Product brochure
Auramarine Emergency Pump Unit (AEP)

1 General

1.1 AEP operating principle

The AEP unit is designed to supply marine diesel oil (MDO) by air motor driven pump. Air is controlled via solenoid valve (Pos. IA002V1) which may be either NO (normally open) or NC (normally close) controlled, depending required specification.

With NO, the loss of control voltage is subject to open solenoid valve IA002V1 and start the air driven pump. Equally, with NC, the solenoid valve IA002V1 will open when activated with control voltage and starts the air driven pump.

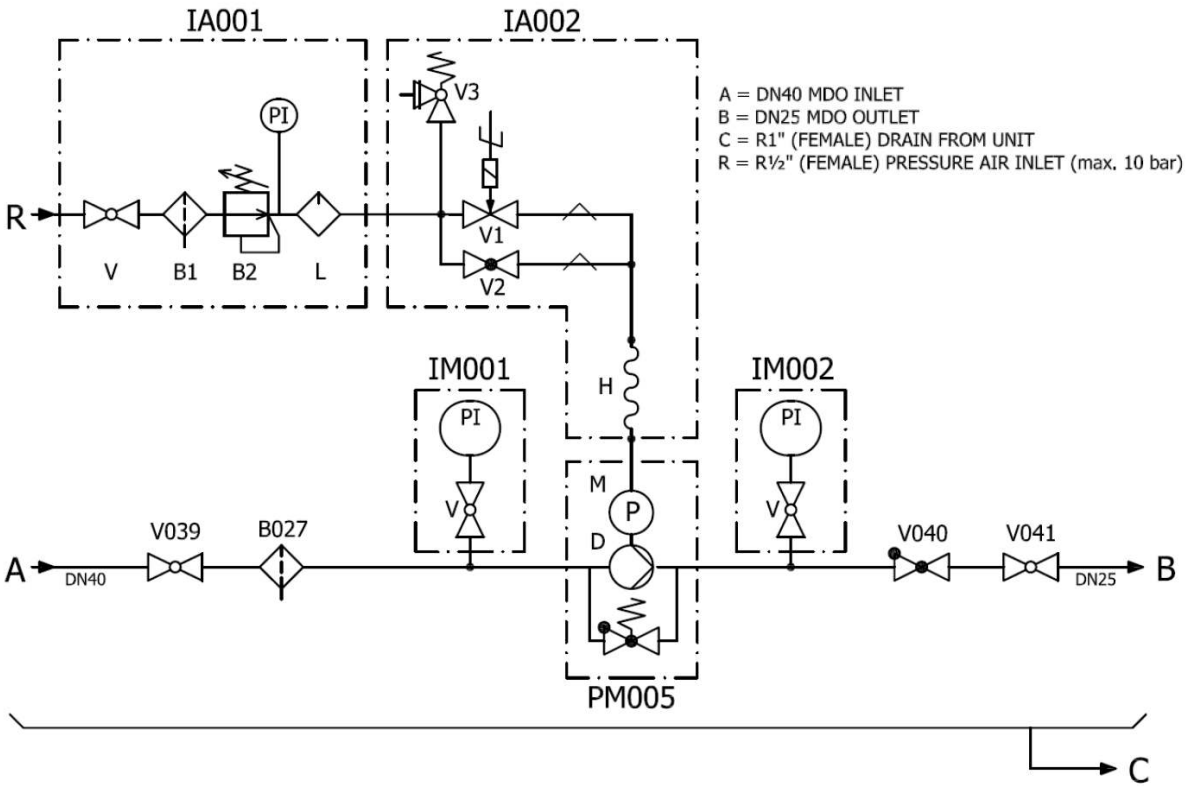

Figure 1. P&ID of the Auramarine Emergency Pump Unit

1.2 Installation of AEP Unit

The AEP Unit is to be installed in the engines fuel system in such a way that the AEP will be able to ensure fuel oil (MDO) supply to the engine when valve IA002V1 opened. Special attention shall be taken in fuel system design to ensure that no obstructions prevent fuel flow during power outage.

In case of any difference between the reference documents and the technical specification, the technical specification shall overrule. All AEP documents supplied remain the property of Auramarine Oy Ltd.

2 Technical data

MDO viscosity range:	2 -20 cSt
Control voltage:	230 V AC / 110 V AC / 24 V DC
Control method:	Normally open (NO) / Normally close (NC)
Design temperature:	60°C (maximum operating temperature)
Design pressure:	10 bar
Test pressure:	15 bar
Working pressure:	6 bar
Pressurized air:	Max. 10,3 or 30 bar
Min. FO viscosity for pump:	1.4 cSt
MDO Flow (@ 2cSt, 6 bar):	1,18 / 1,58 / 2,71 / 3,73
MDO Flow (@ 6cSt, 6 bar):	1,32 / 1,80 / 2,95 / 4,09
MDO Flow (@ 20cSt, 6 bar):	1,43 / 1,98 / 3,15 / 4,39
Air motor:	Nominal power 1,25 kW, 3000 r/min, 7 bar, IEC D71,IM V1
Instrument air consumption:	55~110 m3/h
AEP Unit dimensions (mm):	W350xH790xL850
AEP Unit dry weight:	~100 kg

