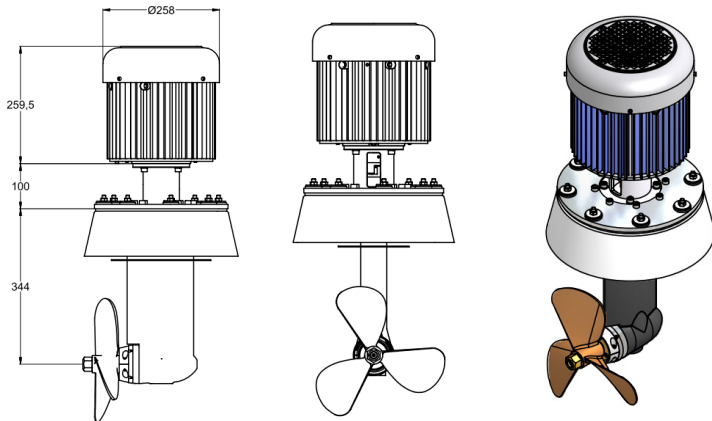


ELECTRIC SAIL DRIVE SDK 4.3 4.3 KW/9-10 HP *



all4solar
123 Harbour Drive
Trinity Park QLD
4879
ABN 61832274764

all4solar
electric boat engines & solar power



AC INDUCTION MOTORS DO NOT REQUIRE BRUSHES OR PERMANENT MAGNETS AS DC MOTORS. THIS MAKES THEM MAINTENANCE FREE FOR UPTO 50000 HOURS. A SUSTAINABLE INVESTMENT!

Propeller included

THE COMPLETE KIT TO MAKE YOUR BOAT ELECTRIC

Krätler Motor Technology since 1971

THAT'S INCLUDED

- Advanced electric AC induction motor for 48 V DC
- Includes sail drive leg(also available for existing leg)
- Plate can be laminated directly to the hull
- Cables with plug to battery|Main Switch|Contactor
- Single lever with switch lock allprewired
- 5.1 KW h lithium battery pack with BMS 48 V DC or alternatively 4.8 KW h lead acid AGM
- Digital motor controller & battery monitor
- Battery charger 48 V for lithium battery

THAT'S THE PERFORMANCE

- 4.3 KW output / thrust similar to a 9-10 HP diesel *
- 5 KW power consumption (104 Amp) - 1200 rpm
- Weight 45 kg 105 kg (lithium) 175 kg (lead acid)
- For boats upto 5 t (one engine)
- Run time at an average 40% throttle 2 h 20 min.

* performance thrust with lithium batteries average 100-1200 rpm

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OPTIONS

- Manual rotation
- Unlimited sea water
- Recuperation
- Electric rotation

ELECTRIC SAIL DRIVE SDK 6,0 6 KW | 12 HP *



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Propeller included

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THAT'S INCLUDED

- Advanced electric AC induction motor for 48 V DC
- Includes sail drive leg (also available for existing leg)
- Plate can be laminated directly to the hull
- Cables with plug to battery | Main Switch | Contactor
- Single lever with switch lock all prewired
- 5.1 KW h lithium battery pack with BMS 48 V DC or alternatively 4.8 KW h lead acid AGM
- Digital motor controller | battery monitor
- Battery charger 48 V for lithium battery

THAT'S THE PERFORMANCE

- 6 KW output / thrust similar to a 10-12 HP diesel *
- 7 KW power consumption (146 Amp) - 1200 rpm
- Weight 68 kg 128 kg (lithium) 198 kg (lead acid)
- For boats upto 6 t (one engine)
- Run time at an average 40% throttle 1 h 40 min.

* performance thrust with lithium batteries average 100-1200 rpm

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OPTIONS

- Manual rotation (D)
- Unlimited sea water
- Recuperation
- Electric rotation (ED)

ELECTRIC SAIL DRIVE SDKH 10.0 **10 KW | 20 HP * (option 30 HP)**



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Propeller included

THE COMPLETE KIT TO MAKE YOUR BOAT ELECTRIC

Krätler Motor Technology since 1971

THAT'S INCLUDED

- Advanced electric AC induction motor for 48 V DC
- Includes sail drive leg (also available for existing leg)
- Plate can be laminated directly to the hull
- Cables with plug to battery | Main Switch | Contactor
- Single lever with switch lock all prewired
- 9.6 KW h lithium battery pack with BMS 48 V DC or alternatively 9.6 KW h lead acid AGM
- Digital motor controller | battery monitor
- Battery charger 48 V for lithium battery

THAT'S THE PERFORMANCE

- 10 KW output / thrust similar to a 20 HP diesel *
- 11.6 KW power consumption (120 Amp) - 1200 rpm
- Weight 91 kg 200 kg (lithium) 380 kg (lead acid)
- For boats upto 10 t (one engine)
- Run time at an average 40% throttle 1 h 30 min.

