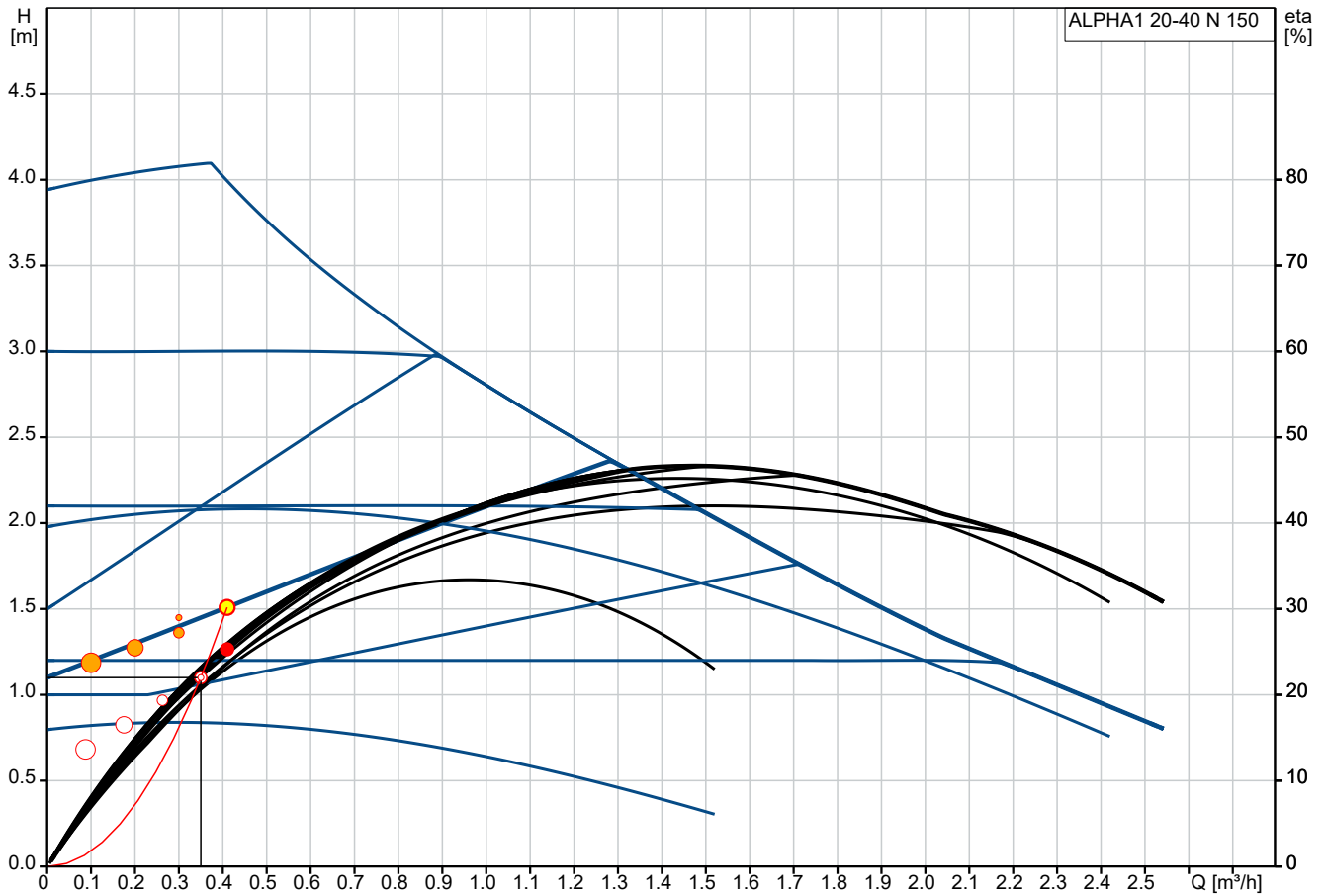


Qty.	Description
1	<p>ALPHA1 20-40 N 150</p>  <p>Note! Product picture may differ from actual product</p> <p>Product No.: 99452178</p> <p>Grundfos ALPHA1 high-efficiency circulator pumps are designed for circulating liquids in heating systems. The stainless-steel variant of ALPHA1 is suitable for e.g. domestic hot-water systems. With an energy efficiency index (EEI) at the ErP benchmark for most efficient pumps, it contributes to energy savings.</p> <p>The pump can operate in proportional-pressure, constant-pressure and constant-curve mode. The control mode is selected using the button on the display. The LEDs indicate the operating status, actual power consumption in watt as well as warnings and alarms.</p> <p>The design and chosen materials of the pump contribute to long life. The pump is self-venting through the system, which contributes to easy commissioning. The compact design, featuring a pump head with an integrated control box, fits into most common installations. The pump and motor form an integral unit without a shaft seal. The bearings are lubricated by the pumped liquid. These constructional features ensure maintenance-free operation.</p> <p>Pump housings made of cast iron are electrocoated to improve corrosion resistance. The motor is a synchronous permanent-magnet/compact-stator motor characterised by high efficiency. The pump speed is controlled by an integrated frequency converter incorporated in the control box.</p> <p>Insulating shells are supplied with pumps to minimise heat loss in heating systems.</p>

