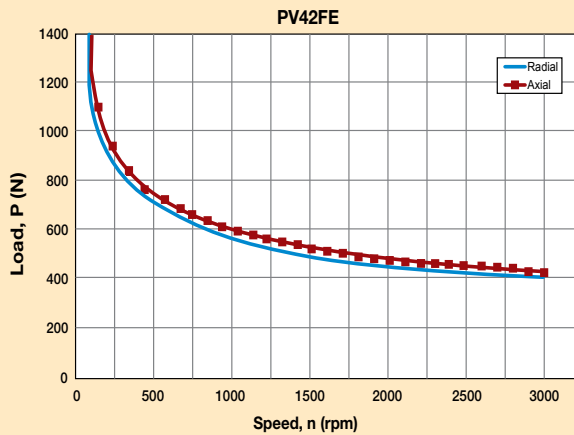
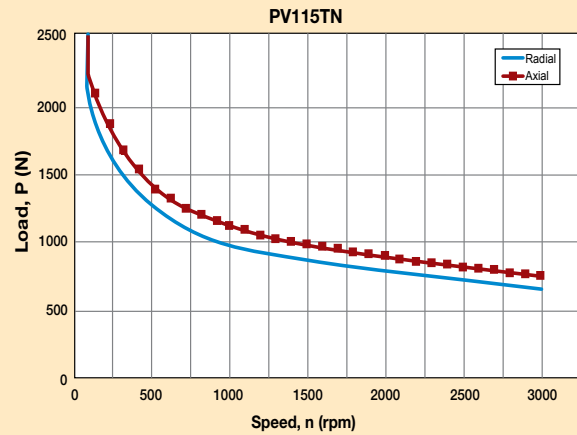
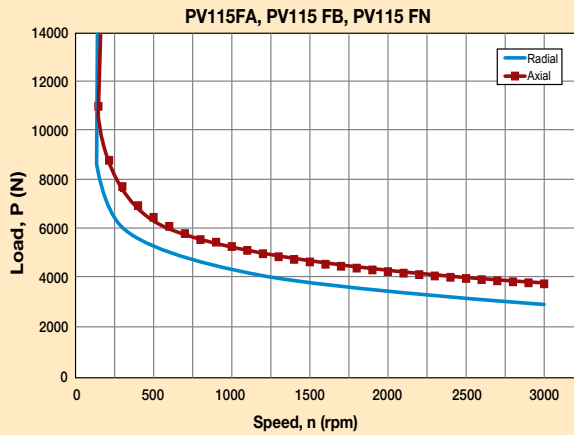
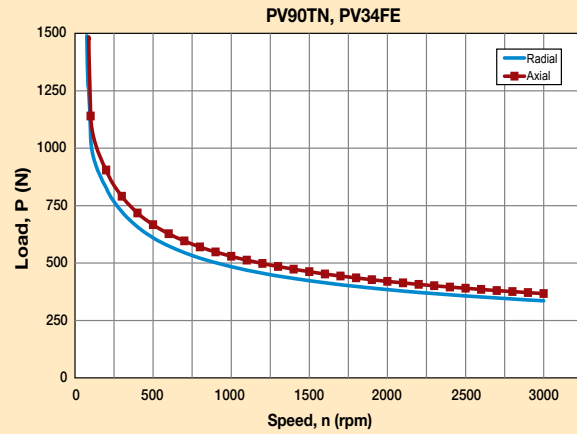
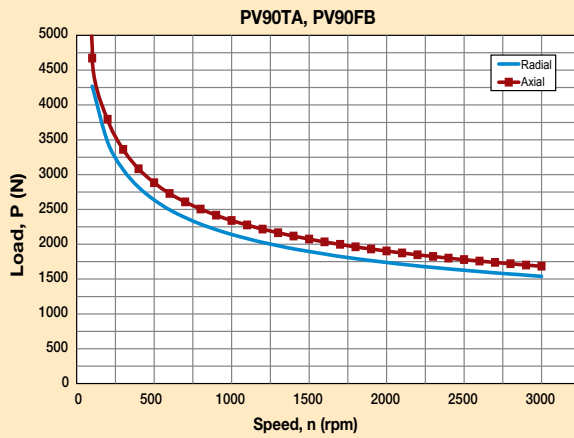


