**ALBIN KOMPONENTER AB**
COMPONENTA GJUTERIER
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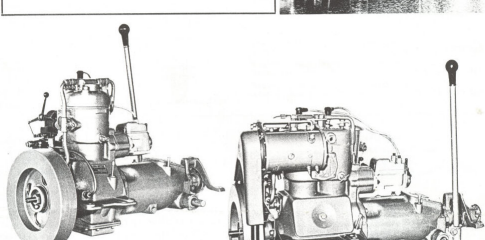
# ALBIN

## båtmotorer

## O-11 och O-21

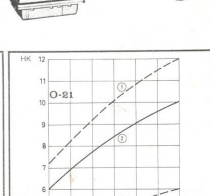
**6** SAE-hk/**5** DIN-hk  **12** SAE-hk/**10** DIN-hk



O-11 och O-21 är 4-taktsmotorer som levereras för bensin- eller fotogendrift. Kvalitet i varje detalj ger motorn slitstyrka och minimala underhållskostnader. Lägg därtill en lugn och behaglig gång, bränslesnålhet och driftsäkerhet och Ni har den riktiga båtmotorn, som ökar nöjet och trivseln ombord.

| TEKNISKA DATA | O-11 | O-21 |
|---|---|---|
| Antal cylindrar | 1 | 2 |
| Arbetssatt | 4-takt | 4-takt |
| Cylinderdiameter | 78 mm | 78 mm |
| Slaglängd | 92 mm | 92 mm |
| Cylindervolym | 0,44 l | 0,88 l |
| Kompressionsförhållande | 5,6:1 | 5,6:1 |
| Rotationsriktning | moturs | moturs |
| Största lutning | 10° | 10° |
| Bränsleförbrukning | | |
| bensin | 235 g/hkh | 235 g/hkh |
| fotogen | 260 g/hkh | 260 g/hkh |
| Vikt | | |
| motor med handstart | 92 kg | 111 kg |
| motor med elstart | 107 kg | 126 kg |

Effektkurvan visar garanterad avgiven effekt vid bensindrift i SAE-hk (1) och DIN-hk (2). Vid fotogendrift ger motorn ca 20% lägre effekt.



TECHNICAL DATA NO 1063E
ALBIN marine engine Boatswain type AL-23
February 1963

Cycle ..... 4-stroke
Bore ..... 3.54 in. (90 mm)
Stroke ..... 4.33 in. (110 mm)
Number of cylinders .... 2
Capacity ..... 85 cu.in. (1.40 litres)

Compression ratio
Petrol engine ..... 5.6:1
Paraffin engine ..... 4.6:1

Compression at full throttle
Petrol engine ..... 85 psi (6 kg/cm$^2$) at 200 RPM
Paraffin engine ..... 71 psi (5 kg/cm$^2$) at 200 RPM

Output
Petrol engine ..... 15 BHP at 1500 RPM
Paraffin engine ..... 12 BHP at 1500 RPM

Firing order ..... 1 - 2
Engine rotation ..... Anti-clockwise seen from the stern

Torque
Petrol engine .... 51.8 ftlb (7.16 mkp) at 1500 RPM
max 54.3 ftlb (7.5 mkp) at 1100 RPM
Paraffin engine .. 41.6 ftlb (5.75 mkp) at 1500 RPM
max 43.6 ftlb (6.03 mkp) at 1200 RPM

Fuel consumption
Petrol engine .... .53 lb (240 g)/BHP - HR at 1400 RPM
1.09 imp.gal. (5 litres)/hour
Paraffin engine .. .60 lb (270 g)/BHP - HR at 1400 RPM
.88 imp.gal. (4 litres)/hour

Weight
Engine with reverse gear and crank start on flywheel ..... 392 lb (178 kg)
Engine with reverse gear, raised rear start and flywheel cover .... 463 lb (210 kg)
Engine with reverse gear, electric starter and flywheel cover ..... 492 lb (223 kg)

Lubricating oil
Summer above + 5°C ... SAE 30
Winter below + 5°C ... SAE 20

Oil pressure ..... 20 - 30 psi (1.5 - 2.5 kg/cm$^2$)

Oil capacity
Crankcase ..... 3 pints (1.7 litres)
Reverse gear ..... 3 pints (1.7 litres)

Capacity of water jackets 4.7 pints (2.65 litres)
Ignition system ..... Magneto with impulse starter

