

# DONG-I MARINE TRANSMISSIONS

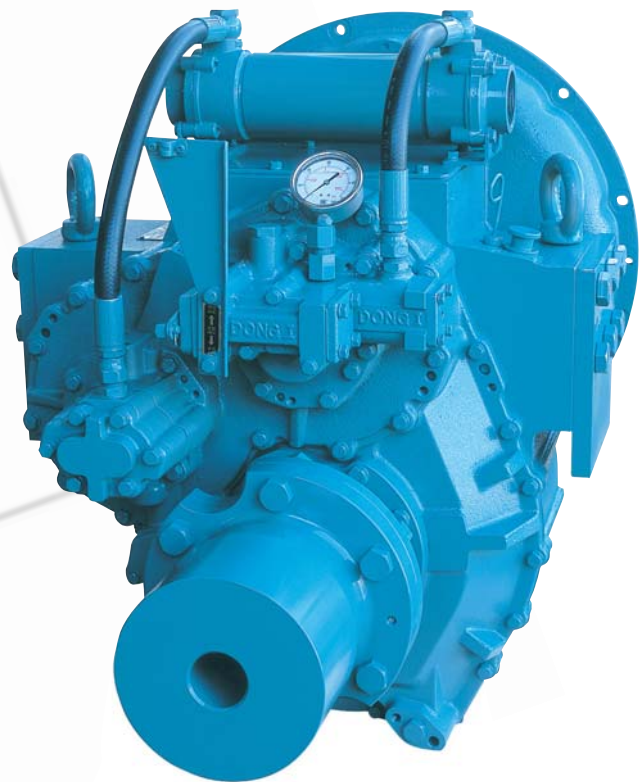


MARINE TRANSMISSIONS

POWER TAKE-OFFS

STEERING SYSTEMS

**DONG-I INDUSTRIAL CO., LTD.**



MARINE TRANSMISSIONS AND STEERING SYSTEMS

**DONG-I INDUSTRIAL CO., LTD.**

# DONG-I MARINE TRANSMISSIONS



**DMT 18A**



**DMT 25AL**



**DMT 50A**

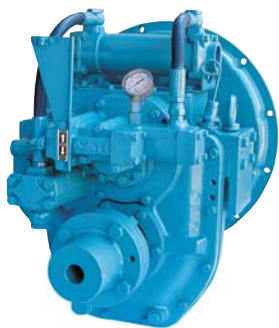


**DMT 70T**

## TECHNICAL DATA

MODEL NAME	Reduction Ratio	Max Input (rpm)	Max. Input Torque (kgf · m)	Horse Power(HP)			Dry weight (kg)	Housing No.
				1800rpm	2100rpm	2400rpm		
<b>DMT 18A</b>	1.64, 2.17, 2.52, 3.13, 3.32	3,500	17	43	50	57	74.5	3, 4, 5
<b>DMT 25AL</b>	1.64, 2.07, 2.52, 2.96, 3.32	3,500	30	75	88	101	77	3, 4, 5
<b>DMT 50A</b>	1.61, 2.06, 2.45 2.82, 3.12, 3.46	3,000	55	138	161	184	143	1, 2, 3
<b>DMT 70T</b>	1.61, 2.06, 2.45 2.82, 3.12, 3.46	3,000	87.5	220	257	293	162	1, 2, 3
<b>DMT 100T</b>	1.61, 2.06, 2.45, 2.82	3,000	97	244	285	325	164	1, 2, 3
※ <b>DMT 100HL</b>	4.07, 4.50, 4.95 5.29 5.95	3,000 3,000 3,000	89 86.7 75.5	224 218 190	261 254 221	298 290 253	263 263 263	1, 2, 3 1, 2, 3 1, 2, 3
<b>DMT 110A</b>	1.77, 2.09, 2.42, 2.82, 3.19, 3.48, 3.81	2,800	110	276	323	369	212	1, 2, 3
<b>DMT 140H</b>	1.97, 2.57, 3.03, 3.46	2,800	130	327	381	436	218	1, 2, 3
※ <b>DMT 135HL</b>	4.07 4.50 4.95	2,800 2,800 2,800	130 125 115.7	329 315 291	384 367 339	438 420 388	293 293 293	1, 2, 3 1, 2, 3 1, 2, 3

※ Special Models, need to be ordered over 5units.



