

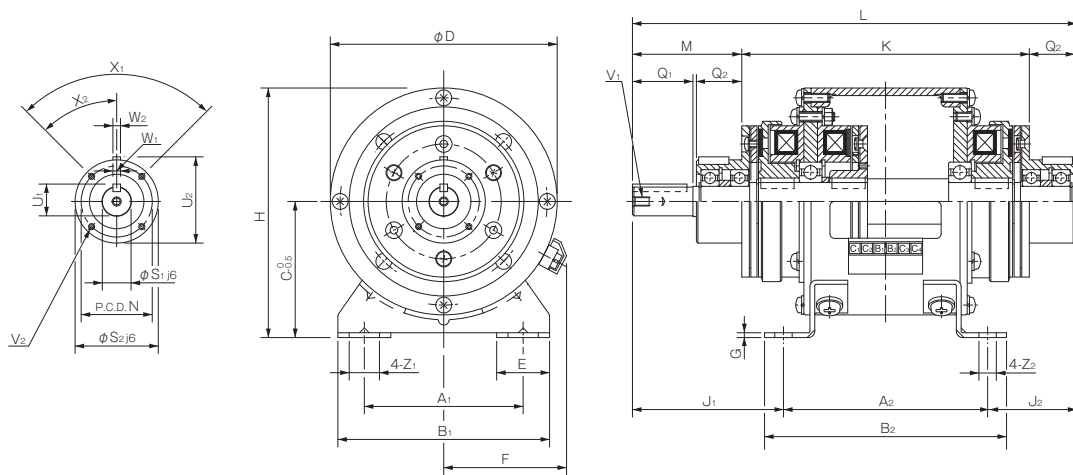
# 122 Models Double Clutch/Brake Units

## Specifications

Model	Size	Dynamic friction torque T <sub>d</sub> [N·m]	Static friction torque T <sub>s</sub> [N·m]	Coil (at 20°C)				Heat resistance class	Max. rotation speed [min <sup>-1</sup> ]	Rotating part moment of inertia J [kg·m <sup>2</sup> ]	Total work performed until readjustment of the air gap E <sub>T</sub> [J]	Armature pull-in time t <sub>a</sub> [s]	Torque build-up time t <sub>p</sub> [s]	Torque decaying time t <sub>d</sub> [s]	Mass [kg]
				Voltage [V]	Wattage [W]	Current [A]	Resistance [Ω]								
122-06-20G	06	5	5.5	DC24	11	0.46	52	B	3000	2.19 × 10 <sup>-4</sup>	36 × 10 <sup>6</sup>	C:0.020 B:0.015	C:0.041 B:0.033	C:0.020 B:0.015	4
122-08-20G	08	10	11	DC24	15	0.63	38	B	3000	6.55 × 10 <sup>-4</sup>	60 × 10 <sup>6</sup>	C:0.023 B:0.016	C:0.051 B:0.042	C:0.030 B:0.025	6
122-10-20G	10	20	22	DC24	20	0.83	29	B	3000	2.12 × 10 <sup>-3</sup>	130 × 10 <sup>6</sup>	C:0.025 B:0.018	C:0.063 B:0.056	C:0.050 B:0.030	9
122-12-20G	12	40	45	DC24	25	1.04	23	B	3000	6.35 × 10 <sup>-3</sup>	250 × 10 <sup>6</sup>	C:0.040 B:0.027	C:0.115 B:0.090	C:0.065 B:0.050	17
122-16-20G	16	80	90	DC24	35	1.46	16	B	3000	1.99 × 10 <sup>-2</sup>	470 × 10 <sup>6</sup>	C:0.050 B:0.035	C:0.160 B:0.127	C:0.085 B:0.055	29
122-20-20G	20	160	175	DC24	45	1.88	13	B	2500	6.15 × 10 <sup>-2</sup>	10 × 10 <sup>8</sup>	C:0.090 B:0.065	C:0.250 B:0.200	C:0.130 B:0.070	58

\* The dynamic friction torque, T<sub>d</sub>, is measured at a relative speed of 100 min<sup>-1</sup>. Depending on the initial torque characteristics, break-in to condition the engaging surfaces may also be required.

