POPLR-I

The POPLR-I is a slow-speed flowmaker made from stainless steel 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 22–47 rpm.
Specific propeller rpm is listed under
Overall Dimensions

MATERIAL OF CONSTRUCTION

Motor housing	W1.4408/AISI316
Propeller hub	W1.4408/AISI316
Propeller blades	Stainless steel W1.4301/AISI304 W1.4408/AISI316 (optional)
Protection jacket over gear box	Acid-proof steel W1.4404
Gear	Cast iron EN-GJL-250 (no contact with the liquid)
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).

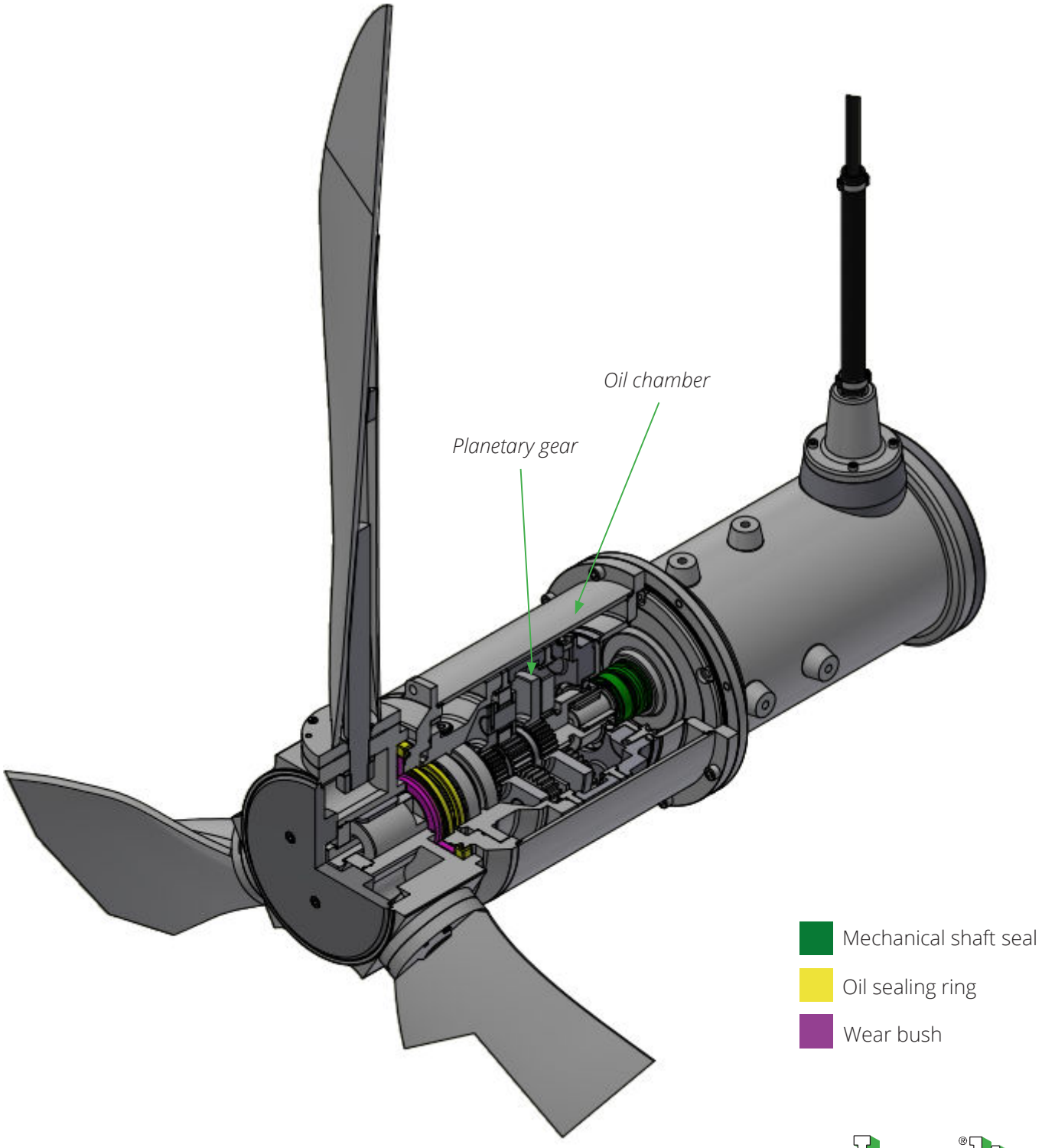
MONITORING FUNCTIONS

Bimetal thermal sensors 120 °C

Moisture detection system (optional)

DESIGN

The Landia POPLR-I is a slow-speed mixer, or flowmaker, for mixing and creating flow in large volumes with very low energy consumption.
The Landia POPLR-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 POPLR-I has a triple sealing system and a grease chamber in the propeller hub.



