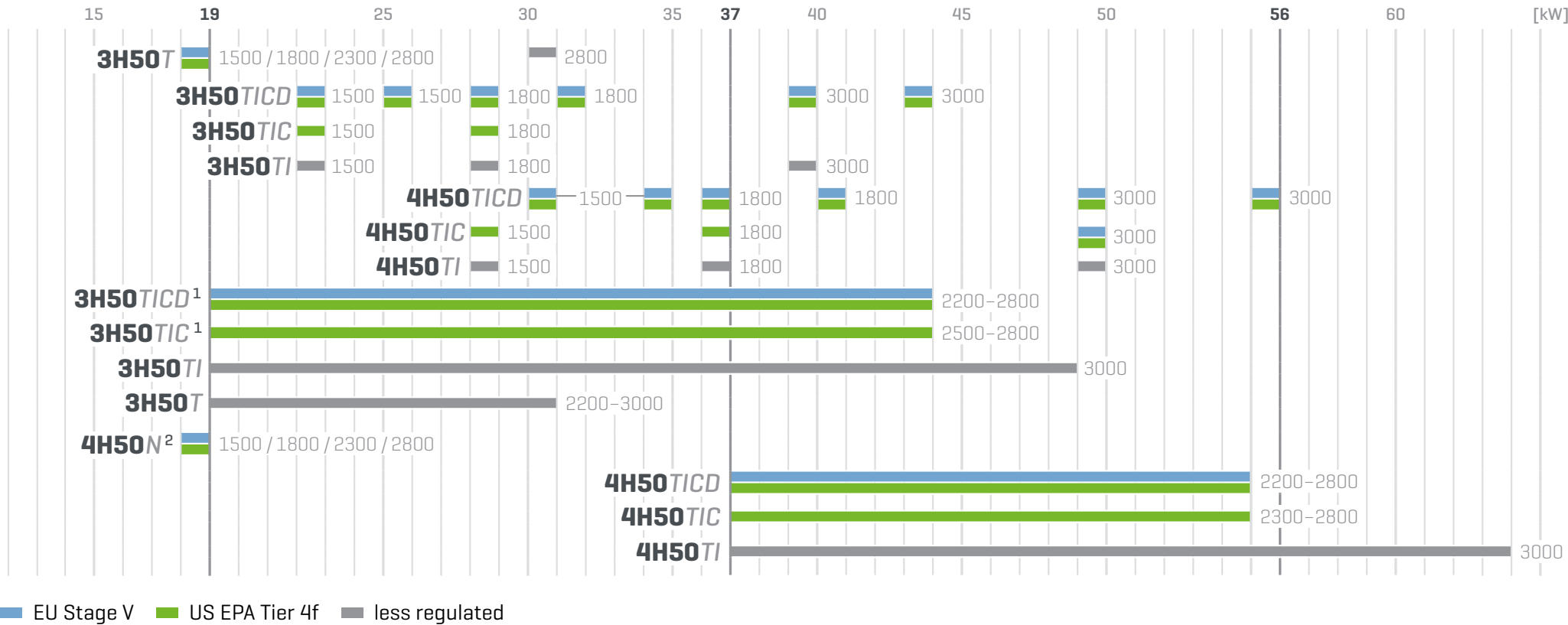




### H-series – power ranges, emission classes and rated speeds



<sup>1</sup>Also available with 36.4 kW @ 2500 rpm for use in California without registration requirements <sup>2</sup>Available as of 2024