**DMT 100T**



**DMT 100HL**



**DMT 110A**



**DMT 140H**



DMT 150H



DMT 170HL



DMT 180HL



DMT 200H



DMT 200HL

MODEL NAME	Reduction Ratio	Max Input (rpm)	Max. Input Torque (kgf · m)	Horse Power(HP)			Dry weight (kg)	Housing No.
				1600rpm	1800rpm	2100rpm		
DMT 150H	1.83, 2.09, 2.51, 3.08, 3.43	2,500	168	375	422	493	287	1, 2
DMT 170HL	4.04, 4.48	2,500	168	375	422	493	352	1, 2
DMT 180HL	5.15, 5.96	2,500	168	375	422	493	475	1, 2
DMT 200H	1.83, 2.09, 2.51, 3.08, 3.43	2,500	200	447	503	586	310	1, 2
DMT 200HL	4.04, 4.48	2,500	200	447	503	586	370	1, 2
DMT 240H	1.50, 1.97, 2.44, 2.93, 3.40	2,500	219	489	550	642	400	0, 1
DMT 260H	2.06, 2.50, 2.92, 3.26	2,500	259	578	650	758	490	0, 1
DMT 260HL	3.53, 4.08, 4.52	2,500	259	578	650	758	640	0, 1
	5.04		239	553	600	700	640	
DMT 280H	2.06, 2.50, 2.92, 3.26	2,500	298	667	750	875	510	0, 1



DMT 240H



DMT 260H



DMT 260HL



DMT 280H



# TRANSMISSIONS WITH LIVE PTO OUTPUT PADS



DMTP 5100



DMTP 6500



DMTP 7500



DMT 400H



DMT 400HL

## TECHNICAL DATA

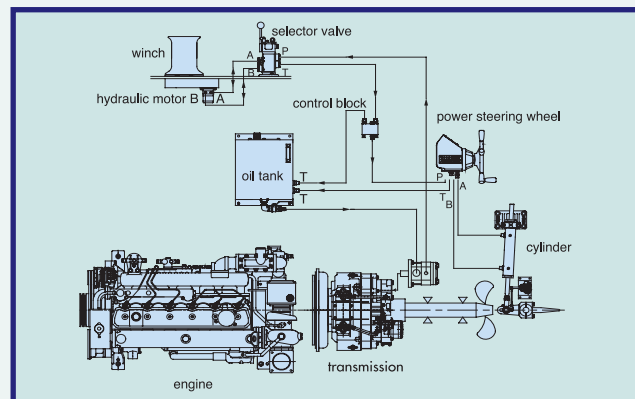
MODEL NAME	Reduction Ratio	Max Input (rpm)	Max. Input Torque (kgf · m)	Horse Power(HP)			Dry weight (kg)	Housing No.
				1600rpm	1800rpm	2100rpm		
DMTP 5100	1.47, 1.76, 1.93	2500	168	375	422	493	270	1, 2, 3
	2.48, 3.08	2500	150	335	377	440	270	1, 2, 3
	3.46	2500	130	290	326	381	270	1, 2, 3
DMTP 6500	5.11, 5.62, 5.91	2400	259	578	650	758	850	0, 1
	6.57, 6.95	2400	239	533	600	700	850	0, 1
DMTP 7500	3.56	2,300	298	666	750	875	700	0, 1
	4.13	2,300	292	653	735	857		
	4.59	2,300	286	640	720	840		
DMT 400H	1.43, 1.72, 2.03	2300	453	1,013	1,140	1,330	660	0,1
	2.46	2300	403	902	1,015	1,184	660	0,1
	2.75	2300	354	791	890	1,038	660	0,1
				1400rpm	1600rpm	1800rpm		
DMT 400HL	3.02, 3.28, 3.56, 4.07	2300	453	887	1,013	1,140	750	0,1
	4.48, 4.95	2300	374	731	836	940	750	0,1
DMT550HL	3.02, 3.28, 3.56, 4.07	2,300	550	1,075	1,229	1,383	830	0, 1
	4.48	2,300	532	1,041	1,190	1,339	830	0, 1
	4.95	2,300	479.8	938	1,072	1,206	830	0, 1

## TRANSMISSION WITH LIVE POWER TAKE-OFF

MODELS WITH BUILT-IN LIVE PTO SAE B or C PUMP MOUNTING PADS

DMTP 5100, DMTP 6500, DMTP 7500, DMT400H, DMT 400HL

The built-in live (no clutch) Power Take-Off (PTO) is designed for direct fitting a Hydraulic Pump and is used to take part of the engine power to drive auxiliary accessories such as power steering system, anchor winches, power rollers, etc.