Output Shaft Load Ratings – PV90/PV34 & PV115/PV42



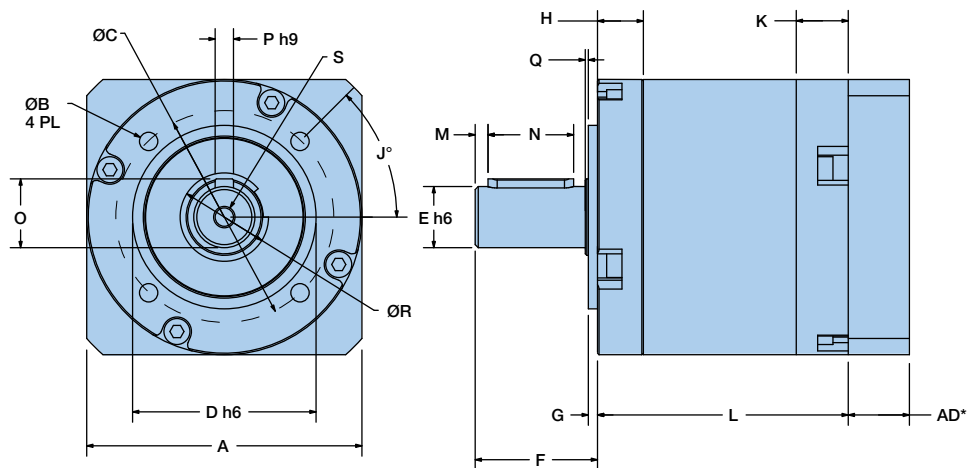
See How to Order page 48, items 3 & 4 for front face/output face code definitions.

- 1) Maximum axial load, F_a .
- 2) Maximum radial load applied to the center of the shaft, F_r .
- 3) Radial load curves can be used to combine (radial + axial) load if $F_a/F_r < 0.22$.
- 4) If $F_a/F_r > 0.22$ consult factory.

PV Series Gearheads

Dimensions – Tapped Face (TA & TN)

Free 3D Solid Models and drawings available at parkermotion.com



*AD = Adapter length. See how to order page for mounting kit adapter lengths.

