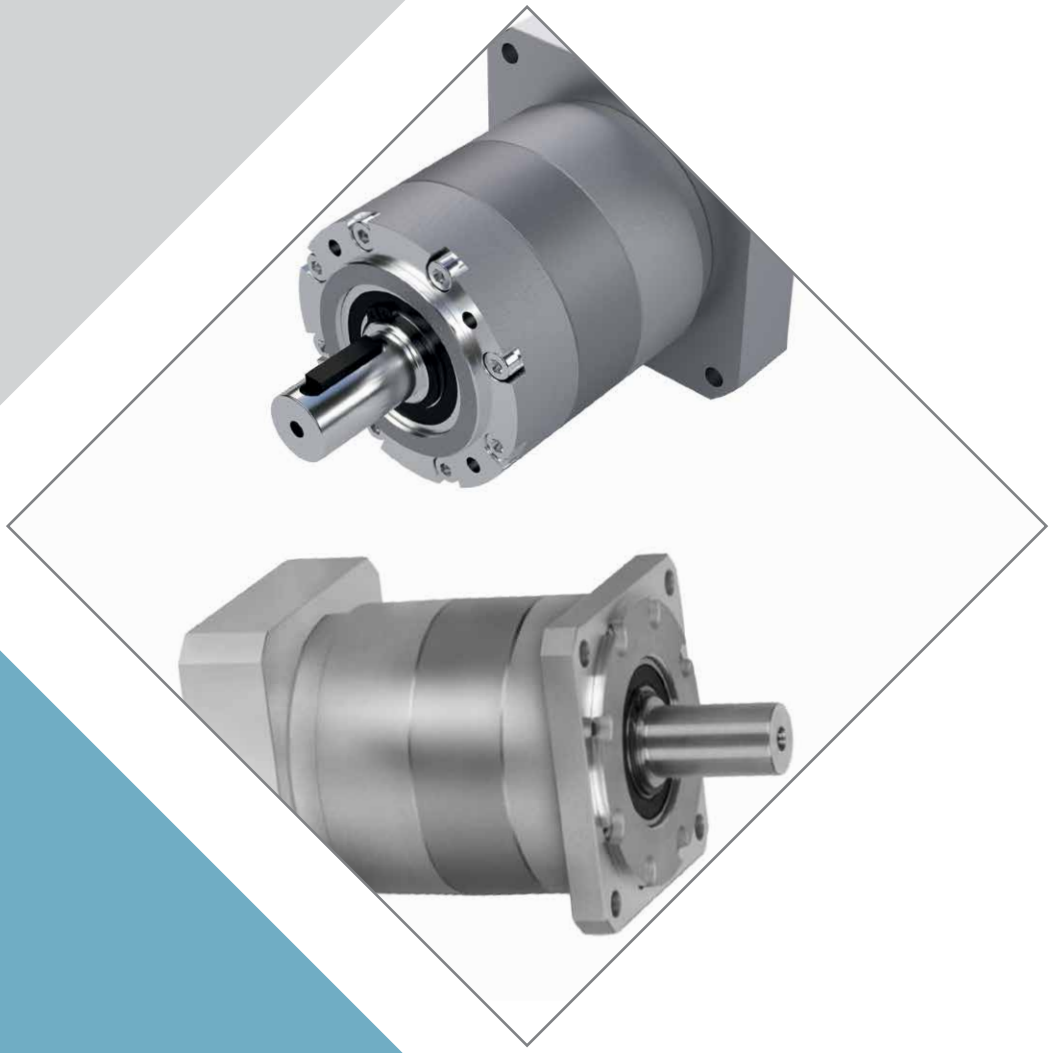
INLINE GEAR REDUCERS PRE/PRF



Nidec
All for dreams

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PRE/PRF Inline Coaxial Epicycloidal Reducers

Features

- Low noise
  Case-hardened helical gears help reduce vibration
- High torque
  Case-hardened needle bearings ensure excellent torque density.
- Clamp connection and reduction sleeves
  Can be mounted on any motor.
- Efficiency ≥ 95%
- Maintenance-free
  The grease does not need to be replaced during the unit's lifetime.
- Can be fixed in any mounting position.

PRE Type

PRF Type

Part Number **RVPR E- 062- 15- K 10- 19HB16**

PR serie

Type (E - F)

Size E type: 040 - 062 - 082 - 120 - 160
Size F type: 062 - 082 - 120 - 160

Ratio
1 stage: 3, 4, 5, 8, 9, 10
2 stage: 12, 15, 16, 20, 25, 32, 40, 50, 80, 100

Output Mounting Style
K: Keyed Shaft
S: Smooth Shaft

Backlash
Size 040
1 stage: 12 arc-min
2 stage: 18 arc-min
Other size
1 stage: 8 arc-min
2 stage: 10 arc-min

Motor Mounting Code
Motor mounting code varies depending on the motor
Please contact us for more information.

PRE 040 technical data

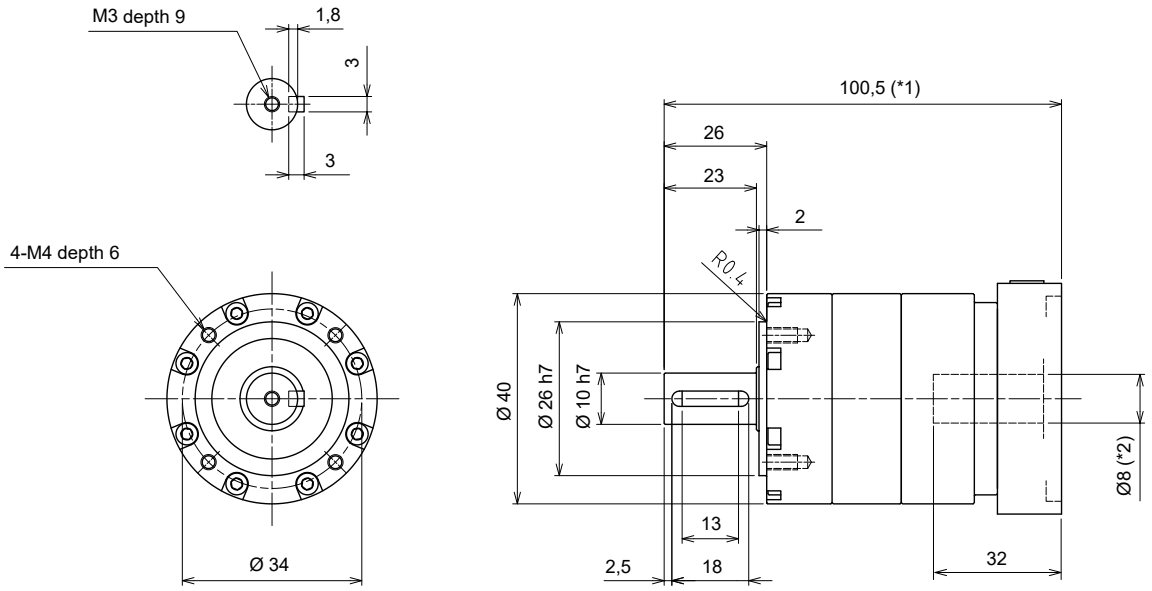
Size	Ratio	Nominal Output Torque(1)	Maximum Output Torque	Emergency Stop Torque(2)	Nominal Input Speed	Maximum Input Speed	Permitted Radial Load(3) (4)	Permitted Axial Load(3) (5)
		[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
040	3	15	21	30	4000	8000	200	240
	4	20	28	35	4000	8000	200	240
	5	20	28	35	4000	8000	200	240
	8	20	28	35	4000	8000	200	240
	9	15	21	30	4000	8000	200	240
	10	15	21	30	4000	8000	200	240
	12	15	18	30	4000	8000	200	240
	15	15	18	30	4000	8000	200	240
	16	20	23	35	4000	8000	200	240
	20	20	23	35	4000	8000	200	240
	25	20	23	35	4000	8000	200	240
	32	20	23	35	4000	8000	200	240
	40	20	23	35	4000	8000	200	240
	50	20	23	35	4000	8000	200	240
	80	20	23	35	4000	8000	200	240
	100	15	18	30	4000	8000	200	240

Size	Ratio	Weight(6)		Moment of intertia		Torsional Stiffness
		Input Bore		Input Bore		
		(≤ Ø 8)	(≤ Ø 14)	(≤ Ø 8)	(≤ Ø 14)	
		[kg]	[kg]	[kgcm²]	[kgcm²]	[Nm/arc-min]
040	3	0,43	0,59	0,05	0,08	0,7
	4			0,04	0,07	0,7
	5			0,03	0,06	0,7
	8			0,03	0,06	0,7
	9			0,03	0,06	0,7
	10			0,03	0,06	0,7
	12	0,59	-	0,03	-	0,7
	15			0,03	-	0,7
	16			0,03	-	0,7
	20			0,03	-	0,7
	25			0,03	-	0,7
	32			0,03	-	0,7
	40			0,02	-	0,7
	50			0,02	-	0,7
	80			0,02	-	0,7
	100			0,02	-	0,7

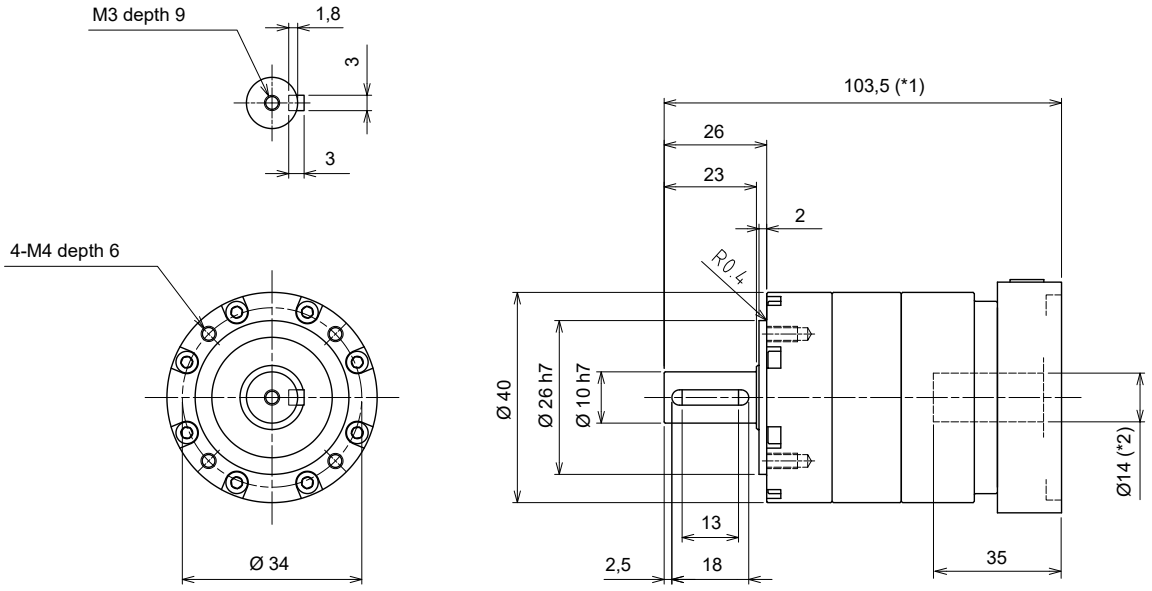
(1) Permitted for 30,000 rotations. Please note operation factor.
(2) The maximum permitted torque at a maximum of 1000 shocks.
(3) No additional axial load on the output shaft.
(4) Point of application is center of output shaft, at maximum output speed of 100 rpm.
(5) No additional radial load on the output shaft.
(6) The values vary depending on the design, e. g. adapter type and bushings.

PRE 040 dimensions - 1 stage

Input bore size ≦φ8 mm



Input bore size ≦φ14 mm

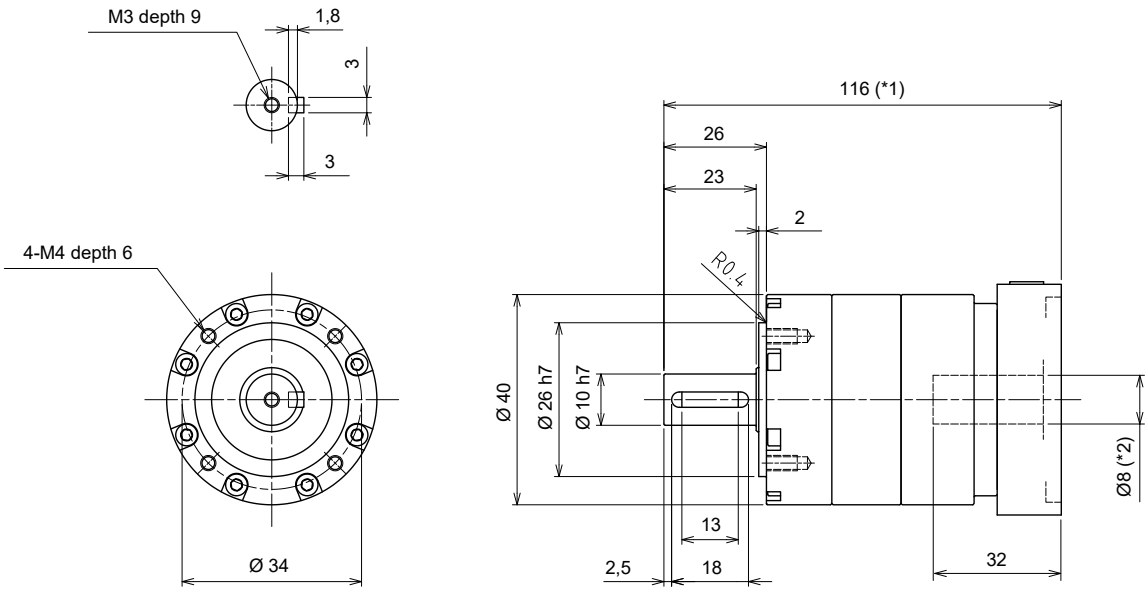


*1 Length will vary depending on motor.

*2 Bushing will be inserted to adapt to motor shaft.

PRE 040 dimensions - 2 stages

Input bore size ≦φ8 mm



*1 Length will vary depending on motor.

*2 Bushing will be inserted to adapt to motor shaft.

PRE/PRF 062 technical data

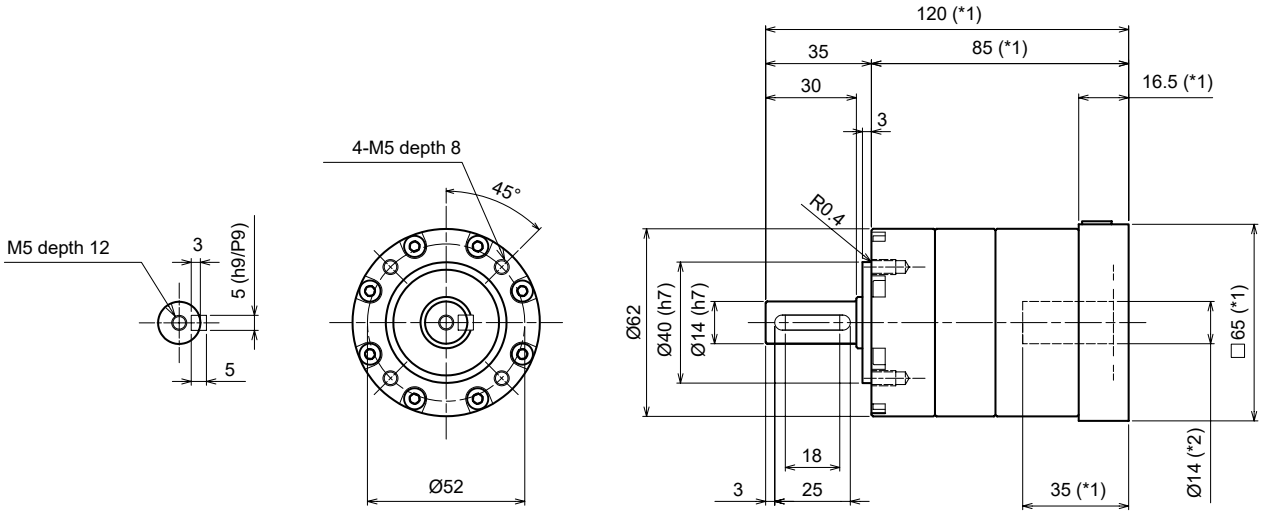
Size	Ratio	Nominal Output Torque(1)	Maximum Output Torque	Emergency Stop Torque(2)	Maximum Input Speed	Maximum Input Speed	Permitted Radial Load(3) (4)	Permitted Axial Load(3) (5)
		[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
062	3	35	55	80	3000	6000	420	520
	4	46	79	90	3000	6000	420	520
	5	46	79	90	3000	6000	420	520
	8	46	76	90	3000	6000	420	520
	9	35	55	80	3000	6000	420	520
	10	35	55	80	3000	6000	420	520
	12	35	46	80	3000	6000	420	520
	15	35	46	80	3000	6000	420	520
	16	46	66	90	3000	6000	420	520
	20	46	66	90	3000	6000	420	520
	25	46	66	90	3000	6000	420	520
	32	46	66	90	3000	6000	420	520
	40	46	66	90	3000	6000	420	520
	50	46	66	90	3000	6000	420	520
	80	46	66	90	3000	6000	420	520
	100	35	46	80	3000	6000	420	520

