

The LRPX carefully integrates the unique RPX series motor with a custom planetary gearbox. The result is a small form factor BLDC motor that can produce high torque at low RPM and offer strong, smooth operation with low noise!

Features:

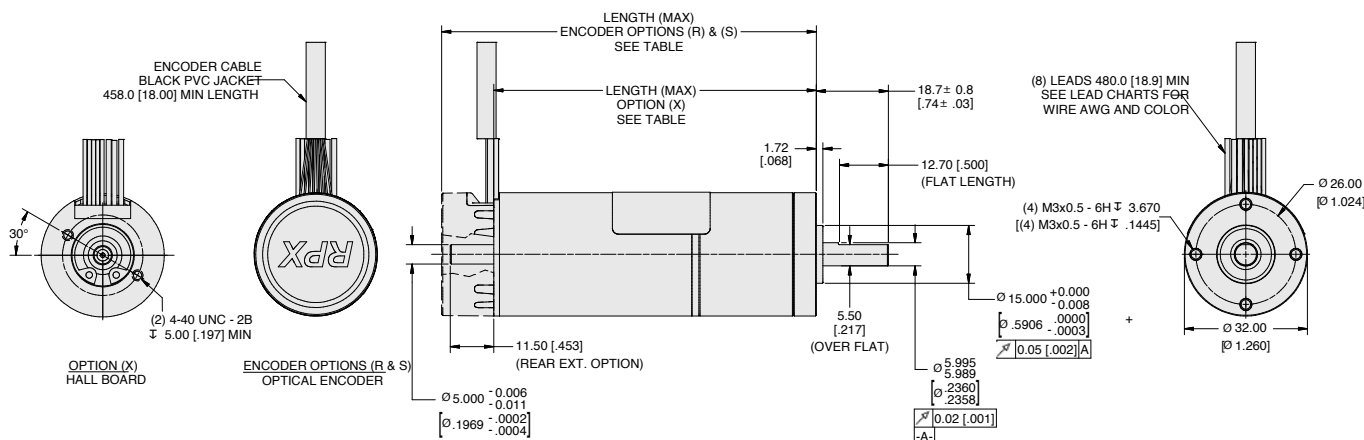
- High torque density delivers class- leading torque from compact frame size.
- 8 pole motor; high torque at low speeds.
- High load capacity.
- Low heat generation.
- Low noise & High efficiency compared to similar gearmotors.



LRPX32 BRUSHLESS DC MOTOR

Size:	32mm (1.25 in) diameter
Peak Torque:	to 8.0 Nm (1,133 oz.in)
Continuous Stall Torque:	to 6.6 Nm (934.6 oz.in)
Speed:	to 2489 RPM

All measurements in mm [inches]



LRPX Model Number

L R P X	3 2	- 0 9 0	V 2 4	- 1 1 0	- S 0 0 3
Product Type	Frame Size 32 mm	Torque mNm 090	Voltage 12 24 48	Rear Shaft 0 - None 1 - Yes	Front Shaft 0 - Round 1 - Flat
				Termination 0 - Flying Leads	

Ratio	Ratio	Ratio	Ratio
003	3.214:1	137	137.1:1
005	4.875:1	162	162.3:1
006	5.769:1	192	192.0:1
010	10.33:1	246	245.5:1
016	15.67:1	291	290.6:1
019	18.54:1	344	343.9:1
024	23.77:1	372	372.4:1
028	28.13:1	441	440.7:1
033	33.28:1	522	521.6:1
050	50.37:1	565	564.8:1
060	59.61:1	617	617.2:1
076	76.39:1	668	668.4:1
090	90.40:1	791	791.0:1
107	107.0:1	936	936.1:1
116	115.9:1	999	1108:1

LRPX32

BRUSHLESS DC GEAR MOTOR

High torque density - high performance.



