

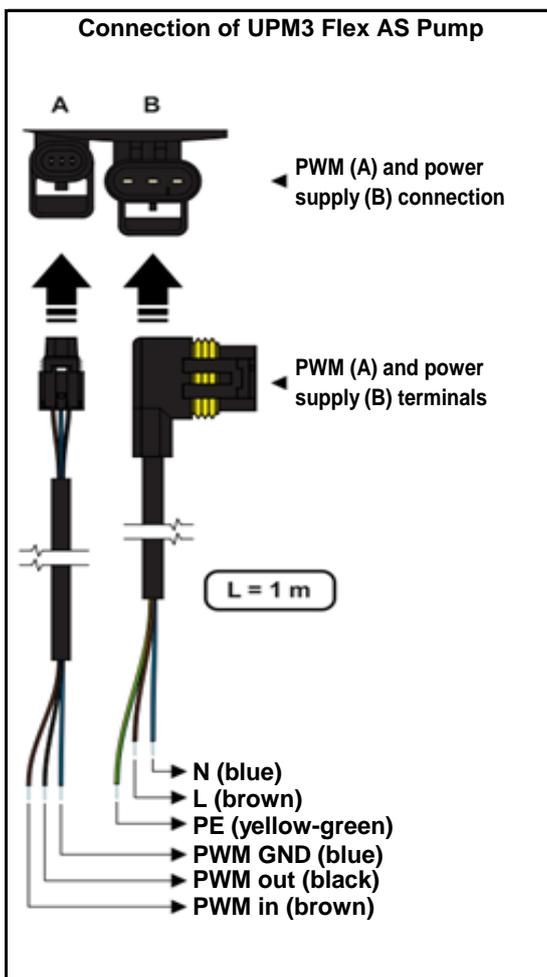
RGMAT EA G 5/4 Pump Station

v1.4_04/2020



Main features	
Application	keeping water temperature at boiler (fire) inlet by means of a thermostatic valve
Description	consists of UPM3 FLEX AS pump, TSV5 valve (with manual by-pass balancing), thermometer, insulation
Function	pump station for solid-fuel boilers and fires, prevents low-temperature corrosion and boiler clogging
Working fluid	water, water-glycol mix (max. 1:1) or water-glycerine mix (max. 2:1)
Installation	on return pipe, min. pipe centre distance from wall = 100 mm; for proper operation it is necessary to install a valve at the B inlet to balance flowrate

Code	max. boiler output
16400 for 45 °C valve opening temperature	max. 50 kW at ΔT 20 K and balancing valve fully open
16399 for 50 °C valve opening temperature	max. 50 kW at ΔT 20 K and balancing valve fully open



Pump Station Technical Data	
Fluid operating temp.	2 - 95 °C
Max. working pressure	6 bar
Ambient temperature	70 °C
Max. relative humidity	95 % non condensing
Power supply	230 V, 50 Hz
Insulation material	EPP RG 60 g/l
Overall dimensions	305 x 145 x 220 mm
Total weight	3,7 kg
Connection	3 x G 5/4" F

Accessories
By-pass with non-return valv code 16139

UPM3 Flex AS 25-75 130 Pump Data	
Electric data	
Power supply	230 V, 50 Hz
Power input (min./max.)	2/60 W
Current (min./max)	0,04/0,58 A
IP rating	IP44
Max. speed	5991 rpm
Weighted average power	≤ 28 W
Energy efficiency index	≤ 0.20 per EN 16 297/3
Motor protection	not needed

Min. pressure at pump suction port to avoid cavitation	
Min. pressures at pump suction port	0.5 mH ₂ O at 75 °C
	5.1 mH ₂ O at 95 °C
	11 mH ₂ O at 110 °C

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Detail of connection on pump



Operation data

Fluid operating temp.	2 - 110 °C
Max. working pressure	10 bar
Max. ambient temperature	70 °C
Max. relative humidity	95 % non condensing

Power supply cables and PWM cables are included in supply.