Magneto ..... SEM EK-241
Contact breaker gap .... .016 in. (0.4 mm)
Spark plugs ..... Bosch M 45 T 1
Champion UD 16
Spark plug gap ..... .024 in. (0.6 mm)
Electrical system ..... 6 V or 12 V
Starter ..... 6 V Bosch EGD 0,6/6 AL 32
12 V Bosch EGD 1/12 AL eml. AL 33/9 N2
Generator ..... 6 V Bosch RED 90/6 2200 BR22
12 V Bosch RJH 150/12 2100 BR1
Carburettor ..... Solex 26 MVD
Solex 26 VN 901 - 905
Solex 26 NV 906

Piston material ..... Cast iron
Piston clearance ..... .003 in (0.07 mm)
Piston ring gap ..... .006 - .01 in. (0.15 - 0.25 mm)

Valve clearance, cold engine
Intake ..... .008 in. (0.20 mm)
Exhaust ..... .01 in. (0.25 mm)

Valve spindle clearance
Intake ..... .003 in. (0.07 mm)
Exhaust ..... .005 in. (0.12 mm)

Valve seat angle
Intake ..... 45°
Exhaust ..... 45°

Clearance
Piston rod bearings .. .0006 - .0016 in. ( 0.015 - 0.040 mm)
Crankshaft bearings .. .0008 - .0016 in. (0.020 - 0.040 mm)
Crankshaft axial play .008 - .016 in. (0.20 - 0.40 mm)

Recommended torque
Cylinder head nuts ... 60 ftlb (8.3 mkp)
Connecting rod nuts .. 30 - 35 ftlb (4.1 - 4.8 mkp)

Carburetter setting

| Carburettor type | Solex 26 MVD | Solex 26 VN 901-903 | Solex 26 VN 904 | Solex 26 VN 905 | Solex 26 NV 906 |
|---|---|---|---|---|---|
| Choke tube | 4070/22.0 | 51708/2/23 | 51708/2/21 | 51708/2/21 | 51708/2/21 |
| Main jet | 1286/85x10 | 50552/1/95 | 50552/1/95 | 50552/1/95 | 50552/1/95 |
| Correction jet | - | 51612/230 | 51612/180 | 51612/180 | 51612/180 |
| Pilot jet | 2894/60 | 53555 A/45 | 53555 A/55 | 53555 A/50 | 55255/45 |
| Emulsion tube | - | 52684/21 | 52684/16 | 52684/6 | 52684/6 |
| Needle valve | 52844/2.0 | 52844/1.5 | 52844/1.5 | 52844/1.5 | 52844/1.5 |
| Float | 3164/33 g | 53559/9.1 g | 53559/9.1 g | 53559/9.1 g | 53559/9.1 g |

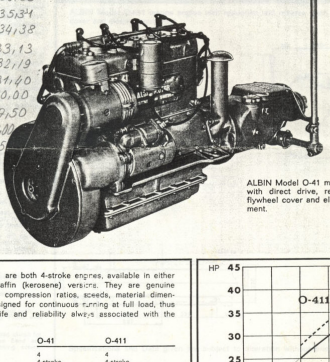
6 EMBOL 1995

# ALBIN Marine Engines

## O-41 24 SAE-hp/20 DIN-hp

## O-411 42 SAE-hp/38 DIN-hp

2500 rpm ⇒ 38,00 bhp ⇒ 10187 bpk
2400 ⇒ 36,88
2350 ⇒ 36,35
2300 ⇒ 35,34
2200 ⇒ 34,38
2100 ⇒ 33,13
2050 ⇒ 32,19
2000 ⇒ 31,40
1900 ⇒ 30,00
1750 ⇒ 27,50
1600 ⇒ 25,00
1500 ⇒ 23,15



ALBIN Model O-41 marine engine with direct drive, reverse gear, flywheel cover and electric equipment.

