

Cooling		Air-Cooled											Liquid-Cooled																						
Fuel		Diesel											Gas			Bio Diesel			Diesel																
Key to Emissions Compliance:																																			
Fully compliant (EU, USA, India)		AC1		LT1		TR2		LPW3 and LPWT4				LPWS4			ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA					
EU 3A and India GSR 448 (E)		AC1		LT1		TR2		LPW3 and LPWT4				LPWS4			ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA					
EU Stage 3A and USA Int. Tier 4		AC1		LT1		TR2		LPW3 and LPWT4				LPWS4			ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA					
USA Interim Tier 4 only		AC1		LT1		TR2		LPW3 and LPWT4				LPWS4			ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA					
EU Stage 3A only*		AC1		LT1		TR2		LPW3 and LPWT4				LPWS4			ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA					
[] denotes compliant to EU Stage 2 only		AC1		LT1		TR2		LPW3 and LPWT4				LPWS4			ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA					
Engine series		A-Series		L-Series		T-Series			ALPHA				NEW ALPHA				ALPHA Gas			ALPHA Bio			SIGMA				DELTA	GAMMA				OMEGA			
Engine model		AC1	AD1	LT1	LV1	TR1	TR2	TR3	LPW2	LPW3	LPW4	LPWT4	LPWS2	LPWS3	LPWS4	LPWST4	LPWG2	LPWG3	LPWG4	LPWS Bio2	LPWS Bio3	LPWS Bio4	SW20	SW25	SW30	SW40	DWS4	GW4	GWT4	GWT6-1A	GWT6-2A	GWTA6	OWT6	OWTA6	
V/G build (=variable/fixed speed)		V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	G	G	G	G	G	G	G	V/G	V/G	V/G	G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	V/G	
Minimum full-load speed (r/min)		1500	1500	1000	1000	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1200	1500	1500	1500	1500	1500	1500	1500	1500
Maximum full-load speed (r/min)		3600	3600	3000	3000	2500	2500	2500	3600	3600	3600	3000	3000	3000	3000	1800	1800	1800	1800	1800	1800	1800	2000	2200	2200	1800	2500	2200	2200	1800	2200	2200	2200	2200	
Number of cylinders L=in-line; H=horizontal		1 L	1 L	1 L	1 L	1 L	2 L	3 L	2 L	3 L	4 L	4 L	2 L	3 L	4 L	4 L	2 L	3 L	4 L	2 L	3 L	4 L	3 L	3 L	4 L	4 L	4 L	4 L	4 L	4 L	6 L	6 L	6 L	6 L	6 L
Bore (mm)		76	80	83	86	98	98	98	86	86	86	86	86	86	86	86	86	86	86	86	86	86	91	105	105 ⁵	105	94	100	100	100	100	100	100	126	126
		in.	3.15	3.25	3.38	3.89	3.89	3.89	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.60	4.13	4.13	4.13	3.70	3.94	3.94	3.94	3.94	3.94	3.94	4.96	4.96	
Stroke (mm)		67	73	76	83	102	102	102	80	80	80	80	80	80	80	80	80	80	80	80	80	80	127	110	110	110	120	127	127	127	127	127	130	130	
		in.	2.64	2.87	3.00	4.00	4.00	4.00	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	5	4.33	4.33	4.33	4.72	5.00	5.00	5.00	5.00	5.00	5.12	5.12		
Displacement per cylinder		litres	0.30	0.37	0.41	0.48	0.77	0.77	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.83	0.95	0.95	0.95	0.83	0.99	0.99	0.99	0.99	0.99	1.62	1.62		
