



Sky In-line Stern Drive System

Special Feature & System Components

◆ 특징

- 축계장치보다 15~20% 속도 증가
- 낮은 수심에서도 자유로운 항해
- 전제품 특수소재로 부식 방지 및 완벽한 내구성
- 유압조타 및 유압트림장치로 부드러운 작동
- 간단한 구조로 유지보수비용 대폭 절감
- 간단한 설치
- 중, 소형 선박의 선외기 수준 고속화 실현
- 보트 2배길이의 U턴

시장을 리더하는 기업 (주)에스에이엠텍은

- ① 지금까지 빠른 속도를 요구하는 선박에서 사용되어 온 선외기 (Outboard) 또는 스텐드라이브 (Stern drive) 보다 견고하고 빠른 속도를 얻을 수 있는 추진장치인 스카이 수면 운전 추진장치를 개발하여 폐사 시험운전에 장착 한 후 다양한 현장 실험을 하여 자신있게 출시하는 제품으로 고객의 욕구를 완벽하게 충족시킬 것이라 확신한다.
- ② 스카이 인라인 스텐드라이브는 간단한 구조와 전제품 특수메탈 사용으로 부식방지 및 유지보수비가 대폭 절감한 완벽한 내구성을 자랑하는 해양 혁명시대에 걸맞는 추진장치임. (참고, 선외기 또는 스텐드라이브는 연간 200~600만원 정도 유지보수비용 소요)
- ③ 디젤엔진으로 고속추진을 할 수 있으므로 연간 연료비 절약이 매우 크다.(참고, 선외기 대비 약 7.6배 절약)

◆ 구성품 (System Components)

<p>Main Parts</p> <p>Trim Cylinder</p> <p>Steering Cylinder</p> <p>Sky In-line Stern Drive</p> <p>Trim Power Pack</p> <p>Universal Joint</p> <p>(For Gearbox and Drive Connecting)</p> <p>(AC 220/380V) (DC 24V)</p>	<p>Steering Parts (For Engine Driving Oil Pump)</p> <p>Wheel</p> <p>Steering Unit</p> <p>Oil Pump</p> <p>Oil Tank (10L)</p> <p>Oil Cooler</p> <p>(Cooling of Oil)</p> <p>(Driven by Engine)</p> <p>Steering & Trim Gauge</p> <p>Gear Oil (#90)</p> <p>Assistant Oil Tank</p>
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기타구성품 (Other Parts)

<p>Propeller</p> <p>(Surface Piercing)</p> <p>Tie Bar</p> <p>(For Twin Engine)</p> <p>Engine Mount</p>	<p>Steering Remote Set</p> <p>Steering Dial Remote</p> <p>Solenoid Valve Block</p>
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◆ Special Feature

- 15~20% more rapid speed than the shafting device.
- Free sailing is possible even at the shallow depth.
- All the products are made of special material, provide anti-corrosion and strong durability.
- Smooth operation due to hydraulic steering trim device.
- Allow you to cut maintenance and repair costs drastically due to the simple structure.
- The installation is simple.
- High speed is realized the same as the outboard level of medium and small boats.
- In U-Turn, need double boat length.

S. A. M-Tech the leading the market.

- ① We have developed a SKY surface drive propelling device (Sky In-line Stern Drive System) swifter than the outboard or stern drive used at boats of needing rapid speed up to now, and mounted the device on our test boat for four years in field experiments. The product is eventually being marketed with our pride, so we are confident that it can completely meet the needs of customers.
- ② Sky In-line Stern Drive has a simple structure and is made of completely special metal, therefore It has a strong durability due to anti-corrosion and that allow you to reduce drastically maintenance and repair expenses It's a suitable propelling device for the marine revolution era. (For your reference, as to the outboard or stern drive, about US \$2,000 ~ \$6,000 of maintenance and repairing expense may be needed yearly.)
- ③ As it can propel with high speed by a diesel engine, the yearly fuel consumption expense saving is very much. (For your reference, about 7.6 times expense saving is possible, comparing to the outboard.)