Applications:

Medical Science

Automated Equipment

- Fluid Pumps
- Air / Ventilation Pumps
- Blood Transfusers
- Diagnostic and Imaging Systems

Surgical Robots and Robotic Assistants

- Traction Motors for Mobile Systems
- Arm/Gripper Positioning and Force Control

Lab Automation Equipment

- Dispensing Systems
- Sample Handling Systems
- Analysis Systems
- Centrifuges

Robotics

- Traction Motors for Mobile Applications
- Steering Systems for Mobile Applications
- Arm/Gripper Positioning and Force Control

Industrial Automation

- Industrial Machinery
- Material Handling and Conveyor Equipment
- Automated Guided Vehicles (AGVs)
- Sorting and Packing Systems
- Dispensing Machines

Electronics / Semiconductor Manufacturing

- Wafer Handling and Processing Systems
- Assembly, Test and Packaging Systems

Transportation

Automotive & Commercial Vehicles

- Power Seats
- Fan & Pump Motors
- Emission Control Systems
- Drive by Wire and Driver Assist Systems
- Autonomous Vehicle Camera & Sensor Controls

Aerospace

- Flight Control Systems
- Commercial UAV Flight Motors
- Pumps / Actuators

Marine & Shipbuilding

- Gyro Stabilization Systems
- Steering Pumps

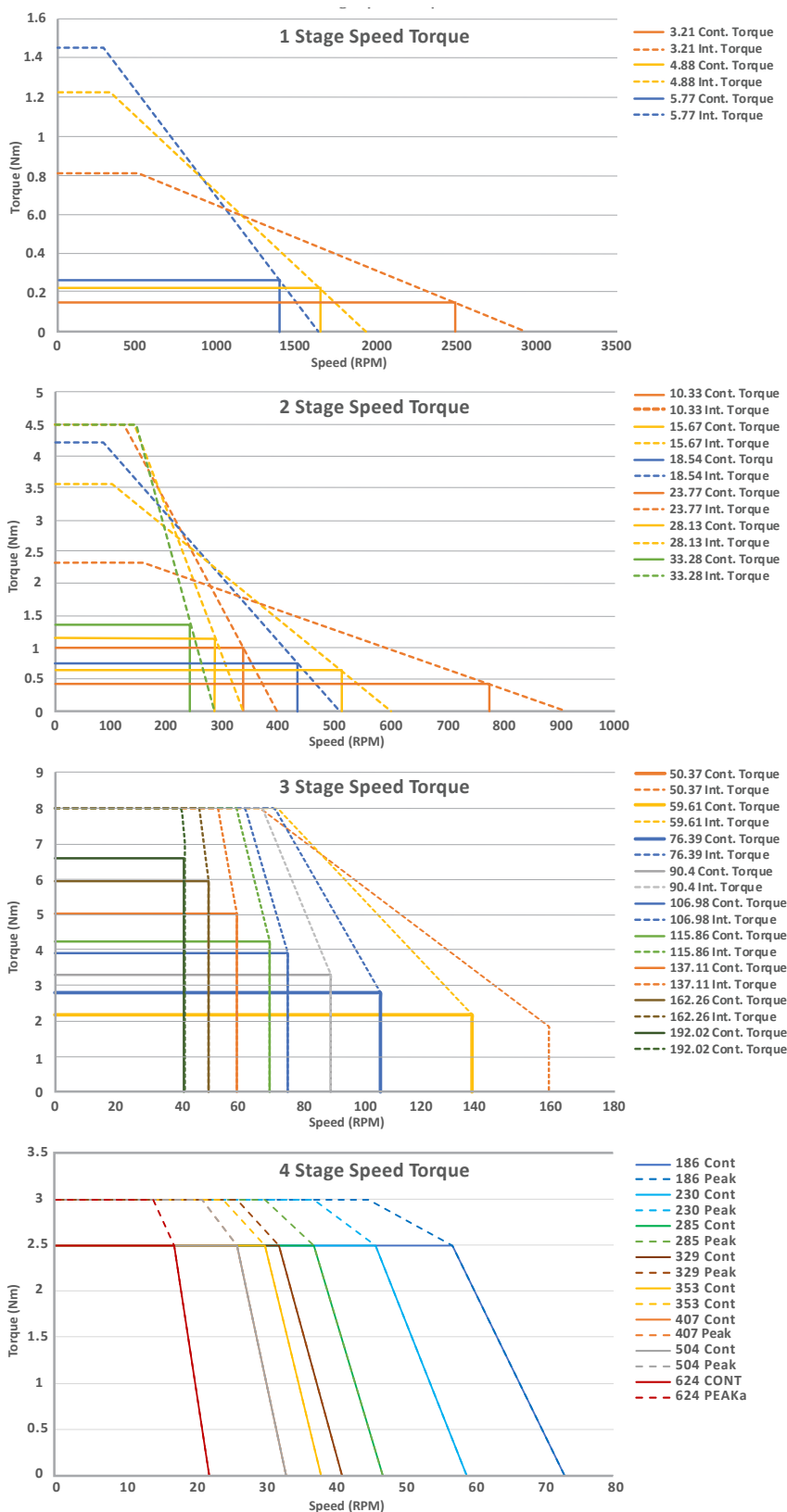
Military/Defense

- Military Robots
- Mobile Radar and Communication Systems
- Flight Control Systems
- Military UAV Flight Motors
- Guidance Systems

Agriculture

- Automated Planting Equipment
- Automated Harvesting Equipment