Size	Ratio	Weight(6)			Moment of intertia			Torsional Stiffness
		Input Bore			Input Bore			
		(≤ Ø 8)	(≤ Ø 14)	(≤ Ø 19)	(≤ Ø 8)	(≤ Ø 14)	(≤ Ø 19)	
		[kg]	[kg]	[kg]	[kgcm²]	[kgcm²]	[kgcm²]	[Nm/arc-min]
062	3	-	1,0	1,4	-	0,21	0,43	2,3
	4				-	0,17	0,39	2,3
	5				-	0,16	0,37	2,3
	8				-	0,14	0,36	2,3
	9				-	0,14	0,36	2,3
	10				-	0,14	0,36	2,3
	12	1,5	1,6	-	0,08	0,16	-	2,3
	15				0,07	0,15	-	2,3
	16				0,08	0,16	-	2,3
	20				0,07	0,15	-	2,3
	25				0,07	0,15	-	2,3
	32				0,07	0,16	-	2,3
	40				0,06	0,14	-	2,3
	50				0,06	0,14	-	2,3
	80				0,06	0,14	-	2,3
	100				0,06	0,14	-	2,3

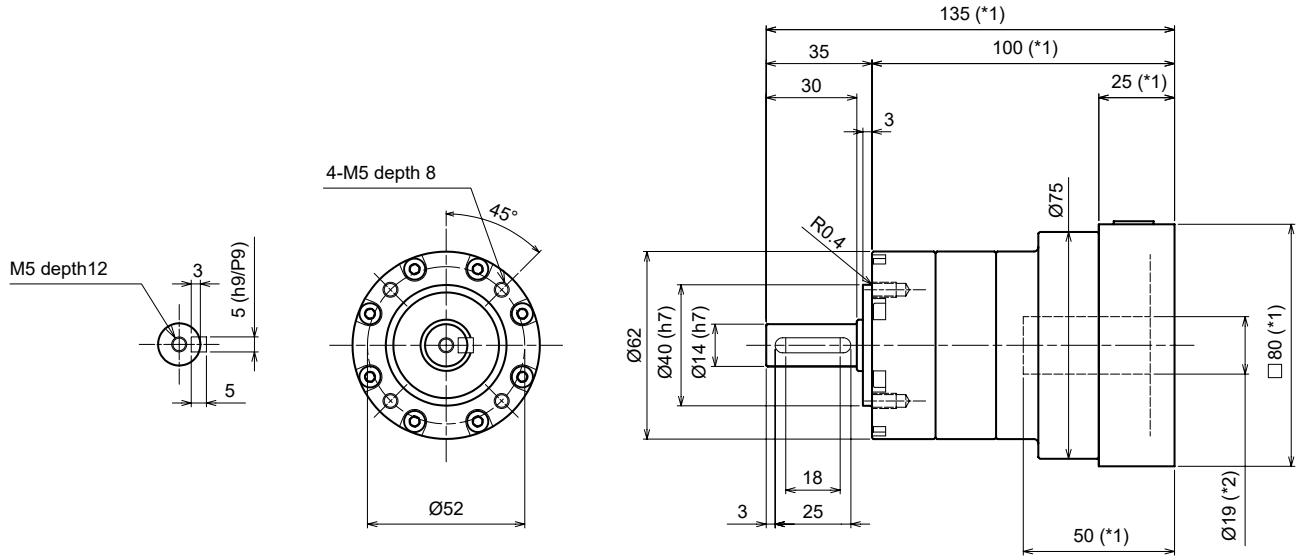
(1) Permitted for 30,000 rotations. Please note operation factor.
(2) The maximum permitted torque at a maximum of 1000 shocks.
(3) No additional axial load on the output shaft.
(4) Point of application is center of output shaft, at maximum output speed of 100 rpm.
(5) No additional radial load on the output shaft.
(6) The values vary depending on the design, e. g. adapter type and bushings.

PRE 062 dimensions - 1 stage

Input bore size ≦φ14 mm



Input bore size ≦φ19 mm

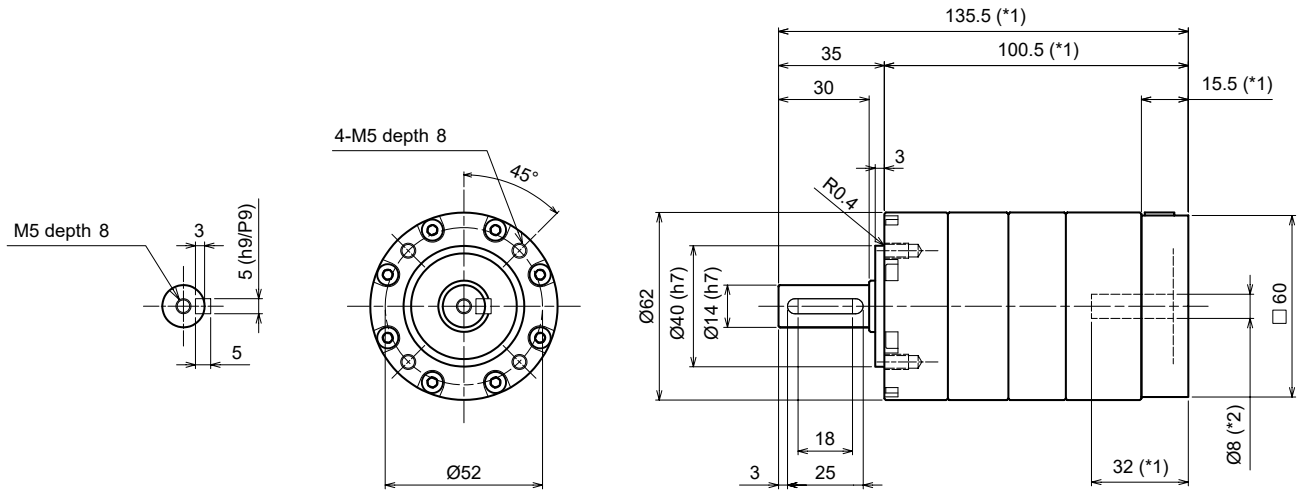


*1 Length will vary depending on motor.

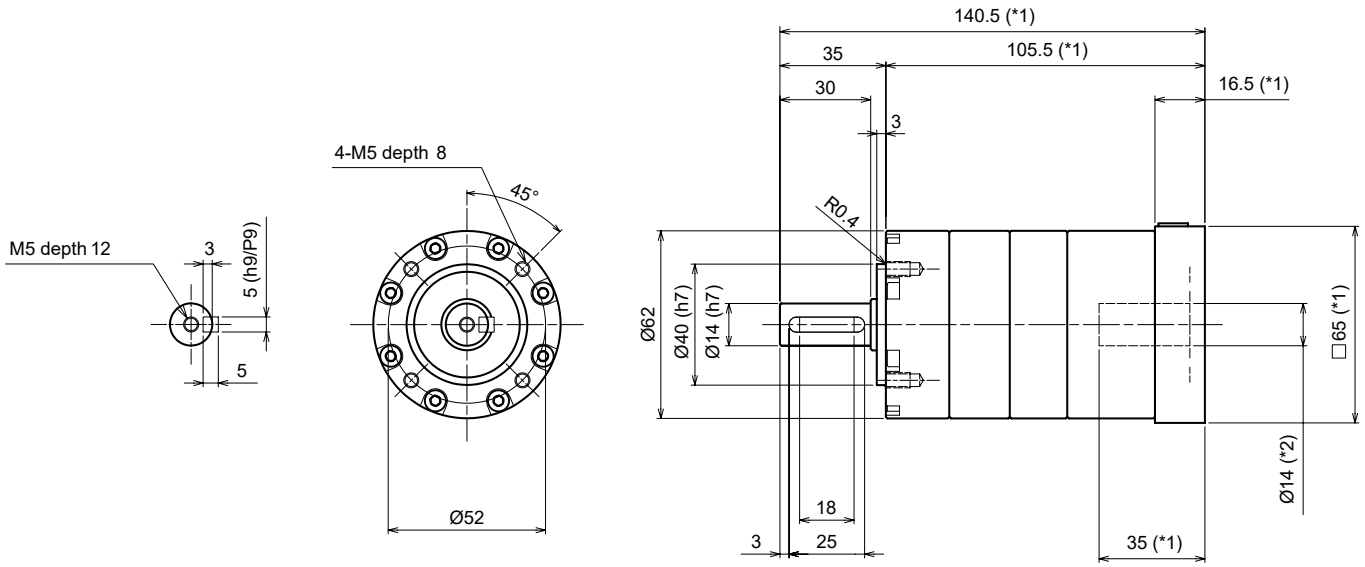
*2 Bushing will be inserted to adapt to motor shaft.

PRE 062 dimensions - 2 stages

Input bore size ≦φ8 mm



Input bore size ≦φ14 mm

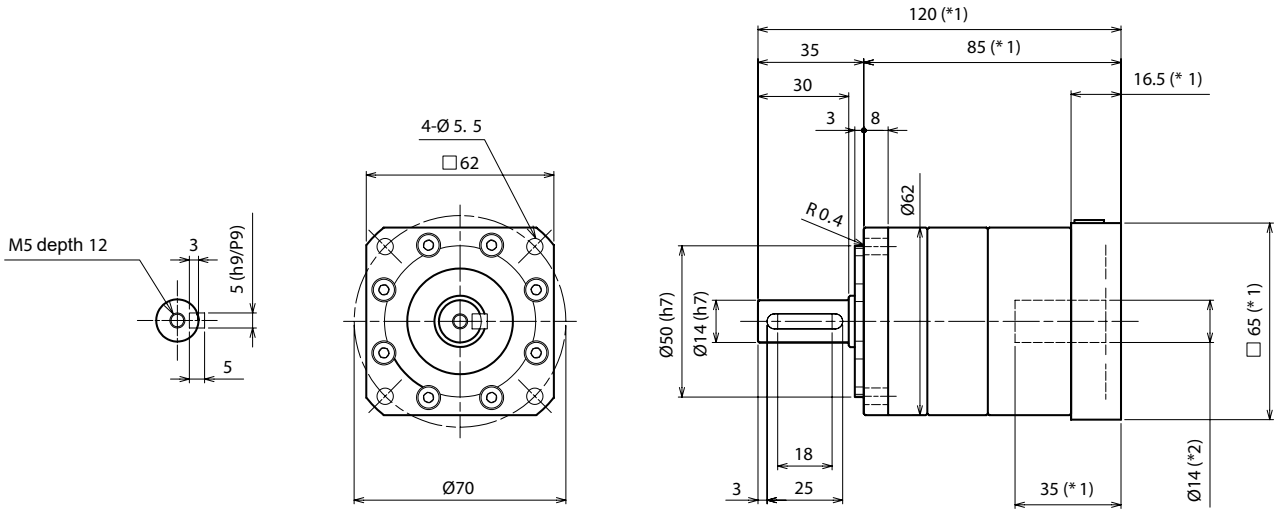


*1 Length will vary depending on motor.

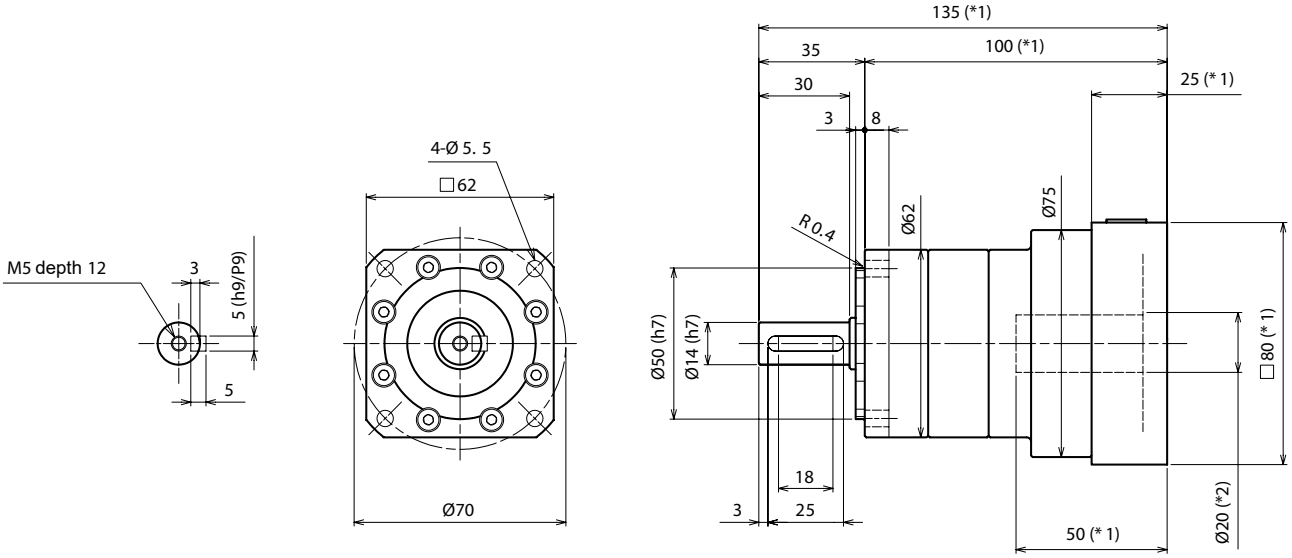
*2 Bushing will be inserted to adapt to motor shaft.

PRF 062 dimensions - 1 stage

Input bore size ≦φ14 mm



Input bore size ≦φ19 mm

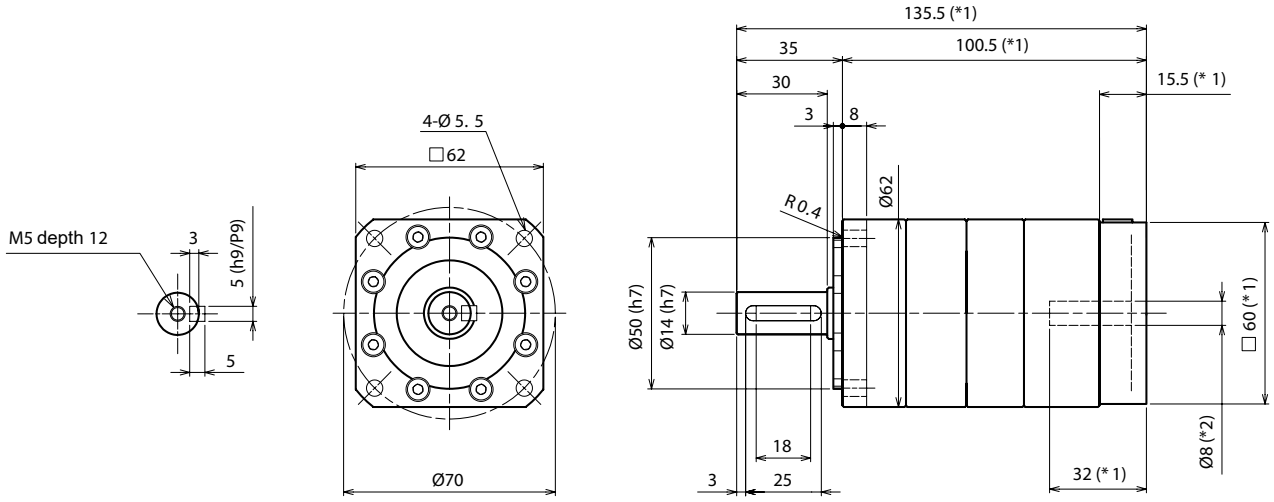


*1 Length will vary depending on motor.

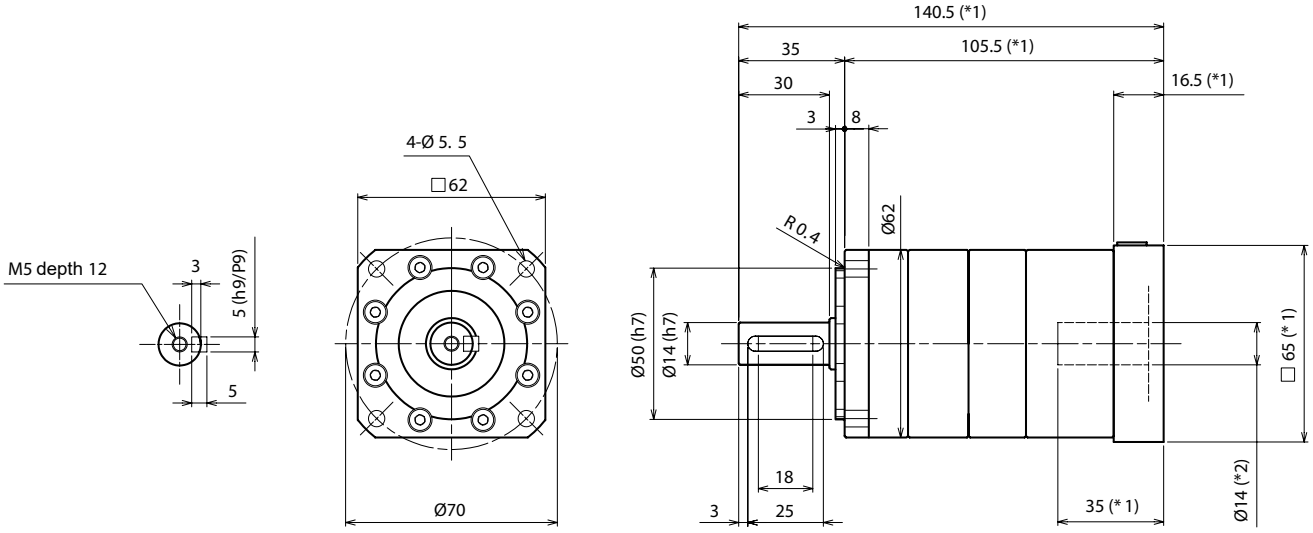
*2 Bushing will be inserted to adapt to motor shaft.

