Hypoid Motor TA Series Features

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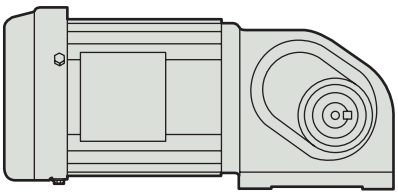
Space savings realized with hypoid gear and orthogonal-axis-type reducer that is ready for multiple applications

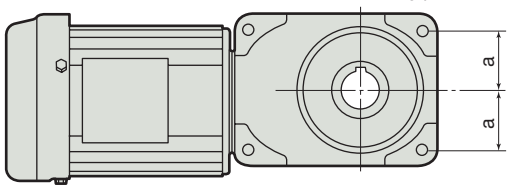
Unlike parallel-axis-type gear motors, the shaft of the hypoid motor does not protrude in the longitudinal direction, allowing the hypoid motor to be mounted on the inside of machinery. Even when mounted on the outside of machinery, a compact layout can be realized because it does not extend outward much, leading to space savings. The face mount type and hollow shaft type using Tsubaki's unique multi-fit system are ready for various installation modes, making it possible to simplify the layout of the whole equipment.

1 Compact

Special emphasis is placed on the height of Tsubaki's hypoid motor - a compact reducer with as low a height as has ever been realized.

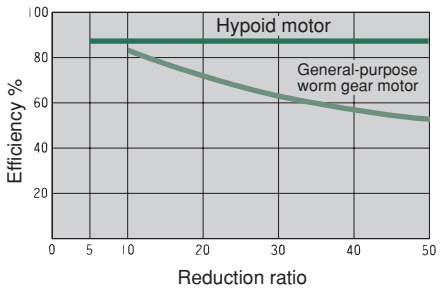


The mounting pitch "a" is the same.



2 High efficiency

The hypoid motor has less slippage than worm gear motors, thus providing higher efficiency. This means that the hypoid motor uses less power for the same output, which results in economical operation.



3 Low noise

The hypoid motor employs the new processing technology incorporated in our T series gear motor providing low noise and high reliability.

4 Usability

Because the product is delivered with grease injected, it can be used immediately.
There is no limitation on the mounting direction.
A tapped (screw) hole is included in the end of the output shaft to aid installation.
For the hollow shaft type, a torque arm and a safety cap are available as options.

5 Inverter motor type

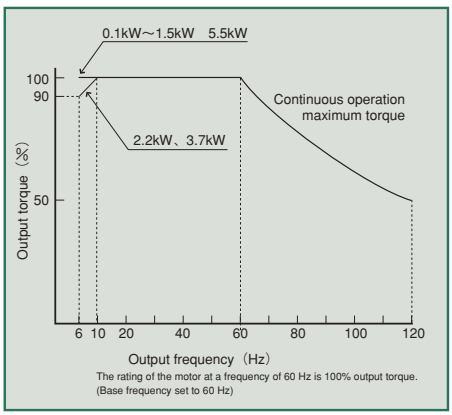
(Quick-delivery make-to-order product)

An inverter-ready motor is connected directly.
Continuous operation with 100% constant torque is possible even at low frequencies (6 Hz or more).
(For the 2.2 kW and 3.7 kW devices, reduction of torque is produced at frequencies of 10 Hz or less.)

In addition… ① **Quick delivery**
Available on short delivery

② **Compact**
Exactly the same size as the standard product

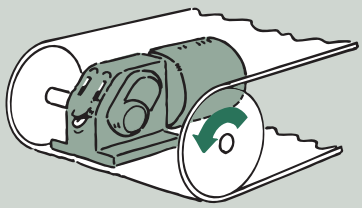
③ **Low price**
A slight increase over the standard product of about 20%



