



Marine Gearbox Selection Guide

EMBRACE A GREENER FUTURE AND REDUCE YOUR CARBON FOOTPRINT
THE SMART WAY

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This selection guide must be read carefully and must be kept for future use with the system.

For safe and proper use, read and follow all instructions in this manual.

ME Production A/S reserves the right to make adjustments and improvements to its products and systems. This means that documentation is subject to change without notice.

ME Production A/S has taken all measures to ensure the information in this guide is accurate and comprehensive. ME Production A/S reserves the right to make corrections and cannot be held liable for any errors or omissions in this guide.

All claims and inquiries for spares shall be addressed to ME Production A/S. In all correspondence or when ordering spare parts, carefully state the equipment type and serial number, which can be found on the label on the equipment.

ME Production A/S appreciates all feedback and suggestions for improvement. If you have any questions, kindly contact ME Production A/S.

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1 Definitions & Abbreviations

The following table lists abbreviations & definitions that are used in this selection guide. When a term is first used, it will be written out in full and include its abbreviation for the sake of clarity.

Term	Abbreviation	Definition
	HS	Hydraulic Servo
	OD	Oil Distribution
	HSC	Hydraulic Servo Compact
	LS	Long Stroke
	IS	Intermediate Shaft
	R	Reverse
	2HS/2OD	2-step gearbox
	H	Horizontal offset gearbox
	VO	Vertical Offset
	HO	Horizontal Offset
	Twin	Twin-in single-out
	U	U-drive
PTO		Power Take Off
PTI/PTH/Hybrid		Power Take In
	TVC	Torsional Vibration Calculation
	CPP	Controllable Pitch Propulsion

2 Introduction

For over 50 years, Mekanord has exemplified the strength of Danish marine engineering, delivering reliable, high-performance gearboxes to the global maritime industry. Now a key part of ME Production, Mekanord continues to lead in marine transmission innovation — particularly in controllable pitch propeller systems, where precision and durability are critical.

Our gearbox solutions are engineered for the demanding conditions of modern marine propulsion, with a strong focus on controllable pitch propeller systems. Built on decades of expertise, they offer exceptional efficiency, reliability, and serviceability.

Since Mekanord's integration into ME Production in 2014, its legacy has been strengthened by new synergies, enabling the development of sustainable, future-ready transmission solutions — while preserving the trusted quality of Danish engineering.

ME Production has been designing, manufacturing, and supplying CPP marine gearboxes. Compatible with all engine types and CPP systems, we offer complete propulsion packages — including gearbox, propeller, and control systems.

MEP gearboxes are designed for continuous-duty applications with engine power ranges from 200 to 10.000 kW. We also offer step-up front PTO gearboxes (200–1.650 kW) for 2-stroke engines.

This selection guide provides a quick reference to standard & hybrid gearbox range. For detailed dimensions, please refer to the individual product data sheets available on MEP website.

Custom ratios and configurations are available upon request. Contact ME Production for tailored solutions.

2.1 Model designations

- **Hydraulic Servo:** gearbox with internal hydraulic servo system for actuation of the CP propeller blades.
- **Oil Distribution:** gearbox prepared for externally mounted oil distribution box for actuation of the CP propeller blades.
- **Hydraulic Servo Compact:** our compact, light-weight gearbox series designed for high speed vessels.
- **Long Stroke:** gearbox series with extra long stroke designed to make propeller feathering on sailing yachts possible.
- **Intermediate Shaft:** additional internal gearing for same propeller rotation direction as engine rotation direction.
- **Reverse:** externally mounted gearing for same propeller rotation direction as engine rotation direction.
- **2-step gearbox:** gearboxes with higher ratios as well as providing the same propeller rotation direction as engine rotation direction.
- **Horizontal offset gearbox**

2.2 Gearbox configurations

- Vertical Offset (most ME Production models)
- Horizontal Offset (for low clearance engine rooms)
- Twin-in single-out (for 2 engines and 1 propeller)
- U-drive (e.g. for engine rooms of limited length)

2.3 Power take off

All ME Production gearboxes are available with 1-3 PTOs. The Max. number available is dependent upon the model. Most ME Production gearboxes are available with independent PTO clutches.

