GP Series

Ultra slim profile, totally enclosed, d.c. motors with cost effective, servo capability. Using flat armature technology they are ideal for general purpose applications.

GP series motors are available in 3 standard sizes and a wide range of performances are achieved from two alternative magnetic technologies.

GPM - excellent performance to volume ratio
GPN - enhanced GPM performance

- 3 sizes
- 12 models

DESIGN OPTIONS

- Operating voltages to suit
- Tailored performance profiles
- Custom shaft sizes/profiles
- In-line gearboxes to suit
- Special OEM configurations
- Rear shaft for encoder, or brake
- High altitude/vacuum operation

MATERIAL AND FINISH

Casing/end plates

GPM & GPN	mild steel - bright zinc plated

Bearings

GP-9	ABEC1
GP-12/16	ABEC3

STANDARD BENEFITS

- GPM models
- High torque
- Zero cogging
- Ultra slow/creep capabilities
- Minimal torque ripple
- Low inertia
- Instant start torque
- Low inductance
- Ultra slim profile
- Wide speed range
- EMC compliant

TYPICAL APPLICATIONS

- Process plant
- Robotics
- Automated machinery
- Professional transcription machines
- Winding machinery
- Sub-sea research machines
- Vehicle sub-systems
- Medical/scientific equipment
- Fluid valve control

For further information ➤

GP Series

PERFORMANCE DATA

TEST DETAIL			GPM SERIES MOTOR TEST RESULTS						GPN SERIES MOTOR TEST RESULTS					
MOTOR RATINGS	SYMBOL	UNIT	GPM9	GPM9LR	GPM12	GPM12LR	GPM16	GPM16LR	GPN9	GPN9LR	GPN12	GPN12LR	GPN16	GPN16LR
Power	P	Watt	41	38.7	110	64	300	221	94	75	200	190	533	324
Torque	T	Ncm	13.1	10	35	20	96	73	30	25	64	48	170	100
Speed	N	rpm	3000	3705	3000	3050	3000	2905	3000	2887	3000	3810	3000	3102
Voltage	V	Volt	14.5	9	23.5	12	43.3	24	22.5	12	37.5	24	75.8	36
Current	I	Amp	6.9	11.7	7.6	10.8	9.3	13.4	6.85	11.4	7.3	11	8.4	11.7
Continuous Stall Current	IS	Amp	4.5	6.5	5.0	6.5	6.0	8.0	4.5	6.5	5.0	7.0	5.7	8.0

MOTOR CONSTANTS	SYMBOL	UNIT	GPM9	GPM9LR	GPM12	GPM12LR	GPM16	GPM16LR	GPN9	GPN9LR	GPN12	GPN12LR	GPN16	GPN16LR
Torque	Kt	Ncm/Amp	2.19	1.05	5.1	2.2	11.2	6.0	4.77	2.38	9.65	4.8	21.87	9.6
EMF	Ke	V/krpm	2.3	1.1	5.3	2.3	11.8	6.3	5.0	2.5	10.1	5.0	22.9	10
Damping	Kd	Ncm/krpm	0.3	0.3	0.59	0.56	0.99	1.0	0.5	0.3	1.2	0.7	2.5	2.5
Friction Torque	Tf	Ncm	1.2	1.2	2.0	2.0	4.9	4.9	1.2	1.2	2.0	2.0	4.9	4.9
Terminal Resistance @5A	Rm	Ohms	1.1	0.42	1.0	0.45	0.85	0.425	1.1	0.42	1.0	0.45	0.85	0.425
Total Inertia	J	kg.cm²	0.388	0.388	1.624	1.624	6.284	6.284	0.388	0.388	1.624	1.624	6.284	6.284

PERFORMANCE CHARACTERISTICS AND DATA

DIMENSION GUIDES

* All variations
All dimensions in mm. All weights in kg.

MOTOR TYPE	DIMENSIONS								
	A	B	C	D	E	F	G	H	Wt
GP*9*	120	5.992/5.987	30.2	11.7	4.7	110	26	19.05	0.59
GP*12*	152.4	9.995/9.982	53	28.5	5.8	142	32	34.3	1.22
GP*16*	215.1	11.988/11.976	60	32.5	7.1	200	35.6	45.72	2.9