Selected profile display during pump operation

control button



curve 1 (4 m)



curve 2 (5 m)



curve 3 (6 m)



curve 4 (7,5 m)

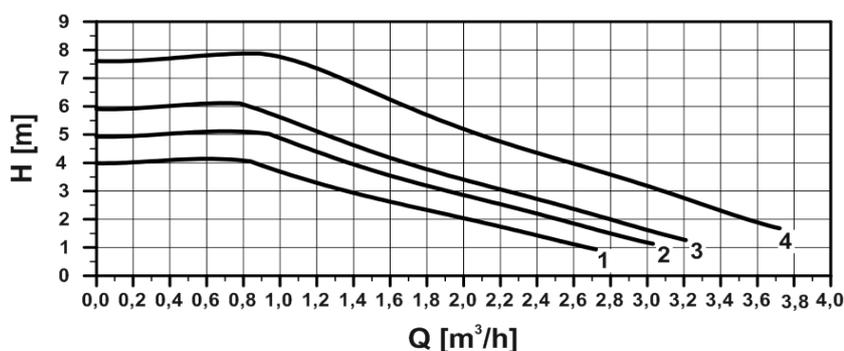


→ when the control button is pressed for less than 2 s, the currently selected curve is shown

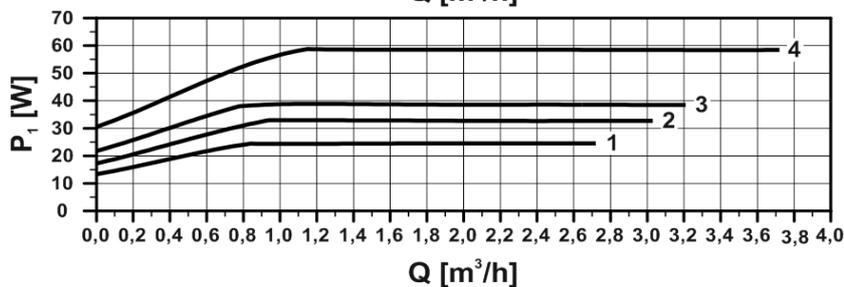
→ with no PWM signal the pump runs at max. speed according to the selected curve

→ with PWM signal the pump speed changes with the signal value up to the maximum of the selected curve

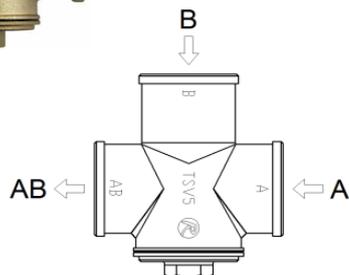
UPM3 Flex AS pump performance curves



Curve	Max. H (upper graph)	Max. P ₁ (lower graph)
1	4,0 m	25 W
2	5,0 m	33 W
3	6,0 m	39 W
4	7,5 m	60 W



TSV5 valve



TSV5 Thermostatic valve data

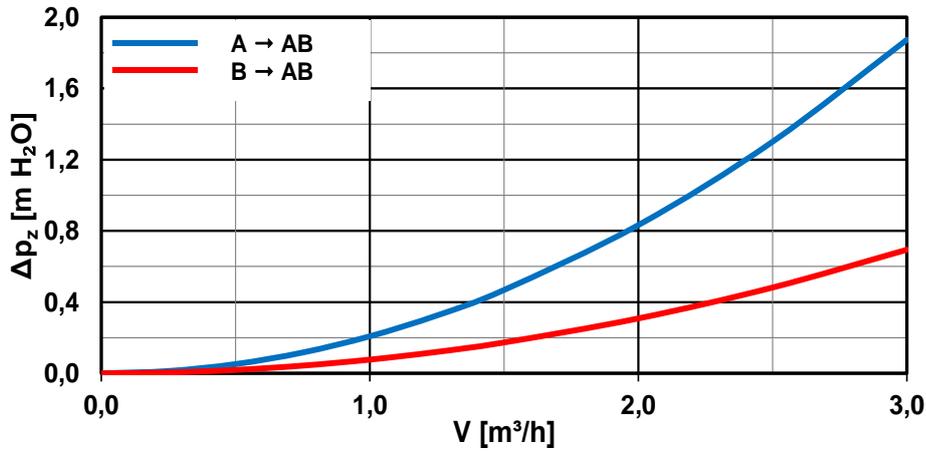
Technical data

Max. operating temp.	95 °C
Max. working pressure	6 bar
Valve opening temp.	as the thermostatic element
Range of control	t _{v,o} + 5 °C
Valve Kvs (A→AB direction)	7,0 m³/hod
Valve Kvs (B→AB direction)	11,5 m³/hod
Connection	3x G 5/4" F
Nominal inner diameter	DN 32

Materials

Housing, cone and plug	brass
Spring	stainless steel
Element and plug seal	EPDM
Cone seal	NBR

Valve pressure drop diagram



Kvs value, and thus also the pressure drop in the B → AB direction, depends on the by-pass balancing valve settings.