The O-41 and O-411 are both 4-stroke engines, available in either petrol or petrol/paraffin (kerosene) versions. They are genuine marine engines, the compression ratios, speeds, material dimensions etc. being designed for continuous running at full load, thus ensuring the long life and reliability always associated with the name of ALBIN.

| TECHNICAL DATA | O-41 | O-411 |
|---|---|---|
| Number of cylinders | 4 | 4 |
| Cycle | 4-stroke | 4-stroke |
| Bore | 78 mm (3.07 ins | 78 mm (3.07 ins) |
| Stroke | 92 mm (3.62 ins | 92 mm (3.62 ins) |
| Capacity | 1760 cc (107 cu. ins | 1760 cc (107 cu.ins) |
| Compression ratio | 5.6:1 | 6.5:1 |
| Direction of rotation with direct drive | Anti-clockwise | Anti-clockwise |
| with reduction gear | Clockwise | Clockwise |
| Maximum tilt | 10° | 15° |
| Fuel consumption Petrol | 240 g (0.53 lb)/bhp/h | 240 g (0.53 lb)/bhp/h |
| Petrol/Paraffin (kerosene) | 260 g (0.57 lb)/bhp/h | 260 g (0.57 lb)/bhp/h |
| Weight Electric start with direct drive | 225 kg (496 lb) | 225 kg (496 lb) |
| Electric start with reduction gear | 250 kg (551 lb) | 250 kg (551 lb) |




The power curves give guaranteed output in SAE h.p. (1) and DIN h.p. (2). For the petrol/paraffin (kerosene) operating with paraffin, the O-41 output is 21 SAE h.p./17 DIN h.p. and the O-411 output is 32 SAE h.p./26 DIN h.p.

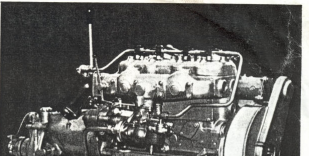
# O-41 and O-411

As both these engines can be supplied with either direct drive or reduction gear, they can be installed in many different types of pleasure craft, small work boats and fishing boats.

The combination of high-quality components and robust construction results in long life with a minimum of maintenance. The crankshafts are well-dimensioned and carefully balanced, ensuring smooth and quiet running — essential for pleasant cruising. The O-41 and O-411 are true marine engines, designed to give reliable and efficient service at full power through the years. The fuel consumption is low: approximately 2½ litres (4½ pts.) per hour for the O-41 and 4 litres (7 pts.) per hour for the O-411, at cruising speed.

The engine cooling is thermostatically controlled, cooling water being circulated by means of a gear pump which may be dismantled easily for inspection. Standard equipment includes built-in reverse gear, flywheel cover, water-cooled exhaust manifold and carburettor with flame guard. In addition, the O-411 is fitted with a lubricating oil filter and tachometer.

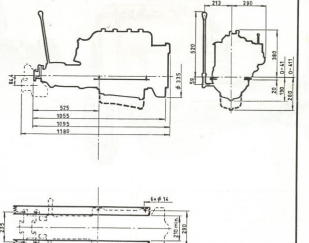
The 12-volt electric equipment consists of a 0.6 h.p. starter motor, 90 W generator with relay, ignition coil and distributor. The instrument panel is fitted with illuminated oil pressure and temperature gauges, starter button, switch with key for ignition and lighting, and ignition and charging warning light.



ALBIN Model O-411 marine engine with reduction and reverse gear, flywheel cover and electric equipment

## MATERIAL SPECIFICATION

| | |
|---|---|
| Cylinder block and crankcase | Cast iron with chill-hardened cylinder bores. |
| Crankshaft | Drop forged, tempered steel. |
| Main bearings | White metal lined. |
| Connecting rods | Drop forged, tempered steel. |
| Big end bearings | Loose, steel-backed bearing shells: for O-41 white metal lined and for O-411 lead-copper lined. |
| Pistons | Light alloy with one oil scraper ring and two compression rings, the upper one chromium plated. |
| Gudgeon pin bearings | Lead-bronze lined. |
| Valves | Corrosion- and heat-resistant steel. |
| Cam shaft | Grey iron with chill-hardened cams. |
| Carburettor | SOLEX marine carburettor with float bowl drain plug. Fitted with flame guard. |
| Reverse gear | Robust design with disc clutch for running ahead. Brake band and bevel gears for running astern. Neutral hold. |




Specifications and Data given are subject to alteration without prior notice.


