

### Quick user guidance for the DESMI OptiSave<sup>™</sup> Energy Saving Simulator

After entering your name, please click on the play button in the lower right hand side corner





MARIN	E & OFFSF	IURE
DESMI	Pumping	Techno

ology A/S Tagholm 1 DK-9400 Nørresundby Denmark

Phone: Web:

INDUSTRY

+45 9632 8111 www.desmi.com

CVR No.: 19351211 VAT No.: DK46837150 Bank: Danske Bank SWIFT/BIC (dabadkkk) Account No.: 4368-3694103286 DKK account 3694103286 EUR account 3201925932 USD account 4451212044





#### Click on the arrow to start



### Click on start



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# DESMI

Two screens appear – one with simulation – one with PID LCP (Local Control Panel) marked = Starters as shown.



When seeing the simulator screen you can click on all the valves, pumps, frequency converter and ... In the lower right hand side corner, you can click on HMI (display in engine room).



MARINE & OFFSHORE DESMI Pumping Technology A/S

DK-9400 Nørresundby

Tagholm 1

Denmark

INDUSTRY Phone: +4 Web: w

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When clicking HMI the below screen appear. Note the top right hand side corner menu option and the menu in the button



To Change heat balance, change the value for ME Power and the rest of the values change automatically. Make sure to check the red area to find optimal pump.

DESMI OPTISAVE - ME HEAT BALANCE							
Basis for below values (ME POWER): Global setpoint of FW Outlet temperature:	8340 kW 36 °C	Total heat to be Tot	removed: 12919.0 tal Flow: 1066.0	kW m3/h SW Ca	pacity at full engine lo	oad 276.7 r	m3/h
		Medium Outlet I	FW temp 45.9	°C Actual	required cooling capa	icity 13.8	m3/h
	Heat to be remo. [kW]	Heat to be remo. [kCal]	Recom. flow [m3/h]	Design FW temp. [°C]	Outlet FW temp. [°C]	[°C*m3/h]	
MAIN ENGINE SCAVENGE AIR COOLER	2720	2.33878e+06	100	36	59	5900	_
MAIN ENGINE LUB OIL COOLER	950	816853	90	36	45	4050	_
NO. 1 DIESEL GENERATOR	830	713672	50	36	50	2500	
NO. 2 DIESEL GENERATOR	1160	997420	70	36	50	3500	
NO. 3 DIESEL GENERATOR	1160	997420	70	36	50	3500	
NO. 4 DIESEL GENERATOR	830	713672	50	36	50	2500	
MGO COOLER	60	51590.7	10	36	41	410	
NO. 1 START AIR COMPRESSOR	60	51590.7	8	36	42	336	
NO. 2 START AIR COMPRESSOR	60	51590.7	8	36	42	336	
SERVICE AIR COMPRESSOR	50	42992.3	8	36	41	328	
NO. 1 FEED AIR COMPRESSOR FOR NGP	180	154772	30	36	41	1230	
NO. 2 FEED AIR COMPRESSOR FOR NGP	180	154772	30	36	41	1230	
	100	104770	20	26	**	1000	<u> </u>

CLOSE

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ISO 9001



Pump size and performance can be changed in order to find the pump with the best performance for your simulation. Use this to select the right pump for the "job".

DESMI OPTISAVE - PUMP PERFORMANCE MAIN CSW PUMP							
Pump data	:						
Capacity: RPM: Total head: Ship frequent Power (duty p	30 17 20. cy: 6 point): 3	00 m3/ 50 n/m 39 mLc 0 Hz 7 kW	'n in				
	Operating Frequency	RPM	Capacity [m3/h]	Total head [mLc]	Actual consumed power [kW]		
	60	1750.0	300.0	20.4	37.0		
	50	1458.3	250.0	14.2	21.4		
	40	1166.7	200.0	9.1	11.0		
	30	875.0	150.0	5.1	4.6		
	20	583.3	100.0	2.3	1.4		
	10	291.7	50.0	0.6	0.2		
	0	0.0	0.0	0.0	0.0		
		A	Actual:				
	28.0	814.9	139.7	4.4	3.7		
			CLOSE		1		
			CLOSE				

And under load simulation you can change seawater temperature. Change overall load of the vessel – refer to heat balance.



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## DESMI



After simulation you can see a report in the menu in the top right hand side corner

### Savings report

Desmi O	otiSave™			Operator	<b></b> D	ate and Time	Ir	nfo
Vessel/Pr	oiect			Tech	2	4/09/2021 13:19:4	42 PM	
VFD	Hz Actual	kW Actual	kW Average	kWh Optisave	kWh Normal	kWh Saved	%	Run Time
SW VFD1	29.4	18.1	15.3	0.17	0.34	0.17	51.0	0.5
SW VFD2	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
Sea Water								

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11 Pumping Technology A/S Tagholm 1 DK-9400 Nørresundby Denmark

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Web:

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## DESMI



On screen number two, you will see what effect the changes have in the PID. PID & "Engine room" are interactive.

For more information, please do not hesitate to contact <u>desmi@desmi.com</u> or your local DESMI sales representative.

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Web:

+45 9632 8111 Phone: www.desmi.com

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