- Farm Machinery Control Systems
- Agricultural Robots

LRPX32 Speed Torque Performance



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Winding Specifications

Part Number	Voltage	Resistance	Inductance	Number of Poles	Torque Constant		Voltage Constant		Continuous Running			Peak		
Units	Volts	Ohms	mH		N-m/A	oz-in/A	V-sec/rad	V/kRPM	Torque (Nm)	RPM	Current (A)	Torque (Nm)	RPM	Current (A)

Motor Only

LRPX32-090V12	12	0.22	0.15	8	0.012	1.69	0.012	1.25	0.09	6900	7.6	0.28	1600	23.5
LRPX32-090V24	24	0.96	0.6	8	0.024	3.37	0.024	2.50	0.09	6900	3.8	0.28	1600	11.8
LRPX32-090V48	48	3.68	2.3	8	0.048	6.74	0.048	5.00	0.09	6900	1.9	0.28	1600	5.9

One Stage Gearbox

LRPX32-090V12-___-003	12	0.22	0.15	8	0.034	4.87	0.038	4.02	0.15	2488	4.2	0.81	498	23.5
LRPX32-090V24-___-003	24	0.96	0.6	8	0.069	9.75	0.077	8.04	0.15	2488	2.1	0.81	498	11.8
LRPX32-090V48-___-003	48	3.68	2.3	8	0.138	19.50	0.153	16.07	0.15	2488	1.1	0.81	498	5.9
LRPX32-090V12-___-005	12	0.22	0.15	8	0.052	7.39	0.058	6.09	0.22	1641	4.2	1.23	328	23.5
LRPX32-090V24-___-005	24	0.96	0.6	8	0.104	14.79	0.116	12.19	0.22	1641	2.1	1.23	328	11.8
LRPX32-090V48-___-005	48	3.68	2.3	8	0.209	29.57	0.233	24.38	0.22	1641	1.1	1.23	328	5.9
LRPX32-090V12-___-006	12	0.22	0.15	8	0.062	8.75	0.069	7.21	0.26	1386	4.2	1.45	277	23.5
LRPX32-090V24-___-006	24	0.96	0.6	8	0.124	17.50	0.138	14.42	0.26	1386	2.1	1.45	277	11.8
LRPX32-090V48-___-006	48	3.68	2.3	8	0.247	35.00	0.275	28.85	0.26	1386	1.1	1.45	277	5.9