The PTOs overhang the sides of the gearbox so as not to take up space behind the gearbox. Other SAE and ISO flanges and splines as well as free shaft ends are also available.

2.4 Power take in

ME Production gearboxes are, depending on the model, also available with PTI, PTH, Boost, as well as Hybrid solutions. Contact ME Production for details of all the possibilities.

2.5 Transmission ratings

The ratings are based on continuous operation (heavy duty) for all applications.

Ratings are shown in kW (1kW = 1,36 metric HP).

The given data is subject to modifications and/or corrections without prior notice.

2.6 Survey society classification

All ME Production gearboxes are dimensioned to continuous duty ratings in full accordance with the rules of the major classification societies. When classification is required, please indicate the specific class required and whether or not an ice classification notation is also required and ME Production will select a suitable gearbox.

2.7 Flexible coupling and TVC

ME Production offers as an option the flexible coupling including TVC.

2.8 CP Propulsion package supply

ME Production is a renowned and experienced supplier of both CPP gearboxes and complete CPP systems. Our customized and turnkey CPP packages include gearbox, propeller shaft and remote control system.

We cover a broad range of propellers with diameters from 700 mm to 5.000 mm for engine ratings up to 10.000 kW.

The propellers can be supplied with pitch system operated by OD-system or by push-pull rod actuated by the hydraulic servo system in the gearbox. With a CPP system from ME Production our customers are ensured optimized system integration and one system responsibility.

3 Safe Operation

ME Production advises users of its products that their safe operation depends on their use in compliance with the technical information provided in the corresponding product manuals. Proper installation, operation, monitoring, periodical inspection and maintenance are a prerequisite for safe operation of ME Production's products.