## DMTP 5100

**Max. 493hp, various reduction ratios with live PTO marine transmission**



- **Reduction ratios**

1.47, 1.76, 1.93, 2.48, 3.08, 3.46

- **Power take-off**

Live PTO 59kgf·m torque (150hp@1800rpm)

SAE B, C type pump mount

Pump mounting kit (option)

Dual stage coupling ( noise & vibration reduction)

\* Trolling valve (option)

## DMTP 6500

**Max. 758hp, deep reduction ratios with live PTO marine transmission**

- **High reduction ratios**

5.11, 5.62, 5.91, 6.57, 6.95

- **Power take-off**

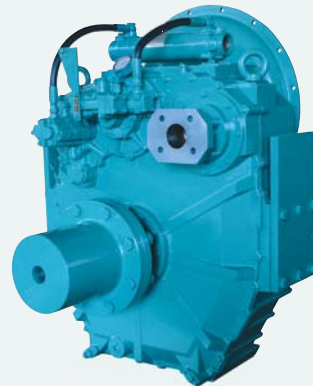
Live PTO 59kgf·m torque (150hp@1800rpm)

SAE B, C type pump mount

Pump mounting kit (option)

\* Trolling valve (option)

\* Electric shifting (option)



## DMTP 7500

**Max. 875hp, deep reduction ratios with live PTO marine transmission**

- **High reduction ratios**

3.56, 4.13, 4.59

- **Power take-off**

Live PTO 59kgf·m torque (150hp@1800rpm)

SAE B, C type pump mount

Pump mounting kit (option)

\* Trolling valve (option)

\* Electric shifting (option)



# TRANSMISSIONS WITH LIVE PTO OUTPUT PADS

## DMT 400H

### Max. 1330hp, live PTO built-in marine transmission



- **Reduction ratios** 2.46, 2.03, 1.72 - standard ratio  
2.75, 1.43 - special ratio (order based production)
- **Bell housing** SAE No. 1, 0 (driving ring 14", 18")
- **Power take-off** Live PTO 59kgf·m (150hp @ 1800rpm)  
SAE B, C type pump mount
- **Scope of supply**
  - \* Standard Oil cooler  
SAE bell housing,  
Plate type brackets  
Propeller coupling  
Pressure gauge  
Standard spare parts
  - \* Options Trolling valve  
Pump mounting kit for PTO  
Electric shifting

#### Heavy Duty

Model	Reduction Ratio		Max. Input torque [kg.m]	Max. Input rpm	Power/rpm		1,600		1,800		2,100	
	Ahead	Astern			Hp	Kw	Hp	Kw	Hp	Kw	Hp	Kw
DMT400H	1.43	1.43	453	2,300	0.6333	0.4726	1013	756	1140	851	1330	992
	1.72	1.72	453	2,300	0.6333	0.4726	1013	756	1140	851	1330	992
	2.03	2.03	453	2,300	0.6333	0.4726	1013	756	1140	851	1330	992
	2.46	2.46	403	2,300	0.5638	0.4207	902	673	1015	757	1184	884
	2.75	2.75	354	2,300	0.4944	0.3690	791	590	890	664	1038	775

#### Medium Duty

Model	Reduction Ratio		Max. Input torque [kg.m]	Max. Input rpm	Power/rpm		1,600		1,800		2,100	
	Ahead	Astern			Hp	Kw	Hp	Kw	Hp	Kw	Hp	Kw
DMT400H	1.43	1.43	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	1.72	1.72	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	2.03	2.03	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	2.46	2.46	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	2.75	2.75	412	2,500	0.5750	0.4291	920	687	1035	772	1208	901

#### Light Duty

Model	Reduction Ratio		Max. Input torque [kg.m]	Max. Input rpm	Power/rpm		1,600		1,800		2,100	
	Ahead	Astern			Hp	Kw	Hp	Kw	Hp	Kw	Hp	Kw
DMT400H	1.43	1.43	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	1.72	1.72	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	2.03	2.03	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	2.46	2.46	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	2.75	2.75	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992



**DMT 400HL**

**Max. 1330hp, Deep Reduction Ratios  
with Built-in Live PTO**



- **Reduction ratios** 4.95, 4.48, 4.07, 3.56 - standard ratio  
3.28, 3.02 - special ratio (order based production)
- **Bell housing** SAE No. 1, 0 (driving ring 14", 18")
- **Power take-off** Live PTO 59kgf·m (150hp @ 1800rpm)  
SAE B, C type pump mount
- **Scope of supply**
  - \* Standard Oil cooler  
SAE bell housing,  
Plate type brackets  
Propeller coupling  
Pressure gauge  
Standard spare parts
  - \* Options Trolling valve  
Pump mounting kit for PTO  
Electric shifting

