

H/H2 Type

Right Angle Shaft

Standard Specification
Model and Type Codes
Standard Model Lineup

- P.218 INDUCTION GEARMOTORS
1. Gearmotors/Gearmotors with Brake
 - 1-1. Motor Characteristics Table
 - 1-2. Performance Table
 - 1-3. Drawings
 - P.252 2. IP65 Gearmotors/
IP65 Gearmotors with Brake
 - 2-1. Motor Characteristics Table
 - 2-2. Performance Table
 - 2-3. Drawings
 - P.270 3. Gearmotors with Clutch/Brake
 - 3-1. Motor Characteristics Table
 - 3-2. Performance Table
 - 3-3. Drawings
 - P.276 4. Speed Control Gearmotors
 - 4-1. Properties and Motor Characteristics Table
 - 4-2. Graph for Speed Characteristics
 - 4-3. Performance Table
 - 4-4. Drawings
 - P.290 5. Reducers (Double Shaft Type)
 - 5-1. Performance Table
 - 5-2. Drawings
 - P.298 6. S-Type Reducers (Type That Can Be Equipped with Designated Motor)
 - 6-1. Performance Table
 - 6-2. Drawings



Standard Specification

H Type Gearmotors/Gearmotors with Brake

Series		MINI		
Motor Unit	Number of Phases	3-Phase	1-Phase	
	Power	15 W to 90 W		
	Power Supply	Standard Voltage	200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz	Standard Voltage 100 V/50 Hz, 100 V/60 Hz
		High Voltage (400 V Class)	380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz	High Voltage (200 V Class) 200 V/50 Hz, 200 V/60 Hz
	Insulation Class	Ins. B		
	Startup Method	Direct Power Input	Capacitor Run	
	Cooling Method	Totally Enclosed Non-Ventilated (TENV) (IC410) or Totally Enclosed Fan Cooled (TEFC) (IC411)		
	Number of Motor Poles	4		
Rating	Continuous			
Reducer	Reduction Type	Hypoid Gear and Helical Gear		
	Lubrication Type	Grease Lubrication (Maintenance-free)		
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.		
	Output Shaft Material	Carbon Steel		
Case Material	Aluminum Die-cast			
Ambient Conditions	Ambient Temperature	-10 °C to 40 °C		
	Ambient Humidity	85 % max (No Condensation)		
	Altitude	1,000 m max		
	Installation Environment	A place free from corrosive gas, explosive gas, and/or vapor. Well ventilated place with no dust.		
Installation Place	Indoors			
Paint	Paint Color	Gray		
Mounting Direction	No limitations to mounting angle			
Motor Characteristics Table	P.218	P.219		
Performance Table	P.222	P.222		
Drawings	P.230	P.230		

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Gearmotors/Gearmotors with Brake

Series		MID				
Motor Unit	Number of Phases	3-Phase			1-Phase	
	Power	0.1 kW to 2.2 kW			0.1 kW to 0.4 kW	
	Power Supply	Type	Global Standards Conformance	Power Supply/Frequency		
		Standard Voltage	UL/CE/CCC	200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz		
		High Voltage (400 V Class)	UL/CE/CCC	380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz		
		Special Voltage	South Korea UL/CE/CCC	220 V/60 Hz, 380 V/60 Hz (Dual Voltage)		Standard Voltage 100 V/50 Hz, 100 V/60 Hz High Voltage (200 V Class) 200 V/50 Hz, 200 V/60 Hz
			China/Europe UL/CE/CCC	220 V/50 Hz, 380 V/50 Hz (Dual Voltage) 230 V/50 Hz		
			North America/Europe UL/CE/CCC	208 V/60 Hz, 230 V/60 Hz, 460 V/60 Hz (Dual Voltage) 400 V/50 Hz		
			North America/Europe UL/CE/CCC	415 V/50 Hz, 440 V/50 Hz, 480 V/60 Hz		
	North America UL	575 V/60 Hz				
	Insulation Class	Ins. F			Ins. B	
Startup Method	Direct Power Input			Capacitor Start (0.1 kW: Capacitor Run)		
Cooling Method	Totally Enclosed Fan Cooled (TEFC) (IC411) (All of 0.1 kW and 0.2 kW models without brake are totally enclosed non-ventilated (TENV) (IC410))			Totally Enclosed Fan Cooled (TEFC) (IC411)		
Number of Motor Poles	4					
Rating	Power	Motor Efficiency	UL/CE Standard	CCC Standard	Continuous	
	0.1 kW	IE1	Continuous	Continuous		
	0.2 kW, 0.4 kW (Note 1)	IE2	Continuous	Short Time (120 minutes)		
0.75 kW or above	IE3, GB3	Continuous	Continuous			
Reducer	Reduction Type	Hypoid Gear and Helical Gear				
	Lubrication Type	Grease Lubrication (Maintenance-free)				
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.				
	Output Shaft Material	Carbon Steel				
	Case Material	Aluminum Die-cast (Frame Size 50: Cast Iron, 1.5 kW Frame Size 40: Aluminum Casting)		Aluminum Die-cast (Frame size 50 is made of cast iron.)		
Ambient Conditions	Ambient Temperature	-10 °C to 40 °C (Note 2)				
	Ambient Humidity	85 % max (No Condensation)				
	Altitude	1,000 m max				
	Installation Environment	A well ventilated place free from corrosive gas, explosive gas, vapor and/or chemicals Not to be exposed to direct rain. Not to be exposed to direct sunlight. The brake should not to be exposed to water, dust, oil/grease, or oil mist. Models with water protection rating IPX0 shall not be exposed directly to water.				
Paint	Paint Color	Gray				
Protective Structure (Note 3)	IP44 or IP40			IP40 or IP44		
Mounting Direction	No limitations to mounting angle					
Motor Characteristics Table	P.220			P.221		
Performance Table	P.225			P.228		
Drawings	P.233			P.234		

Note 1: For CCC Standard, Three-phase 0.2 kW and Three-phase 0.4 kW are certified under limited duty cycle. Please be cautious upon selecting this product.

Note 2: The ambient temperature for Single-phase motors with a power of 0.1 kW (capacitor run) is 0 °C to 40 °C.

Note 3: The protective structure differs depending on the model.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H/H2 Type IP65 Gearmotors/IP65 Gearmotors with Brake

Series		MINI		MID			
Motor Unit	Number of Phases	3-Phase		1-Phase		3-Phase	
	Power	15 W to 90 W		15 W to 40 W		0.1 kW to 2.2 kW	
	Power Supply	Standard Voltage 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz High Voltage (400 V Class) 380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz	Standard Voltage 100 V/50 Hz, 100 V/60 Hz	Type	Global Standards Conformance	Power Supply/ Frequency	
				Standard Voltage	UL/CE/CCC	200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz	
				High Voltage (400 V Class)	UL/CE/CCC	380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz	
				Special Voltage	South Korea UL/CE/CCC	220 V/60 Hz, 380 V/60 Hz (Dual Voltage)	
					China/Europe UL/CE/CCC	220 V/50 Hz, 380 V/50 Hz (Dual Voltage) 230 V/50 Hz	
					North America/ Europe UL/CE/CCC	208 V/60 Hz, 230 V/60 Hz, 460 V/60 Hz (Dual Voltage) 400 V/50 Hz	
	North America/ Europe UL/CE/CCC	415 V/50 Hz, 440 V/50 Hz, 480 V/60 Hz					
	North America UL	575 V/60 Hz					
Insulation Class	Ins. B			Ins. F			
Startup Method	Direct Power Input	Capacitor Run		Direct Power Input			
Cooling Method	Totally Enclosed Non-Ventilated (TENV) (IC410)			Totally Enclosed Fan Cooled (TEFC) (IC411) (All of 0.1 kW and 0.2 kW models without brake are totally enclosed non-ventilated (TENV) (IC410))			
Number of Motor Poles	4						
Rating	Continuous		Power	Motor Efficiency	UL/CE Standard	CCC Standard	
			0.1 kW	IE1	Continuous	Continuous	
			0.2 kW, 0.4 kW (Note 1)	IE2	Continuous	Short Time (120 minutes)	
			0.75 kW or above	IE3, GB3	Continuous	Continuous	
Reducer	Reduction Type	Hypoid Gear and Helical Gear					
	Lubrication Type	Grease Lubrication (Maintenance-free)					
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.					
	Output Shaft Material	Stainless Steel		Stainless steel or carbon steel			
	Case Material	Aluminum Die-cast		Aluminum Die-cast (Frame Size 50: Cast Iron, 1.5 kW Frame Size 40: Aluminum Casting)			
Ambient Conditions	Ambient Temperature	-10 °C to 40 °C					
	Ambient Humidity	100 % max (No Condensation)					
	Altitude	1,000 m max					
	Installation Environment	A place free from corrosive gas, explosive gas, and/or vapor Not to be exposed to strong rain and wind. Not to be exposed to direct sunlight. Not to be used underwater, environments with exposure to high pressure water splashes, and exposure to cleansing chemicals.					
Paint	Paint Color	Gray					
Protective Structure		IP65					
Mounting Direction		No limitations to mounting angle					
Motor Characteristics Table		P.252			P.253		
Performance Table		P.254			P.256		
Drawings		P.259			P.261		

Note 1: For CCC Standard, Three-phase 0.2 kW and Three-phase 0.4 kW are certified under limited duty cycle. Please be cautious upon selecting this product.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Gearmotors with Clutch/Brake

Series		MID
Motor Unit	Number of Phases	3-Phase
	Power	0.2 kW to 0.75 kW
	Power Supply	Standard Voltage 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz
		High Voltage (400 V Class) 380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz
	Insulation Class	Ins. F
	Startup Method	Direct Power Input
	Cooling Method	Totally Enclosed Fan Cooled (TEFC) (IC411) (0.2 kW model: totally enclosed non-ventilated (TENV) (IC410))
	Number of Motor Poles	4
	Rating	Continuous
Reducer	Reduction Type	Hypoid Gear and Helical Gear
	Lubrication Type	Grease Lubrication (Maintenance-free)
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.
	Output Shaft Material	Carbon Steel
	Case Material	Aluminum Die-cast
Ambient Conditions	Ambient Temperature	-10 °C to 40 °C
	Ambient Humidity	85 % max (No Condensation)
	Altitude	1,000 m max
	Installation Environment	A place free from corrosive gas, explosive gas, and/or vapor. Well ventilated place with no dust.
	Installation Place	Indoors
Paint	Paint Color	Gray
Mounting Direction		No limitations to mounting angle
Motor Characteristics Table		P.270
Performance Table		P.271
Drawings		P.272

H Type Speed Control Gearmotors

Series		MINI
Motor Unit	Number of Phases	1-Phase
	Power	15 W to 90 W
	Power Supply	Standard Voltage 100 V/50 Hz, 100 V/60 Hz
		High Voltage (200 V Class) 200 V/50 Hz, 200 V/60 Hz
	Insulation Class	Ins. B
	Startup Method	Capacitor Run
	Cooling Method	Totally Enclosed Non-Ventilated (TENV) (IC410) (60 to 90 W: provided with a forced fan)
	Number of Motor Poles	4
	Rating	Continuous
Reducer	Reduction Type	Hypoid Gear and Helical Gear
	Lubrication Type	Grease Lubrication (Maintenance-free)
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.
	Output Shaft Material	Carbon Steel
	Case Material	Aluminum Die-cast
Ambient Conditions	Ambient Temperature	-10 °C to 40 °C
	Ambient Humidity	85 % max (No Condensation)
	Altitude	1,000 m max
	Installation Environment	A place free from corrosive gas, explosive gas, and/or vapor. Well ventilated place with no dust.
	Installation Place	Indoors
Paint	Paint Color	Gray
Mounting Direction		No limitations to mounting angle
Motor Characteristics Table		P.276
Performance Table		P.278
Drawings		P.281

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Reducers (Double Shaft Type)

Series		MID
4 Poles Motor Power Class		0.2 kW Class to 2.2 kW Class
Reducer	Reduction Type	Hypoid Gear and Helical Gear
	Lubrication Type	Grease Lubrication (Maintenance-free)
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.
	Input Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.
	Output Shaft Material	Carbon Steel
	Input Shaft Material	Carbon Steel
	Case Material	Aluminum Die-cast (Frame Size 50: Cast Iron, 1.5 kW Frame Size 40: Aluminum Casting)
Ambient Conditions	Ambient Temperature	-10 °C to 40 °C
	Ambient Humidity	85 % max (No Condensation)
	Altitude	1,000 m max
	Installation Environment	A place free from corrosive gas, explosive gas, and/or vapor. Well ventilated place with no dust.
	Installation Place	Indoors
Paint	Paint Color	Gray
Mounting Direction		No limitations to mounting angle
Performance Table		P.290
Drawings		P.293

H2 Type S-Type Reducers

Series		MID
4 Poles Motor Power Class		0.2 kW Class to 2.2 kW Class
Reducer	Reduction Type	Hypoid Gear and Helical Gear
	Lubrication Type	Grease Lubrication (Maintenance-free)
	Output Shaft	JIS Key (JIS B 1301-1996 plain form) * The key is included.
	Output Shaft Material	Carbon Steel
	Case Material	Aluminum Die-cast (Frame Size 50: Cast Iron, 1.5 kW Frame Size 40: Aluminum Casting)
	Ambient Conditions	Ambient Temperature
Ambient Humidity		85 % max (No Condensation)
Altitude		1,000 m max
Installation Environment		A place free from corrosive gas, explosive gas, and/or vapor. Well ventilated place with no dust.
Paint	Paint Color	Gray
Mounting Direction		No limitations to mounting angle
Performance Table		P.298
Drawings		P.301

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

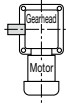
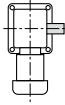
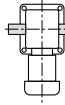
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H Type Gearmotors/Gearmotors with Brake MINI Series

Mounting Type	Motor Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Power	Supply Voltage	Terminal Box	Option	Option Code
HL	M	15	L	30	T25	W	K		
HF	MN	22	T	450	S40		C	X	T6
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

① Mounting Type	HL : Right Angle Shaft Foot Mount HF : Right Angle Shaft Flange Mount (up to frame sizes 22)
② Motor Type	M : With Motor MN : With Brakemotor MR : Motor with Simple Brake (Option)
③ Frame Size and Output Shaft Diameter	Output Shaft Diameter
④ Shaft Arrangement	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Output shaft on the left side when viewed from the input shaft side</p>  <p>L</p> </div> <div style="text-align: center;"> <p>Output shaft on the right side when viewed from the input shaft side</p>  <p>R</p> </div> <div style="text-align: center;"> <p>Output shaft on both sides when viewed from the input shaft side</p>  <p>T</p> </div> </div>
⑤ Reduction Ratio	10: 1/10 to 1800: 1/1800
⑥ Motor Power	T15 : 3-Phase 15 W T25 : 3-Phase 25 W T40 : 3-Phase 40 W T60 : 3-Phase 60 W T90 : 3-Phase 90 W S15 : 1-Phase 15 W S25 : 1-Phase 25 W S40 : 1-Phase 40 W S60 : 1-Phase 60 W S90 : 1-Phase 90 W
⑦ Supply Voltage (High Voltage: Option)	Blank : Standard Voltage 3-Phase: 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz 1-Phase: 100 V/50 Hz, 100 V/60 Hz W : High Voltage 3-Phase: 380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz 1-Phase: 200 V/50 Hz, 200 V/60 Hz
⑧ Terminal Box (Option) (Note 1)	Blank : Flying Leads (Standard Type) T : T Type Terminal Box K : K Type Terminal Box C : Terminal Box with Built-in Rectifier for Gearmotor with Brake
⑨ Option	Blank : Standard Specification X : Special Specification Code
⑩ Option Code (Note 2)	Lead Wires/Terminal Box Position Code Please refer to the list of option codes on page 523 for details.

Note 1: When using an inverter for a C type terminal box, be sure to designate an AC switching (A) connection. Please refer to page 495 for details.

Note 2: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft




F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Gearmotors/Gearmotors with Brake MID Series [3-Phase]

Gearhead Type				Motor Type							Brake Specifications	Option	
Mounting Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Series	Motor Specifications	Motor Power	Number of Phases	Supply Voltage	Standards	Terminal Box	Brake	Option	Option Code
H2F	22	L	5	M	M	01	T	N	N	T	N		
H2L	32	R	15	M	D	08	T	W	N	T	B4	X	AA
H2L	50	T	120	M	D	15	T	K	N	T	B2	X	T9HZ
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭

① Mounting Type	H2L : Right Angle Shaft Foot Mount H2F : Right Angle Shaft Flange Mount	
② Frame Size and Output Shaft Diameter	Output Shaft Diameter	
③ Shaft Arrangement	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> Viewing from the input Shaft (↑), the Output shaft would be on the left side  <p style="text-align: center;">L</p> </div> <div style="width: 30%;"> Viewing from the input Shaft (↑), the Output shaft would be on the right side  <p style="text-align: center;">R</p> </div> <div style="width: 30%;"> Viewing from the input Shaft(↑), the Output shaft would be on the both sides  <p style="text-align: center;">T</p> </div> </div>	
④ Reduction Ratio	5: 1/5 to 15X: 1/1500	
⑤ Motor Type	M : Standard Induction Motor (IP40 or IP44)	
⑥ Motor Specifications (Note 1)	M : IE1 Efficiency Ins. F (0.1 kW) IE2 Efficiency Ins. F (0.2 kW to 0.4 kW) D : IE3 Efficiency Ins. F (0.75 kW to 2.2 kW)	
⑦ Motor Power	01 : 0.1 kW 02 : 0.2 kW 04 : 0.4 kW 08 : 0.75 kW 15 : 1.5 kW 22 : 2.2 kW	
⑧ Number of Phases	T : 3-Phase	
⑨ Supply Voltage	⑨ Supply Voltage	
	N : 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz	⑫ Brake Specifications (Note 2)
	W : 380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz	N B2 B4 J2 J4
	K : 220 V/60 Hz, 380 V/60 Hz	○ ○ ○ ○ ○
	C : 220 V/50 Hz, 230 V/50 Hz, 380 V/50 Hz	○ ○ ○ ○ ○
	A : 208 V/60 Hz, 230 V/60 Hz, 460 V/60 Hz, 400 V/50 Hz	○ ○ ○ ○ ○
	E : 415 V/50 Hz, 440 V/50 Hz, 480 V/60 Hz	○ ○ ○ ○ ○
	M : 575 V/60 Hz	○ ○ ○ ○ ○
⑩ Standards	N : UL/CE/CCC A : UL*Supply Voltage: M (575 V/60 Hz) only	
⑪ Terminal Box (Note 3)	T : T Type Terminal Box (Steel Plate) N : Flying Leads	
⑫ Brake Specifications	N : No Brake	
	B2 : 200 V Class Brake	
	B4 : 400 V Class Brake	
	J2 : 200 V Class Brake with Manual Brake Release Lever (Optional) J4 : 400 V Class Brake with Manual Brake Release Lever (Optional)	
⑬ Option	Blank : Standard Specification X : Special Specification Code	
	Built-in Rectifier Connection Code For details, please refer to the list of option codes on page 504.	
⑭ Option Code (Note 4)	Terminal Box Position Code For details, please refer to the list of option codes on page 524.	
	For other option codes, please refer to the list of option codes on page 900.	

Note 1: For CCC Standard, Three-phase 0.2 kW and Three-phase 0.4 kW are certified under limited duty cycle. Please be cautious upon selecting the product.

Note 2: ○ indicates a brake specification that can be manufactured.

Note 3: With regard to the types of flying leads, only supply voltage codes N and W are covered.

Note 4: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

H2 Type Gearmotors/Gearmotors with Brake MID Series [1-Phase]

Gearhead Type				Motor Type								Brake Specifications	Option	
Mounting Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Type	Motor Specifications	Motor Power	Number of Phases	Supply Voltage	Standards	Terminal Box	Brake	Option	Option Code	
H2F	22	L	50	M	M	01	S	N	J	A	N			
H2L	28	R	100	M	M	02	C	W	J	A	B2			
H2L	40	T	375	M	M	04	C	N	J	A	B2	X	T9HZ	
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	

① Mounting Type	H2L : Right Angle Shaft Foot Mount H2F : Right Angle Shaft Flange Mount (only frame size 22)
② Frame Size and Output Shaft Diameter	Output Shaft Diameter
③ Shaft Arrangement	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Viewing from the input Shaft (↑), the Output shaft would be on the left side</p> <p>L</p> </div> <div style="text-align: center;"> <p>Viewing from the input Shaft (↑), the Output shaft would be on the right side</p> <p>R</p> </div> <div style="text-align: center;"> <p>Viewing from the input Shaft(↑), the Output shaft would be on the both sides</p> <p>T</p> </div> </div>
④ Reduction Ratio	5: 1/5 to 15X: 1/1500
⑤ Motor Type	M : Induction Standard (IP44 or IP40)
⑥ Motor Specifications	M : IE1 Efficiency Ins. B Standard Motor
⑦ Motor Power	01 : 0.1 kW 02 : 0.2 kW 04 : 0.4 kW
⑧ Number of Phases	S : 1-Phase Capacitor Run C : 1-Phase Capacitor Start
⑨ Supply Voltage (Note 1)	N : 100 V/50 Hz, 100 V/60 Hz W : 200 V/50 Hz, 200 V/60 Hz
⑩ Standards	J : No Standards
⑪ Terminal Box	A : A Type Terminal Box (Aluminum) N : No Brake
⑫ Brake Specifications	B2 : 200 V Class Brake
⑬ Option	Blank : Standard Specification X : Special Specification Code
⑭ Option Code (Note 2)	Terminal Box Position Code Please refer to page 526 for details.

Note 1: For voltages/frequencies not listed above, please contact your nearest Sales Office or the CS Center.

Note 2: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

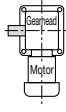
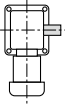
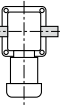
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H Type IP65 Gearmotors/IP65 Gearmotors with Brake MINI Series

Mounting Type	Motor Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Power	Option	Option Code
HL	W	15	L	30	T25		
HF	V	18	T	50	S40	X	T6
①	②	③	④	⑤	⑥	⑦	⑧

① Mounting Type	HL : Right Angle Shaft Foot Mount
	HF : Right Angle Shaft Flange Mount
② Motor Type	W : With IP65 Motor (Output Shaft Material: Stainless Steel)
	V : With IP65 Brakemotor (Output Shaft Material: Stainless Steel)
③ Frame Size and Output Shaft Diameter	Output Shaft Diameter
④ Shaft Arrangement	Output shaft on the left side when viewed from the input shaft side 
	Output shaft on the right side when viewed from the input shaft side 
	Output shaft on both sides when viewed from the input shaft side 
	L R T
⑤ Reduction Ratio	10: 1/10 to 240: 1/240
⑥ Motor Power and Supply Voltage/Frequency	T15 : 3-Phase 15 W
	T25 : 3-Phase 25 W
	T40 : 3-Phase 40 W
	T60 : 3-Phase 60 W
	T90 : 3-Phase 90 W
	S15 : 1-Phase 15 W
	S25 : 1-Phase 25 W
	S40 : 1-Phase 40 W
	3-Phase : 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz 1-Phase : 100 V/50 Hz, 100 V/60 Hz
⑦ Option	Blank : Standard Voltage
	X : Special Specification Code
⑧ Option Code (Note 1)	Cabtyre Cable Position Code Please refer to the list of option codes on page 523 for details.

Note 1: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

H2 Type IP65 Gearmotors/IP65 Gearmotors with Brake MID Series

Gearhead Type				Motor Type							Brake Specifications	Option	
Mounting Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Series	Motor Specifications	Motor Power	Number of Phases	Supply Voltage	Standards	Terminal Box	Brake	Option	Option Code
H2F	22	L	5	W	M	01	T	N	N	E	N		
H2L	32	M	15	W	D	08	T	W	N	E	V4	X	AA
H2L	50	T	120	W	D	15	T	K	N	E	V2	X	T9HZ
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭

① Mounting Type	H2L : Right Angle Shaft Foot Mount H2F : Right Angle Shaft Flange Mount		
② Frame Size and Output Shaft Diameter	Output Shaft Diameter		
③ Shaft Arrangement	Shaft Arrangement	Viewing from the input Shaft(↑), the Output shaft would be on the left side	Viewing from the input Shaft(↑), the Output shaft would be on the right side
	Material	Carbon Steel	Stainless Steel
④ Reduction Ratio	5: 1/5 to 15X: 1/1500		
⑤ Motor Type	W : IP65 Induction Motor		
⑥ Motor Specifications (Note 1)	M : IE1 Efficiency Ins. F (0.1 kW) IE2 Efficiency Ins. F (0.2 kW to 0.4 kW)		
	D : IE3 Efficiency Ins. F (0.75 kW to 2.2 kW)		
⑦ Motor Power	01 : 0.1 kW		
	02 : 0.2 kW		
	04 : 0.4 kW		
	08 : 0.75 kW		
	15 : 1.5 kW		
	22 : 2.2 kW		
⑧ Number of Phases (Note 2)	T : 3-Phase		
⑨ Supply Voltage	⑨ Supply Voltage		⑫ Brake Specifications (Note 3)
	N	: 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz	N V2 V4
	W	: 380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz	○ ○ ○
	K	: 220 V/60 Hz, 380 V/60 Hz	○ ○ ○
	C	: 220 V/50 Hz, 230 V/50 Hz, 380 V/50 Hz	○ ○ ○
	A	: 208 V/60 Hz, 230 V/60 Hz, 460 V/60 Hz, 400 V/50 Hz	○ ○ ○
	E	: 415 V/50 Hz, 440 V/50 Hz, 480 V/60 Hz	○ ○ ○
	M	: 575 V/60 Hz	○ ○ ○
⑩ Safety Standards	N : CE/UL/CCC A : UL*Supply Voltage: M (575 V/60 Hz) only		
⑪ Terminal Box	E : E Type Terminal Box (Aluminum) N : No Brake		
⑫ Brake Specifications (Note 5)	V2 : IP65 200 V Class Brake (Note 4) V4 : IP65 400 V Class Brake (Note 4)		
	Blank : Standard Specification X : Special Specification Code		
⑬ Option	Built-in Rectifier Connection Code For details, please refer to the list of option codes on page 504.		
	Terminal Box Position Code For details, please refer to the list of option codes on page 524.		
	For other option codes, please refer to the list of option codes on page 900.		

Note 1: For CCC Standard, Three-phase 0.2 kW and Three-phase 0.4 kW are certified under limited duty cycle. Please be cautious upon selecting the product.
 Note 2: Single-phase types are not available.
 Note 3: ○ indicates a brake specification that can be manufactured.
 Note 4: IP65 gearmotors with a brake are not available with motor powers of 1.5 kW and 2.2 kW.
 Note 5: The rectifier is included with the product.
 Note 6: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft




F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Gearmotors with Clutch/Brake MID Series

Gearhead Type				Motor Type								Brake Specifications	Option	
Mounting Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Type	Motor Specifications	Motor Power	Number of Phases	Supply Voltage	Standards	Terminal Box	Brake	Option	Option Code	
H2F	22	L	30	E	M	02	T	N	J	T	N			
H2L	32	R	100	E	M	04	T	W	J	T	N	X	T9HZ	
H2L	40	T	160	E	D	08	T	W	J	T	N	X	T9HZ	
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	

① Mounting Type	H2L : Right Angle Shaft Foot Mount H2F : Right Angle Shaft Flange Mount (only frame size 22)
② Frame Size and Output Shaft Diameter	Output Shaft Diameter
③ Shaft Arrangement	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Viewing from the input Shaft (↑), the Output shaft would be on the left side</p>  <p>L</p> </div> <div style="text-align: center;"> <p>Viewing from the input Shaft (↑), the Output shaft would be on the right side</p>  <p>R</p> </div> <div style="text-align: center;"> <p>Viewing from the input Shaft(↑), the Output shaft would be on the both sides</p>  <p>T</p> </div> </div>
④ Reduction Ratio	5: 1/5 to 240: 1/240
⑤ Motor Type	E : Induction Motor With Clutch/Brake
⑥ Motor Specifications	M : IE2 Efficiency Ins. F (0.2 kW to 0.4 kW) D : IE3 Efficiency Ins. F (0.75 kW)
⑦ Motor Power	02 : 3-Phase 0.2 kW 04 : 3-Phase 0.4 kW 08 : 3-Phase 0.75 kW
⑧ Number of Phases	T : 3-Phase
⑨ Supply Voltage (Note 1)	N : 200 V/50 Hz, 200 V/60 Hz, 220 V/60 Hz W : 380 V/50 Hz, 400 V/50 Hz, 400 V/60 Hz, 440 V/60 Hz
⑩ Standards	J : No Standards
⑪ Terminal Box	T : T Type Terminal Box (Steel Plate)
⑫ Brake Specifications	N : No Brake (With Clutch/Brake)
⑬ Option	Blank : Standard Specification X : Special Specification Code
⑭ Option Code (Note 2)	Terminal Box Position Code Please refer to page 526 for details.

Note 1: For voltages/frequencies not listed above, please contact your nearest Sales Office or the CS Center.

Note 2: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

Note 3: Please avoid using gearmotors with clutch/brake in vertical operation (lifting). There is a danger of falling during a power outage.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

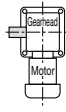
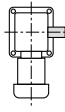
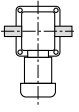
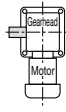
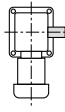
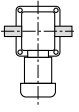
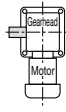
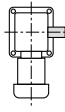
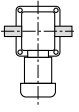
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H Type Speed Control Gearmotors MINI Series

Mounting Type	Motor Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Power	Supply Voltage	Terminal Box	Option	Option Code
HL	U	15	L	30	S25				
HF	P	22	T	450	S40	W	C	X	T6
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

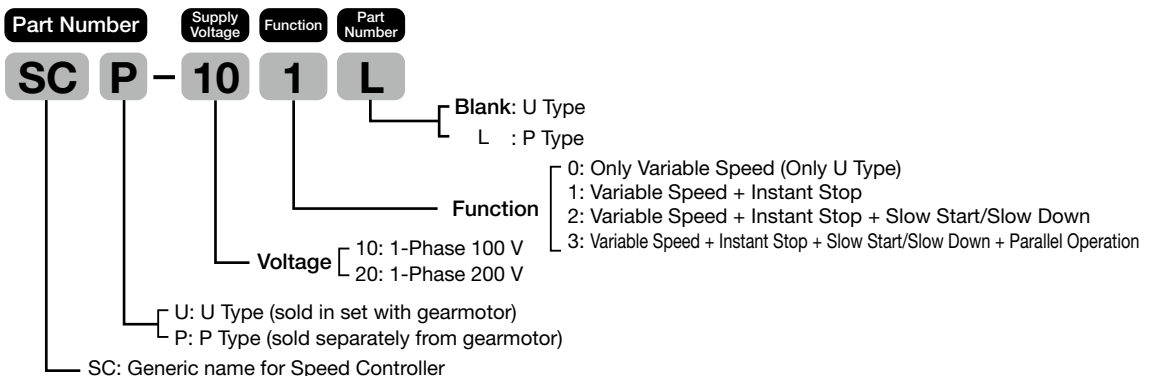
① Mounting Type	HL : Right Angle Shaft Foot Mount HF : Right Angle Shaft Flange Mount (up to frame size 22)												
② Motor Type	U : U Type with Speed Control Motor (Controller Set) P : P Type with Speed Control Motor (Controller: Sold Separately)												
③ Frame Size and Output Shaft Diameter	Output Shaft Diameter												
④ Shaft Arrangement	<table border="1"> <tr> <td>Output shaft on the left side when viewed from the input shaft side</td> <td></td> <td>Output shaft on the right side when viewed from the input shaft side</td> <td></td> <td>Output shaft on both sides when viewed from the input shaft side</td> <td></td> </tr> <tr> <td></td> <td>L</td> <td></td> <td>R</td> <td></td> <td>T</td> </tr> </table>	Output shaft on the left side when viewed from the input shaft side		Output shaft on the right side when viewed from the input shaft side		Output shaft on both sides when viewed from the input shaft side			L		R		T
Output shaft on the left side when viewed from the input shaft side		Output shaft on the right side when viewed from the input shaft side		Output shaft on both sides when viewed from the input shaft side									
	L		R		T								
⑤ Reduction Ratio	10: 1/10 to 1800: 1/1800												
⑥ Motor Power	S15 : 1-Phase 15 W												
	S25 : 1-Phase 25 W												
	S40 : 1-Phase 40 W												
	S60 : 1-Phase 60 W												
	S90 : 1-Phase 90 W												
⑦ Supply Voltage (High Voltage (200 V Class): Option)	Blank : Standard Voltage 1-Phase 100 V/50 Hz, 100 V/60 Hz												
	W : High Voltage (200 V Class) 1-Phase 200 V/50 Hz, 200 V/60 Hz												
⑧ Terminal Box (Option) (Note 1)	Blank : Flying Leads (Standard Type)												
	C : Terminal Box for P Type												
⑨ Option	Blank : Standard Specification												
	X : Special Specification Code												
⑩ Option Code (Note 2)	Lead Wires/Terminal Box Position Code												
	Please refer to the list of option codes on page 523 for details.												

Note 1: Please refer to page 579 for the specifications of terminal boxes.

Note 2: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

Controller

Type Code



G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft




F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Reducers (Double Shaft Type) MID Series

Mounting Type	Motor Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Power Class	Option	Terminal Box	Option	Option Code
H2L		32	L	200	040				
H2F		22	T	50	020			X	
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

① Mounting Type	H2L : Right Angle Shaft Foot Mount H2F : Right Angle Shaft Flange Mount (only frame size 22)		
② Motor Type	Blank : Without Motor (Double Shaft Type)		
③ Frame Size and Output Shaft Diameter	Output Shaft Diameter		
④ Shaft Arrangement	Viewing from the input Shaft (↑), the Output shaft would be on the left side 	Viewing from the input Shaft (↑), the Output shaft would be on the right side 	Viewing from the input Shaft (↑), the Output shaft would be on the both sides 
	L	R	T
⑤ Reduction Ratio	5: 1/5 to 1500: 1/1500		
⑥ Motor Designation and Power	020 : 0.2 kW Class		
	040 : 0.4 kW Class		
	075 : 0.75 kW Class		
	150 : 1.5 kW Class 220 : 2.2 kW Class		
⑦ ⑧ Options	Blank : Standard Specification There is no applicable option.		
⑨ Option	Blank : Standard Specification		
	X : Special Specification Code		
⑩ Option Code (Note 1)	Blank : Standard Specification		

Note 1: The option code will not be shown in the nomenclature on the nameplate. But it will be shown in the Option code row of the nameplate.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft




F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type S-Type Reducers MID Series

Mounting Type	Motor Type	Frame Size	Shaft Arrangement	Reduction Ratio	Motor Power Class	Option	Terminal Box	Option
H2L	S	32	L	200	040			
H2F	S	22	T	50	020			X
①	②	③	④	⑤	⑥	⑦	⑧	⑨

① Mounting Type	H2L : Right Angle Shaft Foot Mount		
	H2F : Right Angle Shaft Flange Mount (only frame size 22)		
② Motor Type	S : Type That Can be Equipped with Designated Motor (S-Type)		
③ Frame Size and Output Shaft Diameter	Output Shaft Diameter		
④ Shaft Arrangement	Viewing from the input Shaft (↑), the Output shaft would be on the left side 	Viewing from the input Shaft (↑), the Output shaft would be on the right side 	Viewing from the input Shaft (↑), the Output shaft would be on the both sides 
	L	R	T
	⑤ Reduction Ratio	5: 1/5 to 1500: 1/1500	
	⑥ Motor Designation and Power	020 : 0.2 kW Class	
040 : 0.4 kW Class			
075 : 0.75 kW Class			
150 : 1.5 kW Class			
220 : 2.2 kW Class			
⑦ ⑧ Options	Blank : Standard Specification		
⑨ Option	Blank : Standard Specification		
	X : Special Specification Code		

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

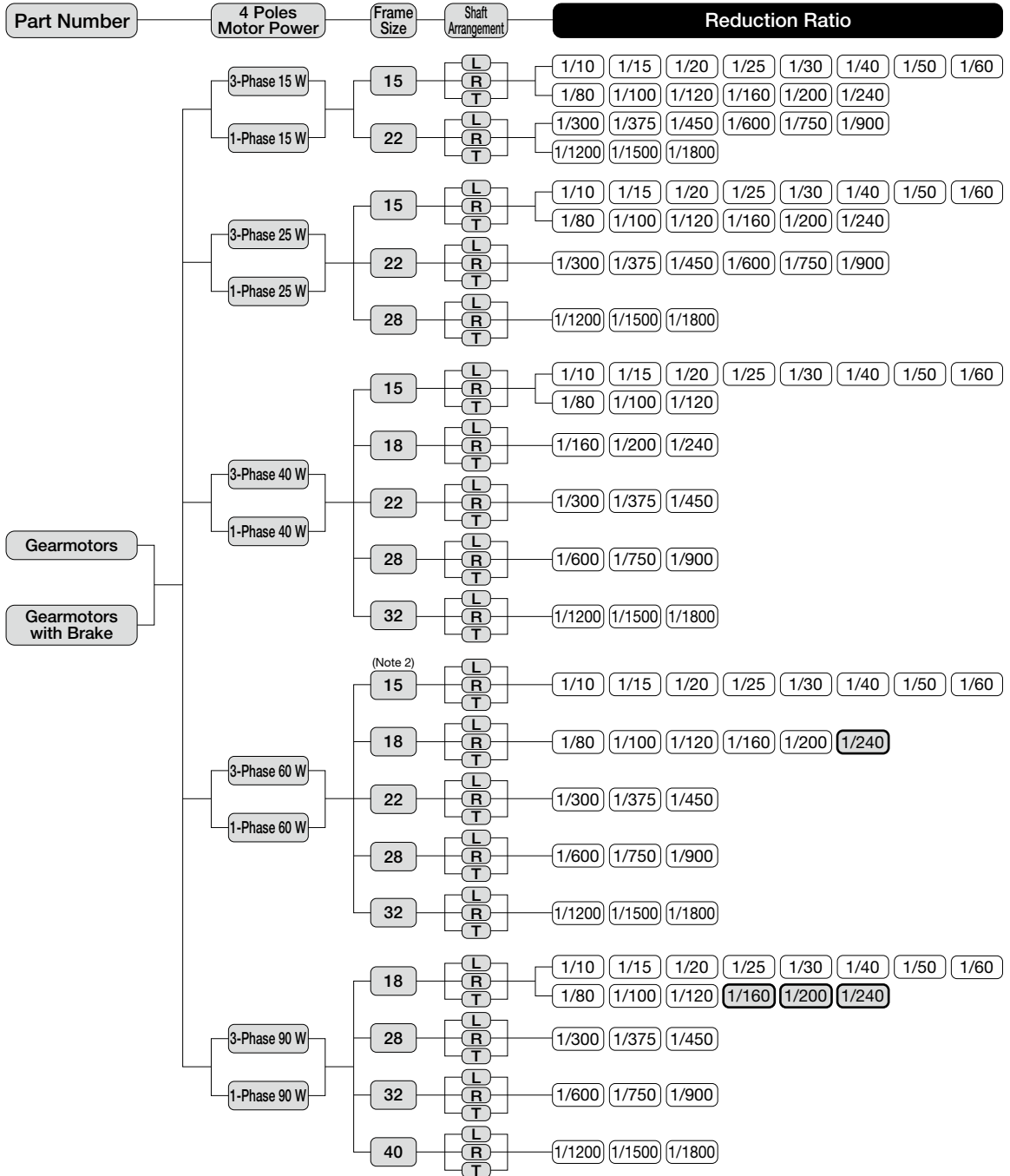
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Standard Model Lineup

H Type Gearmotors/Gearmotors with Brake MINI Series



Note 1: Please note that mounting type HF is available only for frame sizes 15 to 22.

