

# Nomenclature, Model Lineup

## Nomenclature

**HMTA010-38L1200L** □ □ □ □ □ □ □ □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

**HMTR550-55H40B** □ □ □ □ □ □ □ □

① ② ③ ④ ⑤ ⑦ ⑧ ⑨

Nomenclature, Model Lineup  
HYPOID MOTOR TA/TR Series

① <b>Product series name</b>	HMTA HMTR HRTA	0.1 kW-0.4 kW 0.75 kW-5.5 kW Inline reducer and adapter type
② <b>Motor capacity (example)</b>	010 150	Three-phase 0.1 kW Three-phase 1.5 kW
③ <b>Frame number (example)</b>	38 55	Frame number 38 Frame number 55
④ <b>Mounting type</b>	L U H	Foot mount Face mount Hollow shaft
⑤ <b>Reduction ratio (example)</b>	1200 200	1/1200 1/200
⑥ <b>Shaft arrangement</b>	L T R S No code	Output shaft located to the left as viewed from the motor side Output shaft located on both sides Output shaft located to the right as viewed from the motor side Output shaft located on one side (face side: for face mount type only) Hollow shaft type
⑦ <b>Specification code</b>	No code B FI BE K SR	Without B or BE Brake type Adapter type Encoder type with brake POWER-LOCK type (for hollow shaft type with standard shaft hole diameter only) SHOCK RELAY specifications (0.1 kW-0.4 kW only)
⑧ <b>Option code A (Order of priority)</b>	Z W WC J V V1 V2 V3 V4 N N2 N3 PN3 HN3 WN3 VN VN2 VN3 PVN3 HVN3 WVN3 N8 VN8 H Q M A1 A2	Inverter motor type (0.1 kW-0.4 kW only) Outdoor type Outdoor type (with brake, 0.2 kW-0.75 kW only) Waterproof specifications (0.1 kW-0.75 kW only) 400V class 380V 50Hz (0.1 kW-0.4 kW only) 380V 60Hz 415V 50Hz 460V 60Hz (0.1 kW-0.4 kW only) 200V class Europe 200V class North America 200V class China 200V class China (resin terminal box) 200V class China (hard terminal box) 200V class China, outdoor 400V class Europe 400V class North America 400V class China 400V class China (resin terminal box) 400V class China (hard terminal box) 400V class China, outdoor 200V class South Korea 400V class South Korea Hard terminal box (0.1 kW-0.75 kW only) One-touch manual release type Manual shaft type Heat-resistant specifications (0.1 kW-0.75 kW only) Cold-resistant specifications (0.1 kW-0.75 kW only)
⑨ <b>Option code B Former supplementary code</b>	P1 P2 P3 D1 D2 D3 F1 F2 F3 C0 C1 C2 C3 S1 S2 S3 S4 S5 S6 S7	Terminal box position 90° swing Terminal box position 180° swing Terminal box position 270° swing Terminal box outlet direction 90° swing (0.1 kW-0.4 kW) Terminal box outlet direction 180° swing (0.1 kW-0.4 kW) Terminal box outlet direction 270° swing (0.1 kW-0.4 kW) Terminal box outlet direction 90° swing (0.75 kW-5.5 kW) Terminal box outlet direction 180° swing (0.75 kW-5.5 kW) Terminal box outlet direction 270° swing (0.75 kW-5.5 kW) Paint color: Light gray (Munsell N7,5) Paint color: Light silver metallic Paint color: Ivory white Paint color: Dark silver metallic Hollow shaft hole diameter φ20 Hollow shaft hole diameter φ25 Hollow shaft hole diameter φ30 Hollow shaft hole diameter φ35 Hollow shaft hole diameter φ40 Hollow shaft hole diameter φ45 Hollow shaft hole diameter φ50

Refer to "Combination of specification codes and option codes A."

Global series<sup>Note 1</sup>

Note 2

### Combination of specification codes and option codes A

#### 0.1 kW-0.4 kW

Specification code: None	Specification code: B	Specification code: BE
Z ZW ZWV	W WV	Z ZV
ZJ ZJV	WC WCV	V VH
ZV ZVH	Z ZV ZVH	H
ZH	ZV ZVH	
W WN	ZV ZVH	
WV WV1	ZV ZVH	
WV2	ZV ZVH	
WV3	ZV ZVH	
WV4	ZV ZVH	
WVN	ZV ZVH	
J JV JV1	VH VHQ	W WV WV1
JV2	VHM	WV2
JV3	VQ VQM	WV3
JV4	VM	WV4
V VH	V1 V1H	J JV JV1
VN	V2 V2H	JV2
VN2	V3 V3H	JV3
V1 V1H	V4 V4H	JV4
V2 V2H	N	V VN
V3 V3H	N2	VN2
V4 V4H	PN3 PVN3	PN3 PVN3
VH	HN3 HVN3	HN3 HVN3
N	H HQ HQM	WN3 WVN3
N2	HM	VH
PN3 PVN3	Q QM	V1 V1H
HN3 HVN3	M	V2 V2H
WN3 WVN3	A1	V3 V3H
H	A2	V4 V4H
A1		
A2		

Note: Combinations of outdoor type with brake and waterproof type are made-to-order products. Motor specifications differ from those of standard products.

#### 0.75 kW-5.5 kW

Specification code: None	Specification code: B	Specification code: K
W WV	V VQ	W WV
WV3	V3	WV3
V	Q	V
V3		V3
VN		
N		
A1		
A2		

Specification code: BE

V

Note: Combinations of outdoor type with brake and waterproof type are made-to-order products. Motor specifications differ from those of standard products.

Note 1: Refer to pages 252-256 for voltages of global series products.

Note 2: Refer to the next page for details on terminal box positions and outlet directions.

**Model Lineup**

**Three-phase motor: Hollow shaft type (Non-brake type, brake type)**

	5	7.5	10	12.5	15	20	25	30	40	50	60	80	100	120	160	200	300	360	480	600	720	960	1200	
0.1kW	20H												30H						35H					
0.2kW	20H										30H						35H			45H				
0.4kW	30H								35H								45H			55H				
0.75kW	35H						45H												55H					
1.5kW	45H										55H													
2.2kW	45H										55H													
3.7kW	55H																							
5.5kW	55H																							

Note: Reduction ratios 1/7.5 and 1/12.5 are for 0.1 kW–0.75 kW models.