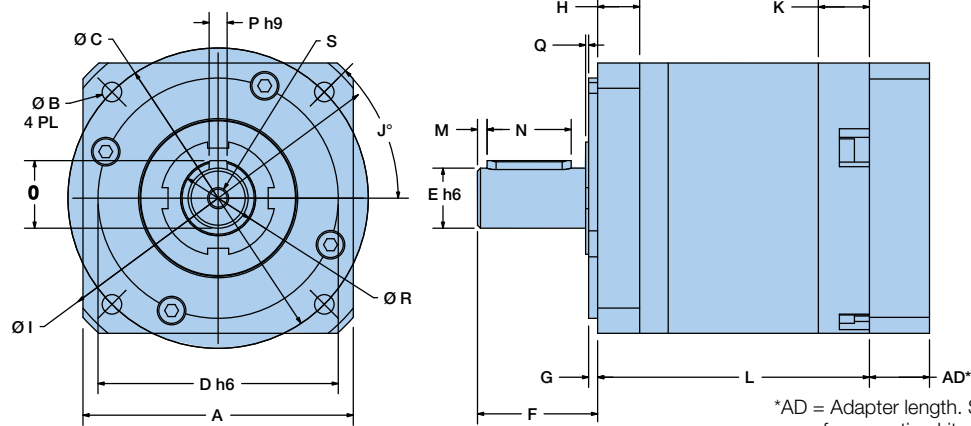
Metric Frame Sizes

Frame Size	A		B		C		D		E		F		G		H		J		K	
	Body Diameter		Tap x Depth		Bolt Circle		Pilot Diameter		Output Shaft Diameter		Output Shaft Length		Pilot Thickness		Flange Thickness		Lead Angle		Rear Thickness	
	mm	in			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	°		mm	in
PV40TN	43	1.693	M4x7	34	1.339	26	1.024	10	0.394	26	1.024	1.5	0.059	10	0.394	45	11	0.433		
PV40TA	50	1.969	M4x10	44	1.732	35	1.378	12	0.472	25	0.984	3	0.118	10	0.394	90	11	0.433		
PV60TN	62	2.441	M5x10	52	2.047	40	1.575	14	0.551	35	1.378	2.5	0.098	12	0.472	45	16	0.630		
PV60TA	70	2.756	M5x10	62	2.362	52	2.047	16	0.630	36	1.417	5	0.197	16	0.630	90	16	0.630		
PV90TN	90	3.543	M6x11	70	2.756	60	2.362	20	0.787	40	1.575	3	0.118	15	0.591	45	17	0.670		
PV90TA	90	3.543	M6x12	80	3.150	68	2.677	22	0.866	46	1.811	5	0.197	18.5	0.728	90	17	0.670		
PV115TN	115	4.528	M10x16	100	3.937	80	3.150	25	0.984	55	2.165	4	0.157	20	0.787	45	23	0.906		
PV115TA	120	4.724	M8x20	108	4.252	90	3.543	32	1.260	70	2.756	6	0.236	28	1.102	90	23	0.906		

Frame Size	L1		L2		M		N		O		P		Q		R		S	
	Length (3 – 10 Ratios)		Length (12 – 100 Ratios)		Distance from Shaft End		Keyway Length		Key Height		Keyway Width		Shoulder Height		Shoulder Diameter		Tap & Depth (end of shaft)	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		
PV40TN	48.5	1.909	63	2.480	3.1	0.122	16	0.630	10.2	0.402	3	0.118	0.6	0.024	11.633	0.458	M3X6	
PV40TA	48.5	1.909	63	2.480	1.3	0.051	16	0.630	13.5	0.531	4	0.157	3.5	0.138	17.831	0.702	M4x8	
PV60TN	63	2.480	83	3.268	2.71	0.107	25	0.984	16		5	0.197	2.5	0.098	19.939	0.785	M5x12	
PV60TA	67	2.638	87	3.425	2.21	0.087	25	0.984	18	0.709	5	0.197	3	0.118	28	1.102	M5x12	
PV90TN	82	3.228	105.5	4.154	4.197	0.165	28	1.102	22.5	0.886	6	0.236	1	0.039	25	0.984	M6x12	
PV90TA	85.5	3.366	109	4.291	3.197	0.126	28	1.102	24.5	0.965	6	0.236	5	0.197	38	1.496	M8x13	
PV115TN	102	4.016	136	5.354	5.2	0.205	40	1.575	28	1.102	8	0.315	1	0.039	35	1.378	M10x20	
PV115TA	110	4.331	144	5.669	4	0.157	50	1.969	35	1.378	10	0.394	1.8	0.071	40	1.575	M12x22	

Dimensions – Flange Face (FB, FE & FN)

Free 3D Solid Models and drawings available at parkermotion.com



*AD = Adapter length. See how to order page for mounting kit adapter lengths.