PRF 062 dimensions - 2 stages

Input bore size ≦φ8 mm



Input bore size ≦φ14 mm



*1 Length will vary depending on motor.

*2 Bushing will be inserted to adapt to motor shaft.

PRE/PRF 082 technical data

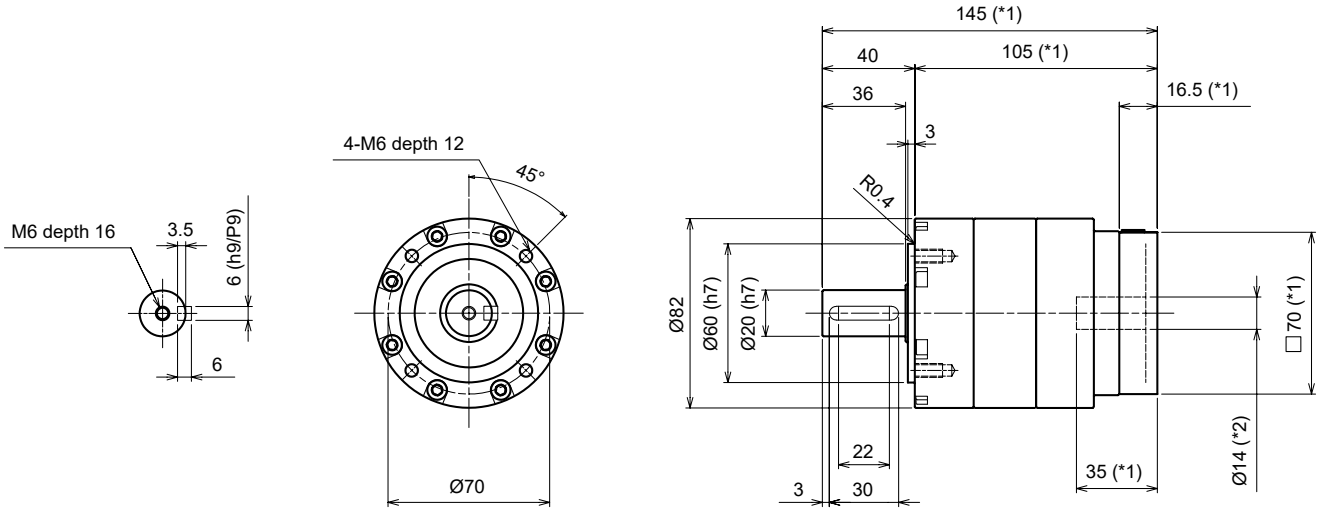
Size	Ratio	Nominal Output Torque(1)	Maximum Output Torque	Emergency Stop Torque(2)	Maximum Input Speed	Maximum Input Speed	Permitted Radial Load(3) (4)	Permitted Axial Load(3) (5)
		[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
082	3	80	135	200	3000	6000	700	1050
	4	120	200	210	3000	6000	700	1050
	5	120	200	210	3000	6000	700	1050
	8	120	190	210	3000	6000	700	1050
	9	80	145	200	3000	6000	700	1050
	10	80	145	200	3000	6000	700	1050
	12	80	108	200	3000	6000	700	1050
	15	80	108	200	3000	6000	700	1050
	16	120	165	210	3000	6000	700	1050
	20	120	165	210	3000	6000	700	1050
	25	120	165	210	3000	6000	700	1050
	32	120	165	210	3000	6000	700	1050
	40	120	165	210	3000	6000	700	1050
	50	120	165	210	3000	6000	700	1050
	80	120	165	210	3000	6000	700	1050
	100	80	112	200	3000	6000	700	1050

Size	Ratio	Weight(6)			Moment of intertia			Torsional Stiffness
		Input Bore			Input Bore			
		(≤ Ø 14)	(≤ Ø 19)	(≤ Ø 28)	(≤ Ø 14)	(≤ Ø 19)	(≤ Ø 28)	
		[kg]	[kg]	[kg]	[kgcm^2]	[kgcm^2]	[kgcm^2]	[Nm/arc-min]
082	3	2,2	2,5	3,3	0,63	1,10	3,20	6,0
	4				0,45	0,92	3,02	6,0
	5				0,39	0,86	2,95	6,0
	8				0,32	0,79	2,89	6,0
	9				0,31	0,78	2,88	6,0
	10				0,31	0,78	2,87	6,0
	12	2,7	3,0	3,8	0,39	0,84	2,91	6,0
	15				0,35	0,80	2,87	6,0
	16				0,38	0,83	2,90	6,0
	20				0,34	0,79	2,86	6,0
	25				0,34	0,79	2,86	6,0
	32				0,37	0,82	2,89	6,0
	40				0,29	0,74	2,81	6,0
	50				0,29	0,74	2,81	6,0
	80				0,28	0,74	2,81	6,0
	100				0,28	0,74	2,81	6,0

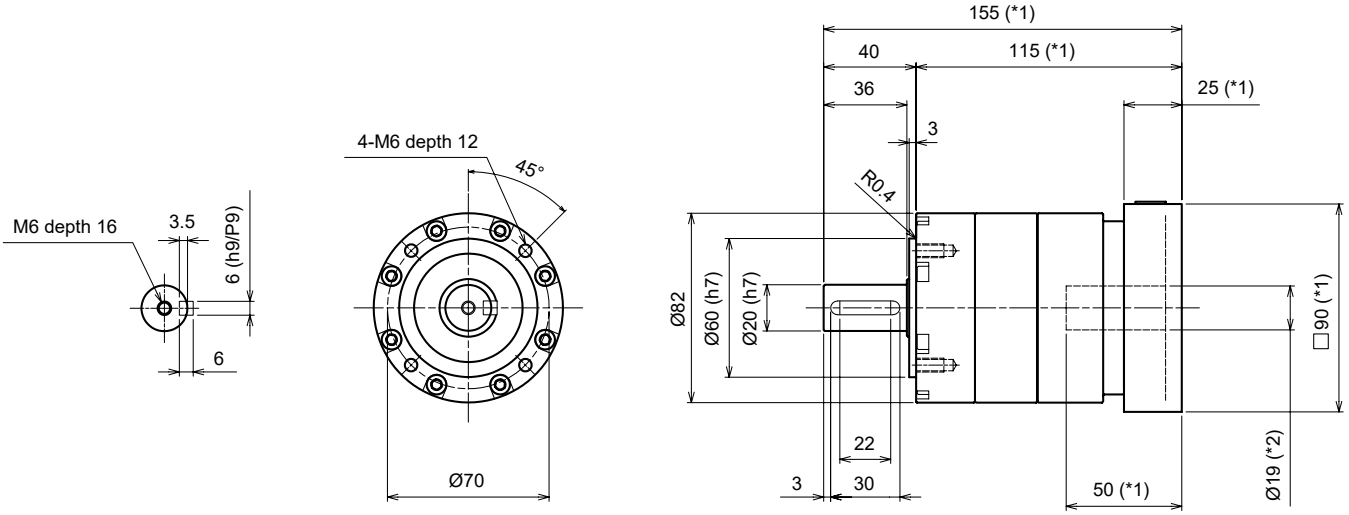
(1) Permitted for 30,000 rotations. Please note operation factor.
(2) The maximum permitted torque at a maximum of 1000 shocks.
(3) No additional axial load on the output shaft.
(4) Point of application is center of output shaft, at maximum output speed of 100 rpm.
(5) No additional radial load on the output shaft.
(6) The values vary depending on the design, e. g. adapter type and bushings.

PRE 082 dimensions - 1 stage

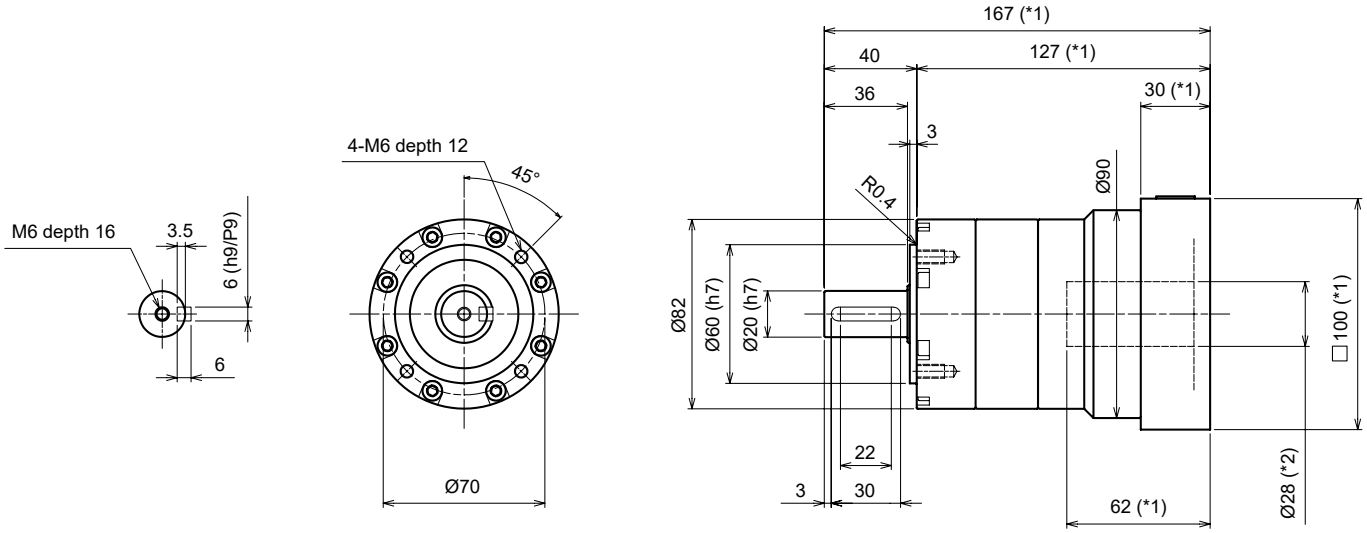
Input bore size ≦φ14 mm



Input bore size ≦φ19 mm



Input bore size ≦φ28 mm

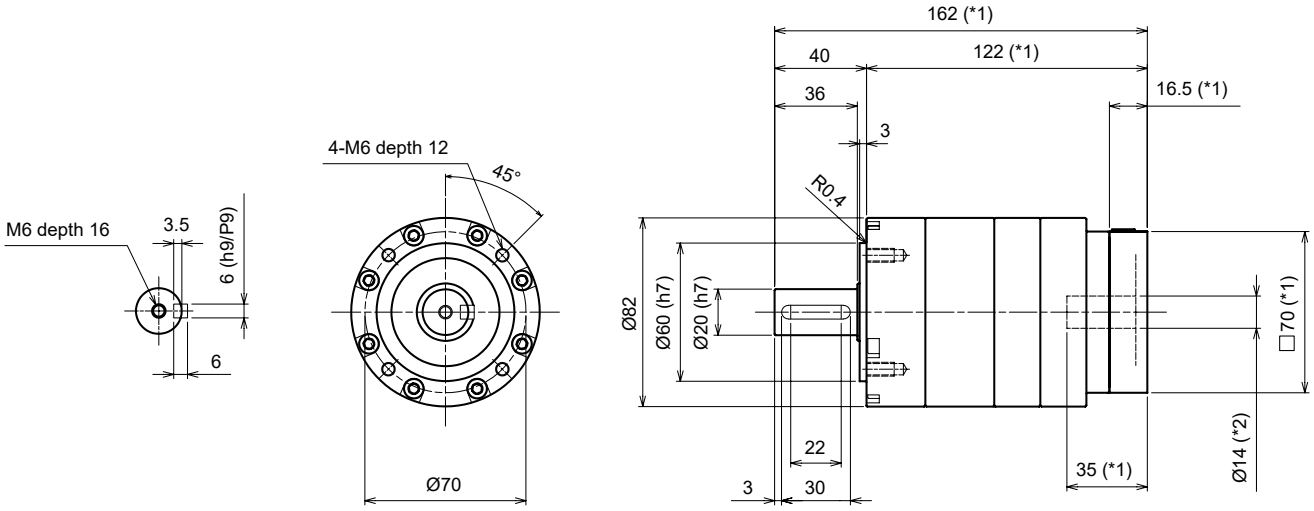


*1 Length will vary depending on motor.

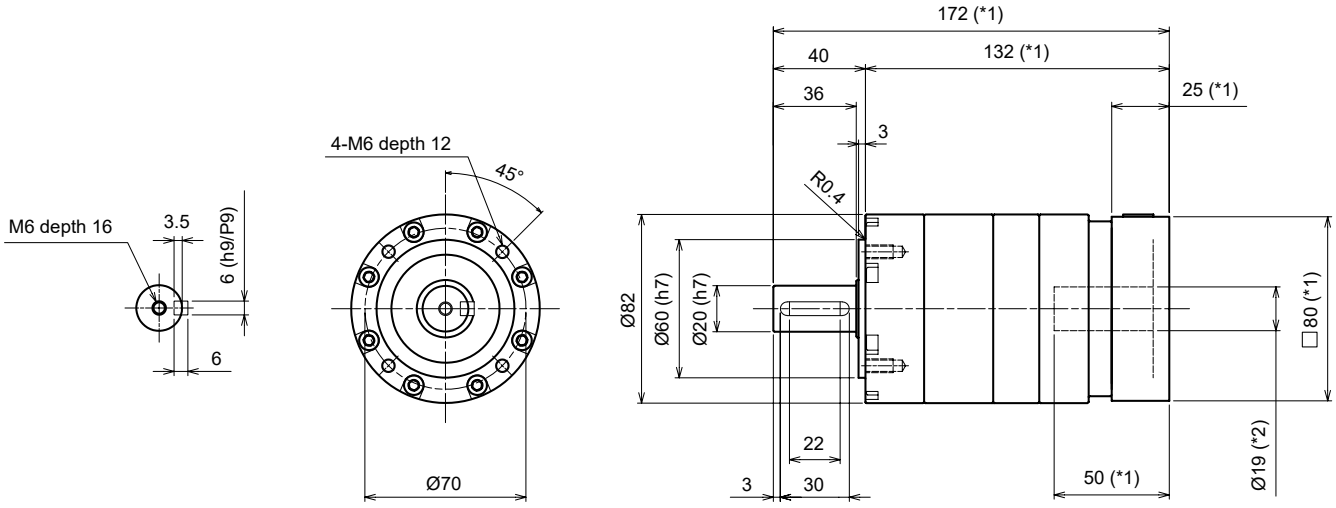
*2 Bushing will be inserted to adapt to motor shaft.

