

# 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 19–49 rpm.

Specific propeller rpm is listed under

Overall Dimensions



## MATERIAL OF CONSTRUCTION

Motor housing	Cast iron AISI A48-40B
Propeller hub	Cast iron AISI A48-40B
Propeller blades	Stainless steel AISI 304
Gear	Cast iron AISI A48-40B
Output shaft gear	Shaft steel AISI 9840 (no contact with the liquid)
Bolts	Acid-proof steel AISI 316
Exterior sealing system	3 oil sealing rings made of nitrile Stainless steel AISI 304 wear bush w/hardened surface
Interior sealing system	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

Standard Finish - For Corrosive Environments

RAL 7005 (Mouse Grey)

## ELECTRICAL CABLE

Resistant to abrasion, oil and UV radiation.



Number of conductors:

SOOW 7AWG14

SOOW 10AWG10

23' (other lengths available upon request)

## MONITORING FUNCTIONS

Bimetal thermal sensors 248 °F

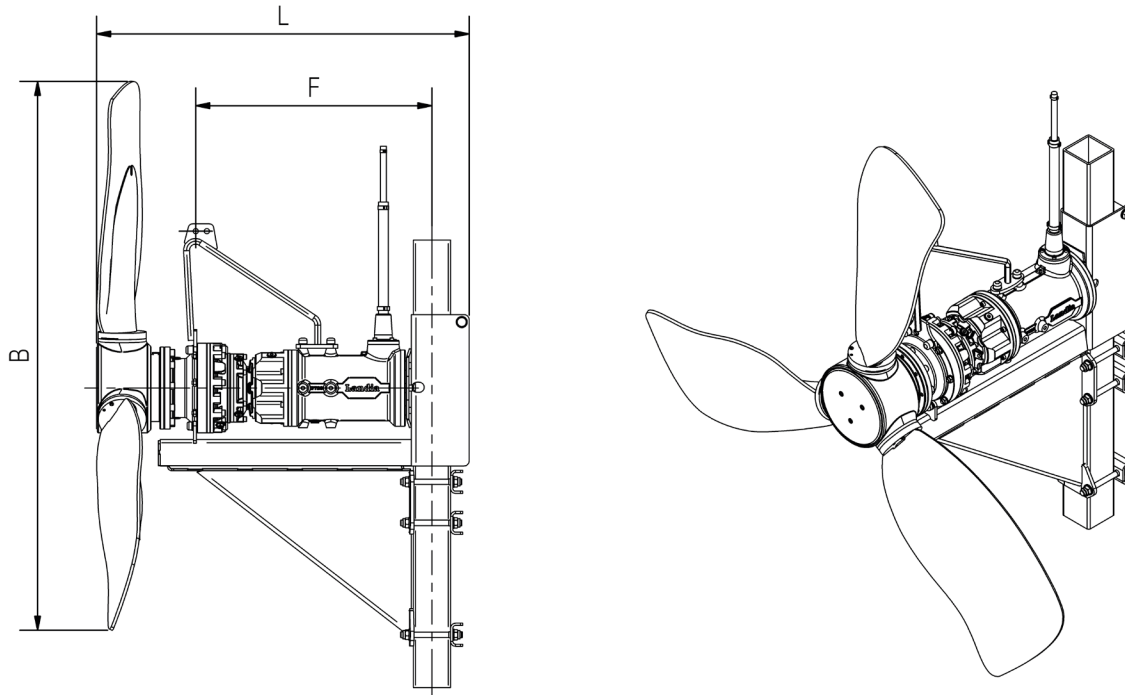
Moisture detection system (optional)

**ELECTRICAL DATA**

Motor type	3-phase AC motor
Nominal voltage	460 V
Minimum voltage allowed	415 V
Nominal frequency	60 Hz
Suitable for VFD-operation	Yes
Cage class	IP 68
Insulation class	F
Start function	Soft starter required
ATEX classification	Class I, Groups C & D (option for selected models)
Variable-speed drives	Inverter Duty Rated