## Dimensions



Unit [mm]

Size	Dimensions of part																		
	A <sub>1</sub>	A <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	C	D	E	F	G	H	J <sub>1</sub>	J <sub>2</sub>	K	L	M	N	Z <sub>1</sub>	Z <sub>2</sub>	
06	65	90	90	105	65	100	27.5	61	2.6	115	73	48	142	211	47	33	13.5	6.5	
08	80	110	110	130	80	125	32.5	72	3.2	142.5	83	53	162	246	57	37	15.5	9	
10	105	135	140	160	90	150	35	81	3.2	165	100	59	190	294	72	47	20	11.5	
12	135	160	175	185	112	190	42.5	97	4.5	207	124	74	222	358	93	52	24.5	11.5	
16	155	200	200	230	132	230	45	109	6	247	150.5	89.5	272	440	114.5	62	28	14	
20	195	240	240	270	160	290	47.5	124	20	305	197	114	348	551	143	74.5	28	14	

Size	Dimensions of shaft										
	Q <sub>1</sub>	Q <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	U <sub>1</sub>	U <sub>2</sub>	V <sub>1</sub>	V <sub>2</sub>	X <sub>1</sub>	X <sub>2</sub>	W <sub>1,2</sub>
06	25	20	11	38	12.5	39.5	M4 × 0.7, length: 8	3-M4 × 0.7, length: 4	3-120°	60°	4
08	30	25	14	45	16	47	M4 × 0.7, length: 8	3-M4 × 0.7, length: 6	3-120°	60°	5
10	40	30	19	55	21	57	M6 × 1, length: 11	4-M4 × 0.7, length: 8	4-90°	45°	5
12	50	40	24	64	27	67	M6 × 1, length: 11	4-M4 × 0.7, length: 8	4-90°	45°	7
16	60	50	28	75	31	78	M6 × 1, length: 11	6-M5 × 0.8, length: 8	6-60°	30°	7
20	80	60	38	90	41.5	93.5	M10 × 1.5, length: 17	4-M6 × 1, length: 12	4-90°	45°	10

\* The input/output keyways are old JIS standard class 2 while the key is old JIS standard class 1. Note that the keyway dimensions of the unit hub part do not conform to JIS standards. Check them on the dimensions table above.

\* When inserting pulleys or the like onto output shafts, use the supplied insertion set.

\* The 122-20-20G base is a casting.

How to Place an Order

122-06-20G  
└── Size

## List of Stand-alone Clutches and Brakes Used

Model	Stand-alone clutch system	Stand-alone braking system	Bearing number	
			Main shaft part	Hub part
122-06-20G	101-06-15G 24V R15JIS A12JIS	111-06-12G 24V 15JIS	6202	6001
122-08-20G	101-08-15G 24V R20JIS A15JIS	111-08-12G 24V 20JIS	6004	6002
122-10-20G	101-10-15G 24V R25JIS A20JIS	111-10-12G 24V 25JIS	6205	6004
122-12-20G	101-12-15G 24V R30JIS A25JIS	111-12-12G 24V 30JIS	6206	6005
122-16-20G	101-16-15G 24V R40JIS A30JIS	111-16-12G 24V 40JIS	6208	6006
122-20-20G	101-20-15G 24V R50JIS A40JIS	111-20-12G 24V 55JIS	6211	6008

## Recommended Power Supplies and Accessory Parts

Model	Recommended power supplies	Accessory parts				
		Circuit protector (Varistor), qty. 3	Tightening collar	Screw stock	Presser foot	Hexagonal nut
122-06-20G	BES-20-10	TND07V-820KB00AAA0 or an equivalent	Qty. 1	M4 × 55, qty. 3	Qty. 1	M4, qty. 3
122-08-20G	BES-20-10	TND07V-820KB00AAA0 or an equivalent	Qty. 1	M4 × 55, qty. 3	Qty. 1	M4, qty. 3
122-10-20G	BES-20-10	TND07V-820KB00AAA0 or an equivalent	Qty. 1	M4 × 55, qty. 2/M6 × 100, qty. 1	Qty. 1	M4, qty. 2/M6, qty. 2
122-12-20G	BES-20-16	TND07V-820KB00AAA0 or an equivalent	Qty. 1	M4 × 55, qty. 2/M6 × 100, qty. 1	Qty. 1	M4, qty. 2/M6, qty. 2
122-16-20G	BES-20-16	TND07V-820KB00AAA0 or an equivalent	Qty. 1	M5 × 70, qty. 2/M6 × 100, qty. 1	Qty. 1	M5, qty. 2/M6, qty. 2
122-20-20G	BES-20-20	TND07V-820KB00AAA0 or an equivalent	Qty. 1	M6 × 160, qty. 2/M10 × 220, qty. 1	Qty. 1	M6, qty. 2/M10, qty. 2

