

## Specifications- Model 2TNE68C

Engine model			2TNE68C-															
Engine spec. type			G1		EYAS						EYAG2			EYAH				
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine															
2	Combustion system		Indirect injection ( IDI )															
3	No. of cylinders- Bore x Stroke	n- mm X mm	2 - 68 X 72															
4	Displacement	liters	0.523															
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	3000	3600	3200	3400	3600		
	Output	Rated Output	kW (hp)	—	—	5.7 (7.6)	6.3 (8.4)	6.8 (9.1)	7.1 (9.5)	7.4 (9.9)	7.9 (10.6)	8.5 (11.4)	8.5 (11.4)	10.0 (13.4)	8.7 (11.7)	9.2 (12.3)	9.6 (12.9)	
		Cont. rating	kW (hp)	—	—								7.6 (10.2)	9.0 (12.1)				
6	Maximum idling speed	rpm ( + or - 50 )	—	—	2180	2375	2590	2685	2780	2995	3195	3175	3805	3410	3620	3790		
7	Specific fuel consumption	g / kWhr (g / hphr)	—	= or < 272 ( 203 )						= or < 279 ( 208 )			= or < 299 ( 223 )		= or < 279 ( 208 )		= or < 286 ( 213 )	= or < 292 ( 218 )
8	Exhaust gas temp.	degree C	—	< 480		< 490	< 495	< 500	< 510	< 530			< 580		< 550		< 560	< 580
9	Compression ratio	—	23.0 : 1															
10	Fuel injection timing	bTDC (FID) degrees	—	14						16								
11	Fuel injection pressure	kPa	11,800 plus or minus 980															
12	Main shaft side	—	Flywheel side															
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)															
14	Governor	—	Mechanical centrifugal governor (All-speed governor)															
15	Aspiration	—	Naturally aspirated															
16	Cooling system	—	Force-feed circulation radiator type cooling system															
17	Lubrication system	—	Forced lubrication with trochoid pump															
18	Starting system	—	Electric starting motor, 12V DC															
19	Charging system	—	Alternator, 12 V DC, 40 amp															
20	Starting aid device	—	Glow plug (10 VDC / 10 amp X 3 pcs., std. spec.)															
20	Lube oil pressure	Rated speed	kPa	—	245 plus or minus 49		294 plus or minus 49				343 plus or minus 49							
21		Idling speed	kPa	—	> or = 59													
22	Oil pan capacity	Full	liters	—	1.6						2.3							
		Useful	liters	—	1						1.3							
23	Cooling water capacity	liters	0.6															
24	Cooling fan type - dia. X No. blades	mm	Pusher - 290 dia. X 5															
25	Crank pulley dia. / fan pulley dia.	mm / mm	95 dia. X 85 dia.															

Note: This table is subject to change without notice.

## Specifications- Model 3TNE68C

Engine model			3TNE68C-																		
Engine spec. type			EYAG1	EYAS						EYAG2				EYAH							
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine																		
2	Combustion system		Indirect injection ( IDI )																		
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 68 X 72																		
4	Displacement	liters	0.784																		
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	3000	3600	3200	3400	3600					
	Output	Rated Output	kW (hp)	—	7.5 (10.1)	8.6 (11.5)	9.4 (12.6)	10.3 (13.8)	10.7 (14.3)	11.2 (15.0)	12.0 (16.1)	12.9 (17.3)	12.9 (17.3)	15.1 (20.2)	13.1 (17.6)	13.8 (18.5)	14.5 (19.4)				
		Cont. rating	kW (hp)	—	6.7 (9.0)																
6	Maximum idling speed	rpm ( + or - 50 )	—	—	2180	2375	2570	2675	2780	2995	3195	3195	3790	3410	3620	3790					
7	Specific fuel consumption	g / kWhr (g / hphr)	—	= or < 272 ( 203 )						= or < 279 ( 208 )		= or < 299 ( 223 )		= or < 279 ( 208 )		= or < 286 ( 213 )		= or < 292 ( 218 )			
8	Exhaust gas temp.	degree C	—	< 480				< 515				< 540		< 590		< 490		< 540		< 590	
9	Compression ratio	—	23.0 : 1																		
10	Fuel injection timing	bTDC (FID) degrees	—	14						16											
11	Fuel injection pressure	kPa	11,800 plus or minus 980																		
12	Main shaft side	—	Flywheel side																		
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)																		
14	Governor	—	Mechanical centrifugal governor (All-speed governor)																		
15	Aspiration	—	Naturally aspirated																		
16	Cooling system	—	Force-feed circulation radiator type cooling system																		
17	Lubrication system	—	Forced lubrication with trochoid pump																		
18	Starting system	—	Electric starting motor, 12V DC																		
19	Charging system	—	Alternator, 12 V DC, 40 amp																		
20	Starting aid device	—	Glow plug (10 VDC / 10 amp X 3 pcs., std. spec.)																		
21	Lube oil pressure	Rated speed	kPa	—	245 plus or minus 49			294 plus or minus 49				343 plus or minus 49									
		Idling speed	kPa	—	> or = 59																
22	Oil pan capacity	Full	liters	—	2.7						3.5										
		Useful	liters	—	1.2						1.5										
23	Cooling water capacity	liters	0.9																		
24	Cooling fan type - dia. X No. blades	mm	Pusher - 310 dia. X 5																		
25	Crank pulley dia. / fan pulley dia.	mm / mm	95 dia. X 85 dia.																		