Note 2: The frame size for types other than three-phase standard voltage types is 18. The frame size for all single-phase types is 18.

Note 3: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

H2 Type Gearmotors/Gearmotors with Brake MID Series

Part Number	4 Poles Motor Power	Frame Size	Shaft Arrangement	Reduction Ratio									
Gearmotors	3-Phase 0.1 kW	22 (Note 1)	L	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50		
			R	1/60	1/80	1/100	1/120	1/160	1/200	1/240			
			T										
		28	L	1/300	1/375	1/450							
			R										
			T										
	32	L	1/600	1/750	1/900	1/1200	1/1500						
		R											
		T											
	Gearmotors with Brake	3-Phase 0.2 kW	22 (Note 1)	L	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
				R	1/60								
				T									
28			L	1/80	1/100	1/120	1/160	1/200	1/240				
			R										
			T										
32		L	1/300	1/375	1/450								
		R											
		T											
40		L	1/600	1/750	1/900	1/1200	1/1500						
		R											
		T											
Brakemotors with Manual Release	3-Phase 0.4 kW	28	L	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50		
			R	1/60									
			T										
		32	L	1/80	1/100	1/120	1/160	1/200	1/240				
			R										
			T										
	40	L	1/300	1/375	1/450								
		R											
		T											
	50	L	1/600	1/750	1/900	1/1200	1/1500						
		R											
		T											
Technical Documentation	3-Phase 0.75 kW	32	L	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50		
			R	1/60									
			T										
		40	L	1/80	1/100	1/120	1/160	1/200	1/240				
			R										
			T										
	50	L	1/300	1/375	1/450								
		R											
		T											
	3-Phase 1.5 kW	40	L	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50		
			R	1/60									
			T										
50		L	1/80	1/100	1/120	1/160	1/200	1/240					
		R											
		T											
3-Phase 2.2 kW	50	L	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50			
		R	1/60	1/80	1/100	1/120							
		T											

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

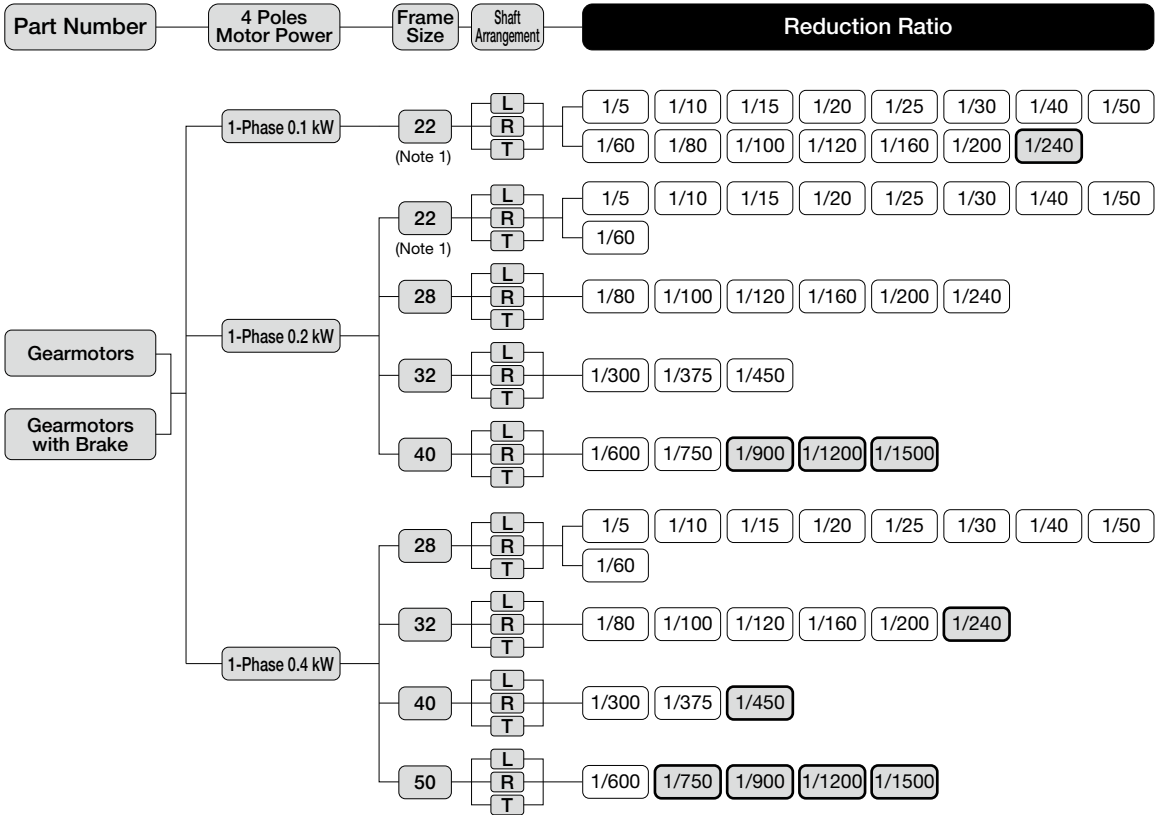
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Note 1: The flange mount type (H2F) is also available for frame size 22 only.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

H2 Type Gearmotors/Gearmotors with Brake MID Series



Note 1: The flange mount type (H2F) is also available for frame size 22 only.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

G/G3 Type
Parallel Shaft

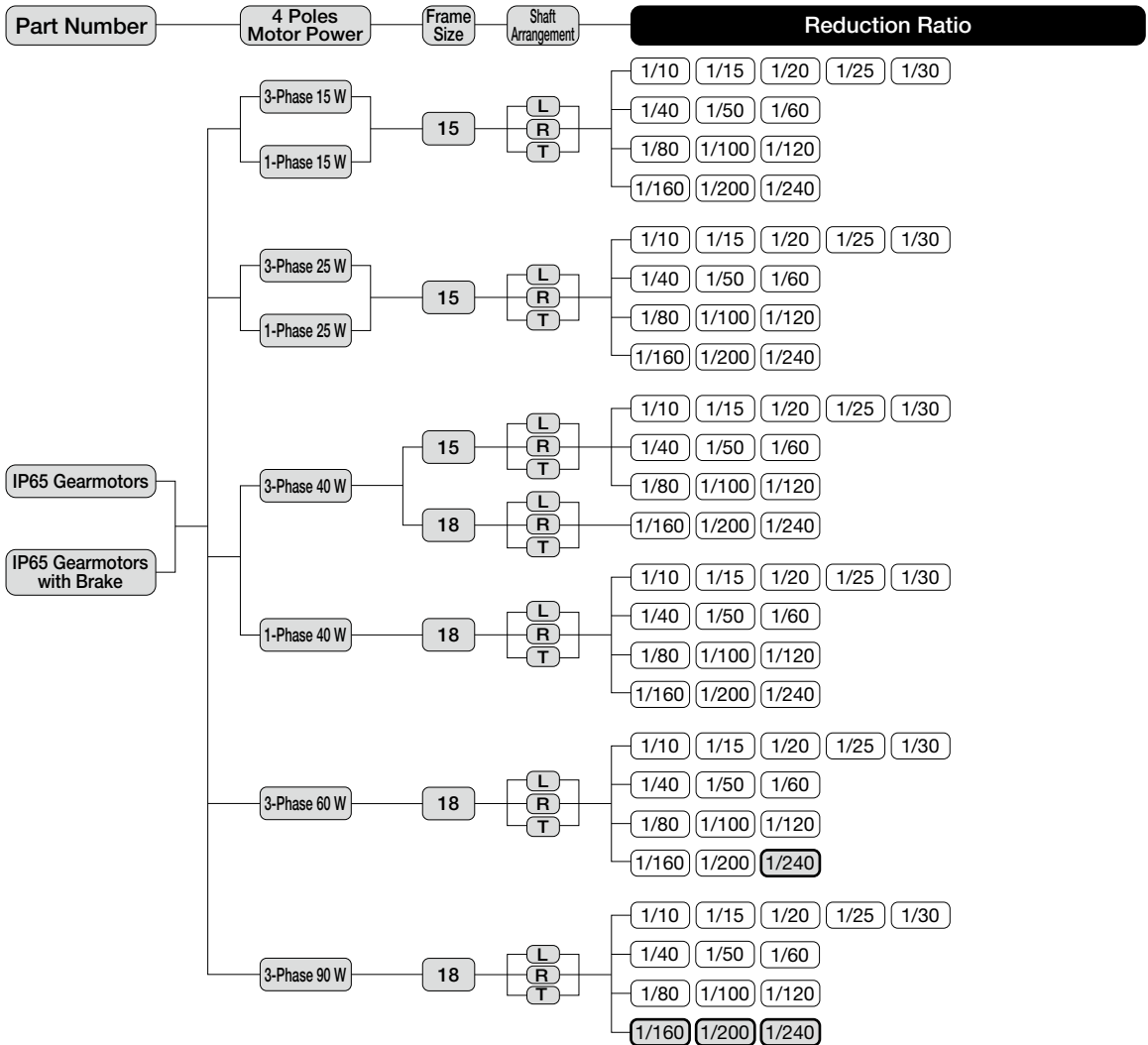
H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H Type IP65 Gearmotors/IP65 Gearmotors with Brake MINI Series



Note 1: Single-phase types are not available for 60 W and 90 W.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type IP65 Gearmotors/IP65 Gearmotors with Brake MID Series

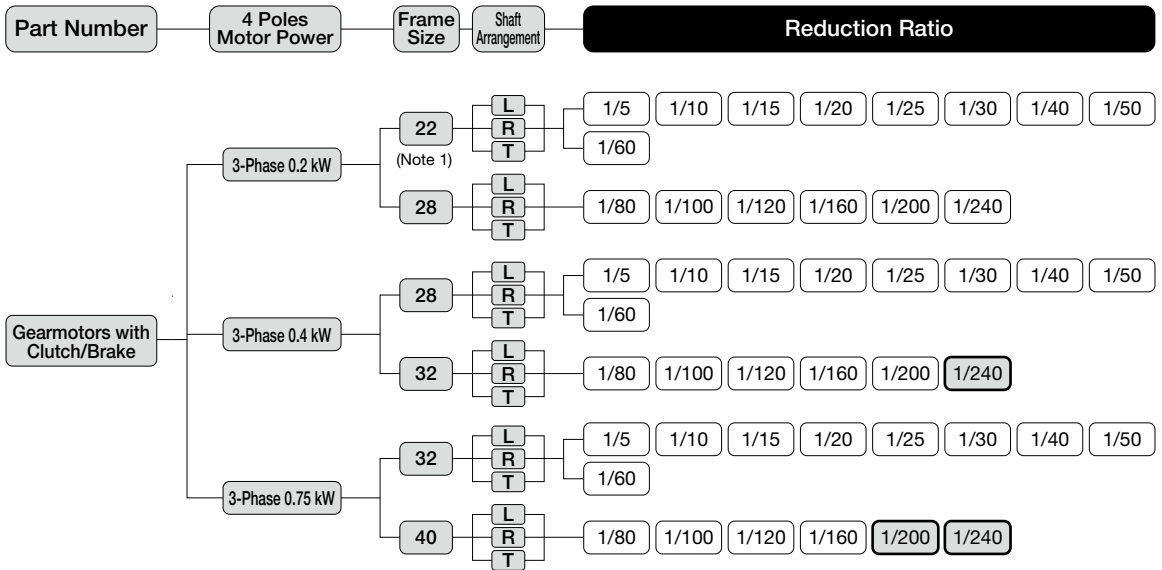
Part Number	4 Poles Motor Power	Frame Size	Shaft Arrangement	Reduction Ratio							
IP65 Gearmotors	3-Phase 0.1 kW	22 (Note 1)	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50
			R M	1/60	1/80	1/100	1/120	1/160	1/200	1/240	
			T B								
		28	L H	1/300	1/375	1/450					
			R M								
			T B								
	3-Phase 0.2 kW	22 (Note 1)	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50
			R M	1/60							
			T B								
		28	L H	1/80	1/100	1/120	1/160	1/200	1/240		
			R M								
			T B								
3-Phase 0.4 kW	28	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
		R M	1/60								
		T B									
	32	L H	1/80	1/100	1/120	1/160	1/200	1/240			
		R M									
		T B									
IP65 Gearmotors with Brake	32	L H	1/600	1/750	1/900	1/1200	1/1500				
		R M									
		T B									
	40	L H	1/300	1/375	1/450						
		R M									
		T B									
3-Phase 0.75 kW	32	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
		R M	1/60								
		T B									
	40	L H	1/80	1/100	1/120	1/160	1/200	1/240			
		R M									
		T B									
(Note 2)	32	L H	1/300	1/375	1/450						
		R M									
		T B									
	40	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
		R M	1/60								
		T B									
(Note 2)	40	L H	1/80	1/100	1/120	1/160	1/200	1/240			
		R M									
		T B									
	50	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
		R M	1/60								
		T B									
(Note 2)	50	L H	1/300	1/375	1/450						
		R M									
		T B									
	50	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
		R M	1/60								
		T B									
3-Phase 2.2 kW	50	L H	1/5	1/10	1/15	1/20	1/25	1/30	1/40	1/50	
		R M	1/60								
		T B									
	50	L H	1/60	1/80	1/100	1/120					
		R M									
		T B									

Note 1: The flange mount type (H2F) is also available for frame size 22 only.

Note 2: IP65 gearmotors with a brake are not available with motor powers of 1.5 kW and 2.2 kW.

Note 3: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

H2 Type Gearmotors with Clutch/Brake MID Series



Note 1: The flange mount type (H2F) is also available for frame size 22 only.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

Note 3: Single-phase motors with a clutch/brake are not available.

G/G3 Type
Parallel Shaft

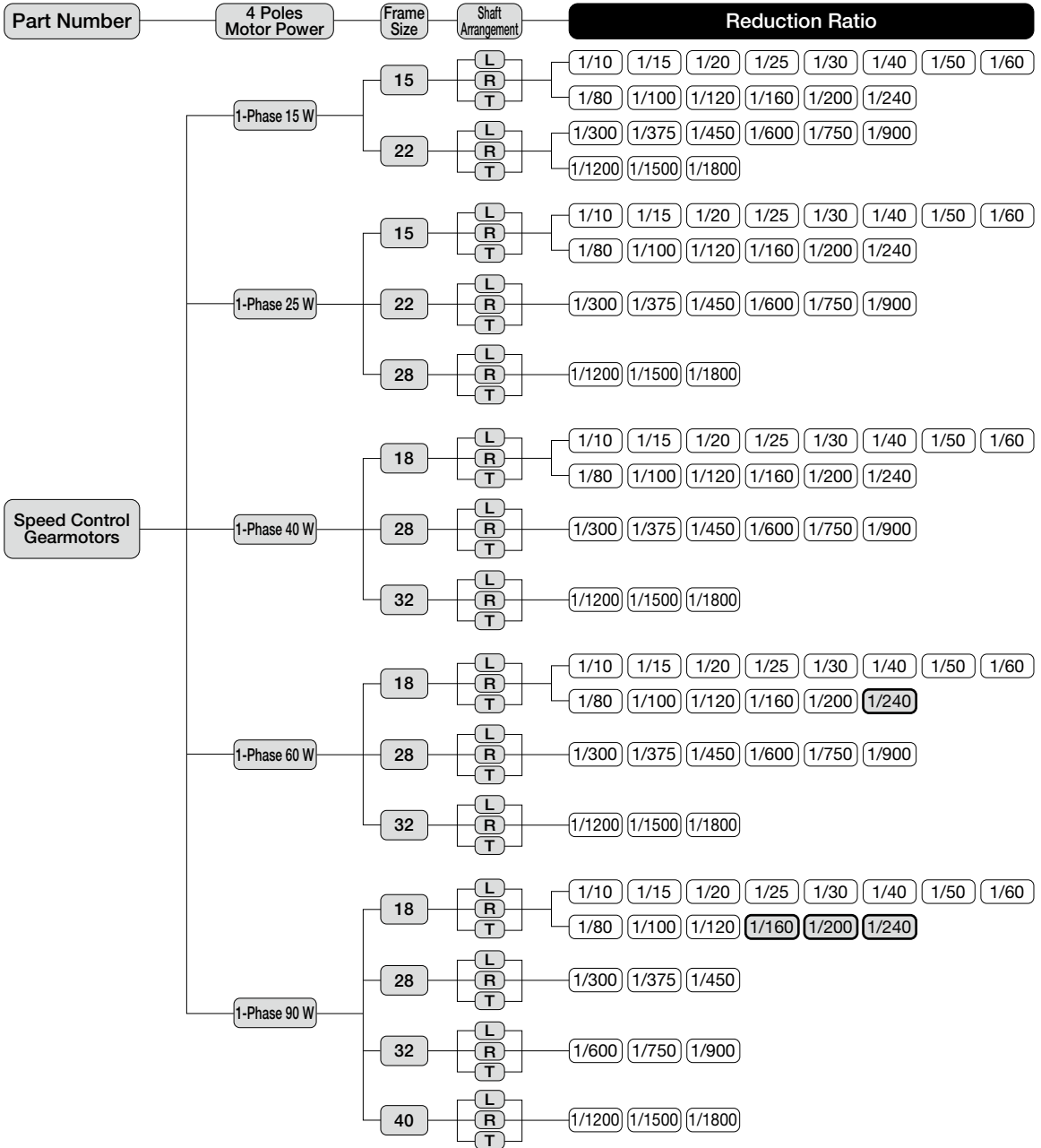
H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

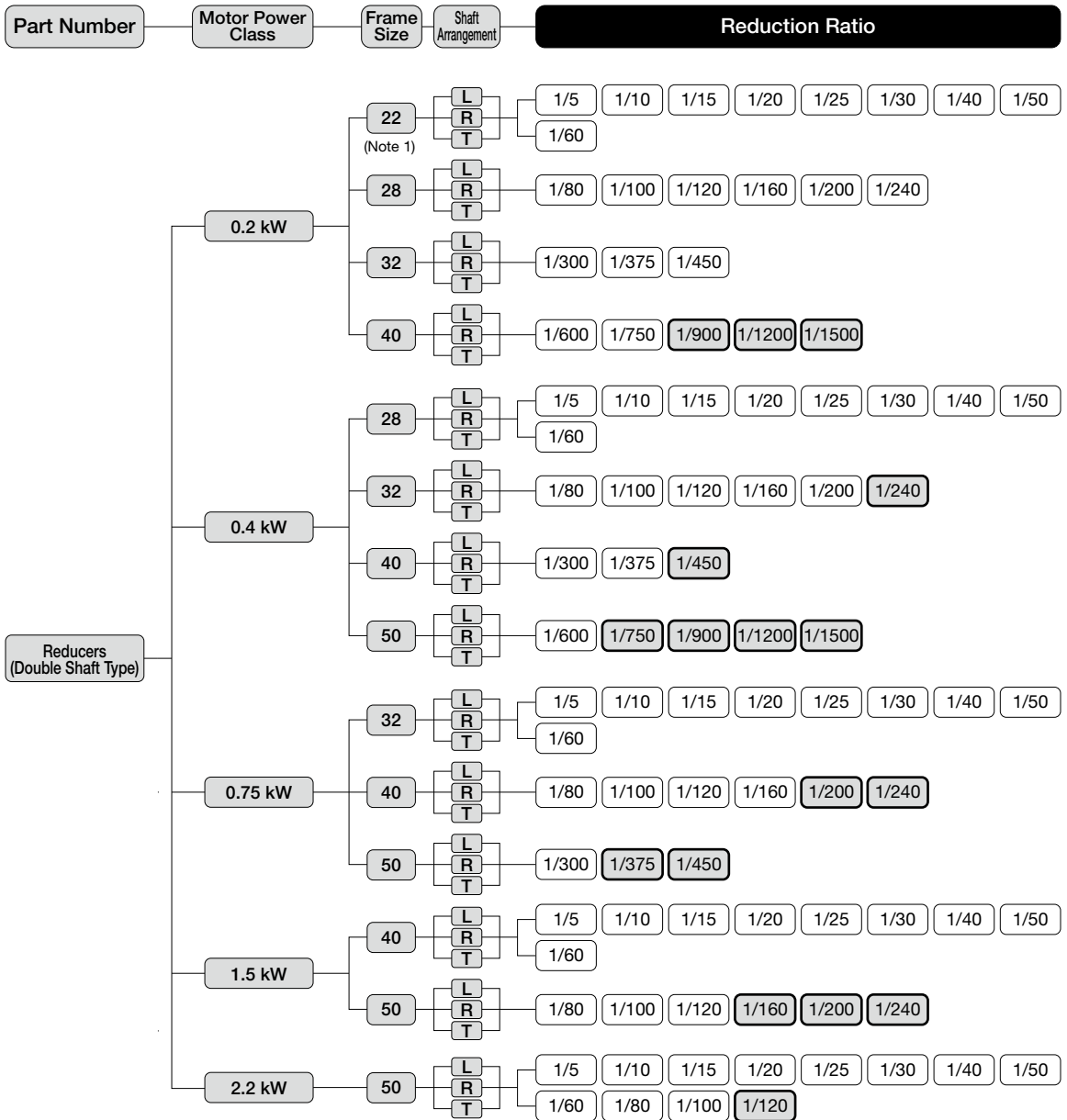
H Type Speed Control Gearmotors MINI Series



Note 1: Please note that mounting type HF is available only for frame sizes 15 to 22.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

H2 Type Reducers (Double Shaft Type) MID Series



Note 1: The flange mount type (H2F) is also available for frame size 22 only.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

G/G3 Type
Parallel Shaft

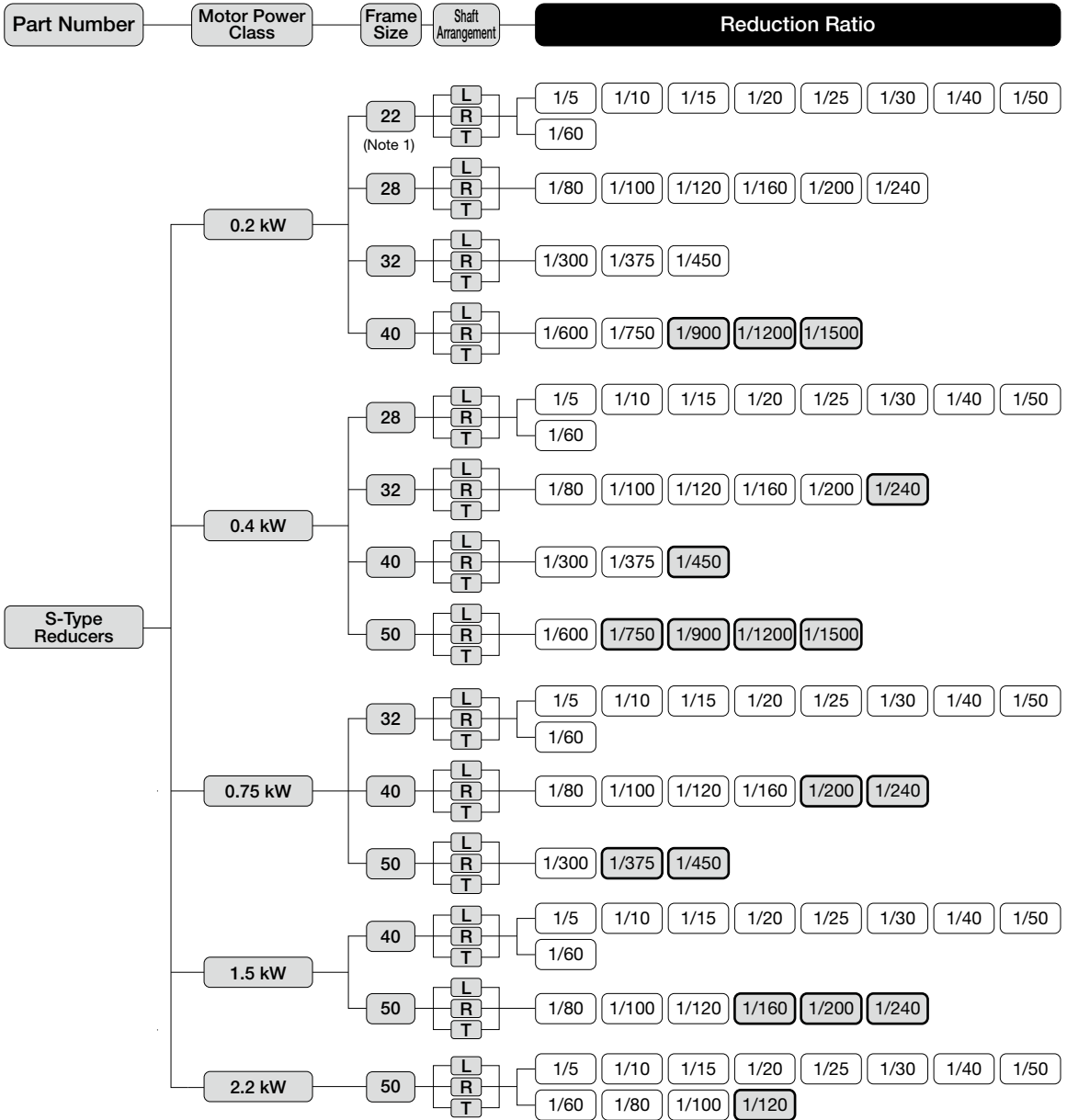
H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type S-Type Reducers MID Series



Note 1: The flange mount type (H2F) is also available for frame size 22 only.

Note 2: indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

MEMO

Technical Documentation	F2/F3 Type Concentric Right-Angle Hollow Bore/ Concentric Right Angle Shaft	F Type Right-Angle Hollow Bore/ Right Angle Shaft	H/H2 Type Right Angle Shaft	G/G3 Type Parallel Shaft
-------------------------	---	---	--------------------------------	-----------------------------

1. Gearmotors Gearmotors with Brake

1-1. Motor Characteristics Table

H Type 3-Phase Standard Voltage

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Rated Current (A)	Rated Speed (r/min)	Startup Current (A)
MINI	15	200/200/220	50/60/60	15	0.14/0.13/0.13	1350/1550/1600	0.30/0.28/0.31
				22	0.14/0.13/0.13	1350/1550/1600	0.30/0.28/0.31
	25	200/200/220	50/60/60	15	0.21/0.19/0.19	1350/1550/1600	0.44/0.42/0.46
				22	0.21/0.19/0.19	1350/1550/1600	0.44/0.42/0.46
				28	0.18/0.17/0.17	1350/1550/1600	0.43/0.41/0.46
	40	200/200/220	50/60/60	15	0.29/0.27/0.27	1350/1550/1600	0.67/0.62/0.68
				18	0.27/0.26/0.26	1350/1550/1550	0.73/0.69/0.76
				22	0.29/0.27/0.27	1350/1550/1600	0.67/0.62/0.68
				28	0.27/0.26/0.26	1350/1550/1550	0.73/0.69/0.76
				32	0.27/0.26/0.26	1350/1550/1550	0.73/0.69/0.76
				40	0.42/0.39/0.39	1350/1550/1550	0.94/0.86/1.00
	60	200/200/220	50/60/60	15	0.40/0.36/0.36	1350/1550/1600	1.04/0.97/1.07
				18	0.40/0.36/0.36	1350/1550/1600	1.04/0.97/1.07
				22	0.42/0.39/0.39	1350/1550/1550	0.94/0.86/1.00
				28	0.40/0.36/0.36	1350/1550/1600	1.04/0.97/1.07
				32	0.40/0.36/0.36	1350/1550/1600	1.04/0.97/1.07
40				0.51/0.48/0.48	1350/1550/1550	1.42/1.36/1.49	
90	200/200/220	50/60/60	18	0.51/0.48/0.48	1350/1550/1550	1.42/1.36/1.49	
			28	0.51/0.48/0.48	1350/1550/1550	1.42/1.36/1.49	
			32	0.51/0.48/0.48	1350/1550/1550	1.42/1.36/1.49	
			40	0.47/0.47/0.47	1350/1550/1600	1.59/1.51/1.66	

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

H Type 3-Phase High Voltage (400 V Class)

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Rated Current (A)	Rated Speed (r/min)	Startup Current (A)
MINI	15	380/400/400/440	50/50/60/60	15	0.11/0.12/0.10/0.11	1400/1400/1700/1700	0.26/0.28/0.26/0.29
				22	0.11/0.12/0.10/0.11	1400/1400/1700/1700	0.26/0.28/0.26/0.29
	25	380/400/400/440	50/50/60/60	15	0.11/0.12/0.11/0.12	1350/1400/1600/1650	0.26/0.28/0.26/0.29
				22	0.11/0.12/0.11/0.12	1350/1400/1600/1650	0.26/0.28/0.26/0.29
				28	0.09/0.09/0.09/0.09	1300/1350/1550/1600	0.20/0.21/0.20/0.22
	40	380/400/400/440	50/50/60/60	15	0.14/0.14/0.14/0.14	1300/1350/1550/1600	0.30/0.32/0.30/0.33
				18	0.13/0.14/0.13/0.14	1300/1350/1550/1600	0.33/0.35/0.33/0.37
				22	0.14/0.14/0.14/0.14	1300/1350/1550/1600	0.30/0.32/0.30/0.33
				28	0.13/0.14/0.13/0.14	1300/1350/1550/1600	0.33/0.35/0.33/0.37
				32	0.13/0.14/0.13/0.14	1300/1350/1550/1600	0.33/0.35/0.33/0.37
				40	0.17/0.17/0.17/0.17	1300/1350/1550/1600	0.43/0.45/0.43/0.47
	60	380/400/400/440	50/50/60/60	22	0.20/0.20/0.20/0.20	1250/1300/1500/1550	0.38/0.40/0.38/0.41
				28	0.17/0.17/0.17/0.17	1300/1350/1550/1600	0.43/0.45/0.43/0.47
				32	0.17/0.17/0.17/0.17	1300/1350/1550/1600	0.43/0.45/0.43/0.47
				18	0.26/0.26/0.26/0.26	1300/1350/1550/1600	0.70/0.74/0.69/0.77
				28	0.26/0.26/0.26/0.26	1300/1350/1550/1600	0.70/0.74/0.69/0.77
32				0.26/0.26/0.26/0.26	1300/1350/1550/1600	0.70/0.74/0.69/0.77	
90	380/400/400/440	50/50/60/60	40	0.23/0.23/0.24/0.24	1350/1350/1600/1650	0.73/0.78/0.74/0.81	

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

1-1. Motor Characteristics Table

H Type 1-Phase Standard Voltage

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Rated Current (A)	Rated Speed (r/min)	Startup Current (A)	Capacitor (μF)
MINI	15	100/100	50/60	15	0.39/0.35	1350/1650	0.72/0.67	5
				22	0.39/0.35	1350/1650	0.72/0.67	5
	25	100/100	50/60	15	0.48/0.48	1350/1600	0.86/0.80	7
				22	0.48/0.48	1350/1600	0.86/0.80	7
				28	0.44/0.45	1350/1650	1.00/0.92	7
	40	100/100	50/60	15	0.67/0.80	1400/1650	1.26/1.23	12
				18	0.61/0.66	1350/1650	1.43/1.36	10
				22	0.67/0.80	1400/1650	1.26/1.23	12
				28	0.61/0.66	1350/1650	1.43/1.36	10
				32	0.61/0.66	1350/1650	1.43/1.36	10
	60	100/100	50/60	18	0.90/1.00	1350/1600	2.11/1.98	15
				22	0.90/1.10	1300/1500	1.33/1.34	15
				28	0.90/1.00	1350/1600	2.11/1.98	15
				32	0.90/1.00	1350/1600	2.11/1.98	15
	90	100/100	50/60	18	1.30/1.40	1350/1600	2.89/2.68	20
				28	1.30/1.40	1350/1600	2.89/2.68	20
32				1.30/1.40	1350/1600	2.89/2.68	20	
40				1.20/1.40	1350/1600	3.27/3.04	20	

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

H Type 1-Phase High Voltage (200 V Class)

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Rated Current (A)	Rated Speed (r/min)	Startup Current (A)	Capacitor (μF)
MINI	15	200/200	50/60	15	0.21/0.19	1350/1650	0.35/0.33	1.2
				22	0.21/0.19	1350/1650	0.35/0.33	1.2
	25	200/200	50/60	15	0.26/0.25	1350/1600	0.47/0.44	1.7
				22	0.26/0.25	1350/1600	0.47/0.44	1.7
				28	0.23/0.24	1350/1650	0.46/0.45	1.7
	40	200/200	50/60	15	0.34/0.33	1350/1600	0.66/0.60	2.5
				18	0.29/0.34	1350/1600	0.64/0.61	2.5
				22	0.34/0.33	1350/1600	0.66/0.60	2.5
				28	0.29/0.34	1350/1600	0.64/0.61	2.5
				32	0.29/0.34	1350/1600	0.64/0.61	2.5
	60	200/200	50/60	18	0.45/0.48	1350/1600	1.06/1.00	3.5
				22	0.43/0.50	1300/1500	0.67/0.64	3.5
				28	0.45/0.48	1350/1600	1.06/1.00	3.5
				32	0.45/0.48	1350/1600	1.06/1.00	3.5
	90	200/200	50/60	18	0.65/0.66	1350/1600	1.44/1.35	5
				28	0.65/0.66	1350/1600	1.44/1.35	5
				32	0.65/0.66	1350/1600	1.44/1.35	5
				40	0.59/0.65	1400/1650	1.67/1.58	5

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type 3-Phase Standard Voltage/High Voltage (400 V Class)/Special Voltage

Series	Power	Power Supply/ Certification Codes	Voltage (V)	Frequency (Hz)	Rated Current (A)	Startup Current (A)	Rated Speed (r/min)
MID	0.1 kW	NN	200/200/220	50/60/60	0.61/0.54/0.54	2.39/2.27/2.52	1410/1690/1710
		WN	380/400/400/440	50/50/60/60	0.31/0.31/0.28/0.28	1.12/1.18/1.12/1.22	1400/1410/1690/1720
		KN	220/380	60/60	0.52/0.30	1.90/1.10	1680/1680
		CN	220/230/380	50/50/50	0.55/0.54/0.31	1.94/2.03/1.12	1400/1410/1400
		AN	208/230/460/400	60/60/60/50	0.54/0.57/0.29/0.31	2.35/2.62/1.26/1.21	1690/1730/1730/1410
		EN	415/440/480	50/50/60	0.30/0.29/0.26	1.06/1.12/1.17	1390/1420/1720
	MA	575	60	0.20	0.87	1700	
	0.2 kW IE2	NN	200/200/220	50/60/60	1.1/1.0/1.0	4.70/4.35/4.85	1400/1680/1700
		WN	380/400/400/440	50/50/60/60	0.56/0.56/0.50/0.50	2.29/2.38/2.29/2.48	1390/1400/1680/1710
		KN	220/380	60/60	0.93/0.52	3.70/2.20	1680/1680
		CN	220/230/380	50/50/50	0.99/0.98/0.56	3.97/4.15/2.29	1400/1410/1390
		AN	208/230/460/400	60/60/60/50	1.0/1.0/0.50/0.56	4.78/5.16/2.56/2.44	1680/1720/1720/1400
		EN	415/440/480	50/50/60	0.50/0.50/0.45	1.75/1.86/2.00	1370/1400/1700
	MA	575	60	0.40	1.78	1710	
	0.4 kW IE2	NN	200/200/220	50/60/60	2.1/1.8/1.8	9.50/8.60/9.60	1400/1680/1700
		WN	380/400/400/440	50/50/60/60	1.0/1.0/0.9/0.9	4.35/4.65/4.30/4.75	1390/1400/1680/1710
		KN	220/380	60/60	1.7/1.0	7.10/4.00	1670/1670
		CN	220/230/380	50/50/50	1.8/1.8/1.0	7.53/7.88/4.35	1390/1400/1390
		AN	208/230/460/400	60/60/60/50	1.8/1.8/0.9/1.0	8.90/9.76/4.73/4.78	1680/1720/1720/1400
		EN	415/440/480	50/50/60	0.96/0.95/0.82	3.96/4.20/4.20	1390/1410/1680
	MA	575	60	0.68	3.51	1700	
	0.75 kW IE3	NN	200/200/220	50/60/60	3.2/3.0/2.9	19.1/16.6/18.6	1440/1720/1740
		WN	380/400/400/440	50/50/60/60	1.65/1.60/1.50/1.40	9.00/9.60/8.30/9.30	1430/1440/1730/1740
		KN	220/380	60/60	2.8/1.6	17.9/10.8	1750/1750
CN		220/230/380	50/50/50	2.8/2.7/1.65	15.6/16.3/9.00	1430/1440/1430	
AN		208/230/460/400	60/60/60/50	2.9/2.8/1.4/1.6	18.3/19.6/10.2/10.0	1740/1750/1750/1440	
EN		415/440/480	50/50/60	1.50/1.50/1.35	9.1/9.65/9.70	1440/1450/1750	
MA	575	60	1.10	6.60	1750		
1.5 kW IE3	NN	200/200/220	50/60/60	6.4/6.0/5.7	43.5/36.0/40.3	1450/1740/1750	
	WN	380/400/400/440	50/50/60/60	3.3/3.2/3.0/2.9	21.7/23.1/18.6/20.7	1440/1450/1740/1750	
	KN	220/380	60/60	5.6/3.2	43.2/24.3	1760/1760	
	CN	220/230/380	50/50/50	5.6/5.6/3.3	37.6/39.3/21.7	1450/1460/1440	
	AN	208/230/460/400	60/60/60/50	5.9/5.7/2.9/3.2	42.3/45.3/23.0/24.3	1750/1760/1760/1450	
	EN	415/440/480	50/50/60	3.0/3.0/2.7	19.8/21.0/18.5	1460/1470/1760	
MA	575	60	2.2	15.3	1760		
2.2 kW IE3	NN	200/200/220	50/60/60	8.8/8.4/7.9	58.5/47.0/52.5	1450/1740/1750	
	WN	380/400/400/440	50/50/60/60	4.5/4.4/4.2/3.9	30.0/32.0/25.0/28.0	1440/1450/1740/1750	
	KN	220/380	60/60	7.8/4.5	56.4/32.3	1760/1760	
	CN	220/230/380	50/50/50	7.9/7.7/4.5	52.0/54.3/30.0	1460/1470/1440	
	AN	208/230/460/400	60/60/60/50	8.3/7.9/4.0/4.5	60.8/65.2/34.8/36.3	1750/1770/1770/1470	
	EN	415/440/480	50/50/60	4.3/4.3/3.8	33.1/35.5/29.8	1460/1470/1770	
MA	575	60	3.3	24.4	1760		

