



ADVANCE

Marine Gearboxes And Power Shift Transmissions



- +++ Set up in 1990
- +++ ISO9001 Quality System Certified
- +++ Products Ratified By CCS, LR, GL, BV, ABS AND NK, etc.

杭州前进齿轮箱集团有限公司 (杭州齿轮集团)
HANGZHOU ADVANCE GEARBOX GROUP CO., LTD.

BRIEF INTRODUCTION

HANGZHOU ADVANCE GEARBOX GROUP CO., LTD. (former name: Hangzhou Gearbox Works), was set up in 1948. The Company is the largest and the most famous enterprise specialized in producing transmissions, as well as P/M products in China. It is 150 km from Shanghai and has an area of 100,000m², staff of 3000 (including 800 professional technicians) and 10 hundred million RMB Yuan assets. It owns a Hangzhou Marine Gearbox Research Institute, a Hangzhou P/M Research Institute, 12 sub-factories and 8 subordinate companies.

The Company has introduced advanced foreign technology and imported equipment since 1956 in order to keep its leading place in China. There are eight families and nearly a thousand types of the products in the company. They are: marine gearbox, constructional transmission, vehicle transmission, industrial gearbox, gearbox clutch, special vehicle transmission, P/M product and large sized precision gearwheel. Its output and export occupy the superior place in China.

The company passed the certificate of ISO9001 and all the products have the approval of C.C.S.

ADVANCE, as a famous brand in China, has exported its products to more than 50 countries and regions, including South East Asia, Europe, Australia, Africa, Middle East and America. The company has established joint-ventures in Malaysia, Hongkong, Macao and can do well in after-sale service.

We deeply appreciate all our friends and hope to cooperate continually.

GUIDE TO MODEL SELECTION

1. "RATED" in this manual indicates the proportion of the engine continuous power to the rated speed. When selecting model, the actual "RATED" should be smaller than the data listed in this manual.
2. For personal pleasure boat, if the duration of full-speed sailing is less than 5% of total running time and for other duty duration running under speed less than 87% of full-duty speed, the selected "RATED" may be 20 % bigger than the data in the table.
3. If the average running duration at full-duty speed is not more than two hours every day for whole working time running below the full-duty of the engine and the total annual running time is less than 2000 hours, the selected "RATED" may be 20 % bigger than the data in the table.
4. Rigid water line of gearbox with engine is prohibited.
5. Gearbox must be used in the maximal vibration environment allowed by the classification society of shipping.

SPECIAL NOTE:

1. "ENGINE" in this manual are only for your reference.
2. When confirming the gearbox model, please study the "GUIDE TO MODEL SELECTION" carefully or contact "MANULIROU ADVANCE GEARBOX GROUP CO., LTD".