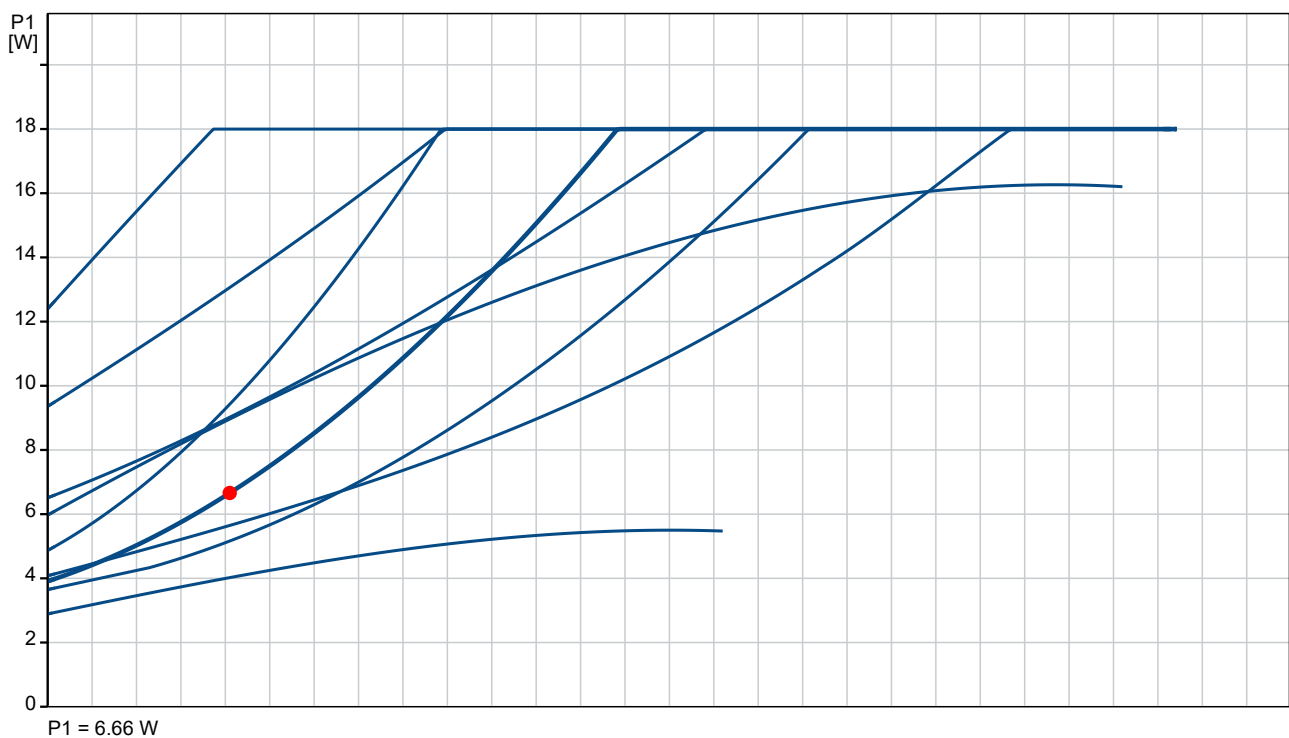


99452178 ALPHA1 20-40 N 150 50 Hz



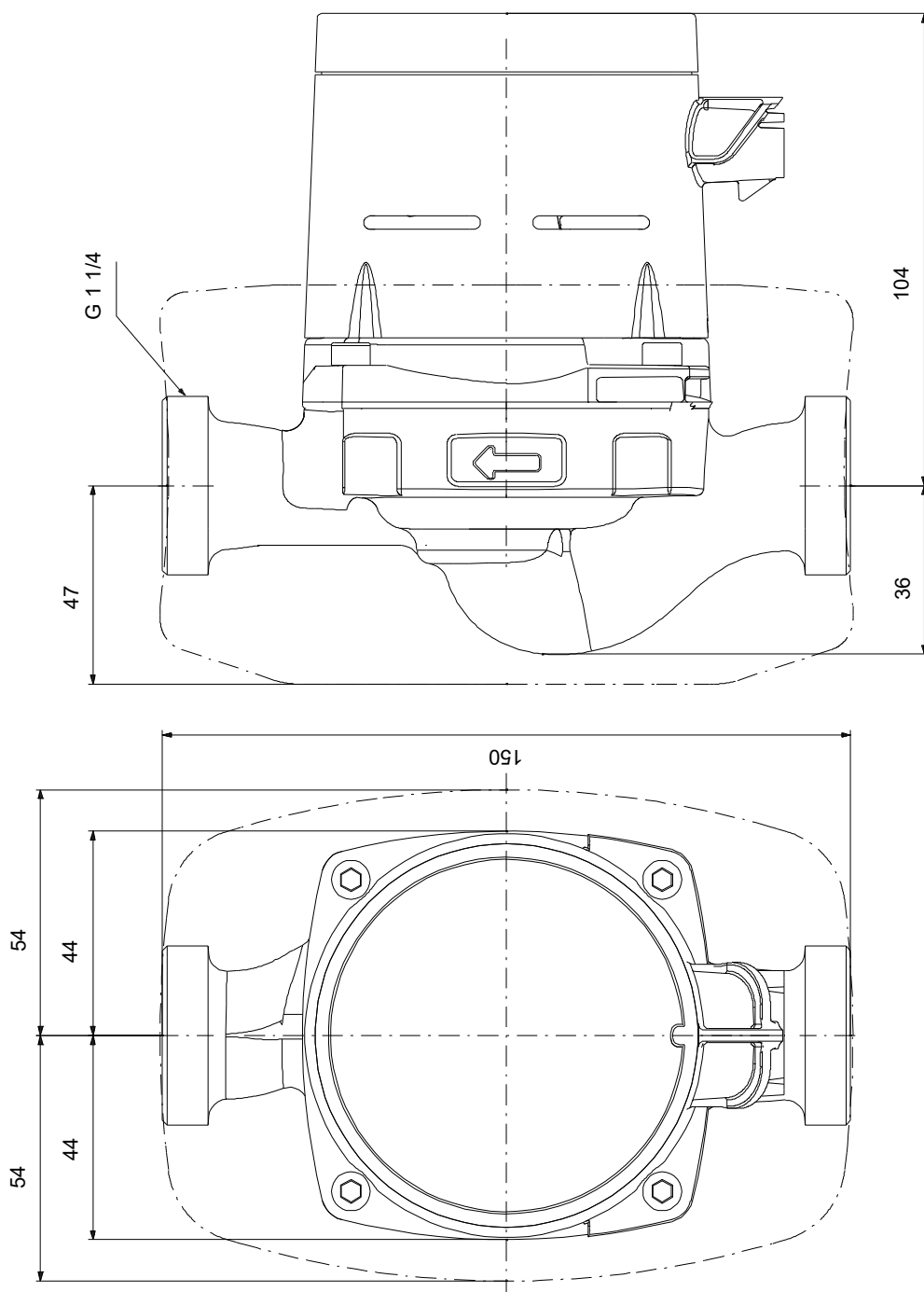
Q = 0.41 m³/h
Pumped liquid = Water
Density = 998.2 kg/m³

H = 1.509 m
Liquid temperature during operation = 20 °C
Eta pump+motor+freq.converter = 25.3 %