PRE 082 dimensions - 2 stages

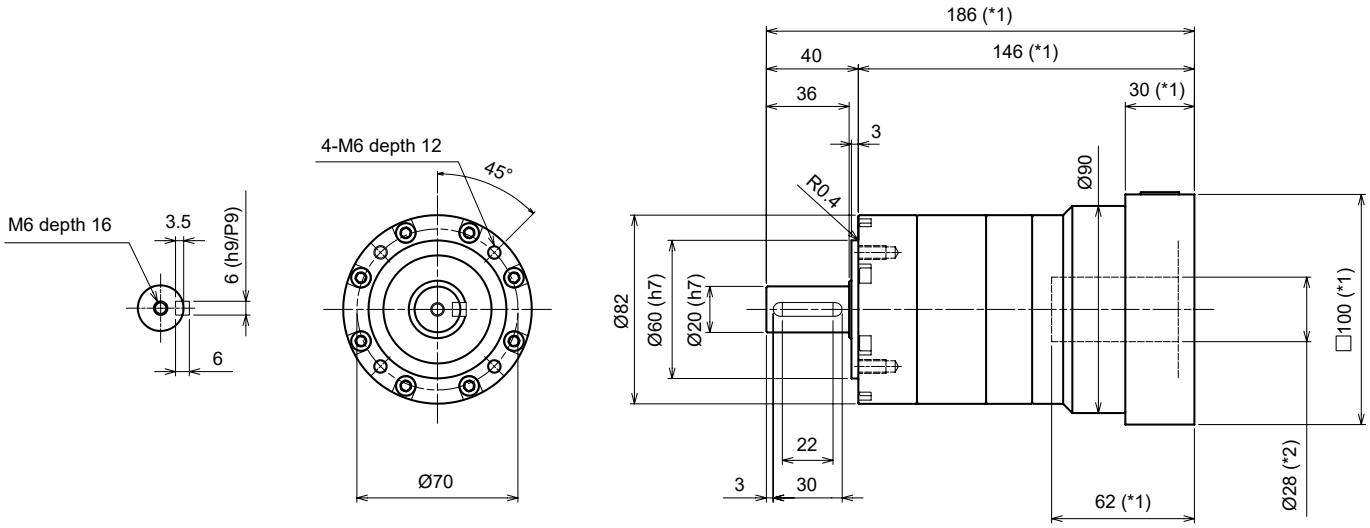
Input bore size ≦φ14 mm



Input bore size ≦φ19 mm



Input bore size ≦φ28 mm

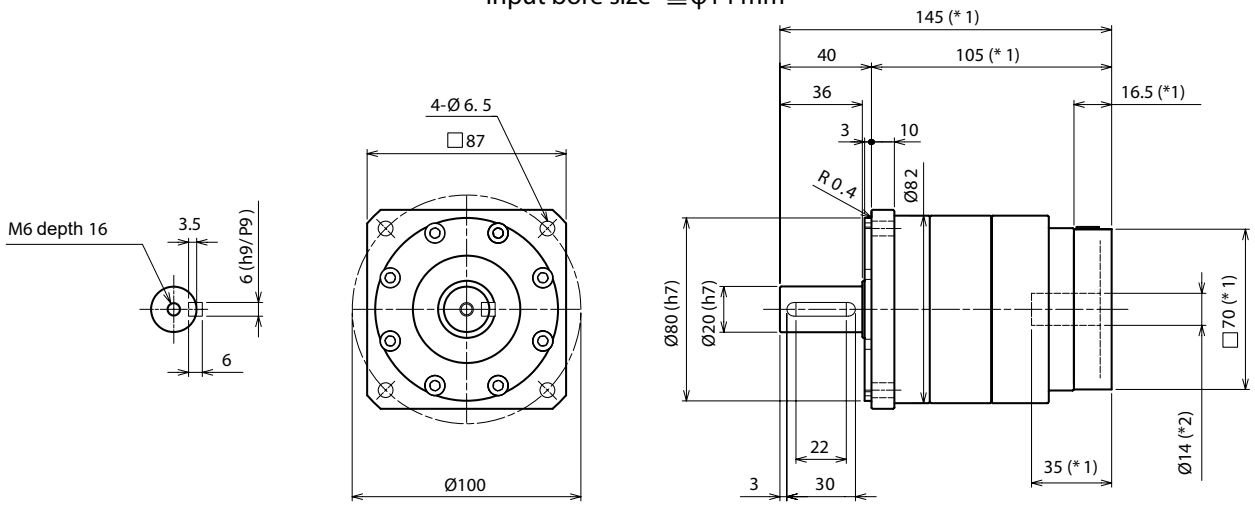


*1 Length will vary depending on motor

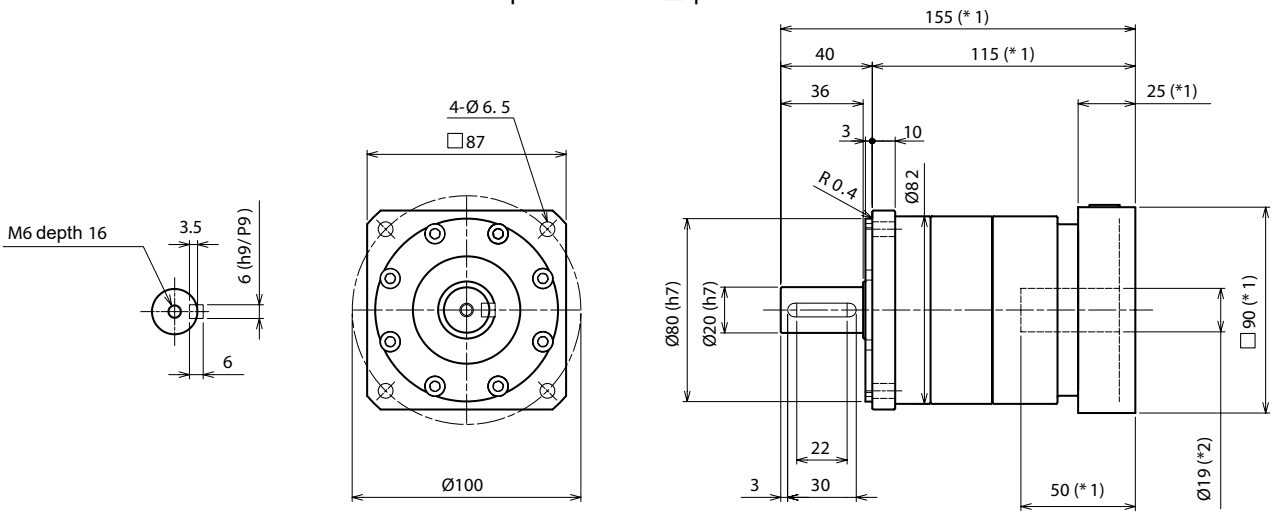
*2 Bushing will be inserted to adapt to motor shaft

PRF 082 dimensions - 1 stage

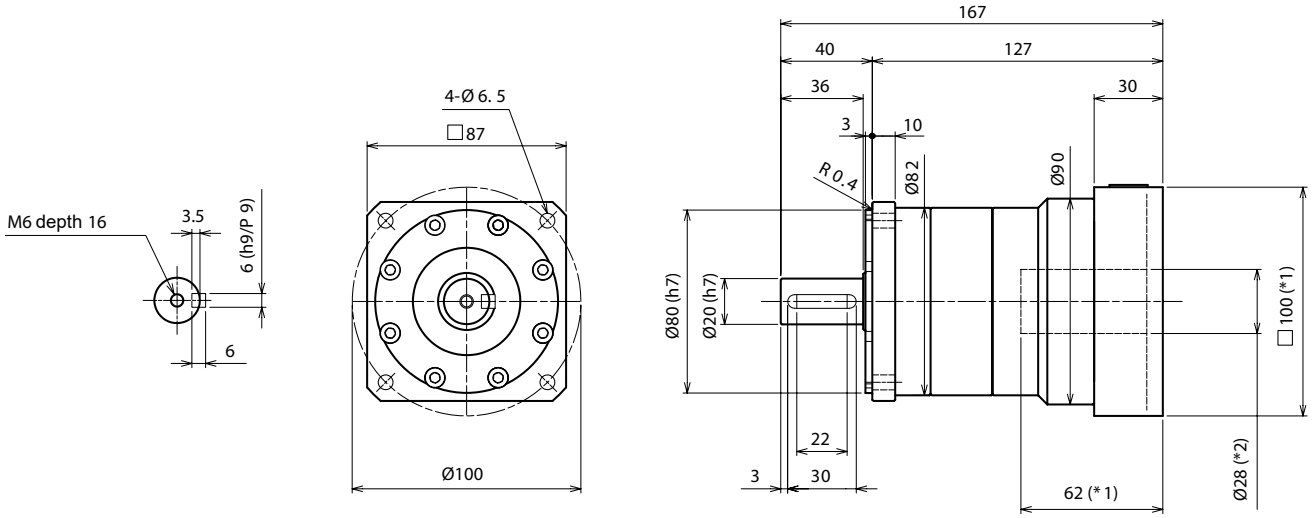
Input bore size ≦φ14 mm



Input bore size ≦φ19 mm



Input bore size ≦φ28 mm

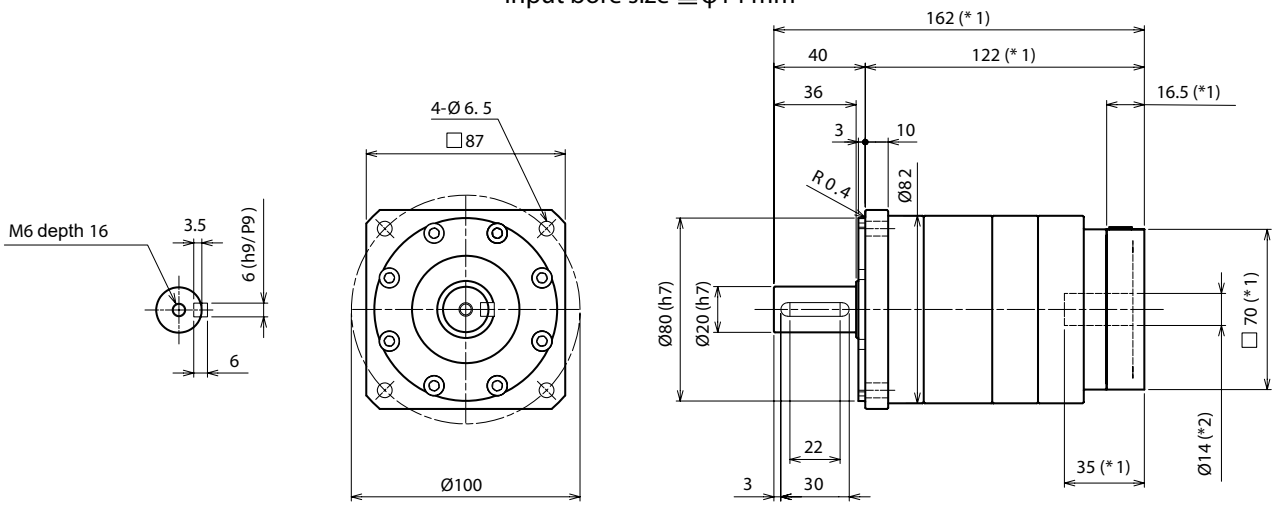


*1 Length will vary depending on motor.

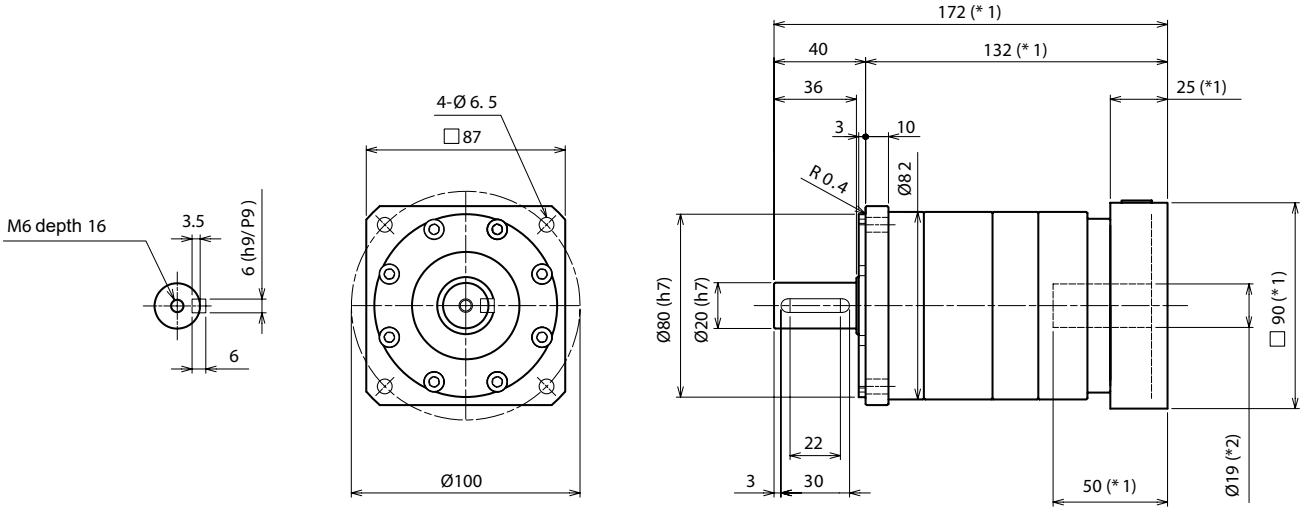
*2 Bushing will be inserted to adapt to motor shaft.

PRF 082 dimensions - 2 stages

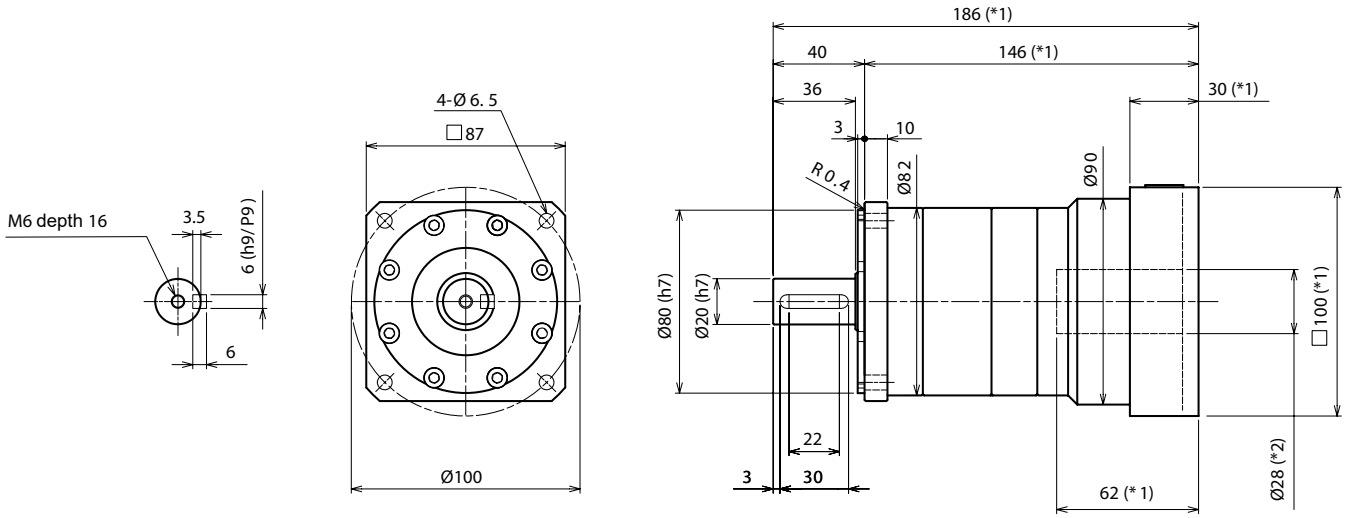
Input bore size ≦φ14 mm



Input bore size ≦φ19 mm



Input bore size ≦φ28 mm



*1 Length will vary depending on motor.

*2 Bushing will be inserted to adapt to motor shaft.

PRE/PRF 120 technical data

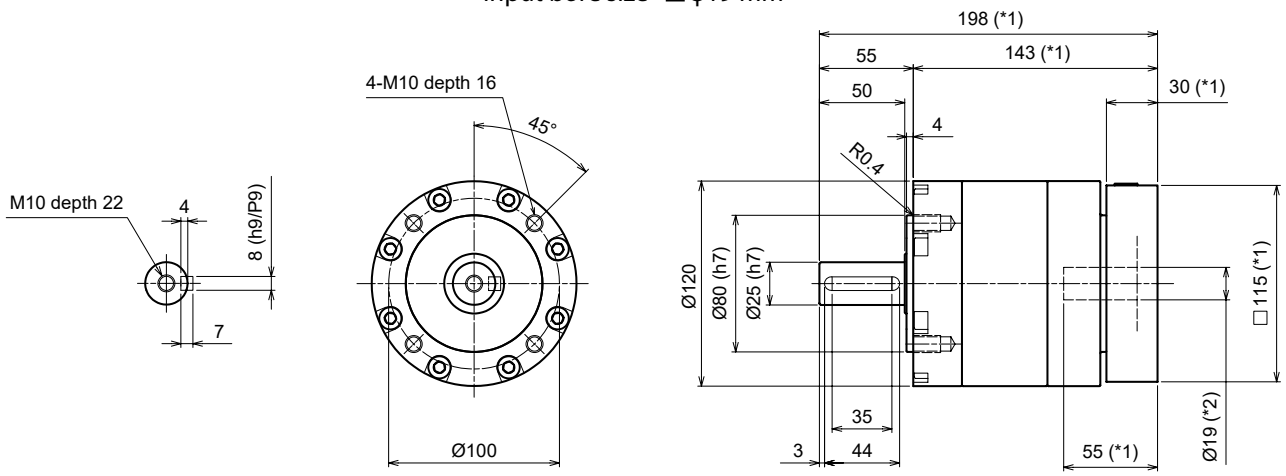
Size	Ratio	Nominal Output Torque(1)	Maximum Output Torque	Emergency Stop Torque(2)	Maximum Input Speed	Maximum Input Speed	Permitted Radial Load(3) (4)	Permitted Axial Load(3) (5)
		[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
120	3	225	340	500	3000	6000	1900	2700
	4	280	490	550	3000	6000	1900	2700
	5	280	490	550	3000	6000	1900	2700
	8	280	480	550	3000	6000	1900	2700
	9	225	370	500	3000	6000	1900	2700
	10	225	370	500	3000	6000	1900	2700
	12	225	270	500	3000	6000	1900	2700
	15	225	270	500	3000	6000	1900	2700
	16	280	390	550	3000	6000	1900	2700
	20	280	390	550	3000	6000	1900	2700
	25	280	390	550	3000	6000	1900	2700
	32	280	390	550	3000	6000	1900	2700
	40	280	390	550	3000	6000	1900	2700
	50	280	390	550	3000	6000	1900	2700
	80	280	390	550	3000	6000	1900	2700
	100	225	292	500	3000	6000	1900	2700

Size	Ratio	Weight(6)			Moment of intertia			Torsional Stiffness
		Input Bore			Input Bore			
		(≤ Ø 19)	(≤ Ø 28)	(≤ Ø 38)	(≤ Ø 19)	(≤ Ø 28)	(≤ Ø 38)	
		[kg]	[kg]	[kg]	[kgcm²]	[kgcm²]	[kgcm²]	[Nm/arc-min]
120	3	6,1	6,8	9,2	2,75	4,78	12,70	15
	4				1,73	3,76	11,60	15
	5				1,36	3,40	11,30	15
	8				0,95	2,97	10,80	15
	9				0,90	2,92	10,80	15
	10				0,88	2,90	10,80	15
	12	8	8,8	-	1,32	3,31	-	15
	15				1,12	3,10	-	15
	16				1,25	3,24	-	15
	20				1,07	3,05	-	15
	25				1,05	3,04	-	15
	32				1,21	3,19	-	15
	40				0,80	2,78	-	15
	50				0,80	2,78	-	15
	80				0,79	2,78	-	15
	100				0,79	2,78	-	15

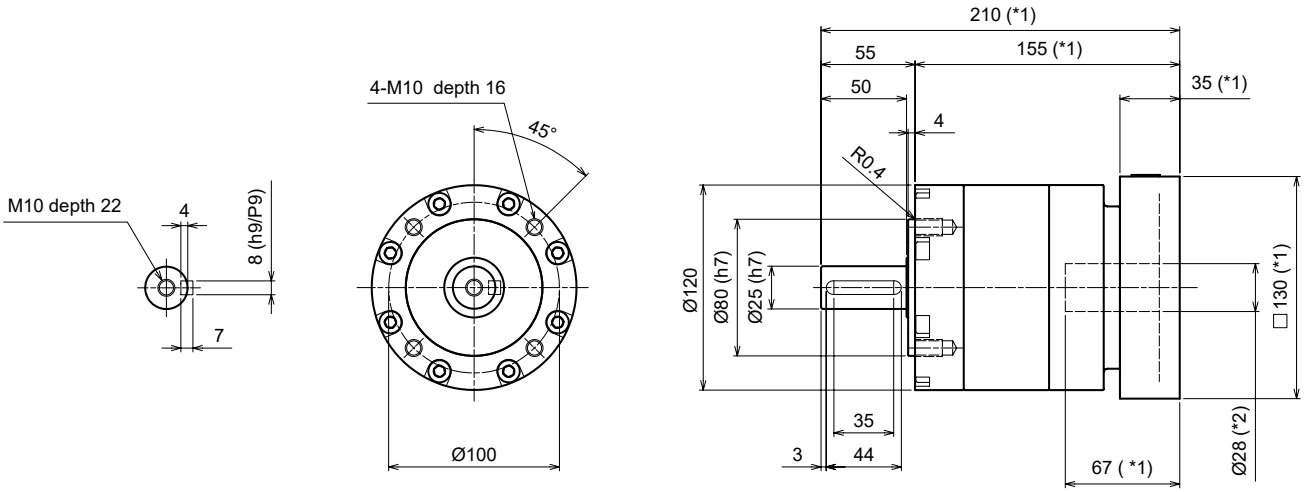
(1) Permitted for 30,000 rotations. Please note operation factor.
(2) The maximum permitted torque at a maximum of 1000 shocks.
(3) No additional axial load on the output shaft.
(4) Point of application is center of output shaft, at maximum output speed of 100 rpm.
(5) No additional radial load on the output shaft.
(6) The values vary depending on the design, e. g. adapter type and bushings.

