

POPL-I

The POPL-I is a slow-speed flowmaker for mixing large volumes of water. A unique function of the POPL-I is the ability to change the angle of the propeller blades. This special feature, which is only offered by Landia, optimizes energy consumption.

APPLICATION EXAMPLES

- Oxidation ditches
- Anoxic and anaerobic tanks
- MBBR reactors

PROPELLER RPM

Propeller speed can vary between 19–47 rpm.

Specific propeller rpm is listed under

Overall Dimensions



MATERIAL OF CONSTRUCTION

Motor housing	Cast iron EN-GJL-250
Propeller hub	Cast iron EN-GJL-250
Propeller blades	Stainless steel W1.4301/AISI304
Gear	Cast iron EN-GJL-250
Output shaft gear	Shaft steel W1.6511/9840 (no contact with the liquid)
Bolts	A4
External sealing set	3 oil sealing rings made of nitrile Wear bush made of stainless steel W1.4301/AISI304 (ceramic coating optional) Wear bush made of steel W1.2363
Interior sealing set	Mechanical shaft seal: silicon carbide/silicon carbide
Oil type	SP 220 GS 220 (with moisture detection)
Grease type	High temperature grease

SERVICE AND MAINTENANCE

Recommended service interval/oil change	Maximum 4,300 operating hours/minimum once a year
Motor	Lifetime lubricated bearings (no maintenance required)
Gear	Periodic oil change Calculated service life >100,000 operating hours
Propeller	Periodic lubrication with grease

SURFACE TREATMENT

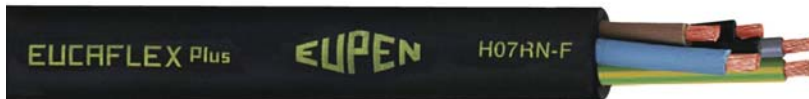
2-component coating: RAL 7005 (Mouse Grey)

Mouse Grey

ELECTRICAL CABLE

H07RN-F/S07RN-F EUCAFLEX^{Plus} Cable.

Resistant to oil and UV radiation.



Number of conductors:

H07RN-F 7G1.5 mm² (Not used in United Kingdom)

H07RN-F 7G2.5 mm²

As standard supplied with 7 m of cable (extra length available upon request). **12,5 m**