Sky In-line Stern Drive System

Model Selection Method & Dimensions & Specifications

◆ 귀하에게 맞는 모델이 어떤 것인지를 결정하는 방법

1. 엔진토크 계산

모든 엔진 제조사들은 엔진 파워 곡선을 제공합니다.
여기서 최대 출력 및 최대 회전을 확인하세요.

예) 360마력 @2800 rpm

$$\text{토크 } T(\text{kg}\cdot\text{m}) = 716.2 \times \text{출력(마력)} \div \text{회전(분량회전수)}$$

이 경우 엔진 토크는

$$T(\text{kg}\cdot\text{m}) = 716.2 \times 360(\text{마력}) \div 2800(\text{분량회전수}) = 92.08 \text{ kg}\cdot\text{m}$$

2. 구동 입력 토크계산

추진 장치에서 사용될 토크는 입력 토크이기 때문에 토크는 기어비율로 공급해주어야 합니다.

예) ① 기어비율 1.5 : 1 $T = 92.08 \text{ kg}\cdot\text{m} \times 1.5 = 138.12 \text{ kg}\cdot\text{m}$

※ 모델은 SKY-300 해당

② 기어비율 2.0 : 1 $T = 92.08 \text{ kg}\cdot\text{m} \times 2.0 = 184.16 \text{ kg}\cdot\text{m}$

※ 모델은 SKY-500 해당

3. 아래 표에서 적합한 모델을 선택하세요.

Model	SKY-180	SKY-250	SKY-300A	SKY-500
Torque (kg·m)	74.48	102.87	153.55	271.71

4. 선체형태

선체모양은 플레닝 형태여야 합니다.

① 단면체(Monohedron) ② 휨(Warped) 형태

5. 사용엔진

① 디젤엔진 ② 가솔린 엔진 ③ 터빈엔진

6. 엔진마력(출력)과 선체 무게 비율

기존 장치보다 속도를 향상시키기 위해서는 목표속도는 25노트 이상이어야 하며, 출력 / 무게 비율은 톤당 50마력 이상이어야 합니다.

◆ HOW TO DETERMINE WHICH MODEL is SUITABLE FOR YOUR APPLICATION.

1. ENGINE TORQUE CALCULATION.

All engine manufacture supply the engine power curve, look at the maximum power and maximum revolution.

example) 360 horse power @2800 rpm

The torque is

$$T(\text{kg}\cdot\text{m}) = 716.2 \times \text{Power}(\text{hp}) \div \text{Revolutions}(\text{revs}/\text{min})$$

In that case the engine torque is :

$$T(\text{kg}\cdot\text{m}) = 716.2 \times 360(\text{hp}) \div 2800(\text{revs}/\text{min}) = 92.08 \text{ kg}\cdot\text{m}$$

2. DRIVE INPUT TORQUE

The torque to be used for drive selection is the input torque, so the engine torque has to be MULTIPLIED by the gear ratio.

example) ① Gear ratio 1.5 : 1

Input torque is : $T = 92.08 \text{ kg}\cdot\text{m} \times 1.5 = 138.12 \text{ kg}\cdot\text{m}$

※ 138.12 kg·m is applied Model SKY-300 shown as below;

example) ② Gear ratio 2.0 : 1

Input torque is : $T = 92.08 \text{ kg}\cdot\text{m} \times 2.0 = 184.16 \text{ kg}\cdot\text{m}$

※ 184.16 kg·m is applied Model SKY-500 shown as below;