**Three-phase motor: Face mount type (Non-brake type, brake type)**

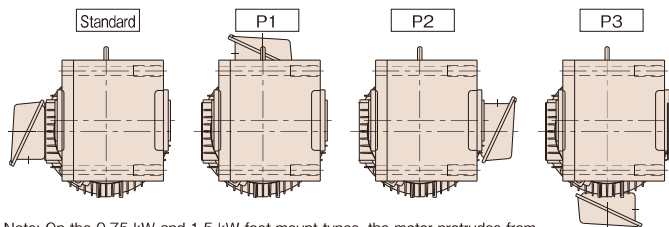
	5	10	15	20	25	30	40	50	60	80	100	120	160	200	300	360	480	600	720	960	1200					
0.1kW	22U												24U			28U			38U							
0.2kW	22U										28U						38U			42U						
0.4kW	28U								38U								42U			50U						
0.75kW	38U						42U												50U							
1.5kW	42U										50U															
2.2kW	42U										50U															
3.7kW	50U																									
5.5kW	50U																									

**Three-phase motor: Foot mount type (Non-brake type, brake type)**

	5	10	15	20	25	30	40	50	60	80	100	120	160	200	300	360	480	600	720	960	1200					
0.1kW	22L												24L			28L			38L							
0.2kW	22L										28L						38L			42L						
0.4kW	28L								38L								42L			50L						
0.75kW	38L						42L												50L							
1.5kW	42L										50L															
2.2kW	42L										50L															
3.7kW	50L																									
5.5kW	50L																									

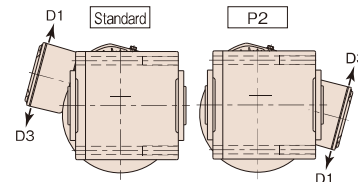
**Terminal box positions and lead outlet directions**

**1. Terminal box position codes**



Note: On the 0.75 kW and 1.5 kW foot mount types, the motor protrudes from the mounting surface when the terminal box is at a position other than the standard position.

Note: On 0.1 kW and 0.2 kW models with reduction ratios of 1/300 to 1/2000, the terminal box inclines 15° horizontally, as shown in the figure below. (D1 and D3 are for outdoor types and models with a hard terminal box.)

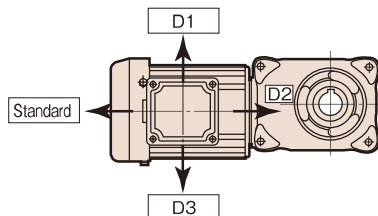


**2. Terminal box outlet direction**

The positions shown below are obtained by sequentially swinging the lead outlet clockwise, as viewed facing the terminal box, by 90 degrees from the standard position of the lead outlet.

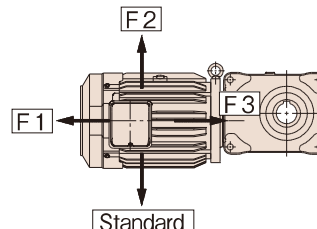
**0.1 kW to 0.4 kW: Outdoor type, hard terminal box**

Note: For standard motors (with resin terminal box), change the direction of the lead outlet by changing the terminal box top cover mounting direction.



**0.75 kW to 5.5 kW: Standard model, outdoor terminal box**

Note: On 0.75 kW non-brake types and 1.5 kW–2.2 kW brake types, changing the lead outlet direction will change the center of the terminal box.



Specifications

Motor	Output	Three-phase: 0.1, 0.2, 0.4 kW: IE1, 0.75, 1.5, 2.2, 3.7, 5.5 kW: IE3 Non-brake type, Brake type
	Power supply	0.1 kW-5.5 kW, 200/200/220 V, 50/60/60 Hz
	Number of poles	4
	Protection	0.1 kW: Totally enclosed type (IP44), 0.2 kW-5.5 kW: Totally enclosed external fan type (IP44)
	Cooling	0.1 kW: Self-cooled type (IC410), 0.2 kW-5.5 kW: Self-managed type (IC411)
	Startup	—
	Rating	S1 (continuous)
	Insulation	0.1 kW-0.4 kW: 120 (E), 0.75 kW: 155 (F), 1.5 kW-5.5 kW: 130 (B)
	Brake	Non-excitation operation, DC electromagnetic brake
Reducer	Reduction ratio	1/5 to 1/1200
	Lubrication	Grease
	Start end keyway	New JIS key (JISB1301-1976): Output shaft key attached (Ordinary-class keyway, except hollow shaft type)
	Output shaft end	Tapped (except hollow shaft type)
Ambient conditions	Installation place	Indoor not exposed to dust or water
	Temperature	-20°C to 40°C
	Humidity	Less than 85% (non condensing)
	Altitude	Elevations below 1000 m
	Atmosphere	Free from corrosive gases, explosive gases, and steam
	Mounting direction	No limitations on mounting angles: horizontal, vertical, or inclined
Paint color	Munsell 2.5G 6/3	

Note: The protective construction for the brake type is IP20.

Motor Specifications (0.1 kW-0.4 kW)

Number of phases	Output	Number of poles	Frequency Hz	Voltage V	Rated current A	Rated revolution r/min	AC-side brake current Reference value at 20°C
Three-phase	0.1kW	4	50/60/60	200/200/220 (400/400/440)	0.63/0.57/0.58 (0.32/0.29/0.29)	1420/1680/1710 (1440/1740/1740)	0.12
	0.2kW				1.2/1.1/1.1 (0.59/0.55/0.55)	1420/1700/1720 (1410/1690/1720)	0.12
	0.4kW				2.3/2.0/2.0 (1.2/1.0/1.0)	1380/1650/1680 (1390/1670/1700)	0.16

Motor Specifications (0.75 kW-5.5 kW)

Number of phases	Output	Number of poles	Frequency Hz	Voltage V	Rated current A	Rated revolution r/min	Energy efficiency %	Efficiency class IE code	AC-side brake current Reference value at 20°C
Three-phase	0.75kW	4	50/60/60 (50/50/60/60)	200/200/220 (380/400/400/440)	4.0/3.5/3.4 (1.9/2.0/1.75/1.7)	1440/1730/1740 (1435/1440/1730/1740)	83.9/86.4/86.4 (83.6/83.9/86.4/86.4)	IE3	0.17
	1.5kW				6.6/6.0/5.8 (3.4/3.3/3.0/2.9)	1450/1745/1755 (1445/1450/1745/1755)	86.9/88.6/89.1 (86.7/86.9/88.6/89.1)		0.10
	2.2kW				9.6/8.8/8.4 (4.8/4.8/4.4/4.2)	1450/1745/1755 (1445/1450/1745/1755)	88.2/89.9/90.2 (88.1/88.2/89.9/90.2)		0.10
	3.7kW				15.4/14.4/13.6 (7.8/7.7/7.2/6.8)	1450/1745/1755 (1445/1450/1745/1755)	89.2/89.8/90.7 (88.8/89.2/89.8/90.7)		0.08
	5.5kW				22.6/20.8/20.0 (11.3/11.3/10.4/10.0)	1465/1760/1765 (1460/1465/1760/1765)	91.2/92.1/92.4 (91.2/91.2/92.1/92.4)		0.10

Note 1: The values in parentheses under "Rated current" and "Rated revolution" for 0.1 kW-0.4 kW are for 400/400/440 V.  
 Note 2: The values in parentheses under "Rated current" and "Rated revolution" for 0.75 kW-5.5 kW are for 380/400/400/440 V.  
 Note 3: For the brake-type models, the brake current shown above is added for the phase where the brake lead wire is connected to the motor lead wire. The AC-side brake current is for 200 V AC 60 Hz.  
 Note 4: The specifications for 0.75 kW-5.5 kW are the IE3 motor specifications for the Japanese market. Please refer to other information to confirm that products comply with global voltage requirements.