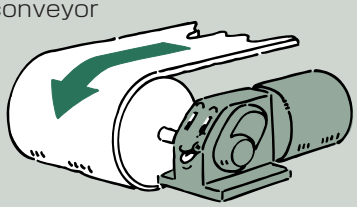
Hypoid Motor TA Series Features

Space saving

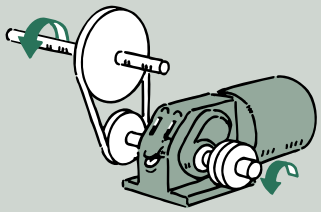
Mounted on inside of conveyor



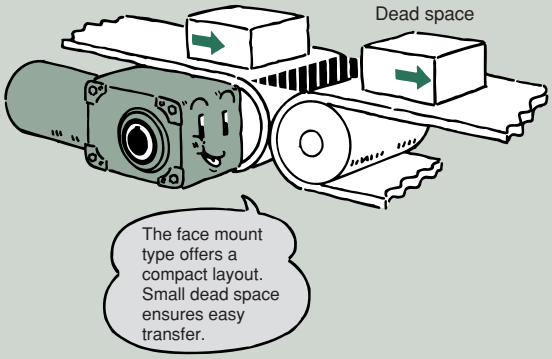
Mounted on outside of conveyor

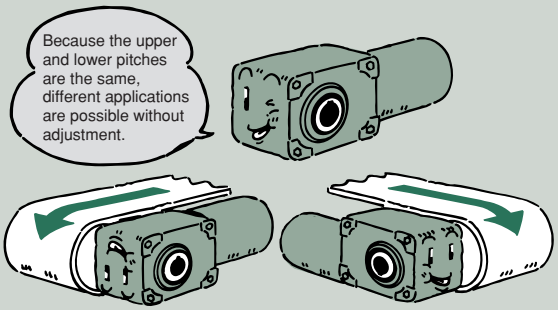


Multiple drive



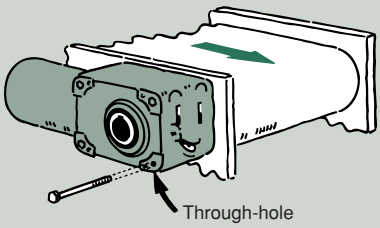
Multi-fit system



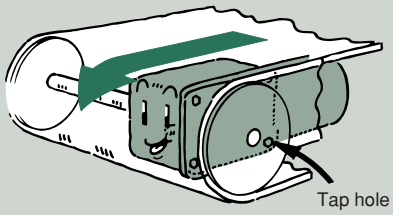


Three types of mounting

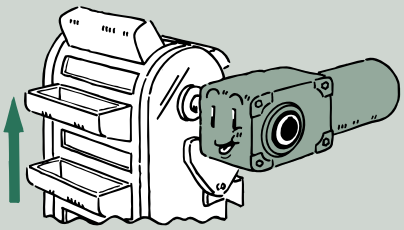
Mounted on outside of conveyor



Mounted on inside of conveyor

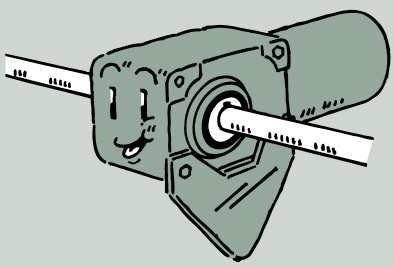


Mounted on shaft

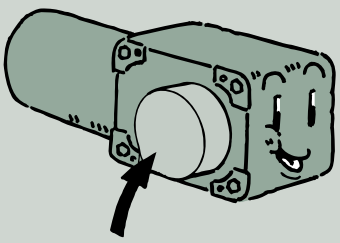


Options

Mounted on shaft with torque arm



Safety cap for added safety



Nomenclature

■Model number 1 (0.1kW～0.75kW)