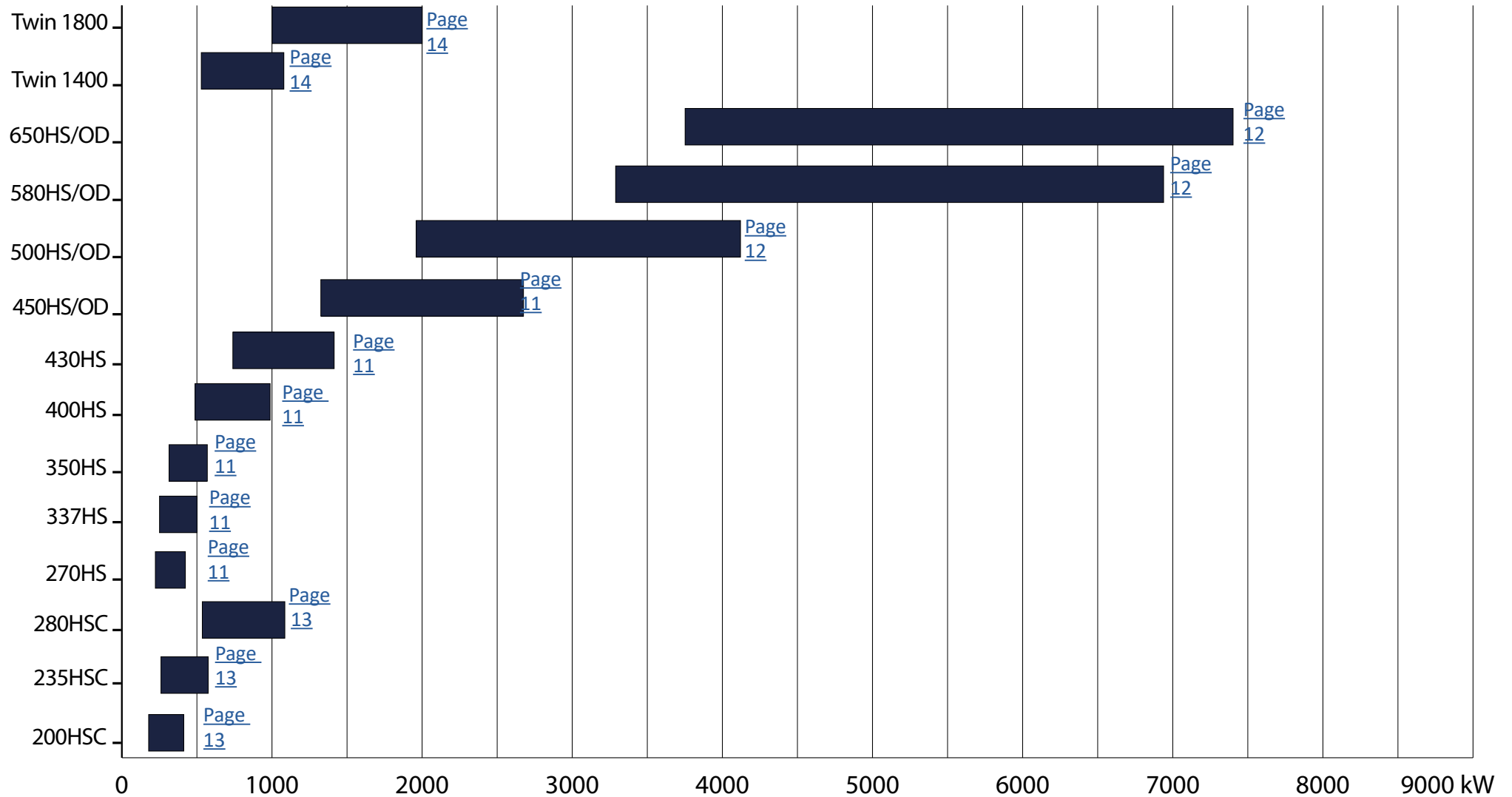
It is the responsibility of the assembler of the propulsion system to provide and install safety devices, which may be required in accordance with recognized safety standards.

4 Warranty

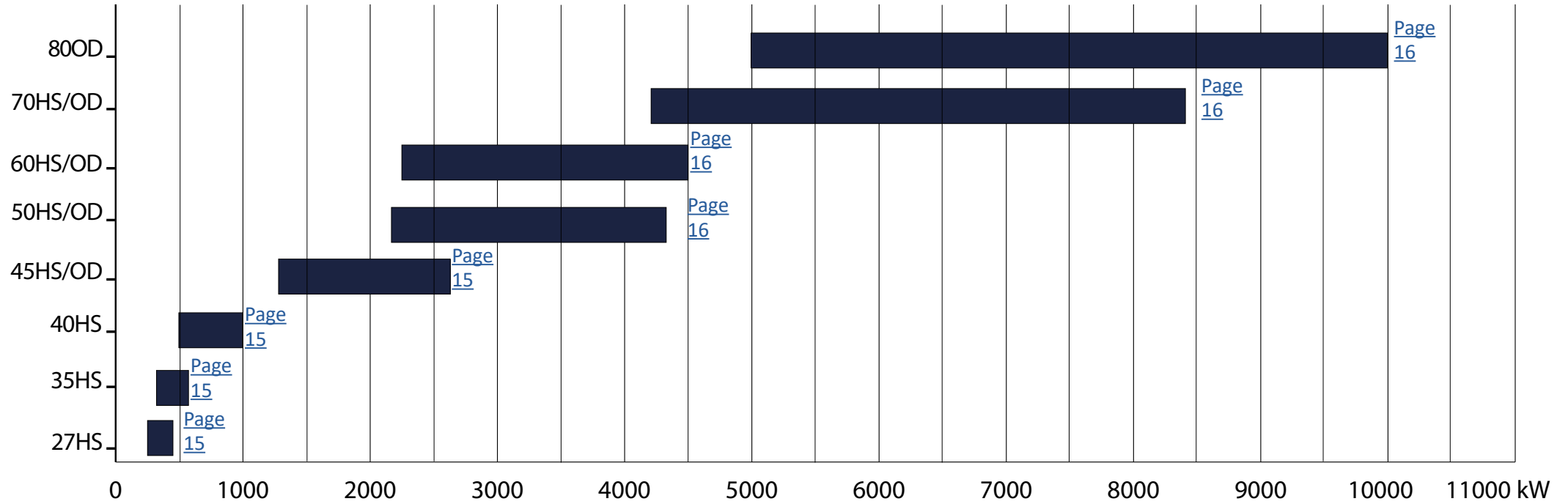
All ME Production gearboxes are subject to the standard ME Production warranty conditions. Modifications of the products are permissible only after consultation with ME Production. Damage to a ME Production gearbox caused by repeated or continuous emergency manoeuvres or abnormal operation is not covered under warranty.