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

1-1. Motor Characteristics Table

H2 Type 1-Phase Standard Voltage

Series	Power	Startup Method	Voltage (V)	Frequency (Hz)	Rated Current (A)	Startup Current (A)	Rated Speed (r/min)	Startup Torque (%)	Breakdown Torque (%)
MID	0.1 kW	Capacitor Run	100/100	50/60	1.7/1.9	4.40/4.07	1400/1700	60/70	165/172
	0.2 kW	Capacitor Start	100/100	50/60	5.1/4.5	20.0/20.0	1420/1700	276/294	194/187
	0.4 kW	Capacitor Start	100/100	50/60	8.7/7.9	32.0/32.0	1440/1730	210/205	189/178

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

H2 Type 1-Phase High Voltage (200 V Class)

Series	Power	Startup Method	Voltage (V)	Frequency (Hz)	Rated Current (A)	Startup Current (A)	Rated Speed (r/min)	Startup Torque (%)	Breakdown Torque (%)
MID	0.1 kW	Capacitor Run	200/200	50/60	0.82/0.96	2.10/2.00	1410/1700	65/81	163/178
	0.2 kW	Capacitor Start	200/200	50/60	2.5/2.2	10.0/10.0	1420/1700	254/250	203/205
	0.4 kW	Capacitor Start	200/200	50/60	4.3/3.9	19.0/18.0	1440/1730	181/190	240/217

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

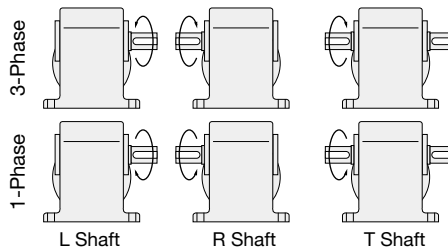
Technical Documentation

1-2. Performance Table

H Type Gearmotors/Gearmotors with Brake

[Notes]

- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
 - Three output shaft types, L, R, and T, are available for the H Type.
 - Allowable output shaft O.H.L. is the value at the middle of the output shaft.
 - The “*” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.
 - The reduction ratio in [] in the performance table indicates that the output shaft rotates in the directions shown below when the connection is made as shown on page 492 (CW). (Refer to the figure on the right)
- 3-phase: L shaft in the CW direction and R and T shafts in the CCW direction when viewed from the output shaft side
 1-phase: L shaft in the CCW direction and R and T shafts in the CW direction when viewed from the output shaft side



G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

F Type Right Angle Hollow Bore/ Right Angle Shaft

F2/F3 Type Concentric Right Angle Hollow Bore/ Concentric Right Angle Shaft

Technical Documentation

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque	Allowable Output Shaft O.H.L.	Drawings	
					r/min				N·m	N
					50 Hz	60 Hz				
MINI	15 W	15	1/10	1/10	150	180	0.69	343	P.230	P.246
			1/15	1/15	100	120	0.98	441		
			1/20	1/20	75	90	1.27	539		
			1/25	1/25	60	72	1.67	588		
			1/30	1/30	50	60	1.96	686		
			1/40	1/40	37.5	45	2.65	784		
			1/50	1/50	30	36	3.33	882		
			1/60	1/60	25	30	3.92	882		
			1/80	1/80	18.8	22.5	5.00	980		
			1/100	1/100	15	18	6.27	980		
			1/120	1/120	12.5	15	7.45	1080		
			1/160	1/160	9.4	11.2	9.80	1080		
		1/200	1/200	7.5	9	12.7	1080			
		1/240	1/240	6.3	7.5	14.7	1080			
		1/300	1/300	5	6	16.7	1760			
		1/375	1/375	4	4.8	20.6	1760			
		1/450	2/885	3.3	4	25.5	1760			
		1/600	1/600	2.5	3	33.3	1760			
	1/750	1/750	2	2.4	42.1	1760				
	1/900	1/885	1.7	2	50.0	1760				
	1/1200	1/1160	1.3	1.5	66.6	1760				
	1/1500	1/1450	1	1.2	83.3	1760				
	1/1800	1/1711	0.8	1	98.0	1760				
	1/10	4/41	150	180	1.08	343				
	1/15	8/123	100	120	1.67	441				
	1/20	2/41	75	90	2.25	539				
	1/25	8/205	60	72	2.74	588				
	1/30	4/123	50	60	3.33	686				
	1/40	1/41	37.5	45	4.41	784				
	1/50	4/205	30	36	5.49	882				
	1/60	20/1189	25	30	6.66	882				
	1/80	1/82	18.8	22.5	8.43	980				
	1/100	2/205	15	18	10.8	980				
	1/120	1/123	12.5	15	12.7	1080				
	1/160	1/164	9.4	11.2	16.7	1080				
	1/200	1/205	7.5	9	20.6	1080				
	1/240	5/1189	6.3	7.5	25.5	1080				
	1/300	1/300	5	6	28.4	1760				
	1/375	1/375	4	4.8	35.3	1760				
	1/450	2/885	3.3	4	42.1	1760				
	1/600	1/600	2.5	3	55.9	1760				
	1/750	1/750	2	2.4	69.6	1760				
1/900	1/885	1.7	2	84.3	1760					
1/1200	1/1160	1.3	1.5	108	2740					
1/1500	1/1450	1	1.2	137	2740					
1/1800	1/1711	0.8	1	167	2740					
25 W	22	15	22	28	P.230	P.246				
25 W	22	22	28	P.232	P.248					
25 W	28	28	P.235	-						

1-2. Performance Table

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque	Allowable Output Shaft O.H.L.	Drawings	
					r/min				Foot Mount	Flange Mount
					50 Hz	60 Hz	N·m	N		
MINI	40 W	15	1/10	4/41	150	180	1.76	343	P.230	P.246
			1/15	8/123	100	120	2.65	441		
			1/20	2/41	75	90	3.53	539		
			1/25	8/205	60	72	4.41	588		
			1/30	4/123	50	60	5.29	686		
			1/40	1/41	37.5	45	7.06	784		
			1/50	4/205	30	36	8.82	882		
			1/60	20/1189	25	30	10.8	882		
			1/80	1/82	18.8	22.5	13.7	980		
			1/100	2/205	15	18	16.7	980		
		1/120	1/123	12.5	15	20.6	1080			
		1/160	1/164	9.4	11.2	26.5	1370			
		1/200	1/205	7.5	9	33.3	1370			
		1/240	1/246	6.3	7.5	40.2	1370			
		1/300	1/300	5	6	45.1	1760			
		1/375	1/375	4	4.8	55.9	1760			
		1/450	2/885	3.3	4	67.6	1760			
		1/600	1/600	2.5	3	90.2	1760			
		1/750	1/750	2	2.4	118	2740			
		1/900	1/885	1.7	2	137	2740			
		1/1200	1/1200	1.3	1.5	176	5100			
		1/1500	1/1500	1	1.2	225	5100			
		1/1800	1/1800	0.8	1	274	5100			
		1/10	4/41	150	180	2.74	343	P.230	P.246	
		1/15	8/123	100	120	4.12	441			
		1/20	2/41	75	90	5.49	539			
		1/25	8/205	60	72	6.96	588			
		1/30	4/123	50	60	8.33	686			
		1/40	1/41	37.5	45	10.8	784			
		1/50	4/205	30	36	13.7	882			
	1/60	20/1189	50	30	16.7	882				
	1/10	4/41	150	180	2.74	343	P.231			P.247
	1/15	8/123	100	120	4.12	441				
	1/20	2/41	75	90	5.49	539				
	1/25	8/205	60	72	6.96	588				
	1/30	4/123	50	60	8.33	686				
	1/40	1/41	37.5	45	10.8	784				
	1/50	4/205	30	36	13.7	882				
	1/60	2/123	25	30	16.7	882				
	1/80	1/82	18.8	22.5	20.6	1270				
	1/100	2/205	15	18	26.5	1270				
	1/120	1/123	12.5	15	31.4	1370				
	1/160	1/164	9.4	11.2	42.1	1370				
	1/200	1/205	7.5	9	52.9	1370				
	* 1/240	1/246	6.3	7.5	53.9	1370				
	1/300	1/300	5	6	70.6	1760				
	1/375	1/375	4	4.8	88.2	1760				
	1/450	2/885	3.3	4	108	1760				
	1/600	1/600	2.5	3	137	2740				
	1/750	1/750	2	2.4	176	2740				
	1/900	1/885	1.7	2	216	2740				
	1/1200	1/1200	1.3	1.5	284	5100				
	1/1500	1/1500	1	1.2	353	5100				
	1/1800	1/1800	0.8	1	421	5100				

Note 1: Please note that with regard to reduction ratios of 1/10 to 1/30 of 60 W gearmotors, the frame size for Three-phase standard voltages (200 V class) is 15, but the frame size for Three-phase high voltage (400 V class) and Single-phase voltages is 18.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

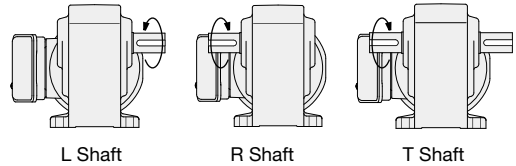
Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque	Allowable Output Shaft O.H.L.	Drawings	
					r/min				Foot Mount	Flange Mount
					50 Hz	60 Hz	N-m	N		
MINI	90 W	18	1/10	4/41	150	180	4.12	441	P.231	P.247
			1/15	8/123	100	120	6.17	588		
			1/20	2/41	75	90	8.33	735		
			1/25	8/205	60	72	10.8	882		
			1/30	4/123	50	60	12.7	980		
			1/40	1/41	37.5	45	16.7	1080		
			1/50	4/205	30	36	20.6	1180		
			1/60	2/123	25	30	24.5	1180		
			1/80	1/82	18.8	22.5	31.4	1270		
			1/100	2/205	15	18	39.2	1270		
			1/120	1/123	12.5	15	47.0	1370		
			* 1/160	1/164	9.4	11.2	53.9	1370		
		* 1/200	1/205	7.5	9	53.9	1370			
		* 1/240	1/246	6.3	7.5	53.9	1370			
		28	1/300	1/300	5	6	108	2740	P.235	-
			1/375	1/375	4	4.8	137	2740		
			1/450	2/885	3.3	4	157	2740		
		32	1/600	1/600	2.5	3	216	5100	P.238	-
			1/750	1/750	2	2.4	265	5100		
			1/900	1/900	1.7	2	314	5100		
		40	1/1200	1/1200	1.3	1.5	421	7060	P.241	-
			1/1500	1/1500	1	1.2	529	7060		
			1/1800	1/1800	0.8	1	637	7060		

Note 1: Please be sure to read the notes on page 222.

H2 Type Gearmotors/Gearmotors with Brake

[Notes]

- The values in parentheses in the drawings are the values for gearmotors with a brake.
- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
- In the performance table, indicates that the L shaft rotates clockwise and the R and T shafts rotate counterclockwise when viewed from the output shaft direction when the connection is made as shown on page 493 (CW). (Refer to the figure on the right)
- Allowable output shaft O.H.L. is the value at the middle of the output shaft.
- The “*” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.



G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

F Type Right Angle Hollow Bore/Right Angle Shaft

F2/F3 Type Concentric Right Angle Hollow Bore/Concentric Right Angle Shaft

Technical Documentation

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings				
					r/min		N·m			Foot Mount	Flange Mount			
					50 Hz	60 Hz	50 Hz	60 Hz	N					
MID	3-Phase 0.1 kW	22	1/5	1/5	300	360	2.8	2.4	588	P.233	P.249			
			1/10	1/10	150	180	5.7	4.8	931					
			1/15	1/15	100	120	8.6	7.2	1030					
			1/20	1/20	75	90	12	9.5	1180					
			1/25	1/25	60	72	15	12	1270					
			1/30	1/30	50	60	18	15	1370					
			1/40	1/40	37.5	45	23	19	1570					
			1/50	1/50	30	36	28	24	1720					
			1/60	1/59	25	30	34	28	1760					
			1/80	1/80	18.8	22.5	44	37	1760					
		1/100	1/100	15	18	55	46	1760						
		1/120	1/120	12.5	15	67	55	1760						
		1/160	1/160	9.4	11.2	88	74	1760						
		1/200	1/200	7.5	9	111	92	1760						
		* 1/240	1/236	6.3	7.5	118	111	1760						
		1/300	7/2120	5	6	145	121	2840	P.236	-				
		1/375	7/2650	4	4.8	181	151	2840						
		1/450	7/3127	3.3	4	218	181	2840						
		32	1/600	7/4240	2.5	3	286	238	4120	P.239	-			
			1/750	7/5300	2	2.4	358	298	4120					
	1/900		7/6360	1.7	2	429	358	4120						
	* 1/1200		7/8480	1.3	1.5	431	431	4120						
	* 1/1500		7/10600	1	1.2	431	431	4120						
	3-Phase 0.2 kW		22	1/5	1/5	300	360	5.7	4.8			588	P.233	P.249
				1/10	1/10	150	180	12	9.5			931		
				1/15	1/15	100	120	18	15			1030		
				1/20	1/20	75	90	23	19			1180		
				1/25	1/25	60	72	28	24			1270		
		1/30		1/30	50	60	34	28	1370					
		1/40		1/40	37.5	45	46	38	1570					
		1/50		1/50	30	36	57	48	1720					
		1/60		1/59	25	30	69	57	1810					
		1/80		1/80	18.8	22.5	88	74	2450					
		28	1/100	1/100	15	18	111	92	2650	P.236	-			
			1/120	1/120	12.5	15	133	111	2740					
			1/160	1/160	9.4	11.2	177	148	2840					
			1/200	1/200	7.5	9	221	184	2840					
			1/240	1/236	6.3	7.5	245	221	2840					
			1/300	7/2120	5	6	294	245	3820					
			1/375	7/2650	4	4.8	368	306	4120					
1/450			7/3127	3.3	4	431	368	4120						
1/600			7/4240	2.5	3	588	490	6760	P.242			-		
1/750			7/5300	2	2.4	735	613	6760						
* 1/900	7/6360	1.7	2	764	735	6760								
* 1/1200	7/8480	1.3	1.5	764	764	6760								
* 1/1500	7/10600	1	1.2	764	764	6760								

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings
					r/min		N·m			
					50 Hz	60 Hz	50 Hz	60 Hz	N	Foot Mount
MID	3-Phase 0.4 kW	28	1/5	1/5	300	360	12	9.5	931	P.236
			1/10	1/10	150	180	23	19	1470	
			1/15	1/15	100	120	34	28	1670	
			1/20	1/20	75	90	46	38	1860	
			1/25	1/25	60	72	57	48	2010	
			1/30	1/30	50	60	69	57	2210	
			1/40	1/40	37.5	45	92	76	2450	
			1/50	1/50	30	36	115	95	2650	
		1/60	1/59	25	30	137	115	2740		
		32	1/80	1/80	18.8	22.5	177	148	3430	P.239
			1/100	1/100	15	18	221	184	3820	
			1/120	1/120	12.5	15	266	221	4120	
			1/160	1/160	9.4	11.2	355	295	4120	
			1/200	1/200	7.5	9	431	369	4120	
	* 1/240		1/236	6.3	7.5	431	431	4120		
	40	1/300	7/2080	5	6	572	477	6760	P.242	
		1/375	7/2600	4	4.8	715	597	6760		
		* 1/450	7/3120	3.3	4	764	715	6760		
	50	1/600	21/12220	2.5	3	1150	955	9510	P.244	
		* 1/750	1/728	2	2.4	1230	1190	9510		
		* 1/900	7/6240	1.7	2	1230	1230	9510		
		* 1/1200	21/24440	1.3	1.5	1230	1230	9510		
		* 1/1500	1/1456	1	1.2	1230	1230	9510		
	3-Phase 0.75 kW	32	1/5	1/5	300	360	22	18	1520	P.239
			1/10	1/10	150	180	43	36	2010	
			1/15	1/15	100	120	65	54	2210	
			1/20	1/20	75	90	86	72	2450	
			1/25	1/25	60	72	108	89	2740	
			1/30	1/30	50	60	128	107	2940	
			1/40	1/40	37.5	45	172	143	3430	
1/50			1/50	30	36	215	179	3820		
1/60		1/59	25	30	258	215	4120			
40		1/80	1/80	18.8	22.5	332	277	5780	P.242	
		1/100	1/100	15	18	416	346	6080		
		1/120	1/120	12.5	15	498	415	6270		
		1/160	1/160	9.4	11.2	664	554	6470		
		* 1/200	1/200	7.5	9	764	692	6660		
		* 1/240	1/240	6.3	7.5	764	764	6660		
50		1/300	7/2120	5	6	1070	895	7740	P.244	
		* 1/375	7/2650	4	4.8	1230	1120	8040		
		* 1/450	7/3180	3.3	4	1230	1230	8530		

Note 1: Please be sure to read the notes on page 225.

1-2. Performance Table

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings
					r/min		N·m			
					50 Hz	60 Hz	50 Hz	60 Hz	N	Foot Mount
MID	3-Phase 1.5 kW	40	1/ 5	1/5	300	360	43	36	2650	P.242
			1/ 10	1/10	150	180	86	72	3530	
			1/ 15	1/15	100	120	128	107	4410	
			1/ 20	1/20	75	90	172	143	4700	
			1/ 25	1/25	60	72	215	179	5100	
			1/ 30	1/30	50	60	258	215	5290	
			1/ 40	1/40	37.5	45	344	277	5590	
		1/ 50	1/50	30	36	429	346	5880		
		1/ 60	1/60	25	30	515	415	6080		
		1/ 80	3/235	18.8	22.5	664	554	8530	P.244	
		1/100	1/98	15	18	830	692	8820		
		1/120	1/120	12.5	15	1000	830	9020		
		* 1/160	3/470	9.4	11.2	1230	1110	9310		
		* 1/200	1/196	7.5	9	1230	1230	9510		
	* 1/240	1/240	6.3	7.5	1230	1230	9510			
	3-Phase 2.2 kW	50	1/5	1/5	300	360	63	53	3920	P.244
			1/10	1/10	150	180	126	105	4410	
			1/15	1/15	100	120	189	157	4900	
			1/20	12/235	75	90	252	210	5490	
			1/25	2/49	60	72	315	263	6080	
			1/30	1/30	50	60	378	315	6570	
			1/40	1/40	37.5	45	487	406	7060	
			1/50	1/50	30	36	609	507	7550	
			1/60	1/60	25	30	731	609	8130	
			1/80	3/235	18.8	22.5	974	812	8430	
			1/100	1/98	15	18	1220	1010	8820	
			* 1/120	1/120	12.5	15	1230	1220	8820	

Note 1: Please be sure to read the notes on page 225.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

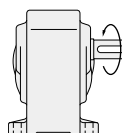
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

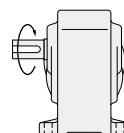
H2 Type Gearmotors/Gearmotors with Brake

[Notes]

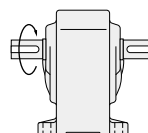
- The values in parentheses in the drawings are the values for gearmotors with a brake.
- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
- In the performance table, indicates that the L shaft rotates clockwise and the R and T shafts rotate counterclockwise when viewed from the output shaft side when the connection is made as shown on page 494 (CW). (Refer to the figure on the right)
- The startup torque of the single-phase 0.1 kW motor is 60 to 80 % because a capacitor run motor is adopted.
- Allowable output shaft O.H.L. is the value at the middle of the output shaft.
- The "*" mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.



L Shaft



R Shaft



T Shaft

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings	
					r/min		N·m		N	Foot Mount	Flange Mount
					50 Hz	60 Hz	50 Hz	60 Hz			
MID	1-Phase 0.1 kW	22	1/5	1/5	300	360	2.8	2.4	588	P.234	P.250
			1/10	1/10	150	180	5.7	4.8	931		
			1/15	1/15	100	120	8.6	7.2	1030		
			1/20	1/20	75	90	12	9.5	1180		
			1/25	1/25	60	72	15	12	1270		
			1/30	1/30	50	60	18	15	1370		
			1/40	1/40	37.5	45	23	19	1570		
			1/50	1/50	30	36	28	24	1720		
			1/60	1/59	25	30	34	28	1760		
			1/80	1/80	18.8	22.5	44	37	1760		
			1/100	1/100	15	18	55	46	1760		
			1/120	1/120	12.5	15	67	55	1760		
	1/160	1/160	9.4	11.2	88	74	1760				
	1/200	1/200	7.5	9	111	92	1760				
	* 1/240	1/236	6.3	7.5	118	111	1760				
	1/5	1/5	300	360	5.7	4.8	588	P.234	P.250		
	1/10	1/10	150	180	12	9.5	931				
	1/15	1/15	100	120	18	15	1030				
	1/20	1/20	75	90	23	19	1180				
	1/25	1/25	60	72	28	24	1270				
	1/30	1/30	50	60	34	28	1370				
	1/40	1/40	37.5	45	46	38	1570				
	1/50	1/50	30	36	57	48	1720				
	1/60	1/59	25	30	69	57	1810				
1/80	1/80	18.8	22.5	88	74	2450	P.237	-			
1/100	1/100	15	18	111	92	2650					
1/120	1/120	12.5	15	133	111	2740					
1/160	1/160	9.4	11.2	177	148	2840					
1/200	1/200	7.5	9	221	184	2840					
1/240	1/236	6.3	7.5	245	221	2840					
1/300	7/2120	5	6	294	245	3820	P.240	-			
1/375	7/2650	4	4.8	368	306	4120					
1/450	7/3127	3.3	4	431	368	4120					
1/600	7/4240	2.5	3	588	490	6760	P.243	-			
1/750	7/5300	2	2.4	735	613	6760					
* 1/900	7/6360	1.7	2	764	735	6760					
* 1/1200	7/8480	1.3	1.5	764	764	6760					
* 1/1500	7/10600	1	1.2	764	764	6760					

1-2. Performance Table

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings	
					r/min		N·m			N	Foot Mount
					50 Hz	60 Hz	50 Hz	60 Hz			
MID	1-Phase 0.4 kW	28	1/5	1/5	300	360	12	9.5	931	P.237	-
			1/10	1/10	150	180	23	19	1470		
			1/15	1/15	100	120	34	28	1670		
			1/20	1/20	75	90	46	38	1860		
			1/25	1/25	60	72	57	48	2010		
			1/30	1/30	50	60	69	57	2210		
			1/40	1/40	37.5	45	92	76	2450		
			1/50	1/50	30	36	115	95	2650		
		1/60	1/59	25	30	137	115	2740			
		32	1/80	1/80	18.8	22.5	177	148	3430	P.240	-
			1/100	1/100	15	18	221	184	3820		
			1/120	1/120	12.5	15	266	221	4120		
			1/160	1/160	9.4	11.2	355	295	4120		
			1/200	1/200	7.5	9	431	369	4120		
		* 1/240	1/236	6.3	7.5	431	431	4120			
		40	1/300	7/2080	5	6	572	477	6760	P.243	-
			1/375	7/2600	4	4.8	715	597	6760		
			* 1/450	7/3120	3.3	4	764	715	6760		
		50	1/600	21/12220	2.5	3	1150	955	9510	P.245	-
			* 1/750	1/728	2	2.4	1230	1190	9510		
			* 1/900	7/6240	1.7	2	1230	1230	9510		
			* 1/1200	21/24440	1.3	1.5	1230	1230	9510		
			* 1/1500	1/1456	1	1.2	1230	1230	9510		

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

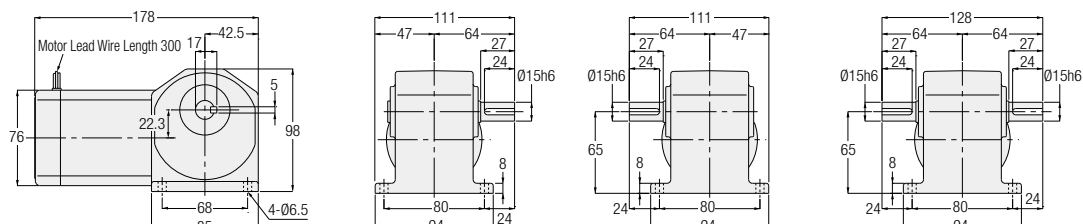
Technical Documentation

1-3. Drawings

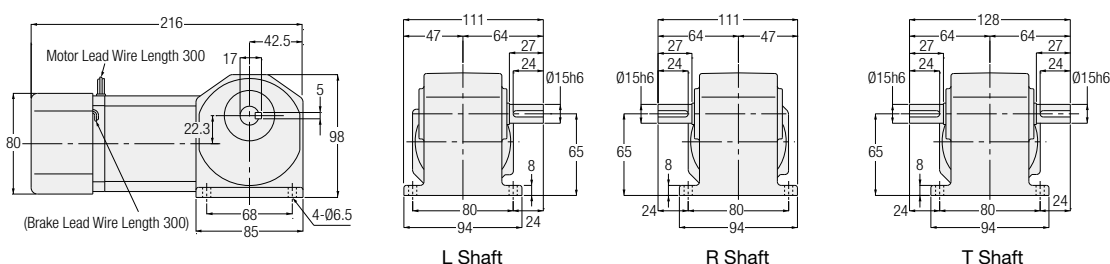
H Type Right Angle Shaft Shaft Diameter 15 **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

F Type Right Angle Hollow Bore/ Right Angle Shaft

F2/F3 Type Concentric Right Angle Hollow Bore/ Concentric Right Angle Shaft

Technical Documentation

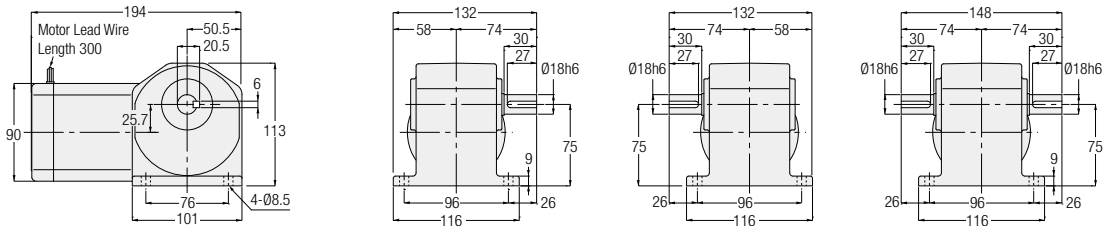
Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	15 W	HLM-15#-***-T15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HLM-15#-***-T15W				
		HLMN-15#-***-T15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	
		HLMN-15#-***-T15W				
	25 W	HLM-15#-***-T25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HLM-15#-***-T25W				
		HLMN-15#-***-T25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	
		HLMN-15#-***-T25W				
	40 W	HLM-15#-***-T40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	1	No	3
		HLM-15#-***-T40W				
		HLMN-15#-***-T40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	2	Yes	
		HLMN-15#-***-T40W				
60 W	HLM-15#-***-T60	10, 15, 20, 25, 30, 40, 50, 60	2	No	3	
	HLMN-15#-***-T60		2	Yes		
1-Phase	15 W	HLM-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HLM-15#-***-S15W				
		HLMN-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	
		HLMN-15#-***-S15W				
	25 W	HLM-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HLM-15#-***-S25W				
		HLMN-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	
		HLMN-15#-***-S25W				
	40 W	HLM-15#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	2	No	3
		HLM-15#-***-S40W				
		HLMN-15#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	2	Yes	
		HLMN-15#-***-S40W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 222 for the performance table.

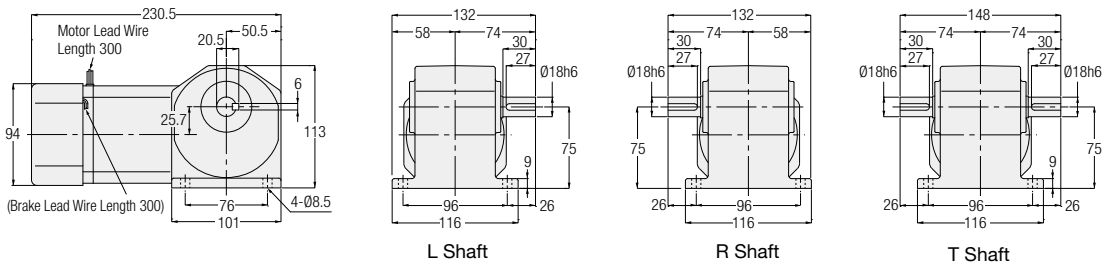
H Type Right Angle Shaft Shaft Diameter **18** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	40 W	HLM-18#-***-T40	160, 200, 240	1	No	4
		HLM-18#-***-T40W				
		HLMN-18#-***-T40				
		HLMN-18#-***-T40W				
	60 W	HLM-18#-***-T60	80, 100, 120, 160, 200, 240	1	No	4
		HLM-18#-***-T60W				
		HLMN-18#-***-T60				
	90 W	HLM-18#-***-T90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4
		HLM-18#-***-T90W				
HLMN-18#-***-T90						
1-Phase	40 W	HLM-18#-***-S40	160, 200, 240	1	No	4
		HLM-18#-***-S40W				
		HLMN-18#-***-S40				
		HLMN-18#-***-S40W				
	60 W	HLM-18#-***-S60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	No	4
		HLM-18#-***-S60W				
		HLMN-18#-***-S60				
		HLMN-18#-***-S60W				
	90 W	HLM-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	No	4
		HLM-18#-***-S90W				
		HLMN-18#-***-S90				
		HLMN-18#-***-S90W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 223 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

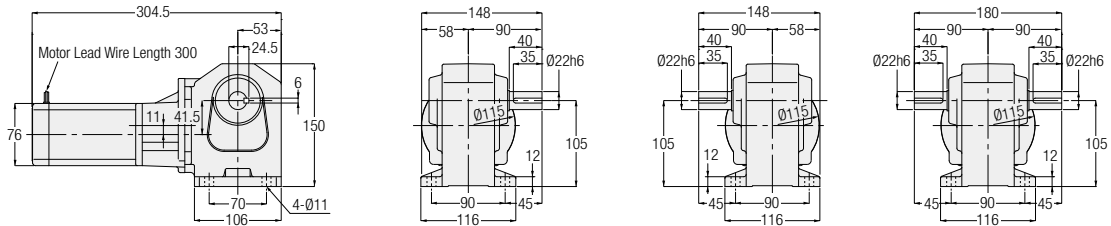
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

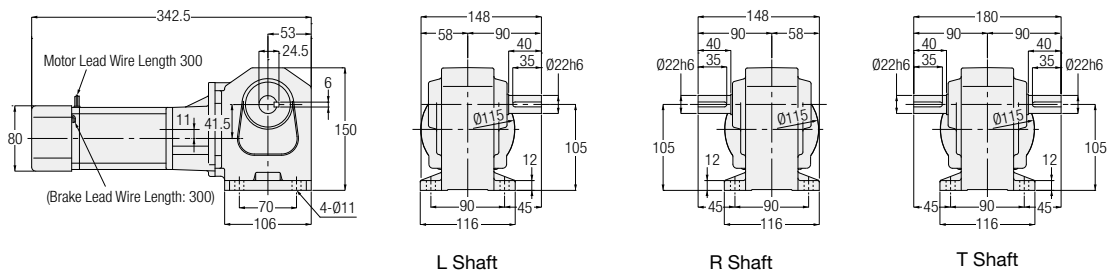
H Type Right Angle Shaft Shaft Diameter **22** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



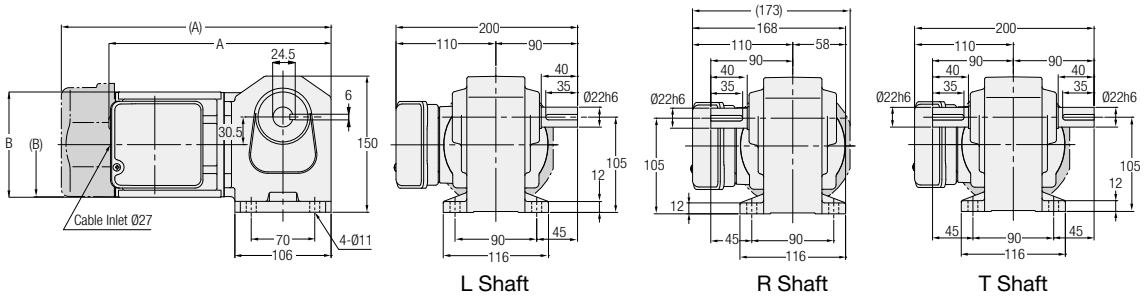
Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	
3-Phase	15 W	HLM-22#-***-T15	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	1	No	6	
		HLMN-22#-***-T15W	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	2	Yes	6	
		HLM-22#-***-T25	300, 375, 450, 600, 750, 900	1	No	6	
		HLMN-22#-***-T25W	300, 375, 450, 600, 750, 900	2	Yes	6	
	25 W	HLM-22#-***-T40	300, 375, 450	1	No	6	
		HLMN-22#-***-T40W	300, 375, 450	2	Yes	6	
		HLM-22#-***-T60	300, 375, 450	2	No	6	
		HLMN-22#-***-T60W	300, 375, 450	2	Yes	6	
	1-Phase	15 W	HLM-22#-***-S15	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	1	No	6
			HLMN-22#-***-S15W	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	2	Yes	6
			HLM-22#-***-S25	300, 375, 450, 600, 750, 900	1	No	6
			HLMN-22#-***-S25W	300, 375, 450, 600, 750, 900	2	Yes	6
25 W		HLM-22#-***-S40	300, 375, 450	2	No	6	
		HLMN-22#-***-S40W	300, 375, 450	2	Yes	6	
		HLM-22#-***-S60	300, 375, 450	2	No	6	
		HLMN-22#-***-S60W	300, 375, 450	2	Yes	6	
40 W		HLM-22#-***-S40	300, 375, 450	2	No	6	
		HLMN-22#-***-S40W	300, 375, 450	2	Yes	6	
		HLM-22#-***-S60	300, 375, 450	2	No	6	
		HLMN-22#-***-S60W	300, 375, 450	2	Yes	6	
60 W	HLM-22#-***-S60	300, 375, 450	2	No	6		
	HLMN-22#-***-S60W	300, 375, 450	2	Yes	6		
	HLM-22#-***-S60	300, 375, 450	2	No	6		
	HLMN-22#-***-S60W	300, 375, 450	2	Yes	6		

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 222 for the performance table.

H2 Type Right Angle Shaft Shaft Diameter **22** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2L22****-MM01T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	6.5	232	116
		H2L22****-MM01T◇◇TB◆			Yes	8	272	□126
	0.2 kW	H2L22****-MM02T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60	1	No	7.5	247	116
		H2L22****-MM02T◇◇TB◆			Yes	9	297.5	□126

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***, a supply voltage/certification code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

Note: Please refer to page 225 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

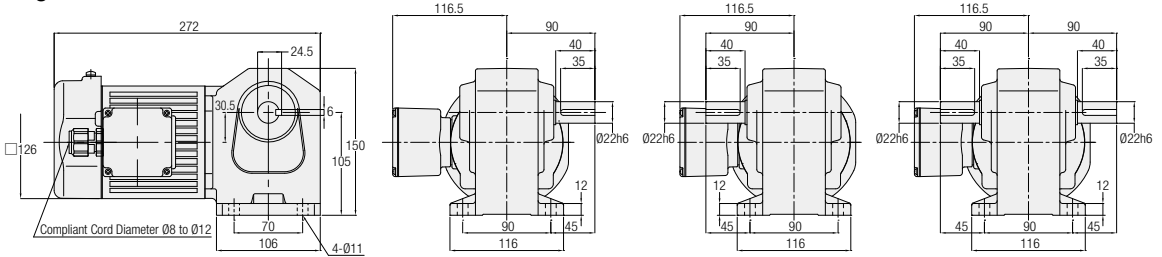
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

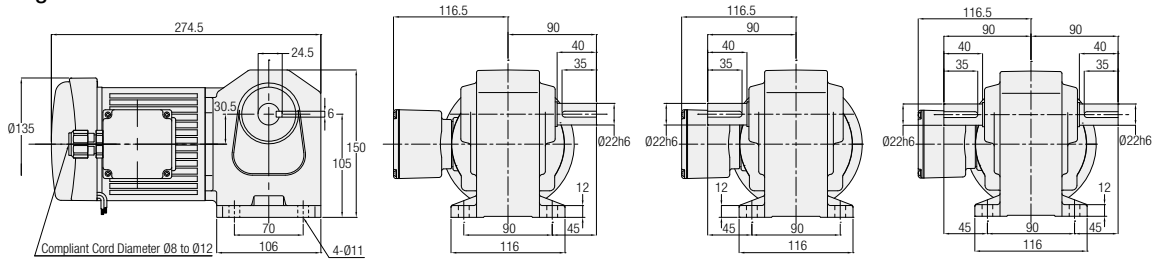
H2 Type Right Angle Shaft Shaft Diameter **22** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

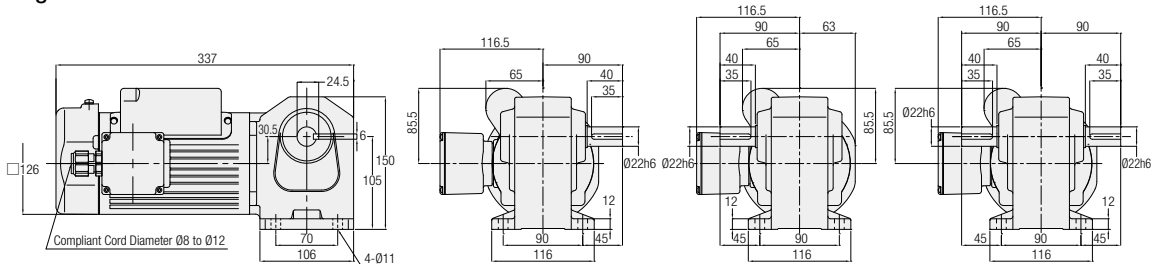
<Figure 1>



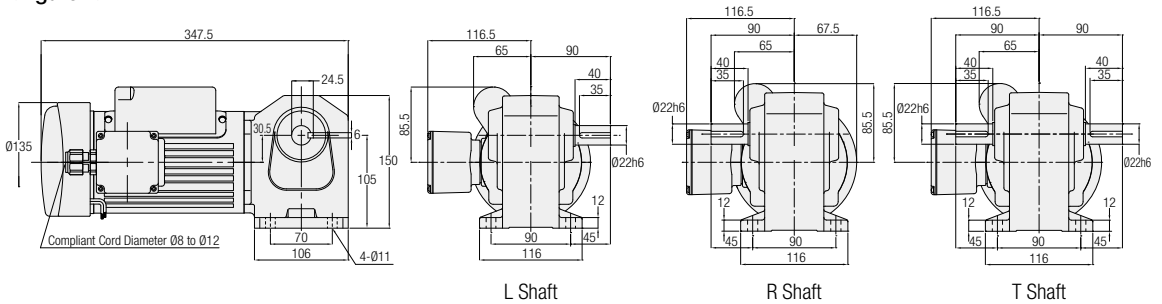
<Figure 2>



<Figure 3>



<Figure 4>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
1-Phase	0.1 kW	H2L22#***-MM01S◇JAN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	1	No	7
		H2L22#***-MM01S◇JAB2	120, 160, 200, 240	2	Yes	8
	0.2 kW	H2L22#***-MM02C◇JAN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	9.5
		H2L22#***-MM02C◇JAB2		4	Yes	11

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 228 for the performance table.