25 02 2016



104 SERIES VARIABLE

MAX. 42 HP at 2000 RPM

Engine Speed: 1800-2000 RPM

Size	1.5	2.2	3.0	4.0	5.5
Max. Output	0.75	1.1	1.5	2.2	3.0

1 Phase, 200-240VAC, 50/60 Hz

Net Weight: 10 kg

Options/Comments: Mechanical joint shaft

Cable distance: 1.2 m

Engine: YASKAWA P100, P100, P100-200 —



104 SERIES VARIABLE

MAX. 42 HP at 2000 RPM

Engine Speed: 1800-2000 RPM

Size	1.5	2.2	3.0	4.0	5.5
Max. Output	0.75	1.1	1.5	2.2	3.0

1 Phase, 200-240VAC, 50/60 Hz

Net Weight: 10 kg

Options/Comments: Mechanical joint shaft

Cable distance: 1.2 m

Engine: YASKAWA P100-2, P100-2, P100-2 —



104 SERIES VARIABLE

MAX. 37 HP at 2000 RPM

Engine Speed: 1800-2000 RPM

Size	1.5	2.2	3.0	4.0	5.5	7.5
Max. Output	0.75	1.1	1.5	2.2	3.0	4.0

1 Phase, 200-240VAC, 50/60 Hz

Net Weight: 10 kg

Net Weight: 10 kg

Phase: 200-240V, 50/60 Hz

Options/Comments: PFD device available; Mechanical motor operation

Cable distance: 1.2 m

Engine: YASKAWA P100-2, P100-2, P100-2 —



104 SERIES VARIABLE

MAX. 42 HP at 2000 RPM

Engine Speed: 1800-2000 RPM

Size	1.5	2.2	3.0	4.0	5.5	7.5
Max. Output	0.75	1.1	1.5	2.2	3.0	4.0

1 Phase, 200-240VAC, 50/60 Hz

Net Weight: 10 kg

Net Weight: 10 kg

Phase: 200-240V, 50/60 Hz

Options/Comments: PFD device available; Mechanical motor operation

Cable distance: 1.2 m

Engine: YASKAWA P100-2, P100-2, P100-2 —



104 SERIES VARIABLE

MAX. 42 HP at 2000 RPM

Engine Speed: 1800-2000 RPM

Size	1.5	2.2	3.0	4.0	5.5	7.5
Max. Output	0.75	1.1	1.5	2.2	3.0	4.0

1 Phase, 200-240VAC, 50/60 Hz

Net Weight: 10 kg

Net Weight: 10 kg

Phase: 200-240V, 50/60 Hz

Options/Comments: PFD device available; Mechanical motor operation

Cable distance: 1.2 m

Engine: YASKAWA P100-2, P100-2, P100-2 —



1354 MARINE GENERATOR

MAX. 1200 HP or 2000 KVA

Engine Speed: 1800/2100 RPM

Base	1.5A	2.2A	3.0A	3.7A	4.5A	5.5A	6.6A	7.5A	8.0A									
Base Output	10.0 kVA	15.0 kVA	20.0 kVA	25.0 kVA	30.0 kVA	37.5 kVA	45.0 kVA	50.0 kVA	55.0 kVA									
Load and Efficiency					See Page 100 kg													
Following: 100 %					Page 100 kg													
Optional: Mechanical or Electrical remote control																		
Control: 240 mm																		
Engine: 1354/1354/1354/1354/1354/1354/1354/1354/1354/1354																		



1354 MARINE GENERATOR

MAX. 1200 HP or 2000 KVA

Engine Speed: 1800/2100 RPM

Base	1.5A	2.2A	3.0A	3.7A	4.5A	5.5A	6.6A	7.5A	8.0A									
Base Output	10.0 kVA	15.0 kVA	20.0 kVA	25.0 kVA	30.0 kVA	37.5 kVA	45.0 kVA	50.0 kVA	55.0 kVA									
Load and Efficiency					See Page 100 kg													
Following: 100 %					Page 100 kg													
Optional: Mechanical or Electrical remote control																		
Control: 240 mm																		
Engine: 1354/1354/1354/1354/1354/1354/1354/1354/1354/1354																		



1354 MARINE GENERATOR

MAX. 1200 HP or 2000 KVA

Engine Speed: 1800/2100 RPM

Base	1.5A	2.2A	3.0A
Base Output	10.0 kVA	15.0 kVA	20.0 kVA
Load and Efficiency	See Page 100 kg		
Following: 100 %	Page 100 kg		
Optional: Mechanical or Electrical remote control			
Control: 240 mm			
Engine: 1354/1354/1354/1354/1354/1354/1354/1354/1354			



1354 MARINE GENERATOR

MAX. 1200 HP or 2000 KVA

Engine Speed: 1800/2100 RPM

Base	1.5A	2.2A	3.0A	3.7A	4.5A	5.5A	6.6A				
Base Output	10.0	15.0	20.0	25.0	30.0	37.5	45.0				
Load and Efficiency					See Page 100 kg						
Following: 100 %					Page 100 kg						
Optional: Mechanical or Electrical remote control											
Control: 240 mm											
Engine: 1354/1354/1354/1354/1354/1354/1354/1354/1354											



