

Motor/Engine:	MAN E0834 LE302
Leistung/Power:	68 kW @1500 min ⁻¹
Zyl/Cylinders:	R4
Venturi:	GM 100/54 GMA 34
Gas:	Natural
Lambda:	1,6
Gas:	Biogas 50% CH ₄
Lambda:	1,4

Pos.	Qty.	Description	Item	HZN
1.1		Speed/ Load Control PANDAROS 2010		
	1	Controller PANDAROS	DC 2010.6-19	622-00-051-00
	1	Actuator Throttle Valve	StG 2010.21-SV-TS	511-00-013-01
	1	Cable Harness Actuator	10m	620-81-256-5005
	1	Cable Harness Pickup	10m	620-81-248-5005
	1	Lever arm	RH 2010-01	452-17-002-01
	1	Pickup 5/8" - 18 UNF-2A	IA 12-76	600-00-006-02
2.1		GMA AFR Positioner		
	1	Gap gas mixer annular	GMA 34	491-00-002-00
	1	Cable harness (Input 4-20mA, 0-5V, PWM, Feedback, Ref, Stop, Error) 10 m		490-81-012-00

OR

2.2		GM E-LES SMC Positioner		
		For Natural Gas use:		
	1	Gas mixer Housing	GM 100-01	462-80-000-00
	1	Venturi Insert Natural Gas*	VE-100-0541-36-K12-2,0	462-83-545-20
	1	Mounting Plate Rp 1 1/4"	MP 100-02	462-19-002-01
	1	Electronically controlled MAS E-LES 30.3 SMC		472-00-024-00
	2	Mounting Plate Rp 1 1/4"	MP 100-02	462-19-002-01
	1	Cable harness (Input 4-20mA, 0-5V, PWM, Feedback, Ref, Stop, Error) 10 m		490-81-012-00
		For Biogas use:		
	1	Gas mixer Housing	GM 100-01	462-80-000-00
	1	Venturi Insert Biogas* 50%CH ₄	VE-100-0541-36-K12-3,1	462-83-545-31
	1	Mounting plate Rp 1 1/2"	MP 100-01	462-19-002-02
	1	Electronically controlled MAS E-LES 50.3 SMC		472-00-021-00
	1	Cable harness (Input 4-20mA, 0-5V, PWM, Feedback, Ref, Stop, Error) 10 m		490-81-012-00

*note: For the correct dimension of the venturi insert the gas data must be known. Please fill out the order information and send this to the head office. <http://www.heinzmann.de/en/engine-and-turbine-management/system-solutions/gas-engine-management>

2.3		AFR-Control KRONOS 20 (Optional); only in combination with E-LES SMC		
	1	Controller Closed Loop	KRONOS 20-01 CL	620-00-118-01
	1	Combined Pressure/ Temp.sensor		600-00-082-00
	1	Cable Harness Sensor		600-81-051-00
	1	Pick up isolator *)	PUI-01	300-00-175-00
		or		
	1	Pickup 5/8" - 18 UNF-2A *)	IA 12-76	600-00-006-02
	1	Cable Harness Pickup *)	10 m	620-81-047-10
		*) If PANDAROS DC XX.6-19 is used, alternatively, engine speed can be read via HZM-CAN. In this case, please order 620-00-118-01 with software Kronos20_ac002XX_CL_Power_HZMCAN_AC_DC_GC.dwn		

Pos.	Qty.	Description	Item	HZN
OR				
2.4		AFR-Control KRONOS 30 (alternative)		
	1	Control System closed loop for GMCU 30/42	KRONOS 30	620-00-202-00
	1	ELEKTRA 30	GMCU-30-FC	473-00-030-10
	1	Cable harness Elektra 30		473-81-017-00
	1	Combined Pressure/ Temp.sensor		600-00-082-00
	1	Cable Harness Sensor		600-81-051-00
	1	Pick up isolator or	PUI-01	300-00-175-00
	1	Pickup 5/8" - 18 UNF-2A	IA 12-76	600-00-006-02
	1	Cable Harness Pickup	10 m	620-81-047-10
	1	Gas mixer Housing	GM 100-01	462-80-000-00
	1	Venturi Insert *)	VE-100-0541-24-O-5,9	462-20-541-59
	1	Mounting Plate Rp 1 1/4" *) for gases between 50% CH4 - 100% CH4 (biogas - natural gas)	MP 100-02	462-19-002-01
3		Ignition Control PHLOX II 4 Cylinder		
	1	Controller PHLOX	PHLOX II IC-08	680-00-010-00
	1	Cable Harness Input or	without CAN	680-81-002-17
	1	Cable Harness Input	with CAN	680-81-002-18
	1	Pickup camshaft	HIA-M12-76	600-00-140-00
	1	Ignition Rail 4 cyl. with cable harness, mounting set and ignition coils grey		Z00-21-061-00
	4	Ignition lead w ring connector for M6		Z00-19-036-00
4		Knock control system ARIADNE 4 Cylinder		
	1	Knock controller	KC 01-IP 00	620-00-137-06
	4	Knocksensor	KS 1-01	010-80-022-00
	4	Connecting Cable Knock Sensor		600-81-082-00
	1	Pickup camshaft *)	HIA-M12-76	600-00-140-00
	1	Cable for Pickup HIA S3 / M12 *)	10 m	620-81-177-00

*note: Pickup may be shared with the ignition system by using a splitter. Pickup or splitter not necessary in combination with Heinzmann ignition system PHLOX.