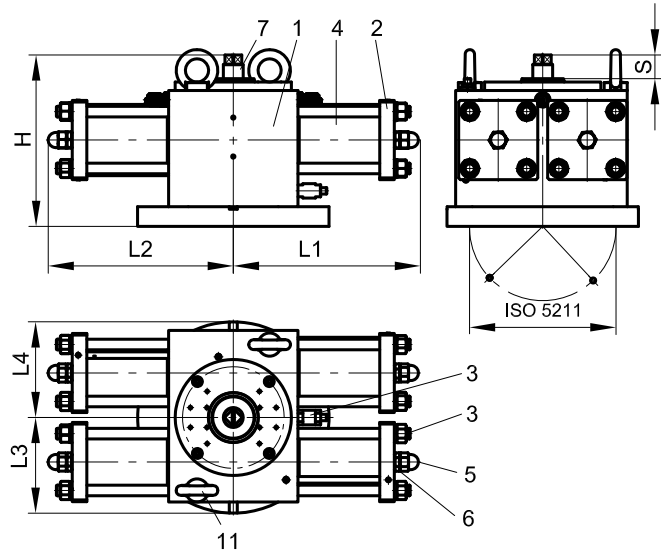
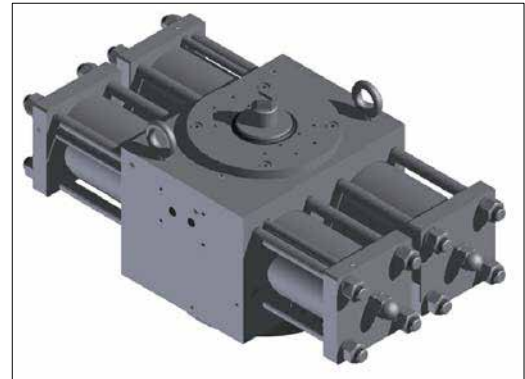
Viscosity range 15 to 64 cSt. acc. to thermal environment

Technical datas:

Rotation: 90° ± 3°  
Closing direction: clockwise  
Painting 70: 2-comp. epoxy primer  
Painting 160-200: 1-comp. thick film epoxy coat.  
Male stud coupl.: OD8 to OD12  
Two pcs. quick couplings for emerg. operation  
Two pcs. throttle valve for speed regulation  
Lifting eyes for handling  
Two pcs. intern oil filters

Options:

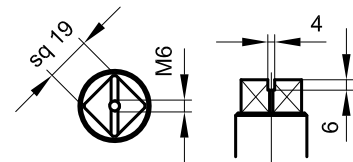
- male stud coupling in stainl. steel
- electric limit switches IP 65, IP 68 or IP 67 Eex
- proximity switches IP 68
- position indication by analog transmitter or potentiometer
- set for submerged installation
- electro-hydraulic aggregate ( Fig. 916.1-10)
- special coating for wet conditions



Item	Description	Material 1	Material 2
1	Body	EN-GJL250 / GG 25*	EN-GJS400-18 / GGG 40.3**
2	Cover	Steel	Steel
3	Tie bolts	Stainl. steel*	42CrMo4**
4	Cylinder	Steel	Stainl. steel
5	Cap nuts	Stainl. steel	Stainl. steel
6	Hexagon nuts	Stainl. steel	Stainl. steel
7	Shaft	Stainl. steel	Stainl. steel
8	Check valve	Stainl. steel	Stainl. steel
9			
10			
11	Lifting eyes	Steel	Steel

\* Only SHA/D 70  
\*\* Only SHA/D 160 and 200

All shaft ends:

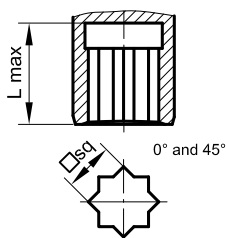


For mounting on flanges according to ISO 5211

Size	Torque [Nm] <sup>1)</sup>	Stroke volume [cm³]	L1	L2	L3	L4	H	S	ISO 5211	Weight [kg]
70*	2000	338	219	210	93	123	172	36,5	F12 or F14	48
160**	5200	946	282	282	145	145	260	36	F14 or F16 or F25	103
200**	15700	2764	462	462	198	228	404	36	F25 or F30 or F40	371

<sup>1)</sup> for control pressure 10.5 MPa

For valves with square shaft end



Shaft connection

Size	□ sq					L max
	70	22	24	27	30	
160	24	27	32	36	40	60
200	Upon request					110

Other dimension on request