PRE 120 dimensions - 1 stage

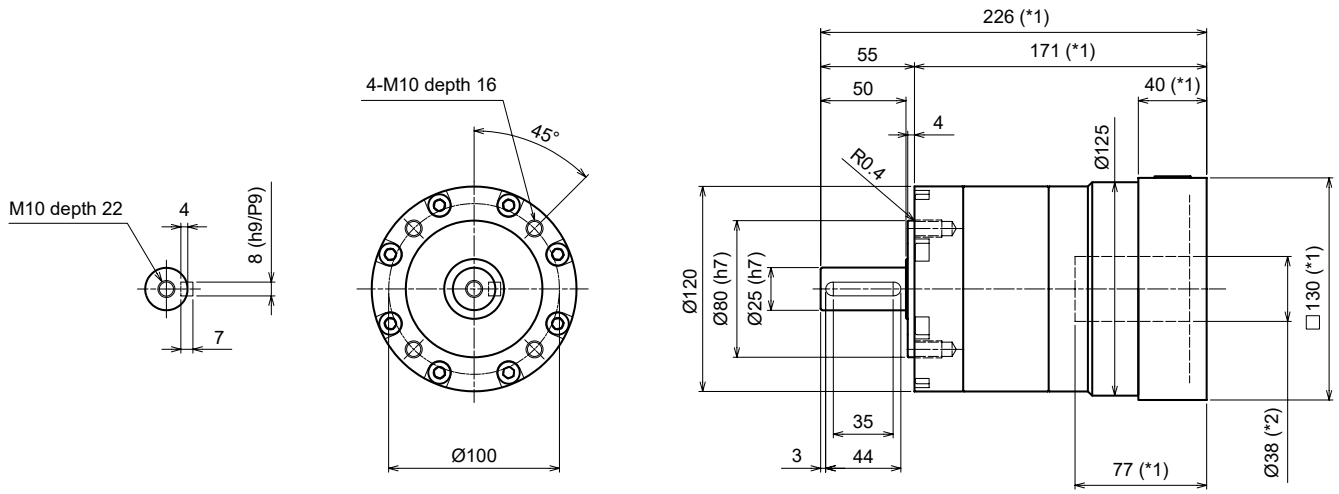
Input bore size ≦φ19 mm



Input bore size ≦φ28 mm



Input bore size ≦φ38 mm

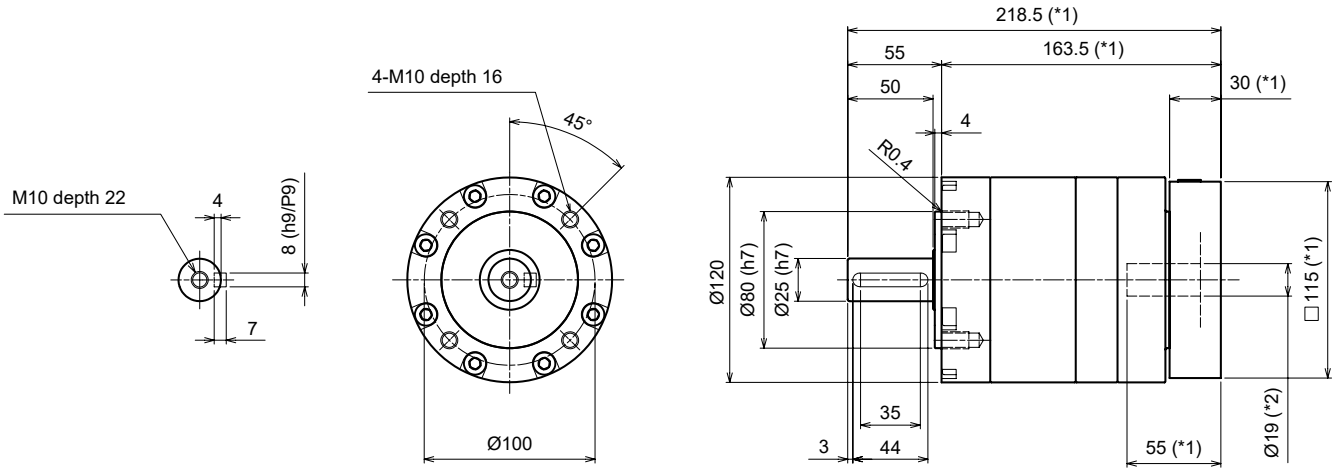


*1 Length will vary depending on motor.

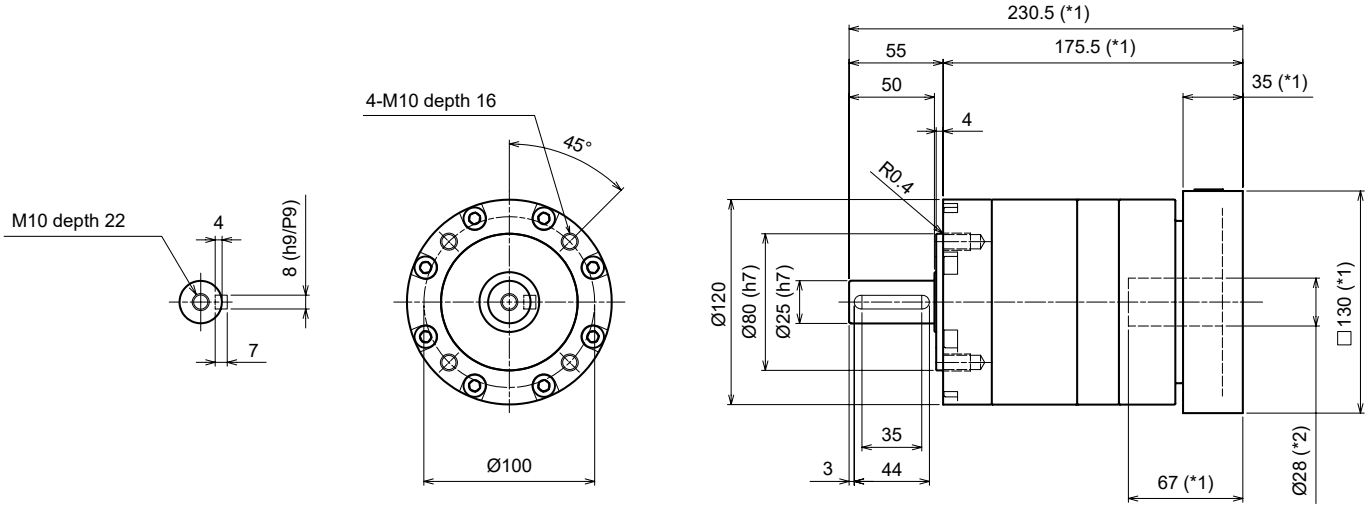
*2 Bushing will be inserted to adapt to motor shaft.

PRE 120 dimensions - 2 stages

Input bore size ≦φ19 mm



Input bore size ≦φ28 mm

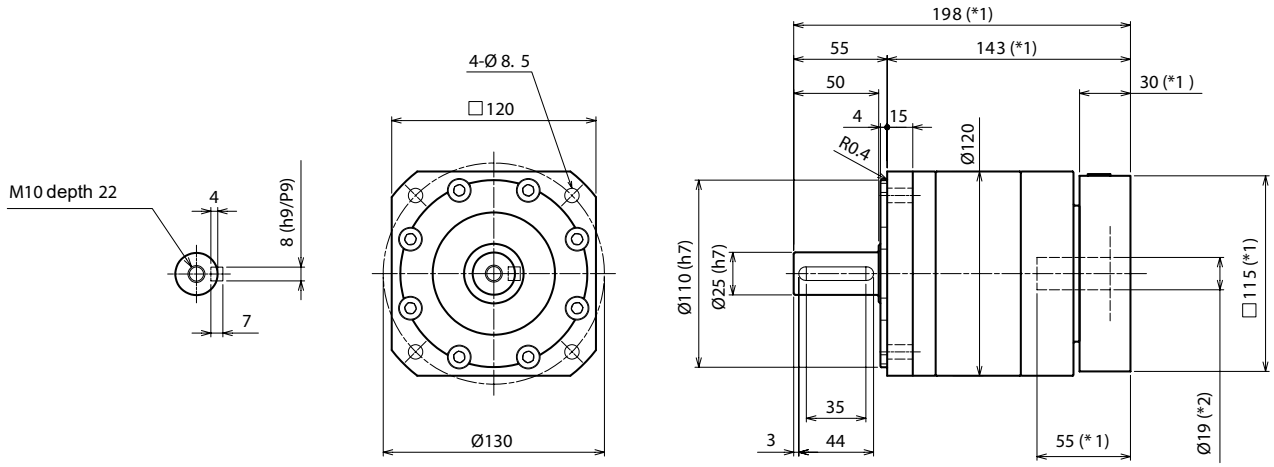


*1 Length will vary depending on motor.

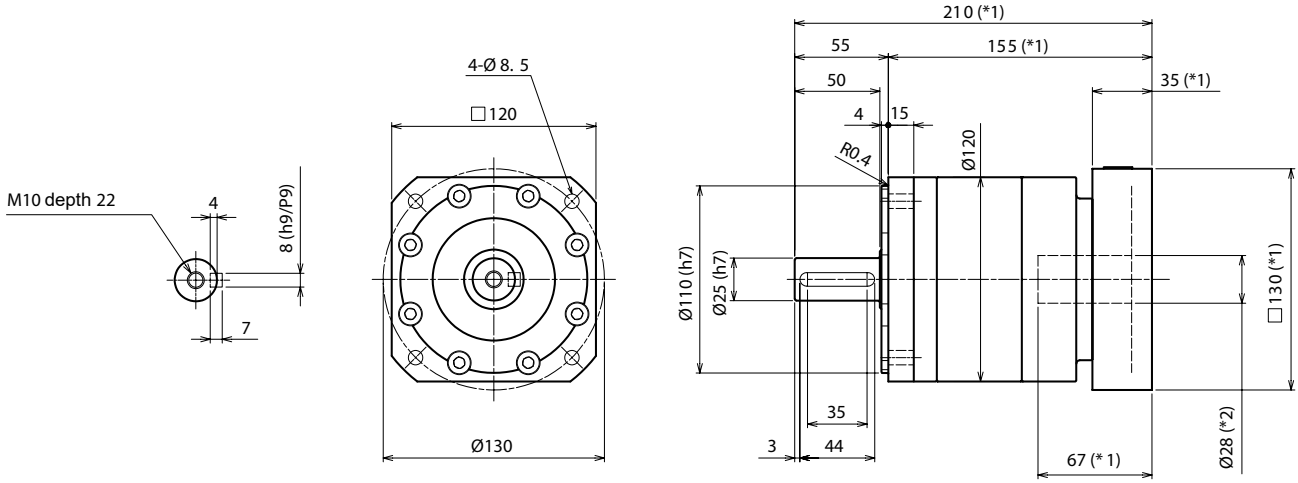
*2 Bushing will be inserted to adapt to motor shaft.

PRF 120 dimensions - 1 stage

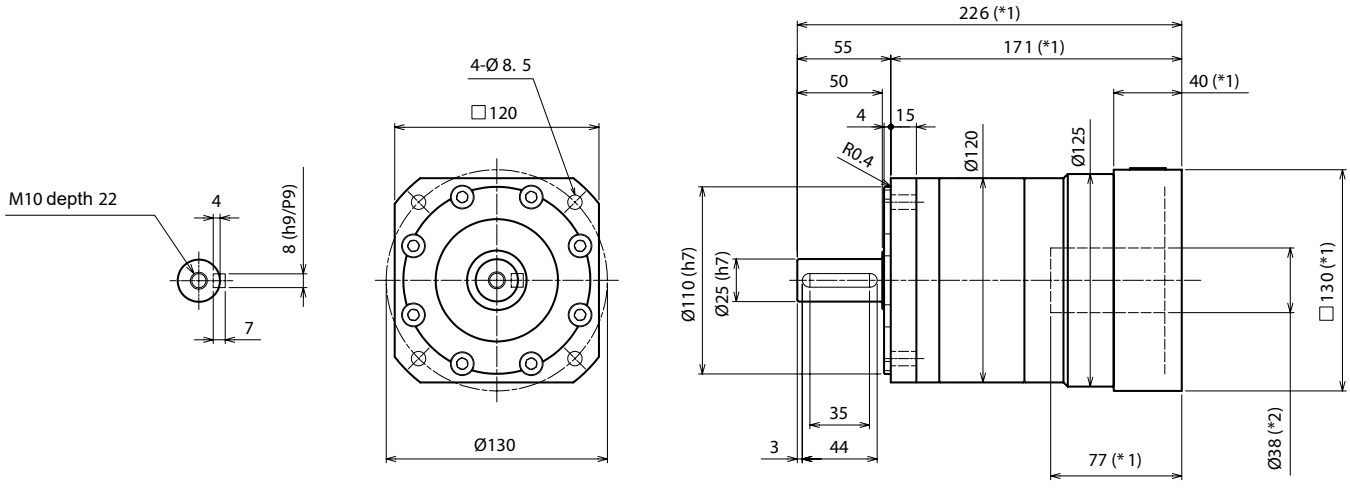
Input bore size ≦φ19 mm



Input bore size ≦φ28 mm



Input bore size ≦φ38 mm

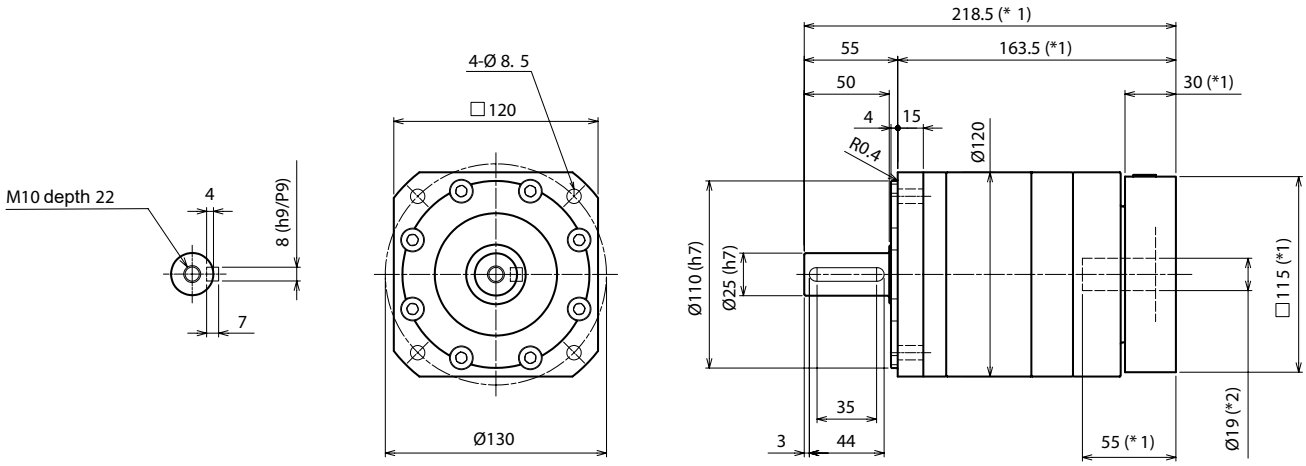


*1 Length will vary depending on motor.