G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

F Type Right Angle Hollow Bore/Right Angle Shaft

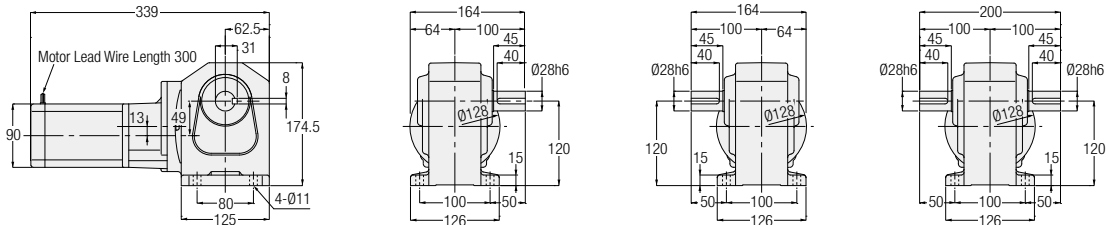
F2/F3 Type Concentric Right Angle Hollow Bore/Concentric Right Angle Shaft

Technical Documentation

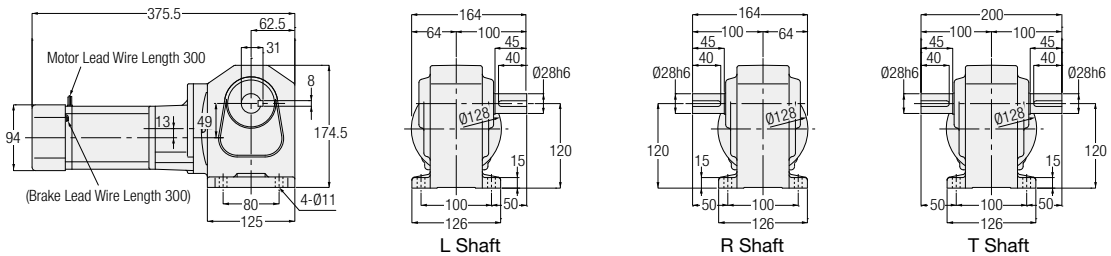
H Type Right Angle Shaft Shaft Diameter **28** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	25 W	HLM-28#-***-T25	1200, 1500, 1800	1	No	9
		HLM-28#-***-T25W				
		HLMN-28#-***-T25	1200, 1500, 1800	2	Yes	9
		HLMN-28#-***-T25W				
	40 W	HLM-28#-***-T40	600, 750, 900	1	No	9
		HLM-28#-***-T40W				
		HLMN-28#-***-T40	600, 750, 900	2	Yes	9
		HLMN-28#-***-T40W				
	60 W	HLM-28#-***-T60	600, 750, 900	1	No	9
		HLM-28#-***-T60W				
		HLMN-28#-***-T60	600, 750, 900	2	Yes	9
		HLMN-28#-***-T60W				
90 W	HLM-28#-***-T90	300, 375, 450	1	No	9	
	HLM-28#-***-T90W		2	No	9	
	HLMN-28#-***-T90	300, 375, 450	2	Yes	9	
	HLMN-28#-***-T90W					
1-Phase	25 W	HLM-28#-***-S25	1200, 1500, 1800	1	No	9
		HLM-28#-***-S25W				
		HLMN-28#-***-S25	1200, 1500, 1800	2	Yes	9
		HLMN-28#-***-S25W				
	40 W	HLM-28#-***-S40	600, 750, 900	1	No	9
		HLM-28#-***-S40W				
		HLMN-28#-***-S40	600, 750, 900	2	Yes	9
		HLMN-28#-***-S40W				
	60 W	HLM-28#-***-S60	600, 750, 900	2	No	9
		HLM-28#-***-S60W				
		HLMN-28#-***-S60	600, 750, 900	2	Yes	9
		HLMN-28#-***-S60W				
	90 W	HLM-28#-***-S90	300, 375, 450	2	No	9
		HLM-28#-***-S90W				
		HLMN-28#-***-S90	300, 375, 450	2	Yes	9
		HLMN-28#-***-S90W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 222 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

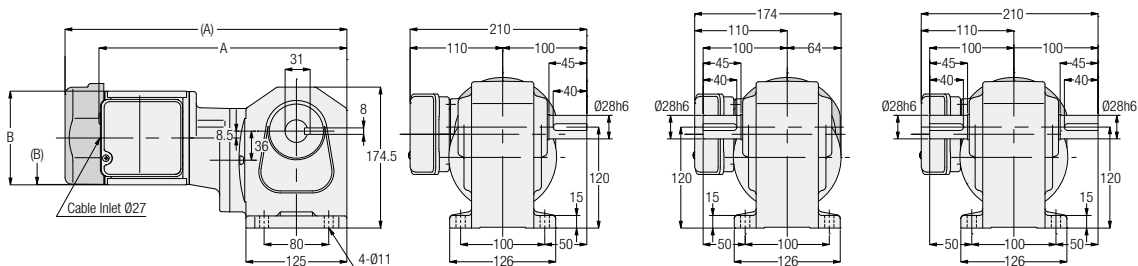
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

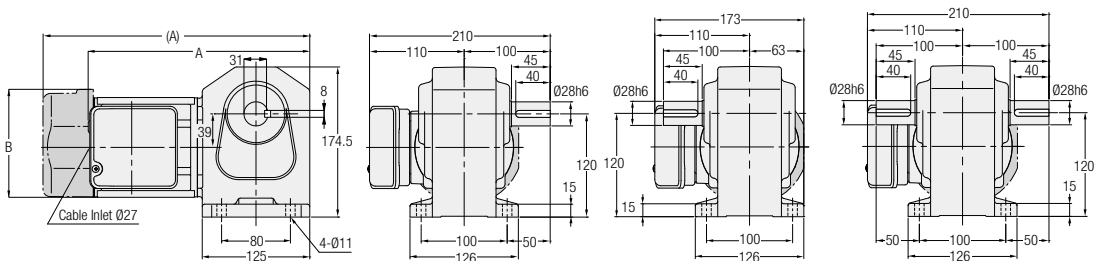
H2 Type Right Angle Shaft **Shaft Diameter 28** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

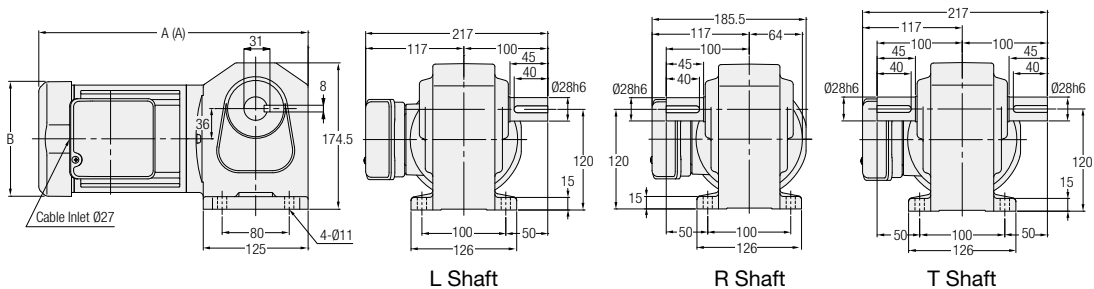
<Figure 1>



<Figure 2>



<Figure 3>



G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

F Type Right Angle Hollow Bore/ Right Angle Shaft

F2/F3 Type Concentric Right Angle Hollow Bore/ Concentric Right Angle Shaft

Technical Documentation

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2L28****-MM01T◇◇TN	300, 375, 450	1	No	10	309	Ø115
		H2L28****-MM01T◇◇TB◆			Yes	11.5	349	□126
	0.2 kW	H2L28****-MM02T◇◇TN	80, 100, 120, 160, 200, 240	2	No	9.5	259.5	Ø115
		H2L28****-MM02T◇◇TB◆			Yes	11	310	□126
	0.4 kW	H2L28****-MM04T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	11	321	□137
		H2L28****-MM04T◇◇TB◆			Yes	12.5	341	□137

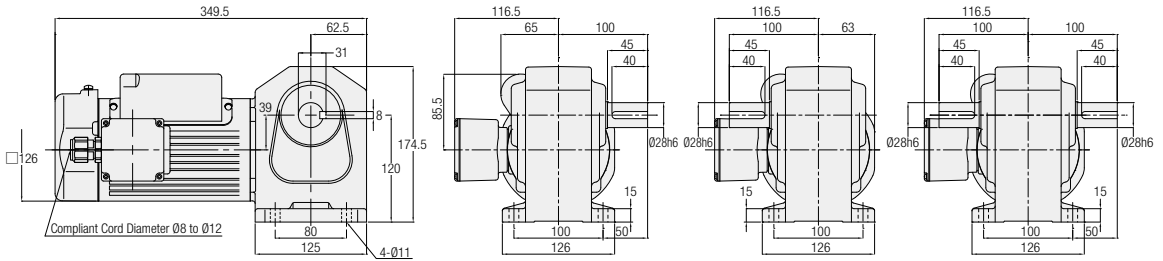
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***, a supply voltage/certification code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

Note: Please refer to page 225 for the performance table.

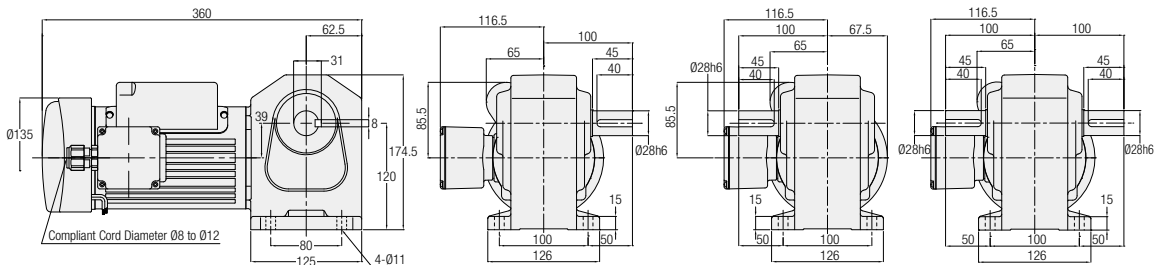
H2 Type Right Angle Shaft Shaft Diameter **28** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

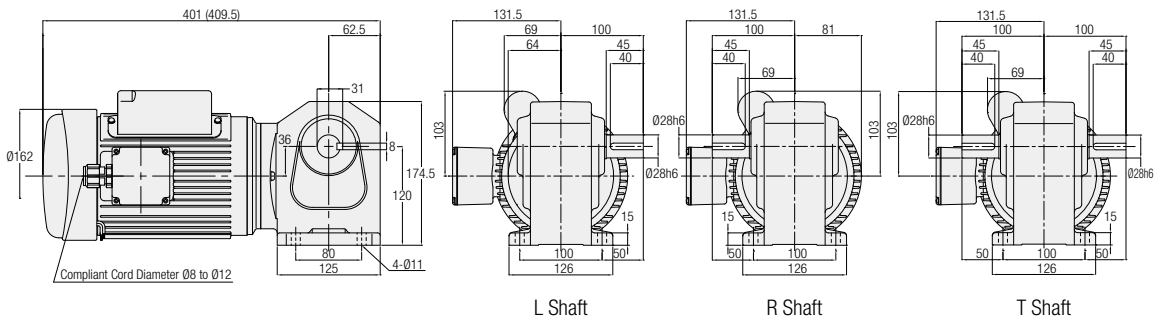
<Figure 1>



<Figure 2>



<Figure 3>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
1-Phase	0.2 kW	H2L28#***-MM02C◇JAN	80, 100, 120, 160, 200, 240	1	No	11.5
		H2L28#***-MM02C◇JAB2	80, 100, 120, 160, 200, 240	2	Yes	13
	0.4 kW	H2L28#***-MM04C◇JAN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	16.5
		H2L28#***-MM04C◇JAB2	5, 10, 15, 20, 25, 30, 40, 50, 60		Yes	19

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 228 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

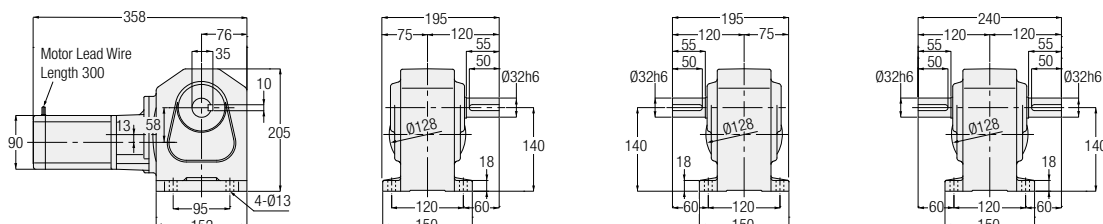
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

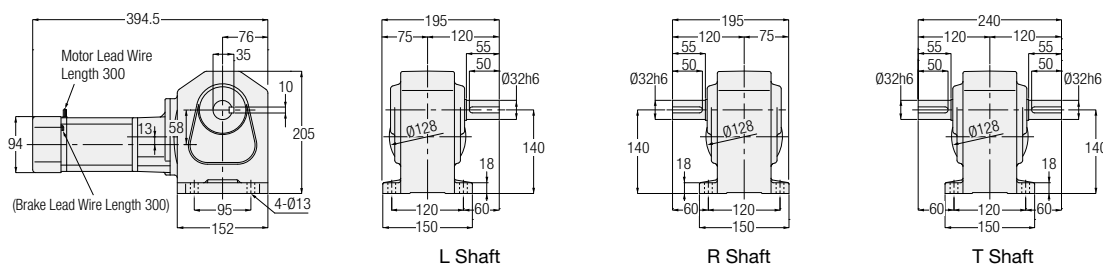
H Type Right Angle Shaft Shaft Diameter **32** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	40 W	HLM-32#-***-T40	1200, 1500, 1800	1	No	15
		HLM-32#-***-T40W				
		HLMN-32#-***-T40	1200, 1500, 1800	2	Yes	15
		HLMN-32#-***-T40W				
	60 W	HLM-32#-***-T60	1200, 1500, 1800	1	No	15
		HLM-32#-***-T60W				
		HLMN-32#-***-T60	1200, 1500, 1800	2	Yes	15
		HLMN-32#-***-T60W				
90 W	HLM-32#-***-T90	600, 750, 900	1	No	15	
	HLM-32#-***-T90W					
	HLMN-32#-***-T90	600, 750, 900	2	Yes	15	
	HLMN-32#-***-T90W					
1-Phase	40 W	HLM-32#-***-S40	1200, 1500, 1800	1	No	15
		HLM-32#-***-S40W				
		HLMN-32#-***-S40	1200, 1500, 1800	2	Yes	15
		HLMN-32#-***-S40W				
	60 W	HLM-32#-***-S60	1200, 1500, 1800	2	No	15
		HLM-32#-***-S60W				
		HLMN-32#-***-S60	1200, 1500, 1800	2	Yes	15
		HLMN-32#-***-S60W				
	90 W	HLM-32#-***-S90	600, 750, 900	2	No	15
		HLM-32#-***-S90W				
		HLMN-32#-***-S90	600, 750, 900	2	Yes	15
		HLMN-32#-***-S90W				

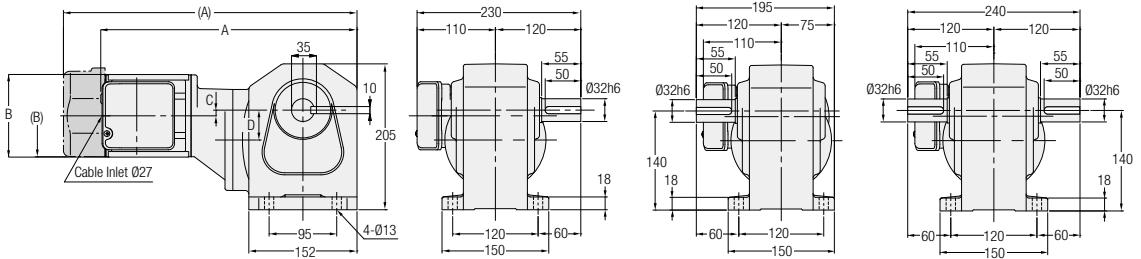
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 223 for the performance table.

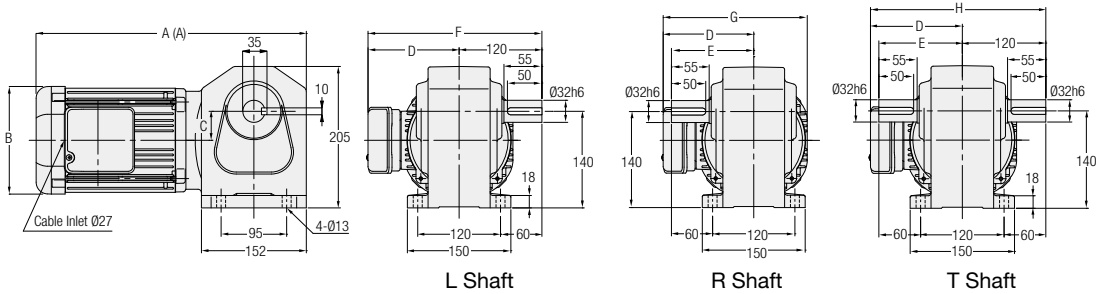
H2 Type Right Angle Shaft Shaft Diameter **32** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



L Shaft

R Shaft

T Shaft

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B	C	D	E	F	G	H
3-Phase	0.1 kW	H2L32****-MM01T◇◇TN	600, 750, 900, 1200, 1500	1	No	13	328	Ø115	17.5	45	-	-	-	-
		Yes			14.5	368	□126	17.5	45	-	-	-	-	
	0.2 kW	H2L32****-MM02T◇◇TN	300, 375, 450	1	No	13.5	362	Ø115	8	42	-	-	-	-
		Yes			15	412.5	□126	8	42	-	-	-	-	
	0.4 kW	H2L32****-MM04T◇◇TN	80, 100, 120, 160, 200, 240	2	No	14	340	□137	45	117	120	237	195	240
		Yes			15.5	360	□137	45	117	120	237	195	240	
	0.75 kW	H2L32****-MD08T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60	2	No	21	391.5	□156	42	132	120	252	210	252
		Yes			23.5	411.5	□156	42	132	120	252	210	252	

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***, a supply voltage/certification code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

Note: Please refer to page 225 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

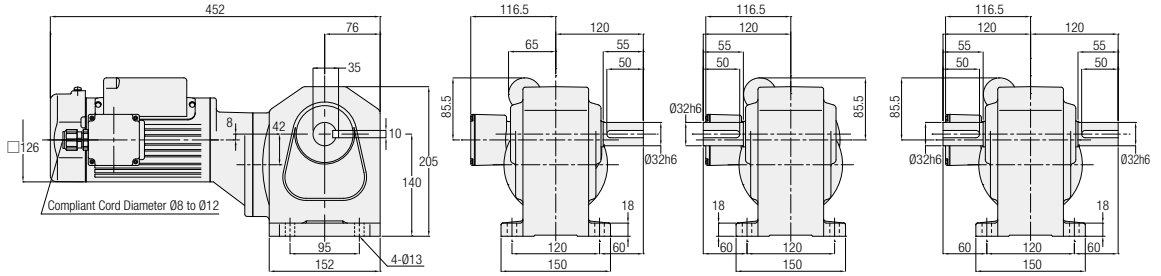
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

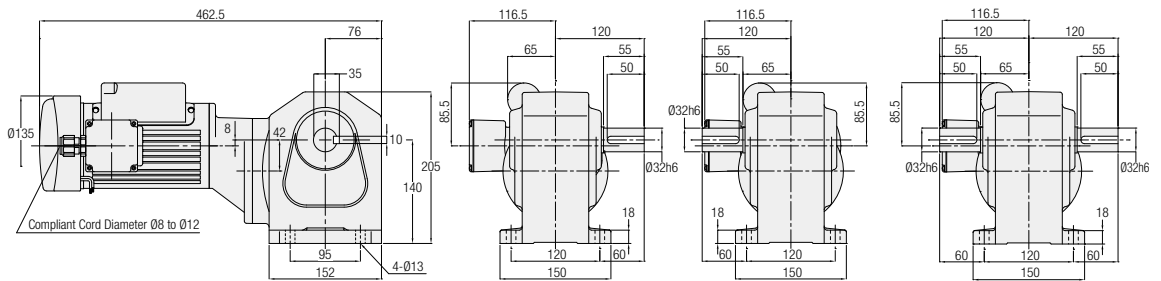
H2 Type Right Angle Shaft Shaft Diameter **32** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

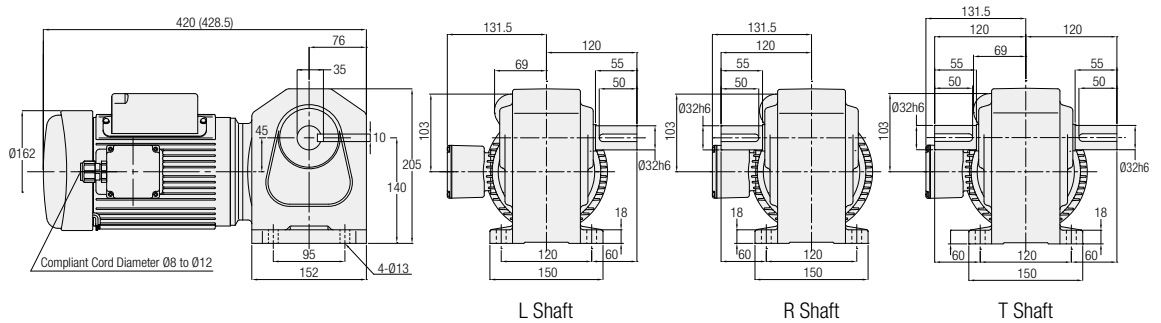
<Figure 1>



<Figure 2>



<Figure 3>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
1-Phase	0.2 kW	H2L32****-MM02C◇JAN	300, 375, 450	1	No	15.5
		H2L32****-MM02C◇JAB2	300, 375, 450	2	Yes	17
	0.4 kW	H2L32****-MM04C◇JAN	80, 100, 120, 160, 200, 240	3	No	19.5
		H2L32****-MM04C◇JAB2			Yes	22

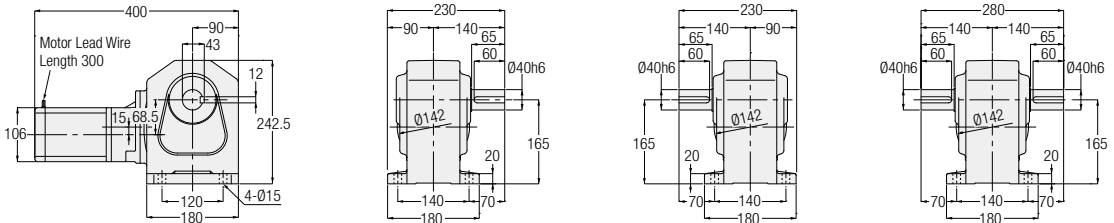
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 228 for the performance table.

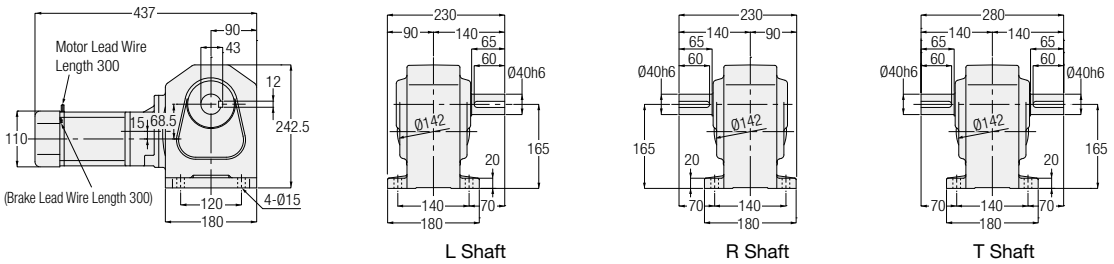
H Type Right Angle Shaft Shaft Diameter **40** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	90 W	HLM-40#-***-T90	1200, 1500, 1800	1	No	22
		HLM-40#-***-T90W				
		HLMN-40#-***-T90	1200, 1500, 1800		Yes	
		HLMN-40#-***-T90W				
1-Phase	90 W	HLM-40#-***-S90	1200, 1500, 1800	2	No	22
		HLM-40#-***-S90W				
		HLMN-40#-***-S90			Yes	22
		HLMN-40#-***-S90W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 224 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

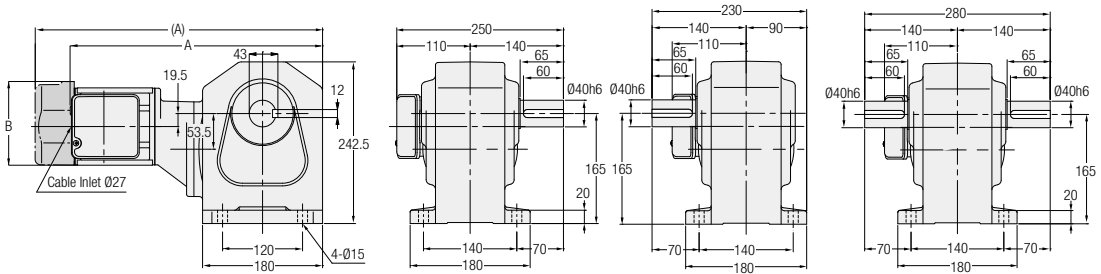
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

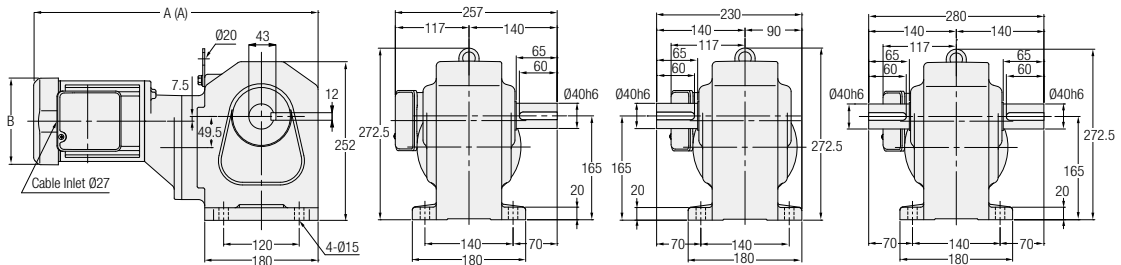
H2 Type Right Angle Shaft **Shaft Diameter 40** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

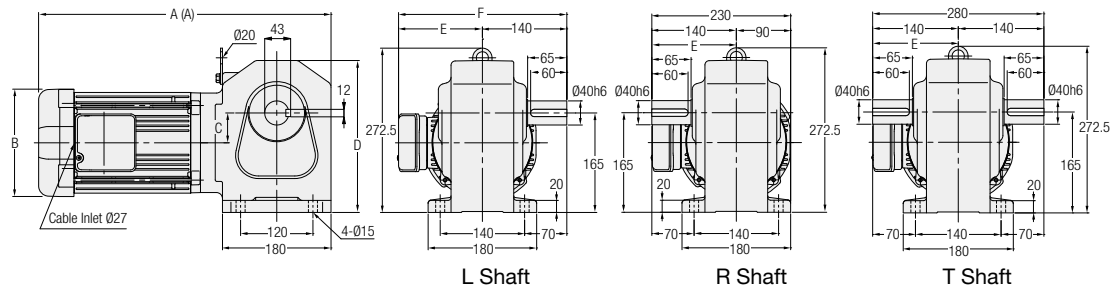
<Figure 1>



<Figure 2>



<Figure 3>



Note: Gearmotors with a motor power of 0.75 kW does not include the hanging plate.

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B	C	D	E	F
3-Phase	0.2 kW	H2L40***-MM02T◇◇TN	600, 750, 900, 1200, 1500	1	No	22	380.5	Ø115	-	-	-	-
		Yes			23.5	431	□126	-	-	-	-	
	0.4 kW	H2L40***-MM04T◇◇TN	300, 375, 450	2	No	24.5	451.5	□137	-	-	-	-
		Yes			26	471.5	□137	-	-	-	-	
	0.75 kW	H2L40***-MD08T◇◇TN	80, 100, 120, 160, 200, 240	3	No	29.5	410	□156	53.5	242.5	132	272
		Yes			32	430	□156	53.5	242.5	132	272	
1.5 kW	H2L40***-MD15T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	36.5	485	□178	49.5	252	139	279	
	Yes			40	514	□178	49.5	252	139	279		

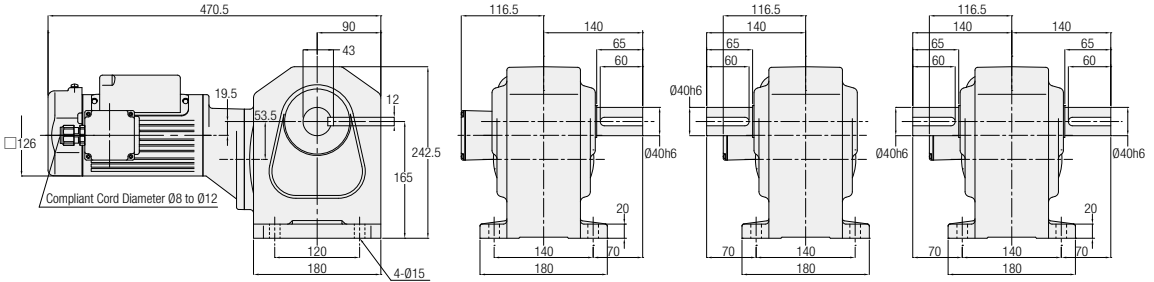
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***, a supply voltage/certification code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

Note: Please refer to page 225 for the performance table.

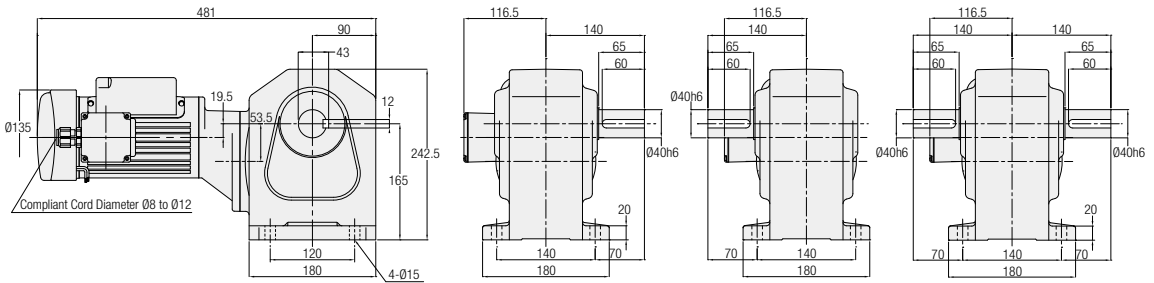
H2 Type Right Angle Shaft **Shaft Diameter 40** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

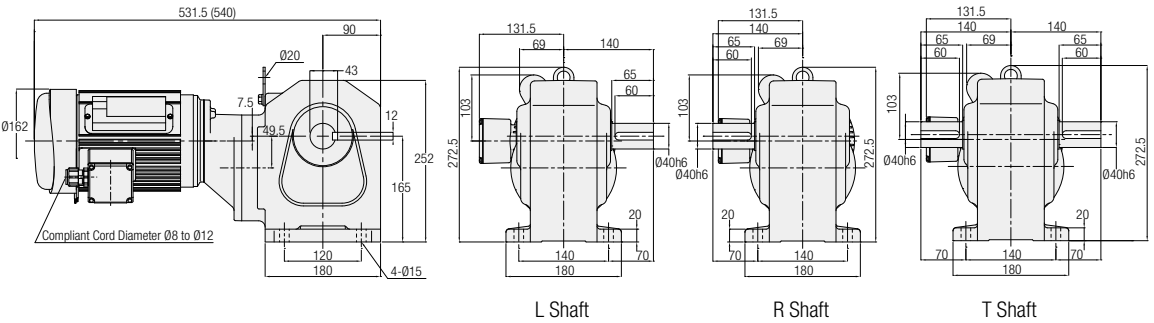
<Figure 1>



<Figure 2>



<Figure 3>



G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
1-Phase	0.2 kW	H2L40***-MM02C◇JAN	600, 750, 900, 1200, 1500	1	No	24
		H2L40***-MM02C◇JAB2	600, 750, 900, 1200, 1500	2	Yes	24.5
	0.4 kW	H2L40***-MM04C◇JAN	300, 375, 450	3	No	30
		H2L40***-MM04C◇JAB2			Yes	32.5

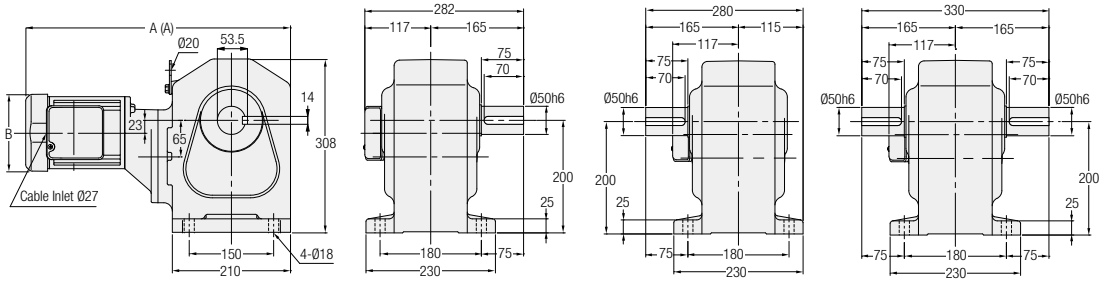
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 228 for the performance table.

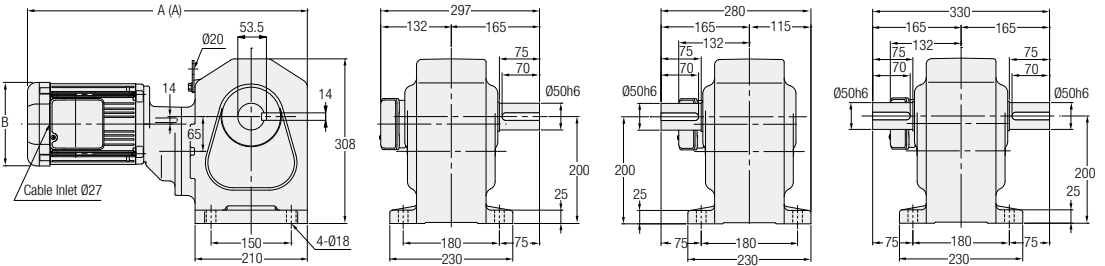
H2 Type Right Angle Shaft Shaft Diameter **50** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

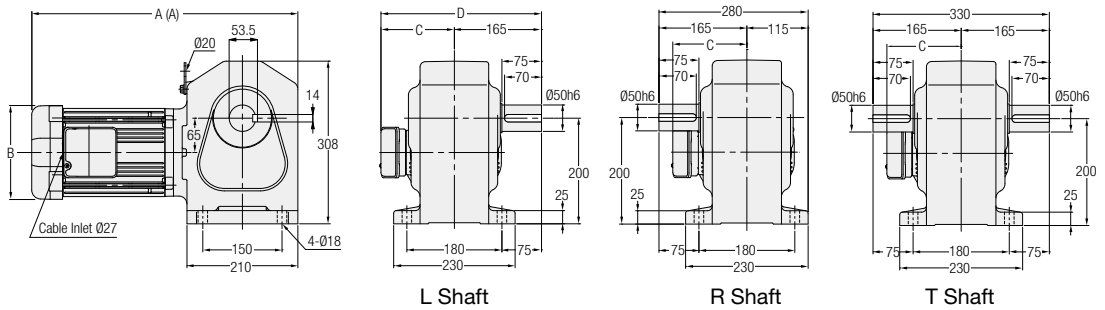
<Figure 1>



<Figure 2>



<Figure 3>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B	C	D
3-Phase	0.4 kW	H2L50#***-MM04T◇◇TN	600, 750, 900, 1200, 1500	1	No	54.5	470.5	□137	-	-
		Yes			56	490.5	□137	-	-	
	0.75 kW	H2L50#***-MD08T◇◇TN	300, 375, 450	2	No	62	523	□156	-	-
		Yes			64.5	543	□156	-	-	
	1.5 kW	H2L50#***-MD15T◇◇TN	80, 100, 120, 160, 200, 240	3	No	65.5	504	□178	139	304
		Yes			69	533	□178	139	304	
	2.2 kW	H2L50#***-MD22T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	3	No	72.5	537.5	□192	149	314
		Yes			76	566.5	□192	149	314	

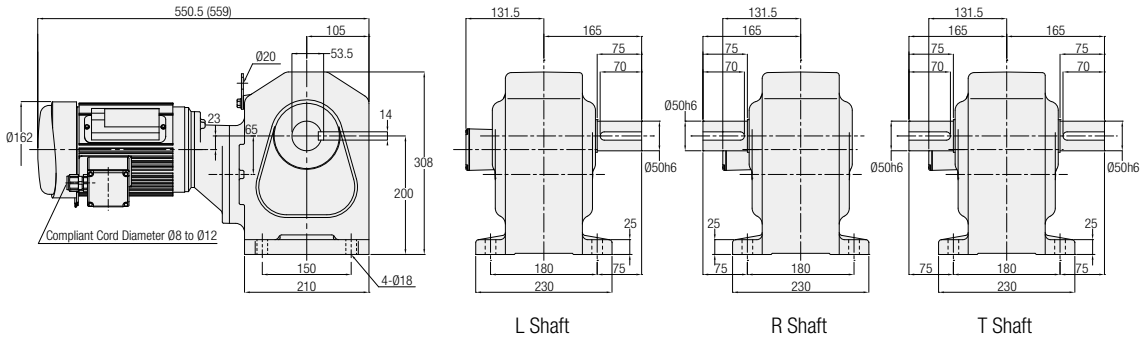
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***, a supply voltage/certification code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

Note: Please refer to page 226 for the performance table.

