Temperature control units for thermal oil up to 660 °F.

Temperature control of die-casting dies, extruders, rollers, storage tanks and mixers.

Your benefit in words and figures!

Example from daily practice: In the production of die-castings, Regloplas temperature control units can reduce reject rates up to 80%, increase the service life of the die by a factor of two to three, reduce heating-up time by as much as 30%.

Standard equipment

- Dual zone (DG) model: → Minimum space requirement.
- Control system RT 45 → Optimal fit for practical every application. For technical data see page 16.
- Small filling quantity and high pump capacity → Quick compensation of disturbances, good control behaviour.
- Pump with magnetic drive → Leak-free operation.
- Safety cut-outs → No fuses to be replaced in case of failure.
- Electric control in accordance with IEC standards. Degree of protection IP 40. Tropic-proof up to 90% humidity. Completely separated from the pumping section and protected against direct contact → Safe operation.
- One-way check valve in cooling water outlet → Less scaling in the cooler by back flow water due to pressure in the water drainage system.
- Separate expansion vessel → Prevents oxidation, because the circulating hot oil is separated from atmospheric oxygen by the oil at rest in the expansion vessel. Emission of combustible oil into the atmosphere is avoided.
- By-pass for internal circulation of the oil in case of insufficient or stagnating flow, e.g. when the consumer is obstructed → Avoids thermal overloading of the oil.
- Flow monitor → Protection against running dry and overheating of the oil.
- Model 350: Cooler with by-pass circuit (Fig.5) → Much better regulating behaviour, reduced tendency to scaling.
- Safety thermostat → Protection against overheating.
- Automatic fluid level control → Protection against running dry.
- Filter in the water mains.
- Fail-safe circuit in case of heat contactor malfunction. Current to the heater is interrupted by an overriding main contactor → Protection against overheating of unit.
- Pressure gauge in the outlet and inlet.
- Castors and eye bolts.
- In accordance with the following standards:
  - EU Machine Guidelines 89/392/EEC.
  - Electrical equipment of industrial machines EN 60204-1, 1997.
  - EU Guidelines Electro-Magnetic Compatibility 89/336/EEC.
  - Low voltage standards 73/23/EWG, 1997.
  - Low voltage switchgear and controlgear assemblies. Part 1. EN 60439-1, 1999.

  → High degree of operational reliability.

300 S
300
301
350

Optional features

- Solid-state relay (SSR) instead of heating contactor.
- Model 350 with inert gas blanket → Longer oil life.
- Model 301: Cooler with by-pass circuit.

Further options see control system RT 45, page 16.

Selection of the unit

- Necessary data see page 21.

Mechanical assembly:
Expertise and precision assure the high quality of our products.

Technical data			300 S	300 (DG)	301 (DG)	350
Outlet temperature	max.	°F	570	570	570	660
Heat transfer fluid			Thermal oil	Thermal oil	Thermal oil	Thermal oil
Filling quantity		Gal	1.5	2.5 4**	4-5 6.5-8**	4-5
Expansion volume	max.	Gal	1.8	3.5	5	5
Heating capacity at 400 V		kW	6	12*	24; 36*	20; 30
Cooling capacity		kW	70	160*	160*	70; 115; 160
at outlet temperature		°F	535	535	535	645
Cooler (K)			1	1*	1*	1; 2; 3
Diagram (Fig.)			1	1	1	2
Pump capacity/type			FM 25	FM 30	FM 30 FM 65	FM 65
Flow rate	max.	GPM	14	22*	22* 23*	23
Pressure	max.	psi	73	99*	99* 145*	145
Motor		HP	1.3	2.0*	2.0* 3.8*	3.8
Diagram (Fig.)			3	3	3 3	3
Control			RT 45	RT 45	RT 45	RT 45
Measuring mode (standard)			Pt 100	Pt 100	Pt 100	Pt 100
Operating voltage (standard)		V/Hz	220-575 V/60 Hz/3 PE			
Connections						
Outlet/inlet			NPT 1/2"	NPT 3/4"	NPT 3/4"	DN 20/PN 40
Cooling water mains			NPT 1/2"	NPT 3/4"	NPT 3/4"	NPT 3/4"
Dimensions W/H/D		in	13/30/35	16/45/45 16/45/45**	17/53/45 27/55/45**	23/64/64
Weight	approx.	lb	190	340 515**	460-495 660-725**	990
Color	Grey	RAL	7035/7024			
Ambient temperature	max.	°F	105			
Noise level		dB (A)	< 70			
Notes			*Per zone **Dual zone unit (DG)			

Models

Unit	Heating capacity (kW)	Pump	Cooler (K)	Control
300 S	**6**	**FM 25**	**1**	**RT 45**
300	**12**	**FM 30**	**1**	**RT 45**
300 DG	**12**	**FM 30**	**1**	**RT 45**
301	**24**	**FM 30; FM 65**	**1**	**RT 45**
301	**36**	**FM 65**	**1**	**RT 45**
301 DG	**24**	**FM 30; FM 65**	**1**	**RT 45**
301 DG	**36**	**FM 65**	**1**	**RT 45**
350	**20; 30**	**FM 65**	**1; 2; 3**	**RT 45**

Example for ordering **301/24/FM 30/1K/RT 45**

Cooling capacity P as a function of outlet temperature ϑ.