1354 MARINE GENERATOR

MAX. 1200 HP or 2000 KVA

Engine Speed: 1800/2100 RPM

Base	1.5A	2.2A	3.0A	3.7A
Base Output	10.0	15.0	20.0	25.0
Load and Efficiency	See Page 100 kg			
Following: 100 %	Page 100 kg, 100 kg			
Optional Components: Mechanical or electrical remote operation				
Control: 240 mm				
Engine: 1354/1354/1354/1354/1354/1354/1354/1354/1354				



ADP SERIES GEARBOX

MAX. 800 HP at 1500RPM

Engine Speed: 1500-2500RPM

Ratio	1.50	1.43	1.38	1.32	1.25	1.20	1.14	1.08
Max Output	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Output: 5000-10000 GPM

No. Shafts: 1 or 2

Reduction: 1:1 to 1

Pages 10, 11, 12

Options/Comments: PTO drive available. Mechanical or Electrical remote control.

Construction: 304 SS

Engines: 1700-1500, 1800-1500, 1900-1500



ADP SERIES GEARBOX

MAX. 800 HP at 1500RPM

Engine Speed: 1500-2500RPM

Ratio	1.50	1.43	1.38	1.32	1.25	1.20	1.14	1.08
Max Output	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Output: 5000-10000 GPM

No. Shafts: 1 or 2

Reduction: 1:1 to 1

Pages 10, 11, 12

Options/Comments: PTO drive available. Mechanical or Electrical remote control.

Construction: 304 SS

Engines: 1700-1500, 1800-1500, 1900-1500



ADP SERIES GEARBOX

MAX. 750 HP at 1500RPM

Engine Speed: 1500-2500RPM

Ratio	1.50	1.43	1.38	1.32	1.25	1.20
Max Output	5.0	5.0	5.0	5.0	5.0	5.0

Output: 5000-10000 GPM

No. Shafts: 1 or 2

Reduction: 1:1 to 1

Pages 10, 11, 12

Options/Comments: PTO drive available. Mechanical or Electrical remote control.

Construction: 304 SS

Engines: 1700-1500, 1800-1500, 1900-1500



ADP SERIES GEARBOX

MAX. 600 HP at 1500RPM

Engine Speed: 1500-2500RPM

Ratio	1.50	1.43	1.38	1.32	1.25
Max Output	5.0	5.0	5.0	5.0	5.0

Output: 5000-10000 GPM

No. Shafts: 1 or 2

Reduction: 1:1 to 1

Pages 10, 11, 12

Options/Comments: PTO drive available. Mechanical or Electrical remote control.

Construction: 304 SS

Engines: 1700-1500, 1800-1500, 1900-1500



ADP SERIES GEARBOX

MAX. 600 HP at 1500RPM

Engine Speed: 1500-2500RPM

Ratio	1.50	1.43	1.38	1.32	1.25
Max Output	5.0	5.0	5.0	5.0	5.0

Output: 5000-10000 GPM

No. Shafts: 1 or 2

Reduction: 1:1 to 1

Pages 10, 11, 12

Options/Comments: PTO drive available. Mechanical or Electrical remote control.

Construction: 304 SS

Engines: 1700-1500, 1800-1500, 1900-1500

Note: The "Max" will be the design flow rate.



HYDRA MARINE CREAMER

MAX. 100 HP at 2000RPM

Engine Speed: 1000-2000 RPM

Size	1.00	1.25	1.50	1.75	2.00	2.25	2.50
Max. Output	0.2	0.3	0.4	0.6	0.7	0.9	0.9

Control: Self-Adjustable

Net Weight: 1.00 kg

Self-Sealing: N/A, N/A

Range: N/A, N/A, N/A, N/A

Optional Features: Mechanical or Electrical remote control

Control distance: 100 m

Engine: 1/2 to 2.5 HP (1000 to 2000 RPM)

Note: The "Mar" will also fit on high flexible coupling.



