

# ccool

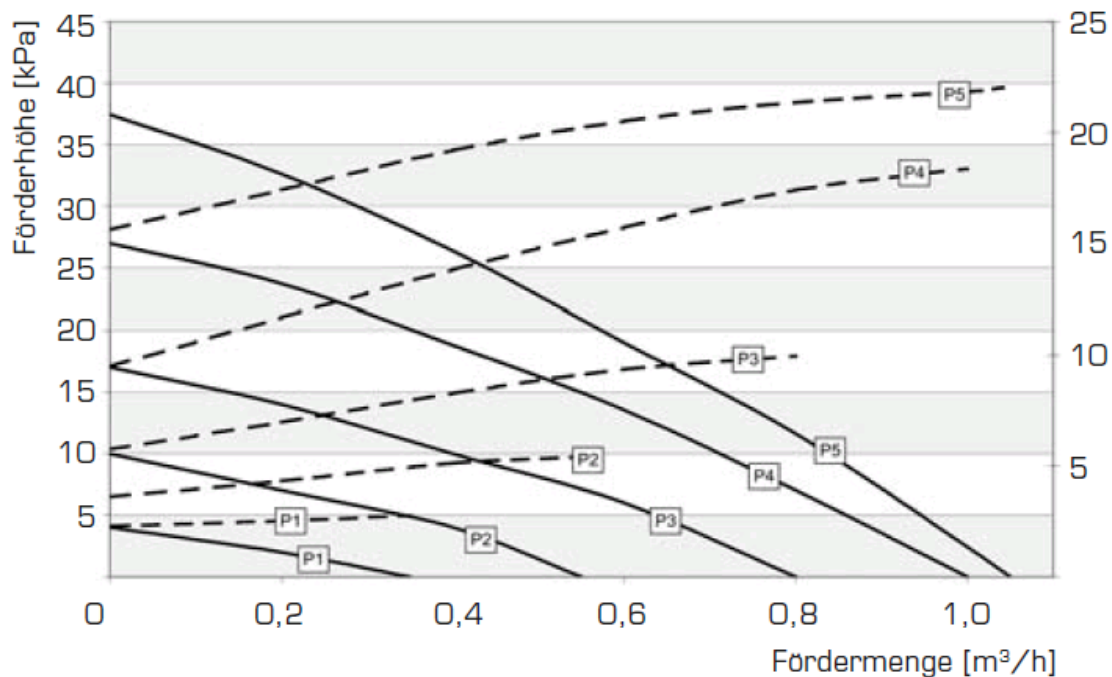
## ALPHACOOOL – THE COOLING COMPANY

### 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.