# Technical Data, Performance Table

Technical data		3H50T	3H50TICD	3H50TIC	3H50TI	4H50N <sup>2</sup>	4H50TICD	4H50TIC	4H50TI	
Type	Liquid-cooled 4 stroke diesel engine									
Cylinder	3						4			
Injection system	Direct injection with Bosch off-highway common-rail system									
Injection pressure [bar]	1800									
Aspiration	Turbo without charge air cooling	Turbocharger with charge air cooling			—		Turbocharger with charge air cooling			
Exhaust emission after-treatment	—	gAGR, DOC, DPF		gAGR, DOC		—	gAGR, DOC, DPF		gAGR, DOC	
Bore x stroke [mm]	84 x 88									
Displacement [l]	1.464						1.952			
Mean piston speed @ 3000 rpm [m/s]	8.8									
Compression ratio	17.5:1									
Lubrication oil consumption. related to full load	max. 0.5 % of fuel consumption									
Oil filling	max. [l]	5.0			9.0		7.0			
	min. [l]	4.2			8.0		6.0			
Speed control	Lowest idle speed [rpm]	900			1250		900			
	Control method	CAN J1939 or multi-stage switch								
Installation information	Amount of combustion air @ 2800 rpm approx. [kg/h]	199 <sup>8</sup>		260		111 <sup>8</sup>		340		
	Amount of cooling air @ 2800 rpm approx. [kg/h]	199 <sup>8</sup>		6650		111 <sup>8</sup>		6650		
	Mass moment of inertia J <sub>engine</sub> [kg m <sup>2</sup> ]	0.217						0.234		
	Starter [V]	12 [2.2 kW / 3.0 PS]   24 [3.0 kW / 4.1 PS]								
	Cold start temperature [°C]	-25 [12 V]   -32 [24 V]								
Alternator charging [A]	110 [14 V] / 150 [14V. Option]   60 [28 V]									
Battery capacity max. [Ah]	110 [12 V - 450 A DIN]   66 [24 V - 300 A DIN]									
Dimensions	Weight [kg]	Basic engine	132	140	154 <sup>3</sup>	133	159	158	173 <sup>3</sup>	152
		as Open Power Unit	147	222	236 <sup>3</sup>	215	174	240	255 <sup>3</sup>	234
		as New Silent Pack <sup>5</sup>	—	339 <sup>3</sup>	327 <sup>3</sup>	306	—	360 <sup>3</sup>	348 <sup>3</sup>	327
	L x W x H [mm] <sup>9</sup>	Basic engine	583 x 558 x 654	585 x 558 x 601	585 x 613 x 601 <sup>3</sup>	583 x 570 x 601	675 x 536 x 660	673 x 558 x 601	673 x 613 x 601 <sup>3</sup>	670 x 570 x 601
		as Open Power Unit	700 x 570 x 652	806 x 660 x 807	806 x 685 x 807 <sup>3</sup>	806 x 660 x 807	789 x 538 x 719	893 x 660 x 807	893 x 685 x 807 <sup>3</sup>	893 x 663 x 807
		as New Silent Pack <sup>5</sup>	—	1122 x 712 x 922 <sup>3</sup>	918 x 712 x 922 <sup>3</sup>	918 x 712 x 922	—	1213 x 712 x 922 <sup>3</sup>	1009 x 712 x 922 <sup>3</sup>	1009 x 712 x 922

<sup>2</sup> Available as of 2024 <sup>3</sup> Including engine mounted aftertreatment <sup>4</sup> 2300/1800/1500: Based on 2800 rpm recordset, other settings on request.

<sup>5</sup> 2300/1800/1500: Based on 2800 rpm recordset, other engine speed only with CAN limitation. <sup>6</sup> Same engine output as IFN, but higher torque.

<sup>7</sup> Spread at box dimensions ± 3 millimeters due to tolerance. <sup>8</sup> @ 2800 rpm ca.