HYDRA MARINE CREAMER

MAX. 100 HP at 2000RPM

Engine Speed: 1000-2000 RPM

Size	1.00	1.25	1.50	1.75	2.00	2.25	2.50
Max. Output	0.2	0.3	0.4	0.6	0.7	0.9	0.9

Control: Self-Adjustable

Net Weight: 1.00 kg

Self-Sealing: N/A, N/A

Range: N/A, N/A, N/A, N/A

Optional Features: Mechanical or Electrical remote control

Control distance: 100 m

Engine: 1/2 to 2.5 HP (1000 to 2000 RPM)



HYDRA MARINE CREAMER

MAX. 100 HP at 2000RPM

Engine Speed: 1000-2000 RPM

Size	1.00	1.25	1.50	1.75	2.00	2.25	2.50
Max. Output	0.2	0.3	0.4	0.6	0.7	0.9	0.9

Control: Self-Adjustable

Net Weight: 1.00 kg

Self-Sealing: N/A, N/A

Range: N/A, N/A, N/A, N/A

Optional Features: Mechanical or Electrical remote control

Control distance: 100 m

Engine: 1/2 to 2.5 HP (1000 to 2000 RPM)



HYDRA MARINE CREAMER

MAX. 100 HP at 2000RPM

Engine Speed: 1000-2000 RPM

Size	1.00	1.25	1.50	1.75	2.00	2.25	2.50
Max. Output	0.2	0.3	0.4	0.6	0.7	0.9	0.9

Control: Self-Adjustable

Net Weight: 1.00 kg

Self-Sealing: N/A, N/A

Range: N/A, N/A, N/A, N/A

Optional Features: Mechanical or Electrical remote control

Control distance: 100 m

Engine: 1/2 to 2.5 HP (1000 to 2000 RPM)

Note: The "Mar" will also fit on high flexible coupling.



HYDRA MARINE CREAMER

MAX. 100 HP at 2000RPM

Engine Speed: 1000-2000 RPM

Size	1.00	1.25	1.50	1.75	2.00	2.25	2.50
Max. Output	0.2	0.3	0.4	0.6	0.7	0.9	0.9

Control: Self-Adjustable

Net Weight: 1.00 kg

Self-Sealing: N/A, N/A

Range: N/A, N/A, N/A, N/A

Optional Features: Mechanical or Electrical remote control

Control distance: 100 m

Engine: 1/2 to 2.5 HP (1000 to 2000 RPM)

Note: The "Mar" will also fit on high flexible coupling.



AUTOMA MARINE CLEVIS

1000, 1.5M HP at 1500RPM

Engine Speed: 1500-2000 RPM

Size	1.0M	1.2M	1.5M	2.0M	2.5M	3.0M	3.5M
Max. Torque	6.0	6.4	8.0	10.0	12.5	15.0	17.5

Lock and Release: 1000-1200 mm

See Weight: 1000 kg

Refitting: 1000-1200

Range: 1.5, 2.0, 3.0

Optional Components: Mechanical or Electrohydraulic control

Control Distance: 400 m

Range: 0 to 1500 m (0 to 1500 ft) —

Note: The "Max" with size 3.5 is not applicable coupling.



AUTOMA MARINE CLEVIS

1500, 1.5M HP at 1500RPM

Engine Speed: 1500-2000 RPM

Size	1.0M	1.2M	1.5M	2.0M	2.5M	3.0M	3.5M
Max. Torque	6.0	6.4	8.0	10.0	12.5	15.0	17.5

Lock and Release: 1000-1200 mm

See Weight: 1.500 kg

Refitting: 1000-1200

Range: 1.5, 2.0, 3.0

Optional Components: Mechanical or Electrohydraulic control

Control Distance: 400 m

Range: 0 to 1500 m (0 to 1500 ft) —

Note: The "Max" with size 3.5 is not applicable coupling.