Two Stage Gearbox

LRPX32-090V12-___-010	12	0.22	0.15	8	0.100	14.10	0.123	12.91	0.42	774	4.2	2.34	155	23.5
LRPX32-090V24-___-010	24	0.96	0.6	8	0.199	28.21	0.247	25.83	0.42	774	2.1	2.34	155	11.8
LRPX32-090V48-___-010	48	3.68	2.3	8	0.398	56.41	0.493	51.66	0.42	774	1.1	2.34	155	5.9
LRPX32-090V12-___-016	12	0.22	0.15	8	0.151	21.39	0.187	19.59	0.64	510	4.2	3.55	102	23.5
LRPX32-090V24-___-016	24	0.96	0.6	8	0.302	42.78	0.374	39.17	0.64	510	2.1	3.55	102	11.8
LRPX32-090V48-___-016	48	3.68	2.3	8	0.604	85.56	0.748	78.35	0.64	510	1.1	3.55	102	5.9
LRPX32-090V12-___-019	12	0.22	0.15	8	0.179	25.31	0.221	23.18	0.76	431	4.2	4.21	86	23.5
LRPX32-090V24-___-019	24	0.96	0.6	8	0.357	50.62	0.443	46.36	0.76	431	2.1	4.21	86	11.8
LRPX32-090V48-___-019	48	3.68	2.3	8	0.715	101.25	0.885	92.72	0.76	431	1.1	4.21	86	5.9
LRPX32-090V12-___-024	12	0.22	0.15	8	0.229	32.44	0.284	29.71	0.97	337	4.2	4.50	67	19.6
LRPX32-090V24-___-024	24	0.96	0.6	8	0.458	64.88	0.567	59.41	0.97	337	2.1	4.50	67	9.8
LRPX32-090V48-___-024	48	3.68	2.3	8	0.916	129.76	1.135	118.83	0.97	337	1.1	4.50	67	4.9
LRPX32-090V12-___-028	12	0.22	0.15	8	0.271	38.39	0.336	35.16	1.15	284	4.2	4.50	57	16.6
LRPX32-090V24-___-028	24	0.96	0.6	8	0.542	76.78	0.671	70.31	1.15	284	2.1	4.50	57	8.3
LRPX32-090V48-___-028	48	3.68	2.3	8	1.084	153.56	1.343	140.63	1.15	284	1.1	4.50	57	4.1
LRPX32-090V12-___-033	12	0.22	0.15	8	0.321	45.43	0.397	41.61	1.36	240	4.2	4.50	48	14.0
LRPX32-090V24-___-033	24	0.96	0.6	8	0.642	90.86	0.795	83.21	1.36	240	2.1	4.50	48	7.0
LRPX32-090V48-___-033	48	3.68	2.3	8	1.283	181.73	1.589	166.42	1.36	240	1.1	4.50	48	3.5