* performance thrust with lithium batteries average 100-1200 rpm

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OPTIONS

- 15 KW/30 HP
- Manual rotation (D)
- Unlimited sea water incl.
- Recuperation
- Electric rotation (ED)

ELECTRIC SAIL DRIVE 6 KW | 10 KW



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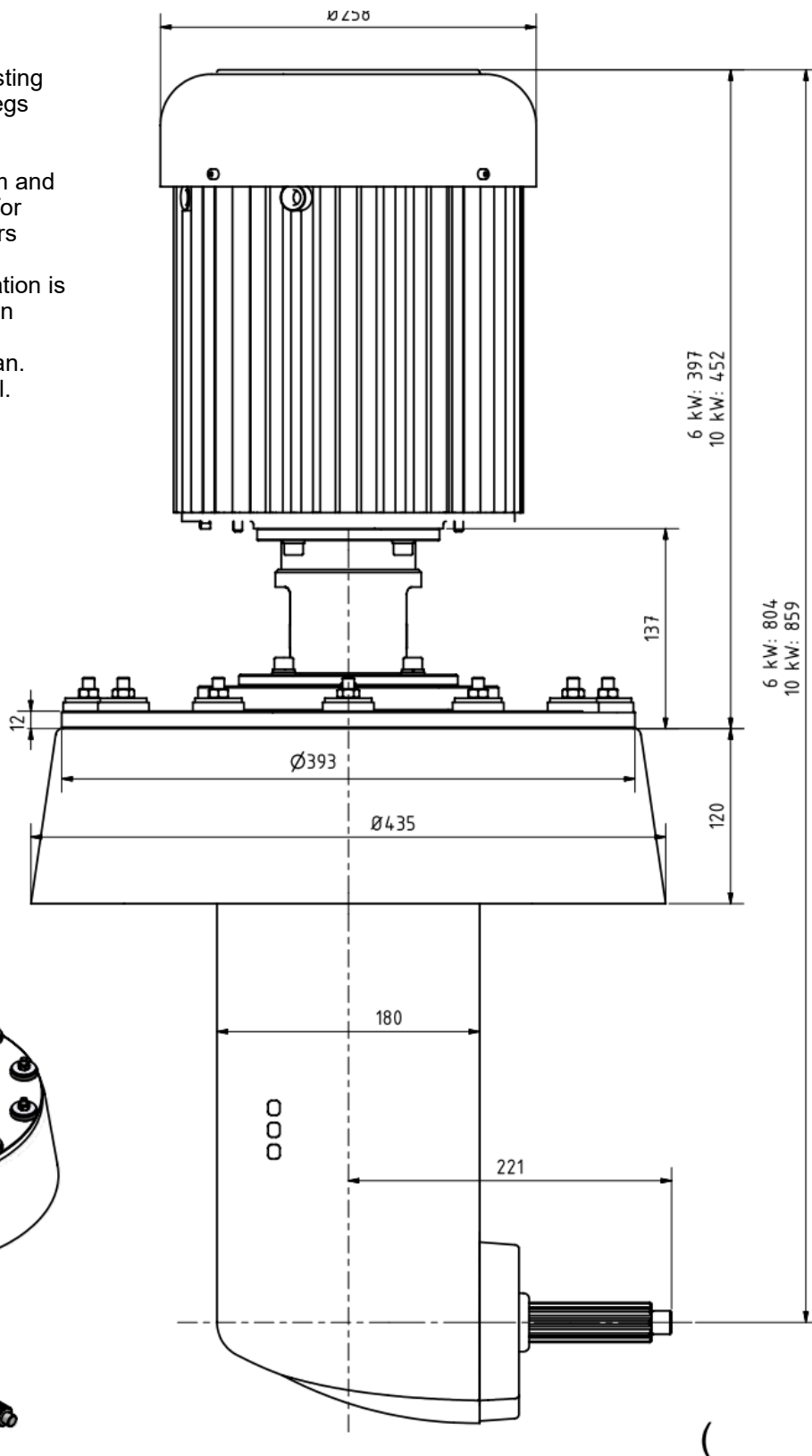
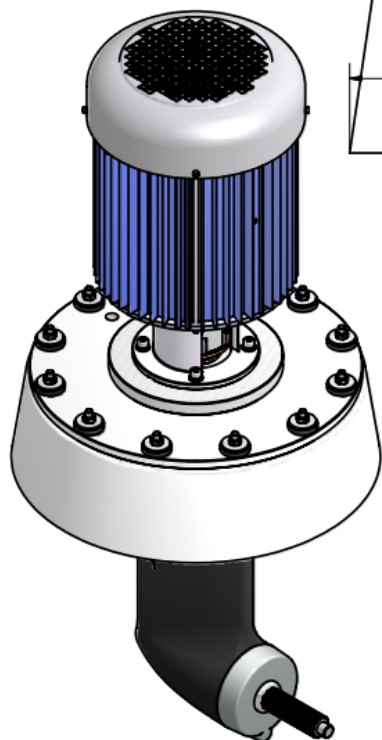
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Adapterplate for existing
Yanmar or Volvo legs
available