HMTA010-38L1200L□□□□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Product and Series name	HMTA	Motorized type
	HRTA	Inline reducer type and adapter type
② Motor capacity (example)	010	Three-phase 0.1 kW
	100	Single-phase 100 W
③ Frame number (example)	38	Frame number 38 (Note 1)
④ Mounting type	L	Foot mount
	U	Face mount type
	H	Hollow shaft type
⑤ Reduction ratio (example)	1200	1/1200
⑥ Shaft arrangement	L	Output shaft located to the left as viewed from the motor side
	T	Output shaft located on both sides
	R	Output shaft located to the right as viewed from the motor side
	S	Output shaft located on one side (face side) (For face mount type only)
	No code	Hollow shaft type
⑦ Specification code	No code	Without B, K or BE
	B	Brake type
	FI	Adapter type
	K	Power lock type (For hollow shaft type with standard shaft hole diameter only)
	BE	Encoder type
	SR	Shock relay type for 0.1 and 0.2 kW only
⑧ Option code Order of priority	1. Z	Inverter motor type
	2. W	Outdoor type
	3. V	400 V class (400/400/440V 50/60/60Hz)
	4. V1	380V50Hz
	5. V2	380V60Hz
	6. V3	415V50Hz
	7. V4	460V60Hz
	8. N	Ready for CE marking
	9. H	Hard terminal box type
	10. Q	One-touch manual release type
	11. M	Manual shaft type

Note 1) For the frame number, refer to the specification chart and outline dimensional drawing.

Supplementary codes (indicated on the second line of the model number)
Supplementary codes may be combined arbitrarily.

Position of terminal box
P1: 90° swing
P2: 180° swing
P3: 270° swing
Note) P1 and P3 are for the face mount and hollow shaft types only.

Hollow shaft hole diameter
S1: φ20
S2: φ25
S3: φ30
S4: φ35
S5: φ40
(For frame number 45 only)

Position of lead outlet of hard terminal box of outdoor type
D1: 90° swing
D2: 180° swing
D3: 270° swing
Note) The standard position is opposite the load side.
For the resin terminal box, the position of the lead outlet can be changed by changing the top cover mounting direction.

Paint color (The standard color is Munsell 2.5G6/3, in which case no code is shown.)
C1: Light silver metallic
C2: Ivory white (Munsell 7.5Y9/1)
C3: Dark silver metallic

Combination of specification and option codes

No brake type

Z	ZW	ZWV
	ZV	ZVH
	ZH	
W	WV	WV1
		WV2
		WV3
		WV4
V	VN	
	VH	
	V1	V1H
	V2	V2H
	V3	V3H
	V4	V4H
N		
H		

Brake type

Z	ZV	ZVH
		ZVQ
		ZVM
	ZH	ZHQ
		ZHM
	ZQ	ZQM
	ZM	
V	VN	
	VH	VHQ
		VHM
	VQ	VQM
	VM	
	V1	V1H
	V2	V2H
	V3	V3H
	V4	V4H
N		
H	HQ	HQM
	HM	
Q	QM	
M		

Power lock type

Z	ZW	ZWV
W	WV	WV1
		WV2
		WV3
		WV4
V	VN	
	VH	
	V1	V1H
	V2	V2H
	V3	V3H
	V4	V4H

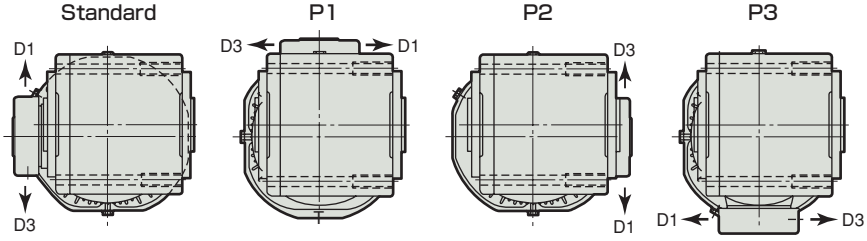
Encorder type

Z	ZV
V	VH
H	

Note) A combination of "brake type" and "outdoor use type" are made-to-order product.

Codes for position of terminal box

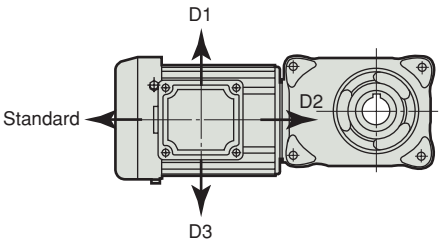
When the reduction is 1/300 or more, the terminal box is positioned differently.
In this case, please contact us for details.



The directions shown by D1 and D3 in the figure above are for the outdoor-type motor with a hard terminal box.
For the standard motor, change the position of the lead outlet by changing the terminal box top cover mounting direction.