5 Main Gearbox Selection

5.1 Gearbox Max. Power



5.2 Hybrid Gearbox Max. Power



5.3 Overview of Gearbox Max. Power

Standard Gear Types		Reference
	Max. power @ 1800 rpm	
270HS	400 kW	270HS
337HS	500 kW	337HS
350HS	510 kW	350HS
400HS	1000 kW	400HS
430HS	1300 kW	430HS
430-2HS	1050 kW	430-2HS
450HS	2700 kW	450HS/OD
450-2HS	2000 kW	450-2HS
500HS	4320 kW	500HS
500-2HS	2800 kW	500-2HS
580HS	6600 kW	580HS/OD
650HS	7300 kW	650HS/OD
Salling Yachts		
270HS/LS	400 kW	270HS
350HS/LS	510 kW	350HS
400HS/LS	1000 kW	400HS/LS
Compacted/High Speed Vessels		
200HSC	468 kW	200HSC
235HSC	630 kW	235HSC
280HSC	1100 kW	280HSC
Twin Gearboxes		
Twin 1400/0	1100 kW	Twin 1400/0
Twin 1400HS/450	1100 kW	Twin 1400HS/450
Twin 1800HS	2000 kW	Twin 1800
Front Gear Types		Reference
PTO 900	900 kW	900
PTO 1500	1650 kW	1500
Hybrid Gear Types		Reference
	Max. power @ 1800 rpm	
27HS	400 kW	27HS
35HS	540 kW	35HS
40HS	1000 kW	40HS
45HS/OD	2700 kW	45HS/OD

Hybrid Gear Types		Reference
50HS	4320 kW	50HS/OD
	Max. power @ 1200 rpm	
60HS	4500 kW	60HS/OD
70HS	8400 kW	70HS/OD
800D	10000 kW	800D