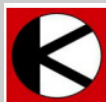
Propeller shaft 25 mm and
1:10 taper shank for
standard propellers

Electric or manual rotation is
available as option

Rotation 2 x 45 man.
Rotation 2 x 90 el.



ELECTRIC SAIL DRIVE upto 30 KW | 60 HP



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ELECTRIC SAIL-DRIVE up to 30kW

- **For maximum performance**

With our electrically-powered Sail-Drive, we offer a space-saving, robust and high-performance drive system. Once you have fitted the corresponding three-blade propeller, you have access to power that is comparable to that of an onboard diesel engine.

- **Controllable**

The practical single-lever control provides stepless motor-speed regulation in forwards or backwards – and the high-performance electrical regulating system works with virtually no energy loss.

- **Low-noise**

The electric motor runs quietly and with almost no vibration.

- **Easy to install**

The Sail-Drive is supplied with a base plate for lamination onto the hull of the vessel and therefore, the installation works is kept to a minimum. The Sail-Drive is also applied with an adapter plate for direct bolt-attachment to existing fixed “Volvo” and “Yanmar” bases.



Performance specifications:

Type	SDK 120/15	SDK 180/20	SDK 180/25	SDK 216/30
Motortype	112M 15,0 4 W	132M 20,0 4 W	DHC 8 W	DHC 8 W
Power output	15 kW	20 kW	25 kW	30 kW
Battery-Voltage	120 V	180 V	180 V	216 V
Current	158 A	134 A	167 A	168 A
Efficiency	83 %	83 %	83 %	83 %
Cooling system	water	water	water	water
Weight	69 kg	82 kg	90 kg	95 kg

15,20 and 25 KW engines in 96 volts DC available

Add 20-25 kg for controller, propeller, cables

ELECTRIC SAIL DRIVES COST VS DIESEL



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Engine	Diesel 9-10 HP	Electric 9-10 HP
Torque engine shaft at 1200 rpm	18 NM	20 NM
Torque engine shaft at 500 rpm	8 NM	20 NM
Life span of engine	3000 hrs	40000—50000 hrs
Warm up time	1-2 minutes	none
Reaction time forward to reverse	5-8 seconds	2 seconds
Weight (incl. all gear, tank, battery, genset)	100.00	140.00
Initial cost for Engine with sail drive	8500.00	9500.00
Costs for tank, wiring, battery (lithium), monitors, cooling systems, lever etc.	1800.00	4200.00
Costs for genset (3 KVA) or solar system	0	1000.00
Remaining value after 10 years	2500.00	4000.00
Cost per year (depreciation on initial value ./ remaining value + finance costs 7%)	780.00 + 273.00	1'070.00 + 374.50
Energy consumption cruising	1.6 L / h	3.5 KW / h
Energy consumption at full throttle	2.5 L / h	5.1 KW / h
Weight tank / battery per hour cruising	1.8 kg	40 kg
Energy costs for 150 hours per year cruising (mix. for electric engine solar grid genset) - based on petrol prices 2014	460.00	190.00
Service costs per year (1 major service)	450.00	150.00
Total costs per year	1963.00	1784.50