3. CHOOSE ONE OF SUITABLE MODEL FOR YOUR VESSEL

Model	SKY-180	SKY-250	SKY-300A	SKY-500
Torque (kg·m)	74.48	102.87	153.55	271.71

4. HULL TYPE OF VESSEL

The hull type must be planning

① Monohedron type ② Warped type

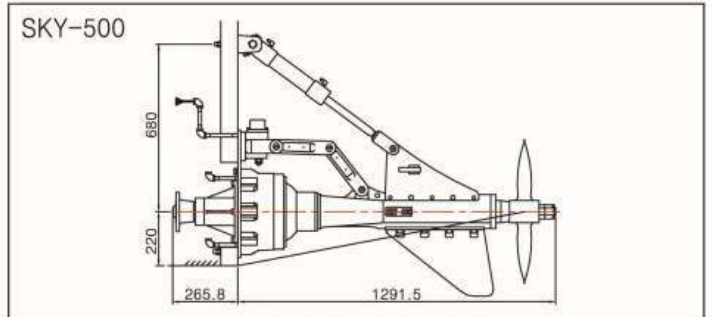
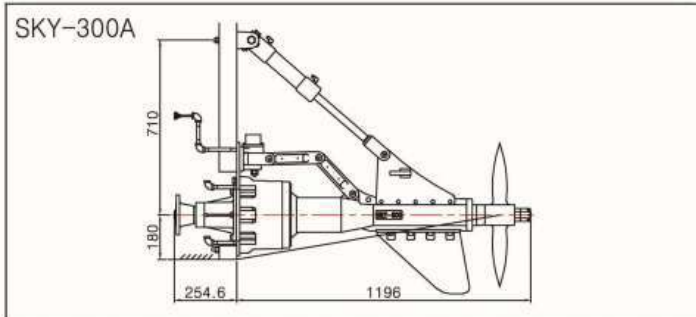
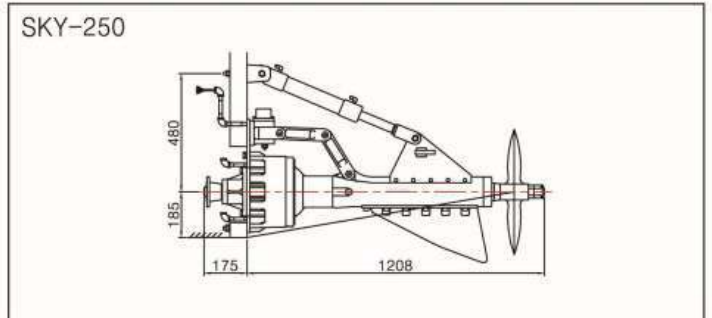
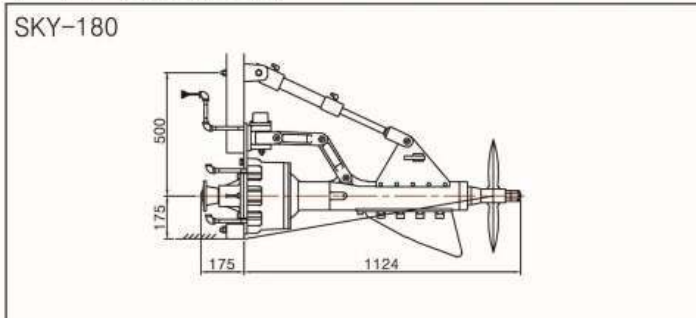
5. THE ENGINE (power source)

① Diesel engine ② Gasoline engine ③ Turbine engine

6. POWER / WEIGHT RATIO

To improve speed, compared to conventional propulsion, the targeted must be above 25 knots and the power / weight ratio must be above 50 horse power pre ton.

◆ 치 수 (Dimensions)



◆ 사양 (Specifications)

Model	SKY-180	SKY-250	SKY-300A	SKY-500
Torque (kg·m)	74.48	102.87	153.55	271.71
Trim Angle	Up	19.0 °	19.0 °	19.0 °
	Down	9 °	9 °	9 °
Steering Angle	23° + 23°	23° + 23°	23° + 23°	23° + 23°
Spline Size (mm)	33.0	36.7	42.0	50.8
Full Set Weight	182 Kg	210 Kg	227 Kg	320 Kg



Sky In-line Stern Drive System

Installed Boats & Package System

Installed Boats



LOA : 9.00m	Engine : 145HP×3,300 R.P.M.	Max. Speed : 29 Knots
LWL : 7.40m	Clutch : ZF 63A 1.56:1	Ton : 1.77 Ton
Beam : 2.21m	Drive : SKY-180	
Depth : 0.87m	Steering : Power	