**Heavy Duty**

Model	Reduction Ratio		Max. Input torque [kg.m]	Max. Input rpm	Power/rpm		1,400		1,600		1,800	
	Ahead	Astern			Hp	Kw	Hp	Kw	Hp	Kw	Hp	Kw
DMT400HL	3.02	3.02	453	2,300	0.6333	0.4726	887	662	1013	756	1140	851
	3.28	3.28	453	2,300	0.6333	0.4726	887	662	1013	756	1140	851
	3.56	3.56	453	2,300	0.6333	0.4726	887	662	1013	756	1140	851
	4.07	4.07	453	2,300	0.6333	0.4726	887	662	1013	756	1140	851
	4.48	4.48	374	2,300	0.5222	0.3897	731	546	836	624	940	701
	4.95	4.95	374	2,300	0.5222	0.3897	731	546	836	624	940	701

**Medium Duty**

Model	Reduction Ratio		Max. Input torque [kg.m]	Max. Input rpm	Power/rpm		1,600		1,800		2,100	
	Ahead	Astern			Hp	Kw	Hp	Kw	Hp	Kw	Hp	Kw
DMT400HL	3.02	3.02	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	3.28	3.28	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	3.56	3.56	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	4.07	4.07	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	4.48	4.48	390	2,500	0.5444	0.4063	871	650	980	731	1143	853
	4.95	4.95	390	2,500	0.5444	0.4063	871	650	980	731	1143	853

**Light Duty**

Model	Reduction Ratio		Max. Input torque [kg.m]	Max. Input rpm	Power/rpm		1,600		1,800		2,100	
	Ahead	Astern			Hp	Kw	Hp	Kw	Hp	Kw	Hp	Kw
DMT400HL	3.02	3.02	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	3.28	3.28	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	3.56	3.56	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	4.07	4.07	453	2,500	0.6333	0.4726	1013	756	1140	851	1330	992
	4.48	4.48	430	2,500	0.5444	0.4063	871	650	980	731	1143	853
	4.95	4.95	430	2,500	0.5444	0.4063	871	650	980	731	1143	853

# Transmissions Designed for Higher Output Speeds (Water Jets or other Pump Drives) with Built-in PTO

## DMTP 5100 P

- Max. 538hp @ 2300rpm, continuous duty and live PTO built-in
- Reduction ratio  
1.25 (Ahead & Astern)
- Applications  
Water jet, Pump (PTO)
- Power take-off  
59kgf·m torque (150HP @ 1800 rpm)  
SAE B, C type Pump Mount  
Pump mounting kit (option)

Reduction ratio		Max input (rpm)	Max Input torque(kgf.m)	Capacity (HP)			Housing No.
				1800rpm	2100rpm	2300rpm	
Ahead	1.25	2500	167	422	490	536	1, 2, 3
Astern	1.25	2500	36	88	103	112	

※Different torque and capacity in ahead and astern

Clutches can be exchanged for twin engine applications to allow opposite rotation propellers

Dimensional data for installation are the same as DMTP 5100

## DMT 240 P

- Max. 833hp @ 2300rpm, continuous duty
- Reduction ratio  
1.25 (Ahead & Astern)
- Applications  
Water jet, Pump (PTO)

Reduction ratio		Max input (rpm)	Max Input torque(kgf.m)	Capacity (HP)			Housing No.
				1800rpm	2100rpm	2300rpm	
Ahead	1.25	2500	260	653	762	833	0, 1
Astern	1.25	2500	50	126	147	161	

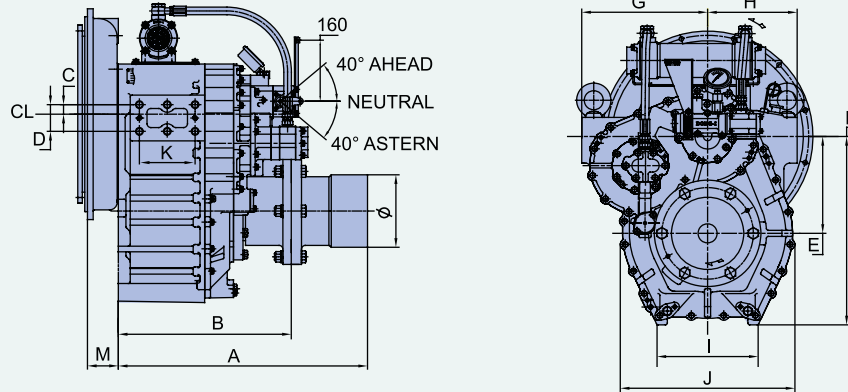
※Different torque and capacity in ahead and astern

Clutches of ahead and astern can be exchanged each other for twin propulsion system

