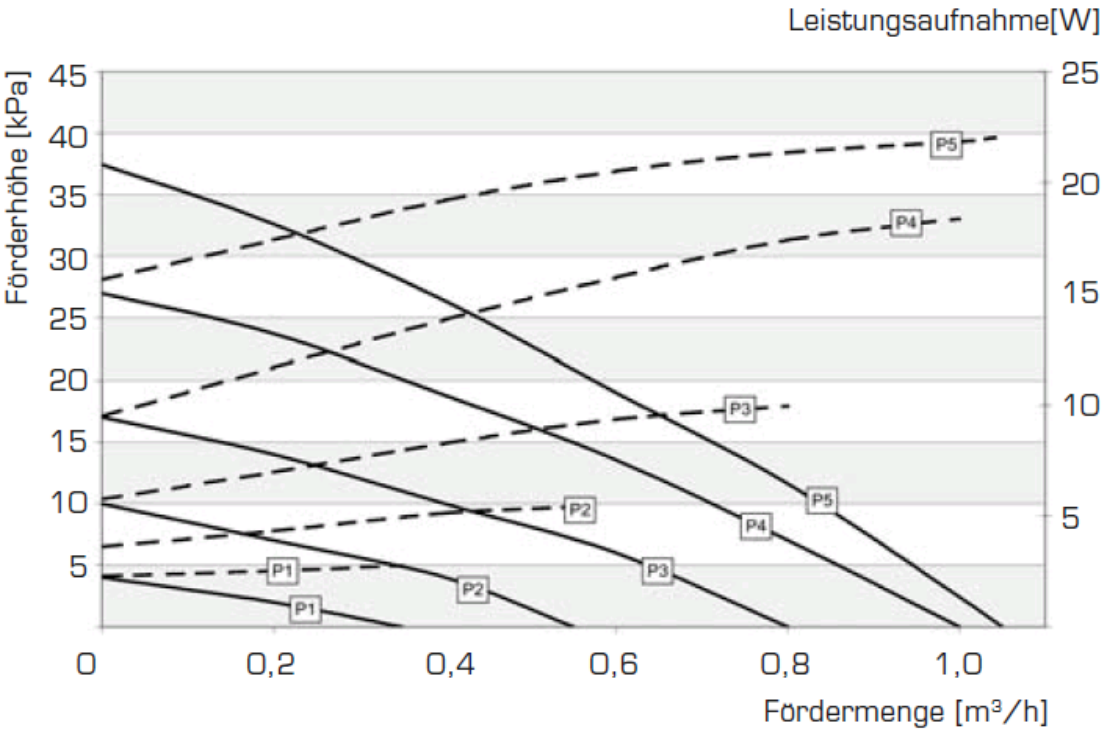
ALPHACOOL – THE COOLING COMPANY

Laing Alphacool pump editions

Model: VPP-655 / TPP-644

	VPP-655 (Single T12 or OT12)			TPP-644 (T12 or OT12)	
Manufacture :	Xylem Water Solutions			Xylem Water Solutions	
Brand:	Laing			Laing	
Product Design Engineering:	Germany			Germany	
Made in :	Hungary			Hungary	
	Data	Unit		Data	Unit
Rated Voltage :	8-24	VDC		8-24	VDC
Standard Voltage	12	VDC		12	VDC
Operating Voltage :	6 ~13,2	VDC		6~13,2	VDC
Input Current	1,916 (Max 3.0)	A		1,916 (Max 3.0)	A
Input Power	23,0	W		23,0	W
Bearing Material	Carbon/ Alluminia Ceramic			Carbon/ Alluminia Ceramic	
Impeller Material	Nylon /PPO			Nylon /PPO	
Gasket Material	EPDM or Viton			EPDM or Viton	
Housing Material	Steel/ Nylon/ PPO			Steel/ Nylon/PPO	
Max. Flow Capacity: (@ Zero Waterhead)	1500	L/h		1500	L/h
Max. Water Head : (@ Zero Flow Capacity)	3,70	MH2O		3,70	MH2O
Max. Pressure	320 50 3,5	kPa PSI bar		320 50 3,5	kPa PSI bar
Pump Fitting Connection	2x 1/2" barbs 10 ID 13 OD	 mm mm		2 x 1/2" barbs 10 ID 13 OD	 mm mm
Acoustical Noise :	35 (Max. 40)	DB(A)		35 (Max. 40)	DB(A)
Max. Temperature:	60,00 140,00	°C °F		60,00 140,00	°C °F
Dimensions (WxHxD) :Single	65 x 65 x 57	mm			
Dimensions (WxHxD) :T12	90x90x90	mm		90x90x90	mm
Dimensions (WxHxD) :OT12	90x90x90	mm		90x90x90	mm
Power Connector :	4	Pin		4	Pin
Tacho Signal Connector	3	Pin		3	Pin
Pump MTBF	50,000	Hours		50,000	Hours
Weight :	650	g		650	g
Acceptable media	Water, water-/Glycolic Mixtures Other media on request			Water, water-/Glycolic Mixtures Other media on request	
Wetted parts	Stainless Steel 1.4571 PPS-GF40 EPDM Gasket Aluminium oxide Carbon PA6.6 GF35			Stainless Steel 1.4571 PPS-GF40 EPDM Gasket Aluminium oxide Carbon PA6.6 GF35	



Characteristic curves

Please note: Depending on the pump model, speed control knob setting and input voltage, a large number of characteristic curves are possible. The displayed values are accurate at the following approximate settings at operating Voltage DC 12V.

	VPP-655 (Single T12 or OT12)			TPP-644 (T12 or OT12)	
	Data	Unit		Data	Unit
P1	1800	RPM		1800	RPM
P2	2550	RPM		2550	RPM
P3	3300	RPM		3300	RPM
P4	4050	RPM		4050	RPM
P5	4800	RPM		4800	RPM

Applications

Alphacool pumps can be used anywhere in the water cooling sector. They feature compact dimensions, high efficiency, very low power consumption and a long lifespan. Thanks to a shaft-less ball motor design, the pumps operate continuously quiet and maintenance-free.

Integrated over-temperature fuse

For maximum safety of operation, an over-temperature fuse is implemented. This mechanism shuts down the pump's electronics should the maximum temperature be exceeded. During normal operation at maximum power, this is the case at a coolant temperature of approximately 60°C. As a sudden shut-down of the pump often has negative effects on the system, and the electronics temperature depends both on medium temperature as well as pump speed, the pump is programmed to reduce its speed autonomously when approaching maximum temperature to prevent a total shut-down.
Should this mechanism fail to prevent the temperature from rising, for example because of an increasing coolant temperature, the pump will shut down completely. As soon as the temperature has dropped to a safe level again, the pump will start up on its own.

Via speed control knob (only VPP versions)

With the speed control knob in the top of the casing it is possible to control the pump speed steplessly. Speed adjustments can be made to regulate flow rate, but also to reduce electrical power consumption or noise level of the pump.
Independent from the set speed, the pump will always start up with maximum torque.