Codes for positions of the lead outlet of a hard terminal box of an outdoor type

Positions D1, D2 and D3 are obtained by rotating the lead outlet clockwise as viewed toward the terminal box by 90, 180, and 270 degrees, respectively, from the standard position of the lead outlet.



Nomenclature

■Model number 2（1.5kW～5.5kW）

HMTA150-50L200L□□□□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Product and Series name	HMTA	Motorized type
	HRTA	Inline reducer type and adapter type
② Motor capacity (example)	150	Three-phase 1.5 kW
③ Frame number (example)	50	Frame number 50 (Note 1)
④ Mounting type	L	Foot mount
	U	Face mount type
	H	Hollow shaft type
⑤ Reduction ratio (example)	200	1/200
⑥ Shaft arrangement	L	Output shaft located to the left as viewed from the motor side
	T	Output shaft located on both sides
	R	Output shaft located to the right as viewed from the motor side
	S	Output shaft located on one side (face side) (For face mount type only)
	No code	Hollow shaft type
⑦ Specification code	No code	Without B, K or BE
	B	Brake type
	FI	Adapter type
	K	Power lock type (For hollow shaft type with standard shaft hole diameter only)
	BE	Encoder type for 1.5 and 2.2 kW only
⑧ Option code Order of priority	1. Z	Inverter motor type
	2. W	Outdoor type
	3. V	400 V class（400/400/440V 50/60/60Hz）
	4. V1	380V50Hz
	5. V2	380V60Hz（Only the 5.5 kW option is handled as a made-to-order product.）
	6. V3	415V50Hz
	7. V4	460V60Hz
	8. Q	One-touch manual release type

Note 1) For the frame number, refer to the specification chart and outline dimensional drawing.

Supplementary codes (indicated on the second line of the model number)
Supplementary codes may be combined arbitrarily.

Position of terminal box
P 1： 90° swing
P 2：180° swing
P 3：270° swing
Note) P1 and P3 are for the face mount and hollow shaft types only.

Hollow shaft hole diameter
S 3：φ30
S 4：φ35
S 5：φ40
(For frame number 45 only)

Position of the lead outlet of a terminal box of the outdoor type and standard products
E1： 90° swing
E2：180° swing
E3：270° swing
Note) The standard position is downward.

Paint color (The standard color is Munsell 2.5G6/3, in which case no code is shown.)
C 1：Light silver metallic
C 2：Ivory white (Munsell 7.5Y9/1)
C 3：Dark silver metallic

Combination of specification and option codes

No brake type

Z	ZW	ZWV
	ZV	
W	WV	WV1
		WV2
		WV3
		WV4
V	V1	
	V2	
	V3	
	V4	

Brake type

Z	ZV	ZVQ
	ZQ	
V	VQ	
	V1	
	V2	
	V3	
	V4	
Q		

Power lock type

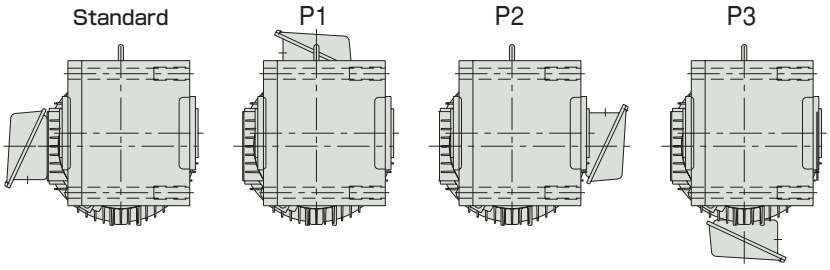
Z	ZW	ZWV
W	WV	WV1
		WV2
		WV3
		WV4
V	V1	
	V2	
	V3	
	V4	

Encorder type

Z	ZV
V	

Note) A combination of "brake type" and "outdoor type" is a made-to-order product. Note that its motor specifications differ from those of the standard product.

Codes for position of terminal box



Codes for positions of the lead outlet of a terminal box of the outdoor type and standard products

Positions E1, E2 and E3 are obtained by rotating the lead outlet clockwise as viewed toward the terminal box by 90, 180, and 270 degrees, respectively, from the standard position of the lead outlet.