Note: This table is subject to change without notice.

## Specifications- Model 3TNE74C

Engine model			3TNE74C-														
Engine spec. type			EYAG1	EYAS						EYAG2				EYAH			
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine														
2	Combustion system	—	Indirect injection ( IDI )														
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 74 X 78														
4	Displacement	liters	1.006														
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	3000	3600	3200	3400	3600	
	Output	Rated Output	kW (hp)	—	9.6 (12.9)	11.0 (14.8)	12.1 (16.2)	13.2 (17.7)	13.8 (18.5)	14.3 (19.2)	15.4 (20.7)	16.5 (22.1)	16.5 (22.1)	19.1 (25.6)	16.5 (22.1)	17.1 (22.9)	17.7 (23.7)
		Cont. rating	kW (hp)	—	8.6 (11.5)												
6	Maximum idling speed	rpm ( + or - 50 )	—	—	2180	2390	2590	2695	2795	3010	3195	3195	3790	3410	3620	3790	
7	Specific fuel consumption	g / kWhr (g / hphr)	—	= or < 272	= or < 279 ( 208 )	= or < 286 ( 213 )			= or < 292	= or < 286	= or < 299 ( 223 )	= or < 286 ( 213 )	= or < 292 ( 218 )	= or < 306 ( 228 )			
8	Exhaust gas temp.	degree C	—	< 480					< 515	< 540		< 595	< 540	< 570	< 590		
9	Compression ratio	—	23.0 : 1														
10	Fuel injection timing	bTDC (FID) degrees	—	14						16							
11	Fuel injection pressure	kPa	11,800 plus or minus 980														
12	Main shaft side	—	Flywheel side														
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)														
14	Governor	—	Mechanical centrifugal governor (All-speed governor)														
15	Aspiration	—	Naturally aspirated														
16	Cooling system	—	Force-feed circulation radiator type cooling system														
17	Lubrication system	—	Forced lubrication with trochoid pump														
18	Starting system	—	Electric starting motor, 12V DC														
19	Charging system	—	Alternator, 12 V DC, 40 amp														
20	Starting aid device	—	Glow plug ( 10 VDC / 10 amp X 3 pcs., std. spec.)														
21	Lube oil pressure	Rated speed	kPa	—	245 plus or minus 49	294 plus or minus 49				343 plus or minus 49							
		Idling speed	kPa	—	—												
22	Oil pan capacity	Full	liters	—	3.1						4.1						
		Useful	liters	—	1.5						1.8						
23	Cooling water capacity	liters	0.9														
24	Cooling fan type - dia. X No. blades	mm	Pusher - 310 dia. X 5														
25	Crank pulley dia. / fan pulley dia.	mm / mm	105 dia. X 85 dia.						110 dia. X 85 dia.								

Note: This table is subject to change without notice.

