

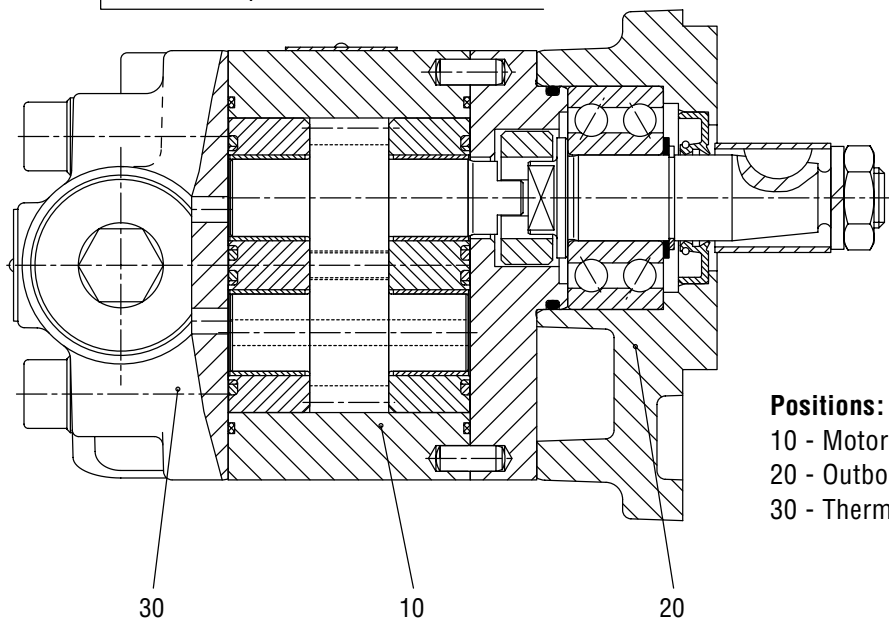
**Gear motor with thermovalve  
(Fan motor)  
KM 1 + TKM**

## Gear motor with thermovalve KM 1 + TKM

### Structure of the fan motor with outboard bearing

KM 1/.L.LA F00 4NL./.

↑ nominal displacement NG: 11 to 22

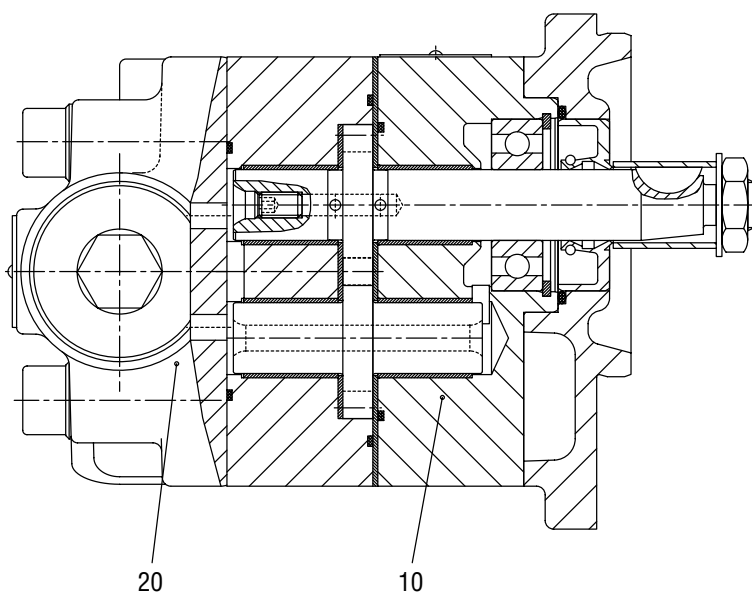


**Positions:**  
 10 - Motor  
 20 - Outboard bearing  
 30 - Thermovalve

### Structure of the fan motor without outboard bearing

KM 1/. ..OA .00 2ML./.