Three Stage Gearbox

LRPX32-090V12-___-050	12	0.22	0.15	8	0.437	61.88	0.601	62.96	1.85	159	4.2	8.00	32	18.3
LRPX32-090V24-___-050	24	0.96	0.6	8	0.874	123.75	1.202	125.92	1.85	159	2.1	8.00	32	9.2
LRPX32-090V48-___-050	48	3.68	2.3	8	1.748	247.50	2.405	251.83	1.85	159	1.1	8.00	32	4.6
LRPX32-090V12-___-060	12	0.22	0.15	8	0.517	73.23	0.711	74.51	2.19	134	4.2	8.00	27	15.5
LRPX32-090V24-___-060	24	0.96	0.6	8	1.034	146.45	1.423	149.01	2.19	134	2.1	8.00	27	7.7
LRPX32-090V48-___-060	48	3.68	2.3	8	2.068	292.90	2.846	298.03	2.19	134	1.1	8.00	27	3.9
LRPX32-090V12-___-076	12	0.22	0.15	8	0.663	93.84	0.912	95.49	2.80	105	4.2	8.00	21	12.1
LRPX32-090V24-___-076	24	0.96	0.6	8	1.325	187.69	1.824	190.97	2.80	105	2.1	8.00	21	6.0
LRPX32-090V48-___-076	48	3.68	2.3	8	2.651	375.38	3.647	381.95	2.80	105	1.1	8.00	21	3.0
LRPX32-090V12-___-090	12	0.22	0.15	8	0.784	111.06	1.079	113.00	3.32	88	4.2	8.00	18	10.2
LRPX32-090V24-___-090	24	0.96	0.6	8	1.568	222.12	2.158	226.00	3.32	88	2.1	8.00	18	5.1
LRPX32-090V48-___-090	48	3.68	2.3	8	3.137	444.23	4.316	452.01	3.32	88	1.1	8.00	18	2.6
LRPX32-090V12-___-107	12	0.22	0.15	8	0.928	131.43	1.277	133.73	3.92	75	4.2	8.00	15	8.6
LRPX32-090V24-___-107	24	0.96	0.6	8	1.856	262.86	2.554	276.46	3.92	75	2.1	8.00	15	4.3
LRPX32-090V48-___-107	48	3.68	2.3	8	3.712	525.72	5.108	534.92	3.92	75	1.1	8.00	15	2.2
LRPX32-090V12-___-116	12	0.22	0.15	8	1.005	142.33	1.383	144.82	4.25	69	4.2	8.00	14	8.0
LRPX32-090V24-___-116	24	0.96	0.6	8	2.010	284.66	2.766	289.64	4.25	69	2.1	8.00	14	4.0
LRPX32-090V48-___-116	48	3.68	2.3	8	4.020	569.32	5.532	579.29	4.25	69	1.1	8.00	14	2.0
LRPX32-090V12-___-137	12	0.22	0.15	8	1.189	168.44	1.637	171.39	5.03	58	4.2	8.00	12	6.7
LRPX32-090V24-___-137	24	0.96	0.6	8	2.379	336.88	3.273	342.77	5.03	58	2.1	8.00	12	3.4
LRPX32-090V48-___-137	48	3.68	2.3	8	4.758	673.75	6.546	685.55	5.03	58	1.1	8.00	12	1.7
LRPX32-090V12-___-162	12	0.22	0.15	8	1.408	199.34	1.937	202.82	5.95	49	4.2	8.00	10	5.7
LRPX32-090V24-___-162	24	0.96	0.6	8	2.815	398.67	3.874	405.65	5.95	49	2.1	8.00	10	2.8
LRPX32-090V48-___-162	48	3.68	2.3	8	5.630	797.34	7.747	811.30	5.95	49	1.1	8.00	10	1.4
LRPX32-090V12-___-192	12	0.22	0.15	8	1.666	235.90	2.292	240.03	6.60	42	4.0	8.00	8	4.8
LRPX32-090V24-___-192	24	0.96	0.6	8	3.332	471.80	4.584	480.06	6.60	42	2.0	8.00	8	2.4
LRPX32-090V48-___-192	48	3.68	2.3	8	6.663	943.60	9.168	960.12	6.60	42	1.0	8.00	8	1.2

Four Stage Gearbox continued on next page



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Part Number	Voltage	Resistance	Inductance	Number of Poles	Torque Constant		Voltage Constant		Continuous Running			Peak		
Units	Volts	Ohms	mH		N-m/A	oz-in/A	V-sec/rad	V/kRPM	Torque (Nm)	RPM	Current (A)	Torque (Nm)	RPM	Current (A)