## Specifications- Model 3TNE78A

Engine model		3TNE78A-										
Engine spec. type		---	EYAG1				EYAS					
1	Type	---	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	---	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 78 X 84									
4	Displacement	liters	1.204									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	9.9 (13.3)	11.9 (16.0)	13.2 (17.7)	14.6 (19.6)	15.9 (21.3)	16.5 (22.1)	17.2 (23.1)	18.5 (24.8)	19.9 (26.7)
		Cont. rating	kW (hp)	9.0 (12.1)	10.8 (14.5)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2180	2375	2570	2675	2780	2995	3180	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )				= or < 245 ( 183 )			= or < 252		
8	Exhaust gas temp.	degree C	< 450	< 480	< 500	< 520	< 535	< 545	< 565	< 595		
9	Compression ratio	---	23.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	10	12	14	16						
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	---	Flywheel side									
13	Rotation direction	---	Counter clockwise (Viewed from flywheel side)									
14	Governor	---	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	---	Naturally aspirated									
16	Cooling system	---	Force-feed circulation radiator type cooling system									
17	Lubrication system	---	Forced lubrication with trochoid pump									
18	Starting system	---	Electric starting motor, 12V DC									
19	Charging system	---	Alternator, 12 V DC, 40 amp									
20	Starting aid device	---	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	310 plus 100, or minus 50	360 plus 100, or minus 50					410 plus 100, or minus 50		
		Idling	kPa	---								
22	Oil pan capacity	Full	liters	5.0	3.6							
		Useful	liters	2.2	1.2							
23	Cooling water capacity	liters	1.8									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 310 dia. X 5									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.	110 dia. X 110 dia.								

Note: This table is subject to change without notice.

## Specifications- Model 3TNE82A

Engine model			3TNE82A-									
Engine spec. type			EYAG1			EYAS						
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 82 X 84									
4	Displacement	liters	1.331									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	11.0 (14.8)	13.2 (17.7)	14.6 (19.6)	16.0 (21.5)	17.5 (23.5)	18.2 (24.4)	19.0 (25.5)	18.5 (20.4)	21.9 (29.4)
		Cont. rating	kW (hp)	9.9 (13.3)	12.0 (16.1)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2180	2375	2570	2675	2780	2995	3180	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 450	< 470	< 490	< 520	< 535	< 545	< 555	< 590		
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	12				14			16		
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Naturally aspirated									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	310 plus 100, or minus 50			360 plus 100, or minus 50				410 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	5.0			3.6					
		Useful	liters	2.2			1.2					
23	Cooling water capacity	liters	1.8									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 310 dia. X 5									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.			110 dia. X 110 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 3TNE84

Engine model			3TNE84-									
Engine spec. type			EYAG1			EYAS						
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 84 X 90									
4	Displacement	liters	1.496									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	12.4 (16.6)	14.8 (19.8)	16.4 (22.0)	18.1 (24.3)	19.7 (26.4)	20.5 (27.5)	20.5 (27.5)	21.3 (28.6)	23.0 (30.8)
		Cont. rating	kW (hp)	11.3 (15.2)	13.5 (18.1)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2180	2400	2590	2700	2810	2995	3210	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 450	< 470	< 480	< 500	< 520	< 535	< 545	< 565	< 595	
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	10	12			14			16		
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Naturally aspirated									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	340 plus 100, or minus 50			390 plus 100, or minus 50				440 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	7.2			4.8					
		Useful	liters	3.5			1.9					
23	Cooling water capacity	liters	2.0									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 335 dia. X 6									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.			110 dia. X 110 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 3TNE84T

Engine model			3TNE84T-									
Engine spec. type			EYAG1				EYAS					
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 84 X 90									
4	Displacement	liters	1.496									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	15.8 (21.2)	18.8 (25.2)	21.0 (28.2)	22.8 (30.6)	25.0 (33.5)	25.7 (34.5)	26.8 (35.9)	29.1 (39.0)	30.9 (41.4)
		Cont. rating	kW (hp)	14.0 (18.8)	16.5 (22.1)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2200	2420	2615	2725	2835	3050	3270	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 470	< 480	< 530	< 540	< 550	< 560	< 565	< 590	< 610	
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	10	12			14			16		
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Turbocharged									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	340 plus 100, or minus 50			410 plus 100, or minus 50				440 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	7.2			4.8					
		Useful	liters	3.5			1.9					
23	Cooling water capacity	liters	2.0									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 335 dia. X 6									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.				110 dia. X 110 dia.					

Note: This table is subject to change without notice.