Metric & NEMA Frame Sizes

Frame Size	Metric	A		B		C		D		E		F		G		H		I		J
		Body				Pilot				Output Shaft		Output Shaft		Pilot		Flange		Housing	Lead	
		Diameter		Bolt Hole		Bolt Circle		Diameter		Diameter		Length		Thickness		Thickness		Diameter	Angle	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	°
	PV40FB	43	1.693	3.4	0.134	50	1.969	35	1.378	13	0.512	26	1.024	3	0.118	10	0.394	56	2.205	45
	PV60FB	62	2.441	5.5	0.217	70	2.756	50	1.969	16	0.630	25	0.984	2.5	0.098	10.3	0.406	80	3.150	45
	PV60FN	62	2.441	5.5	0.217	70	2.756	50	1.969	14	0.551	25	0.984	2.5	0.098	10.3	0.406	80	3.150	45
	PV90FB	90	3.543	6.5	0.256	100	3.937	80	3.150	20	0.787	40	1.575	3	0.118	14	0.551	116	4.567	45
	PV90FN	90	3.543	6.5	0.256	100	3.937	80	3.150	20	0.787	40	1.575	3	0.118	14	0.551	116	4.567	45
	PV115FB	115	4.528	8.5	0.335	130	5.118	110	4.331	24	0.945	50	1.969	3.5	0.138	18	0.709	152	5.984	45
	PV115FN	115	4.528	8.5	0.335	130	5.118	110	4.331	25	0.984	55	2.165	3.5	0.138	18	0.709	152	5.984	45

		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	°
NEMA	PV17FE	1.693	43	0.138	3.5	1.724	43.8	0.866	22	0.250	6.35	0.984	25	0.059	1.5	0.236	6	2.165	55	45
	PV23FE	2.441	62	0.195	4.95	2.625	66.675	1.500	38.1	0.375	9.525	1.000	25.4	0.098	2.5	0.374	9.5	3.150	80	45
	PV34FE	3.543	90	0.217	5.52	3.875	98.43	2.875	73.025	0.500	12.7	1.250	31.75	0.118	3	0.591	15	4.567	116	45
	PV42FE	4.528	115	0.281	7.14	4.949	125.7	2.187	55.55	0.625	15.875	1.500	38.1	0.094	2.4	0.787	20	5.984	152	45

Frame Size	K		L1		L2		M		N		O		P		Q		R		S	
	Rear		Length		Length		Distance		Keyway		Key Height		Keyway		Shoulder		Shoulder		Tap &	
	Thickness		(3 – 10		(12 – 100		from Shaft		Length		Key Height		Width		Height		Diameter		Depth	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		
Metric	PV40FB	11	0.433	48.5	1.909	63	2.480	2.1	0.083	16	0.630	15	0.591	5	0.197	2	0.079	17.831	0.702	M4x8
	PV60FB	16	0.630	71.5	2.815	91.5	3.602	3.2	0.126	16	0.630	18	0.709	5	0.197	1	0.039	28	1.102	M5x12
	PV60FN	16	0.630	71.5	2.815	91.5	3.602	3.2	0.126	16	0.630	16	0.630	5	0.197	1	0.039	28	1.102	M5x12
	PV90FB	17	0.670	90.5	3.563	119	4.685	3.197	0.126	28	1.102	22.5	0.886	6	0.236	1	0.039	38	1.496	M6x12
	PV115FB	23	0.906	114.5	4.508	148.55	5.846	4.2	0.165	40	1.575	27	1.063	8	0.315	1.5	0.059	40	1.575	M10x22
	PV115FN	23	0.906	114.5	4.508	148.55	5.846	4.2	0.165	40	1.575	27	1.063	8	0.315	1.5	0.059	40	1.575	M10x22

		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
NEMA	PV17FE	0.433	11	1.909	48.5	2.480	63	–	–	–	–	–	–	–	0.091	2.3	0.458	11.633	–	
	PV23FE	0.630	16	2.382	60.5	3.169	80.5	–	–	0.748	19	0.372	9.444	Flat	0.039	1	0.785	19.939	M5x12	
	PV34FE	0.670	17	3.228	82	4.154	105.5	–	–	1.063	27	0.561	14.247	0.125	3.175	0.039	1	0.984	25	M6x12
	PV42FE	0.906	23	4.016	102	5.354	136	0.016	0.4	1.120	28.450	0.705	17.91	0.188	4.775	–	–	–	–	M6x20

PV Series Gearheads

How to Order

Use the tables below to configure your PV gearhead and motor mounting kit part number.

