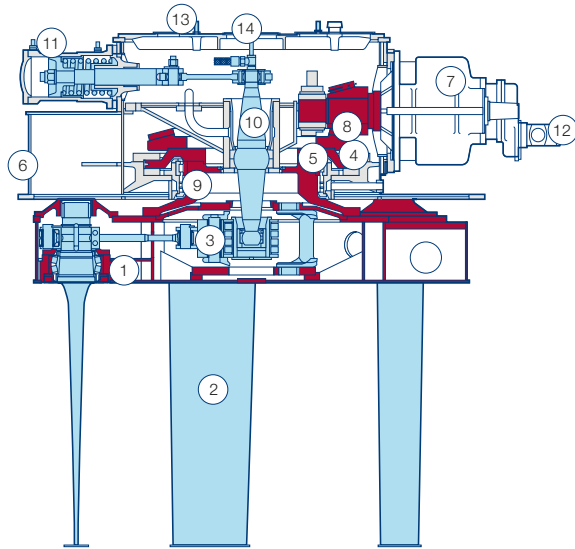


Longitudinal section of a VSP



- |                |                     |                  |                    |
|----------------|---------------------|------------------|--------------------|
| 1 Rotor casing | 5 Roller bearing    | 9 Driving sleeve | 13 Control shaft   |
| 2 Blade        | 6 Propeller housing | 10 Control rod   | 14 Indicator plate |
| 3 Kinematics   | 7 Reduction gear    | 11 Servomotor    | ■ rotating parts   |
| 4 Thrust plate | 8 Bevel gear        | 12 Gear pump     | ■ steering parts   |

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# Types and dimensions Voith Schneider Propeller



VT2484 en, wk, 2019-03, All data and information without obligation. Subject to change.

# Successful worldwide

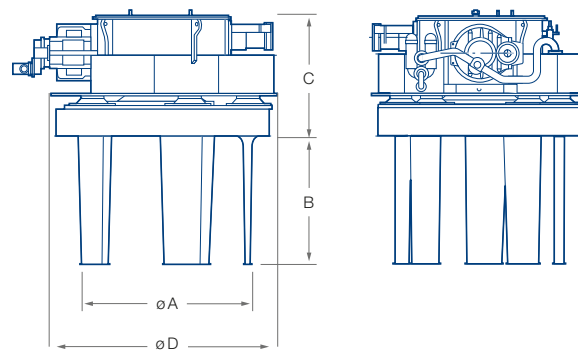
Propulsion and steering – ahead, astern and sideways: The Voith Schneider Propeller (VSP) developed more than 90 years ago generates thrust in all directions. Propulsion and steering are combined in one unit, thus allowing prompt, safe and precise maneuvering, even under adverse conditions. An additional feature: Voith Roll Stabilization (VRS)

The VSP is suitable for a wide range of applications – from harbor tugs to offshore supply vessels. And it has been operating successfully in all these applications for decades. The VSP is distinguished by its high reliability and low maintenance requirements. Its low fuel consumption translates into minimum power requirements while at the same time maximizing safety for the vessel and the environment.

The VSP principle is strikingly simple and fascinating at the same time: A rotor casing fitted with four, five or six propeller blades rotates about a vertical axis. As is the case with the tail fin of a dolphin, a superimposed oscillating motion of the blades around their own axis generates thrust. The magnitude of thrust is determined by the rotational speed of the rotor casing; The blade angle determines the direction of thrust.

## VSP sizes

Propeller type/size	Control system ME/ECA*	Control system EC**	VRS*** option	Blade orbit diameter A [mm]	Blade length B**** [mm]	Housing height C [mm]	Housing diameter D [mm]	Number of gearsteps	Weight without oil [abt. kg]	Oil filling [abt. l]	Max. propeller input power [kW]
VSP 12		x		1 200	9 12	1 185	1 660	1	3 800	380	260
VSP 16		x		1 600	1 215	1 372	2 145	1	6 700	680	540
VSP 18		x		1 800	1 512	1 480	2 405	1	9 500	1 000	780
VSP 21	x			2 100	1 766	1 755	2 815	1 or 2	16 000	1 600	1 000
VSP 26	x			2 600	1 965	1 980	3 435	2	27 500	2 700	1 500
VSP 28	x	x	x	2 800	2 355	2 168	3 790	2	38 500	4 300	2 000
VSP 30	x			3 000	2 666	2 380	4 000	2	47 000	4 000	2 450
VSP 31	x	x	x	3 100	2 666	2 300	4 200	1	48 000	4 000	2 500
VSP 32	x	x	x	3 200	2 666	2 371	4 250	2	50 000	5 200	2 600
VSP 36	x	x	x	3 600	2 872	2 985	4 765	2	75 000	7 700	3 900



Note: Input speeds can be adapted to all common diesel and electric motor rpm either by internal gearbox (2-gear-step VSP) and/or by intermediate gearbox (single-gear-step VSP).

\* Either mechanical or add on electronic control system possible

\*\* Electronic Control System

\*\*\* Voith Electronic Roll Stabilization

\*\*\*\* Maximum blade length (can be shortened)