MONITORING FUNCTIONS

Bimetal thermal sensors 120 °C ✓

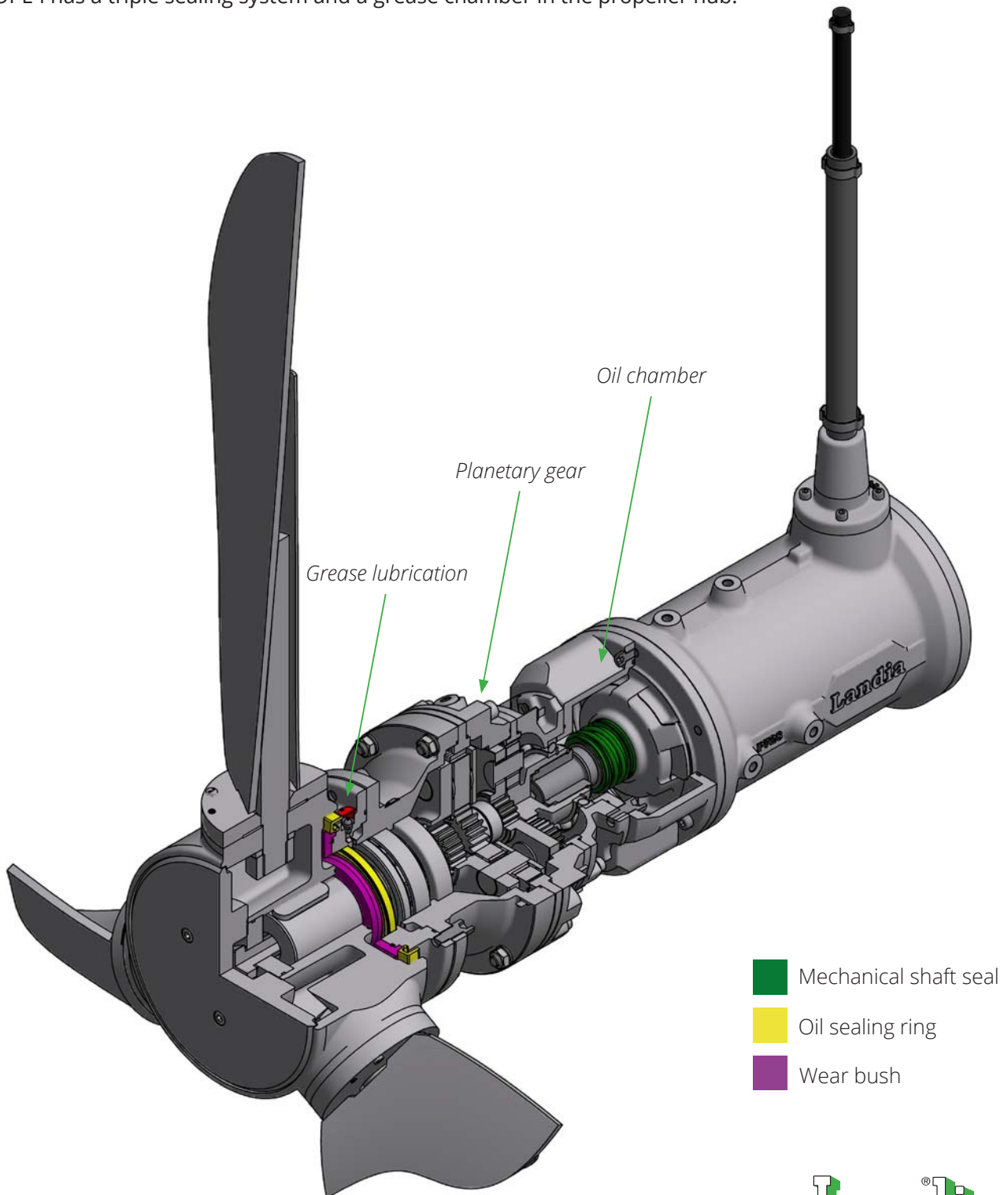
Moisture detection system (optional) ✓

DESIGN

The Landia POPL-I is a slow-speed mixer, or flowmaker, for mixing and creating flow in large volumes with very low energy consumption.

The Landia POPL-I is one of a kind because of its adjustable propeller blades. This enables fine adjustments in the energy consumption simply by changing the angle of the propeller blades. The propeller blades of the POPL-I flowmaker are made of stainless steel.

The POPL-I has a triple sealing system and a grease chamber in the propeller hub.