Cooling water data:
Inlet temperature 68 °F.
Flow rate per zone 5 GPM.

Pump capacity. Flow rate V as a function of manometric pressure p.

Measuring conditions: Oil type RO 300 (temperature 300 °F; density ϱ = 57 lb/cu ft).

By-pass not included.

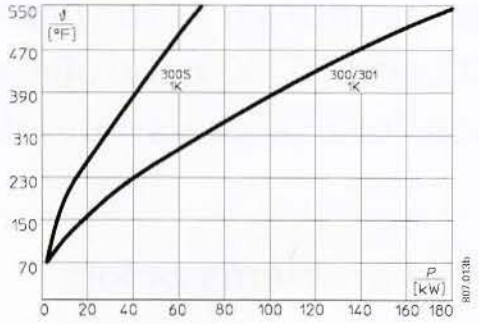

Fig. 1: 300 S, 300 (DG); 301 (DG)

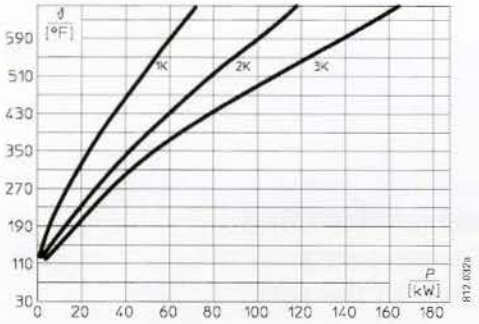

Fig. 2: 350

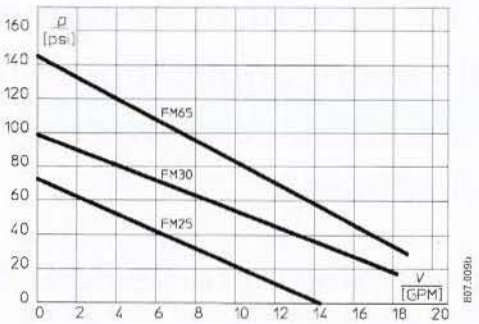

Fig. 3: Pump capacity

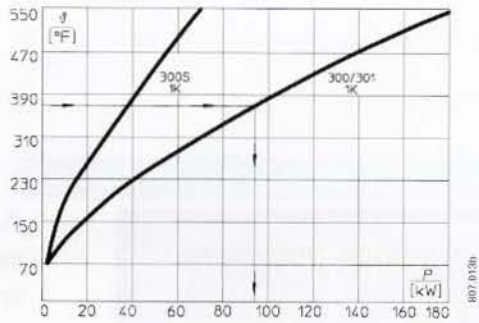

Fig. 4: Chart reference example

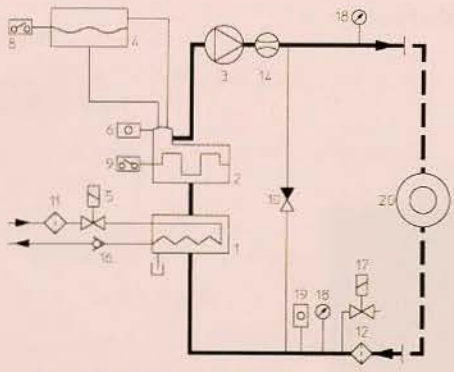

Fig. 5: Principle Type 300 S, 300, 301

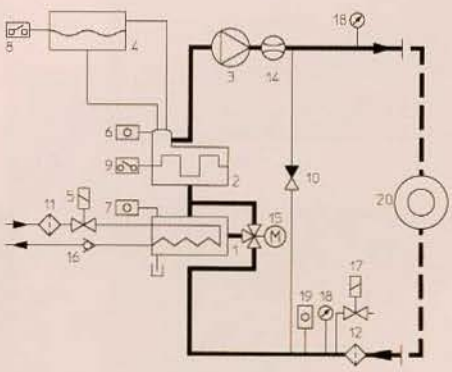

Fig. 6: Principle Type 301, 350 with by-pass circuit for the cooler

1 *Cooler*
2 *Heater*
3 *Pump*
4 *Expansion vessel*
5 *Solenoid valve, cooling*
6 *Outlet temperature sensor*
7 *Temperature sensor of cooler*
8 *Level control*
9 *Safety thermostat*
10 *By-pass*
11 *Filter water mains*
12 *Filter circuit*
13 *– –*
14 *Flow monitoring*
15 *Three-way valve (model 301 option)*
16 *One-way check valve*
17 *Solenoid valve, consumer drainage (optional)*
18 *Pressure gauge*
19 *Inlet temperature sensor (optional)*
20 *Consumer*