HYPOID MOTOR TA/TR Series  
Standard Specifications

Specification Chart

Model number	Motor output kW	Actual reduction ratio	Number of reduction steps	Output shaft revolution r/min		Allowable output shaft torque				Allowable output shaft O.H.L.		Page and drawing number of outline dimensions		
						N·m		[kgf·m]				Hollow shaft	Face mount	Foot mount
				L	U-H	50Hz	60Hz	50Hz	60Hz	N	[kgf]			
HMTA 010	0.1	1/5	2	300	360	2.7	{0.28}	2.4	{0.24}	588	{60}	58   <b>1</b>	70   <b>1</b>	82   <b>1</b>
				200	240	4.2	{0.43}	3.4	{0.35}	784	{80}			
				150	180	5.6	{0.57}	4.6	{0.47}	980	{100}			
				120	144	7.0	{0.71}	5.8	{0.59}	1029	{105}			
				100	120	8.3	{0.85}	7.0	{0.71}	1078	{110}			
				75	90	10.8	{1.1}	9.3	{0.95}	1176	{120}			
				60	72	13.7	{1.4}	11.8	{1.2}	1274	{130}			
				50	60	16.7	{1.7}	13.7	{1.4}	1421	{145}			
				37.5	45	22.5	{2.3}	18.6	{1.9}	1617	{165}			
				30	36	27.4	{2.8}	23.5	{2.4}	1862	{190}			
		1/60	3	25	30	31.4	{3.2}	26.5	{2.7}	2009	{205}	58   <b>2</b>	70   <b>2</b>	82   <b>2</b>
				18.8	22.5	42.1	{4.3}	35.3	{3.6}	2254	{230}			
				15	18	52.9	{5.4}	44.1	{4.5}	2548	{260}			
				12.5	15	63.7	{6.5}	52.9	{5.4}	2793	{285}			
				9.4	11.3	84.3	{8.6}	70.6	{7.2}	3332	{340}			
				7.5	9	106	{10.8}	88.2	{9.0}	3332	{340}			
				5	6	129	{13.2}	108	{11.0}	3332	{340}			
				4.2	5	156	{15.9}	129	{13.2}	3332	{340}			
				3.1	3.8	*169	*{17.2}	*169	*{17.2}	3332	{340}			
				3.1	3.8	*169	*{17.2}	*169	*{17.2}	3332	{340}			
1/480	4	2.5	3	260	{26.5}	217	{22.1}	4410	{450}	58   <b>3</b>	70   <b>3</b>	82   <b>3</b>		
		2.1	2.5	312	{31.8}	260	{26.5}	4410	{450}					
		1.6	1.9	*374	*{38.2}	346	{35.3}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
		1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}					
HMTA 020	0.2	1/5	2	300	360	5.6	{0.57}	4.6	{0.47}	588	{60}	60   <b>1</b>	72   <b>1</b>	84   <b>1</b>
				200	240	8.3	{0.85}	7.0	{0.71}	784	{80}			
				150	180	10.8	{1.1}	9.3	{0.95}	980	{100}			
				120	144	13.7	{1.4}	11.8	{1.2}	1029	{105}			
				100	120	16.7	{1.7}	13.7	{1.4}	1078	{110}			
				75	90	22.5	{2.3}	18.6	{1.9}	1176	{120}			
				60	72	27.4	{2.8}	23.5	{2.4}	1274	{130}			
				50	60	31.4	{3.2}	26.5	{2.7}	1421	{145}			
				37.5	45	42.1	{4.3}	35.3	{3.6}	1617	{165}			
				30	36	52.9	{5.4}	44.1	{4.5}	1862	{190}			
		1/60	3	25	30	66.6	{6.8}	54.9	{5.6}	2009	{205}	60   <b>2</b>	72   <b>2</b>	84   <b>2</b>
				18.8	22.5	84.3	{8.6}	70.6	{7.2}	2254	{230}			
				15	18	106	{10.8}	88.2	{9.0}	2548	{260}			
				12.5	15	126	{12.9}	106	{10.8}	2793	{285}			
				9.4	11.3	169	{17.2}	140	{14.3}	3332	{340}			
				7.5	9	*169	*{17.2}	*169	*{17.2}	3332	{340}			
				5	6	260	{26.5}	217	{22.1}	4410	{450}			
				4.2	5	312	{31.8}	260	{26.5}	4410	{450}			
				3.1	3.8	*374	*{38.2}	*312	*{31.8}	4410	{450}			
				3.1	3.8	*374	*{38.2}	*312	*{31.8}	4410	{450}			
1/480	4	2.5	3	506	{51.6}	432	{44.1}	6272	{640}	60   <b>3</b>	72   <b>3</b>	84   <b>3</b>		
		2.1	2.5	607	{61.9}	519	{53.0}	6272	{640}					
		1.6	1.9	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
		1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					

Note 1: The actual reduction ratio is shown as the reduction ratio. (They are all integer ratios.)  
 Note 2: The output shaft revolution rate is calculated by dividing the synchronous motor revolution rate by the reduction ratio. Calculate the actual output revolution rate from the motor's rated revolution rate (page 53).  
 Note 3: For output shaft arrangement "T" where torque is applied to both shafts, the sum of both torques should be equal to or less than the value shown in the table above. In addition, the O.H.L. on one shaft should be equal to or less than 1/2 of the value shown in the table above.  
 Note 4: The models marked with ※ are ones for which torque is limited.  
 Note 5: Reduction ratios 1/7.5 and 1/12.5 are for hollow shaft, three-phase motor types (non-brake or brake type) only.