Four Stage Gearbox

LRPX32-090V12- - - 246	12	0.22	0.15	8	1.917	271.48	2.931	306.92	6.60	33	3.4	8.00	7	4.2
LRPX32-090V24- - - 246	24	0.96	0.6	8	3.834	542.96	5.862	613.84	6.60	33	1.7	8.00	7	2.1
LRPX32-090V48- - - 246	48	3.68	2.3	8	7.668	1085.91	11.724	1227.69	6.60	33	0.9	8.00	7	1.0
LRPX32-090V12- - - 291	12	0.22	0.15	8	2.269	321.28	3.469	363.22	6.60	28	2.9	8.00	6	3.5
LRPX32-090V24- - - 291	24	0.96	0.6	8	4.537	642.55	6.937	726.44	6.60	28	1.5	8.00	6	1.8
LRPX32-090V48- - - 291	48	3.68	2.3	8	9.075	1285.10	13.874	1452.89	6.60	28	0.7	8.00	6	0.9
LRPX32-090V12- - - 344	12	0.22	0.15	8	2.685	380.21	4.105	429.85	6.60	23	2.5	8.00	5	3.0
LRPX32-090V24- - - 344	24	0.96	0.6	8	5.370	760.41	8.209	859.70	6.60	23	1.2	8.00	5	1.5
LRPX32-090V48- - - 344	48	3.68	2.3	8	10.739	1520.83	16.419	1719.39	6.60	23	0.6	8.00	5	0.7
LRPX32-090V12- - - 372	12	0.22	0.15	8	2.908	411.74	4.445	465.50	6.60	21	2.3	8.00	4	2.8
LRPX32-090V24- - - 372	24	0.96	0.6	8	5.815	823.48	8.890	931.00	6.60	21	1.1	8.00	4	1.4
LRPX32-090V48- - - 372	48	3.68	2.3	8	11.630	1646.96	17.781	1861.99	6.60	21	0.6	8.00	4	0.7
LRPX32-090V12- - - 441	12	0.22	0.15	8	3.441	487.27	5.261	550.89	6.60	18	1.9	8.00	4	2.3
LRPX32-090V24- - - 441	24	0.96	0.6	8	6.882	974.54	10.521	1101.77	6.60	18	1.0	8.00	4	1.2
LRPX32-090V48- - - 441	48	3.68	2.3	8	13.763	1949.07	21.042	2203.54	6.60	18	0.5	8.00	4	0.6
LRPX32-090V12- - - 522	12	0.22	0.15	8	4.072	576.65	6.226	651.94	6.60	15	1.6	8.00	3	2.0
LRPX32-090V24- - - 522	24	0.96	0.6	8	8.144	1153.30	12.451	1303.87	6.60	15	0.8	8.00	3	1.0
LRPX32-090V48- - - 522	48	3.68	2.3	8	16.288	2306.59	24.902	2607.74	6.60	15	0.4	8.00	3	0.5
LRPX32-090V12- - - 565	12	0.22	0.15	8	4.410	624.47	6.742	706.01	6.60	14	1.5	8.00	3	1.8
LRPX32-090V24- - - 565	24	0.96	0.6	8	8.820	1248.95	13.484	1412.01	6.60	14	0.7	8.00	3	0.9
LRPX32-090V48- - - 565	48	3.68	2.3	8	17.639	2497.90	26.967	2824.02	6.60	14	0.4	8.00	3	0.5
LRPX32-090V12- - - 617	12	0.22	0.15	8	4.819	682.42	7.367	771.52	6.60	13	1.3	8.00	3	1.7
LRPX32-090V24- - - 617	24	0.96	0.6	8	9.638	1364.85	14.735	1543.04	6.60	13	0.7	8.00	3	0.8
LRPX32-090V48- - - 617	48	3.68	2.3	8	19.276	2729.691	29.470	3086.09	6.60	13	0.3	8.00	3	0.4
LRPX32-090V12- - - 668	12	0.22	0.15	8	5.219	739.02	7.979	835.51	6.60	12	1.3	8.00	2	1.5
LRPX32-090V24- - - 668	24	0.96	0.60	8	10.437	1478.04	15.957	1671.02	6.60	12	0.6	8.00	2	0.8
LRPX32-090V48- - - 668	48	3.68	2.3	8	20.875	2956.09	31.914	3342.04	6.60	12	0.3	8.00	2	0.4
LRPX32-090V12- - - 791	12	0.22	0.15	8	6.176	874.58	9.442	988.77	6.60	10	1.1	8.00	2	1.3
LRPX32-090V24- - - 791	24	0.96	0.6	8	12.352	1749.17	18.884	1977.54	6.60	10	0.5	8.00	2	0.6
LRPX32-090V48- - - 791	48	3.68	2.3	8	24.704	3489.33	37.768	3955.08	6.60	10	0.3	8.00	2	0.3
LRPX32-090V12- - - 936	12	0.22	0.15	8	7.309	1035.01	11.174	1170.14	6.60	9	0.9	8.00	2	1.1
LRPX32-090V24- - - 936	24	0.96	0.6	8	14.618	2070.02	22.348	2340.28	6.60	9	0.5	8.00	2	0.5
LRPX32-090V48- - - 936	48	3.68	2.3	8	29.4235	4140.04	44.696	4680.57	6.60	9	0.2	8.00	2	0.3
LRPX32-090V12- - - 999	12	0.22	0.15	8	8.649	1224.86	13.224	1384.78	6.60	7	0.8	8.00	1	0.9
LRPX32-090V24- - - 999	24	0.96	0.6	8	17.299	2449.73	26.447	2769.57	6.60	7	0.4	8.00	1	0.5
LRPX32-090V48- - - 999	48	3.68	2.3	8	34.598	4899.45	52.895	5539.13	6.60	7	0.2	8.00	1	0.2