## Specifications- Model 3TNE88

Engine model			3TNE88-									
Engine spec. type			EYAG1				EYAS					
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	3 - 88 X 90									
4	Displacement	liters	1.642									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	13.5 (18.1)	16.3 (21.9)	18.0 (24.1)	19.9 (26.7)	21.6 (29.0)	22.6 (30.3)	23.5 (31.5)	25.2 (33.8)	27.1 (36.3)
		Cont. rating	kW (hp)	12.3 (16.5)	14.8 (19.8)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2180	2400	2590	2700	2810	2995	3210	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 450	< 470	< 490	< 500	< 515	< 525	< 555	< 590		
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	10	12			14			16		
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Naturally aspirated									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	340 plus 100, or minus 50			390 plus 100, or minus 50				440 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	7.2			4.8					
		Useful	liters	3.5			1.9					
23	Cooling water capacity	liters	2.0									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 335 dia. X 6									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.			110 dia. X 110 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 4TNE84

Engine model			4TNE84-									
Engine spec. type			EYAG1			EYAS						
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 84 X 90									
4	Displacement	liters	1.995									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	16.4 (22.0)	19.5 (23.1)	21.9 (29.4)	24.1 (32.3)	26.3 (35.3)	27.4 (36.7)	28.5 (38.2)	30.7 (41.2)	32.9 (44.1)
		Cont. rating	kW (hp)	14.9 (20.0)	17.7 (23.7)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2160	2375	2590	2700	2810	2995	3210	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 455	< 490	< 510	< 530	< 545	< 555	< 575	< 600		
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	10	12	14			16				
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Naturally aspirated									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	340 plus 100, or minus 50	370 plus 100, or minus 50						410 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	8.6	5.8							
		Useful	liters	4.2	2.3							
23	Cooling water capacity	liters	2.7									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 370 dia. X 6									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.			110 dia. X 110 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 4TNE84T

Engine model			4TNE84T-									
Engine spec. type			EYAG1			EYAS						
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 84 X 90									
4	Displacement	liters	1.995									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	21.3 (28.6)	26.9 (36.1)	27.9 (37.4)	30.5 (40.9)	33.5 (44.9)	34.2 (45.9)	35.7 (47.9)	38.6 (51.8)	41.2 (55.3)
		Cont. rating	kW (hp)	19.1 (25.6)	24.3 (32.6)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2200	2420	2590	2700	2810	2995	3210	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 480	< 510	< 520	< 530	< 540	< 550	< 570	< 590		
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	12				14			16		
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Turbocharged									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	340 plus 100, or minus 50			410 plus 100, or minus 50				440 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	8.6			5.8					
		Useful	liters	4.2			2.3					
23	Cooling water capacity	liters	2.7									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 370 dia. X 6									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.			110 dia. X 110 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 4TNE88

Engine model			4TNE88-									
Engine spec. type			EYAG1				EYAS					
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine									
2	Combustion system	—	Direct injection ( DI )									
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 88 X 90									
4	Displacement	liters	2.190									
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	2600	2800	3000	
	Output	Rated Output	kW (hp)	18.0 (24.1)	21.6 (29.0)	24.1 (32.3)	26.5 (35.5)	28.8 (38.6)	30.1 (40.4)	31.3 (42.0)	33.7 (45.2)	36.0 (48.3)
		Cont. rating	kW (hp)	16.4 (22.0)	19.6 (26.3)							
6	Max. idling speed	rpm ( + or - 50 )	1600	1895	2180	2400	2590	2700	2810	3025	3240	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 238 ( 177 )					= or < 245 ( 183 )			= or < 252	
8	Exhaust gas temp.	degree C	< 460	< 490	< 480	< 500	< 510	< 525	< 535	< 565	< 600	
9	Compression ratio	—	18.0 : 1									
10	Fuel injection timing	bTDC (FID) degrees	10		12		14			16		
11	Fuel inj. pressure	kPa	19,600 plus or minus 980									
12	Main shaft side	—	Flywheel side									
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)									
14	Governor	—	Mechanical centrifugal governor (All-speed governor)									
15	Aspiration	—	Naturally aspirated									
16	Cooling system	—	Force-feed circulation radiator type cooling system									
17	Lubrication system	—	Forced lubrication with trochoid pump									
18	Starting system	—	Electric starting motor, 12V DC									
19	Charging system	—	Alternator, 12 V DC, 40 amp									
20	Starting aid device	—	Air heater (12 VDC / 400 W, std. spec.)									
21	Lube oil pressure	Rated speed	kPa	340 plus 100, or minus 50			370 plus 100, or minus 50				410 plus 100, or minus 50	
		Idling	kPa	—								
22	Oil pan capacity	Full	liters	8.6			5.8					
		Useful	liters	4.2			2.3					
23	Cooling water capacity	liters	2.7									
24	Cooling fan type - dia. X No. blades	mm	Pusher - 370 dia. X 6									
25	Crank pulley dia. / fan pulley dia.	mm / mm	120 dia. X 90 dia.			110 dia. X 110 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 4TNE94