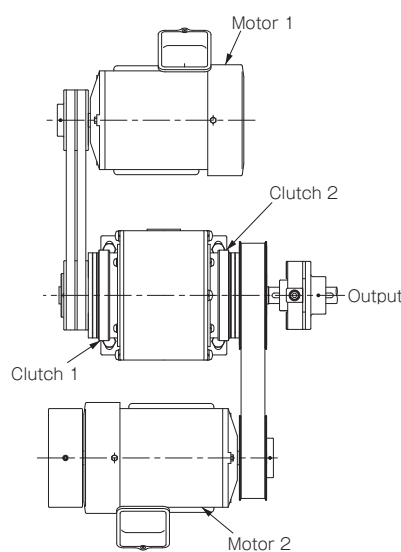
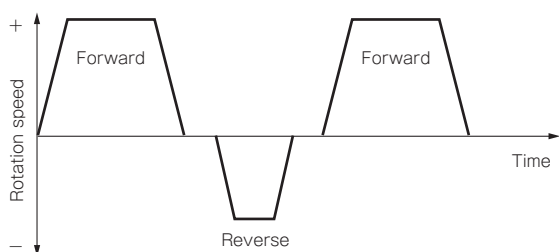
\* The above-model varistors are manufactured by Nippon Chemi-Con Corporation.

\* Recommended BES power supplies are available for each clutch/brake. Varistors need not be used when a BES model is used. For details, refer to the section on power supplies.

## Mounting Example

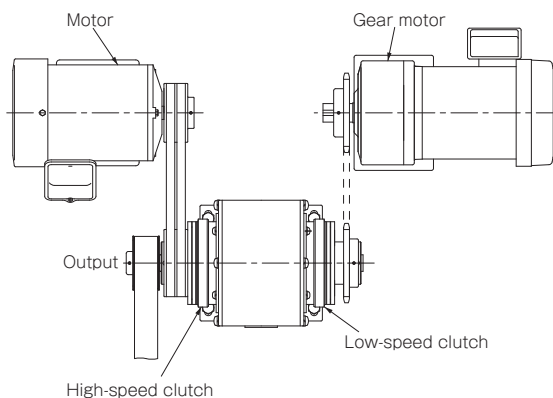
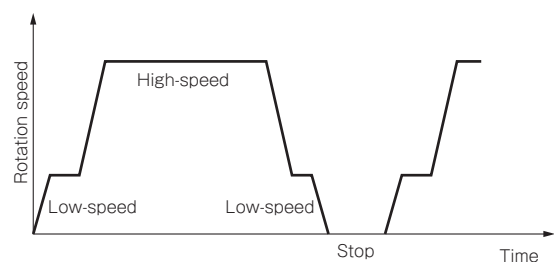
### Example When Used in Forward/Reverse Operation

This is an example of forward/reverse rotation using two motors. The motor rotates continuously, forward and reverse operation are achieved by switching clutches, and any load can be stopped during that period.



### Example When Used in Two-step Speed Change/Stop

High-precision stopping at a predetermined position, winding control on winders, and the like can be controlled simply and with high precision by using this unit to perform a series of operations: slow, fast, slow, stop.



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ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES

ELECTROMAGNETIC CLUTCH & BRAKE UNITS

SPRING-ACTUATED BRAKE

ELECTROMAGNETIC TOOTH CLUTCHES

BRAKE MOTORS

POWER SUPPLIES

MODELS

125

121(20G)

126

CBW

CMW

121(10G)

122