

MACHINE DESCRIPTION WOMA EcoMaster D 550Z EXPERT					
Reference unit: Order 2612301766					
OFFER NUMBER:	MATERIAL NUMBER:	CUSTOMER:	DATE:	REVISION:	ORDER NUMBER:
2612305577	9.911-582.0	UAB "Kertex Energija" 2602000042	11.12.2023	0	-

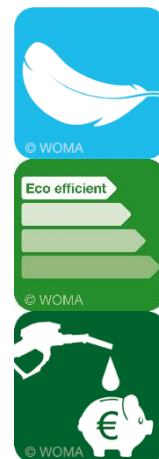
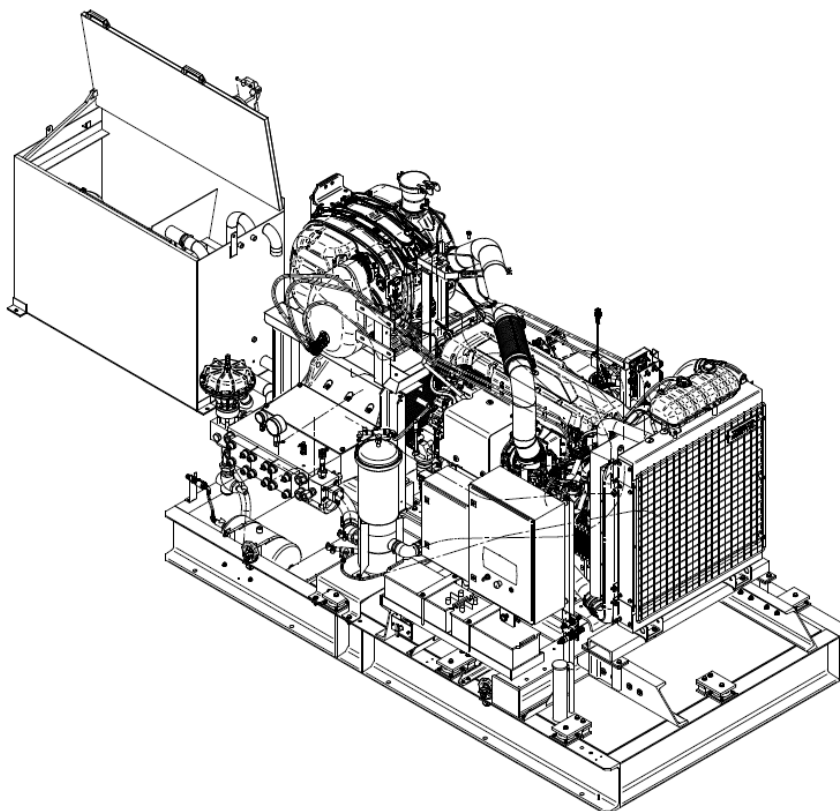




Abb. 1: Execution Example WOMA EcoMaster D 550Z



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1 MACHINE VARIANT TYPE						
	Medium to be pumped:	Water (*)	(*) Medium to be pumped must be in accordance with "Guideline: Requirements on the water supply of WOMA High-Pressure Pumps"!			
	Machine type:	Diesel unit – Woma Eco Master 550Z				
	Typ high-pressure pump:	550Z-1800				
	<b>1. STEP:</b> <b>Selection pressure and flow rate:</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		1500/124	1300/171	1000/196	800/291	
	Plunger diameter in mm:	30	35	40	45	
	Gear reduction gear end:	3,96	3,96	<b>4,60</b>	3,96	
	Max. flow rate in l/min:	124	171	196	291	
	Max. operation pressure in bar:	1500	1300	1000	800	
	Required engine output for high-pressure pump in kW:	340	405	356	423	
	<b>2. STEP:</b> <b>Selection diesel engine</b> <i>(according to the required country-specific emission legislation)</i>	<b>EU Stufe 2</b> [US EPA Tier 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Brand:	VOLVO	VOLVO	VOLVO	VOLVO
		Engine type:	TAD 1643	TAD 1643	TAD 1643	TAD 1643
		<b>EU Stufe 5</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Brand:	VOLVO	VOLVO	<b>VOLVO TAD 1385</b>	VOLVO	
	Engine type:	TWD 1683	TWD 1683		TWD 1683	
	Type diesel engine:	Water cooled diesel engine (*)	(*) Used diesel fuel must be in accordance with DIN EN 590! (*) Used AdBlue (Urea) for stage 5 engine with SCR-system must be in accordance with ISO 2224-1 (previous DIN 70070). (*) We would kindly ask you to let us know when the unit will not be used in the customer's country to prevent wrong assumptions during the customized design of the unit.			
1.1 GENERAL PLATFORM OF BASIC UNIT WOMA ECOMASTER D 550Z						
	<b>1.1.1 HIGH-PRESSURE PUMP 550Z</b>	<ul style="list-style-type: none"> <li>Forced lubrication of connecting rod bearings and crossheads of the high-pressure pump with optical and electric (24V DC) monitoring system</li> <li>Gear oil cooler device with integrated water/oil heat exchanger – cooling water will be supplied via integrated booster pump</li> <li>Sealing water system for cooling the plungers – sealing water will be supplied via integrated booster pump</li> <li>Detailed information regarding the high-pressure pump will be supplied in chapter 1.1.6</li> </ul>				