HYPOID MOTOR TA/TR Series  
Specification Chart

# Specification Chart

Specification Chart  
HYPOID MOTOR TA/TR Series

Model number		Motor output kW	Actual reduction ratio	Number of reduction steps	Output shaft revolution r/min		Allowable output shaft torque				Allowable output shaft O.H.L.		Page and drawing number of outline dimensions			
					L·U·H	50Hz	60Hz	50Hz		60Hz		N	{kgf}	Hollow shaft	Face mount	Foot mount
								N·m	{kgf·m}	N·m	{kgf·m}					
HMTA 040	5	0.4	1/5	2	300	360	10.8	{1.1}	9.3	{0.95}	931	{95}	62 1	74 1	86 1	
	7.5		200		240	16.7	{1.7}	13.7	{1.4}	1254	{128}					
	10		150		180	22.5	{2.3}	18.6	{1.9}	1568	{160}					
	12.5		120		144	27.4	{2.8}	23.5	{2.4}	1646	{168}					
	15		100		120	33.3	{3.4}	27.4	{2.8}	1715	{175}					
	20		75		90	44.1	{4.5}	37.2	{3.8}	1862	{190}					
	25		60		72	55.9	{5.7}	46.1	{4.7}	2009	{205}					
	30		50		60	66.6	{6.8}	55.9	{5.7}	2205	{225}					
	40		37.5		45	84.3	{8.6}	70.6	{7.2}	2450	{250}					
	50		30		36	106	{10.8}	88.2	{9.0}	2793	{285}					
	60		25	30	126	{12.9}	106	{10.8}	3038	{310}						
	80		18.8	22.5	169	{17.2}	141	{14.4}	3479	{355}						
	100		15	18	212	{21.6}	176	{18.0}	3920	{400}						
	120		12.5	15	254	{25.9}	212	{21.6}	4410	{450}						
	160		9.4	11.3	338	{34.5}	281	{28.7}	4410	{450}						
	200		7.5	9	*374	{38.2}	*312	{31.8}	4410	{450}						
	300		5	6	519	{53.0}	432	{44.1}	6272	{640}						
	360		4.2	5	621	{63.4}	519	{53.0}	6272	{640}						
	480		3.1	3.8	*621	{63.4}	*621	{63.4}	6272	{640}						
	600		2.5	3	1029	{105}	869	{88.7}	9800	{1000}						
720	2.1	2.5	*1176	{120}	1029	{105}	9800	{1000}								
960	1.6	1.9	*1176	{120}	*1176	{120}	9800	{1000}								
1200	1.3	1.5	*1176	{120}	*1176	{120}	9800	{1000}								
HMTR 075	5	0.75	1/5	2	300	360	20.6	{2.1}	17.6	{1.8}	1519	{155}	64 1	76 1	88 1	
	7.5		200		240	31.4	{3.2}	26.5	{2.7}	1862	{190}					
	10		150		180	42.1	{4.3}	34.3	{3.5}	2205	{225}					
	12.5		120		144	51.9	{5.3}	43.1	{4.4}	2303	{235}					
	15		100		120	62.7	{6.4}	51.9	{5.3}	2401	{245}					
	20		75		90	83.3	{8.5}	69.6	{7.1}	2646	{270}					
	25		60		72	104	{10.6}	87.2	{8.9}	2891	{295}					
	30		50		60	125	{12.8}	104	{10.6}	3136	{320}					
	40		37.5		45	159	{16.2}	132	{13.5}	3626	{370}					
	50		30		36	198	{20.2}	165	{16.8}	4116	{420}					
	60		25	30	238	{24.3}	198	{20.2}	4508	{460}						
	80		18.8	22.5	317	{32.3}	264	{26.9}	5390	{550}						
	100		15	18	396	{40.4}	330	{33.7}	6272	{640}						
	120		12.5	15	475	{48.5}	396	{40.4}	6272	{640}						
	160		9.4	11.3	621	{63.4}	517	{52.8}	6272	{640}						
	200		7.5	9	*621	{63.4}	*621	{63.4}	6272	{640}						
	300		5	6	973	{99.3}	807	{82.3}	9800	{1000}						
	360		4.2	5	1166	{119}	973	{99.3}	9800	{1000}						
	480		3.1	3.8	*1176	{120}	*1176	{120}	9800	{1000}						

Note 1: The actual reduction ratio is shown as the reduction ratio. (They are all integer ratios.)  
 Note 2: The output shaft revolution rate is calculated by dividing the synchronous motor revolution rate by the reduction ratio. Calculate the actual output revolution rate from the motor's rated revolution rate (page 53).  
 Note 3: For output shaft arrangement "T" where torque is applied to both shafts, the sum of both torques should be equal to or less than the value shown in the table above. In addition, the O.H.L. on one shaft should be equal to or less than 1/2 of the value shown in the table above.  
 Note 4: The models marked with \* are ones for which torque is limited.  
 Note 5: Reduction ratios 1/7.5 and 1/12.5 are for hollow shaft, three-phase motor types (non-brake or brake type) only.

Premium Efficiency: IE3  
HYPOID MOTOR TA Series

Model number	Motor output kW	Actual reduction ratio	Number of reduction steps	Output shaft revolution r/min		Allowable output shaft torque				Allowable output shaft O.H.L.		Page and drawing number of outline dimensions		
				50Hz	60Hz	50Hz		60Hz		N	{kgf}	Hollow shaft	Face mount	Foot mount
						N·m	{kgf·m}	N·m	{kgf·m}					
HMTR 150	5	1/5	2	300	360	41.2	{4.2}	34.3	{3.5}	2058	{210}	65 1	77 1	89 1
				150	180	83.3	{8.5}	69.6	{7.1}	2842	{290}			
				100	120	124	{12.7}	104	{10.6}	3234	{330}			
				75	90	166	{16.9}	138	{14.1}	3626	{370}			
				60	72	208	{21.2}	173	{17.7}	4018	{410}			
				50	60	249	{25.4}	208	{21.2}	4508	{460}			
	150	1.5	3	37.5	45	317	{32.3}	264	{26.9}	5292	{540}	65 2	77 2	89 2
				30	36	396	{40.4}	330	{33.7}	6076	{620}			
				25	30	475	{48.5}	396	{40.4}	6272	{640}			
				18.8	22.5	634	{64.7}	528	{53.9}	6272	{640}			
				15	18	792	{80.8}	661	{67.4}	9800	{1000}			
				12.5	15	951	{97.0}	792	{80.8}	9800	{1000}			
				9.4	11.3	*1176	*{120}	1058	{108}	9800	{1000}			
				7.5	9	*1176	*{120}	*1176	*{120}	9800	{1000}			
HMTR 220	5	1/5	2	300	360	60.8	{6.2}	51.0	{5.2}	3038	{310}	66 1	78 1	90 1
				150	180	122	{12.4}	102	{10.4}	3822	{390}			
				100	120	182	{18.6}	152	{15.5}	4214	{430}			
				75	90	244	{24.9}	203	{20.7}	4606	{470}			
				60	72	290	{29.6}	242	{24.7}	4998	{510}			
				50	60	349	{35.6}	290	{29.6}	5390	{550}			
	220	2.2	3	37.5	45	465	{47.4}	387	{39.5}	5782	{590}	66 2	78 2	90 2
				30	36	581	{59.3}	484	{49.4}	6076	{620}			
				25	30	697	{71.1}	581	{59.3}	6272	{640}			
				18.8	22.5	930	{94.9}	774	{79.0}	9800	{1000}			
				15	18	*1068	*{109}	968	{98.8}	9800	{1000}			
				12.5	15	*1176	*{120}	1166	{119}	9800	{1000}			
HMTR 370	5	1/5	2	300	360	103	{10.5}	85.3	{8.7}	4900	{500}	67 1	79 1	91 1
				150	180	205	{20.9}	171	{17.4}	5880	{600}			
				100	120	308	{31.4}	256	{26.1}	6860	{700}			
				75	90	410	{41.8}	341	{34.8}	7742	{790}			
	370	3.7	3	60	72	489	{49.9}	407	{41.5}	8134	{830}	67 1	79 1	91 1
				50	60	586	{59.8}	489	{49.9}	8428	{860}			
				37.5	45	782	{79.8}	652	{66.5}	8820	{900}			
				30	36	977	{99.7}	814	{83.1}	9114	{930}			
				25	30	1176	{120}	977	{99.7}	9408	{960}			
				20	30	1176	{120}	977	{99.7}	9408	{960}			
HMTR 550	5	1/5	2	300	360	152	{15.5}	126	{12.9}	4900	{500}	68 1	80 1	92 1
				150	180	305	{31.1}	254	{25.9}	5880	{600}			
				100	120	457	{46.6}	380	{38.8}	6860	{700}			
				75	90	609	{62.1}	508	{51.8}	7742	{790}			
	550	5.5	3	60	72	726	{74.1}	606	{61.8}	8134	{830}	68 1	80 1	92 1
				50	60	871	{88.9}	726	{74.1}	8428	{860}			
				37.5	45	1166	{119}	968	{98.8}	8820	{900}			
				30	36	1166	{119}	968	{98.8}	8820	{900}			