5.4 Gearboxes for CPP Propulsion Systems

Standard Gearboxes			
Model	Reduction ratio	Power factor kW/rpm	Offset/Options
270HS	1,61-1,97-2,47-2,96-3,52:1	0,220	- VO=270 mm 1 or 2 PTOs - SAE flange - Max. input speed 2400 rpm
	3,95-4,47-5,12-5,51:1	0,163	
	5,93:1	0,145	
	6,53:1	0,128	
337HS	2,48-3,00-3,54-4,14:1	0,278	- VO=337 mm 1 or 2 PTOs - SAE flang - Intermediate shaft (IS) - Max. input speed 2300 rpm
	4,55-5,11-5,47-5,94:1	0,220	
350HS	1,96-2,53-3,04-3,52:1	0,302	- VO=350 mm 1, 2 or 3 PTOs - SAE flange - Reverse gear (R) - Max. input speed 2300 rpm
	4,14-4,65-5,12-5,53:1	0,302	
	5,94:1	0,278	
	6,35:1	0,236	
	6,94:1	0,208	
400HS	3,04-3,57-4,11-4,65-5,17:1	0,540	- VO=400 mm 1, 2 or 3 PTOs - SAE flange - Reverse gear (R) - Max. input speed 2100 rpm
	5,53:1	0,518	
	5,94:1	0,453	
	6,59:1	0,367	
	6,89:1	0,344	
	8,06:1	0,251	
430HS	1,56-2,04-2,48-3,12-3,48:1	0,690	- VO=430 mm 1, 2 or 3 PTOs - Max. input speed 2000 rpm
	4,15-4,45-5,12:1	0,690	
	5,44:1	0,613	
	6,11:1	0,575	
430 - 2HS	7,08:1	0,540	- VO=430mm 1, 2 or 3 PTOs - Max. input speed 2000 rpm
430 - 2OD	7,31:1	0,508	
	8,00:1	0,495	
	9,14:1	0,436	
450HS/OD	3,11-3,58:1	1,500	- VO=450 mm 1, 2 or 3 PTOs - Max. input speed 1800 rpm
	4,18-4,44:1	1,120	
	5,11:1	0,972	
	5,47:1	0,889	
	5,94:1	0,773	
	6,47:1	0,670	
450 - 2HS	6,53-6,91-7,44-7,88:1	0,943	- VO=450 mm 1, 2 or 3 PTOs - Max. input speed 1800 rpm
	8,61:1	0,837	
450 - 2OD	9,02-9,45:1	0,800	
	9,82:1	0,772	

Standard Gearboxes

Model	Reduction ratio	Power factor kW/rpm	Offset/Options
500HS/OD	2,03-2,56-3,04-3,32:1	2,400	- VO=500 mm 1, 2 or 3 PTOs/PTI - Max. input speed 1800 rpm
	3,63:1	2,315	
	4,24:1	1,803	
	4,39:1	1,752	
	4,56:1	1,433	
	4,94:1	1,345	
	5,67:1	1,026	
	6,06:1	0,951	
	6,56:1	0,810	
500 - 2HS 500 - 2OD	6,58-7,05-7,61:1	1,050	- VO=500 mm 1, 2 or 3 PTOs/PTI - Max. input speed 1800 rpm
	7,93-8,49:1	0,910	
	9,16:1	0,894	
	9,91:1	0,861	
	10,68:1	0,842	
580HS/OD	2,03-2,55-3,12-3,48:1	3,680	- VO=580 mm 1, 2 or 3 PTOs/PTI - Max. input speed 1600 rpm
	4,15:1	3,280	
	4,53:1	2,730	
	5,06:1	2,330	
	5,65:1	1,960	
	6,06:1	1,800	
	6,94:1	1,160	
580HS - H 580OD - H	2,03-2,55-3,12-3,48:1	3,680	- HO=580 mm 1, 2 or 3 PTOs/PTI - Max. input speed 1600 rpm
	4,15:1	3,280	
	4,53:1	2,730	
	5,06:1	2,330	
	5,65:1	1,960	
	6,06:1	1,800	
	6,53:1	1,250	
	6,94:1	1,160	
650HS/OD	2,03-2,58-3,04-3,55:1	4,580	- VO=650 mm 1, 2 or 3 PTOs/PTI - Max. input speed 1600 rpm
	4,05:1	4,185	
	4,53:1	3,631	
	5,05:1	3,067	
	5,44:1	2,836	
	6,06:1	2,303	
	6,47:1	1,990	