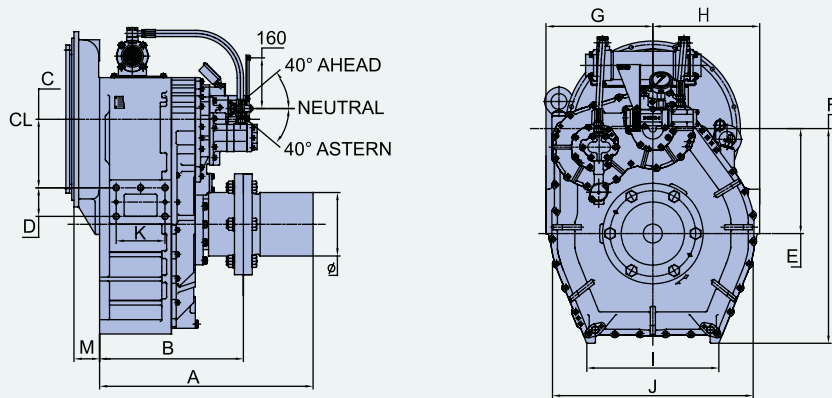
Dimensional data for installation are the same as DMT 240H



# DIMENSIONAL DATA



	A	B	C	D	E	F	G	H	I	J	K	$\phi$
DMT 18A	341	255	-7.8	26	118.7	244	177	135	157	260	60	72
DMT 25AL	341	255	-7.8	26	118.7	244	177	135	157	260	60	72
DMT 50A	382	286	+20	40	160.5	323.5	217	175	170	326	70	100
DMT 70T	436	325	+20	40	160.5	323.5	228	175	170	326	70	110
DMT 100T	471	325	+20	40	160.5	323.5	228	175	170	326	70	120
DMT 110A	446	335	-48	40	195	388	249	197	224	386	100	140
DMT 140H	455	344	-15	50	195	388	249	197	224	386	100	140
DMTP 5100 /P	531.3	391.3	-15	50	195	390	270	250	206	383	100	150
DMT 150H	518	378	+10	50	211.2	428	275	210	218	415	134	150
DMT 170HL	580	390	-14.3	70	260.9	530.5	280	258	307	510	134	180
DMT 200H	590	390	+10	50	211.2	428	275	210	218	415	134	185
DMT 200HL	625	405	-14.3	70	261	530.5	280	258	307	510	134	200
DMT 240H /P	639	439	+25	70	227	458	330	240	244	447	146	185
DMT 260H	653.5	453.5	+25	70	254	494	330	235	266	458	146	190
DMT 280H	653.5	453.5	+25	70	254	494	330	235	266	458	146	190
DMT 400H	705.5	505.5	+35	90	235.9	450	360	360	266	436	160	190



	A	B	C	D	E	F	G	H	I	J	K	$\phi$
DMT 100HL	462	351	-124	70	274	563.5	284	284	370	552	120	134
DMT 135HL	503.2	351.2	-124	70	274	284	284	563.5	376	552	120	148
DMT 180HL	617.5	427.5	-216	90	331	667	337	337	416	654	154	180
DMT 260HL	673.5	453.5	-216	90	331	677	337	337	417	654	154	200
DMTP 6500	777	527	-290	200	415	842	440	440	448	756.2	200	220
DMTP 7500	683	463	-219	200	319	634	330	330	435.8	616	160	200
DMT 400HL	781.6	531.6	-207.5	200	357.5	698	360	360	368	641	170	220
DMT 550HL	801.6	551.6	-207	200	357.5	698	360	360	368	641	170	220

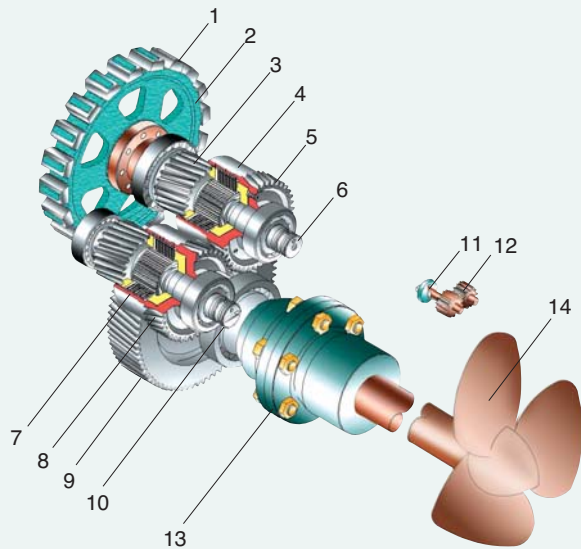
※ Note : 1) Dimension 'M' is different according to the engine specification  
 2) +value(-value) shows above(below) the input shaft center line in dimension 'C'

## DONG-I MARINE TRANSMISSION

**Compact Design for Easy Installation**

**Proven Engineering**

**Simplified Maintenance**



Dong-I marine transmissions feature precision helical gearing for quiet operation; hydraulic-controlled and oil cooled clutches for smooth, fast shifting; identical reduction ratios in forward and reverse, and in most cases, full power forward and reverse with a minimal of external plumbing.