Engine model			4TNE94-						
Engine spec. type			G1			SA			
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine						
2	Combustion system	—	Direct injection ( DI )						
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 94 X 100						
4	Displacement	liters	2.776						
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	
	Output	Rated Output	kW (hp)	29.1 (39.0)	34.6 (46.4)	35.3 (47.3)	38.2 (51.2)	41.6 (55.8)	43.0 (57.7)
		Cont. rating	kW (hp)	26.1 (35.0)	31.3 (42.0)				
6	Max. idling speed	rpm ( + or - 50 )	1575	1872	2180	2398	2592	2700	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 224 ( 167 )		= or < 231 ( 172 )		= or < 238 ( 177 )		
8	Exhaust gas temp.	degree C	< 610		< 580	< 590	< 610		
9	Compression ratio	—	18.0 : 1						
10	Fuel injection timing	bTDC (FID) degrees	11						
11	Fuel inj. pressure	kPa	21,560 plus or minus 980						
12	Main shaft side	—	Flywheel side						
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)						
14	Governor	—	Mechanical centrifugal governor (All-speed governor)						
15	Aspiration	—	Naturally aspirated						
16	Cooling system	—	Force-feed circulation radiator type cooling system						
17	Lubrication system	—	Forced lubrication with trochoid pump						
18	Starting system	—	Electric starting motor, 12V DC						
19	Charging system	—	Alternator, 12 V DC, 40 amp						
20	Starting aid device	—	Air heater (12 VDC / 500 W, std. spec.)						
21	Lube oil pressure	Rated speed	kPa	340 plus or minus 49					
		Idling	kPa	—					
22	Oil pan capacity	Full	liters	9.4					
		Useful	liters	4.4					
23	Cooling water capacity	liters	4.2						
24	Cooling fan type - dia. X No. blades	mm	Pusher - 410 dia. X 6						
25	Crank pulley dia. / fan pulley dia.	mm / mm	130 dia. X 130 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 4TNE98

Engine model			4TNE98-							
Engine spec. type			G1			SA				
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine							
2	Combustion system	—	Direct injection ( DI )							
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 98 X 110							
4	Displacement	liters	3.319							
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500		
	Output	Rated Output	kW (hp)	34.6 (46.4)	41.2 (55.3)	41.9 (56.2)	45.6 (61.2)	49.3 (66.1)	51.1 (68.5)	
		Cont. rating	kW (hp)	30.9 (41.4)	36.8 (49.3)					
6	Max. idling speed	rpm ( + or - 50 )	1575	1872	2180	2398	2592	2700		
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 224 ( 167 )							
8	Exhaust gas temp.	degree C	< 510	< 540	< 550	< 590	< 610	< 630		
9	Compression ratio	—	18.0 : 1							
10	Fuel injection timing	bTDC (FID) degrees	11							
11	Fuel inj. pressure	kPa	21,560 plus or minus 980							
12	Main shaft side	—	Flywheel side							
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)							
14	Governor	—	Mechanical centrifugal governor (All-speed governor)							
15	Aspiration	—	Naturally aspirated							
16	Cooling system	—	Force-feed circulation radiator type cooling system							
17	Lubrication system	—	Forced lubrication with trochoid pump							
18	Starting system	—	Electric starting motor, 12V DC							
19	Charging system	—	Alternator, 12 V DC, 40 amp							
20	Starting aid device	—	Air heater (12 VDC / 500 W, std. spec.)							
21	Lube oil pressure	Rated speed	kPa	340 plus or minus 49						
		Idling	kPa	—						
22	Oil pan capacity	Full	liters	9.4						
		Useful	liters	4.4						
23	Cooling water capacity	liters	4.2							
24	Cooling fan type - dia. X No. blades	mm	Pusher - 410 dia. X 6							
25	Crank pulley dia. / fan pulley dia.	mm / mm	130 dia. X 130 dia.							

Note: This table is subject to change without notice.