Standard Gearboxes

Model	Reduction ratio	Power factor kW/rpm	Offset/Options
Compacted/High Speed Vessels			
200HSC	2,13:1	0,260	• VO=200 mm • 1 PTO; • SAE flange • Intermediate shaft (IS) • Max. input speed 2300 rpm
	2,55:1	0,226	
	2,94:1	0,224	
235HSC	1,96-2,45:1	0,350	• VO=235 mm • 1 PTO • Intermediate shaft (IS) • SAE flange; • U-drive (U) • Max. input speed 2300 rpm
	2,94:1	0,310	
	3,43:1	0,226	
280HSC	1,75-2,06-2,55:1	0,610	• VO=280 mm • 1 or 2 PTOs • Intermediate shaft (IS) • SAE flange • U-drive (U) • Max. input speed 2300 rpm
	3,06:1	0,570	
	3,47:1	0,474	
Salling Yachts			
270HS/LS	1,61-1,97-2,47-2,96-3,52:1	0,220	• VO=270 mm • SAE flange • 1 or 2 PTOs • Max. input speed 2400 rpm
	3,95:1	0,163	
	4,47:1	0,163	
	5,12:1	0,163	
350HS/LS	1,96-2,53-3,04-3,52:1	0,302	• VO=350 mm • SAE flange • 1, 2 or 3 PTOs • Reverse gear (R) • Max. input speed 2300 rpm
	4,14-4,65-5,12:1	0,302	
400HS/LS	3,04-3,57:1	0,540	• VO=400 mm • SAE flange • 1, 2 or 3 PTOs • Reserve gear (R) • Max. input speed 2100 rpm
	4,11-4,65-5,17:1	0,540	
Twin Gearbox			
Twin 1400/0 1400/00D	1:1	2x0,302	• VO=0 mm • HO=2x700mm • 1, 2 or 3 PTOs x 2 • Max. input speed 2300 rpm
	2,03:1	2x0,302	
	4,03:1	2x0,302	
	5,04:1	2x0,302	
	5,94:1	2x0,24	

Standard Gearboxes

Model	Reduction ratio	Power factor kW/rpm	Offset/Options
Twin Gearbox			
Twin 1400/450HS 1400/450OD	2,03-4,03-5,04:1	2x0,302	- VO=450 mm - HO=2x700mm 1, 2 or 3 PTOs x 2 - Max. input speed 2300 rpm
	6,11:1	2x0,280	
	7,18:1	2x0,229	
Twin 1800/0HS Twin 1800/0OD	2,34-4,05-4,55-5,05:1	2x0,540	- VO=0 mm - HO=2x900mm 1, 2 or 3 PTOs x 2 - Max. input speed 2000 rpm
	6,05:1	2x0,540	
	7,12:1	2x0,540	
	7,59:1	2x0,540	

Front Gearboxes

Model	Input rpm	Output rpm	Step-up ratio	Max. power kW	Offset/Options
PTO900	113	1789	1:15,83	900	HO dependent on step-up ratio
	127	1820	1:14,30	900	
	146	1816	1:12,44	900	
	173	1805	1:10,44	900	
	173	1506	1:8,71	700	
	210	1502	1:7,15	900	
PTO1500	110	1801	1:16,37	1250	
	127	1803	1:14,20	1350	
	167	1802	1:10,79	1650	
	173	1805	1:10,44	1650	

*Other step-up ratios are possible

Hybrid Gearboxes

Model	Reduction ratio	Power factor kW/rpm	Max.PTI PF kW/rpm	Max. combined PF kW/rpm	Offset/Options
27HS	1,61-1,97:1	0,22	0,14	0,36	- VO=270 mm - Max. input speed 2400 rpm 1 PTO 1 PTO/PTI
	2,47-2,96:1	0,22	0,14	0,32	
	3,52:1	0,22	0,14	0,26	
	3,95:1	0,16	0,14	0,23	
	4,47:1	0,16	0,14	0,20	
	5,12:1	0,16	0,14	0,17	
	5,50:1	0,16	0,14	0,16	
	5,93:1	0,15	0,14	0,15	
	6,53:1	0,13	0,14	0,13	