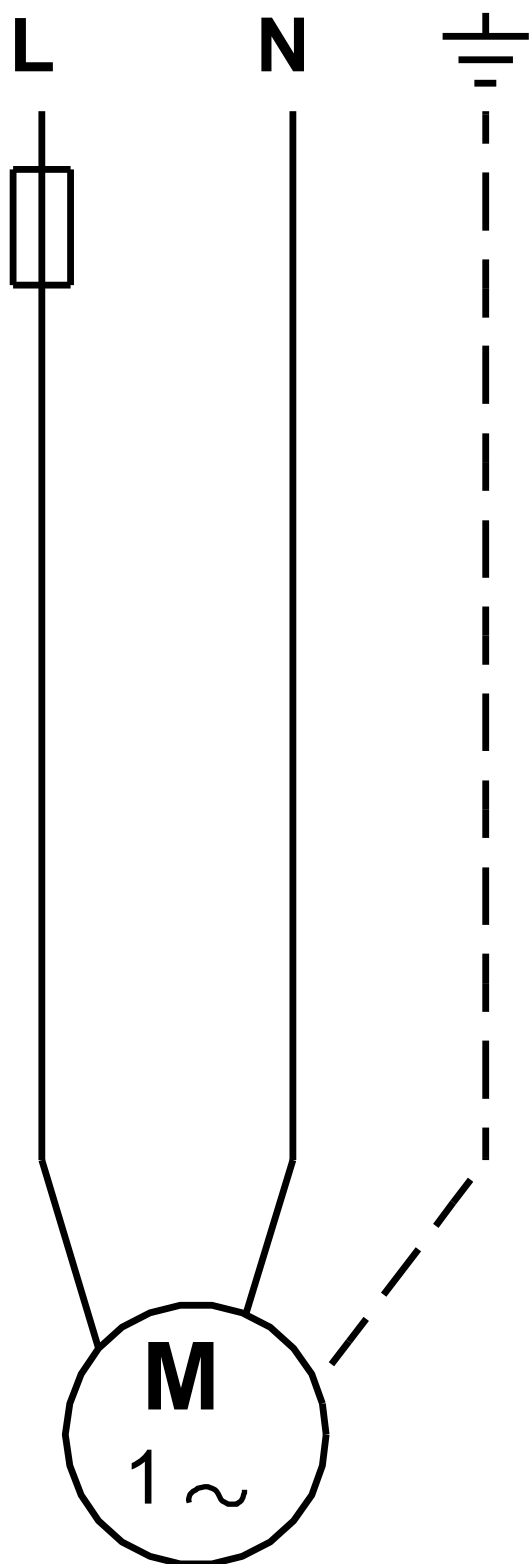
P1 = 6.66 W

99452178 ALPHA1 20-40 N 150 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

99452178 ALPHA1 20-40 N 150 50 Hz



Note! All units are in [mm] unless others are stated.

99452178 ALPHA1 20-40 N 150 50 Hz

Input

Size by Pump family
 Select pump family ALPHA
 Journey Standard
 Select product group ALPHA1 N

Lifecycle cost calculation

Load profile Standard profile
 Heating season 285 days
 Reduced night-time duty No
 Control mode Prop. pressure
 Decrease at low flow 50 %
 Energy price 0.16 EUR/kWh
 Increase of energy price 6 %
 CO2 emission intensity 0.77 kg/kWh
 Calculation period 15 years
 How detailed do you want your life cycle cost analysis? Simple LCC analysis

Load Profile

	1	2	3	4
Flow (%)	25	50	75	100
Flow (m³/h)	0.1	0.2	0.3	0.3
Head (%)	108	116	124	132
Head (m)	1.187	1.274	1.361	1.449
P1 (kW)	0.004	0.005	0.005	0.006
Eta total (%)	6.5	12.5	17.8	22.4
Time (h/a)	3010	2394	1026	410
Energy consumption (kWh/Year)	13	12	6	3
Quantity	1	1	1	1

Sizing result

Type ALPHA1 20-40 N 150

Quantity 1

Flow 0.41 m³/h
 Head 1.509 m
 Power P1 0.007 kW
 Eta pump+motor 25.3 % =Eta pump * Eta motor
 Energy consumption 33 kWh/Year
 CO2 emission 25 kg/Year
 Price 607,00
 Life cycle cost 733 EUR /15Years