Note 1: The actual reduction ratio is shown as the reduction ratio. Note that on the 2.2 kW, 1/50 model (marked with ★), the actual reduction ratio is 1/49.286.  
 Note 2: The output shaft revolution rate is calculated by dividing the synchronous motor revolution rate by the reduction ratio. Calculate the actual output revolution rate from the motor's rated revolution rate (page 53).  
 Note 3: For output shaft arrangement "T" where torque is applied to both shafts, the sum of both torques should be equal to or less than the value shown in the table above. In addition, the O.H.L. on one shaft should be equal to or less than 1/2 of the value shown in the table above.  
 Note 4: The models marked with ※ are ones for which torque is limited.

HYPOID MOTOR TA Series  
Specification Chart



# Hollow Shaft Type Three-Phase 0.1 kW Non-Brake Type, Brake Type

## Specification Chart

Output	Number of phases	Number of poles	Frequency Hz	Voltage V 50/60/60Hz	Rated current A 50/60/60Hz	Rated revolution r/min 50/60/60Hz	Protection	Cooling method	Rating	Insulation	Brake		
											Type	Rated torque (of motor torque)	Insulation
0.1kW	Three-phase	4	50/60/60	200/200/220 (400/400/440)	0.63/0.57/0.58 (0.32/0.29/0.29)	1420/1680/1710 (1440/1740/1740)	Totally enclosed (IP44)	Self-cooled (IC410)	Continuous	120 (E)	Non-excitation	At least 150%	Class B

Note 1: The values in parentheses under "Rated current" and "Rated revolution" are for 400 V class.

Note 2: The protective construction for the brake type is IP20.

Model number	Motor output kW	Actual reduction ratio	Number of reduction steps	Output shaft revolution r/min		Allowable output shaft torque				Allowable output shaft O.H.L.		Drawing number of outline dimensions	
				H	50Hz	60Hz	N·m		{kgf·m}		N		{kgf}
							50Hz	60Hz	N·m	{kgf·m}			
HMTA010	0.1	1/5	2	H	300	360	2.7	{0.28}	2.4	{0.24}	588	{60}	1
					200	240	4.2	{0.43}	3.4	{0.35}	784	{80}	
					150	180	5.6	{0.57}	4.6	{0.47}	980	{100}	
					120	144	7.0	{0.71}	5.8	{0.59}	1029	{105}	
					100	120	8.3	{0.85}	7.0	{0.71}	1078	{110}	
					75	90	10.8	{1.1}	9.3	{0.95}	1176	{120}	
					60	72	13.7	{1.4}	11.8	{1.2}	1274	{130}	
					50	60	16.7	{1.7}	13.7	{1.4}	1421	{145}	
					37.5	45	22.5	{2.3}	18.6	{1.9}	1617	{165}	
					30	36	27.4	{2.8}	23.5	{2.4}	1862	{190}	
	0.1	1/60	3	H	25	30	31.4	{3.2}	26.5	{2.7}	2009	{205}	2
					18.8	22.5	42.1	{4.3}	35.3	{3.6}	2254	{230}	
					15	18	52.9	{5.4}	44.1	{4.5}	2548	{260}	
					12.5	15	63.7	{6.5}	52.9	{5.4}	2793	{285}	
					9.4	11.3	84.3	{8.6}	70.6	{7.2}	3332	{340}	
					7.5	9	106	{10.8}	88.2	{9.0}	3332	{340}	
					5	6	129	{13.2}	108	{11.0}	3332	{340}	
					4.2	5	156	{15.9}	129	{13.2}	3332	{340}	
					3.1	3.8	*169	*{17.2}	*169	*{17.2}	3332	{340}	
					2.5	3	260	{26.5}	217	{22.1}	4410	{450}	
0.1	1/600	4	H	2.1	2.5	312	{31.8}	260	{26.5}	4410	{450}	3	
				1.6	1.9	*374	*{38.2}	346	{35.3}	4410	{450}		
				1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}		
				1.3	1.5	*374	*{38.2}	*374	*{38.2}	4410	{450}		

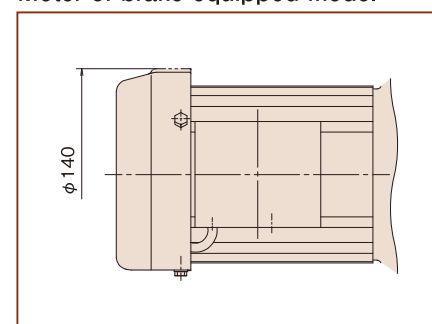
Note 1: The actual reduction ratio is shown as the reduction ratio.

(They are all integer ratios.)

Note 2: The output shaft revolution rate is calculated by dividing the synchronous motor revolution rate by the reduction ratio. Calculate the actual output revolution rate from the motor's rated revolution rate.

Note 3: The models marked with \* are ones for which torque is limited.

### Motor of brake-equipped model



Specification Chart, Dimensions

HYPOID MOTOR TA Series

Outline Dimensions

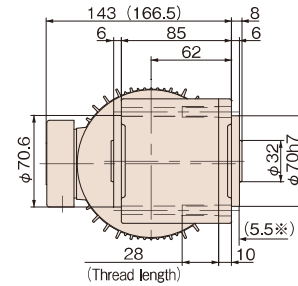
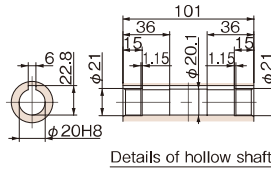
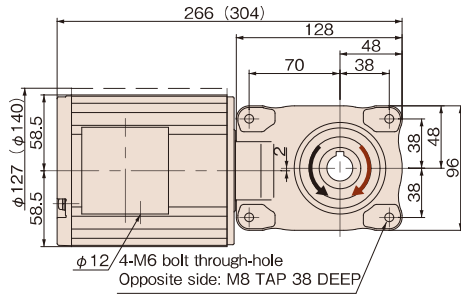
**HMTA010-20H5 - 120 (B)**

1/5-1/50 ↺, 1/60-1/120 ↻

1

Reduction ratio : 5, 7.5, 10, 12.5, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120