General Spec. Table

Part Number	Ratio (approx.)	Ratio (Exact)	Backlash (avg) (Degrees)	Length (Motor + Gearhead) (mm)	Weight (g)	Temperature Range (°C)
One Stage Gearbox						
LRPX32-090V - - - 003	3.21	45 / 14	0.7	84.6	283	-40 °C to +100 °C
LRPX32-090V - - - 005	4.88	39 / 8	0.8	84.6	283	-40 °C to +100 °C
LRPX32-090V - - - 006	5.77	75 / 13	0.9	84.6	283	-40 °C to +100 °C
Two Stage Gearbox						
LRPX32-090V - - - 010	10.33	2025 / 196	0.9	91.3	310	-40 °C to +100 °C
LRPX32-090V - - - 016	15.67	1755 / 112	0.9	91.3	310	-40 °C to +100 °C
LRPX32-090V - - - 019	18.54	3375 / 182	0.9	91.3	310	-40 °C to +100 °C
LRPX32-090V - - - 024	23.77	1521 / 64	1.0	91.3	310	-40 °C to +100 °C
LRPX32-090V - - - 028	28.13	225 / 8	1.0	91.3	310	-40 °C to +100 °C
LRPX32-090V - - - 033	33.28	5625 / 169	1.0	91.3	310	-40 °C to +100 °C
Three Stage Gearbox						
LRPX32-090V - - - 050	50.37	78975 / 1568	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 060	59.61	151875 / 2548	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 076	76.39	68445 / 896	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 090	90.40	10125 / 112	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 107	106.98	253125 / 2366	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 116	115.86	59319 / 512	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 137	137.11	8775 / 64	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 162	162.26	16875 / 104	1.0	97.7	337	-40 °C to +100 °C
LRPX32-090V - - - 192	192.02	421875 / 2197	1.0	97.7	337	-40 °C to +100 °C
Four Stage Gearbox						
LRPX32-090V - - - 246	245.54	3080025 / 12544	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 291	290.58	455625 / 1568	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 344	343.88	11390625 / 33124	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 372	372.40	2669355 / 7168	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 441	440.71	394875 / 896	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 522	521.55	759375 / 1456	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 565	564.80	2313441 / 4096	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 617	617.22	18984375 / 30758	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 668	668.41	342225 / 512	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 791	791.02	50625 / 64	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 936	936.11	1265625 / 1352	1.0	104.1	364	-40 °C to +100 °C
LRPX32-090V - - - 999	1107.83	31640625 / 28561	1.0	104.1	364	-40 °C to +100 °C

**Your Genius. Our Drive.**

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