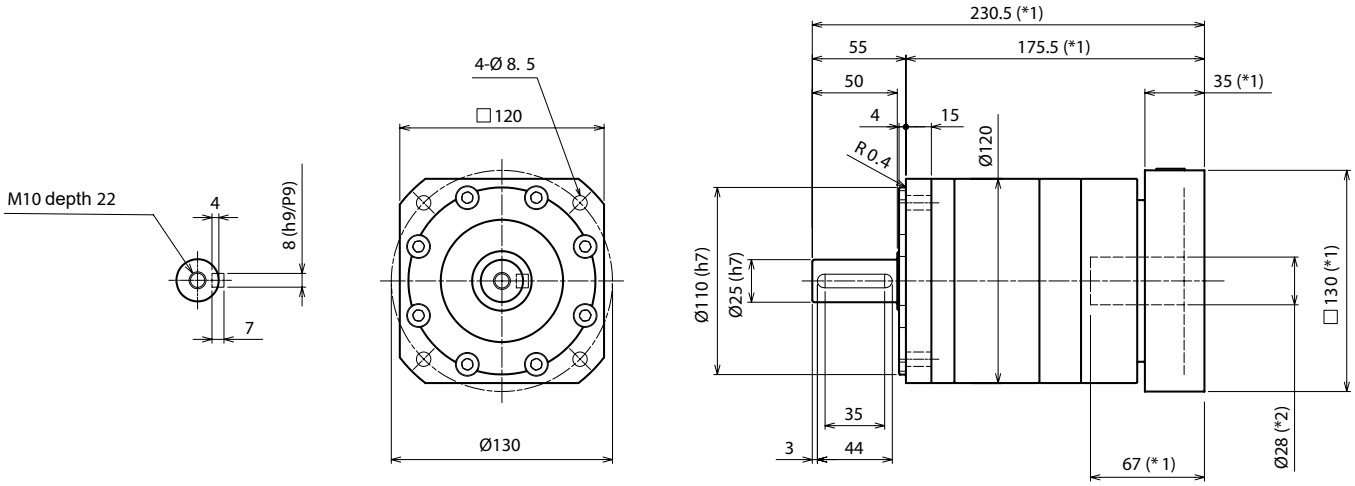
*2 Bushing will be inserted to adapt to motor shaft.

PRF 120 dimensions - 2 stages

Input bore size ≦φ19 mm



Input bore size ≦φ28 mm



*1 Length will vary depending on motor.

*2 Bushing will be inserted to adapt to motor shaft.

PRE/PRF 160 technical data

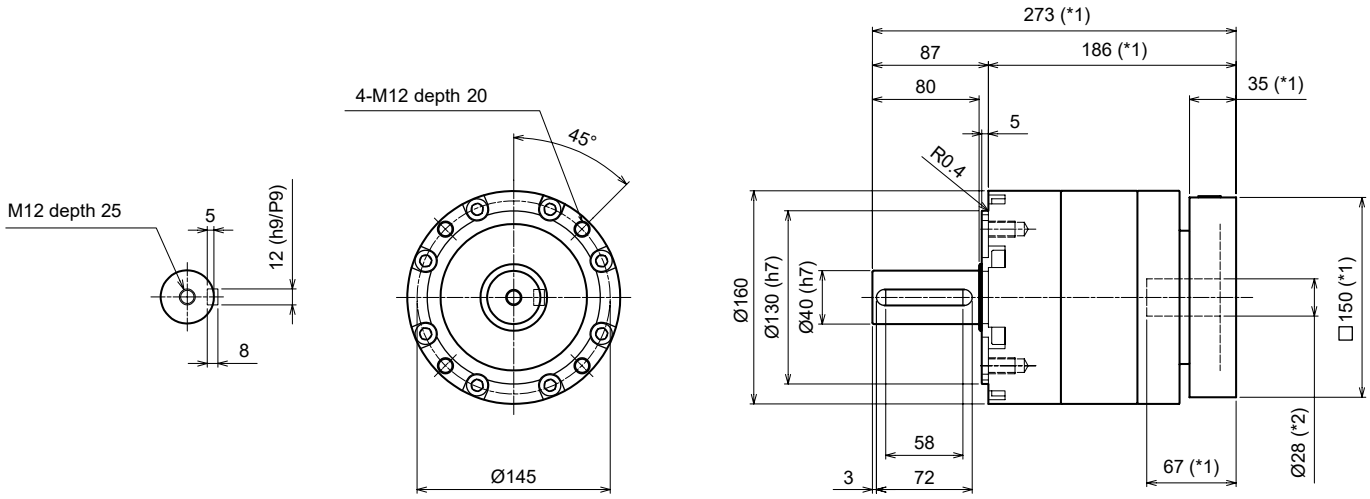
Size	Ratio	Nominal Output Torque(1)	Maximum Output Torque	Emergency Stop Torque(2)	Maximum Input Speed	Maximum Input Speed	Permitted Radial Load(3) (4)	Permitted Axial Load(3) (5)
		[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
160	3	470	630	1000	2000	6000	4000	6200
	4	700	1000	1250	2000	6000	4000	6200
	5	700	1000	1250	2000	6000	4000	6200
	8	700	950	1250	2000	6000	4000	6200
	9	470	730	1000	2000	6000	4000	6200
	10	470	730	1000	2000	6000	4000	6200
	12	470	560	1000	2000	6000	4000	6200
	15	470	560	1000	2000	6000	4000	6200
	16	700	840	1250	2000	6000	4000	6200
	20	700	840	1250	2000	6000	4000	6200
	25	700	840	1250	2000	6000	4000	6200
	32	700	840	1250	2000	6000	4000	6200
	40	700	840	1250	2000	6000	4000	6200
	50	700	840	1250	2000	6000	4000	6200
	80	700	840	1250	2000	6000	4000	6200
	100	470	610	1000	2000	6000	4000	6200

Size	Ratio	Weight(6)		Moment of intertia		Torsional Stiffness
		Input Bore		Input Bore		
		(≤ Ø 28)	(≤ Ø 38)	(≤ Ø 28)	(≤ Ø 38)	
		[kg]	[kg]	[kgcm²]	[kgcm²]	[Nm/arc-min]
160	3	15	17	10,30	19,00	43
	4			6,50	15,10	43
	5			5,13	13,80	43
	8			3,60	12,20	43
	9			3,44	12,10	43
	10			3,36	12,00	43
	12	19	20	5,41	14,00	43
	15			4,49	13,10	43
	16			5,13	13,70	43
	20			4,31	12,90	43
	25			4,25	12,90	43
	32			4,96	13,60	43
	40			3,12	11,90	43
	50			3,11	11,90	43
	80			3,09	11,90	43
	100			3,09	11,90	43

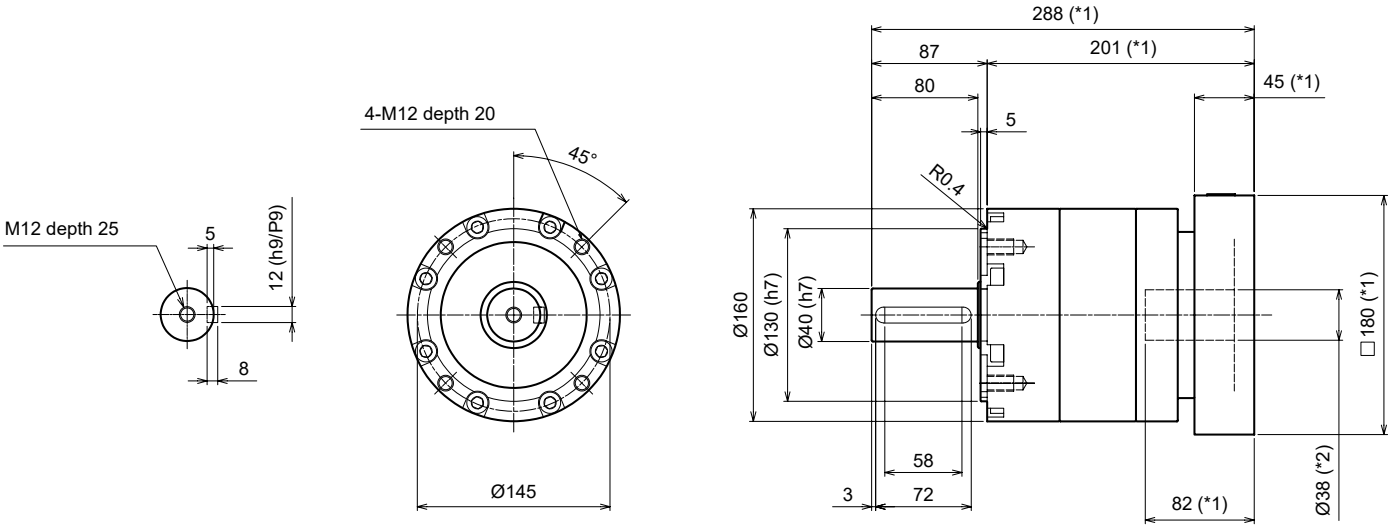
(1) Permitted for 30,000 rotations. Please note operation factor.
(2) The maximum permitted torque at a maximum of 1000 shocks.
(3) No additional axial load on the output shaft.
(4) Point of application is center of output shaft, at maximum output speed of 100 rpm.
(5) No additional radial load on the output shaft.
(6) The values vary depending on the design, e. g. adapter type and bushings.

PRE 160 dimensions - 1 stage

Input bore size ≦φ28 mm



Input bore size ≦φ38 mm

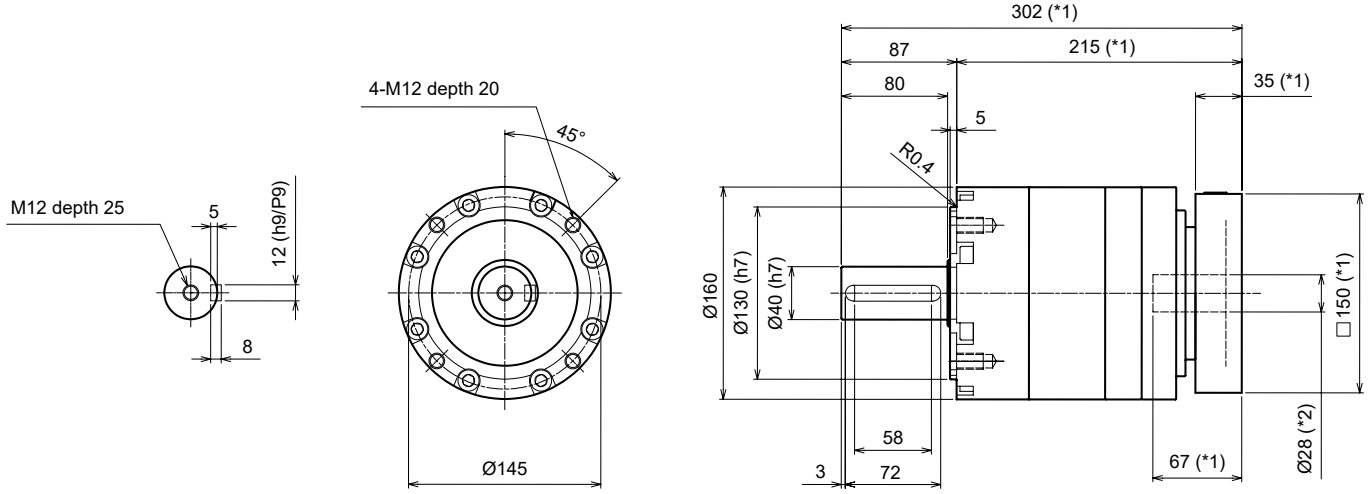


*1 Length will vary depending on motor.

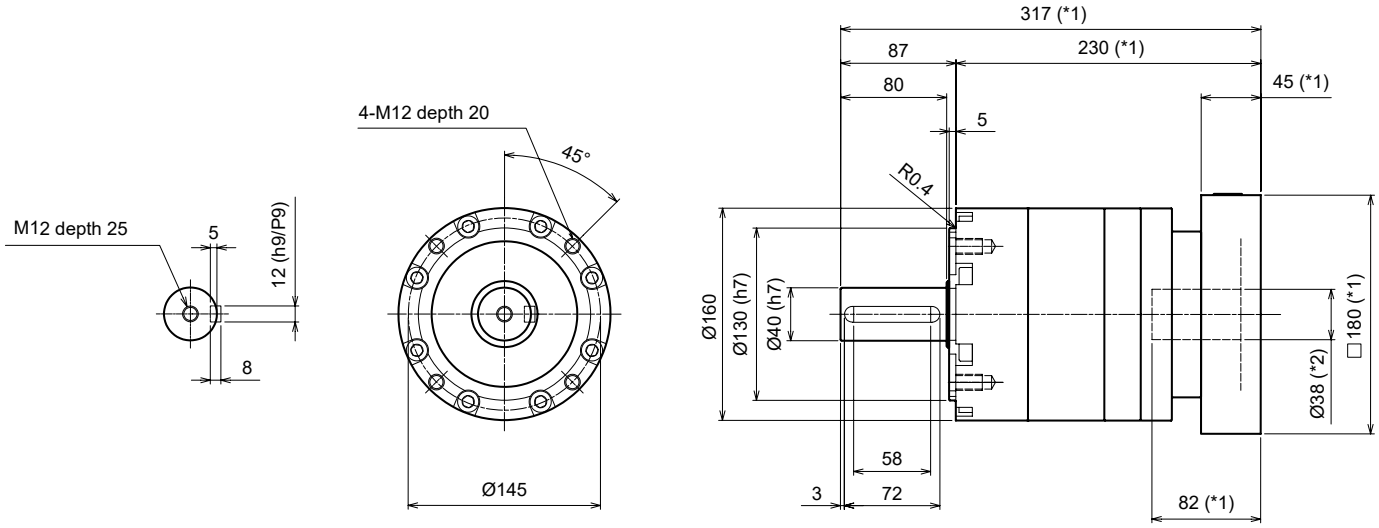
*2 Bushing will be inserted to adapt to motor shaft.

PRE 160 dimensions - 2 stages

Input bore size ≦φ28 mm



Input bore size ≦φ38 mm

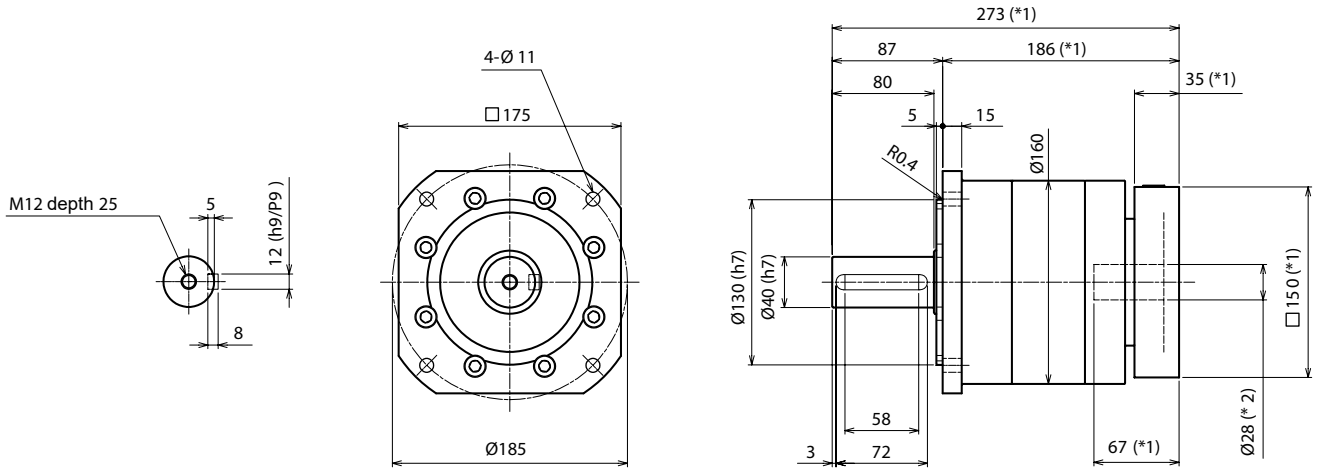


*1 Length will vary depending on motor

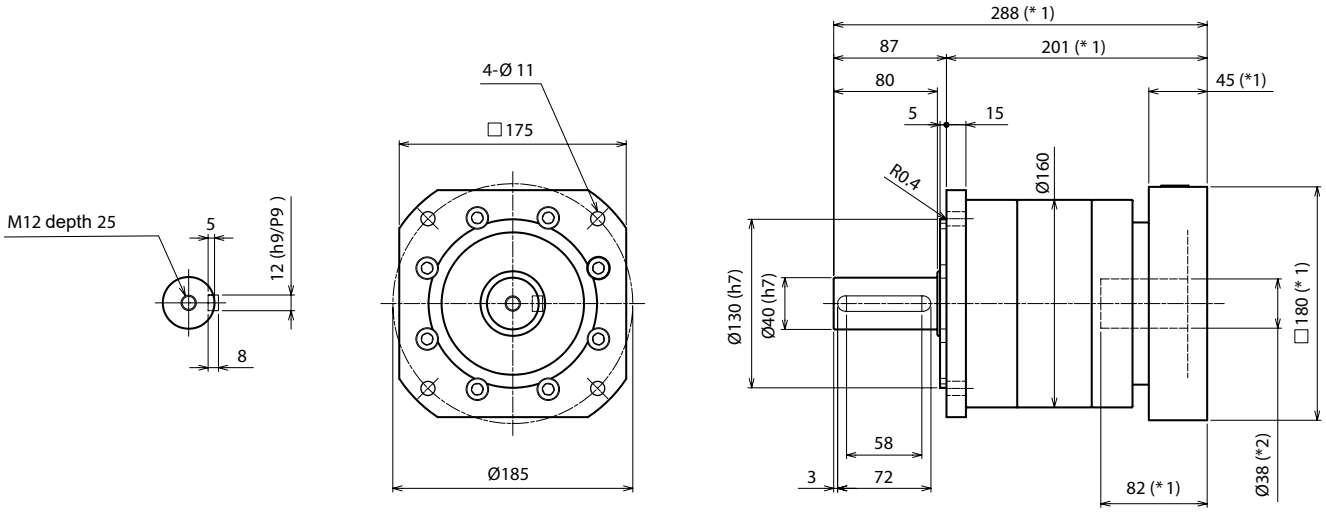
*2 Bushing will be inserted to adapt to motor shaft