		in. ³	18.3	22.6	25.0	29.3	47.0	47.0	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	50.8	58.1	58.1	58.1	50.1	60.4	60.4	60.4	60.4	60.4	98.8	98.8		
Injection: D=direct; I=indirect		Direct		Direct		Direct			Direct				Indirect				N/A (spark ignition)			Indirect			Direct				I	Direct				Direct			
Aspiration: N=natural; T=turbo; I=intercooled		Natural		Natural		Natural			Natural				T				Natural			Natural			Natural				N	N				T, I			
Starting: H=hand; R=rope; E= electric; ()=optional		H (RE)	H (RE)	H (E)	H (E)	H (E)	H (E)	H (E)	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	
Variable Speed Builds Outputs to ISO 3046	1500 r/min	Continuous	kW	2.1	2.5	3.0	3.5	5.5	11.0	16.8	6.8	10.3	13.6	20.7	7.4	11.1	14.7					24.0	29.0	34.0		30.2	36	60		84	110	152	223		
		bhp	2.8	3.4	4.0	4.8	7.4	14.8	22.5	9.1	13.8	18.2	27.7	9.9	14.9	19.7							32.2	38.9	45.6		40.5	48.3	80.4		112.6	147.4	204	299	
	Intermittent	kW	2.3	2.8	3.3	3.9	6.1	12.1	18.5	7.5	11.3	15.0	22.3	8.1	12.2	16.2											31.6								
		bhp	3.1	3.7	4.4	5.2	8.2	16.2	24.8	10.0	15.1	20.1	29.9	10.9	16.4	21.7											42.4								
	2000 r/min	Continuous	kW	2.8	3.4	4.0	4.8	7.3	14.5	22.2	9.6	14.5	19.3	28.7	10.1	15.2	20.2						28.7	35.4	40.0		39.0	43	68		98.0	120.5	176	262	
		bhp	3.8	4.6	5.4	6.4	9.8	19.4	29.8	12.9	19.4	25.9	38.5	13.5	20.4	27.0							38.5	47.45	53.6		52.3	57.6	91.1		131.3	161.5	236	351	
	Intermittent	kW	3.1	3.7	4.4	5.3	8.0	16.0	24.4	10.6	15.9	21.2	31.0	11.1	16.7	22.2											40.3								
		bhp	4.2	5.0	5.9	7.0	10.7	21.5	32.7	14.2	21.3	28.4	41.5	14.9	22.3	30.0											54.0								
	2500 r/min	Continuous	kW	3.7	4.3	5.0	5.8	8.6	17.3	25.9	11.8	17.7	23.6	34.3	12.2	18.3	24.4						N/A	36.4 ⁴	42.0 ⁴		46.3	46.0 ⁴	70.0 ⁴		100.0 ⁴	124.0 ⁴	176 ⁴	268 ⁴	
		bhp	5.0	5.8	6.7	7.8	11.5	23.2	34.7	15.8	23.7	31.6	46.0	16.3	24.5	32.7							N/A	48.8 ⁴	56.3 ⁴		62.1	61.7 ⁴	93.8 ⁴		134.0 ⁴	166.0 ⁴	236 ⁴	358 ⁴	
	Intermittent	kW	4.1	4.8	5.5	6.4	9.5	19.0	28.5	13.0	19.5	26.0	36.7	13.4	20.1	26.8											48.5								
		bhp	5.5	6.4	7.4	8.6	12.7	25.5	38.2	17.4	26.1	34.8	49.1	18.0	26.9	35.9											65.0								
3000 r/min	Continuous	kW	4.5	5.3	5.6	6.7				13.4	20.1	26.8	37.5	13.4	20.1	26.8																			
	bhp	6.0	7.1	7.5	9.0				18.0	26.9	35.9	50.3	18.0	26.9	36.0																				
Intermittent	kW	4.9	5.8	6.2	7.4				14.7	22.1	29.5	40.2	14.7	22.1	29.5																				
	bhp	6.6	7.8	8.3	9.9				19.7	29.6	39.5	53.9	19.7	29.6	39.5																				

Data rounded to 3 significant figures. 1. Denotes emissions compliant to EU Stage 2 only. 2. Weights are net of radiator, except for GAMMA and OMEGA G-Builds. 3. Lengths are fan to flywheel, except for GAMMA, SIGMA and OMEGA G-Builds where they include radiator. N/A = not applicable. N/D = no data available. 4. Rating at maximum speed available. 5. SW30 V/S Engine bore is 102mm. P027-08327 © Lister Petter Ltd, October 2009