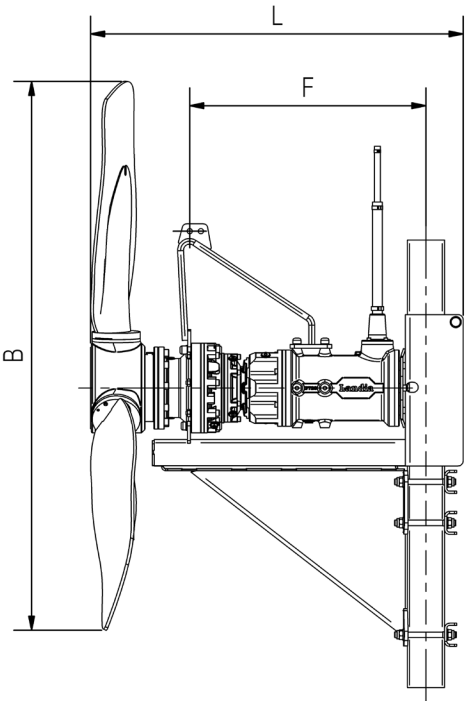
ELECTRICAL DATA

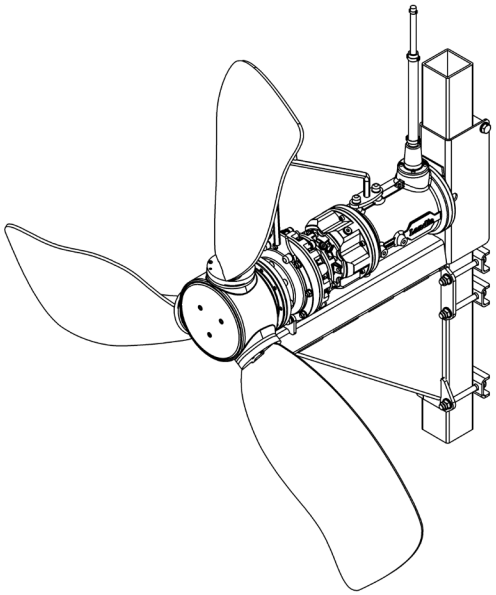
Motor type	3-phase AC motor
Nominal voltage	400 V
Minimum voltage allowed	360 V
Nominal frequency	50 Hz
Applicable for VFD operation	Yes
Ingress protection rating	IP 68
Insulation class	F
Start function	Soft starter required

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]		[%]
POPLR-I 5.5/4.0 kW-47 rpm, ø1,700 IE3	1664205	5.5	1465	11.5	Δ	79.4	0.78	89.6
POPLR-I 2.2/1.5 kW-16 rpm ø2.300 IE3	1568202	2.2	725	5.6	Y	31.9	0.67	81.9
POPLR-I 3.0/2.0 kW-23 rpm, ø2,300 IE3	1568203	3.0	720	7.0	Y	27.3	0.72	83.5
POPLR-I 4.0/3.0 kW-22 rpm ø2.300 IE3	1566204	4.0	1465	7.9	Δ	74.3	0.82	88.6
POPL-I 5.5/4.0 kW-34 rpm ø2.300 IE3	1564205	5.5	1465	11.5	Δ	79.4	0.78	89.6

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]
POPLR-I 5,5/4,0 kW-47 rpm, IE3	1664205	ø1700	1400	700	1150	100x100	
POPLR-I 2,2/1,5 kW-16 rpm, IE3	1568202	ø2300	1800	700	1150	100x100	
POPLR-I 3,0/2,0 kW-23 rpm, IE3	1568203	ø2300	1800	700	1150	100x100	
POPLR-I 4,0/3,0 kW-22 rpm IE3	1566204	ø2300	1800	700	1095	100x100	
POPLR-I 5,5/4,0 kW-34 rpm, IE3	1564205	ø2300	1800	635	1150	100x100	

We reserve the right to make technical changes.