Approx. weight : 5.7 (7.7) kg

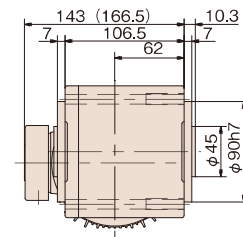
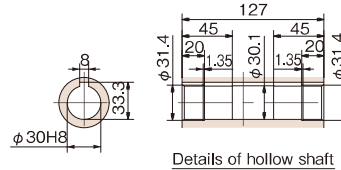
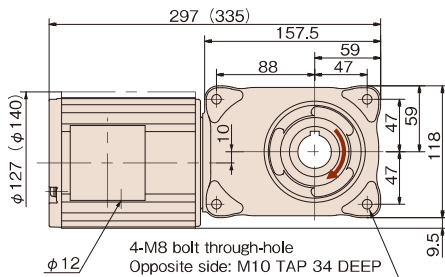


**HMTA010-30H160 - 200 (B)**

2

Reduction ratio : 160, 200

Approx. weight : 9.0 (10.6) kg

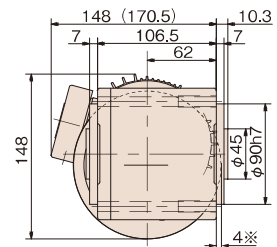
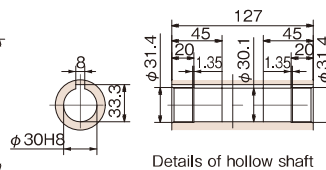
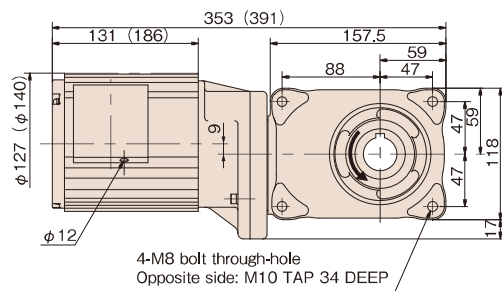


**HMTA010-30H300 - 480 (B)**

3

Reduction ratio : 300, 360, 480

Approx. weight : 11.1 (12.7) kg

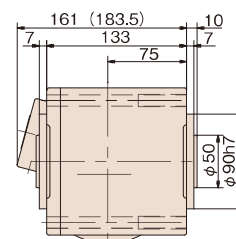
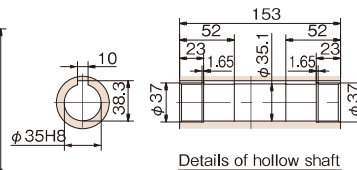
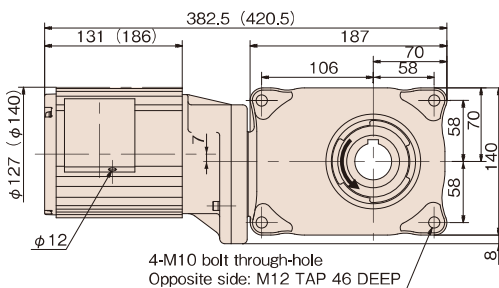


**HMTA010-35H600 - 1200 (B)**

4

Reduction ratio : 600, 720, 960, 1200

Approx. weight : 14.0 (15.6) kg



Note 1: The values in parentheses are for brake-equipped models with a fan cover. Refer to the previous page for the shape of the fan cover.  
 Note 2: The dimension marked with \* indicates that part of the motor protrudes from the mounting face.  
 Note 3: The direction of rotation of the output shaft is based on direction of rotation A shown on page 211.



# Hollow Shaft Type Three-Phase 0.2 kW Non-Brake Type, Brake Type

## Specification Chart

Output	Number of phases	Number of poles	Frequency Hz	Voltage V 50/60/60Hz	Rated current A 50/60/60Hz	Rated revolution r/min 50/60/60Hz	Protection	Cooling method	Rating	Insulation	Brake		
											Type	Rated torque (of motor torque)	Insulation
0.2kW	Three-phase	4	50/60/60	200/200/220 (400/400/440)	1.2/1.1/1.1 (0.59/0.55/0.55)	1420/1700/1720 (1410/1690/1720)	Totally enclosed (IP44)	Self-ventilated (JC411)	Continuous	120 (E)	Non-excitation	At least 150%	Class B

Note 1: The values in parentheses under "Rated current" and "Rated revolution" are for 400 V class.

Note 2: The protective construction for the brake type is IP20.

Model number	Motor output kW	Actual reduction ratio	Number of reduction steps	Output shaft revolution r/min		Allowable output shaft torque				Allowable output shaft O.H.L.		Drawing number of outline dimensions	
				H	50Hz	60Hz	N·m		kgf·m		N		kgf
							50Hz	60Hz					
HMTA020	0.2	1/5	2	H	300	360	5.6	{0.57}	4.6	{0.47}	588	{60}	1
					200	240	8.3	{0.85}	7.0	{0.71}	784	{80}	
					150	180	10.8	{1.1}	9.3	{0.95}	980	{100}	
					120	144	13.7	{1.4}	11.8	{1.2}	1029	{105}	
					100	120	16.7	{1.7}	13.7	{1.4}	1078	{110}	
					75	90	22.5	{2.3}	18.6	{1.9}	1176	{120}	
					60	72	27.4	{2.8}	23.5	{2.4}	1274	{130}	
					50	60	31.4	{3.2}	26.5	{2.7}	1421	{145}	
					37.5	45	42.1	{4.3}	35.3	{3.6}	1617	{165}	
					30	36	52.9	{5.4}	44.1	{4.5}	1862	{190}	
			3	60	30	63.7	{6.5}	52.9	{5.4}	2009	{205}	2	
				25	22.5	84.3	{8.6}	70.6	{7.2}	2254	{230}		
				15	18	106	{10.8}	88.2	{9.0}	2548	{260}		
				12.5	15	126	{12.9}	106	{10.8}	2793	{285}		
				9.4	11.3	169	{17.2}	140	{14.3}	3332	{340}		
				7.5	9	*169	*{17.2}	*169	*{17.2}	3332	{340}		
				5	6	260	{26.5}	217	{22.1}	4410	{450}		
				4.2	5	312	{31.8}	260	{26.5}	4410	{450}		
				3.1	3.8	*374	*{38.2}	*312	*{31.8}	4410	{450}		
				2.5	3	506	{51.6}	432	{44.1}	6272	{640}		
4	2.1	2.5	607	{61.9}	519	{53.0}	6272	{640}	4				
	1.6	1.9	*621	*{63.4}	*621	*{63.4}	6272	{640}					
	1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					
	1.3	1.5	*621	*{63.4}	*621	*{63.4}	6272	{640}					

Note 1: The actual reduction ratio is shown as the reduction ratio. (They are all integer ratios.)

Note 2: The output shaft revolution rate is calculated by dividing the synchronous motor revolution rate by the reduction ratio. Calculate the actual output revolution rate from the motor's rated revolution rate.

Note 3: The models marked with \* are ones for which torque is limited.