H2 Type Right Angle Shaft **Shaft Diameter 50** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
1-Phase	0.4 kW	H2L50#***-MM04C◇JAN	600, 750, 900, 1200, 1500	1	No	60
		H2L50#***-MM04C◇JAB2			Yes	62.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 229 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right-Angle Hollow Bore/
Right Angle Shaft

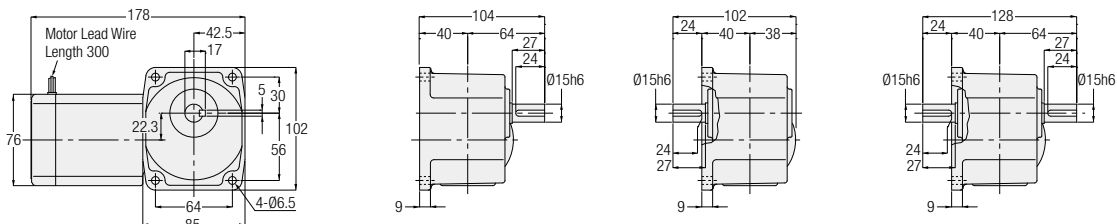
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

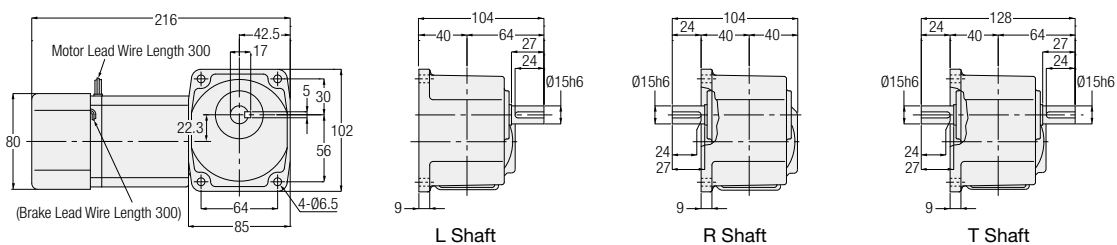
H Type Right Angle Shaft Shaft Diameter **15** **Flange Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



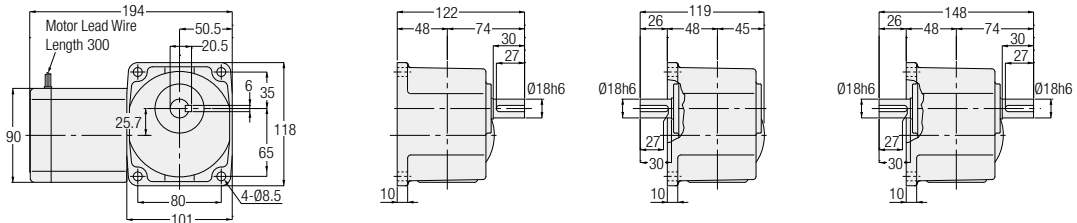
Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	
3-Phase	15 W	HFM-15#-***-T15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3	
		HFMN-15#-***-T15W	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	3	
		HFM-15#-***-T25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3	
		HFMN-15#-***-T25W	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	3	
	40 W	HFM-15#-***-T40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	1	No	3	
		HFMN-15#-***-T40W	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	2	Yes	3	
		60 W	HFM-15#-***-T60	10, 15, 20, 25, 30, 40, 50, 60	2	No	3
			HFMN-15#-***-T60W	10, 15, 20, 25, 30, 40, 50, 60	2	Yes	3
1-Phase	15 W	HFM-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3	
		HFMN-15#-***-S15W	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	3	
		25 W	HFM-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
			HFMN-15#-***-S25W	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	3
	40 W		HFM-15#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	2	No	3
			HFMN-15#-***-S40W	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	2	Yes	3

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 222 for the performance table.

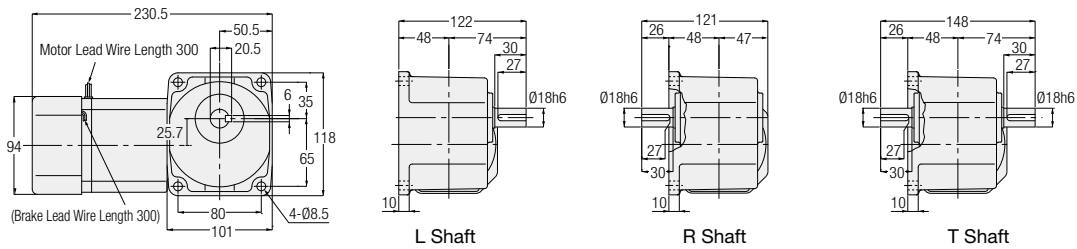
H Type Right Angle Shaft Shaft Diameter **18** Flange Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	40 W	HFM-18#-***-T40	160, 200, 240	1	No	4
		HFM-18#-***-T40W				
		HFMN-18#-***-T40	160, 200, 240	2	Yes	4
		HFMN-18#-***-T40W				
	60 W	HFM-18#-***-T60	80, 100, 120, 160, 200, 240	1	No	4
		HFM-18#-***-T60W				
		HFMN-18#-***-T60	80, 100, 120, 160, 200, 240	2	Yes	4
		HFMN-18#-***-T60W				
	90 W	HFM-18#-***-T90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4
		HFM-18#-***-T90W				
		HFMN-18#-***-T90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	4
		HFMN-18#-***-T90W				
1-Phase	40 W	HFM-18#-***-S40	160, 200, 240	1	No	4
		HFM-18#-***-S40W				
		HFMN-18#-***-S40	160, 200, 240	2	Yes	4
		HFMN-18#-***-S40W				
	60 W	HFM-18#-***-S60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	No	4
		HFM-18#-***-S60W				
		HFMN-18#-***-S60	80, 100, 120, 160, 200, 240	2	Yes	4
		HFMN-18#-***-S60W				
	90 W	HFM-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	No	4
		HFM-18#-***-S90W				
		HFMN-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	4
		HFMN-18#-***-S90W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 223 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

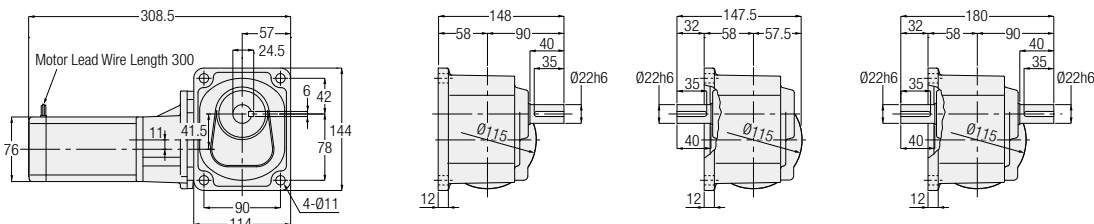
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

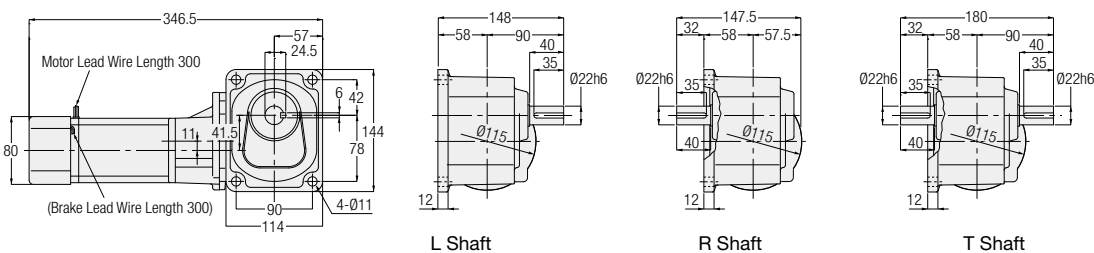
H Type Right Angle Shaft Shaft Diameter **22** Flange Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	15 W	HFM-22#-***-T15	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	1	No	6
		HFMN-22#-***-T15W				
		HFMN-22#-***-T15	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	2	Yes	6
		HFMN-22#-***-T15W				
	25 W	HFM-22#-***-T25	300, 375, 450, 600, 750, 900	1	No	6
		HFMN-22#-***-T25W				
		HFMN-22#-***-T25	300, 375, 450, 600, 750, 900	2	Yes	6
		HFMN-22#-***-T25W				
	40 W	HFM-22#-***-T40	300, 375, 450	1	No	6
		HFMN-22#-***-T40W				
		HFMN-22#-***-T40	300, 375, 450	2	Yes	6
		HFMN-22#-***-T40W				
60 W	HFM-22#-***-T60	300, 375, 450	2	No	6	
	HFMN-22#-***-T60W					
	HFMN-22#-***-T60	300, 375, 450	2	Yes	6	
	HFMN-22#-***-T60W					
1-Phase	15 W	HFM-22#-***-S15	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	1	No	6
		HFMN-22#-***-S15W				
		HFMN-22#-***-S15	300, 375, 450, 600, 750, 900, 1200, 1500, 1800	2	Yes	6
		HFMN-22#-***-S15W				
	25 W	HFM-22#-***-S25	300, 375, 450, 600, 750, 900	2	No	6
		HFMN-22#-***-S25W				
		HFMN-22#-***-S25	300, 375, 450, 600, 750, 900	2	Yes	6
		HFMN-22#-***-S25W				
	40 W	HFM-22#-***-S40	300, 375, 450	2	No	6
		HFMN-22#-***-S40W				
		HFMN-22#-***-S40	300, 375, 450	2	Yes	6
		HFMN-22#-***-S40W				
60 W	HFM-22#-***-S60	300, 375, 450	2	No	6	
	HFMN-22#-***-S60W					
	HFMN-22#-***-S60	300, 375, 450	2	Yes	6	
	HFMN-22#-***-S60W					

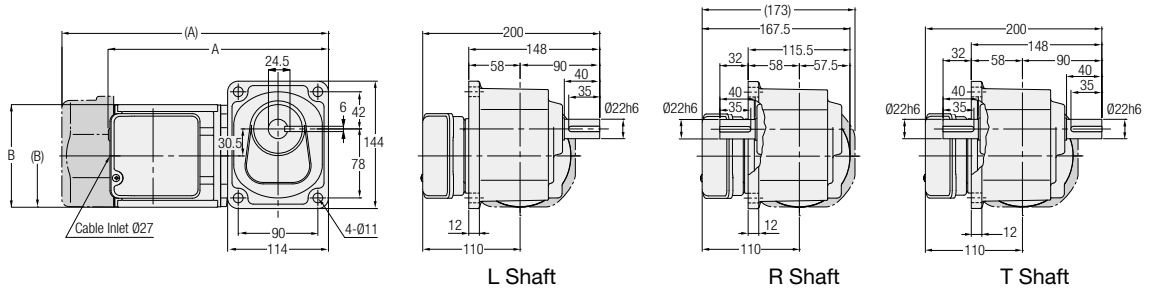
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 222 for the performance table.

H2 Type Right Angle Shaft **Shaft Diameter 22** **Flange Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2F22#***-MM01T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	6.5	236	Ø115
		H2F22#***-MM01T◇◇TB◆			Yes	8	276	□126
	0.2 kW	H2F22#***-MM02T◇◇TN	5, 10, 15, 20, 25, 30, 40, 50, 60	1	No	7.5	251	Ø115
		H2F22#***-MM02T◇◇TB◆			Yes	9	301.5	□126

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***, a supply voltage/certification code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

Note: Please refer to page 225 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right-Angle Hollow Bore/
Right Angle Shaft

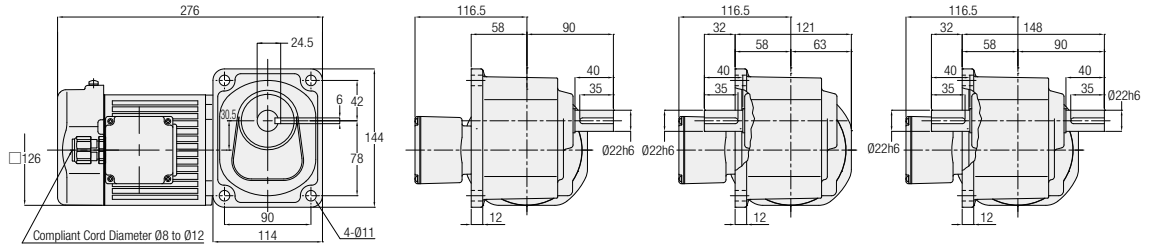
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

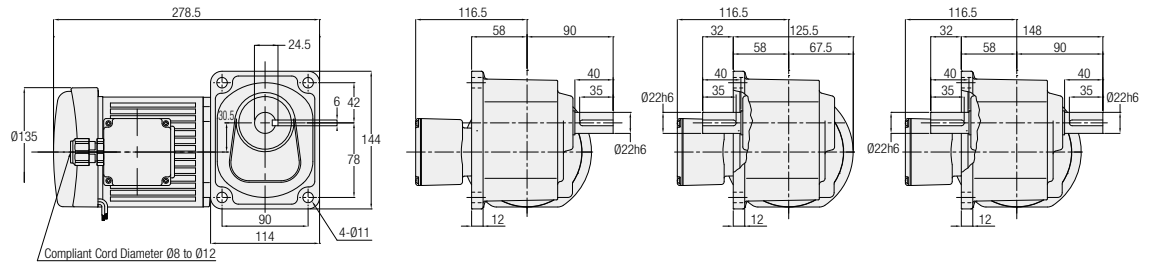
H2 Type Right Angle Shaft Shaft Diameter **22** **Flange Mounting**

The values in parenthesis are those for gearmotors with a brake.

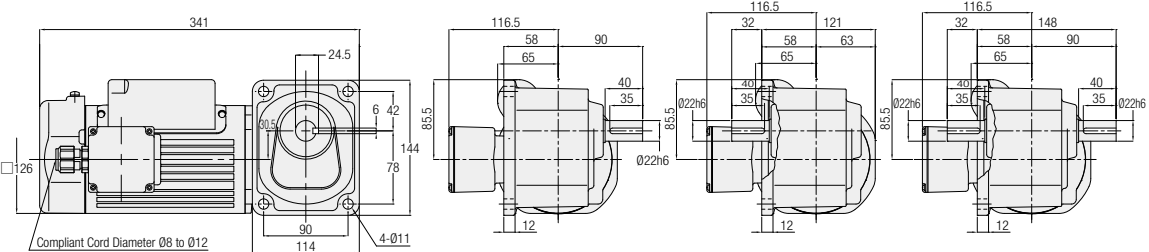
<Figure 1>



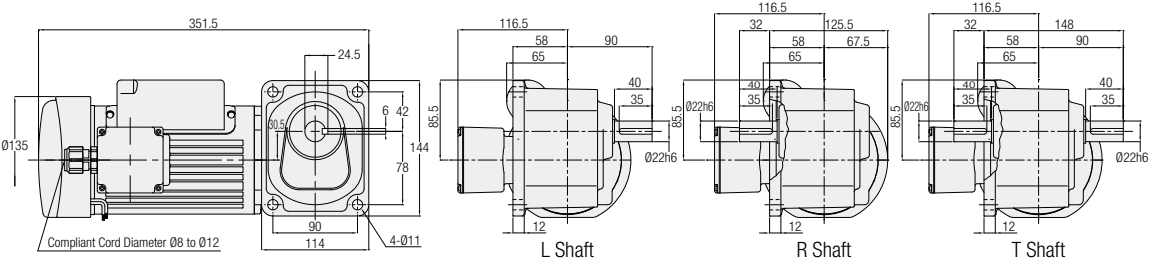
<Figure 2>



<Figure 3>



<Figure 4>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
1-Phase	0.1 kW	H2F22#***-MM01S◇JAN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	7
		H2F22#***-MM01S◇JAB2	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Yes	9.5
	0.2 kW	H2F22#***-MM02C◇JAN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	8
		H2F22#***-MM02C◇JAB2	5, 10, 15, 20, 25, 30, 40, 50, 60	4	Yes	11

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 228 for the performance table.

MEMO

Technical Documentation

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

F Type
Right-Angle Hollow Bore/
Right Angle Shaft

H/H2 Type
Right Angle Shaft

G/G3 Type
Parallel Shaft

2. IP65 Gearmotors

IP65 Gearmotors with Brake

2-1. Motor Characteristics Table

H Type 3-Phase Standard Voltage

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Rated Current (A)	Rated Speed (r/min)	Startup Current (A)
MINI	15	200/200/220	50/60/60	15	0.14/0.13/0.13	1350/1550/1600	0.30/0.28/0.31
	25	200/200/220	50/60/60	15	0.21/0.19/0.19	1350/1550/1600	0.44/0.42/0.46
	40	200/200/220	50/60/60	15	0.29/0.27/0.27	1350/1550/1600	0.67/0.62/0.68
				18	0.27/0.26/0.26	1350/1550/1550	0.73/0.69/0.76
	60	200/200/220	50/60/60	18	0.40/0.36/0.36	1350/1550/1600	1.04/0.97/1.07
	90	200/200/220	50/60/60	18	0.51/0.48/0.48	1350/1550/1550	1.42/1.36/1.49

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

H Type 1-Phase Standard Voltage

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Rated Current (A)	Rated Speed (r/min)	Startup Current (A)	Capacitor (μF)
MINI	15	100/100	50/60	15	0.39/0.35	1350/1650	0.72/0.67	5
	25	100/100	50/60	15	0.48/0.48	1350/1600	0.86/0.80	7
	40	100/100	50/60	18	0.61/0.66	1350/1650	1.43/1.36	10

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

2-1. Motor Characteristics Table

H2 Type 3-Phase Standard Voltage/High Voltage (400 V Class)/Special Voltage

Series	Power	Power Supply/ Certification Codes	Voltage (V)	Frequency (Hz)	Rated Current (A)	Startup Current (A)	Rated Speed (r/min)
MID	0.1 kW	NN	200/200/220	50/60/60	0.61/0.54/0.54	2.39/2.27/2.52	1410/1690/1710
		WN	380/400/400/440	50/50/60/60	0.31/0.31/0.28/0.28	1.12/1.18/1.12/1.22	1400/1410/1690/1720
		KN	220/380	60/60	0.52/0.30	1.90/1.10	1680/1680
		CN	220/230/380	50/50/50	0.55/0.54/0.31	1.94/2.03/1.12	1400/1410/1400
		AN	208/230/460/400	60/60/60/50	0.54/0.57/0.29/0.31	2.35/2.62/1.26/1.21	1690/1730/1730/1410
		EN	415/440/480	50/50/60	0.30/0.29/0.26	1.06/1.12/1.17	1390/1420/1720
	0.2 kW IE2	MA	575	60	0.20	0.87	1700
		NN	200/200/220	50/60/60	1.1/1.0/1.0	4.70/4.35/4.85	1400/1680/1700
		WN	380/400/400/440	50/50/60/60	0.56/0.56/0.50/0.50	2.29/2.38/2.29/2.48	1390/1400/1680/1710
		KN	220/380	60/60	0.93/0.52	3.70/2.20	1680/1680
		CN	220/230/380	50/50/50	0.99/0.98/0.56	3.97/4.15/2.29	1400/1410/1390
		AN	208/230/460/400	60/60/60/50	1.0/1.0/0.50/0.56	4.78/5.16/2.56/2.44	1680/1720/1720/1400
	0.4 kW IE2	EN	415/440/480	50/50/60	0.50/0.50/0.45	1.75/1.86/2.00	1370/1400/1700
		MA	575	60	0.40	1.78	1710
		NN	200/200/220	50/60/60	2.1/1.8/1.8	9.50/8.60/9.60	1400/1680/1700
		WN	380/400/400/440	50/50/60/60	1.0/1.0/0.9/0.9	4.35/4.65/4.30/4.75	1390/1400/1680/1710
		KN	220/380	60/60	1.7/1.0	7.10/4.00	1670/1670
		CN	220/230/380	50/50/50	1.8/1.8/1.0	7.53/7.88/4.35	1390/1400/1390
	0.75 kW IE3	AN	208/230/460/400	60/60/60/50	1.8/1.8/0.9/1.0	8.90/9.76/4.73/4.78	1680/1720/1720/1400
		EN	415/440/480	50/50/60	0.96/0.95/0.82	3.96/4.20/4.20	1390/1410/1680
		MA	575	60	0.68	3.51	1700
		NN	200/200/220	50/60/60	3.2/3.0/2.9	19.1/16.6/18.6	1440/1720/1740
		WN	380/400/400/440	50/50/60/60	1.65/1.60/1.50/1.40	9.00/9.60/8.30/9.30	1430/1440/1730/1740
		KN	220/380	60/60	2.8/1.6	17.9/10.8	1750/1750
	1.5 kW IE3	CN	220/230/380	50/50/50	2.8/2.7/1.65	15.6/16.3/9.00	1430/1440/1430
		AN	208/230/460/400	60/60/60/50	2.9/2.8/1.4/1.6	18.3/19.6/10.2/10.0	1740/1750/1750/1440
		EN	415/440/480	50/50/60	1.50/1.50/1.35	9.1/9.65/9.70	1440/1450/1750
		MA	575	60	1.10	6.60	1750
		NN	200/200/220	50/60/60	6.4/6.0/5.7	43.5/36.0/40.3	1450/1740/1750
		WN	380/400/400/440	50/50/60/60	3.3/3.2/3.0/2.9	21.7/23.1/18.6/20.7	1440/1450/1740/1750
	2.2 kW IE3	KN	220/380	60/60	5.6/3.2	43.2/24.3	1760/1760
		CN	220/230/380	50/50/50	5.6/5.6/3.3	37.6/39.3/21.7	1450/1460/1440
		AN	208/230/460/400	60/60/60/50	5.9/5.7/2.9/3.2	42.3/45.3/23.0/24.3	1750/1760/1760/1450
		EN	415/440/480	50/50/60	3.0/3.0/2.7	19.8/21.0/18.5	1460/1470/1760
		MA	575	60	2.2	15.3	1760
		NN	200/200/220	50/60/60	8.8/8.4/7.9	58.5/47.0/52.5	1450/1740/1750
	2.2 kW IE3	WN	380/400/400/440	50/50/60/60	4.5/4.4/4.2/3.9	30.0/32.0/25.0/28.0	1440/1450/1740/1750
		KN	220/380	60/60	7.8/4.5	56.4/32.3	1760/1760
		CN	220/230/380	50/50/50	7.9/7.7/4.5	52.0/54.3/30.0	1460/1470/1440
		AN	208/230/460/400	60/60/60/50	8.3/7.9/4.0/4.5	60.8/65.2/34.8/36.3	1750/1770/1770/1470
		EN	415/440/480	50/50/60	4.3/4.3/3.8	33.1/35.5/29.8	1460/1470/1770
		MA	575	60	3.3	24.4	1760

The rated current in the motor characteristics table and performance table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

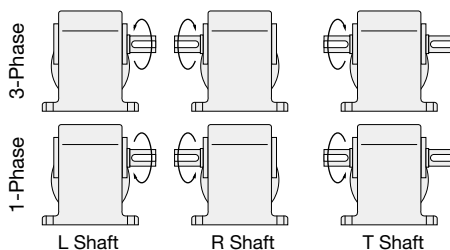
Technical Documentation

2-2. Performance Table

H Type IP65 Gearmotors/IP65 Gearmotors with Brake

[Notes]

- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
- Three output shaft types, L, R, and T, are available for the H Type.
- Allowable output shaft O.H.L. is the at the middle of the output shaft.
- The “*” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.
- The reduction ratio in [] in the performance table indicates that the output shaft rotates in the directions shown below when the connection is made as shown on page 492 (CW). (Refer to the figure on the right)
 3-phase: L shaft in the CW direction and R and T shafts in the CCW direction when viewed from the output shaft side
 1-phase: L shaft in the CCW direction and R and T shafts in the CW direction when viewed from the output shaft side



G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque	Allowable Output Shaft O.H.L.	Drawings	
					r/min				N·m	N
					50 Hz	60 Hz				
MINI	15 W	15	1/10	1/10	150	180	0.69	343	P.259	P.266
			1/15	1/15	100	120	0.98	441		
			1/20	1/20	75	90	1.27	539		
			1/25	1/25	60	72	1.67	588		
			1/30	1/30	50	60	1.96	686		
			1/40	1/40	37.5	45	2.65	784		
			1/50	1/50	30	36	3.33	882		
			1/60	1/60	25	30	3.92	882		
			1/80	1/80	18.8	22.5	5.00	980		
			1/100	1/100	15	18	6.27	980		
			1/120	1/120	12.5	15	7.45	1080		
			1/160	1/160	9.4	11.2	9.80	1080		
			1/200	1/200	7.5	9	12.7	1080		
			1/240	1/240	6.3	7.5	14.7	1080		
			25 W	15	1/10	4/41	150	180		
	1/15	8/123			100	120	1.67	441		
	1/20	2/41			75	90	2.25	539		
	1/25	8/205			60	72	2.74	588		
	1/30	4/123			50	60	3.33	686		
	1/40	1/41			37.5	45	4.41	784		
	1/50	4/205			30	36	5.49	882		
	1/60	20/1189			25	30	6.66	882		
	1/80	1/82			18.8	22.5	8.43	980		
	1/100	2/205			15	18	10.8	980		
	1/120	1/123			12.5	15	12.7	1080		
	1/160	1/164			9.4	11.2	16.7	1080		
	1/200	1/205			7.5	9	20.6	1080		
	1/240	5/1189			6.3	7.5	25.5	1080		
	40 W	15			1/10	4/41	150	180	1.76	343
			1/15	8/123	100	120	2.65	441		
1/20			2/41	75	90	3.53	539			
1/25			8/205	60	72	4.41	588			
1/30			4/123	50	60	5.29	686			
1/40			1/41	37.5	45	7.06	784			
1/50			4/205	30	36	8.82	882			
1/60			20/1189	25	30	10.8	882			
1/80			1/82	18.8	22.5	13.7	980			
1/100			2/205	15	18	16.7	980			
1/120			1/123	12.5	15	20.6	1080			
18			1/160	1/164	9.4	11.2	26.5	1370	P.260	P.267
		1/200	1/205	7.5	9	33.3	1370			
		1/240	1/246	6.3	7.5	40.2	1370			

2-2. Performance Table

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque	Allowable Output Shaft O.H.L.	Drawings	
					r/min				Foot Mount	Flange Mount
					50 Hz	60 Hz	N·m	N		
MINI	60 W	18	1/10	4/41	150	180	2.74	343	P.260	P.267
			1/15	8/123	100	120	4.12	441		
			1/20	2/41	75	90	5.49	539		
			1/25	8/205	60	72	6.96	588		
			1/30	4/123	50	60	8.33	686		
			1/40	1/41	37.5	45	10.8	784		
			1/50	4/205	30	36	13.7	882		
			1/60	2/123	25	30	16.7	882		
			1/80	1/82	18.8	22.5	20.6	1270		
			1/100	2/205	15	18	26.5	1270		
			1/120	1/123	12.5	15	31.4	1370		
			1/160	1/164	9.4	11.2	42.1	1370		
			1/200	1/205	7.5	9	52.9	1370		
	* /240	1/246	6.3	7.5	53.9	1370				
	90 W	18	1/10	4/41	150	180	4.12	441	P.260	P.267
			1/15	8/123	100	120	6.17	588		
			1/20	2/41	75	90	8.33	735		
			1/25	8/205	60	72	10.8	882		
			1/30	4/123	50	60	12.7	980		
			1/40	1/41	37.5	45	16.7	1080		
			1/50	4/205	30	36	20.6	1180		
			1/60	2/123	25	30	24.5	1180		
			1/80	1/82	18.8	22.5	31.4	1270		
			1/100	2/205	15	18	39.2	1270		
			1/120	1/123	12.5	15	47.0	1370		
			* /160	1/164	9.4	11.2	53.9	1370		
* /200			1/205	7.5	9	53.9	1370			
* /240	1/246	6.3	7.5	53.9	1370					

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

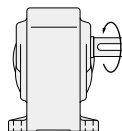
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

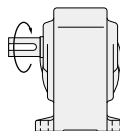
H2 Type IP65 Gearmotors/IP65 Gearmotors with Brake

[Notes]

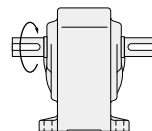
- The values in parentheses in the drawings are the values for gearmotors with a brake.
- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
- in the performance table indicates that the H and L shafts rotate clockwise and the M, B, R, and T shafts rotate counterclockwise when viewed from the output shaft side when the connection is made as shown on page 493 (CW). (Refer to the figure on the right)
- Allowable output shaft O.H.L. is the value at the middle of the output shaft.
- The “*” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.



H Shaft
L Shaft



M Shaft
R Shaft



B Shaft
T Shaft

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings	
					r/min		N·m			N	Foot Mount
					50 Hz	60 Hz	50 Hz	60 Hz			
MID	3-Phase 0.1 kW	22	1/5	1/5	300	360	2.8	2.4	588	P.261	P.268
			1/10	1/10	150	180	5.7	4.8	931		
			1/15	1/15	100	120	8.6	7.2	1030		
			1/20	1/20	75	90	12	9.5	1180		
			1/25	1/25	60	72	15	12	1270		
			1/30	1/30	50	60	18	15	1370		
			1/40	1/40	37.5	45	23	19	1570		
			1/50	1/50	30	36	28	24	1720		
			1/60	1/59	25	30	34	28	1760		
			1/80	1/80	18.8	22.5	44	37	1760		
		1/100	1/100	15	18	55	46	1760			
		1/120	1/120	12.5	15	67	55	1760			
		1/160	1/160	9.4	11.2	88	74	1760			
		1/200	1/200	7.5	9	111	92	1760			
		* 1/240	1/236	6.3	7.5	118	111	1760			
		1/300	7/2120	5	6	145	121	2840			
		1/375	7/2650	4	4.8	181	151	2840			
		1/450	7/3127	3.3	4	218	181	2840			
		1/600	7/4240	2.5	3	286	238	4120			
		1/750	7/5300	2	2.4	358	298	4120			
	1/900	7/6360	1.7	2	429	358	4120				
	* 1/1200	7/8480	1.3	1.5	431	431	4120				
	* 1/1500	7/10600	1	1.2	431	431	4120				
	1/5	1/5	300	360	5.7	4.8	588				
	1/10	1/10	150	180	12	9.5	931				
	1/15	1/15	100	120	18	15	1030				
	1/20	1/20	75	90	23	19	1180				
	1/25	1/25	60	72	28	24	1270				
	1/30	1/30	50	60	34	28	1370				
	1/40	1/40	37.5	45	46	38	1570				
	1/50	1/50	30	36	57	48	1720				
	1/60	1/59	25	30	69	57	1810				
	1/80	1/80	18.8	22.5	88	74	2450				
	1/100	1/100	15	18	111	92	2650				
	1/120	1/120	12.5	15	133	111	2740				
	1/160	1/160	9.4	11.2	177	148	2840				
	1/200	1/200	7.5	9	221	184	2840				
	1/240	1/236	6.3	7.5	245	221	2840				
	1/300	7/2120	5	6	294	245	3820				
	1/375	7/2650	4	4.8	368	306	4120				
1/450	7/3127	3.3	4	431	368	4120					
1/600	7/4240	2.5	3	588	490	6760					
1/750	7/5300	2	2.4	735	613	6760					
* 1/900	7/6360	1.7	2	764	735	6760					
* 1/1200	7/8480	1.3	1.5	764	764	6760					
* 1/1500	7/10600	1	1.2	764	764	6760					
1/5	1/5	300	360	5.7	4.8	588					
1/10	1/10	150	180	12	9.5	931					
1/15	1/15	100	120	18	15	1030					
1/20	1/20	75	90	23	19	1180					
1/25	1/25	60	72	28	24	1270					
1/30	1/30	50	60	34	28	1370					
1/40	1/40	37.5	45	46	38	1570					
1/50	1/50	30	36	57	48	1720					
1/60	1/59	25	30	69	57	1810					
1/80	1/80	18.8	22.5	88	74	2450					
1/100	1/100	15	18	111	92	2650					
1/120	1/120	12.5	15	133	111	2740					
1/160	1/160	9.4	11.2	177	148	2840					
1/200	1/200	7.5	9	221	184	2840					
1/240	1/236	6.3	7.5	245	221	2840					
1/300	7/2120	5	6	294	245	3820					
1/375	7/2650	4	4.8	368	306	4120					
1/450	7/3127	3.3	4	431	368	4120					
1/600	7/4240	2.5	3	588	490	6760					
1/750	7/5300	2	2.4	735	613	6760					
* 1/900	7/6360	1.7	2	764	735	6760					
* 1/1200	7/8480	1.3	1.5	764	764	6760					
* 1/1500	7/10600	1	1.2	764	764	6760					

2-2. Performance Table

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings
					r/min		N·m			Foot Mount
					50 Hz	60 Hz	50 Hz	60 Hz	N	
MID	3-Phase 0.4 kW	28	1/5	1/5	300	360	12	9.5	931	P.262
			1/10	1/10	150	180	23	19	1470	
			1/15	1/15	100	120	34	28	1670	
			1/20	1/20	75	90	46	38	1860	
			1/25	1/25	60	72	57	48	2010	
			1/30	1/30	50	60	69	57	2210	
			1/40	1/40	37.5	45	92	76	2450	
			1/50	1/50	30	36	115	95	2650	
		1/60	1/59	25	30	137	115	2740		
		32	1/80	1/80	18.8	22.5	177	148	3430	P.263
			1/100	1/100	15	18	221	184	3820	
			1/120	1/120	12.5	15	266	221	4120	
			1/160	1/160	9.4	11.2	355	295	4120	
			1/200	1/200	7.5	9	431	369	4120	
			* 1/240	1/236	6.3	7.5	431	431	4120	
		40	1/300	7/2080	5	6	572	477	6760	P.264
			1/375	7/2600	4	4.8	715	597	6760	
			* 1/450	7/3120	3.3	4	764	715	6760	
		50	1/600	21/12220	2.5	3	1150	955	9510	P.265
			* 1/750	1/728	2	2.4	1230	1190	9510	
			* 1/900	7/6240	1.7	2	1230	1230	9510	
	* 1/1200		21/24440	1.3	1.5	1230	1230	9510		
	* 1/1500		1/1456	1	1.2	1230	1230	9510		
	3-Phase 0.75 kW	32	1/5	1/5	300	360	22	18	1520	P.263
			1/10	1/10	150	180	43	36	2010	
			1/15	1/15	100	120	65	54	2210	
			1/20	1/20	75	90	86	72	2450	
			1/25	1/25	60	72	108	89	2740	
			1/30	1/30	50	60	128	107	2940	
			1/40	1/40	37.5	45	172	143	3430	
			1/50	1/50	30	36	215	179	3820	
		1/60	1/59	25	30	258	215	4120		
		40	1/80	1/80	18.8	22.5	332	277	5780	P.264
			1/100	1/100	15	18	416	346	6080	
			1/120	1/120	12.5	15	498	415	6270	
			1/160	1/160	9.4	11.2	664	554	6470	
			* 1/200	1/200	7.5	9	764	692	6660	
			* 1/240	1/240	6.3	7.5	764	764	6660	
		50	1/300	7/2120	5	6	1070	895	7740	P.265
			* 1/375	7/2650	4	4.8	1230	1120	8040	
			* 1/450	7/3180	3.3	4	1230	1230	8530	

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings
					r/min		N·m			Foot Mount
					50 Hz	60 Hz	50 Hz	60 Hz	N	
MID	3-Phase 1.5 kW	40	1/5	1/5	300	360	43	36	2650	P.264
			1/10	1/10	150	180	86	72	3530	
			1/15	1/15	100	120	128	107	4410	
			1/20	1/20	75	90	172	143	4700	
			1/25	1/25	60	72	215	179	5100	
			1/30	1/30	50	60	258	215	5290	
			1/40	1/40	37.5	45	344	277	5590	
		1/50	1/50	30	36	429	346	5880		
		1/60	1/60	25	30	515	415	6080		
		50	1/80	3/235	18.8	22.5	664	554	8530	P.265
			1/100	1/98	15	18	830	692	8820	
			1/120	1/120	12.5	15	1000	830	9020	
			* 1/160	3/470	9.4	11.2	1230	1110	9310	
			* 1/200	1/196	7.5	9	1230	1230	9510	
	* 1/240		1/240	6.3	7.5	1230	1230	9510		
	3-Phase 2.2 kW	50	1/5	1/5	300	360	63	53	3920	P.265
			1/10	1/10	150	180	126	105	4410	
			1/15	1/15	100	120	189	157	4900	
			1/20	12/235	75	90	252	210	5490	
			1/25	2/49	60	72	315	263	6080	
			1/30	1/30	50	60	378	315	6570	
			1/40	1/40	37.5	45	487	406	7060	
			1/50	1/50	30	36	609	507	7550	
			1/60	1/60	25	30	731	609	8130	
			1/80	3/235	18.8	22.5	974	812	8430	
	1/100	1/98	15	18	1220	1010	8820			
	* 1/120	1/120	12.5	15	1230	1220	8820			

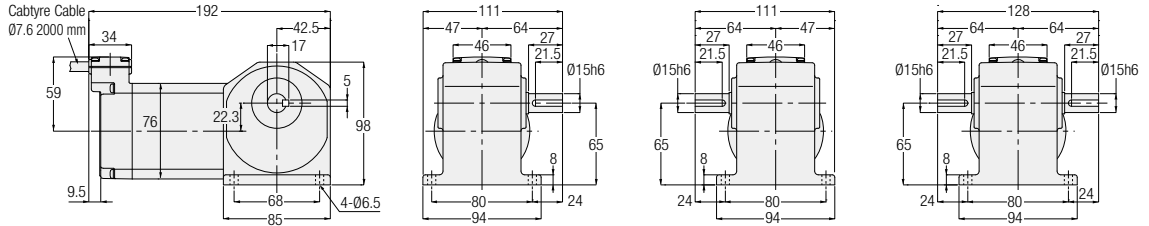
Note 1: Please be sure to read the notes on page 256.