# Technical Data, Performance Table

Engine output max. [kW/hp]	[rpm]	3H50T	3H50TICD	3H50TIC	3H50TI	4H50N <sup>2</sup>	4H50TICD	4H50TIC	4H50TI
<b>Blocked ISO fuel stop power (IFN) for intermittent loading according to ISO 3046-1.<sup>6</sup> Applies to variable speed. 3H50TICD   3H50TIC</b> Also available with 36.4 kW / 49.4 hp @ 2500 rpm for use in California without registration requirements.	3000	—	—	—	44.2 / 59.2	—	55.4 / 74.2	—	55.0 / 73.7
	2800	18.4 / 24.7	43.7 / 58.6	—	43.6 / 58.4	—	55.4 / 74.2	—	55.4 / 74.2
	2300	18.4 / 24.7	42.8 / 57.4	—	41.5 / 55.6	—	55.4 / 74.2	—	55.4 / 74.2
	1800	18.4 / 24.7	35.4 / 47.4	—	35.4 / 47.4	—	45.7 / 61.2	—	45.4 / 61.2
	1500	18.4 / 24.7	28.6 / 38.3	—	28.6 / 38.3	—	37.4 / 50.1	—	37.4 / 50.1
<b>Blocked ISO fuel stop power (IFN) for intermittent load according to ISO 3046-1. Applies to constant speed.</b>	3000	—	43.6 / 58.4	—	—	—	55.4 / 74.2	—	—
	1800	—	31.3 / 41.9	—	31.3 / 41.9	—	41.0 / 55.0	41.0 / 55.0	—
	1500	—	25.5 / 34.2	—	25.5 / 34.2	—	35.0 / 46.9	35.0 / 46.9	—
<b>Blocked ISO fuel stop power (IFNsi) for strongly intermittent load according to ISO 3046-1.<sup>7</sup></b>	2800	—	43.7 / 58.6 <sup>6</sup>	43.6 / 58.4 <sup>6</sup>	48.2 / 64.6	—	—	—	63.7 / 85.4
	2300	—	42.8 / 57.4 <sup>6</sup>	42.5 / 57.0 <sup>6</sup>	47.5 / 63.7	—	—	—	62.2 / 83.3
	1800	—	—	38.2 / 51.2 <sup>6</sup>	38.2 / 51.2	—	—	—	50.2 / 67.3
	1500	—	29.3 / 39.3 <sup>6</sup>	29.3 / 39.3 <sup>6</sup>	31.4 / 42.1	—	—	—	41.1 / 55.1
<b>Blocked ISO standard power (ICFN; not overloadable) according to ISO 3046-1. Applies to variable speed and constant load.</b> Note: Not available as power rating.	3000	—	—	—	39.8 / 53.3	—	49.9 / 66.9	—	49.5 / 66.3
	2800	18.4 / 24.7	39.3 / 52.7	—	39.2 / 52.5	—	49.9 / 66.9	—	49.9 / 66.9
	2300	18.4 / 24.7	38.3 / 51.3	—	37.4 / 50.1	—	49.9 / 66.9	—	49.9 / 66.9
	1800	18.4 / 24.7	31.9 / 42.7	—	31.9 / 42.7	18.4 / 24.7	41.1 / 55.1	—	41.3 / 54.3
	1500	18.4 / 24.7	25.7 / 34.4	—	25.7 / 34.4	18.4 / 24.7	33.7 / 45.2	—	33.7 / 45.2
<b>Blocked ISO standard power (ICFN; not overloadable) according to ISO 3046-1. Applies to constant speed and constant load (e. g. generators).</b>	3000	—	39.2 / 52.5	—	—	—	49.9 / 66.9	—	49.9 / 66.9
	1800	18.4 / 24.7	28.5 / 38.2	—	28.5 / 38.2	18.4 / 24.7	36.4 / 48.8	—	36.4 / 48.8
	1500	18.4 / 24.7	22.6 / 30.3	—	22.6 / 30.3	18.4 / 24.7	31.0 / 41.6	—	31.0 / 41.5

<sup>2</sup> Available as of 2024 <sup>3</sup> Including engine mounted aftertreatment <sup>4</sup> 2300/1800/1500: Based on 2800 rpm recordset, other settings on request.

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<sup>7</sup> Spread at box dimensions ± 3 millimeters due to tolerance. <sup>8</sup> @ 2800 rpm ca.