SPEED CONTROL MOTOR
180W

□90mm(3.54in.)

LEAD WIRE TYPE
+ F2 FAN

LEAD WIRE TYPE
+ F2 FAN

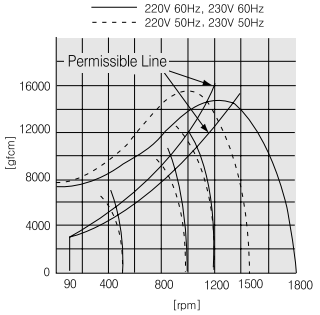
DSA

DSK

Motor Specification

Model 9SDG□-180F2P(H) : Pinion Shaft Type 9SDD□-180F2 : D-Cut Shaft Type		Output		Voltage	Freq.	Speed Range	Permissible Torque						Starting Torque			Current	Condenser	
							1200rpm			90rpm								
Lead Wire Type	Terminal Box Type	HP	W	VAC	Hz	rpm	gfcm	mN.m	oz-in	gfcm	mN.m	oz-in	gfcm	mN.m	oz-in	A	μF	V
(TP) 9SDG(D)C-180F2P(H)	9SDG(D)C-180F2P(H)-T	1/4	180	Single Phase 220	50	90~1400	12000	1200	168	3000	300	42.0	7000	700	98	1.40	6.5	400
(TP) 9SDG(D)D-180F2P(H)	9SDG(D)D-180F2P(H)-T			Single Phase 220	60	90~1700	11000	1100	154	3200	320	44.8						
(TP) 9SDG(D)E-180F2P(H)	9SDG(D)E-180F2P(H)-T			Single Phase 230	50	90~1400	12000	1200	168	3000	300	42.0						
(TP) 9SDG(D)F-180F2P(H)	9SDG(D)F-180F2P(H)-T			Single Phase 230	60	90~1700	11000	1100	154	3200	320	44.8						

* Enter the 'Phase & Voltage' code in the box(□) within the motor model name.
* 'Pinion Shaft' is for attaching gearhead and 'D-Cut Shaft' is for using motor only.
(TP) : Contains a built-in thermal protector. If a motor overheats for any reason the thermal protector opened and the motor stops. When the motor temperature Drops, the thermal protector closes and the motor restarts. Be sure to turn the motor off before inspecting. F2 FAN is basic specification for speed control motor.