<p><b>1.1.2 BASE FRAME, FUEL TANK, COUPLING</b></p> <ul style="list-style-type: none"><li>▪ Base frame of high-pressure unit is constructed with strong metal structure profiles and with lifting lugs</li><li>▪ A metal diesel fuel tank is integrated inside the base frame with a fuel capacity sufficient for 8 to 10 hours operation; fuel level is electrically monitored</li><li>▪ Power transmission between high-pressure pump and diesel unit is realized by a flexible coupling with protection cover</li><li>▪ For sizes and dimensions please refer to the subsequent general layout drawing.</li></ul> <p><b>1.1.3 SUCTION LINE</b></p> <ul style="list-style-type: none"><li>▪ Volute casing pump as booster pump, driven by fan belt drive from the diesel engine; de-airing and draining can be proceeded by manual valves with discharge hoses</li><li>▪ Single filter with 3 pieces cartridge filter elements; de-airing and draining can be proceeded by manual valves with discharge hoses</li><li>▪ Pressure switches for monitoring the booster pressure with idle speed and with operation speed</li><li>▪ Temperature switch for monitoring the water temperature</li><li>▪ Pressure gauge for monitoring the booster pressure</li></ul> <p><b>1.1.4 PRESSURE LINE</b></p> <ul style="list-style-type: none"><li>▪ Full lift safety valve for the protection of the pump against eventually occurring excessive pressures</li><li>▪ High pressure gauge for monitoring high-pressure</li></ul> <p><b>1.1.5 DRIVE</b></p> <ul style="list-style-type: none"><li>▪ Water cooled VOLVO diesel engine</li><li>▪ Exhaust system</li><li>▪ Battery and battery main switch</li><li>▪ Electric control system 24V</li></ul>
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1.1.6 DETAILED DESCRIPTION OF INTEGRATED HIGH-PRESSURE PUMP 550Z			
			
<b>Abb. 2:</b> Frontview High-Pressure Pump 550Z		<b>Abb. 3:</b> Side view High-Pressure Pump 550Z	
Pump type:	550Z		
Drive end:	right		
Stroke in mm:	140		
Oil capacity in liter:	45		
Weight of the pump in kg (netto):	1430		
Max. rod force in N:	128000		
Medium to be pumped:	Water		
Max. water temperature in °C:	45 (*)		(*) Individual contractual approval of higher temperatures is also possible – please kindly let us know!
Required booster pressure in bar:	1,5 to 5,0 (*)	(*) Required booster pressure will be supplied with integrated booster pump of the high-pressure unit	
Max. drive speed in 1/min:	1800		
Min. drive speed in 1/min:	1200		
Material drive end und lantern:	GG 30		
Material plunger:	Tungsten carbide		
Material pump head:	Stainless steel		
Material conversion set:	Stainless steel		
Material flanges	Stainless steel		

1.2 CONTROL SYSTEM, CONTROL CABINET, PRESSURE REGULATION AND CONNECTION TERMINAL			
	<b>3. STEP:</b> Selection control system		<input type="checkbox"/>
			WOMATIC-2 ADVANCED
			<input checked="" type="checkbox"/>
			WOMATIC-4 EXPERT
<p><b>1.2.1 WOMATIC-4 - EXPERT</b></p> <p><b>1.2.1.1 Applicable high-pressure water tools</b></p> <ul style="list-style-type: none"> <li>▪ High-pressure water tools with 24V-remote-connection or E-EXI remote control</li> <li>▪ High-pressure water tools with mechanical valves</li> <li>▪ 24V-remote control with high-pressure ON/OFF turn switch and emergency stop button</li> </ul> <p><b>1.2.1.2 Definition connections WOMA EcoMaster D 550Z</b></p> <ul style="list-style-type: none"> <li>▪ 2x high-pressure connections M24x1,5 DK</li> <li>▪ 1x high-pressure connection M36x2 DK</li> <li>▪ 1x water inlet connection G2,5"</li> <li>▪ 1x water outlet connection G2"</li> <li>▪ 1x relief line from full-lift-safety valve discharged to atmosphere</li> <li>▪ 1x remote control connection 24V with dummy plug for small consumer/ large consumer</li> <li>▪ 1x remote control connection for external emergency stop remote control with high-pressure-off-switch</li> <li>▪ 1x compressed air inlet with express coupling</li> <li>▪ 1x compressed air outlet with express coupling</li> </ul>			
<b>1.2.2 SAFETY SHUT DOWN OF DIESEL ENGINE</b>			
	<b>Automatic shut-down at:</b>	<b>Monitoring position:</b>	<b>Activity:</b>
	Oil pressure min.	Diesel engine	Controlled shut down of unit
	Oil temperature max.	Diesel engine	Controlled shut down of unit
	Coolant min.	Diesel engine	Controlled shut down of unit
	Overspeed	Diesel engine	Controlled shut down of unit
<b>1.2.3 SAFETY SHUT DOWN OF HIGH-PRESSURE PUMP</b>			
	<b>Automatic shut-down at:</b>	<b>Monitoring position:</b>	<b>Activity:</b>
	Oil pressure min.	Drive end high-pressure pump	Controlled shut down of unit
	Oil temperature max.	Drive end high-pressure pump	Controlled shut down of unit
	Booster pressure min. idle speed	Suction line high-pressure pump	Controlled shut down of unit
	Booster pressure min. high-pressure	Suction line high-pressure pump	Controlled shut down of unit
	Water temperature max.	Suction line high-pressure pump	Controlled shut down of unit
	Level min.	Water tank	High-Pressure-OFF
	Compressed air min.	Pneumatic system	High-Pressure-OFF