Specification Chart, Dimensions  
HYPOID MOTOR TA Series

Outline Dimensions

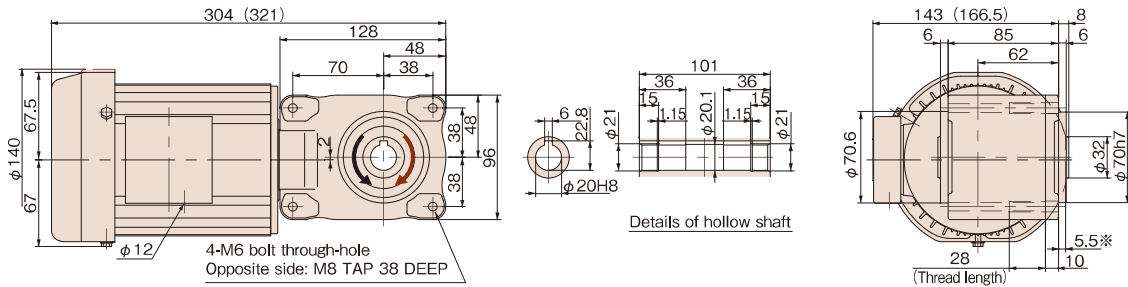
**HMTA020-20H5 - 60 (B)**

1/5-1/25 ↺, 1/30-1/60 ↻

1

Reduction ratio : 5, 7.5, 10, 12.5, 15, 20, 25, 30, 40, 50, 60

Approx. weight : 6.2 (8.0) kg

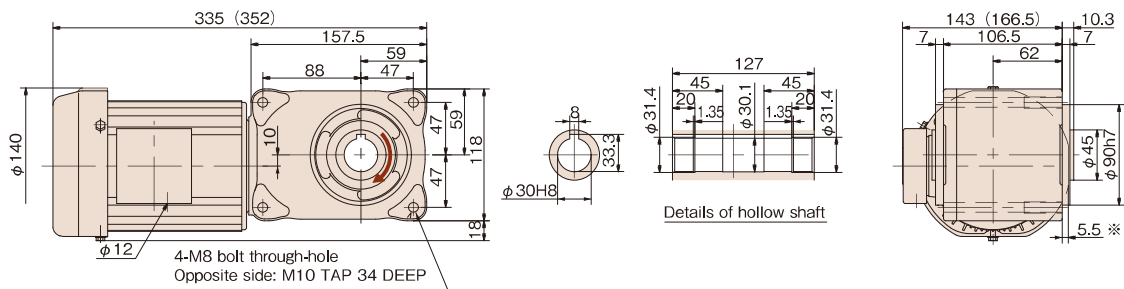


**HMTA020-30H80 - 200 (B)**

2

Reduction ratio : 80, 100, 120, 160, 200

Approx. weight : 8.8 (10.9) kg

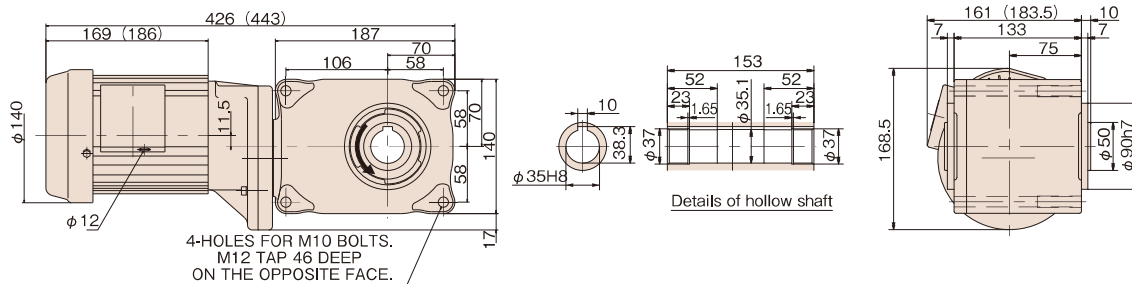


**HMTA020-35H300 - 480 (B)**

3

Reduction ratio : 300, 360, 480

Approx. weight : 14.0 (16.1) kg

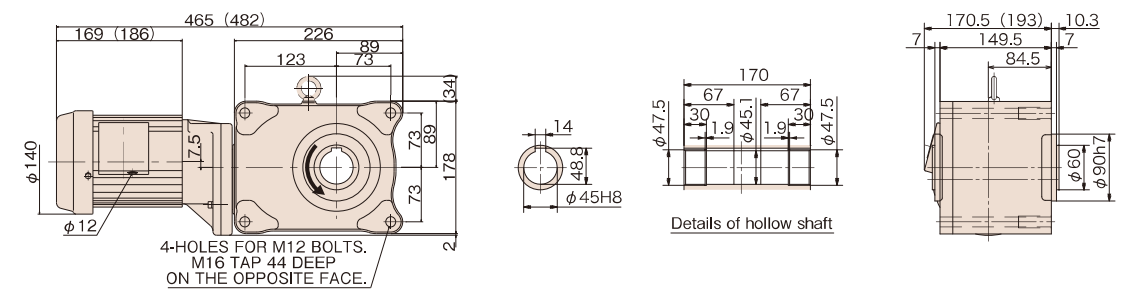


**HMTA020-45H600 - 1200 (B)**

4

Reduction ratio : 600, 720, 960, 1200

Approx. weight : 21.3 (23.4) kg



Note 1: The values in parentheses are for brake-equipped models.

Note 2: The dimension marked with \* indicates that part of the motor protrudes from the mounting face.

Note 3: The direction of rotation of the output shaft is based on direction of rotation A shown on page 2 11.

# Hollow Shaft Type Three-Phase 0.4 kW Non-Brake Type, Brake Type

## Specification Chart

Output	Number of phases	Number of poles	Frequency Hz	Voltage V 50/60/60Hz	Rated current A 50/60/60Hz	Rated revolution r/min 50/60/60Hz	Protection	Cooling method	Rating	Insulation	Brake		
											Type	Rated torque (of motor torque)	Insulation
0.4kW	Three-phase	4	50/60/60	200/200/220 (400/400/440)	2.3/2.0/2.0 (1.2/1.0/1.0)	1380/1650/1680 (1390/1670/1700)	Totally enclosed (IP44)	Self-ventilated (JC411)	Continuous	120 (E)	Non-excitation	At least 150%	Class B

Note 1: The values in parentheses under "Rated current" and "Rated revolution" are for 400 V class.

Note 2: The protective construction for the brake type is IP20.