2-3. Drawings

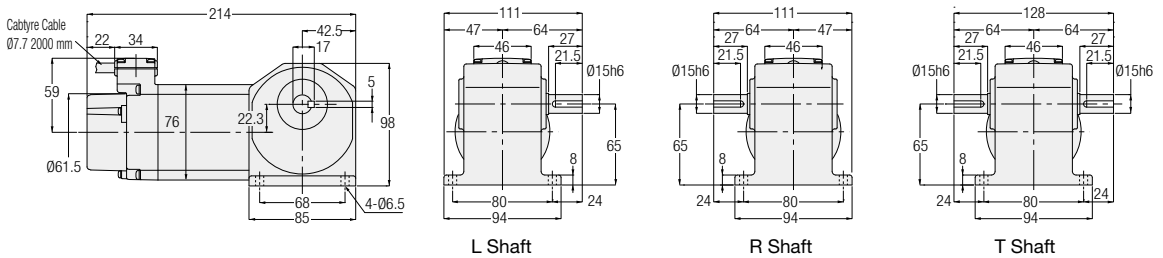
H Type Right Angle Shaft Shaft Diameter 15 **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	15 W	HLW-15#-***-T15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	1	No	3
		HLV-15#-***-T15	120, 160, 200, 240	2	Yes	
	25 W	HLW-15#-***-T25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	1	No	3
		HLV-15#-***-T25	120, 160, 200, 240	2	Yes	
1-Phase	15 W	HLW-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	1	No	3
		HLV-15#-***-S15	120, 160, 200, 240	2	Yes	
	25 W	HLW-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	1	No	3
		HLV-15#-***-S25	120, 160, 200, 240	2	Yes	

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
Note: Please refer to page 254 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

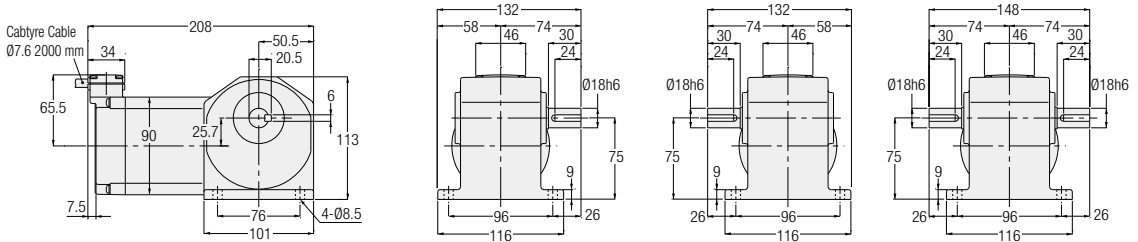
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

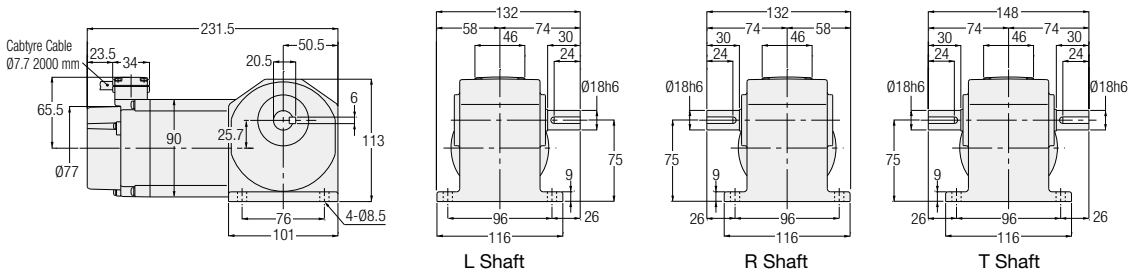
H Type Right Angle Shaft Shaft Diameter **18** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	40 W	HLW-18#-***-T40	160, 200, 240	1	No	4
		HLV-18#-***-T40		2	Yes	
	60 W	HLW-18#-***-T60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4
		HLV-18#-***-T60		2	Yes	
90 W	HLW-18#-***-T90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4	
	HLV-18#-***-T90		2	Yes		
1-Phase	40 W	HLW-18#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4
		HLV-18#-***-S40		2	Yes	

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 254 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

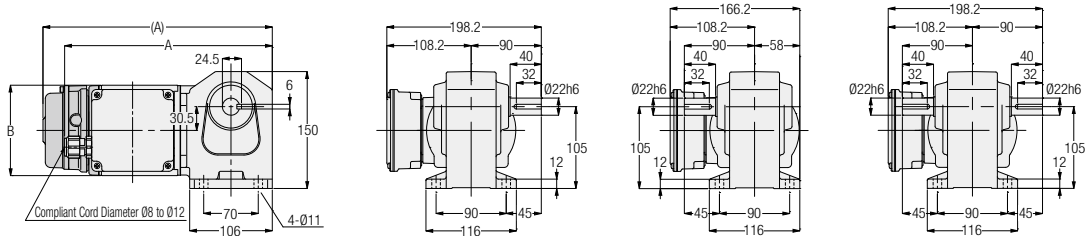
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

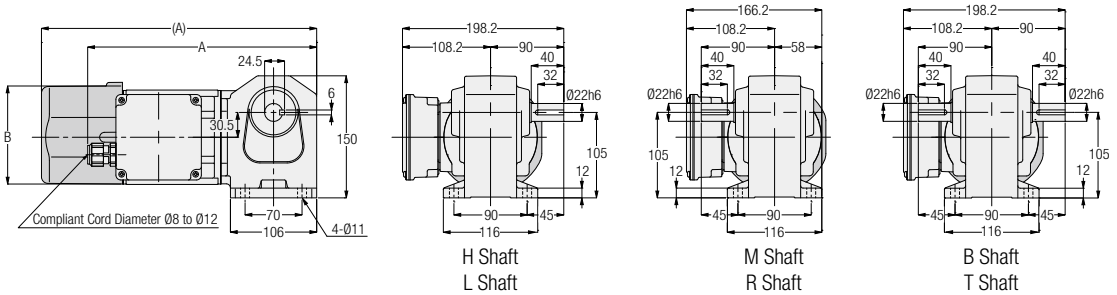
H2 Type Right Angle Shaft Shaft Diameter **22** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2L22#***-WM01T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	6.5	267	Ø115
		Yes			8	294.5	Ø115	
	0.2 kW	H2L22#***-WM02T◇◇EN		2	No	7.5	282	Ø115
		Yes			9	338.5	□126	

Note: H, M, or B will be indicated as # in the nomenclature when the shaft material is stainless steel, L, R, or T will be indicated as # when it is carbon steel. In addition, a reduction ratio will be indicated as ***, a supply voltage code will be indicated as ◇◇, and a brake specification will be indicated as ◆. Note: Please refer to page 256 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

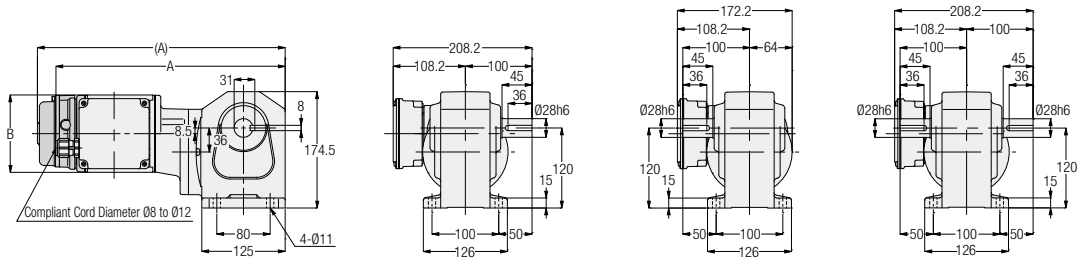
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

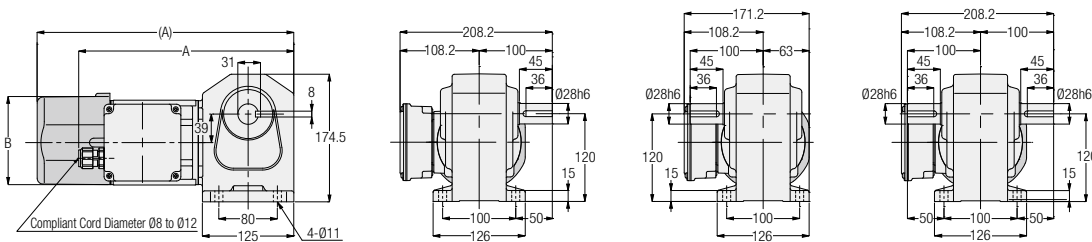
H2 Type Right Angle Shaft Shaft Diameter **28** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

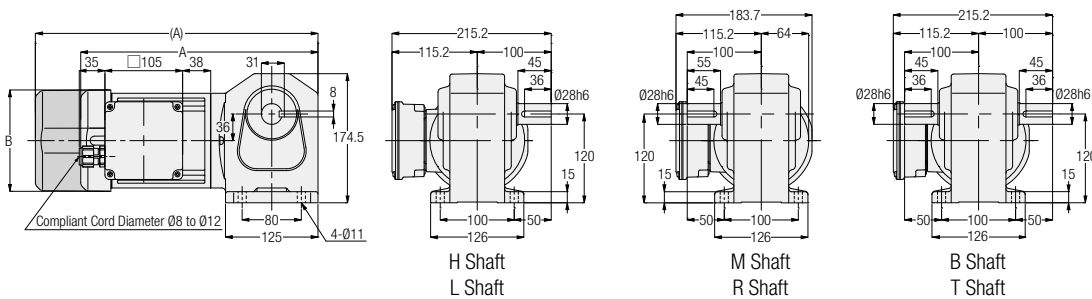
<Figure 1>



<Figure 2>



<Figure 3>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2L28#***-WM01T◇◇EN	300, 375, 450	1	No	10	344	Ø115
		H2L28#***-WM01T◇◇EV◆			Yes	11.5	371.5	Ø115
	0.2 kW	H2L28#***-WM02T◇◇EN	80, 100, 120, 160, 200, 240	2	No	9.5	294.5	Ø115
		H2L28#***-WM02T◇◇EV◆			Yes	11	351	□126
	0.4 kW	H2L28#***-WM04T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	11	321	□137
		H2L28#***-WM04T◇◇EV◆			Yes	12.5	382	□137

Note: H, M, or B will be indicated as # in the nomenclature when the shaft material is stainless steel, L, R, or T will be indicated as # when it is carbon steel.
 In addition, a reduction ratio will be indicated as ***, a supply voltage code will be indicated as ◇◇, and a brake specification will be indicated as ◆.
 Note: Please refer to page 256 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

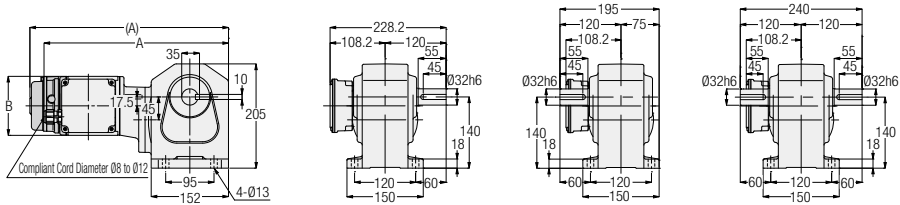
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

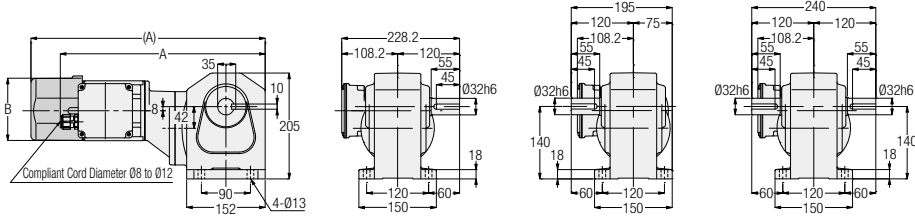
H2 Type Right Angle Shaft Shaft Diameter 32 Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

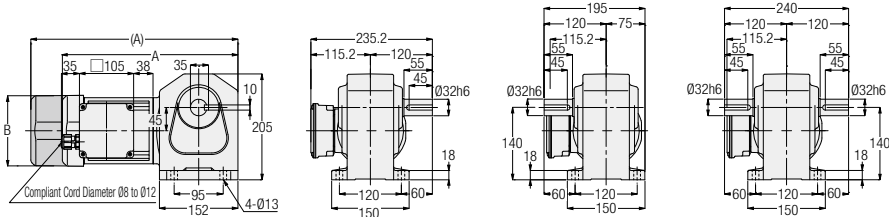
<Figure 1>



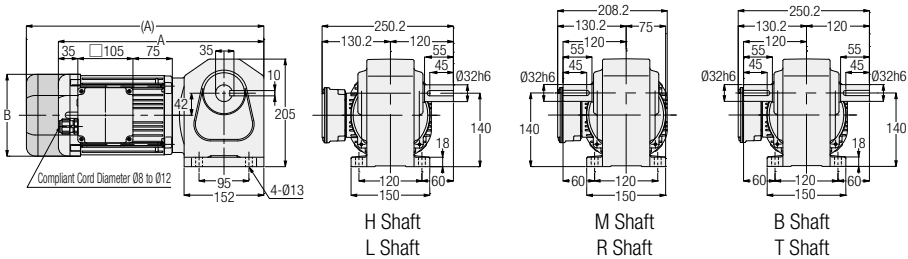
<Figure 2>



<Figure 3>



<Figure 4>



H Shaft
L Shaft

M Shaft
R Shaft

B Shaft
T Shaft

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2L32###-WM01T◇◇EN	600, 750, 900, 1200, 1500	1	No	13	363	Ø115
		H2L32###-WM01T◇◇EV◆			Yes	14.5	390.5	Ø115
	0.2 kW	H2L32###-WM02T◇◇EN	300, 375, 450	2	No	13.5	397	Ø115
		H2L32###-WM02T◇◇EV◆			Yes	15	453.5	□126
	0.4 kW	H2L32###-WM04T◇◇EN	80, 100, 120, 160, 200, 240	3	No	14	340	□137
		H2L32###-WM04T◇◇EV◆			Yes	15.5	401	□137
	0.75 kW	H2L32###-WD08T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60	4	No	21	391.5	□156
		H2L32###-WD08T◇◇EV◆			Yes	23.5	452.5	□156

Note: H, M, or B will be indicated as # in the nomenclature when the shaft material is stainless steel, L, R, or T will be indicated as # when it is carbon steel.
 In addition, a reduction ratio will be indicated as ###, a supply voltage code will be indicated as ◇◇, and a brake specification will be indicated as ◆.
 Note: Please refer to page 256 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

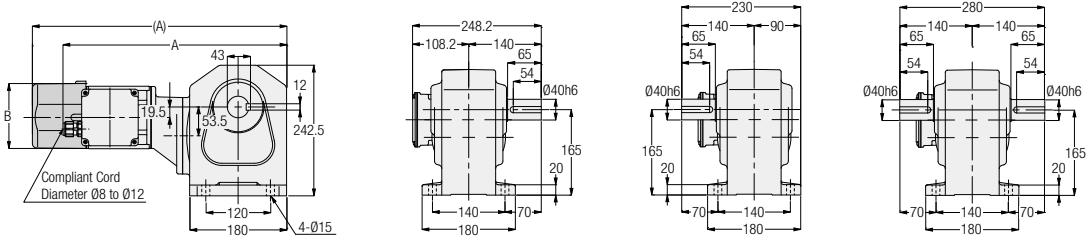
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

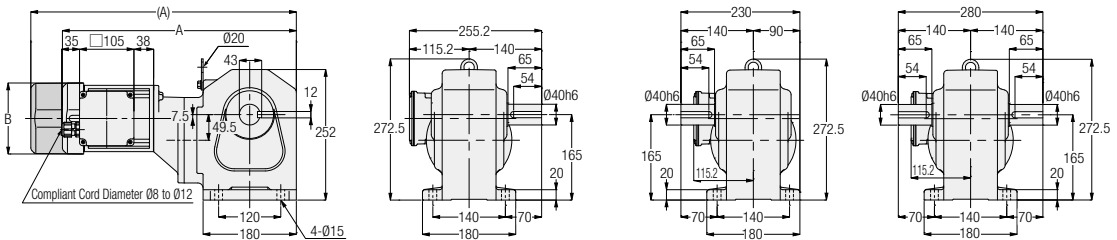
H2 Type Right Angle Shaft Shaft Diameter **40** **Foot Mounting**

The values in parenthesis are those for gearmotors with a brake.

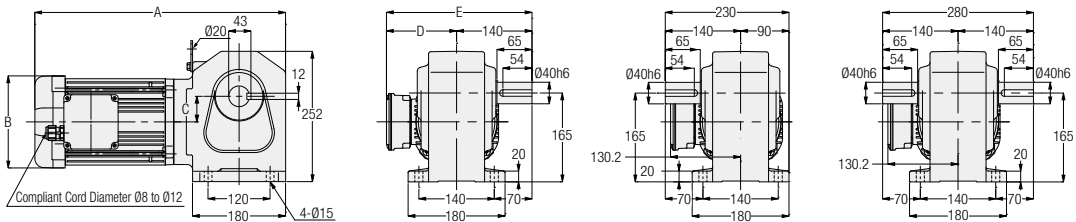
<Figure 1>



<Figure 2>



<Figure 3>



Note: Gearmotors with a motor power of 0.75 kW does not include the hanging plate.

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B	C	D	E
3-Phase	0.2 kW	H2L40****-WM02T◇◇EN	600, 750, 900, 1200, 1500	1	No	22	415.5	Ø115	-	-	-
		Yes			23.5	472	□126	-	-	-	
	0.4 kW	H2L40****-WM04T◇◇EN	300, 375, 450	2	No	24.5	451.5	□137	-	-	-
		Yes			26	512.5	□137	-	-	-	
	0.75 kW	H2L40****-WD08T◇◇EN	80, 100, 120, 160, 200, 240	3	No	29.5	410	□156	53.5	130.2	270.2
		Yes			32	471	□156	53.5	130.2	270.2	
1.5 kW	H2L40****-WD15T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60	3	No	36.5	542.6	□178	49.5	137.2	272.2	

Note: H, M, or B will be indicated as # in the nomenclature when the shaft material is stainless steel, L, R, or T will be indicated as # when it is carbon steel.

In addition, a reduction ratio will be indicated as ***, a supply voltage code will be indicated as ◇◇, and a brake specification will be indicated as ◆.

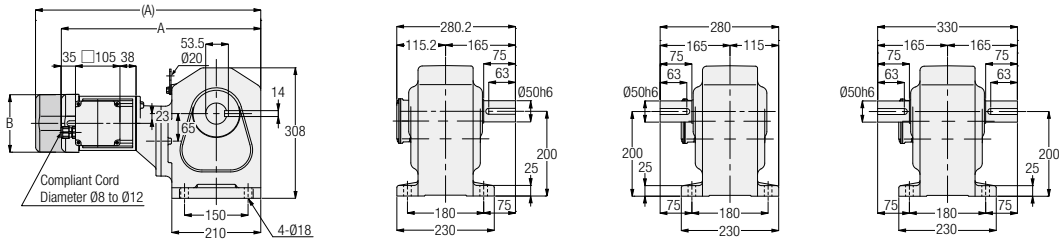
Note: There are no gearmotors with motor power of 1.5 kW that have a brake.

Note: Please refer to page 256 for the performance table.

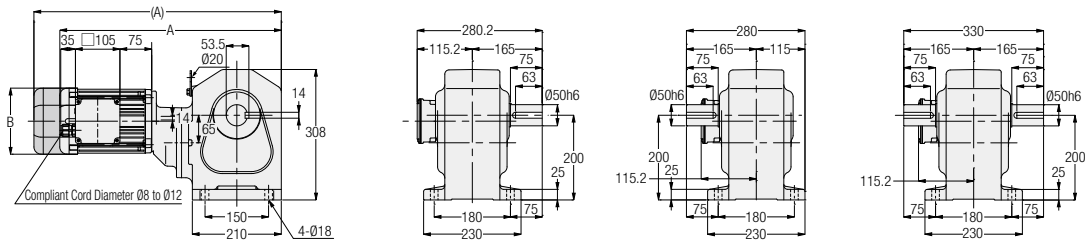
H2 Type Right Angle Shaft Shaft Diameter **50** Foot Mounting

The values in parenthesis are those for gearmotors with a brake.

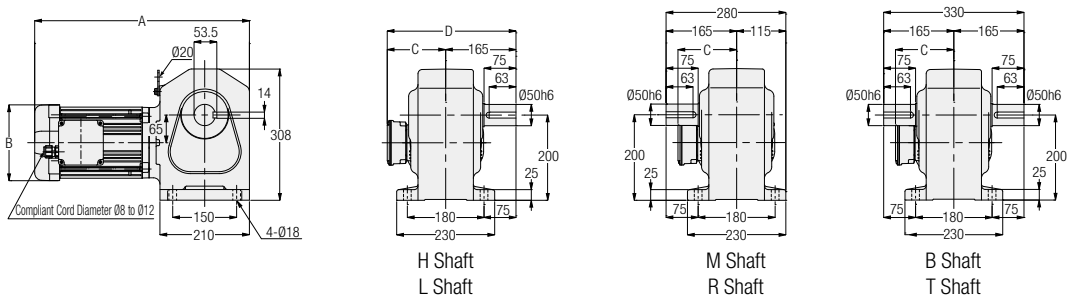
<Figure 1>



<Figure 2>



<Figure 3>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B	C	D
3-Phase	0.4 kW	H2L50***-WM04T◇◇EN	600, 750, 900, 1200, 1500	1	No	54.5	470.5	□137	-	-
		Yes			56	531.5	□137	-	-	
	0.75 kW	H2L50***-WD08T◇◇EN	300, 375, 450	2	No	62	523	□156	-	-
		Yes			64.5	584	□156	-	-	
	1.5 kW	H2L50***-WD15T◇◇EN	80, 100, 120, 160, 200, 240	3	No	65.5	504	□178	137.2	302.2
	2.2 kW	H2L50***-WD22T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120	3	No	72.5	537.5	□192	147.2	312.2

Note: H, M, or B will be indicated as # in the nomenclature when the shaft material is stainless steel, L, R, or T will be indicated as # when it is carbon steel.
 In addition, a reduction ratio will be indicated as ***, a supply voltage code will be indicated as ◇◇, and a brake specification will be indicated as ◆.
 Note: There are no gearmotors with motor power of 1.5 kW and 2.2 kW that have a brake.
 Note: Please refer to page 257 for the performance table.

C/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

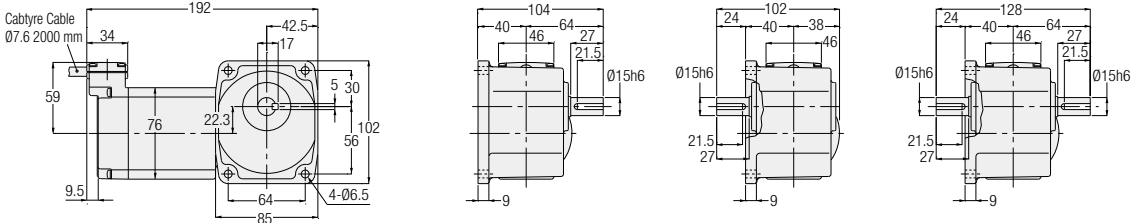
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

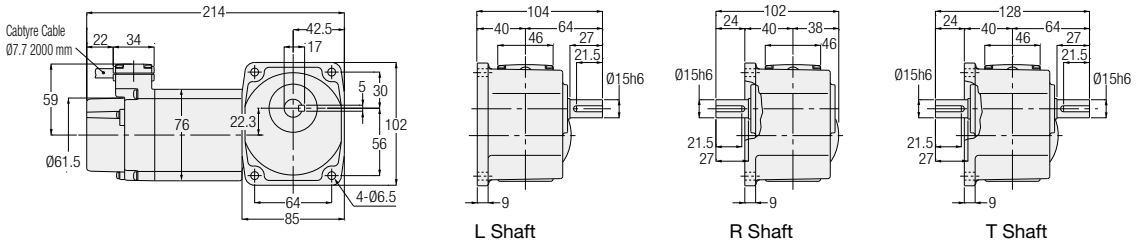
H Type Right Angle Shaft Shaft Diameter **15** **Flange Mounting**

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



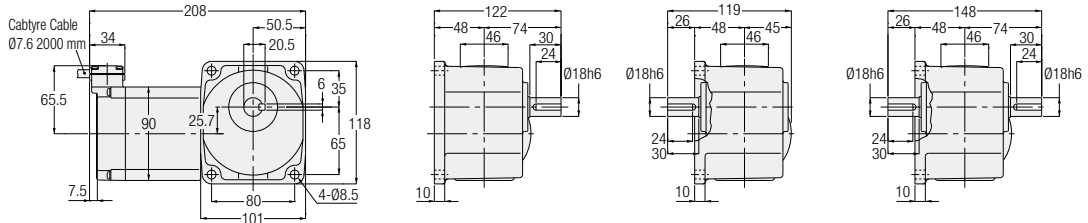
Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	15 W	HFW-15#-***-T15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HFV-15#-***-T15		2	Yes	
	25 W	HFW-15#-***-T25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HFV-15#-***-T25		2	Yes	
1-Phase	15 W	HFW-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HFV-15#-***-S15		2	Yes	
	25 W	HFW-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	3
		HFV-15#-***-S25		2	Yes	

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 254 for the performance table.

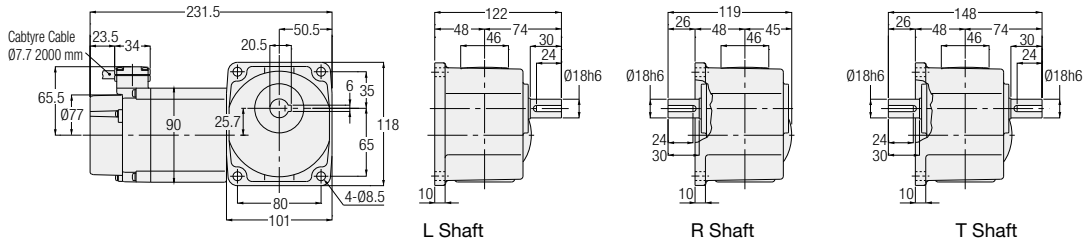
H Type Right Angle Shaft Shaft Diameter **18** Flange Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)
3-Phase	40 W	HFW-18#-***-T40	160, 200, 240	1	No	4
		HFV-18#-***-T40		2	Yes	
	60 W	HFW-18#-***-T60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4
		HFV-18#-***-T60		2	Yes	
90 W	HFW-18#-***-T90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4	
	HFV-18#-***-T90		2	Yes		
1-Phase	40 W	HFW-18#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	4
		HFV-18#-***-S40		2	Yes	

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 254 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

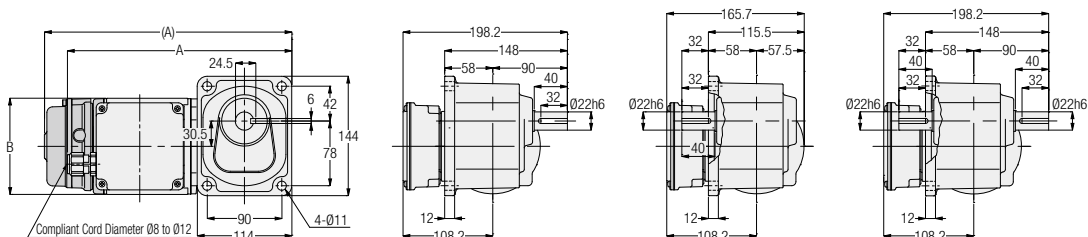
F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

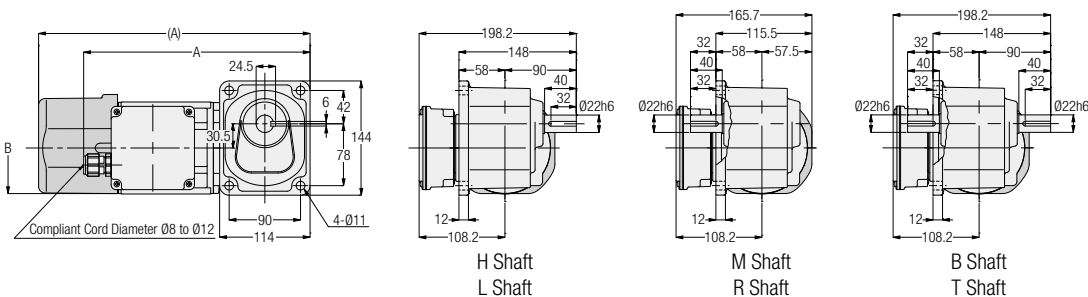
H2 Type Right Angle Shaft Shaft Diameter **22** Flange Mounting

The values in parenthesis are those for gearmotors with a brake.

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Brake	Approx. Weight (kg)	A	B
3-Phase	0.1 kW	H2F22#***-WM01T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	No	6.5	271	Ø115
		Yes			8	298.5	Ø115	
	0.2 kW	H2F22#***-WM02T◇◇EN	5, 10, 15, 20, 25, 30, 40, 50, 60		No	7.5	286	Ø115
		Yes			9	342.5	□126	

Note: H, M, or B will be indicated as # in the nomenclature when the shaft material is stainless steel, L, R, or T will be indicated as # when it is carbon steel.
 In addition, a reduction ratio will be indicated as ***, a supply voltage code will be indicated as ◇◇, and a brake specification will be indicated as ◆.
 Note: Please refer to page 256 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

MEMO

Technical Documentation

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

F Type
Right-Angle Hollow Bore/
Right Angle Shaft

H/H2 Type
Right Angle Shaft

G/G3 Type
Parallel Shaft

3. Gearmotors with Clutch/Brake

3-1. Motor Characteristics Table

H2 Type 3-Phase Standard Voltage

Series	Power	Voltage (V)	Frequency (Hz)	Rated Current (A)	Rated Speed (r/min)
MID	0.2 kW IE2	200/200/220	50/60/60	1.1/1.0/1.0	1400/1680/1700
	0.4 kW IE2	200/200/220	50/60/60	2.1/1.8/1.8	1400/1680/1700
	0.75 kW IE3	200/200/220	50/60/60	3.2/3.0/2.9	1440/1720/1740

The rated current in the motor characteristics table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

H2 Type 3-Phase High Voltage (400 V Class)

Series	Power	Voltage (V)	Frequency (Hz)	Rated Current (A)	Rated Speed (r/min)
MID	0.2 kW IE2	380/400/400/440	50/50/60/60	0.56/0.56/0.5/0.5	1390/1400/1680/1710
	0.4 kW IE2	380/400/400/440	50/50/60/60	1.0/1.0/0.9/0.9	1390/1400/1680/1710
	0.75 kW IE3	380/400/400/440	50/50/60/60	1.65/1.6/1.5/1.4	1430/1440/1730/1740

The rated current in the motor characteristics table is the current data for the motor operating without a gearbox. With regard to gearmotors with a brake, it is necessary to consider the current value flowing through the brake as needed. For more details, please contact your nearest Sales Office or the CS Center.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft


F Type
Right Angle Hollow Bore/
Right Angle Shaft

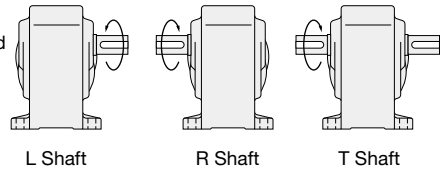
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

3-2. Performance Table

[Notes]

- The values in parentheses in the drawings are the values for gearmotors with a brake.
- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
- In the performance table,  indicates that the L shaft rotates clockwise and the R and T shafts rotate counterclockwise when viewed from the output shaft side when the connection is made as shown on page 499 (CW). (Refer to the figure on the right)
- Allowable output shaft O.H.L. is the value at the middle of the output shaft.
- The "*" mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.
- Please avoid using gearmotors with clutch/brake in vertical operation (lifting). There is a danger of falling during a power outage.



G/G3 Type
Parallel Shaft

Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings	
				r/min		N·m		N	Foot Mount	Flange Mount
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz		
3-Phase 0.2 kW	22	1/5	1/5	300	360	5.7	4.8	588	P.272	P.274
		1/10	1/10	150	180	12	9.5	931		
		1/15	1/15	100	120	18	15	1030		
		1/20	1/20	75	90	23	19	1180		
		1/25	1/25	60	72	28	24	1270		
		1/30	1/30	50	60	34	28	1370		
		1/40	1/40	37.5	45	46	38	1570		
		1/50	1/50	30	36	57	48	1720		
	1/60	1/59	25	30	69	57	1810			
	28	1/80	1/80	18.8	22.5	88	74	2450	P.272	-
		1/100	1/100	15	18	111	92	2650		
		1/120	1/120	12.5	15	133	111	2740		
		1/160	1/160	9.4	11.2	177	148	2840		
		1/200	1/200	7.5	9	221	184	2840		
1/240		1/236	6.3	7.5	245	221	2840			
3-Phase 0.4 kW	28	1/5	1/5	300	360	12	9.5	931	P.272	-
		1/10	1/10	150	180	23	19	1470		
		1/15	1/15	100	120	34	28	1670		
		1/20	1/20	75	90	46	38	1860		
		1/25	1/25	60	72	57	48	2010		
		1/30	1/30	50	60	69	57	2210		
		1/40	1/40	37.5	45	92	76	2450		
		1/50	1/50	30	36	115	95	2650		
	1/60	1/59	25	30	137	115	2740			
	32	1/80	1/80	18.8	22.5	177	148	3430	P.273	-
		1/100	1/100	15	18	221	184	3820		
		1/120	1/120	12.5	15	266	221	4120		
		1/160	1/160	9.4	11.2	355	295	4120		
		1/200	1/200	7.5	9	431	369	4120		
* 1/240		1/236	6.3	7.5	431	431	4120			
3-Phase 0.75 kW	32	1/5	1/5	300	360	22	18	1520	P.273	-
		1/10	1/10	150	180	43	36	2010		
		1/15	1/15	100	120	65	54	2210		
		1/20	1/20	75	90	86	72	2450		
		1/25	1/25	60	72	108	89	2740		
		1/30	1/30	50	60	128	107	2940		
		1/40	1/40	37.5	45	172	143	3430		
		1/50	1/50	30	36	215	179	3820		
	1/60	1/59	25	30	258	215	4120			
	40	1/80	1/80	18.8	22.5	332	277	5780	P.273	-
		1/100	1/100	15	18	416	346	6080		
		1/120	1/120	12.5	15	498	415	6270		
		1/160	1/160	9.4	11.2	664	554	6470		
		1/200	1/200	7.5	9	764	692	6660		
* 1/240		1/240	6.3	7.5	764	764	6660			

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

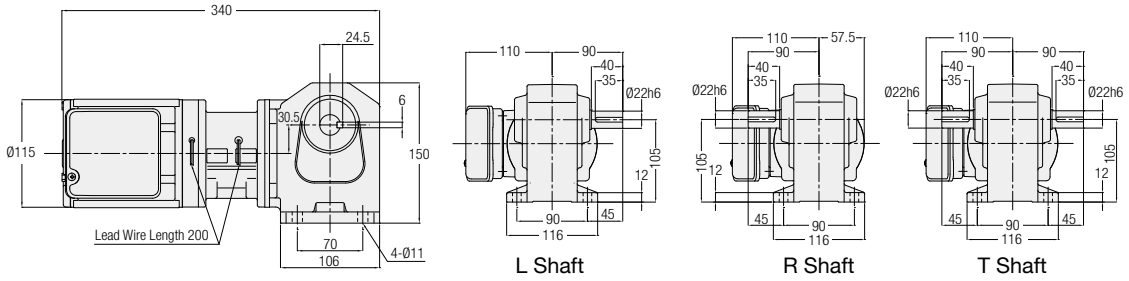
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

3-3. Drawings

H2 Type Right Angle Shaft Shaft Diameter **22** **Foot Mounting**

<Figure 1>



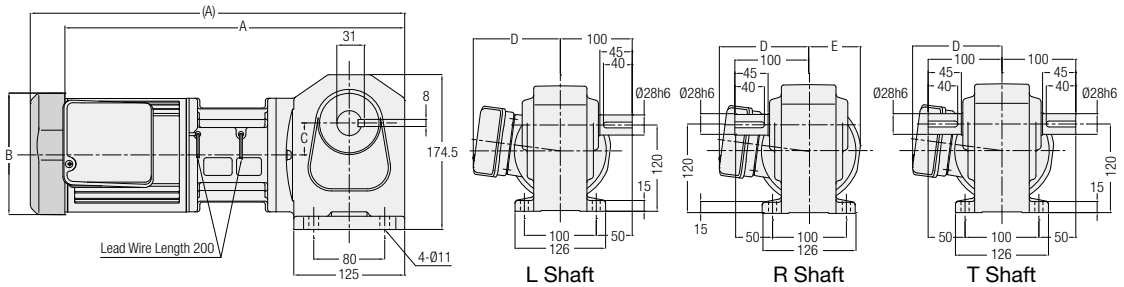
Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
3-Phase	0.2 kW	H2L22#***-EM02T◇JTN	5, 10, 15, 20, 25, 30, 40, 50, 60	1	9.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 271 for the performance table.

H2 Type Right Angle Shaft Shaft Diameter **28** **Foot Mounting**

<Figure 2>



Note: The value in parentheses is the value of a gearmotor with a motor power of 0.4 kW.

Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E
3-Phase	0.2 kW	H2L28#***-EM02T◇JTN	80, 100, 120, 160, 200, 240	2	11.5	352.5	Ø115	39	110	57.5
	0.4 kW	H2L28#***-EM04T◇JTN	5, 10, 15, 20, 25, 30, 40, 50, 60	2	14	422	□137	36	121	70

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 271 for the performance table.

G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

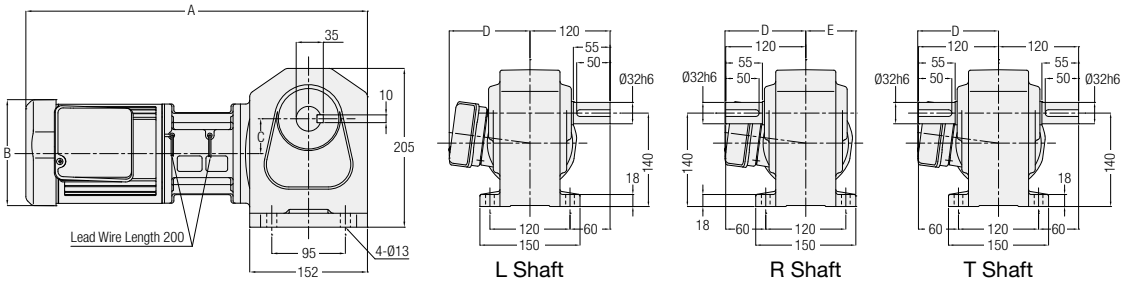
F Type Right Angle Hollow Bore/ Right Angle Shaft

F2/F3 Type Concentric Right Angle Hollow Bore/ Concentric Right Angle Shaft

Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **32** Foot Mounting

<Figure 1>



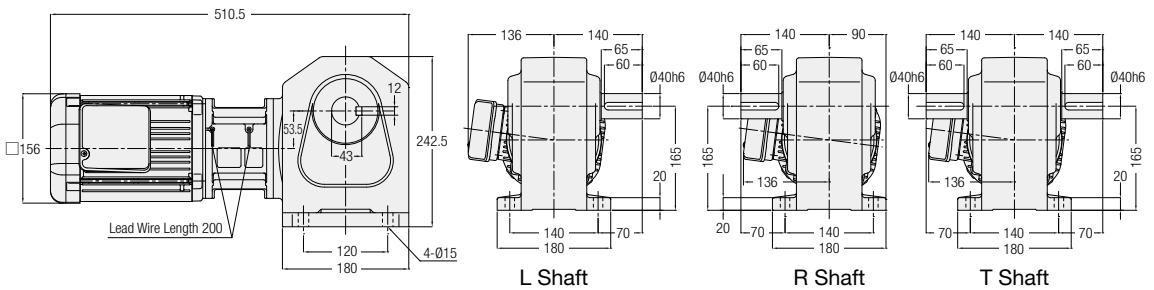
Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E
3-Phase	0.4 kW	H2L32#***-EM04T◇JTN	80, 100, 120, 160, 200, 240	1	17	441	□137	45	121	75
	0.75 kW	H2L32#***-ED08T◇JTN	5, 10, 15, 20, 25, 30, 40, 50, 60	1	24.5	492	□156	42	136	81

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 271 for the performance table.

H2 Type Right Angle Shaft Shaft Diameter **40** Foot Mounting

<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
3-Phase	0.75 kW	H2L40#***-ED08T◇JTN	80, 100, 120, 160, 200, 240	2	33

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 271 for the performance table.

C/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

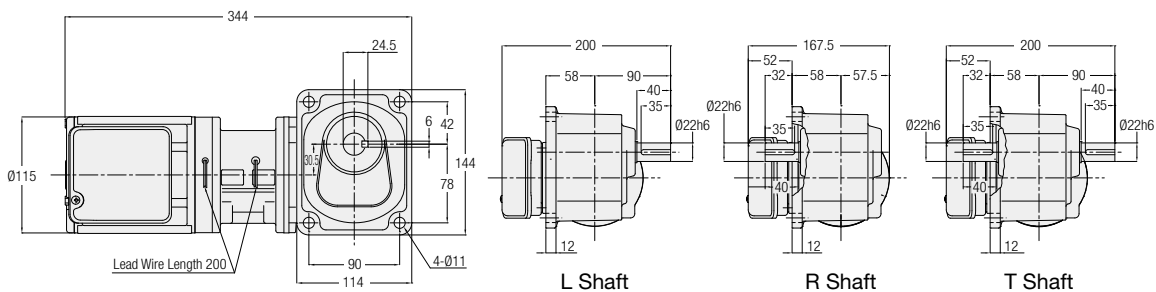
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **22** **Flange Mounting**

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
3-Phase	0.2 kW	H2F22#***-EM02T◇JTN	5, 10, 15, 20, 25, 30, 40, 50, 60	1	9.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as *** and a supply voltage code will be indicated as ◇.