1.3 COLOURS					
	HIGH-PRESSURE-PUMP:	RAL 5011 - steel blue according to C3 DIN EN ISO 12944			
	HIGH-PRESSURE-UNIT:	RAL 9005 - deep black			
	CONTROL CABINET PNEUMATIC	RAL 7035 - light grey			
	CONTROL CABINET ELECTRIC	RAL 7035 - light grey			
	DIESEL ENGINE:	VOLVO-green			
1.4 DELIVERY STATUS AND DOCUMENTATION					
	<ul style="list-style-type: none"> <li>High-pressure unit has passed WOMA test run procedure</li> <li>High-pressure unit is ready for operation</li> <li>Certification of conformity according to EC machinery directive</li> </ul>				
	Language of documentation:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		German	English	French	Lithuanian
	Format and quantity of documentation:	HARDCOPY		DATA CARRIER	
		Quantity/ (Language):	1	Quantity/ (Language):	1
	Labeling: (Type plate, information signs, ...):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		German	English	French	Lithuanian
	Display language:	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
		German	English		
1.5 ADDITIONAL OPTIONS FOR WOMA ECOMASTER D 550Z					
	<b>1 Remote control box 24V with 50 m cable drum</b>				
	<input type="checkbox"/>				
	<b>2 E-EXI control system instead of 24V control system for remote control</b>				
	<input checked="" type="checkbox"/>				
	<b>3 Remote control box E-EXI with 50 Meter cable drum</b>				
	<input type="checkbox"/>				
	<b>4 Add-On WOMATIC 4: WOMA Speed control without idle speed after HP-OFF</b>				
	<input checked="" type="checkbox"/>				

	<b>5 Add-On WOMATIC 4: Additional remote control connection for high-pressure approval switch</b>	<input type="checkbox"/>	
	<b>8 Flat car with 8,0 t working load for 13L and 16L-engine (TAD 13xx/ Tad 16xx) – pneumatic tire</b>	<input type="checkbox"/>	
	<b>12 Multi-user-valve-control-system MVV 1500S for 2 consumers</b>	<input type="checkbox"/>	
	<b>13 Multi-user-valve-control-system MVV 1500S for 3 consumers</b>	<input type="checkbox"/>	
	<b>14 Multi-user-valve-control-system MVV 1500S for 4 consumers</b>	<input type="checkbox"/>	
	<b>23 20' feet see container without sound insulation - CLASSIC</b>	<input type="checkbox"/>	
	<b>24 20' feet see container without sound insulation - ADVANCED</b>	<input type="checkbox"/>	
	<b>25 20' feet see container with sound insulation – EXPERT (no intermediate transmission possible)</b>	<input type="checkbox"/>	
	<b>27 25' feet plain wall container with sound insulation - EXPERT</b>	<input type="checkbox"/>	
	<b>29 Water tank 800 Liter for 20' an 25' container</b>	<input checked="" type="checkbox"/>	
	<b>30 Water tank 2000 liter (no workplate possible!!!) for 20' and 25' container</b>	<input type="checkbox"/>	
	<b>31 Diesel fueled stationary heating installation for 10', 20' and 25'-container</b>	<input type="checkbox"/>	



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	<b>32 Workplate with bench vise for 20' and 25' container</b>	
	<input type="checkbox"/>	
	<b>33 Stair with hand rail for 20' and 25' container (apiece)</b>	
	<input type="checkbox"/>	
	<b>34 Lance channel for container for 25' feet container (apiece)</b>	
	<input type="checkbox"/>	
	<b>35 Storage box for 25' container (apiece) for chassis sub-construction</b>	
	<input type="checkbox"/>	
	<b>36 Spark arrestor in the exhaust line (not required with stage 4 engine)</b>	
	<input type="checkbox"/>	
	<b>37 Electric air shut-off damper (chalwyn valve) in the inlet air duct</b>	
	<input type="checkbox"/>	
	<b>39 Automatic intermediate transmission for 400PS-/550PS-/700PS-diesel units</b>	
	<input type="checkbox"/>	
	<b>40 Add-On WOMATIC 4: Automatic operation for intermediate transmission</b>	
	<input type="checkbox"/>	
	<b>41 Telematics – Hardware</b> <b>A separate usage contract must be signed for use</b>	
	<input type="checkbox"/>	