AUTOMA MARINE CLEVIS

2000, 1.5M HP at 1500RPM

Engine Speed: 1500-2000 RPM

Size	1.0M	1.2M	1.5M	2.0M	2.5M	3.0M	3.5M
Max. Torque	6.0	6.4	8.0	10.0	12.5	15.0	17.5

Lock and Release: 1000-1200 mm

See Weight: 2000 kg

Refitting: 1000-1200

Range: 1.5, 2.0, 3.0

Optional Components: Mechanical or Electrohydraulic control

Control Distance: 400 m

Range: 0 to 1500 m —



AUTOMA MARINE CLEVIS

3000, 1.5M HP at 1500RPM

Engine Speed: 1500-2000 RPM

Size	1.0M	1.2M	1.5M	2.0M	2.5M	3.0M	3.5M
Max. Torque	6.0	6.4	8.0	10.0	12.5	15.0	17.5

Lock and Release: 1000-1200 mm

See Weight: 3000 kg

Optional Components: Mechanical control, Flange connection

Flange connection

Control Distance: 400 m and longer (optional)

Range: 0 to 1500 m (0 to 1500 ft) —



www.elsevier.com/locate/jmb

Location	Year	Value	Unit
New York City Manhattan	1950 - 1959	1,234,567	sq ft
	1960 - 1969	1,345,678	sq ft
	1970 - 1979	1,456,789	sq ft
	1980 - 1989	1,567,890	sq ft
	1990 - 1999	1,678,901	sq ft
	2000 - 2009	1,789,012	sq ft
	2010 - 2019	1,890,123	sq ft
	2020 - 2029	1,901,234	sq ft
	2030 - 2039	2,012,345	sq ft
	2040 - 2049	2,123,456	sq ft
Los Angeles Downtown	1950 - 1959	987,654	sq ft
	1960 - 1969	1,098,765	sq ft
	1970 - 1979	1,209,876	sq ft
	1980 - 1989	1,320,987	sq ft
	1990 - 1999	1,432,098	sq ft
	2000 - 2009	1,543,209	sq ft
	2010 - 2019	1,654,320	sq ft
	2020 - 2029	1,765,431	sq ft
	2030 - 2039	1,876,542	sq ft
	2040 - 2049	1,987,653	sq ft
Chicago Loop	1950 - 1959	765,432	sq ft
	1960 - 1969	876,543	sq ft
	1970 - 1979	987,654	sq ft
	1980 - 1989	1,098,765	sq ft
	1990 - 1999	1,209,876	sq ft
	2000 - 2009	1,320,987	sq ft
	2010 - 2019	1,432,098	sq ft
	2020 - 2029	1,543,209	sq ft
	2030 - 2039	1,654,320	sq ft
	2040 - 2049	1,765,431	sq ft

Category	Item	Value	Unit
Category A (10 items)	Item A-1	1.2345	kg
	Item A-2	2.3456	kg
	Item A-3	3.4567	kg
	Item A-4	4.5678	kg
	Item A-5	5.6789	kg
	Item A-6	6.7890	kg
	Item A-7	7.8901	kg
	Item A-8	8.9012	kg
	Item A-9	9.0123	kg
	Item A-10	10.1234	kg
Category B (10 items)	Item B-1	11.2345	kg
	Item B-2	12.3456	kg
	Item B-3	13.4567	kg
	Item B-4	14.5678	kg
	Item B-5	15.6789	kg
	Item B-6	16.7890	kg
	Item B-7	17.8901	kg
	Item B-8	18.9012	kg
	Item B-9	19.0123	kg
	Item B-10	20.1234	kg
Category C (10 items)	Item C-1	21.2345	kg
	Item C-2	22.3456	kg
	Item C-3	23.4567	kg
	Item C-4	24.5678	kg
	Item C-5	25.6789	kg
	Item C-6	26.7890	kg
	Item C-7	27.8901	kg
	Item C-8	28.9012	kg
	Item C-9	29.0123	kg
	Item C-10	30.1234	kg
Category D (10 items)	Item D-1	31.2345	kg
	Item D-2	32.3456	kg
	Item D-3	33.4567	kg
	Item D-4	34.5678	kg
	Item D-5	35.6789	kg
	Item D-6	36.7890	kg
	Item D-7	37.8901	kg
	Item D-8	38.9012	kg
	Item D-9	39.0123	kg
	Item D-10	40.1234	kg
Category E (10 items)	Item E-1	41.2345	kg
	Item E-2	42.3456	kg
	Item E-3	43.4567	kg
	Item E-4	44.5678	kg
	Item E-5	45.6789	kg
	Item E-6	46.7890	kg
	Item E-7	47.8901	kg
	Item E-8	48.9012	kg
	Item E-9	49.0123	kg
	Item E-10	50.1234	kg
Category F (10 items)	Item F-1	51.2345	kg
	Item F-2	52.3456	kg
	Item F-3	53.4567	kg
	Item F-4	54.5678	kg
	Item F-5	55.6789	kg
	Item F-6	56.7890	kg
	Item F-7	57.8901	kg
	Item F-8	58.9012	kg
	Item F-9	59.0123	kg
	Item F-10	60.1234	kg
Category G (10 items)	Item G-1	61.2345	kg
	Item G-2	62.3456	kg
	Item G-3	63.4567	kg
	Item G-4	64.5678	kg
	Item G-5	65.6789	kg
	Item G-6	66.7890	kg
	Item G-7	67.8901	kg
	Item G-8	68.9012	kg
	Item G-9	69.0123	kg
	Item G-10	70.1234	kg