Note: Please refer to page 271 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

MEMO

<p>Technical Documentation</p>	<p>F2/F3 Type Concentric Right-Angle Hollow Bore/ Concentric Right Angle Shaft</p>	<p>F Type Right-Angle Hollow Bore/ Right Angle Shaft</p>	<p>H/H2 Type Right Angle Shaft</p>	<p>G/G3 Type Parallel Shaft</p>
--------------------------------	--	--	--	-------------------------------------

4. Speed Control Gearmotors

4-1. Properties and Motor Characteristics Table

Properties

This gearmotor has a motor provided with a rate generator (AC generator) for speed detection and can control the speed freely in a wide range of 50 to 1400 r/min (50 Hz) or 50 to 1700 r/min (60 Hz) by means of a dedicated speed controller.

■ Properties

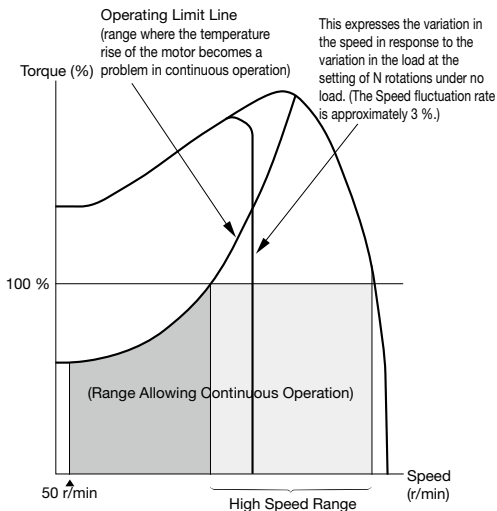
① Wide variable speed range

Our original circuit design enables the induction gearmotor to operate continuously from a low speed range of 50 r/min.

Power Source Frequency	Variable speed range
50 Hz	50 to 1400 r/min
60 Hz	50 to 1700 r/min

② Outstanding output characteristic

The induction motor ensures a high allowable load torque value in the low speed range and has a wide high-speed range characteristic as shown in the right figure.



Note: The same speed can be obtained from a speed control gearmotor, regardless of the power supply frequency. For example, a speed set in the 50 Hz region remains unchanged also in the 60 Hz region, and the same speed can be obtained. (However, the maximum speed is within the range of 1400 r/min.)

③ Wide variety of types

Induction gearmotors are available in eight main types according to applications: two U types (100 V, 200 V) connectable by means of a lead wire with a connector and six plug-in P types (100 V, 200 V).

Note: Please refer to page 571 for detailed specifications.

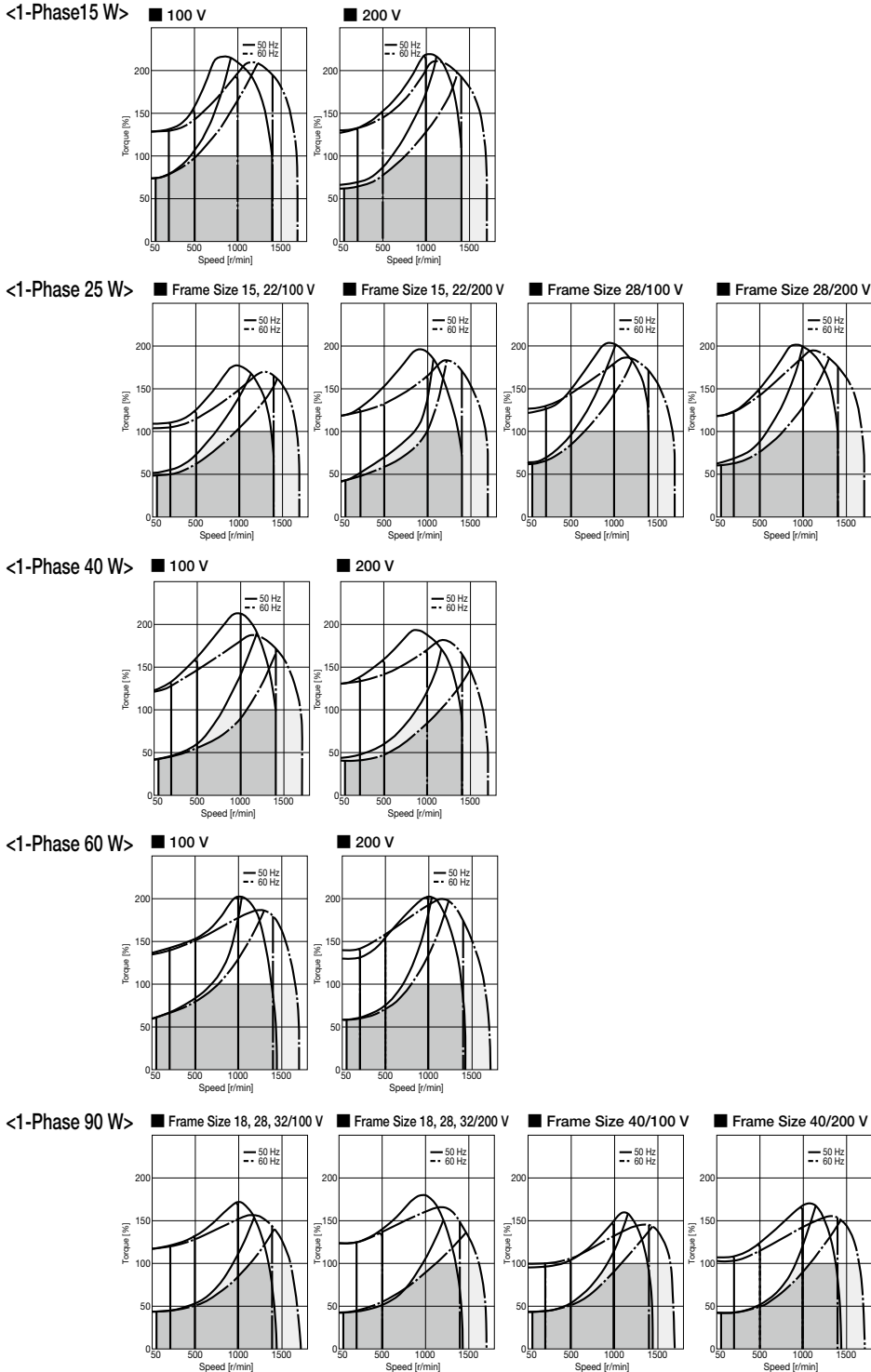
Motor Characteristics Table

H Type 1-Phase (Speed Control Gearmotor)

Series	Power (W)	Voltage (V)	Frequency (Hz)	Frame Size	Max Current (A)	High Speed Range (r/min)	Capacitor (μF)
MINI	15 W	100/100	50/60	15	0.6/0.6	500 to 1350/550 to 1650	6
				22	0.6/0.6	500 to 1350/550 to 1650	6
		200/200	50/60	15	0.3/0.3	600 to 1400/750 to 1700	1.5
				22	0.3/0.3	600 to 1400/750 to 1700	1.5
	25 W	100/100	50/60	15	0.6/0.6	750 to 1350/1000 to 1650	8
				22	0.6/0.6	750 to 1350/1000 to 1650	8
				28	0.7/0.7	550 to 1400/650 to 1650	8
		200/200	50/60	15	0.4/0.4	850 to 1350/1000 to 1650	2
				22	0.4/0.4	850 to 1350/1000 to 1650	2
				28	0.4/0.4	600 to 1350/800 to 1650	2
	40 W	100/100	50/60	18	0.9/0.9	800 to 1350/1050 to 1650	12
				28	0.9/0.9	800 to 1350/1050 to 1650	12
				32	0.9/0.9	800 to 1350/1050 to 1650	12
				18	0.5/0.5	900 to 1350/1300 to 1650	3
		200/200	50/60	28	0.5/0.5	900 to 1350/1300 to 1650	3
				32	0.5/0.5	900 to 1350/1300 to 1650	3
				18	1.0/1.7	700 to 1350/800 to 1650	20
				28	1.0/1.7	700 to 1350/800 to 1650	20
	60 W	100/100	50/60	32	1.0/1.7	700 to 1350/800 to 1650	20
				18	0.8/0.9	700 to 1350/800 to 1650	5
				28	0.8/0.9	700 to 1350/800 to 1650	5
		200/200	50/60	32	0.8/0.9	700 to 1350/800 to 1650	5
				18	1.4/2.0	950 to 1300/1150 to 1600	26
				28	1.4/2.0	950 to 1300/1150 to 1600	26
90 W	100/100	50/60	32	1.4/2.0	950 to 1300/1150 to 1600	26	
			40	1.4/2.0	950 to 1350/1100 to 1650	26	
			18	0.9/1.0	1000 to 1350/1150 to 1600	6.5	
			28	0.9/1.0	1000 to 1350/1150 to 1600	6.5	
	200/200	50/60	32	0.9/1.0	1000 to 1350/1150 to 1600	6.5	
			40	1.0/1.1	900 to 1350/1100 to 1650	6.5	

4-2. Graph for Speed Characteristics

Torque-Speed Characteristic Graph



Note: 100 % torque represents the allowable output shaft torque at high speed.

G/G3 Type
 Parallel Shaft

H/H2 Type
 Right Angle Shaft

F Type
 Right Angle Hollow Bore/
 Right Angle Shaft

F2/F3 Type
 Concentric Right Angle Hollow Bore/
 Concentric Right Angle Shaft

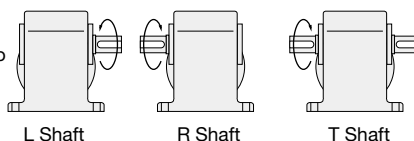
Technical Documentation

4-3. Performance Table

H Type Speed Control Gearmotors

[Notes]

- The output shaft speed is the value relative to the synchronous speed of the motor and the reduction ratio.
- Three output shaft types, L, R, and T, are available for the H Type.
- The allowable output shaft torque at high speed represents the allowable output shaft torque in the high speed range (r/min).
- The value (%) of the allowable output shaft torque at 50 r/min represents the ratio to the allowable output shaft torque at high speed.
- Allowable output shaft O.H.L. is the value at the middle of the output shaft.
- The “*” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.
- In the performance table, indicates that the L shaft rotates clockwise and the R and T shafts rotate counterclockwise when viewed from the output shaft side when the connection is made as shown on page 492 (CW). (Refer to the figure on the right)



G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft O.H.L.	Allowable Output Shaft Torque		Drawings		
					r/min			N	At High Speed	At 50 r/min (%)	Foot Mount	Flange Mount
					50 Hz	60 Hz						
MINI	1-Phase 15 W	15	1/10	1/10	150	180	343	0.69	70 (100 V) 60 (200 V)	P.281	P.286	
			1/15	1/15	100	120	441	0.98				
			1/20	1/20	75	90	539	1.27				
			1/25	1/25	60	72	588	1.67				
			1/30	1/30	50	60	686	1.96				
			1/40	1/40	37.5	45	784	2.65				
			1/50	1/50	30	36	882	3.33				
			1/60	1/60	25	30	882	3.92				
			1/80	1/80	18.8	22.5	980	5.00				
			1/100	1/100	15	18	980	6.27				
			1/120	1/120	12.5	15	1080	7.45				
			1/160	1/160	9.4	11.2	1080	9.80				
		1/200	1/200	7.5	9	1080	12.7					
		1/240	1/240	6.3	7.5	1080	14.7					
		1/300	1/300	5	6	1760	16.7					
		1/375	1/375	4	4.8	1760	20.6					
		1/450	2/885	3.3	4	1760	25.5					
		1/600	1/600	2.5	3	1760	33.3					
	1/750	1/750	2	2.4	1760	42.1						
	1/900	1/885	1.7	2	1760	50.0						
	1/1200	1/1160	1.3	1.5	1760	66.6						
	1/1500	1/1450	1	1.2	1760	83.3						
	1/1800	1/1711	0.8	1	1760	98.0						
	1/10	4/41	150	180	343	1.08	50 (100 V) 45 (200 V)	P.281	P.286			
	1/15	8/123	100	120	441	1.67						
	1/20	2/41	75	90	539	2.25						
	1/25	8/205	60	72	588	2.74						
	1/30	4/123	50	60	686	3.33						
	1/40	1/41	37.5	45	784	4.41						
	1/50	4/205	30	36	882	5.49						
	1/60	20/1189	25	30	882	6.66						
	1/80	1/82	18.8	22.5	980	8.43						
	1/100	2/205	15	18	980	10.8						
	1/120	1/123	12.5	15	1080	12.7						
	1/160	1/164	9.4	11.2	1080	16.7						
	1/200	1/205	7.5	9	1080	20.6						
1/240	5/1189	6.3	7.5	1080	25.5							
1/300	1/300	5	6	1760	28.4	50 (100 V) 45 (200 V)	P.283	P.288				
1/375	1/375	4	4.8	1760	35.3							
1/450	2/885	3.3	4	1760	42.1							
1/600	1/600	2.5	3	1760	55.9							
1/750	1/750	2	2.4	1760	69.6							
1/900	1/885	1.7	2	1760	84.3							
1/1200	1/1160	1.3	1.5	2740	108							
1/1500	1/1450	1	1.2	2740	137							
1/1800	1/1711	0.8	1	2740	167							
1/10	4/41	150	180	343	1.08				60 (100 V) (200 V)	P.284	-	
1/15	8/123	100	120	441	1.67							
1/20	2/41	75	90	539	2.25							
1/25	8/205	60	72	588	2.74							
1/30	4/123	50	60	686	3.33							
1/40	1/41	37.5	45	784	4.41							
1/50	4/205	30	36	882	5.49							
1/60	20/1189	25	30	882	6.66							
1/80	1/82	18.8	22.5	980	8.43							
1/100	2/205	15	18	980	10.8							
1/120	1/123	12.5	15	1080	12.7							
1/160	1/164	9.4	11.2	1080	16.7							
1/200	1/205	7.5	9	1080	20.6							
1/240	5/1189	6.3	7.5	1080	25.5							

4-3. Performance Table

Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft O.H.L.	Allowable Output Shaft Torque		Drawings		
					r/min			At High Speed	At 50 r/min (%)	Foot Mount	Flange Mount	
					50 Hz	60 Hz	N					N·m
MINI	1-Phase 40 W	18	1/10	4/41	150	180	343	1.76	40 (100 V) (200 V)	P.282	P.287	
			1/15	8/123	100	120	441	2.65				
			1/20	2/41	75	90	539	3.53				
			1/25	8/205	60	72	588	4.41				
			1/30	4/123	50	60	686	5.29				
			1/40	1/41	37.5	45	784	7.06				
			1/50	4/205	30	36	882	8.82				
			1/60	20/1189	25	30	882	10.8				
			1/80	1/82	18.8	22.5	980	13.7				
			1/100	2/205	15	18	980	16.7				
			1/120	1/123	12.5	15	1080	20.6				
			1/160	1/164	9.4	11.2	1370	26.5				
		1/200	1/205	7.5	9	1370	33.3					
		1/240	1/246	6.3	7.5	1370	40.2					
		28	1/300	1/300	5	6	2740	45.1	40 (100 V) (200 V)	P.284	-	
			1/375	1/375	4	4.8	2740	55.9				
			1/450	2/885	3.3	4	2740	67.6				
			1/600	1/600	2.5	3	2740	90.2				
	1/750		1/750	2	2.4	2740	118					
	1/900		1/885	1.7	2	2740	137					
	32	1/1200	1/1200	1.3	1.5	5100	176	40 (100 V) (200 V)	P.285	-		
		1/1500	1/1500	1	1.2	5100	225					
		1/1800	1/1800	0.8	1	5100	274					
	1-Phase 60 W	18	18	1/10	4/41	150	180	343	2.74	60 (100 V) 55 (200 V)	P.282	P.287
				1/15	8/123	100	120	441	4.12			
				1/20	2/41	75	90	539	5.49			
				1/25	8/205	60	72	588	6.96			
				1/30	4/123	50	60	686	8.33			
				1/40	1/41	37.5	45	784	10.8			
				1/50	4/205	30	36	882	13.7			
				1/60	2/123	25	30	882	16.7			
				1/80	1/82	18.8	22.5	1270	20.6			
				1/100	2/205	15	18	1270	26.5			
				1/120	1/123	12.5	15	1370	31.4			
				1/160	1/164	9.4	11.2	1370	42.1			
		1/200	1/205	7.5	9	1370	52.9					
		* 1/240	1/246	6.3	7.5	1370	53.9					
		28	1/300	1/300	5	6	2740	70.6	60 (100 V) 55 (200 V)	P.284	-	
			1/375	1/375	4	4.8	2740	88.2				
			1/450	2/885	3.3	4	2740	108				
			1/600	1/600	2.5	3	2740	137				
			1/750	1/750	2	2.4	2740	176				
1/900			1/885	1.7	2	2740	216					
32		1/1200	1/1200	1.3	1.5	5100	284	60 (100 V) 55 (200 V)	P.285	-		
		1/1500	1/1500	1	1.2	5100	353					
		1/1800	1/1800	0.8	1	5100	421					

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

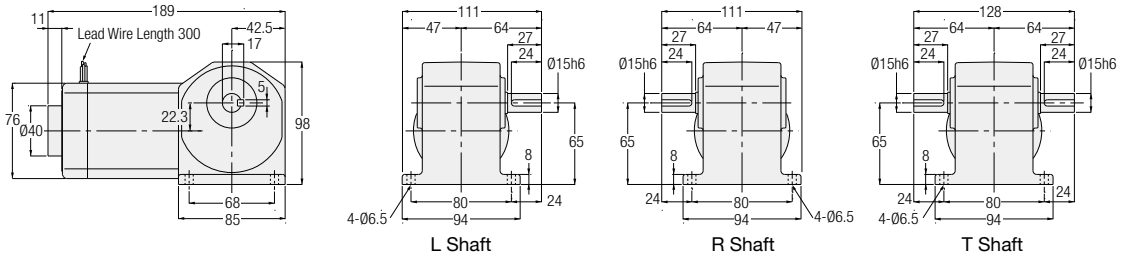
Series	Motor Power	Frame Size	Reduction Ratio	Actual Reduction Ratio	Output Shaft Speed		Allowable Output Shaft O.H.L.	Allowable Output Shaft Torque		Drawings	
					r/min			At High Speed	At 50 r/min (%)	Foot Mount	Flange Mount
					50 Hz	60 Hz	N	N·m			
MINI	1-Phase 90 W	18	1/10	4/41	150	180	441	4.12	40 (100 V) (200 V)	P.282	P.287
			1/15	8/123	100	120	588	6.17			
			1/20	2/41	75	90	735	8.33			
			1/25	8/205	60	72	882	10.8			
			1/30	4/123	50	60	980	12.7			
			1/40	1/41	37.5	45	1080	16.7			
			1/50	4/205	30	36	1180	20.6			
			1/60	2/123	25	30	1180	24.5			
			1/80	1/82	18.8	22.5	1270	31.4			
			1/100	2/205	15	18	1270	39.2			
			1/120	1/123	12.5	15	1370	47.0			
			* 1/160	1/164	9.4	11.2	1370	53.9			
		* 1/200	1/205	7.5	9	1370	53.9				
		* 1/240	1/246	6.3	7.5	1370	53.9				
		28	1/300	1/300	5	6	2740	108	40 (100 V) (200 V)	P.284	-
			1/375	1/375	4	4.8	2740	137			
			1/450	2/885	3.3	4	2740	157			
		32	1/600	1/600	2.5	3	5100	216	40 (100 V) (200 V)	P.285	-
			1/750	1/750	2	2.4	5100	265			
			1/900	1/900	1.7	2	5100	314			
		40	1/1200	1/1200	1.3	1.5	7060	421	40 (100 V) (200 V)	P.286	-
			1/1500	1/1500	1	1.2	7060	529			
			1/1800	1/1800	0.8	1	7060	637			

Note 1: Please be sure to read the notes on page 278.

4-4. Drawings

H Type Right Angle Shaft Shaft Diameter 15 **Foot Mounting**

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	15 W	HLU-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Set	3
		HLU-15#-***-S15W				
	25 W	HLP-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Sold Separately	3
		HLP-15#-***-S15W				
		HLU-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Set	3
		HLP-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Sold Separately	3

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
Note: Please refer to page 278 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

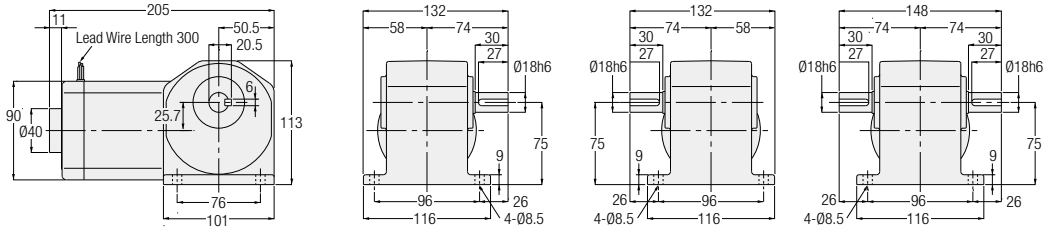
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

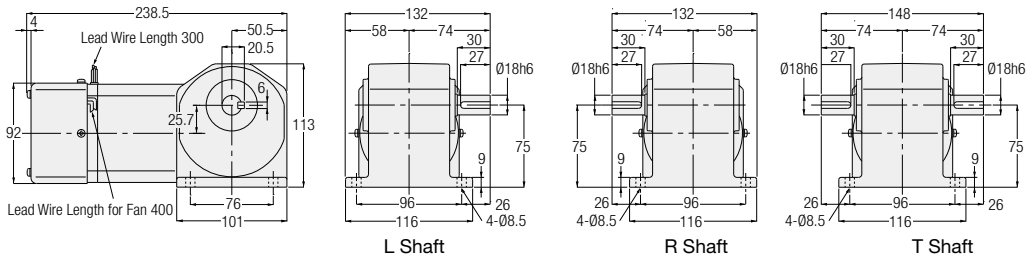
Technical Documentation

H Type Right Angle Shaft Shaft Diameter 18 **Foot Mounting**

<Figure 1>



<Figure 2>

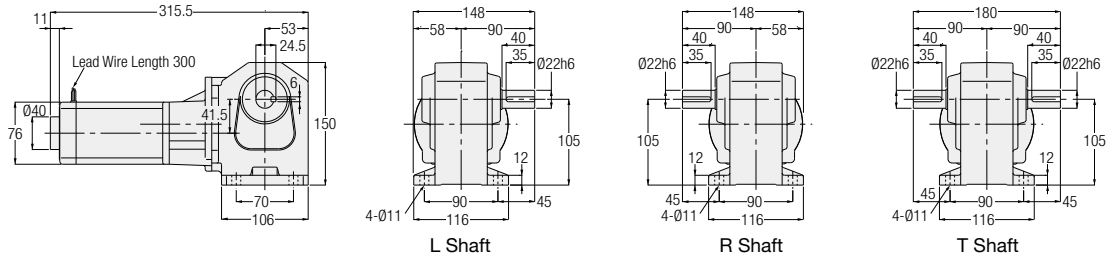


Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	40 W	HLU-18#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Set	4
		HLU-18#-***-S40W				
		HLP-18#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Sold Separately	4
	60 W	HLU-18#-***-S60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Set	4
		HLU-18#-***-S60W				
		HLP-18#-***-S60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Sold Separately	4
	90 W	HLU-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Set	4
		HLU-18#-***-S90W				
		HLP-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Sold Separately	4

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 279 for the performance table.

H Type Right Angle Shaft Shaft Diameter **22** **Foot Mounting**

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	15 W	HLU-22#-***-S15	300, 375, 450, 600, 750, 900, 1200,	1	Set	6
		HLU-22#-***-S15W	1500, 1800			
	25 W	HLP-22#-***-S15	300, 375, 450, 600, 750, 900, 1200,	1	Sold Separately	6
		HLP-22#-***-S15W				
		HLU-22#-***-S25	300, 375, 450, 600, 750, 900	1	Set	6
		HLU-22#-***-S25W	300, 375, 450, 600, 750, 900	1	Sold Separately	6
HLP-22#-***-S25						
		HLP-22#-***-S25W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 278 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

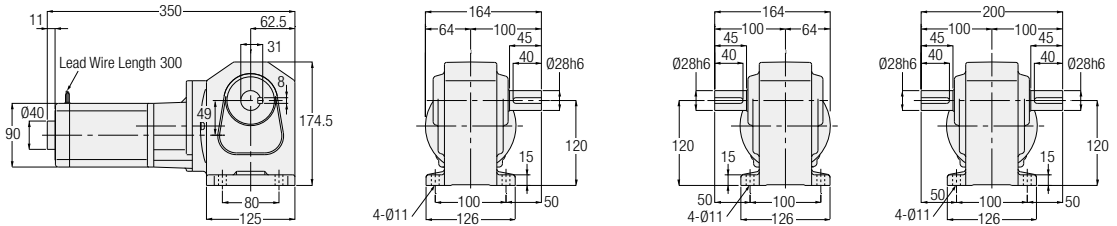
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

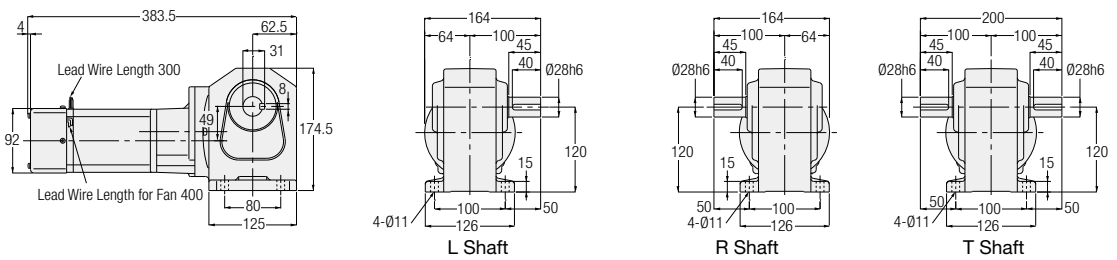
Technical Documentation

H Type Right Angle Shaft Shaft Diameter **28** **Foot Mounting**

<Figure 1>



<Figure 2>

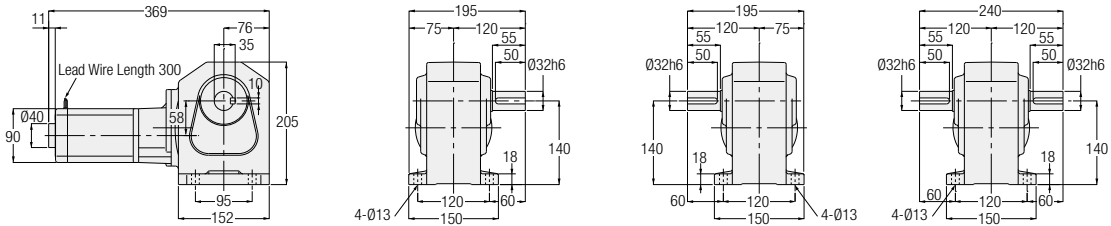


Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	25 W	HLU-28#-***-S25	1200, 1500, 1800	1	Set	9
		HLU-28#-***-S25W				
		HLP-28#-***-S25	1200, 1500, 1800	1	Sold Separately	9
		HLP-28#-***-S25W				
	40 W	HLU-28#-***-S40	300, 375, 450, 600, 750, 900	1	Set	9
		HLU-28#-***-S40W				
		HLP-28#-***-S40	300, 375, 450, 600, 750, 900	1	Sold Separately	9
		HLP-28#-***-S40W				
	60 W	HLU-28#-***-S60	300, 375, 450, 600, 750, 900	2	Set	9
		HLU-28#-***-S60W				
		HLP-28#-***-S60	300, 375, 450, 600, 750, 900	2	Sold Separately	9
		HLP-28#-***-S60W				
90 W	HLU-28#-***-S90	300, 375, 450	2	Set	9	
	HLU-28#-***-S90W					
	HLP-28#-***-S90	300, 375, 450	2	Sold Separately	9	
	HLP-28#-***-S90W					

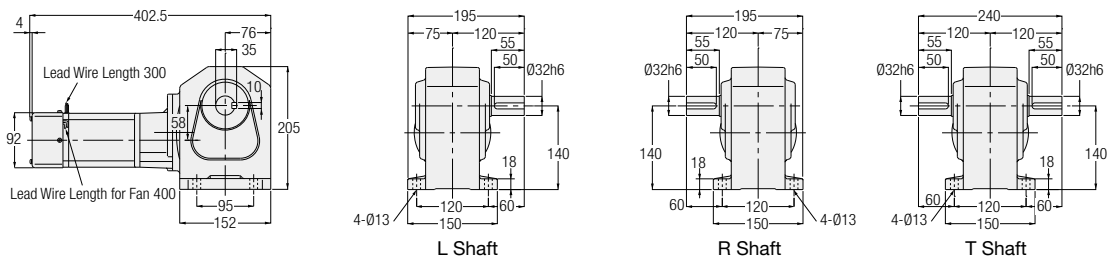
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 278 for the performance table.

H Type Right Angle Shaft Shaft Diameter **32** Foot Mounting

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	40 W	HLU-32#-***-S40	1200, 1500, 1800	1	Set	15
		HLU-32#-***-S40W				
		HLP-32#-***-S40	1200, 1500, 1800	1	Sold Separately	15
	HLP-32#-***-S40W					
	60 W	HLU-32#-***-S60	1200, 1500, 1800	2	Set	15
		HLU-32#-***-S60W				
		HLP-32#-***-S60	1200, 1500, 1800	2	Sold Separately	15
	HLP-32#-***-S60W					
	90 W	HLU-32#-***-S90	600, 750, 900	2	Set	15
HLU-32#-***-S90W						
HLP-32#-***-S90		600, 750, 900	2	Sold Separately	15	
HLP-32#-***-S90W						

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 279 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

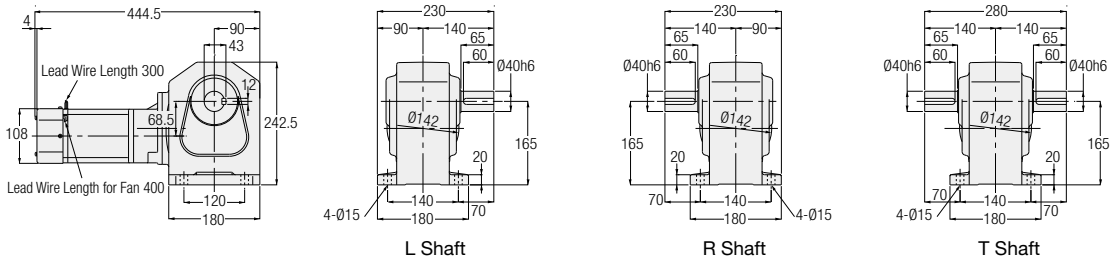
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H Type Right Angle Shaft Shaft Diameter **40** **Foot Mounting**

<Figure 1>

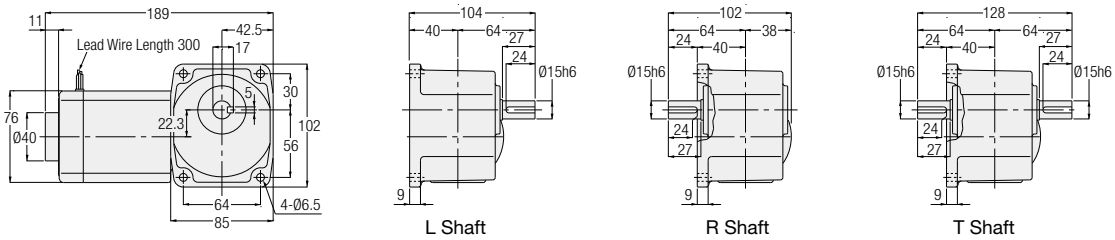


Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	90 W	HLU-40#-***-S90	1200, 1500, 1800	1	Set	22
		HLU-40#-***-S90W				
		HLP-40#-***-S90	1200, 1500, 1800	1	Sold Separately	22
		HLP-40#-***-S90W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 280 for the performance table.

H Type Right Angle Shaft Shaft Diameter **15** **Flange Mounting**

<Figure 2>

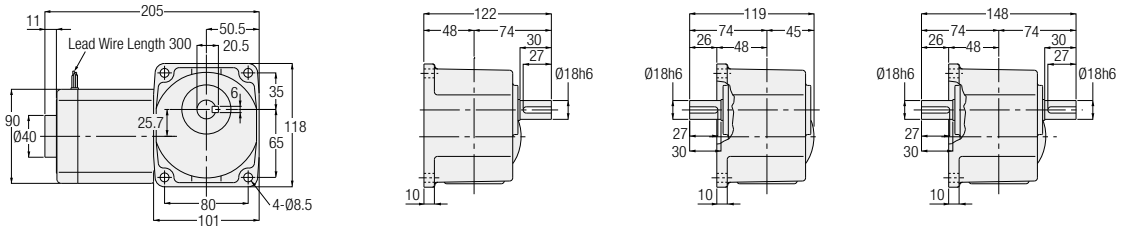


Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	15 W	HFU-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Set	3
		HFU-15#-***-S15W				
		HFP-15#-***-S15	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Sold Separately	3
	HFP-15#-***-S15W					
	25 W	HFU-15#-***-S25	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Set	3
		HFU-15#-***-S25W				
HFP-15#-***-S25		10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Sold Separately	3	
HFP-15#-***-S25W						

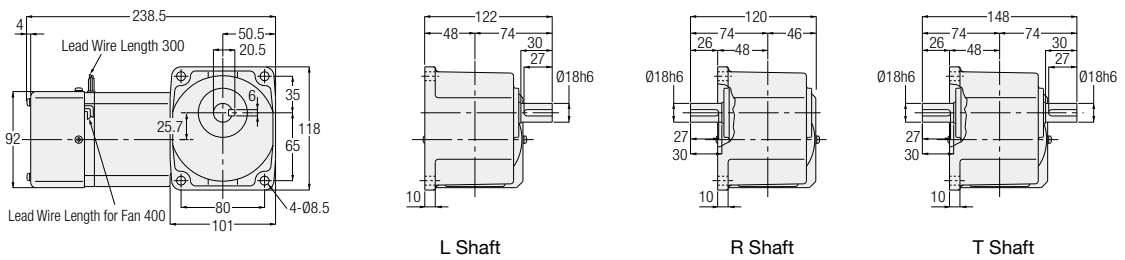
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 278 for the performance table.

H Type Right Angle Shaft Shaft Diameter **18** Flange Mounting

<Figure 1>



<Figure 2>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	40 W	HFU-18#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Set	4
		HFU-18#-***-S40W				
		HFP-18#-***-S40	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	1	Sold Separately	4
		HFP-18#-***-S40W				
	60 W	HFU-18#-***-S60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Set	4
		HFU-18#-***-S60W				
		HFP-18#-***-S60	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Sold Separately	4
		HFP-18#-***-S60W				
	90 W	HFU-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Set	4
		HFU-18#-***-S90W				
		HFP-18#-***-S90	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 120, 160, 200, 240	2	Sold Separately	4
		HFP-18#-***-S90W				

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 279 for the performance table.

C/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

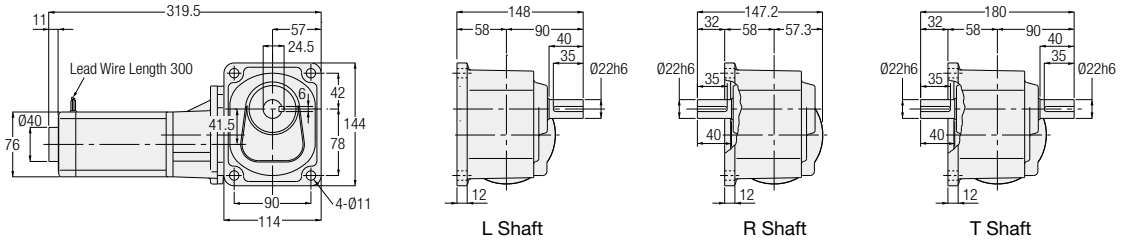
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

H Type Right Angle Shaft Shaft Diameter **22** **Flange Mounting**

<Figure 1>



Number of Phases	Power	Part Number	Reduction Ratio	Figure Number	Controller	Approx. Weight (kg)
1-Phase	15 W	HFU-22#-***-S15	300, 375, 450, 600, 750, 900, 1200,	1	Set	6
		HFU-22#-***-S15W	1500, 1800			
		HFP-22#-***-S15	300, 375, 450, 600, 750, 900, 1200,	1	Sold Separately	6
	HFP-22#-***-S15W	1500, 1800				
	25 W	HFU-22#-***-S25	300, 375, 450, 600, 750, 900	1	Set	6
		HFU-22#-***-S25W				
HFP-22#-***-S25		300, 375, 450, 600, 750, 900	1	Sold Separately	6	
HFP-22#-***-S25W						

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 278 for the performance table.

MEMO

<p>Technical Documentation</p>	<p>F2/F3 Type Concentric Right-Angle Hollow Bore/ Concentric Right Angle Shaft</p>	<p>F Type Right-Angle Hollow Bore/ Right Angle Shaft</p>	<p>H/H2 Type Right Angle Shaft</p>	<p>G/G3 Type Parallel Shaft</p>
--------------------------------	--	--	--	-------------------------------------

5. Reducers (Double Shaft Type)

5-1. Performance Table

H2 Type Reducers (Double Shaft Type)

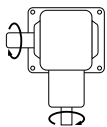
[Notes]

- The motor power class value is the value when a 4 pole motor is used.
- Allowable output shaft O.H.L. is the value at 20 mm from the end of the output shaft.
- For the rotational direction of the output shaft, please refer to the figure shown below.
- The “*” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

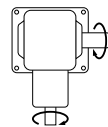
■ Rotational Direction Relationship

The rotational direction shown below with arrow illustrates the rotation relationship between the output shaft / input shaft and is no way illustrating limitations in rotational direction.