3 Main components

Position	**Denomination**
B027	**Suction strainer** -Y-type, 320 µm (nom.)
IA001B1	**Air filter** -Air filtration degree of 5 µm (abs.), manual drain
IA001B2	**Air regulator** -Inlet pressure max. 10,3 / 30 bar, outlet pressure 0 – 8.6 bar, 7 bar is max. air pressure for the air motor
IA001L	**Oil mist unit** -For lubrication of air motor
PM005	**MDO pump (PM005D) and air motor (PM005M)** -Rotary self-priming displacement screw pump
IA002V1	**Solenoid valve,** at inlet line for control of pump

4 Materials, miscellaneous

Frame	-Bolted sheet metal construction -Equipped with a bottom for leakage oil and 1'' threaded female connection at frame for draining of leakages -Painting system: ISO 12944-5; 2007 A2.06 EP120/2-FeSa2½
Color (Frame& Pipes)	-Specified in the Inquiry Appendix of AEP
Color (Components)	-Original color as supplied by manufacturer
Oil pipes	-Seamless carbon steel P235GH, EN10217 or equal -Welding according to ISO 5817 C -Painting system: ISO 12944-5; 2007 A2.06 EP120/2
Flanges	-EN 1092-1, counter flanges, gaskets, bolts and nuts included
Valves	-Ball valves for oil, PN 40 bar
Name plates	-English, material of stainless steel, for piping and components

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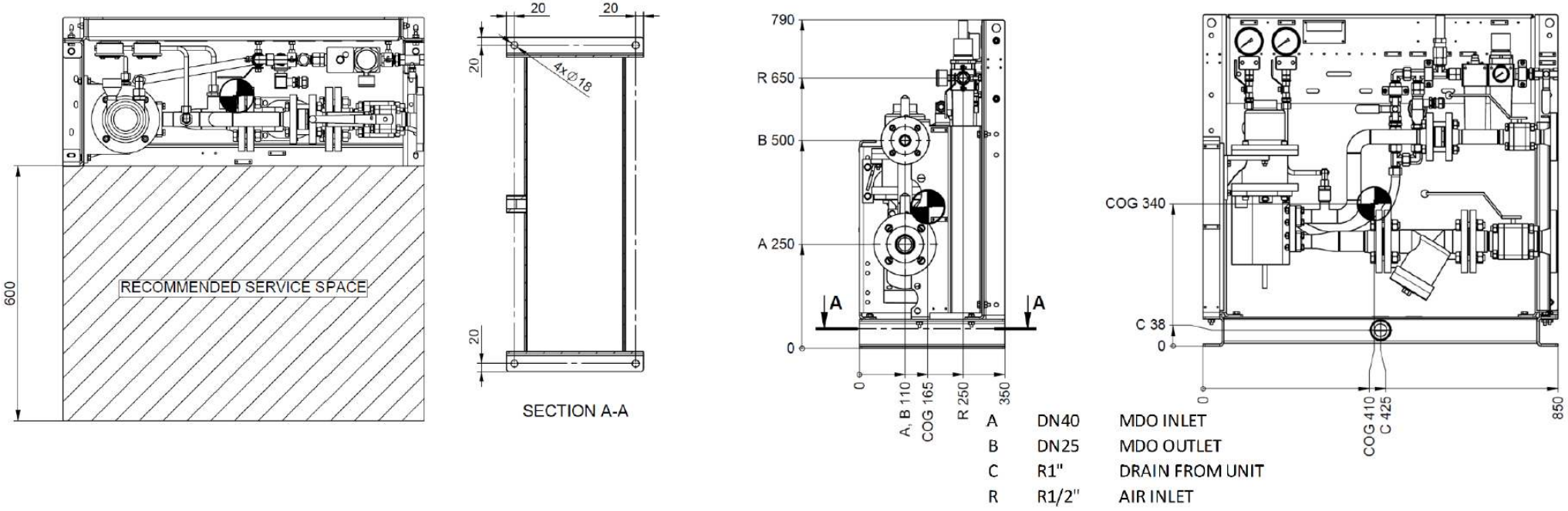
AEP Product range-Connections on right side

Order code	Type	Inlet air pressure max.	Flow (@2 cSt, 6 bar)	Flow (@6 cSt, 6 bar)	Flow (@20 cSt, 6 bar)	Control method	Control voltage	Instrumentation pressure scale	Unit color
		bar	m³/h	m³/h	m³/h				
CG200003	AEP-M-25-PN-R-I	10,3	1,18 / 1,58 *	1,32 / 1,80 *	1,43 / 1,98 *	Normally open (NO)/ Normally close (NC) *	230 V AC / 110 V AC / 24 V DC *	kPa / bar / psi *	RAL 5019 / RAL 6019 / RAL 7035 / Munsell 7.5 BG 7/2 *
CG200004	AEP-M-25-PH-R-I	30							
CG200011	AEP-M-32-PN-R-I	10,3	2,71 / 3,73 *	2,95 / 4,09 *	3,15 / 4,39 *				
CG200012	AEP-M-32-PH-R-I	30							

*Table 1. *Choice to be made into separate Inquiry Appendix of AEP*



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