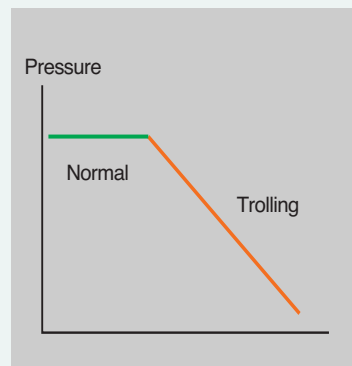
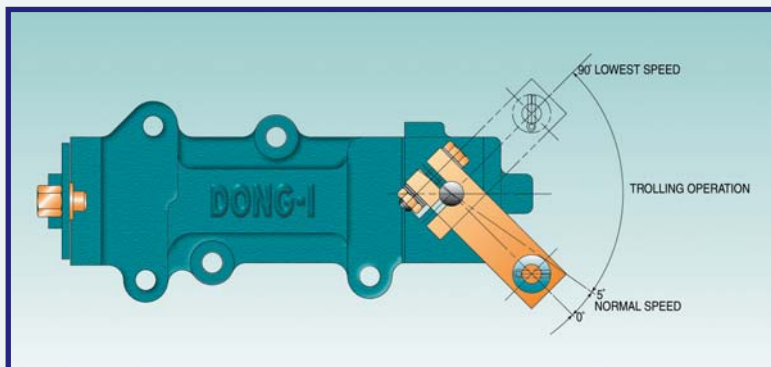
We feature 25 models for heavy duty applications up to 1330HP with various reduction from 1.25 : 1, to Deep Case transmissions with 6.95 : 1 ratios.

- |                          |                           |
|--------------------------|---------------------------|
| 1 : RUBBER BLOCK         | 8 : ASTERN CLUTCH HOUSING |
| 2 : SPIDER               | 9 : OUTPUT GEAR           |
| 3 : PINION               | 10 : ASTERN SHAFT         |
| 4 : INPUT CLUTCH         | 11 : DRIVING BLOCK        |
| 5 : INPUT CLUTCH HOUSING | 12 : GEAR PUMP            |
| 6 : INPUT SHAFT          | 13 : OUTPUT COUPLING      |
| 7 : ASTERN CLUTCH        | 14 : PROPELLER            |

## TROLLING VALVE OPTION

“For Slow Speed Operation or Manuevering”

### TROLLING VALVE



**The TROLLING VALVE is designed to allow very low speed operation by precisely controlling clutch slippage**

The trolling valve is fitted directly on the selector valve.

Trolling operation can be applied both ahead and astern directions.

Trolling valve operation must be limited to a maximum of 900 engine RPM

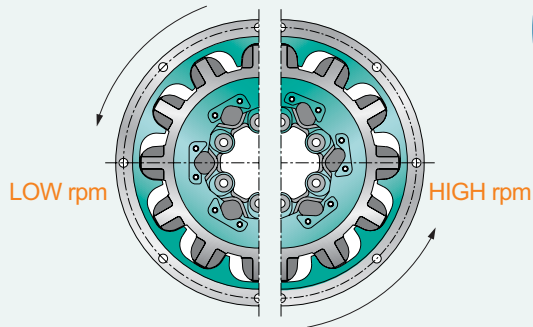
# DONG-I MARINE TRANSMISSIONS

## OPTION PART

### “CALM AND COMFORTABLE SAILING!!”

#### ◆ DUAL STAGE COUPLING

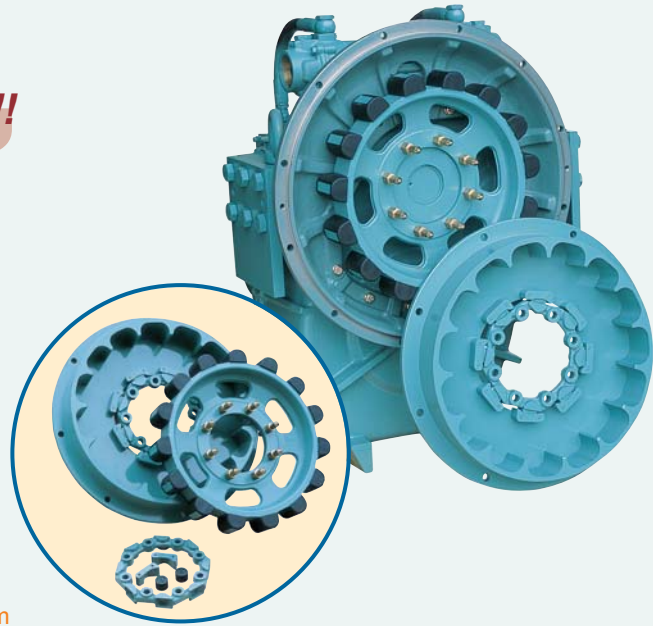
The **DUAL STAGE COUPLING** is used to reduce the noises and vibrations.