Permissible Torque When using gearhead

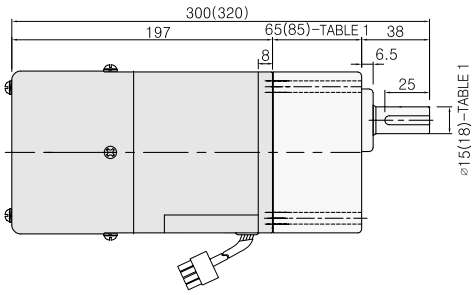
Motor/Gearhead	rpm / Voltage		Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180
9SDG□-180FP/ 9PB(F)K□BH	1200rpm		kgf cm	24	27	32	45	54	67	80	100	120	144	160	180	200	200	200	200	200	200	200	200	200	200	200
			N.m	2.4	2.7	3.2	4.5	5.4	6.7	8.0	10	12.0	14.4	16	18	20	20	20	20	20	20	20	20	20	20	20
			lb-in	21.2	23.5	28.5	39	48	60	70	88	106	128	141	159	177	177	177	177	177	177	177	177	177	177	177
	90rpm	110/115 60 Hz	kgf cm	6.5	7.2	9.0	12.1	15	18	22	27	34	39	43	50	56	58	62	66	80	90	106	118	142	178	200
			N.m	0.65	0.72	0.90	1.21	1.52	1.82	2.23	2.7	3.4	3.9	4.3	5.0	5.6	5.8	6.2	6.6	8	9	11	12	14	18	20
			lb-in	5.7	6.3	8.0	10.6	13.4	16.1	20	24	30	34	38	44	49	51	55	58	71	79	94	404	125	157	177
		220/230 60 Hz	kgf cm	8.4	9.3	11.6	17	20	24	29	36	42	51	56	65	70	72	80	86	104	116	138	154	184	200	200
			N.m	0.84	0.93	1.16	1.65	2.00	2.43	2.84	3.6	4.2	5.1	5.6	6.5	7.0	7.2	8.0	8.6	10.4	11.6	13.8	15.4	18.4	20	20
			lb-in	7.42	8.22	10.3	14.6	17.7	21.4	25.4	32	37	45	49	57	62	64	71	76	92	102	122	136	162	177	177
		220/230 50 Hz	kgf cm	7.4	8.2	10.3	14	17	22	26	31	37	45	50	57	64	64	70	76	92	102	122	136	164	200	200
			N.m	0.74	0.82	1.03	1.38	1.68	2.16	2.55	3.1	3.7	4.5	5.0	5.7	6.4	6.4	7.0	7.6	9.2	10	12	14	16	20	20
			lb-in	6.57	7.28	9.13	12.2	14.8	19.1	23	27	33	40	44	51	57	57	62	67	81	90	108	120	145	177	177
9SDG□-180FH/ 9HBK□BH	1200rpm		kgf cm	-	28	34	-	57	-	84	105	126	152	-	189	227	273	-	300	300	300	300	300	300	300	300
			N.m	-	2.8	3.4	-	5.7	-	8.4	10.5	12.6	15.2	-	18.9	22.7	27.3	-	30	30	30	30	30	30	30	30
			lb-in	-	24.7	30.0	-	50	-	74	93	111	134	-	167	200	241	-	265	265	265	265	265	265	265	265
	90rpm	110/115 60 Hz	kgf cm	-	7.2	9.0	-	15	-	22	27	34	39	-	50	56	56	-	66	80	90	110	120	140	180	240
			N.m	-	0.72	0.90	-	1.52	-	2.23	2.7	3.4	3.9	-	5.0	5.6	5.6	-	6.6	8.0	9.0	11	12	14	18	24
			lb-in	-	6.3	8.0	-	13.4	-	20	24	30	34	-	44	49	49	-	58	71	79	97	106	124	159	212
		220/230 60 Hz	kgf cm	-	9.3	11.6	-	20	-	29	36	42	51	-	65	70	72	-	86	104	116	138	154	184	250	300
			N.m	-	0.93	1.16	-	2.00	-	2.87	3.6	4.2	5.1	-	6.5	7.0	7.2	-	8.6	10.4	11.6	13.8	15.4	18.4	25	30
			lb-in	-	8.22	10.3	-	17.7	-	25.4	32	37	45	-	57	62	64	-	76	92	102	122	136	162	221	265
		220/230 50 Hz	kgf cm	-	8.2	10.3	-	17	-	26	31	37	45	-	57	64	64	-	76	92	100	120	140	160	240	280
			N.m	-	0.82	1.03	-	1.68	-	2.55	3.1	3.7	4.5	-	5.7	3.4	6.4	-	7.6	9.2	10	12	14	16	24	28
			lb-in	-	7.28	9.13	-	14.8	-	23	27	33	40	-	51	57	57	-	67	81	88	106	124	141	212	247

* Enter the gear ratio in the box (□) within the gearhead model name. A colored background indicates gear shaft rotation in the same direction as the motor shaft ; a white background indicates rotation in the opposite direction.
* The speed is calculated by dividing the motor' s synchronous speed (50Hz : 1500 r/min, 60 Hz : 1800 r/min) by the gear ratio.
* The actual speed is 2~20% less than the displayed value, depending on the size of the load.
* If more slow speed is needed than above value, use decimal gearhead with a gear ratio of 10:1 could be used between general gearhead and motor. Even in this case, just speed will be reduced without increase in permissible torque; the maximum permissible torque is 200kgfcm (P type) / 300kgfcm (H type).

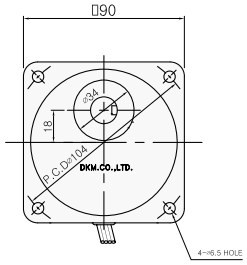
Dimension

LEAD WIRE TYPE

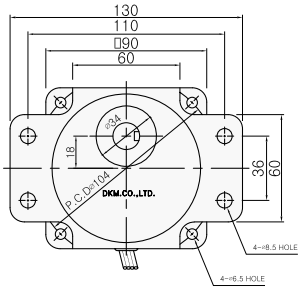
◆ GEARED MOTOR
* MOTOR MODEL : 9SDG□-180F2P(H) (POWERFUL FAN)