Hybrid Gearboxes

Model	Reduction ratio	Power factor kW/rpm	Max.PTI PF kW/rpm	Max. combined PF kW/rpm	Offset/Options
35HS	1,9-2,53-3,04-3,52:1	0,30	0,18	0,49	- VO=350 mm - Max. input speed 2300 rpm 1 PTO 1 PTO/PTI
	4,14:1	0,30	0,18	0,41	
	4,65:1	0,30	0,18	0,37	
	5,12:1	0,30	0,18	0,33	
	5,53:1	0,30	0,18	0,31	
	5,94:1	0,28	0,18	0,28	
	6,35:1	0,24	0,18	0,24	
	6,94:1	0,21	0,18	0,21	
40HS	3,04:1	0,54	0,26	0,80	- VO=400 mm - Max. input speed 2100 rpm 1 PTO/PTI
	3,57:1	0,54	0,26	0,78	
	4,11:1	0,54	0,26	0,68	
	4,65:1	0,54	0,26	0,60	
	5,17:1	0,54	0,26	0,48	
	5,53:1	0,52	0,26	0,45	
	5,94:1	0,45	0,26	0,45	
	6,59:1	0,37	0,26	0,37	
	6,89:1	0,25	0,26	0,25	
45HS/OD	2,04:1	2,125	0,52	2,64	- VO=450 mm - Max. input speed 1800 rpm 1 PTO/PTI
	2,59:1	1,938	0,52	2,08	
	3,24:1	1,50	0,52	1,66	
	3,58:1	1,50	0,52	1,50	
	4,18:1	1,120	0,52	1,12	
	4,44:1	1,120	0,52	1,12	
	5,11:1	0,972	0,52	0,972	
	5,47:1	0,889	0,52	0,889	
	5,94:1	0,773	0,52	0,773	
	6,47:1	0,670	0,52	0,67	
50HS/OD	2,03:1	2,40	0,52	2,92	- VO=500 mm - Max. input speed 1800 rpm 1 PTO/PTI
	2,56:1	2,40	0,52	2,92	
	3,04:1	2,40	0,52	2,72	
	3,63:1	2,32	0,52	2,32	
	4,56:1	1,433	0,52	1,433	
	4,94:1	1,345	0,52	1,345	
	6,06:1	0,95	0,52	0,95	
	6,56:1	0,81	0,52	0,81	

Hybrid Gearboxes

Model	Reduction ratio	Power factor kW/rpm	Max.PTI PF kW/rpm	Max. combined PF kW/rpm	Offset/Options
60HS/OD	2,84:1	3,700	0,89	4,59	- VO=600 mm 1 PTO/PTI - Max. input speed 1600 rpm
	3,67:1	3,700	0,89	4,35	
	4,06:1	3,700	0,89	3,94	
	4,44:1	3,600	0,89	3,60	
	4,94:1	3,000	0,89	3,00	
	5,61:1	2,600	0,89	2,60	
	5,94:1	2,300	0,89	2,30	
70HS/OD	3,05:1	7,000	0,89	7,89	- VO=700 mm 1 PTO/PTI - Max. input speed 1200 rpm
	3,53:1	6,800	0,89	6,80	
	4,16:1	5,900	0,89	5,90	
	4,44:1	5,300	0,89	5,30	
	5,05:1	4,500	0,89	4,50	
	5,58:1	3,800	0,89	3,80	
	5,94:1	3,500	0,89	3,50	
800D	2,95:1	9,900	0,89	11,73	- VO=800 mm 1 PTO/PTI - Max. input speed 1200 rpm
	3,58:1	9,900	9,900	3,58:1	
	4,16:1	8,800	8,800	4,16:1	
	4,33:1	7,600	7,600	4,33:1	
	4,95:1	7,000	7,000	4,95:1	
	5,59:1	5,800	5,800	5,59:1	
	6,15:1	4,500	4,500	6,15:1	
	6,59:1	4,500	4,500	6,59:1	
	8,12:1	3,400	3,400	8,12:1	
	8,53:1	3,400	3,400	8,53:1	

6 Marine Propulsion System Inquiry

To assist us in preparing an accurate and competitive quotation, please complete and submit this inquiry.

<https://meproduction.com/gearbox-inquiry-form/>