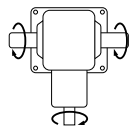
Power	Reduction Ratio	Power	Reduction Ratio
0.2 kW	1/5 to 1/60 and 1/600 to 1/1500	0.2 kW	1/80 to 1/450
0.4 kW, 0.75 kW	1/5 to 1/60 and 1/300 to 1/1500	0.4 kW, 0.75 kW	1/80 to 1/240
1.5 kW, 2.2 kW	1/5 to 1/30	1.5 kW, 2.2 kW	1/40 to 1/240



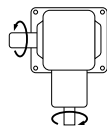
L Shaft



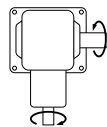
R Shaft



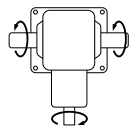
T Shaft



L Shaft



R Shaft



T Shaft

4 Poles Motor Power Class	Frame Size	Reduction Ratio	Actual Reduction Ratio	Allowable Output Shaft Torque Input (1500 r/min)	Allowable O.H.L.		Drawings	
					N		Foot Mount	Flange Mount
					Input Shaft	Output Shaft		
0.2 kW	22	1/5	1/5	5.7	245	588	P.293	P.296
		1/10	1/10	12		931		
		1/15	1/15	18		1030		
		1/20	1/20	23		1180		
		1/25	1/25	28		1270		
		1/30	1/30	34		1370		
		1/40	1/40	46		1570		
		1/50	1/50	57		1720		
	28	1/60	1/59	69	245	1810	P.293	-
		1/80	1/80	88		2450		
		1/100	1/100	111		2650		
		1/120	1/120	133		2740		
		1/160	1/160	177		2840		
		1/200	1/200	221		2840		
	32	1/240	1/236	245	245	2840	P.294	-
		1/300	7/2120	294		3820		
		1/375	7/2650	368		4120		
	40	1/450	7/3127	431	245	4120	P.295	-
		1/600	7/4240	588		6760		
		1/750	7/5300	735		6760		
		1/900	7/6360	764		6760		
		* 1/1200	7/8480	764		6760		
		* 1/1500	7/10600	764		6760		

5-1. Performance Table

4 Poles Motor Power Class	Frame Size	Reduction Ratio	Actual Reduction Ratio	Allowable Output Shaft Torque Input (1500 r/min)	Allowable O.H.L.		Drawings
					N		
					N-m	Input Shaft	Output Shaft
0.4 kW	28	1/5	1/5	12	294	931	P.293
		1/10	1/10	23		1470	
		1/15	1/15	34		1670	
		1/20	1/20	46		1860	
		1/25	1/25	57		2010	
		1/30	1/30	69		2210	
		1/40	1/40	92		2450	
		1/50	1/50	115		2650	
	32	1/60	1/59	137	294	2740	P.294
		1/80	1/80	177		3430	
		1/100	1/100	221		3820	
		1/120	1/120	266		4120	
		1/160	1/160	355		4120	
		1/200	1/200	431		4120	
	40	* 1/240	1/236	431	294	4120	P.295
		1/300	7/2080	572		6760	
		1/375	7/2600	715		6760	
	50	* 1/450	7/3120	764	294	6760	P.296
		1/600	21/12220	1150		9510	
		* 1/750	1/728	1230		9510	
* 1/900		7/6240	1230	9510			
* 1/1200		21/24440	1230	9510			
0.75 kW	32	* 1/1500	1/1456	1230	392	9510	P.294
		1/5	1/5	22		1520	
		1/10	1/10	43		2010	
		1/15	1/15	65		2210	
		1/20	1/20	86		2450	
		1/25	1/25	108		2740	
		1/30	1/30	128		2940	
		1/40	1/40	172		3430	
	40	1/50	1/50	215	392	3820	P.295
		1/60	1/59	258		4120	
		1/80	1/80	332		5780	
		1/100	1/100	416		6080	
		1/120	1/120	498		6270	
		1/160	1/160	664		6470	
	50	* 1/200	1/200	764	392	6660	P.296
		* 1/240	1/240	764		6660	
		1/300	7/2120	1070		7740	
		* 1/375	7/2650	1230		8040	
		* 1/450	7/3180	1230		8530	
		1.5 kW	40	1/500		1/500	
1/5	1/5			43	2650		
1/10	1/10			86	3530		
1/15	1/15			128	4410		
1/20	1/20			172	4700		
1/25	1/25			215	5100		
1/30	1/30			258	5290		
1/40	1/40			344	5590		
50	1/50		1/50	429	392	5880	P.296
	1/60		1/60	515		6080	
	1/80		3/235	664		8530	
	1/100		1/98	830		8820	
	1/120		1/120	1000		9020	
	* 1/160		3/470	1230		9310	
* 1/200	1/196	1230	9510				
* 1/240	1/240	1230	9510				

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

4 Poles Motor Power Class	Frame Size	Reduction Ratio	Actual Reduction Ratio	Allowable Output Shaft Torque Input (1500 r/min)	Allowable O.H.L.		Drawings
					N		Foot Mount
					Input Shaft	Output Shaft	
2.2 kW	50	1/5	1/5	63	392	3920	P.296
		1/10	1/10	126		4410	
		1/15	1/15	189		4900	
		1/20	12/235	252		5490	
		1/25	2/49	315		6080	
		1/30	1/30	378		6570	
		1/40	1/40	487		7060	
		1/50	1/50	609		7550	
		1/60	1/60	731		8130	
		1/80	3/235	974		8430	
		1/100	1/98	1220		8820	
		* 1/120	1/120	1230		8820	

Note 1: Please be sure to read the notes on page 290.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

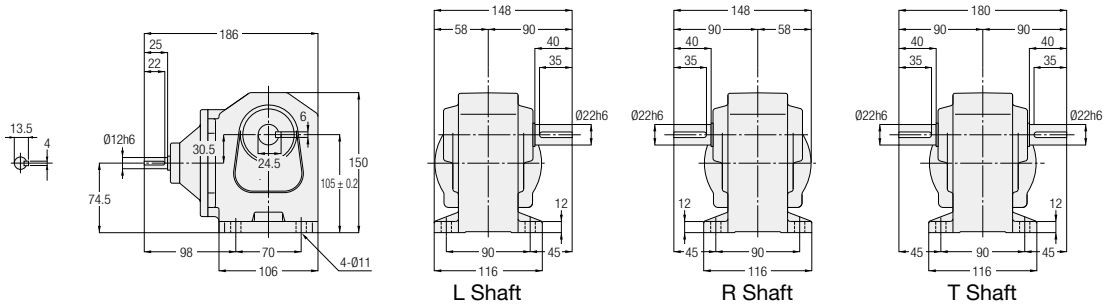
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

5-2. Drawings

H2 Type Right Angle Shaft Shaft Diameter **22** Foot Mounting

<Figure 1>

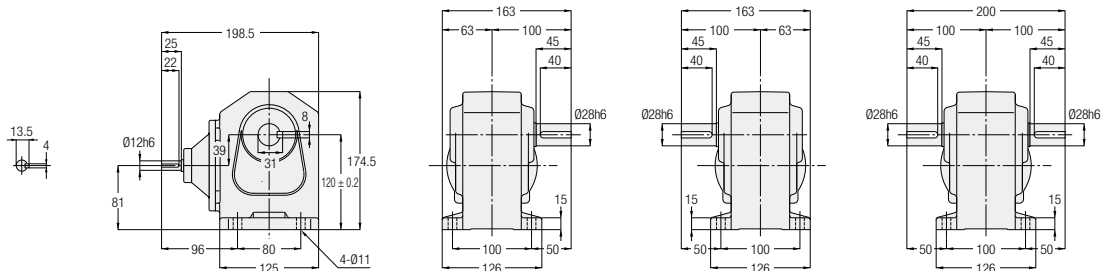


Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
0.2 kW	H2L-22#-***-020	5, 10, 15, 20, 25, 30, 40, 50, 60	1	3.5

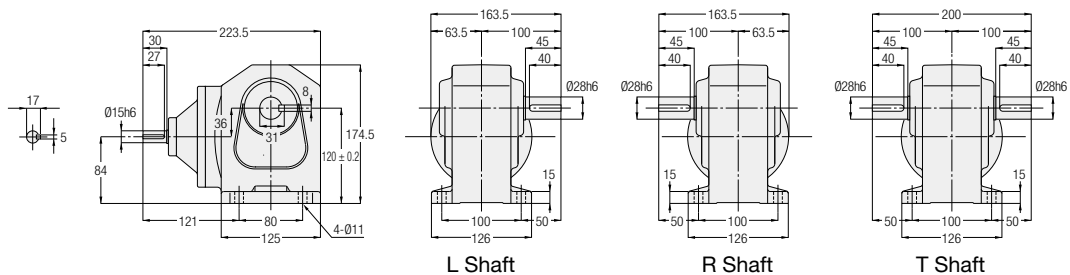
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
Note: Please refer to page 290 for the performance table.

H2 Type Right Angle Shaft Shaft Diameter **28** Foot Mounting

<Figure 2>



<Figure 3>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
0.2 kW	H2L-28#-***-020	80, 100, 120, 160, 200, 240	2	5.5
0.4 kW	H2L-28#-***-040	5, 10, 15, 20, 25, 30, 40, 50, 60	3	5.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
Note: Please refer to page 290 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

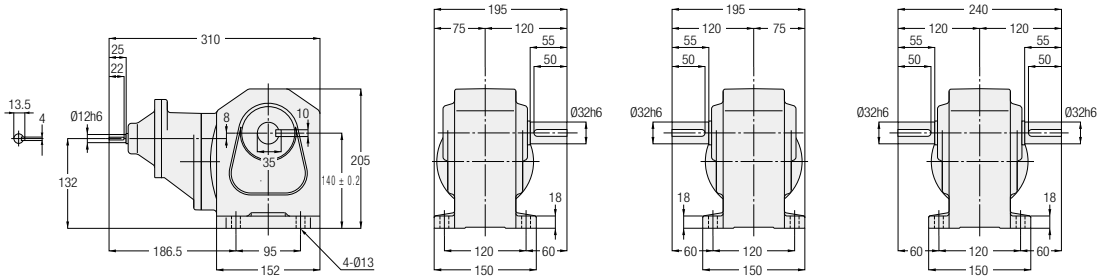
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

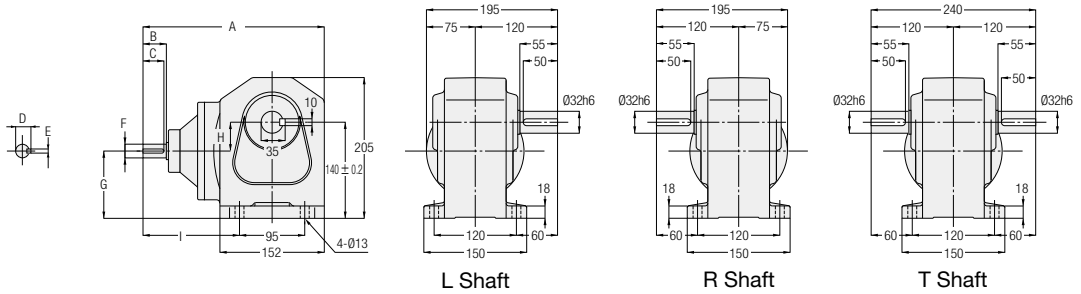
Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **32** Foot Mounting

<Figure 1>



<Figure 2>



L Shaft

R Shaft

T Shaft

Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E	F	G	H	I
0.2 kW	H2L-32#-***-020	300, 375, 450	1	9.5	-	-	-	-	-	-	-	-	-
0.4 kW	H2L-32#-***-040	80, 100, 120, 160, 200, 240	2	8.5	242.5	30	27	17	5	Ø15h6	95	45	119
0.75 kW	H2L-32#-***-075	5, 10, 15, 20, 25, 30, 40, 50, 60	2	8.5	264	35	32	22.5	6	Ø20h6	98	42	140.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 290 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

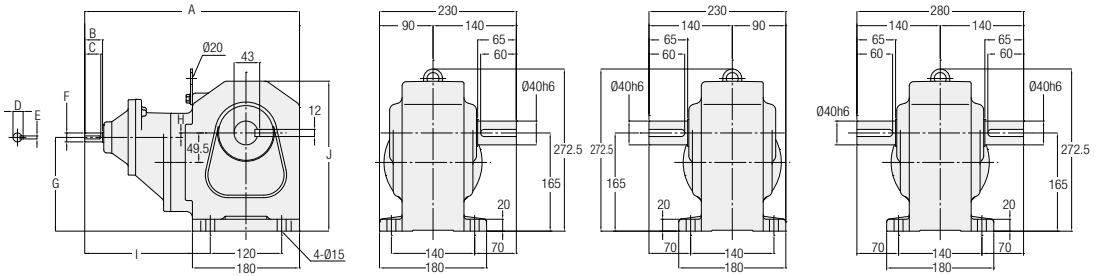
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

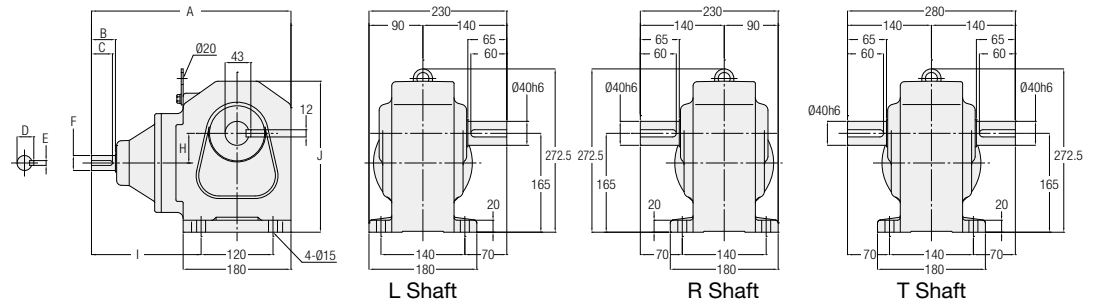
Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **40** Foot Mounting

<Figure 1>



<Figure 2>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E	F	G	H	I	J
0.2 kW	H2L-40#-***-020	600, 750, 900, 1200, 1500	1	18	328.5	25	22	13.5	4	Ø12h6	145.5	19.5	178.5	242.5
0.4 kW	H2L-40#-***-040	300, 375, 450	1	19	361	30	27	17	5	Ø15h6	157.5	7.5	211	252
0.75 kW	H2L-40#-***-075	80, 100, 120, 160, 200, 240	2	17	282.5	35	32	22.5	6	Ø20h6	-	53.5	132.5	242.5
1.5 kW	H2L-40#-***-150	5, 10, 15, 20, 25, 30, 40, 50, 60	2	17.5	333	40	35	28	8	Ø25h6	-	49.5	183	252

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 290 for the performance table.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

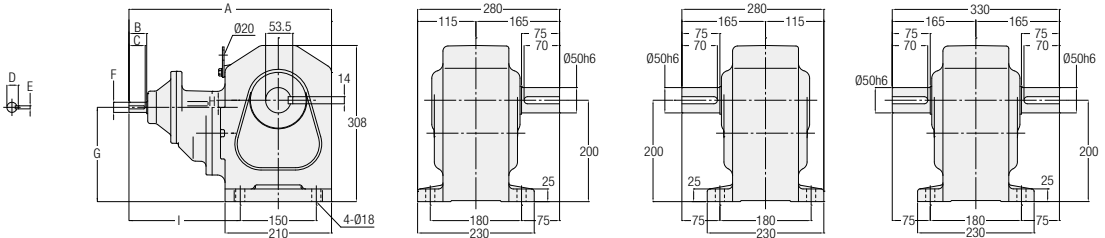
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

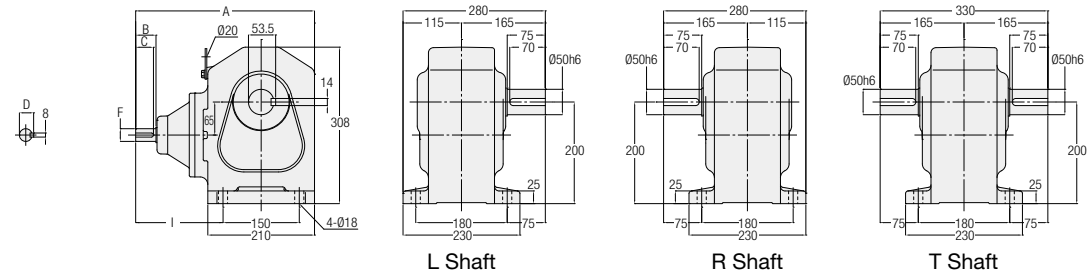
Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **50** Foot Mounting

<Figure 1>



<Figure 2>

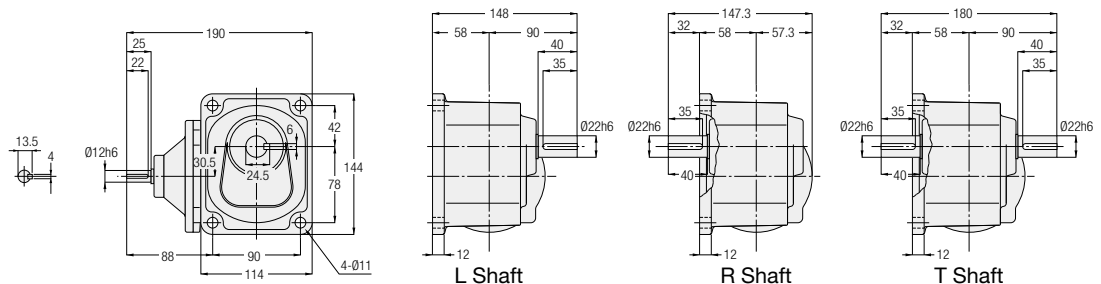


Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E	F	G	H	I
0.4 kW	H2L-50#-***-040	600, 750, 900, 1200, 1500	1	48.5	380	30	27	17	5	Ø15h6	177	23	200
0.75 kW	H2L-50#-***-075	300, 375, 450	1	49.5	399.5	35	32	22.5	6	Ø20h6	186	14	219.5
1.5 kW	H2L-50#-***-150	80, 100, 120, 160, 200, 240	2	47.5	352	40	35	28	-	Ø25h6	-	-	172
2.2 kW	H2L-50#-***-220	5, 10, 15, 20, 25, 30, 40, 50, 60	2	47	364	45	40	33	-	Ø30h6	-	-	184

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 291 for the performance table.

H2 Type Right Angle Shaft Shaft Diameter **22** Flange Mounting

<Figure 1>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
0.2 kW	H2F-22#-***-020	5, 10, 15, 20, 25, 30, 40, 50, 60	1	3.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 290 for the performance table.

MEMO

<p>Technical Documentation</p>	<p>F2/F3 Type Concentric Right-Angle Hollow Bore/ Concentric Right Angle Shaft</p>	<p>F Type Right-Angle Hollow Bore/ Right Angle Shaft</p>	<p>H/H2 Type Right Angle Shaft</p>	<p>G/G3 Type Parallel Shaft</p>
--------------------------------	--	--	--	-------------------------------------

6. S-Type Reducers (Type That Can Be Equipped with Designated Motor)

6-1. Performance Table

H2 Type S-Type Reducers (Type which Can be Equipped with Designated Motor)

[Notes]

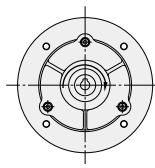
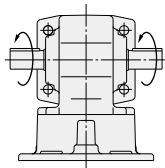
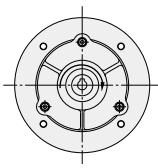
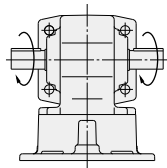
- The value of the allowable output shaft torque is the value when a 4 pole motor is used.
- When using an output shaft for a motor other than a 4 pole motor, the value obtained by multiplying the torque by the torque correction coefficient shown on page 566 shall be the allowable output shaft torque at the rotation.
- Allowable output shaft O.H.L. is the value at 20 mm from the end of the output shaft.
- For the rotational direction of the output shaft, please refer to the figure shown below.
- The “**” mark indicates a limited torque type. Please make sure to check the allowable output shaft torque in the performance table.

■ Rotational Direction Relationship

The rotational direction shown below with arrow illustrates the rotation relationship between the output shaft / input shaft and is no way illustrating limitations in rotational direction.

Power	Reduction Ratio
0.2 kW	1/5 to 1/60 and 1/600 to 1/1500
0.4 kW,0.75 kW	1/5 to 1/60 and 1/300 to 1/1500
1.5 kW,2.2 kW	1/5 to 1/30

Power	Reduction Ratio
0.2 kW	1/80 to 1/450
0.4 kW,0.75 kW	1/80 to 1/240
1.5 kW,2.2 kW	1/40 to 1/240



4 Poles Motor Power Class	Frame Size	Reduction Ratio	Actual Reduction Ratio	Allowable Output Shaft Torque		Allowable Output Shaft O.H.L.	Drawings	
				N·m			Foot Mount	Flange Mount
				50 Hz	60 Hz	N		
0.2 kW	22	1/5	1/5	5.7	4.8	588	P.301	P.305
		1/10	1/10	12	9.5	931		
		1/15	1/15	18	15	1030		
		1/20	1/20	23	19	1180		
		1/25	1/25	28	24	1270		
		1/30	1/30	34	28	1370		
		1/40	1/40	46	38	1570		
		1/50	1/50	57	48	1720		
	1/60	1/59	69	57	1810			
	28	1/80	1/80	88	74	2450	P.301	-
		1/100	1/100	111	92	2650		
		1/120	1/120	133	111	2740		
		1/160	1/160	177	148	2840		
		1/200	1/200	221	184	2840		
		1/240	1/236	245	221	2840		
		1/300	7/2120	294	245	3820		
	32	1/375	7/2650	368	306	4120	P.302	-
		1/450	7/3127	431	368	4120		
		1/600	7/4240	588	490	6760		
	40	1/750	7/5300	735	613	6760	P.303	-
		1/900	7/6360	764	735	6760		
		* 1/1200	7/8480	764	764	6760		
		* 1/1500	7/10600	764	764	6760		

G/G3 Type Parallel Shaft

H/H2 Type Right Angle Shaft

F Type Right Angle Hollow Bore/ Right Angle Shaft

F2/F3 Type Concentric Right Angle Hollow Bore/ Concentric Right Angle Shaft

Technical Documentation

6-1. Performance Table

4 Poles Motor Power Class	Frame Size	Reduction Ratio	Actual Reduction Ratio	Allowable Output Shaft Torque		Allowable Output Shaft O.H.L. N	Drawings Foot Mount
				N-m			
				50 Hz	60 Hz		
0.4 kW	28	1/5	1/5	12	9.5	931	P.301
		1/10	1/10	23	19	1470	
		1/15	1/15	34	28	1670	
		1/20	1/20	46	38	1860	
		1/25	1/25	57	48	2010	
		1/30	1/30	69	57	2210	
		1/40	1/40	92	76	2450	
		1/50	1/50	115	95	2650	
	1/60	1/59	137	115	2740		
	32	1/80	1/80	177	148	3430	P.302
		1/100	1/100	221	184	3820	
		1/120	1/120	266	221	4120	
		1/160	1/160	355	295	4120	
		1/200	1/200	431	369	4120	
		* 1/240	1/236	431	431	4120	
	40	1/300	7/2080	572	477	6760	P.303
		1/375	7/2600	715	597	6760	
		* 1/450	7/3120	764	715	6760	
	50	1/600	21/12220	1150	955	9510	P.304
		* 1/750	1/728	1230	1190	9510	
* 1/900		7/6240	1230	1230	9510		
* 1/1200		21/24440	1230	1230	9510		
* 1/1500		1/1456	1230	1230	9510		
0.75 kW	32	1/5	1/5	22	18	1520	P.302
		1/10	1/10	43	36	2010	
		1/15	1/15	65	54	2210	
		1/20	1/20	86	72	2450	
		1/25	1/25	108	89	2740	
		1/30	1/30	128	107	2940	
		1/40	1/40	172	143	3430	
		1/50	1/50	215	179	3820	
	1/60	1/59	258	215	4120		
	40	1/80	1/80	332	277	5780	P.303
		1/100	1/100	416	346	6080	
		1/120	1/120	498	415	6270	
		1/160	1/160	664	554	6470	
		* 1/200	1/200	764	692	6660	
		* 1/240	1/240	764	764	6660	
	50	1/300	7/2120	1070	895	7740	P.304
		* 1/375	7/2650	1230	1120	8040	
		* 1/450	7/3180	1230	1230	8530	
1.5 kW	40	1/5	1/5	43	36	2650	P.303
		1/10	1/10	86	72	3530	
		1/15	1/15	128	107	4410	
		1/20	1/20	172	143	4700	
		1/25	1/25	215	179	5100	
		1/30	1/30	258	215	5290	
		1/40	1/40	344	277	5590	
		1/50	1/50	429	346	5880	
	1/60	1/60	515	415	6080		
	50	1/80	3/235	664	554	8530	P.304
		1/100	1/98	830	692	8820	
		1/120	1/120	1000	830	9020	
		* 1/160	3/470	1230	1110	9310	
		* 1/200	1/196	1230	1230	9510	
* 1/240		1/240	1230	1230	9510		

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

4 Poles Motor Power Class	Frame Size	Reduction Ratio	Actual Reduction Ratio	Allowable Output Shaft Torque		Allowable Output Shaft O.H.L. N	Drawings
				N·m			Foot Mount
				50 Hz	60 Hz		
2.2 kW	50	1/5	1/5	63	53	3920	P.304
		1/10	1/10	126	105	4410	
		1/15	1/15	189	157	4900	
		1/20	12/235	252	210	5490	
		1/25	2/49	315	263	6080	
		1/30	1/30	378	315	6570	
		1/40	1/40	487	406	7060	
		1/50	1/50	609	507	7550	
		1/60	1/60	731	609	8130	
		1/80	3/235	974	812	8430	
		1/100	1/98	1220	1010	8820	
		* 1/120	1/120	1230	1220	8820	

Note 1: Please be sure to read the notes on page 298.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

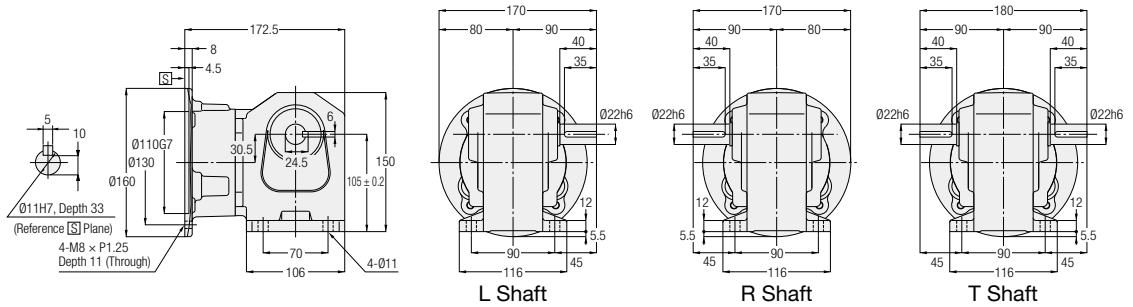
F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

6-2. Drawings

H2 Type Right Angle Shaft Shaft Diameter **22** Foot Mounting

<Figure 1>

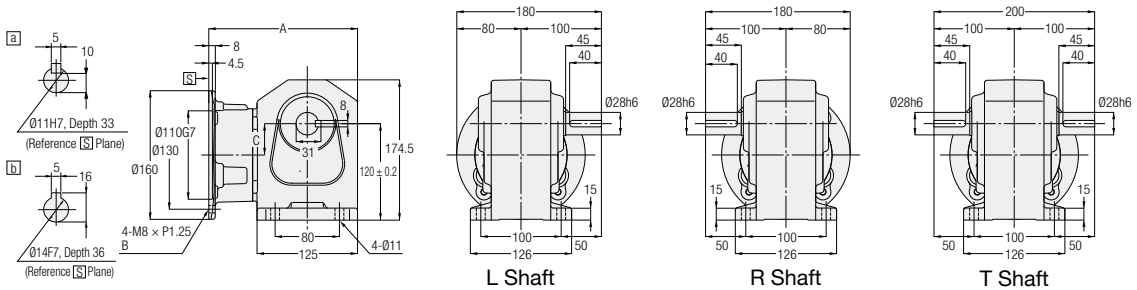


Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
0.2 kW	H2LS-22#-***-020	5, 10, 15, 20, 25, 30, 40, 50, 60	1	4.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 298 for the performance table.
 Note: Please refer to page 569 for the details of the motor mounting area.

H2 Type Right Angle Shaft Shaft Diameter **28** Foot Mounting

<Figure 2>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	Input Shaft	A	B	C
0.2 kW	H2LS-28#-***-020	80, 100, 120, 160, 200, 240	2	6.5	a	185	Depth 11 (Through)	39
0.4 kW	H2LS-28#-***-040	5, 10, 15, 20, 25, 30, 40, 50, 60	2	6.5	b	201	Depth 20	36

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.
 Note: Please refer to page 298 for the performance table.
 Note: Please refer to page 569 for the details of the motor mounting area.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

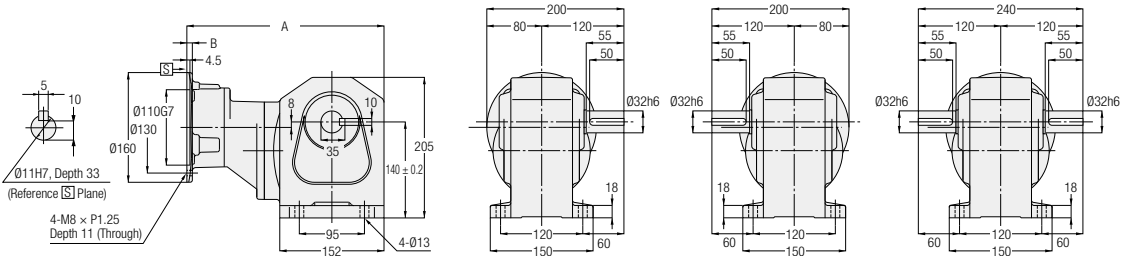
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

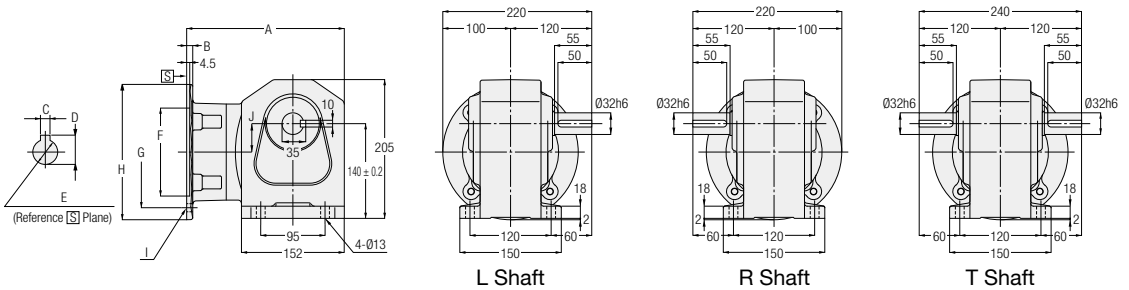
Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **32** **Foot Mounting**

<Figure 1>



<Figure 2>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E	F	G	H	I	J
0.2 kW	H2LS-32#-***-020	300, 375, 450	1	10.5	287.5	8	-	-	-	-	-	-	-	-
0.4 kW	H2LS-32#-***-040	80, 100, 120, 160, 200, 240	2	9.5	220	8	5	16	Ø14F7, Depth 36	Ø110G7	Ø130	Ø160	4-M8xP1.25, Depth 20	45
0.75 kW	H2LS-32#-***-075	5, 10, 15, 20, 25, 30, 40, 50, 60	2	9	233	9	6	21.5	Ø19F7, Depth 42	Ø130G7	Ø165	Ø200	4-M10xP1.5, Depth 23 (Through)	42

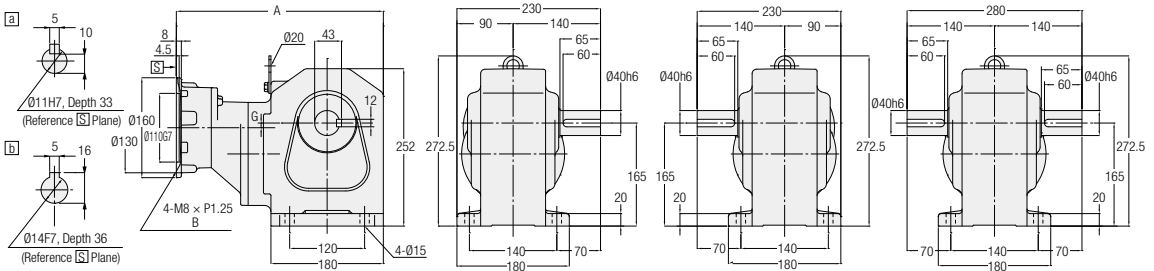
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 298 for the performance table.

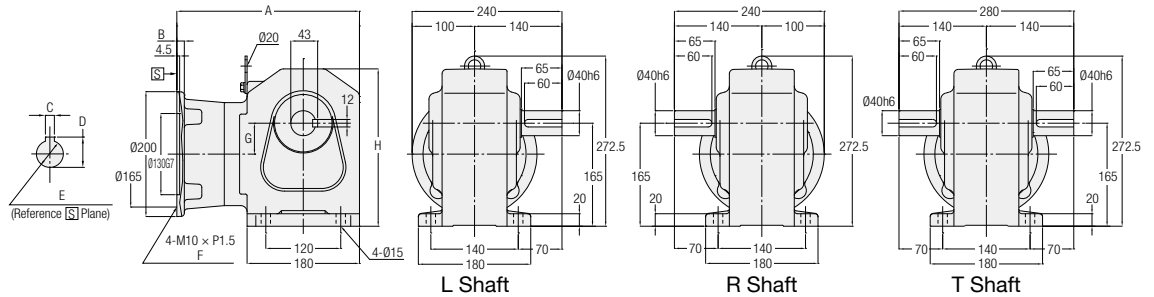
Note: Please refer to page 569 for the details of the motor mounting area.

H2 Type Right Angle Shaft Shaft Diameter **40** Foot Mounting

<Figure 1>



<Figure 2>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	Input Shaft	A	B	C	D	E	F	G	H
0.2 kW	H2LS-40#-***-020	600, 750, 900, 1200, 1500	1	19	a	306	Depth 11 (Through)	-	-	-	-	19.5	-
0.4 kW	H2LS-40#-***-040	300, 375, 450	1	20	b	331.5	Depth 20	-	-	-	-	7.5	-
0.75 kW	H2LS-40#-***-075	80, 100, 120, 160, 200, 240	2	17.5	-	251.5	9	6	21.5	Ø19F7, Depth 42	Depth 23 (Through)	53.5	242.5
1.5 kW	H2LS-40#-***-150	5, 10, 15, 20, 25, 30, 40, 50, 60	2	19.5	-	292.5	12	8	27	Ø24F7, Depth 52	25	49.5	252

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 298 for the performance table.

Note: Please refer to page 569 for the details of the motor mounting area.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

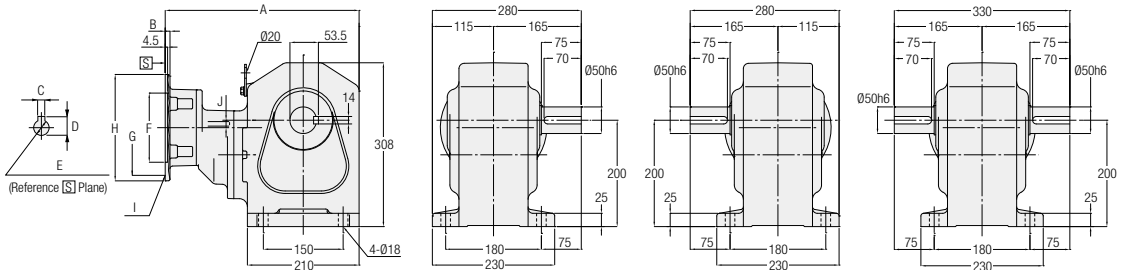
F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

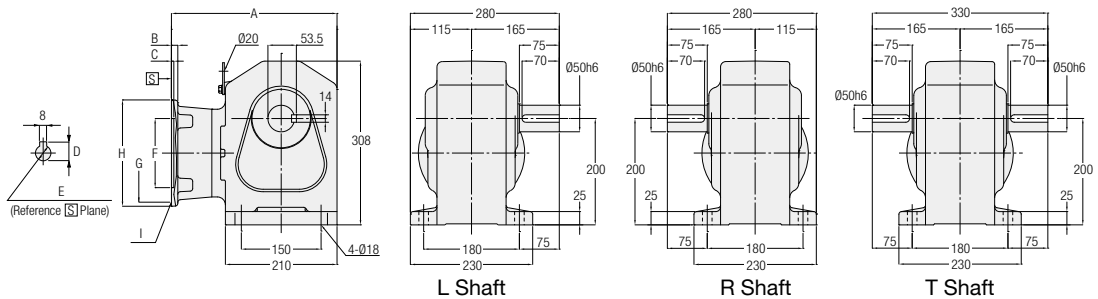
Technical Documentation

H2 Type Right Angle Shaft Shaft Diameter **50** **Foot Mounting**

<Figure 1>



<Figure 2>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)	A	B	C	D	E	F	G	H	I	J
0.4 kW	H2LS-50#-***-040	600, 750, 900, 1200, 1500	1	49.5	350.5	8	5	16	Ø14F7, Depth 36	Ø110G7	Ø130	Ø160	4-M8×P1.25, Depth 20	23
0.75 kW	H2LS-50#-***-075	300, 375, 450	1	50.5	364.5	9	6	21.5	Ø19F7, Depth 42	Ø130G7	Ø165	Ø200	4-M10×P1.5, Depth 23 (Through)	14
1.5 kW	H2LS-50#-***-150	80, 100, 120, 160, 200, 240	2	49	311.5	12	4.5	27	Ø24F7, Depth 52	Ø130G7	Ø165	Ø200	4-M10×P1.5, Depth 25	-
2.2 kW	H2LS-50#-***-220	5, 10, 15, 20, 25, 30, 40, 50, 60	2	49.5	324	16	5	31	Ø28F7, Depth 62	Ø180G7	Ø215	Ø250	4-M12×P1.75, Depth 16	-

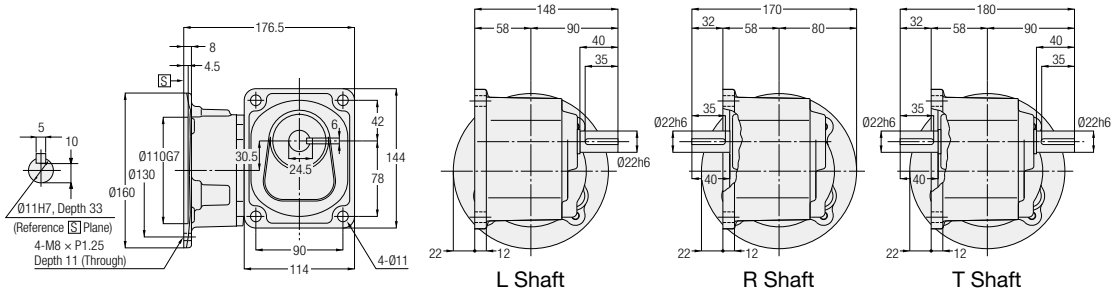
Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 299 for the performance table.

Note: Please refer to page 569 for the details of the motor mounting area.

H2 Type Right Angle Shaft Shaft Diameter **22** Flange Mounting

<Figure 1>



Power Class	Part Number	Reduction Ratio	Figure Number	Approx. Weight (kg)
0.2 kW	H2FS-22#-***-020	5, 10, 15, 20, 25, 30, 40, 50, 60	1	4.5

Note: A shaft arrangement (L, R, T) will be indicated as # in the nomenclature. In addition, a reduction ratio will be indicated as ***.

Note: Please refer to page 298 for the performance table.

Note: Please refer to page 569 for the details of the motor mounting area.

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right-Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right-Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation

MEMO

G/G3 Type
Parallel Shaft

H/H2 Type
Right Angle Shaft

F Type
Right Angle Hollow Bore/
Right Angle Shaft

F2/F3 Type
Concentric Right Angle Hollow Bore/
Concentric Right Angle Shaft

Technical Documentation