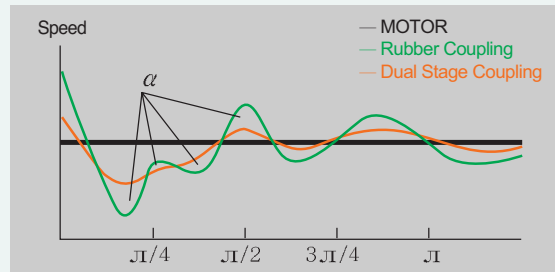
Inner blocks transmit power in low rpm section and outer blocks transmit power in high rpm section (over 1000rpm)

#### AVAILABLE SIZE :

**11.5", 14" FLYWHEEL**



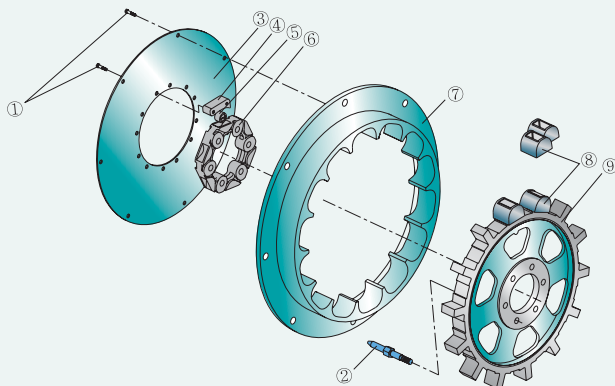
#### ◆ Factors of Angle Speed



DUAL STAGE RUBBER BLOCKS absorb the impacts & noises occurred from connecting parts. And they also decrease the vibrations following the engine explosion timing.

※  $\alpha$  = Reduced vibration volume

#### ◆ PARTS LIST



NO	PART NAME
1	Bolt
2	Bolt, reamer
3	Plate
4	Cover, rubber
5	Rubber block, torsional
6	Center Ring
7	Driving Ring
8	Rubber block
9	Spider





## OPTION PART

### ◆ Electric Shifting

Electric shifting is applicable to all the models of DONG-I marine transmission besides DMTP 5100.

#### Applicable Models

DMT 18A, DMT 25AL, DMT 50A, DMT 70T, DMT 100T, DMT 100HL, DMT 110A,  
DMT 130AL, DMT 140H, DMT 150H, DMT 170HL, DMT 180HL, DMT 200H/HL,  
DMT 240H/P, DMT 260H/HL, DMT 280H/HL, DMTP 6500, DMTP 7500, DMT 400H/HL

## INTEGRAL SHAFT SUPPORTER

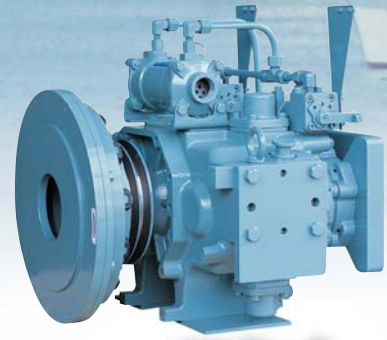
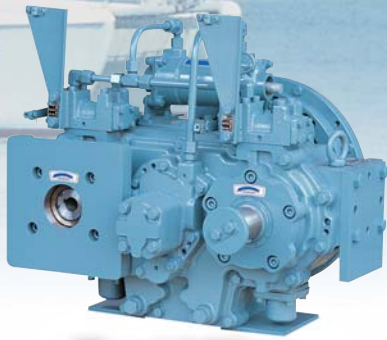
#### Applications

V-drive, U-drive, Water jet  
Generator, Pump, Compressor  
Construction equipment etc.



Model	Reduction Ratio	Nominal Torque(kg.m)	Speed / rpm	Output / rpm		1800rpm		2100rpm		2300rpm		Weight (kg)	Housing (SEA)
				Hp	kw	Hp	kw	Hp	kw	Hp	kw		
DIS-100A	1 : 1	100	3600	0.1394	0.1041	280	187	292	218	320	239	21	3
DIS-120A	1 : 1	120	2700	0.1672	0.1248	300	224	350	262	384	287	50	2, 1
DIS-300A	1 : 1	300	2700	0.3769	0.2810	678	505	791	590	384	646	56	0, 1
DIS-500A	1 : 1	450	2700	0.6277	0.4685	1129	843	1318	983	1443	1077	59	0, 1