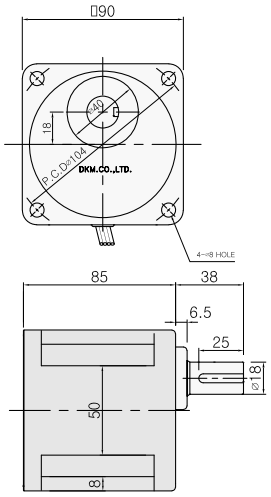
* GEARHEAD MODEL :
9PB□3BH - 9PB□180BH



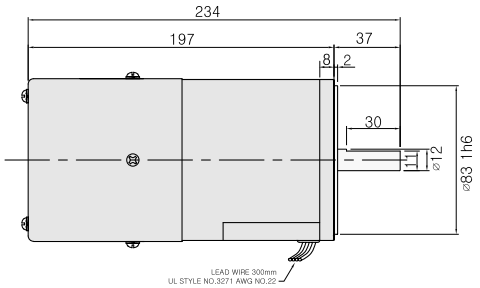
* GEARHEAD MODEL :
9PF□3BH - 9PF□180BH

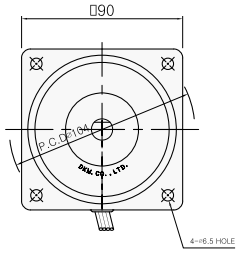


* GEARHEAD MODEL :
9HB□3BH - 9HB□180BH

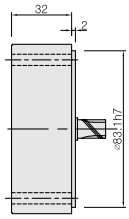


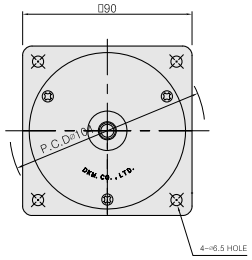
◆ MOTOR ONLY * MOTOR MODEL : 9SD□□-180F2 (POWERFUL FAN)





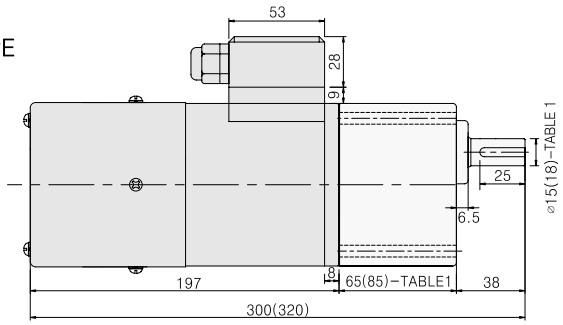
◆ INTER-DECIMAL GEARHEAD
* MODEL : 9XD10M□

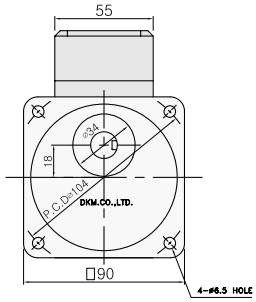




TERMINAL BOX TYPE

* MOTOR MODEL :
9SDG□-180F2P(H)-T
(POWERFUL FAN)



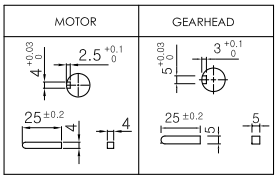


* Note : For speed control motor, powerful Fan(F2) is basic specification.

◆ 65(85)-TABLE1

SIZE(mm)	GEARHEAD TYPE
65 ~ ø15	P TYPE GEARHEAD
85 ~ ø18	H TYPE GEARHEAD

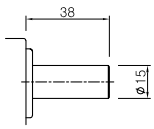
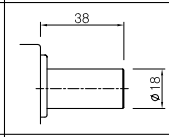
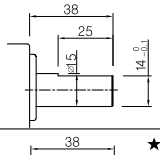
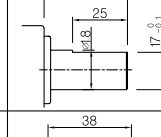
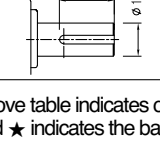
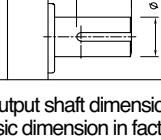
◆ KEY SPEC



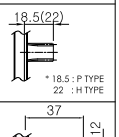
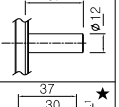
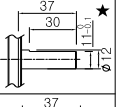
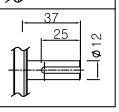
◆ WEIGHT

PART		WEIGHT(Kg)	
MOTOR		3.8	
DECIMAL GEARHEAD		0.5	
GEAR HEAD	GEARHEAD TYPE	P TYPE	H TYPE
	9P(H)□□ 3BH - 9P(H)□□9BH	1.3	1.45
	9P(H)□□ 12.5BH - 9P(H)□□18BH	1.3	1.5
	9P(H)□□ 25BH - 9P(H)□□60BH	1.4	1.7
	9P(H)□□ 90BH - 9P(H)□□180BH	1.4	1.8

◆ GEARHEAD OUTPUT

MODEL	P TYPE	H TYPE
ROUND TYPE 9P(H)□S3BH ~9P(H)□S180BH		
D-CUT TYPE 9P(H)□D3BH ~9P(H)□D180BH		
KEY TYPE 9P(H)□K3BH ~9P(H)□K180BH		

◆ MOTOR OUTPUT

MODEL	SHAFT
GEAR TYPE 9SDG□-180□ P(H)	
ROUND TYPE 9SDS□-180□	
D-CUT TYPE 9SDD□-180□	
KEY TYPE 9SDK□-180□	

* Note : Above table indicates output shaft dimension made by user's request and ★ indicates the basic dimension in factory shipping.

Connection Diagrams Please refer to page 148, 151.