Model number	Motor output kW	Actual reduction ratio	Number of reduction steps	Output shaft revolution r/min		Allowable output shaft torque				Allowable output shaft O.H.L.		Drawing number of outline dimensions	
				H	50Hz	60Hz	50Hz		60Hz		N		{kgf}
							N·m	{kgf·m}	N·m	{kgf·m}			
HMTA040	5	1/5	2	H	300	360	10.8	{1.1}	9.3	{0.95}	931	{95}	1
					200	240	16.7	{1.7}	13.7	{1.4}	1254	{128}	
					150	180	22.5	{2.3}	18.6	{1.9}	1568	{160}	
					120	144	27.4	{2.8}	23.5	{2.4}	1646	{168}	
					100	120	33.3	{3.4}	27.4	{2.8}	1715	{175}	
					75	90	44.1	{4.5}	37.2	{3.8}	1862	{190}	
					60	72	55.9	{5.7}	46.1	{4.7}	2009	{205}	
					50	60	66.6	{6.8}	55.9	{5.7}	2205	{225}	
					40	60	66.6	{6.8}	55.9	{5.7}	2205	{225}	
	0.4	1/60	3	H	25	30	126	{12.9}	106	{10.8}	3038	{310}	2
					18.8	22.5	169	{17.2}	141	{14.4}	3479	{355}	
					15	18	212	{21.6}	176	{18.0}	3920	{400}	
					12.5	15	254	{25.9}	212	{21.6}	4410	{450}	
					9.4	11.3	338	{34.5}	281	{28.7}	4410	{450}	
					7.5	9	*374	*{38.2}	*312	*{31.8}	4410	{450}	
	0.4	1/200	4	H	5	6	519	{53.0}	432	{44.1}	6272	{640}	3
					4.2	5	621	{63.4}	519	{53.0}	6272	{640}	
					3.1	3.8	*621	*{63.4}	*621	*{63.4}	6272	{640}	
2.5					3	1029	{105}	869	{88.7}	9800	{1000}		
2.1					2.5	*1176	*{120}	1029	{105}	9800	{1000}		
1.6					1.9	*1176	*{120}	*1176	*{120}	9800	{1000}		
0.4	1/1200	4	H	1.3	1.5	*1176	*{120}	*1176	*{120}	9800	{1000}	4	

Note 1: The actual reduction ratio is shown as the reduction ratio. (They are all integer ratios.)

Note 2: The output shaft revolution rate is calculated by dividing the synchronous motor revolution rate by the reduction ratio. Calculate the actual output revolution rate from the motor's rated revolution rate.

Note 3: The models marked with ※ are ones for which torque is limited.

Specification Chart, Dimensions  
HYPOID MOTOR TA Series

Outline Dimensions

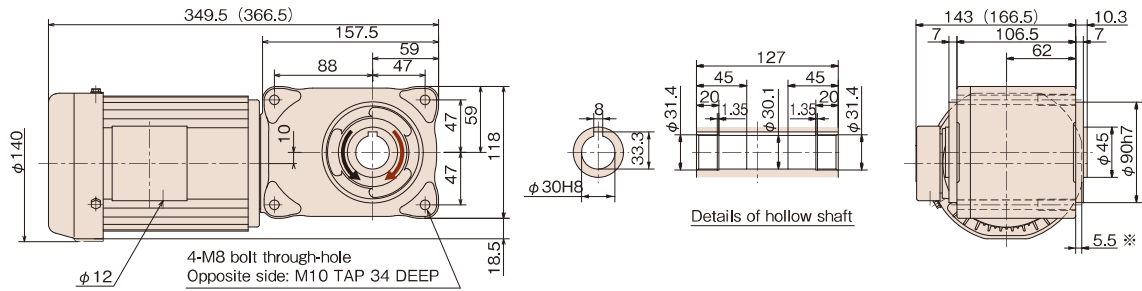
**HMTA040-30H5 - 50 (B)**

1/5-1/30 ↺, 1/40-1/50 ↻

1

Reduction ratio : 5, 7.5, 10, 12.5, 15, 20, 25, 30, 40, 50

Approx. weight : 9.4 (11.7) kg

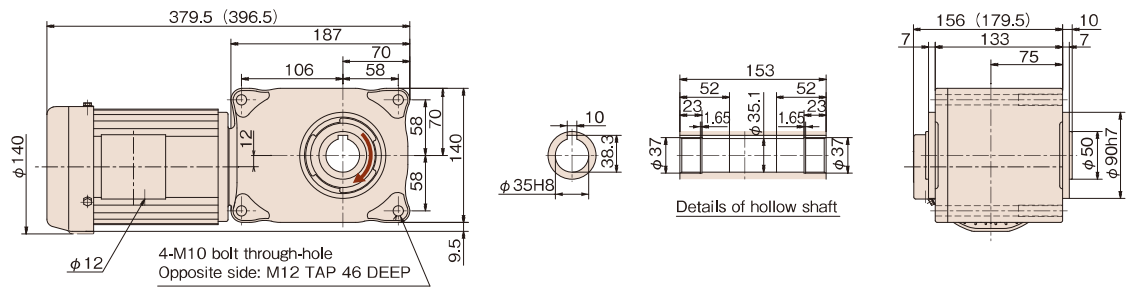


**HMTA040-35H60 - 200 (B)**

2

Reduction ratio : 60, 80, 100, 120, 160, 200

Approx. weight : 14.2 (16.5) kg

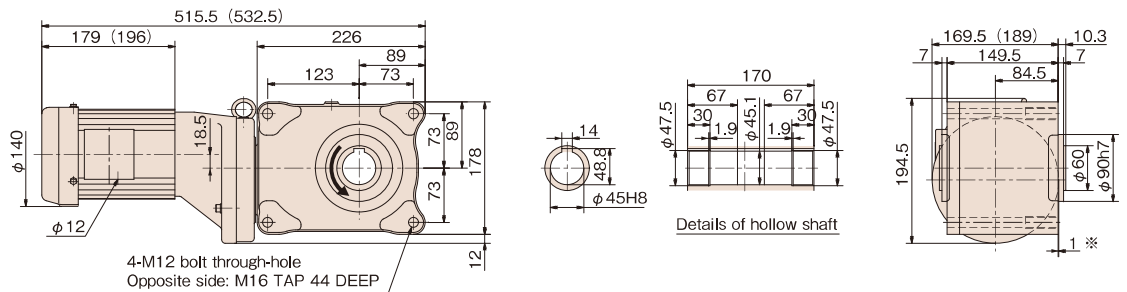


**HMTA040-45H300 - 480 (B)**

3

Reduction ratio : 300, 360, 480

Approx. weight : 26.2 (28.5) kg

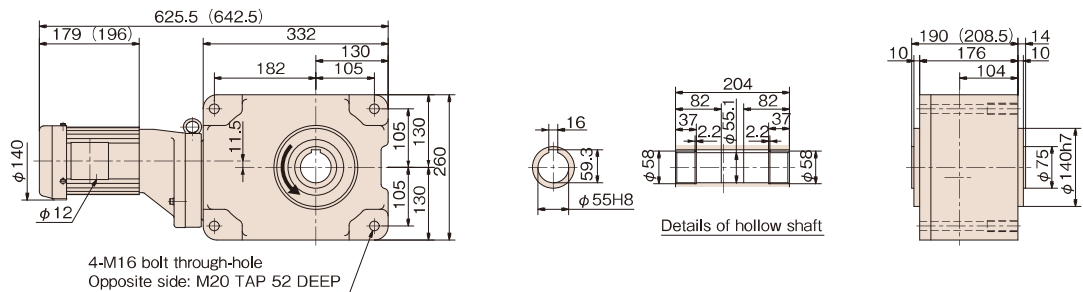


**HMTA040-55H600 - 1200 (B)**

4

Reduction ratio : 600, 720, 960, 1200

Approx. weight : 52.8 (55.1) kg



Note 1: The values in parentheses are for brake-equipped models.

Note 2: The dimension marked with \* indicates that part of the motor protrudes from the mounting face.

Note 3: The direction of rotation of the output shaft is based on direction of rotation A shown on page 2 11.