Order Example: ^① PV ^② 40 ^③ T ^④ N ^⑤ - 004

Sizing/Selection Design Assistance

To properly size and select a gearhead for a specific application requires consideration of several interrelated parameters including: speed, continuous torque, repetitive peak torque or acceleration torque, emergency stop torque, duty cycle, ambient temperature and radial and axial shaft load.

The 9 step procedure on pages 72-73 provides a straightforward method of selecting the correct gearhead for your application.

^① Series	^② Frame Size		^③ Front Face		^④ Output Face Compatible		^⑤ Ratio	
PV Power Versatility Series	40	40 mm	T	Tapped (round)	A	Alpha/Stober	004	4:1
					N	Neugart	005	5:1
			F	Flanged (square)	B	Parker Bayside (PX)	007	7:1
	17	NEMA 17	F	Flanged (square)	E	NEMA (English)	010	10:1
							016	16:1
							020	20:1
							025	25:1
							035	35:1
							040	40:1
							050	50:1
							070	70:1
							100	100:1
	60	60 mm	T	Tapped (round)	A	Alpha/Stober	003	3:1
					N	Neugart	004	4:1
			F	Flanged (square)	B	Parker Bayside (PX)	005	5:1
	23	NEMA 23	F	Flanged (square)	E	NEMA (English)	007	7:1
							010	10:1
							012	12:1
	90	90 mm	T	Tapped (round)	A	Alpha/Stober	015	15:1
					N	Neugart	020	20:1
			F	Flanged (square)	B	Parker Bayside (PX)	025	25:1
	34	NEMA 34	F	Flanged (square)	E	NEMA (English)	030	30:1
							040	40:1
							050	50:1
	115	115 mm	T	Tapped (round)	A	Alpha/Stober	070	70:1
					N	Neugart	100	100:1
			F	Flanged (square)	B	Parker Bayside (PX)		
	42	NEMA 42	F	Flanged (square)	E	NEMA (English)		

Mounting Kit Ordering Information

Know your motor and need our mounting kit part number? Use the charts below or use our Motor Mounting Search Tool on our website at:

www.parkermotion.com

	⑥	⑦	⑧
Order Example:	MV	60	XXX
	⑥	⑦	⑧
Series	Frame Size	Factory Assigned	
MV (Mounting kit for PV)	40	40 or 17	See Motor Mounting Search Tool on parkermotion.com or consult factory for part number
	60	60 or 23	
	90	90 or 34	
	115	115 or 42	

Mounting Kit Adapter Length*

Frame Size	Motor Shaft Length		“AD”	
	mm	(in)	mm	(in)
40/17	12 – 20	(0.472 – 0.787)	13.7	(0.539)
	20.1 – 25.4	(0.791 – 1.000)	19.0	(0.748)
60/23	16 – 25.4	(0.630 – 1.000)	16.5	(0.650)
	25.4 – 31.8	(1.004 – 1.252)	22.5	(0.886)
90/34	20 – 31.8	(0.787 – 1.252)	20.0	(0.787)
	31.9 – 40	(1.256 – 1.575)	28.5	(1.122)
115/42	22 – 40	(0.866 – 1.575)	24.0	(0.945)
	40.1 – 51	(1.579 – 2.008)	35.0	(1.378)

* Adapter length may vary depending on motor make and model.

Recommended Parker Motor and Mounting Kit*

Frame Size	Recommended Servo Motor			Recommended Stepper Motor		
	Motor	Mounting Kit	AD Dimension	Motor	Mounting Kit	AD Dimension
40 or 17	BE16	MV40-005	19 mm	LV17	MV40-003	19 mm
	SM16			HV17		
60 or 23	BE23	MV60-001	22.5 mm	LV23	MV60-002	16.5 mm
	SM23	MV60-005	16.5 mm	HV23		
90 or 34	BE34	MV90-005	20 mm	LV34	MV90-005	20 mm
	MPP092	MV90-002	28.5 mm	HV34		
115 or 42	MPP100	MV115-039	24 mm			
	MPP115	MV115-010	35 mm			

*Parker MotionSizer sizing software available for free download at: www.parkermotion.com