## Specifications- Model 4TNE106

Engine model			4TNE106-						
Engine spec. type			G1			SA			
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine						
2	Combustion system	—	Direct injection ( DI )						
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 106 X 125						
4	Displacement	liters	4.412						
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	
	Output	Rated Output	kW (hp)	49.3 (66.1)	58.8 (78.9)	56.6 (75.9)	61.4 (82.3)	65.5 (87.8)	67.7 (90.8)
		Cont. rating	kW (hp)	44.5 (59.7)	53.3 (71.5)				
6	Max. idling speed	rpm ( + or - 50 )	1610	1925	2200	2400	2600	2700	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 224 ( 167 )			= or < 227	= or < 229	= or < 231	
8	Exhaust gas temp.	degree C	< 590	< 630	< 590	< 620	< 650	< 670	
9	Compression ratio	—	17.5 : 1						
10	Fuel injection timing	bTDC (FID) degrees	14						
11	Fuel inj. pressure	kPa	21,600 plus or minus 1,000						
12	Main shaft side	—	Flywheel side						
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)						
14	Governor	—	Mechanical centrifugal governor (All-speed governor)						
15	Aspiration	—	Naturally aspirated						
16	Cooling system	—	Force-feed circulation radiator type cooling system						
17	Lubrication system	—	Forced lubrication with trochoid pump						
18	Starting system	—	Electric starting motor, 12V DC						
19	Charging system	—	Alternator, 12 V DC, 40 amp						
20	Starting aid device	—	Air heater (12 VDC / 1,000 W, std. spec.)						
21	Lube oil pressure	Rated speed	kPa	390 plus or minus 100					
		Idling	kPa	—					
22	Oil pan capacity	Full	liters	12.5					
		Useful	liters	5.5					
23	Cooling water capacity	liters	6.0						
24	Cooling fan type - dia. X No. blades	mm	Pusher - 500 dia. X 7						
25	Crank pulley dia. / fan pulley dia.	mm / mm	150 dia. X 150 dia.						

Note: This table is subject to change without notice.

## Specifications- Model 4TNE106T

Engine model			4TNE106T-						
Engine spec. type			G1			SA			
1	Type	—	Vertical cylinder, 4-cycle, water-cooled diesel engine						
2	Combustion system	—	Direct injection ( DI )						
3	No. of cylinders- Bore x Stroke	n- mm X mm	4 - 106 X 125						
4	Displacement	liters	4.412						
5	Rated engine speed	rpm	1500	1800	2000	2200	2400	2500	
	Output	Rated Output	kW (hp)	56.5 (75.8)	67.7 (90.8)	66.1 (88.6)	72.7 (97.5)	79.4 (106.5)	83.8 (112.4)
		Cont. rating	kW (hp)	51.3 (68.8)	61.5 (82.5)				
6	Max. idling speed	rpm ( + or - 50 )	1610	1925	2200	2400	2600	2700	
7	Specific fuel consumption	g / kWhr (g / hphr)	= or < 231 ( 172 )		= or < 218	= or < 226	= or < 234	= or < 238	
8	Exhaust gas temp.	degree C	< 490	< 530	< 470	< 500	< 530	< 540	
9	Compression ratio	—	17.5 : 1						
10	Fuel injection timing	bTDC (FID) degrees	12						
11	Fuel inj. pressure	kPa	21,600 plus or minus 1,000						
12	Main shaft side	—	Flywheel side						
13	Rotation direction	—	Counter clockwise (Viewed from flywheel side)						
14	Governor	—	Mechanical centrifugal governor (All-speed governor)						
15	Aspiration	—	Turbocharged						
16	Cooling system	—	Force-feed circulation radiator type cooling system						
17	Lubrication system	—	Forced lubrication with trochoid pump						
18	Starting system	—	Electric starting motor, 12V DC						
19	Charging system	—	Alternator, 12 V DC, 40 amp						
20	Starting aid device	—	Air heater (12 VDC / 1,000 W, std. spec.)						
21	Lube oil pressure	Rated speed	kPa	390 plus or minus 100					
		Idling	kPa	—					
22	Oil pan capacity	Full	liters	12.5					
		Useful	liters	5.5					
23	Cooling water capacity	liters	6.0						
24	Cooling fan type - dia. X No. blades	mm	Pusher - 500 dia. X 7						
25	Crank pulley dia. / fan pulley dia.	mm / mm	150 dia. X 150 dia.						

Note: This table is subject to change without notice.