LOA : 11.98m	Engine : 145HP×3,300 R.P.M.	Max. Speed : 16 Knots
LWL : 10.50m	Clutch : ZF 63A 1.56:1	Ton : 4.98 Ton
Beam : 4.20m	Drive : SKY-180	
Depth : 1.00m	Steering : Power	



LOA : 10.50m	Engine : 360HP×2,800 R.P.M.	Max. Speed : 29 Knots
LWL : 9.47m	Clutch : ZF 220 1.5:1	Ton : 4.07 Ton
Beam : 2.60m	Drive : SKY-300	
Depth : 1.08m	Steering : Power	



LOA : 13.00m	Engine : DAEWOO 360PS	Max. Speed : 29 Knots
LWL : 9.34m	Clutch : ZF 285A 1.28:1	Hull Material : Aluminum
Beam : 2.70m	Drive : SKY-400	Full Displacement (Ton)
Depth : 1.00m	Steering : Power	-Right : 8, -Heavy : 9

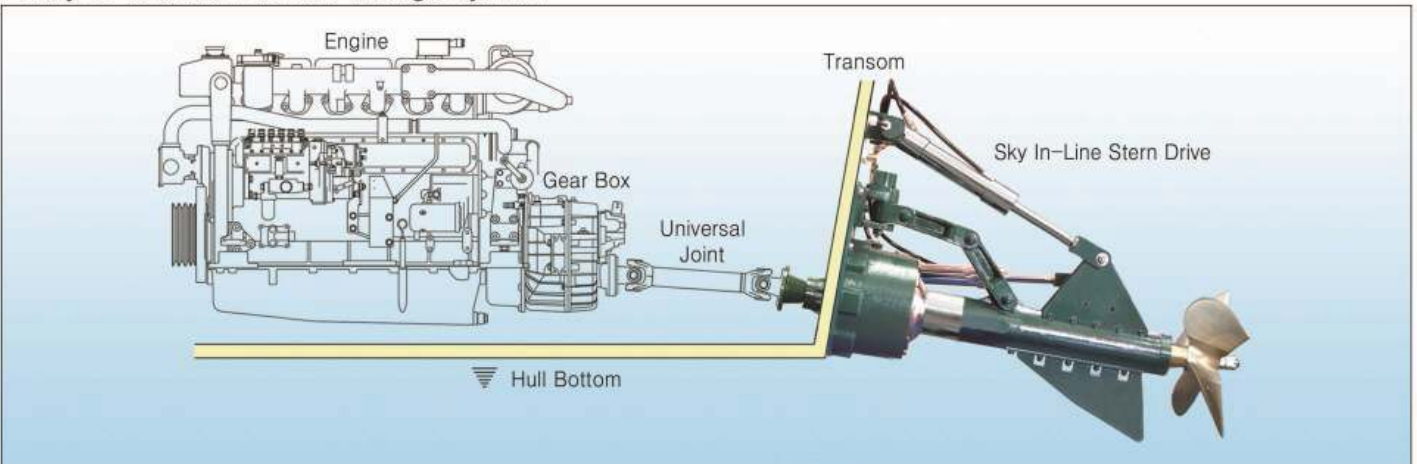


LOA : 19.80m	Engine : DAEWOO 315PS	Max. Speed : 12 Knots
LWL : 18.10m	Clutch : ZF 285A	Hull Material : WOOD
Beam : 4.50m	Drive : SKY-400	Full Displacement
Depth : 1.20m	Steering : Power	: 21 Ton



LOA : 16.41m	Engine : HD611TA 330PS×2	Max. Speed : 13 Knots
LWL : 14.70m	Clutch : KGM400, 2:1	Hull Material : F.R.P.
Beam : 3.90m	Drive : SKY-500	Full Displacement (Ton)
Depth : 1.00m	Steering : Power	-Right : 12, -Heavy : 16

Sky In-line Stern Drive Package System



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