MODEL	RPM	RATIO	HP@RPM	MODEL	RPM	RATIO	HP@RPM
04000-01 04000-02 04000-03 04000-04	400 - 1600	1.5 1.25 1.0 0.75	0.04	04000-05 04000-06 04000-07 04000-08	400 - 1600	1.5 1.25 1.0 0.75	0.04
04000-09 04000-10 04000-11 04000-12	400 - 1600	1.5 1.25 1.0 0.75	0.05	04000-13 04000-14 04000-15 04000-16	400 - 1600	1.5 1.25 1.0 0.75	0.05
04000-17 04000-18 04000-19 04000-20	400 - 1600	1.5 1.25 1.0 0.75	0.06	04000-21 04000-22 04000-23 04000-24	400 - 1600	1.5 1.25 1.0 0.75	0.06
04000-25 04000-26 04000-27 04000-28	400 - 1600	1.5 1.25 1.0 0.75	0.08	04000-29 04000-30 04000-31 04000-32	400 - 1600	1.5 1.25 1.0 0.75	0.08
04000-33 04000-34 04000-35 04000-36	400 - 1600	1.5 1.25 1.0 0.75	0.09	04000-37 04000-38 04000-39 04000-40	400 - 1600	1.5 1.25 1.0 0.75	0.09

NEW PRODUCT NOTICE

HYDRA MARINE GEARBOX (Flexible Connection)

Ratio	Rev/Output				
	1200	1500	1800	2100	2400
1.43	0.71		0.302		
1.50	0.71		0.302		
1.60	0.71		0.302		
1.76	0.71	0.256		0.256	
1.91	0.68	0.249			0.256
4.00	0.71	0.364	0.36		
5.47	0.71	0.364		0.363	
6.36	0.68	0.360			0.356
7.00	0.564	0.364			0.361
1.43	0.539	0.539			0.487

Length: 162.3mm (6.4 in)

Ball Bearing: 5x8 mm

Options/Connections: Mechanical or Electrical Remote Control

Center Distance: 205.144 mm

The installation dimension is decrease as FROM CASE (02040).

Net Weight: 2000g

Page: 15 / 19

"ADVANCE" — ASSURANCE OF QUALITY AND BENEFIT



杭州凱聯發展有限公司

(杭州凱聯發展)

地址：浙江省杭州市江干區錢江新城一號

電話：(0571) 87090000

傳真：(0571) 87090001

網址：http://www.kailiandevelopment.com

Hangzhou Kailian Development Co., Ltd.
Address: No.1, Qiantang New City, Hangzhou, Zhejiang

Tel: (86) 571 87090000

Fax: (86) 571 87090001

Website: www.kailiandev.com

www.hangzhoudevelopment.com



KAILIAN UNITED GROUP

Address: 321100, Xingye Road, Hangzhou, China
Tel: (86) 571 87090000 Fax: (86) 571 87090001
Website: www.kailiandev.com www.hangzhoudevelopment.com