PRF 160 dimensions - 1 stage

Input bore size ≦φ28 mm



Input bore size ≦φ38 mm

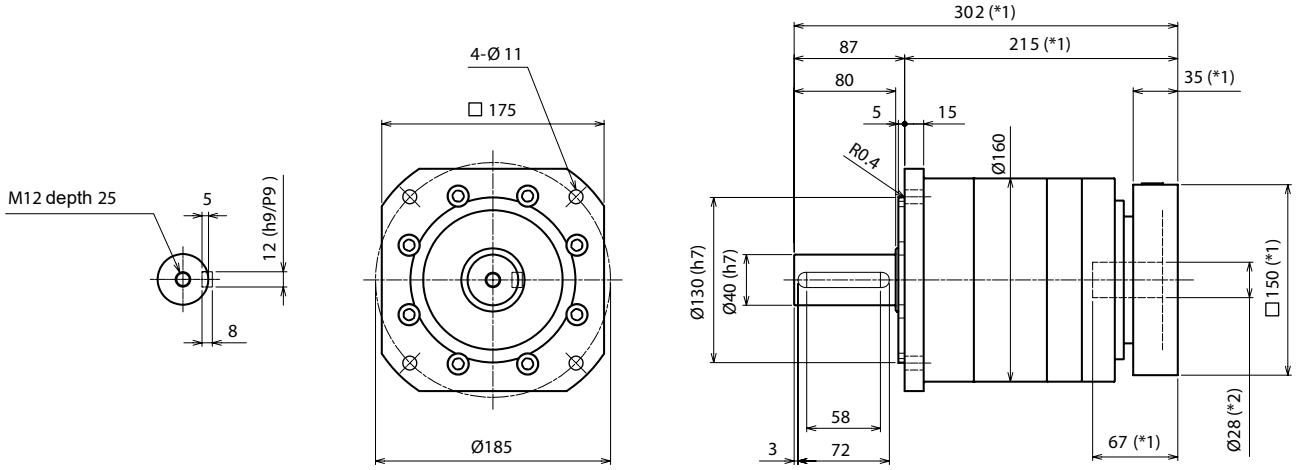


*1 Length will vary depending on motor.

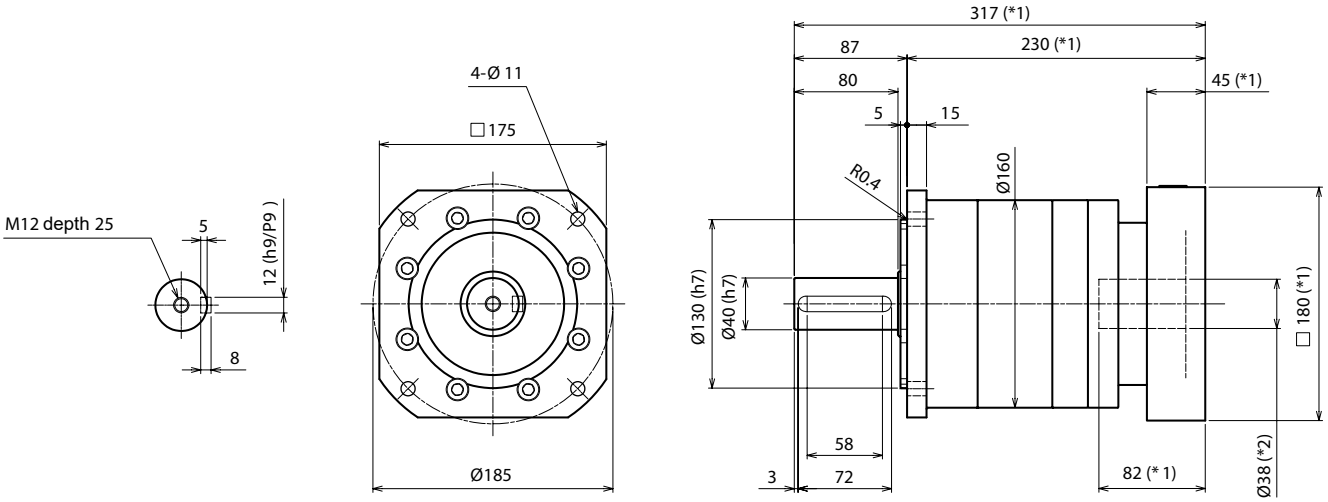
*2 Bushing will be inserted to adapt to motor shaft.

PRF 160 dimensions - 2 stages

Input bore size ≦φ28 mm



Input bore size ≦φ38 mm



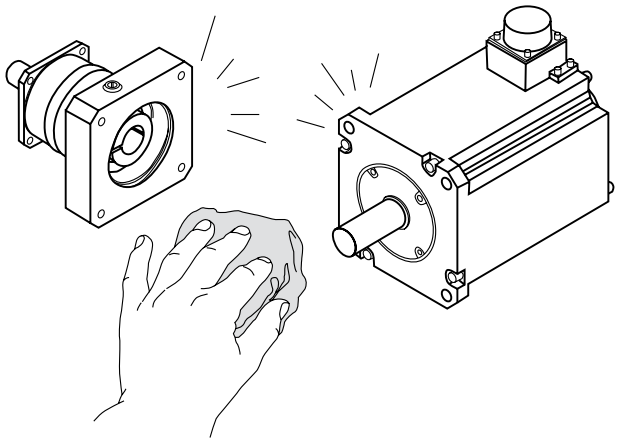
*1 Length will vary depending on motor.

*2 Bushing will be inserted to adapt to motor shaft.

Installation Instructions and Safety Precautions

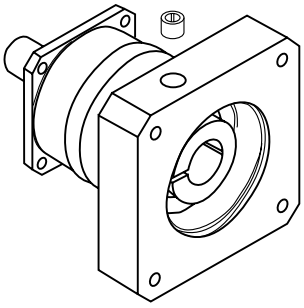
Inspection and Preparations

A. Upon delivery of the gearbox, confirm that you received the exact model that was specified on your purchase order.
B. Inspect for shipping damage. Notify the shipping agent immediately if any damage is discovered.
C. Remove the protective covering from the output shaft.

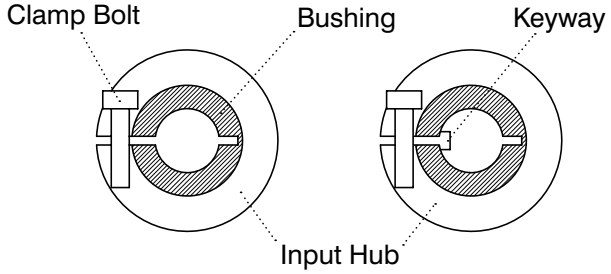


D. Clean and de-grease the motor mounting surface and shaft, as well as the gearbox mounting surface, input hub bore, and shaft bushing (if included). This cleaning is very important for the shaft and bushing, to prevent slip during motion.

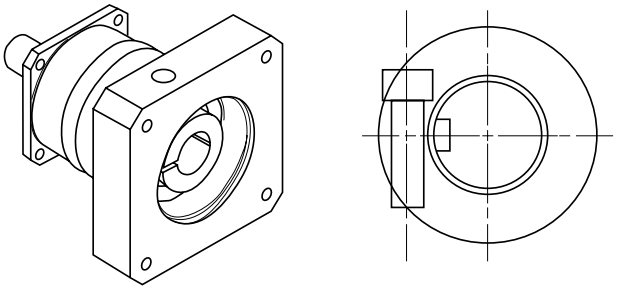
Motor Mounting



A. Remove the access hole plug, allowing access to the motor shaft clamp.

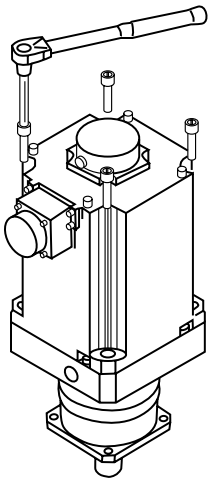


B. Carefully align the shaft bushing (if included) so that the opening in the bushing aligns with the opening in the input hub. It is also recommended that the motor shaft keyway (if present) aligns with the opening in the input hub clamp.



C. Rotate the gearbox input hub so that the clamp bolt is aligned with the access hole. Loosen the clamp bolt.

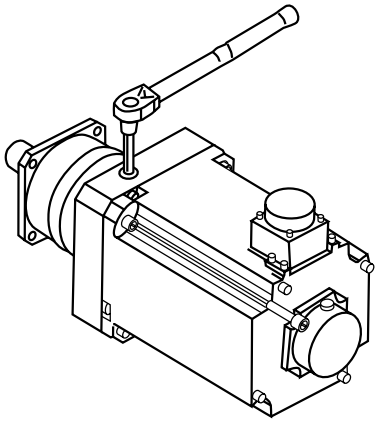
D. Remove the motor key (if supplied), as it is not required for proper installation and operation.



E. Slowly slide the motor into the gearbox, so that the motor shaft enters the gearbox input hub with motor shaft keyway (if present) aligned with gearbox input shaft clamp opening. Install the four motor flange bolts in a cross-wise pattern, to ensure proper alignment of motor to gearbox. Tighten the bolts to the proper torque using a torque wrench (see Table A).

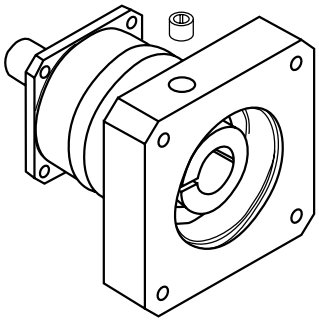
Table A

Motor Installation Bolt Size	Tightening Torque	
	(Nm)	(in lbs)
M3	1.3	12
M4	3.0	27
M5	6.0	53
M6	10	89
M8	20	171
M10	38	338
M12	67	596



F. Tighten the gearbox input shaft clamp bolt to the proper torque using a torque wrench (see Table B).

Clamp Bolt Size	Tightening Torque	
	(Nm)	(in lbs)
M3	2.0	18
M4	4.5	40
M5	9.0	80
M6	16	142
M8	36	318
M10	27	637
M12	125	1106



G. Re-install the access hole plug into the motor adapter plate. Assembly is complete.

Safety Precautions

A. Avoid use in wet or corrosive areas, unless the gearbox is specified for these environments.

B. Ambient temperature in the area of the gearbox must be in the range of 0° -40 °C, unless the gearbox is built to withstand a different temperature range.

C. The gearbox (with motor) must be firmly attached to a vibration-free frame or fixture.

D. The gearbox has been lubricated and can be operated immediately.

E. At initial operation, check the direction of shaft rotation, then apply the load gradually.

F. Avoid excessive loads.

G. Ensure that the motor speed does not exceed the maximum RPM specified for the gearbox.

H. Watch for the following problems and discontinue motion immediately:

   a. Sharp increase in temperature
   b. Abnormal noise
   c. Unstable output speed

I. The gearbox is not designed to be disassembled.

J. The gearbox is lubricated for its lifetime with appropriate grease. No re-lubrication is required.

IP 65 Versions

If you have received an IP65 version of the gearbox, be sure to seal between the gearbox and motor interface with a sealant to ensure an IP65 rating of the gearbox / motor assembly. Also apply sealant to the access hole plug during step “G”. Please contact SIT S.p.A. with any questions.

Motor Mounting Codes

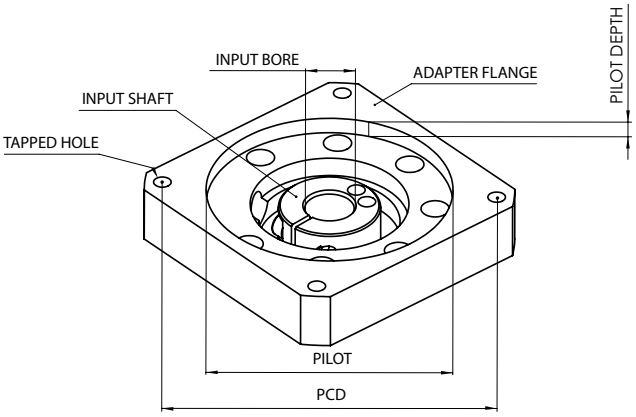
Our motor mounting codes can be configured automatically using our online selection tool. These tables supply the details behind these codes. The tables start with Input Bore measurement and the Part # Code, which are indicated at the end of every model code. For each Part # Code, the Pilot, pCD, Tapped Hole, and Pilot Depth, are explained.

Please note that even though the Part# Code may have the same letters (i.e. DC, FB, HA, etc), the Pilot and PCD dimensions may not be the same if a different input bore diameter. Locate the table by input bore diameter first, and then find the appropriate adapter Part# Code to check the dimensions. If you have any questions, Contact SIT S.p.A. for support.

Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
65	MA	114.3	200	M12	8
65	MB	200	235	M12	8
65	MC	180	215	M12	8
65	MD	180	265	M12	8
65	NA	230	265	M12	8
65	NB	230	265	M12	18
65	NC	230	290	M12	8
65	ND	230	265	M20	18
65	PA	250	300	M16	8
65	PB	250	320	M16	18
65	QA	300	350	M16	8
65	QB	280	325	M16	8

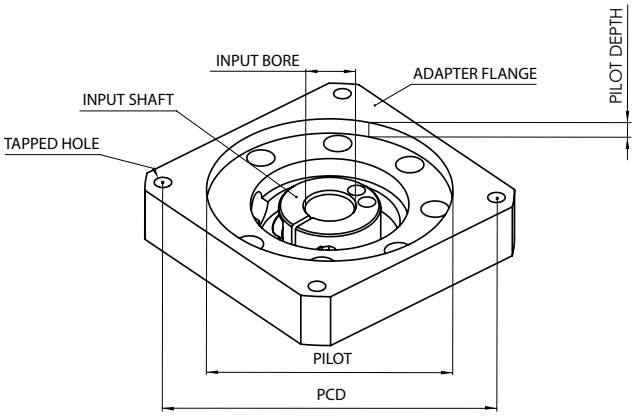
Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
48	KA	114.3	200	M12	8
48	KB	110	130	8.8	8
48	KC	130	215	M12	8
48	LA	180	215	M12	8
48	MA	180	265	M12	8
48	MB	200	235	M12	8
48	NA	230	265	M12	8
48	PA	250	300	M16	8

Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
38	HA	110	130	8.8	8
38	HB	110	145	M8	8
38	HE	110	130	M8	8
38	JA	130	165	M10	8
38	KA	114.3	200	M12	8
38	KB	130	215	M10	8
38	KC	130	215	M12	8
38	KD	95	200	M10	18
38	KE	114.3	200	M12	18
38	LA	180	215	M12	8
38	LB	180	215	M12	18
38	MA	180	265	M12	8
38	MB	200	235	M12	8
38	MC	215.9	184.15	13.7	5.5
38	MD	200	250	M8	18
38	NA	230	265	M12	8



Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
28	FA	80	100	M6	8
28	FB	95	115	M6	8
28	FC	95	115	M8	8
28	FD	95	115	M6	6
28	FE	95	115	M8	8
28	GA	55.563	125.73	M6	8
28	GB	63.5	127	M6	8
28	GC	95	130	M8	8
28	GD	110	130	M8	8
28	GE	110	130	M10	8
28	GF	110	130	8.8	8
28	GG	110	135	M8	8
28	GH	95	135	M8	8
28	HA	110	145	M8	8
28	HB	110	145	M8	18
28	HC	110	145	10.5	8
28	HD	114.3	149.23	10.5	8
28	HE	95	145	M8	18
28	HF	110	145	M8	8
28	JA	110	165	M8	8
28	JB	110	165	M10	8
28	JC	130	165	M10	8
28	JD	130	174	M10	28
28	JE	130	165	M10	18
28	JF	114.3	160	M10	8
28	KA	114.3	200	M12	8
28	KB	130	215	M10	8
28	KD	114.3	200	M12	18
28	KE	150	185	M10	8
28	LA	180	215	M12	8
28	LB	180	220	M12	18
28	MA	200	235	M12	8
28	MB	200	250	M8	18

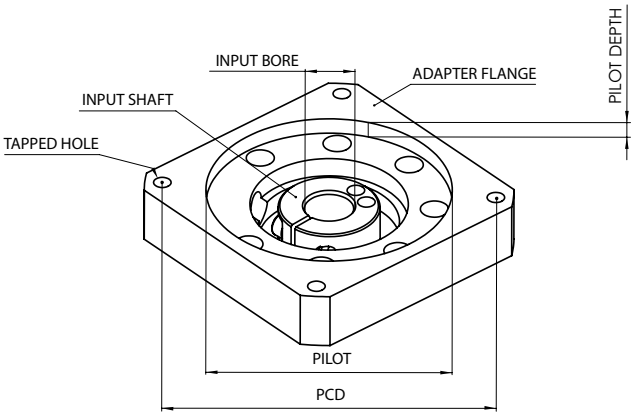
Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
19 /	FC	95	115	M8	9
19 /	BK	50	70	M5	6
19	DA	60	90	M5	6
19	DB	70	90	M5	6
19	DC	70	90	M6	6
19	DD	70	90	M6	16
19	DE	70	90	M5	11
19	EA	73.025	98.43	M5	11
19	EB	80	100	M6	6
19	EC	80	100	M6	16
19	ED	60	98.99	M6	6
19	FA	95	115	M8	6
19	FB	95	115	M8	16
19	GA	55.563	125.73	M6	11
19	GB	95	130	M8	6
19	GC	110	130	M8	11
19	GD	110	130	8.8	6
19	GE	95	130	M8	16
19	GF	100	125	M8	16
19	GH	95	135	M8	11
19	HA	110	145	M8	6
19	HB	110	145	M8	21
19	HC	110	145	10.5	11
19	HD	114.3	149.23	M8	11
19	HE	114.3	149.23	10.5	11
19	JA	130	165	M10	16
19	JB	115	165	M8	21



Our motor mounting codes can be configured automatically using our online selection tool. These tables supply the details behind these codes. The tables start with Input Bore measurement and the Part # Code, which are indicated at the end of every model code. For each Part # Code, the Pilot, pCD, Tapped Hole, and Pilot Depth, are explained.