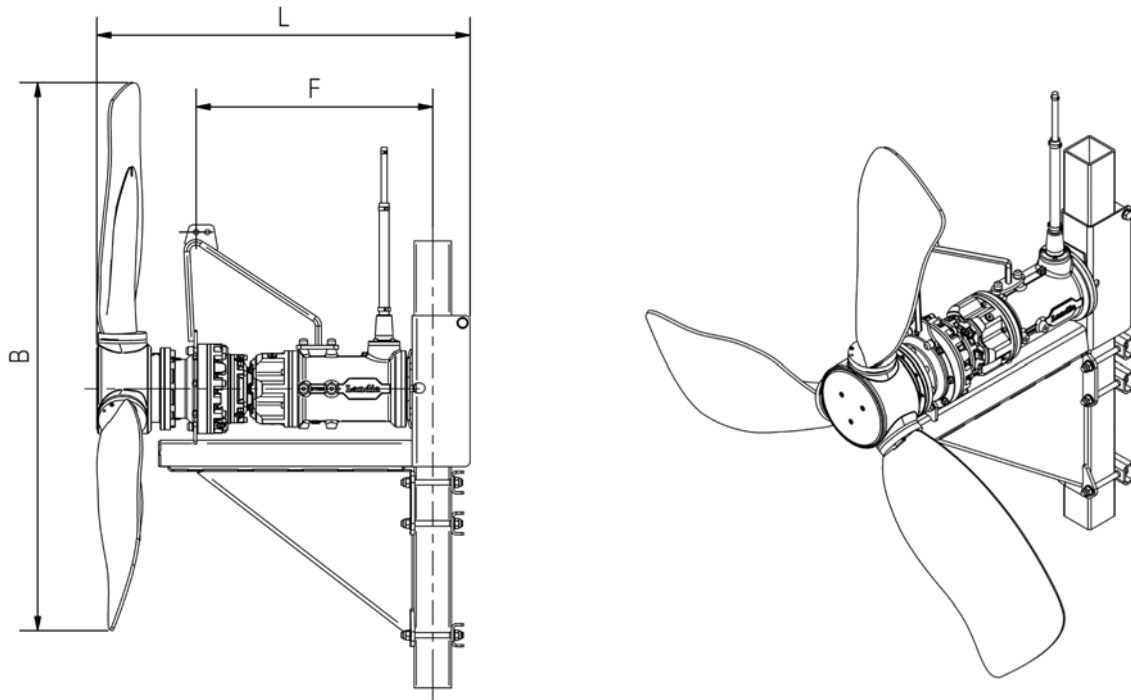
ELECTRICAL DATA

Motor type	3-phase AC motor
Nominal voltage	400 V
Minimum voltage allowed	360 V
Nominal frequency	50 Hz
Applicable for VFD operation	Yes
Ingress protection rating	IP 68
Insulation class	F
Start function	Soft starter required
ATEX classification	II 2 G Ex d c IIB T4 Gb (Option, only available for specific models)

Model	Item number	Nominal power	Motor	Full load current (400 V)	Connection method	Start current (DOL)	cos phi	Efficiency
		[kW]	[rpm]	[A]	Y/Δ	[A]		[%]
POPL-I 1.5/1.1 kW-22 rpm, ø1,700 IE2	1636601	3.0	955	7.1	Δ	50	0.73	83.3
POPL-I 2.2/1.5 kW-34 rpm, ø1,700 IE2	1634602	2.2	1,455	4.8	Y	45	0.77	84.3
POPL-I 3.0/2.2 kW-34 rpm, ø1,700 IE2	1634603	3.0	1,460	6.5	Δ	63	0.77	85.5
POPL-I 4.0/3.0 kW-47 rpm, ø1,700 IE2	1634604	4.0	1,460	7.6	Δ	63	0.86	87.6
POPL-I 7.5/4.0 kW-47 rpm, ø1,700 IE2	1634607	7.5	1,470	14.5	Δ	123	0.82	89.9
POPL-I 2.2/1.5 kW-19 rpm, ø2,300 IE2	1536502	3.0	955	7.1	Δ	50	0.73	83.3
POPL-I 3.0/2.0 kW-22 rpm, ø2,300 IE2	1536503	3.0	955	7.1	Δ	50	0.73	83.3
POPL-I 4.0/3.0 kW-34 rpm, ø2,300 IE2	1534504	4.0	1,460	7.6	Δ	63	0.86	87.6
POPL-I 7.5/4.0 kW-34 rpm, ø2,300 IE2	1534507	7.5	1,470	14.5	Δ	123	0.82	89.9

For voltages others than 400 V/50 Hz please refer to the attached Appendix.

OVERALL DIMENSIONS



Model	Item number	Propeller diameter [mm]	B [mm]	F [mm]	L [mm]	Guide pipe [mm]	Weight [kg]
POPL-I 1.5/1.1 kW-22 rpm, IE2	1636601	ø1,700	1,400	635	1,095	100x100	180
POPL-I 2.2/1.5 kW-34 rpm, IE2	1634602	ø1,700	1,400	635	1,065	100x100	210
POPL-I 3.0/2.2 kW-34 rpm, IE2	1634603	ø1,700	1,400	635	1,095	100x100	220
POPL-I 4.0/3.0 kW-47 rpm, IE2	1634604	ø1,700	1,400	635	1,095	100x100	230
POPL-I 7.5/4.0 kW-47 rpm, IE2	1634607	ø1,700	1,400	635	1,150	100x100	270
POPL-I 2.2/1.5 kW-19 rpm, IE2	1536502	ø2,300	1,800	635	1,095	100x100	260
POPL-I 3.0/2.0 kW-22 rpm, IE2	1536503	ø2,300	1,800	635	1,095	100x100	260
POPL-I 4.0/3.0 kW-34 rpm, IE2	1534504	ø2,300	1,800	635	1,095	100x100	227
POPL-I 7.5/4.0 kW-34 rpm, IE2	1534507	ø2,300	1,800	635	1,165	100x100	286

We reserve the right to make technical changes.