Model	Nominal power	Motor	Full load current (460 V)	Connection method		Start current (DOL)	cos phi	Efficiency (100%)
	[HP]	[rpm]		[A]	[V]			
POPL-I 2.4/1.6 HP-26 rpm ø67"	2.4	850	4.3	460	Y	20	0.67	78.0
POPL-I 3.6/2.4 HP-38 rpm ø67"	3.6	1720	5.3	460	Y	34	0.75	81.0
POPL-I 4.9/3.6 HP-38 rpm ø67"	4.9	1730	7.0	460	Δ	48	0.77	84.0
POPL-I 6.5/4.9 HP-48 rpm ø67"	6.5	1735	9.0	460	Δ	66	0.78	85.0
POPL-I 9.0/6.5 HP-48 rpm ø67"	9.0	1745	11.0	460	Δ	72	0.88	86.0
POPL-I 2.4/1.6 HP-19 rpm ø91"	2.4	850	4.3	460	Y	20	0.67	78.0
POPL-I 3.6/2.4 HP-19 rpm ø91"	3.6	865	6.0	460	Y	27	0.71	76.0
POPL-I 4.9/3.6 HP-26 rpm ø91"	4.9	855	7.9	460	Δ	34	0.73	78.0
POPL-I 6.5/4.9 HP-32 rpm ø91"	6.5	1155	9.7	460	Δ	58	0.78	80.0
POPL-I 9.0/6.5 HP-38 rpm ø91"	9.0	1745	11.0	460	Δ	72	0.88	86.0
POPL-I 1.8/1.2 HP-27 rpm ø67"	4.9	1165	6.8	460	Δ	47	0.79	84.0
POPL-I 3.6/2.4 HP-40 rpm ø67"	3.6	1755	4.9	460	Y	38	0.76	87.5
POPL-I 4.9/3.6 HP-40 rpm ø67"	6.5	1760	7.7	460	Δ	60	0.87	89.5
POPL-I 6.5/4.9 HP-49 rpm ø67"	6.5	1760	7.7	460	Δ	60	0.87	89.5
POPL-I 12.2/6.5 HP-49 rpm ø67"	12.2	1770	15.0	460	Δ	121	0.83	90.8
POPL-I 3.6/2.4 HP-23 rpm ø91"	4.9	1165	6.8	460	Δ	47	0.79	84.0
POPL-I 4.9/3.6 HP-27 rpm ø91"	4.9	1165	6.8	460	Δ	47	0.79	84.0
POPL-I 6.5/4.9 HP-32 rpm ø91"	6.5	1165	8.7	460	Δ	46	0.79	87.5
POPL-I 12.2/6.5 HP-40 rpm ø91"	12.2	1770	15.0	460	Δ	121	0.83	90.8

## OVERALL DIMENSIONS



Model	Standard propeller diameter [inch]	B [inch]	F [inch]	L [inch]	Guide pipe [inch]	Weight [lb]
POPL-I 2.4/1.6 HP-26 rpm	ø67	55	25.0	41.9	3.9x3.9	450
POPL-I 3.6/2.4 HP-38 rpm	ø67	55	21.3	38.4	3.9x3.9	401
POPL-I 4.9/3.6 HP-38 rpm	ø67	55	25.0	41.9	3.9x3.9	445
POPL-I 6.5/4.9 HP-48 rpm	ø67	55	25.0	41.9	3.9x3.9	454
POPL-I 9.0/6.5 HP-48 rpm	ø67	55	25.0	43.1	3.9x3.9	474
POPL-I 2.4/1.6 HP-19 rpm	ø91	71	25.0	41.9	3.9x3.9	496
POPL-I 3.6/2.4 HP-19 rpm	ø91	71	25.0	43.1	3.9x3.9	511
POPL-I 4.9/3.6 HP-26 rpm	ø91	71	25.0	43.1	3.9x3.9	527
POPL-I 6.5/4.9 HP-32 rpm	ø91	71	25.0	41.9	3.9x3.9	500
POPL-I 9.0/6.5 HP-38 rpm	ø91	71	25.6	43.7	3.9x3.9	540
POPL-I 1.8/1.2 HP-27 rpm	ø67	55	25.0	43.1	3.9x3.9	397
POPL-I 3.6/2.4 HP-40 rpm	ø67	55	25.0	41.9	3.9x3.9	463
POPL-I 4.9/3.6 HP-40 rpm	ø67	55	25.0	43.1	3.9x3.9	485
POPL-I 6.5/4.9 HP-49 rpm	ø67	55	25.0	43.1	3.9x3.9	507
POPL-I 12.2/6.5 HP-49 rpm	ø67	55	25.0	45.3	3.9x3.9	595
POPL-I 3.6/2.4 HP-23 rpm	ø91	71	25.0	43.1	3.9x3.9	573
POPL-I 4.9/3.6 HP-27 rpm	ø91	71	25.0	43.1	3.9x3.9	529
POPL-I 6.5/4.9 HP-32 rpm	ø91	71	25.0	45.3	3.9x3.9	540
POPL-I 12.2/6.5 HP-40 rpm	ø91	71	25.0	45.9	3.9x3.9	562

We reserve the right to make technical alterations.