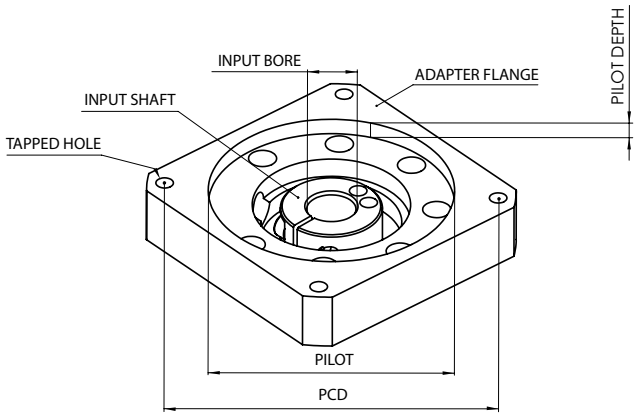
Please note that even though the Part# Code may have the same letters (i.e. DC, FB, HA, etc), the Pilot and PCD dimensions may not be the same if a different input bore diameter. Locate the table by input bore diameter first, and then find the appropriate adapter Part# Code to check the dimensions. If you have any questions, Contact SIT S.p.A. for support.

Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
14	BA	38.1	66.68	M4	5
14	BB	38.1	66.68	M5	5
14	BC	38.1	66.68	M5	10
14	BD	40	63	M4	5
14	BE	40	63	M5	5
14	BF	40	65	M5	5
14	BG	40	70	M4	5
14	BH	50	60	M4	10
14	BJ	50	70	M4	5
14	BK	50	70	M5	5
14	BL	50	70	M5	15
14	BM	50	70	M5	10
14	BN	50	70	M4	10
14	BP	36	70.71	M4	5
14	CA	60	75	M5	5
14	CB	60	75	M6	10
14	CC	60	80	M4	5
14	DA	50	95	M6	5
14	DB	60	85	M5	5
14	DC	60	90	M5	5
14	DD	70	85	6.5	5
14	DE	70	90	M5	10
14	DF	70	90	M6	5
14	DG	70	90	M6	15
14	DH	70	95	M6	5
14	DJ	60	95	M5	5
14	DK	36.8	82.024	M6	15
14	DL	62	91.924	M5	10
14	EA	50	100	M6	5
14	EB	73.025	98.43	M5	5
14	EC	80	100	M6	5
14	ED	80	100	M6	15
14	EE	73.025	98.43	M6	15
14	EF	50	98.43	M5	5
14	EG	60	98.995	M5	5
14	EH	80	105	M6	15
14	EJ	60	98.995	M6	10
14	EK	73.025	98.43	M6	5
14	EL	73	94	M6	5
14	EM	83	104	M8	10
14	FA	60	115	M6	5
14	FB	95	115	M8	15
14	GA	80	139.7	M6	5
14	GB	80	130	M5	20
14	GC	94	120	M8	10
14	JA	115	165	M8	10

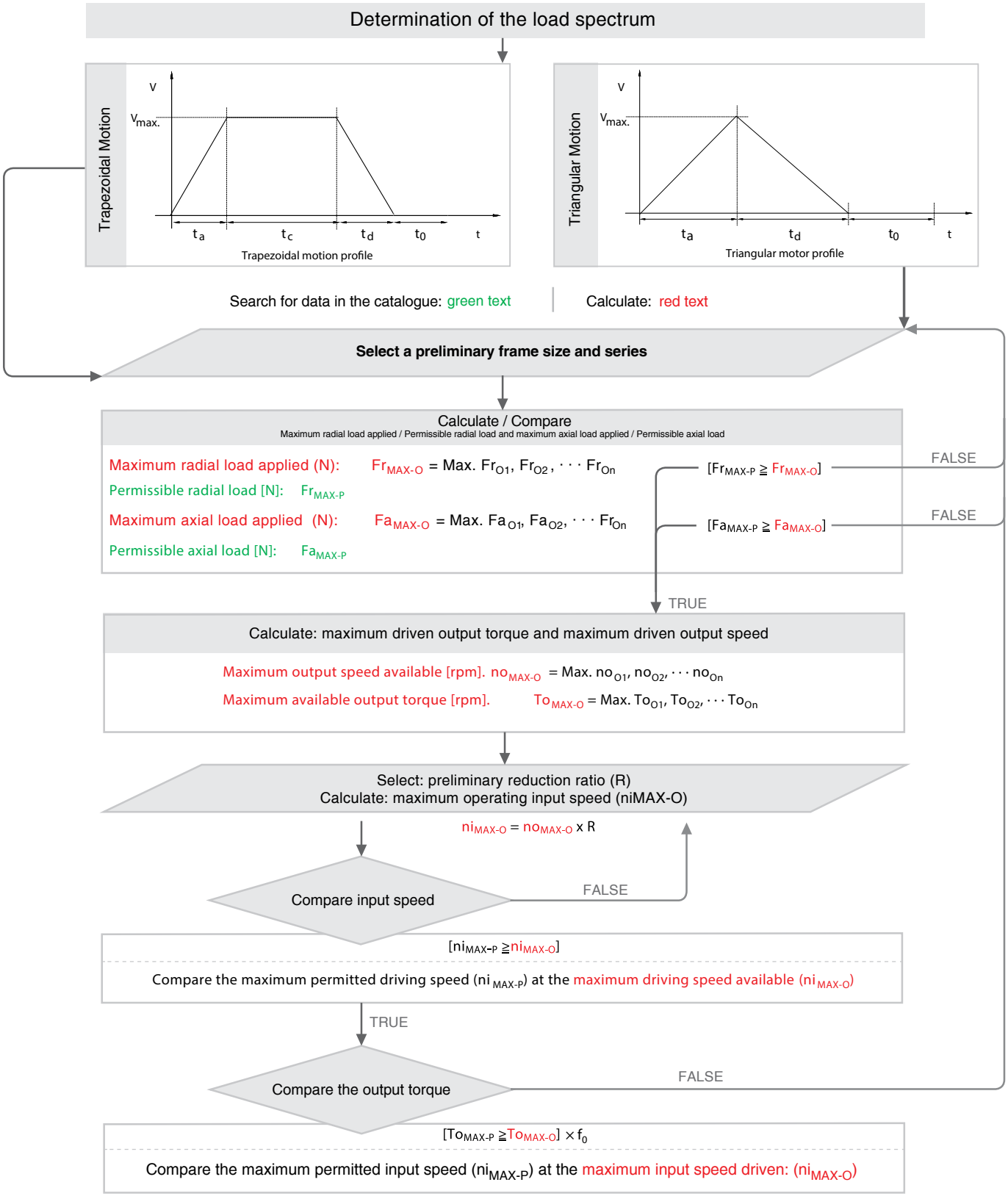


Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
8	AA	20.02	46.69	M3	5
8	AB	22	43.82	4.7	10
8	AC	22	48	M3	5
8	AD	22.22	50.8	M3	5
8	AE	25.4	38.89	4	10
8	AF	30	45	M3	5
8	AG	30	46	M4	5
8	AH	30	46	M4	10
8	AJ	30	46	3.5	10
8	AK	34	48	M3	10
8	AL	30	48	M3	5
8	AM	22	43.82	3.5	5
8	AN	40	50	M4	5
8	AQ	37.6	48	M3	5
8	BA	38.1	66.68	M4	5
8	BB	38.1	66.68	M5	5
8	BC	50	60	M4	10
8	BD	50	70	M4	5
8	BE	50	70	M5	5
8	BF	50	70	M5	10
8	BG	36	70.71	M4	5
8	BH	54	70	M4	5
8	BJ	50	58	M3	5
8	CA	50	80	M4	10

Input Bore [mm]	Part# Code	Pilot [mm]	PCD [mm]	Tapped Hole	Pilot Depth [mm]
S8	ZA	20.02	46.69	M3	5
S8	ZB	22	43.82	4.7	10
S8	ZC	22	48	M3	5
S8	ZD	22.22	50.8	M3	5
S8	ZE	25.4	38.89	4	10
S8	ZF	30	45	M3	5
S8	ZG	30	46	M4	5
S8	ZH	30	46	M4	10
S8	ZJ	30	46	3.5	10
S8	ZK	34	48	M3	10
S8	ZL	30	48	M3	5
S8	ZM	22	43.82	3.5	5
S8	ZN	40	50	M4	5
S8	ZQ	37.6	48	M3	5
S8	BA	38.1	66.68	M4	5
S8	BB	38.1	66.68	M5	5
S8	BC	50	60	M4	10
S8	BD	50	70	M4	5
S8	BE	50	70	M5	5
S8	BF	50	70	M5	10
S8	BG	36	70.71	M4	5
S8	BH	54	70	M4	5
S8	BJ	50	58	M3	5



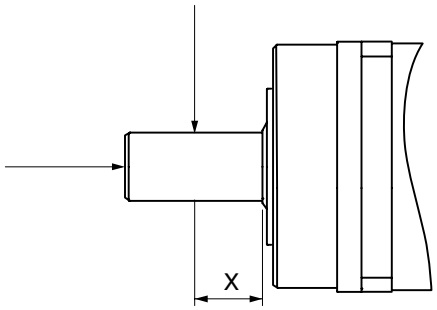
Selection Flow Charts



Add operation factor

f_0	~1k cycles/hour	1~3k cycles/hour	3~5k cycles/hour	5~7k cycles/hour	7k~ cycles/hour
<1h/day	1.0	1.2	1.3	1.3	1.4
<8h/day	1.3	1.5	1.6	1.9	1.9
<16h/day	1.4	1.6	1.9	2.4	2.6
<24h/day	1.5	1.9	2.4	2.9	3.1

Calculate: average radial load and average axial load



Average existing radial force [N]

$$Fr_{AVG-O} = \sqrt[3]{\frac{no_{O1} \cdot t_1 \cdot |Fr_{O1}|^3 + no_{O2} \cdot t_2 \cdot |Fr_{O2}|^3 + \cdots + no_{On} \cdot t_n \cdot |Fr_{On}|^3}{no_{O1} \cdot t_1 + no_{O2} \cdot t_2 + \cdots + no_{On} \cdot t_n}}$$

Average axial force existing [N]

$$Fa_{AVG-O} = \sqrt[3]{\frac{no_{O1} \cdot t_1 \cdot |Ft_{O1}|^3 + no_{O2} \cdot t_2 \cdot |Ft_{O2}|^3 + \cdots + no_{On} \cdot t_n \cdot |Ft_{On}|^3}{no_{O1} \cdot t_1 + no_{O2} \cdot t_2 + \cdots + no_{On} \cdot t_n}}$$

Calculate: average driven output torque and average driven output speed

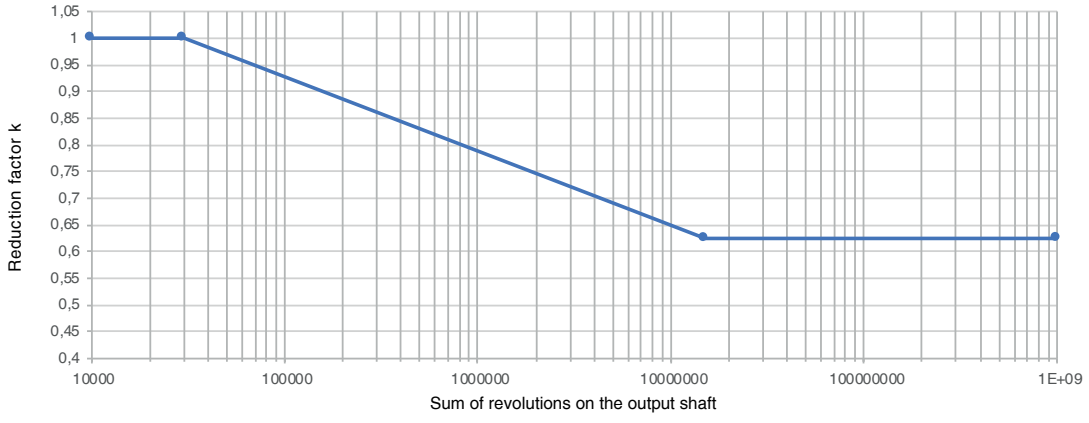
Average torque available at output [Nm]

$$To_{AVG-O} = \sqrt[10/3]{\frac{no_{O_1} \cdot to_1 \cdot |To_{O_1}|^{10/3} + no_{O2} \cdot to_2 \cdot |To_{O2}|^{10/3} + \cdots + no_{On} \cdot to_n \cdot |To_{On}|^{10/3}}{no_{O1} \cdot to_1 + no_{O2} \cdot to_2 \cdots no_{On} \cdot to_n}}$$

Average output speed available [rpm]

$$no_{AVG-O} = \frac{no_{O1} \cdot to_1 + no_{O2} \cdot to_2 \cdots no_{On} \cdot to_n}{to_1 + to_2 + \cdots + to_n}$$

Reduction factor k for determining the maximum torque at speeds >30,000 rpm for the entire service life



The data refer to output shaft speed n2 = 100 rpm, factor k and a temperature of T = 30 °C.

AUTHORIZED DISTRIBUTOR

SIT S.p.A.
Viale A. Volta, 2
20047 Cusago (MI) - Italy
Tel. +39.02.89144.1
Fax +39.02.89144.293

export@sitspa.it
www.sitspa.com

Factory
Via G. Carminati, 15
24012 Val Brembilla (BG) - Italy

SIT GERMANY
SIT ANTRIEBSELEMENTE GmbH
Rieseler Feld 9 (Gewerbegebiet West)
D - 33034 Brakel
Tel. +49 52 72 39 28 0
Fax +49 52 72 39 28 90
E-mail: info@sit-antriebselemente.de
Web: www.sit-antriebselemente.de

SIT SWITZERLAND
SIT (Schweiz) AG
Lenzbüel 13
CH - 8370 Sirnach
Tel. +41 71 969 50 00
Fax +41 71 969 50 01
E-mail: info@sit-antriebstechnik.ch
Web: www.sit-antriebstechnik.ch

SIT SPAIN
DINAMICA DRIVE SOLUTIONS S.A.
Ctra. N-II, Km 592,6
E - 08740 S. Andreu De La Barca
(Barcelona)
Tel. +34 93 653 35 00
Fax +34 93 653 35 08
E-mail: dinamica@dinamica.net
Web: www.dinamica.net

SIT FRANCE
FOGEX SAS
215, Rue Henri Barbusse
F - 95100 Argenteuil
Tel. +33 1 34 34 46 00
Fax +33 1 34 34 46 01
E-mail: info@fogex.com
Web: www.fogex.com

SIT USA
SIT ELATECH, INC.
11540-A Cordage St
NC - 28273 Charlotte
Tel. +1 704 357 8811
Fax +1 704 357 8866
E-mail: info@sit-elatech.com
Web: www.sit-elatech.com

SIT CHINA
SIT ELATECH (SHANGHAI) LTD.
Room 804, Building 2, Alley 8666
Hunan Highway
Pudong New District
PRC – 201314 Shanghai
Tel. +86 021 51082206
Fax +86 021 64863511
E-mail: info@sit-shanghai.com
Web: www.sit-shanghai.com

SIT INDIA
SIT PTC INDIA PRIVATE LIMITED
S. No. 353/A, Gauddara Road,
A/p. Gauddara, Shriram Nagar,
Khed-Shivapur, Tal.: - Haveli,
Dist.: - Pune - 412205
Tel. +91 9158 5921 11
E-mail: a.nangre@sitspa.com
Web: www.sitspa.com

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