# DONG-I POWER TAKE-OFF



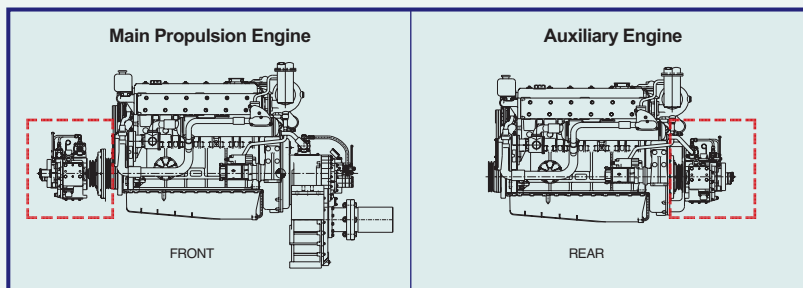
## DPO-087 Series

### TECHNICAL SPECIFICATIONS

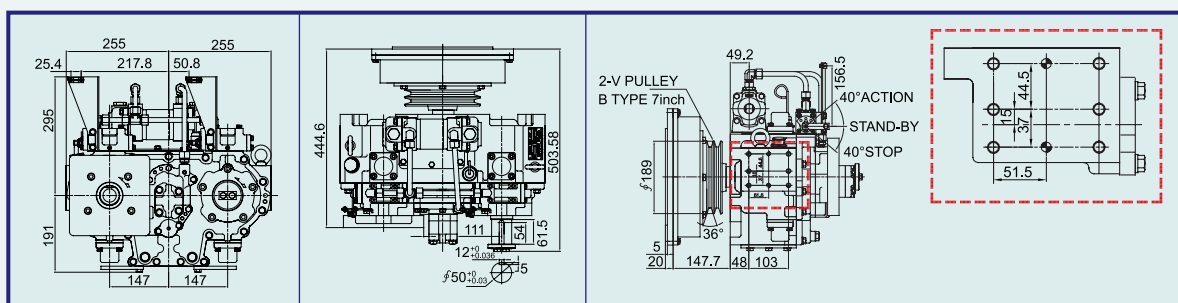
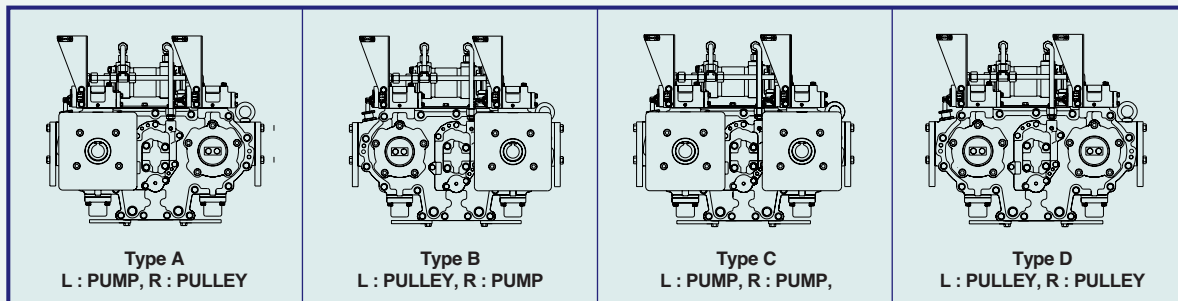
Model	Ratio	Max. Torque	Max. Output	Permissible Max. RPM	Cooling Water $\ell$ /min	Engine	Housing	Weight
DPO-F087	1 : 1	55 kgf · m	230 HP (169 Kw)	3000 RPM	40 ~ 60	Propulsion	-	150 kg
DPO-R087	1 : 0.85					Auxiliary	Option	165kg

- Independently driving two shafts and continuously rotating pulley on the input shaft
- Minimal engine power loss by adopting no-load circuit while the PTO does not work
- Perfect brake system to prevent dragging
- Electric shifting can be installed to all the models in DPO-087 series with option.

### APPLICATIONS & DIMENSIONAL DATA



TYPE	FRONT	REAR
A	DPO-F087A	DPO-R087A
B	DPO-F087B	DPO-R087B
C	DPO-F087C	DPO-R087C
D	DPO-F087D	DPO-R087D



**3** EXCELLENT DESIGN  
**E** EASY INSTALLATION  
**E** EFFICIENT MANEUVERABILITY

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MARINE TRANSMISSIONS AND STEERING SYSTEMS  
**DONG-I INDUSTRIAL CO., LTD.**

33-31, Sang Dae 2 Dong, Jinju, Kyung Nam, Korea  
 Tel : +82 55 755 9928  
 Fax : +82 55 755 9188  
 E-mail : [dongiso@dongico.co.kr](mailto:dongiso@dongico.co.kr)  
 URL : <http://www.e-dongi.com>



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