# ALBIN MOTOR AB

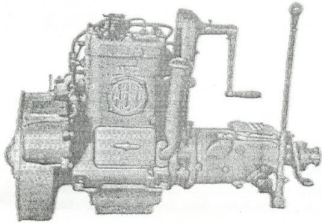
KRISTINEHAMN — SWEDEN — TELEGRAMS: ALBIN, KRISTINEHAMN

# Reservdelskatalog

för

ALBIN marinmotor

## BÅTSMAN typ AL-23

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| Makine tipi | 0-11 | 0-21 | AL-23 | 0-41 | 0-411 |
|---|---|---|---|---|---|
| Silindir adedi | 1 | 2 | 2 | 4 | 4 |
| Zaman | 4-zamanlı | 4-zamanlı | 4-zamanlı | 4-zamanlı | 4-zamanlı |
| Silindir kutru | 78 mm | 78 mm | 90 mm | 78 mm | 78 mm |
| Piston yolu (Strok) | 92 mm | 92 mm | 110 mm | 92 mm | 92 mm |
| Silindir hacmi | 0,44 litre | 0,88 litre | 1,40 litre | 1,76 litre | 1,76 litre |
| Kompresyon nispeti | | | | | |
| Benzinli | 5,6:1 | 5,6:1 | 5,6:1 | 5,6:1 | 6,5:1 |
| Benzin/gazlı | 4,8:1 | 4,8:1 | 4,6:1 | 4,8:1 | 5,0:1 |
| Tam yolda kompresyon | | | | | |
| Benzinli | 200 dev.de (ilk hareket) 6 kg/cm² | 200 dev.de (ilk hareket) 6 kg/cm² | 200 dev.de (ilk hareket) 6 kg/cm² | 200 dev.de (ilk hareket) 6 kg/cm² | 200 dev.de (ilk h 7 kg/cm² |
| Benzin/gazlı | 200 dev.de (ilk hareket) 5 kg/cm² | 200 dev.de (ilk hareket) 5 kg/cm² | 200 dev.de (ilk hareket) 5 kg/cm² | 200 dev.de (ilk hareket) 5 kg/cm² | 200 dev.de (ilk h 5,3 kg/cm² |
| Çekiş kuvveti (Tork) | | | | | |
| Benzinli | 1600 dev.de 2,24 kgm azamî-1300 dev.de 2,31 kgm | 1600 dev.de 4,47 kgm azamî-1300 dev.de 4,65 kgm | 1500 dev.de 7,16 kgm azamî-1100 dev.de 7,5 kgm | 1600 dev.de 8,96 kgm azamî-1300 dev.de 9,52 kgm | 2500 dev.de 11,46 azamî-2000 dev.de |
| Benzin/gazlı | 1600 dev.de 1,79 kgm azamî-1300 dev.de 1,93 kgm | 1600 dev.de 3,58 kgm azamî-1300 dev.de 3,81 kgm | 1500 dev.de 5,75 kgm azamî-1200 dev.de 6,03 kgm | 1600 dev.de 7,6 kgm azamî-1300 dev.de 7,82 kgm | 2500 dev.de 8,92 azamî-1900 dev.de |
| Takat | | | | | |
| Benzinli | 1600 dev. 5 HP | 1600 dev. 10 HP | 1500 dev. 15 HP | 1600 dev. 20 HP | 2500 dev. 40 HP |
| Benzin/gazlı | 1600 dev. 4 HP | 1600 dev. 8 HP | 1500 dev. 12 HP | 1600 dev. 17 HP | 2500 dev. 28 HP |
| Yakıt sarfiyatı | | | | | |
| Benzinli | 1400 dev.de 235 g/hp/sa. | 1400 dev.de 240 g/hp/sa. | 1400 dev.de 240 g/hp/sa. | 1400 dev.de 240 g/hp/sa. | 2500 dev.de 235 g |
| Benzin/gazlı | 1400 dev.de 260 g/hp/sa. | 1400 dev.de 260 g/hp/sa. | 1400 dev.de 270 g/hp/sa. | 1400 dev.de 260 g/hp/sa. | 2500 dev.de 285 g |
| Motor soğuk iken supap aralığı | | | | | |
| Emme supabı | 0,20 mm | 0,20 mm | 0,20 mm | 0,20 mm | 0,20 mm |
| Egzost supabı | 0,25 mm | 0,25 mm | 0,25 mm | 0,25 mm | 0,25 mm |
| Motor sıcak iken yağ tazyiki | 1,5 - 2,5 kg/cm² | 1,5 - 2,5 kg/cm² | 1,5 - 2,5 kg/cm² | 1,5 - 2,5 kg/cm² | 2,0 - 3,0 kg/cm² |