↑ nominal displacement NG: 4 to 9.6

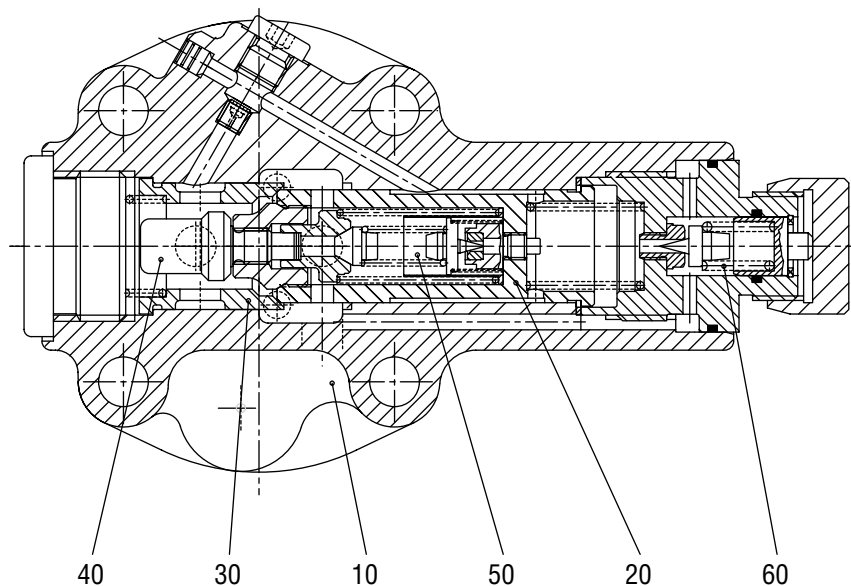


**Positions:**  
 10 - Motor  
 20 - Thermovalve

Further informations about gear motors KM 1 can be obtained from KM1.d.05.2000 leaflet.

## Gear motor with thermovalve KM 1 + TKM

### Structure of thermovalve TKM 1 (for gear motor KM 1)



#### Positions:

- 10 - Housing (cover)
- 20 - Main piston valve
- 30 - Recharging piston
- 40 - Flexible material element
- 50 - Pre-control (temp.-controlled)
- 60 - Pre-control ( $p_{\max}$  permanently set)

### Description

The thermovalve is a pre-controlled pressure relief valve with temperature-dependent pressure control and is mounted on the KRACHT KM 1 gear motor in the place of the existing cover plate.

Motor + TKM = fan motor

There are two different types:

- a) Pressure and temperature control TKM 1 D ... and
- b) Quantity, pressure and temperature control TKM 1 M ...

The basic principle of both variants is that the pressure setting of the valve automatically changes dependent on the temperature, via a built-in flexible material element, and thus controls the motor speed. The pressure control for a) contains a pure pressure control, while the quantity and pressure control for b), in addition to the pressure control, also contains a permanently set quantity control.

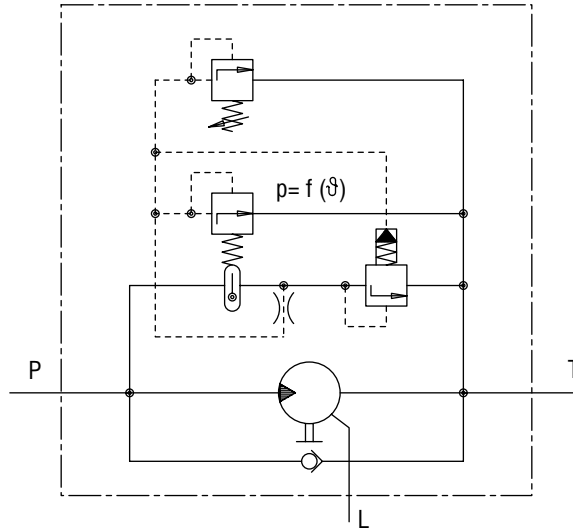
In addition to the actual temperature-controlled pressure setting, a mechanical maximum pressure control, set in the factory, and a recharging valve are fitted as a non-return valve.

To enable further consumption units to be installed in the fan motor cycle, there is also a type with external oil discharge. The "internal" oil discharge model must be arranged when the order is placed, as a subsequent conversion can only be carried out in the factory.

# Gear motor with thermostatic valve KM 1 + TKM

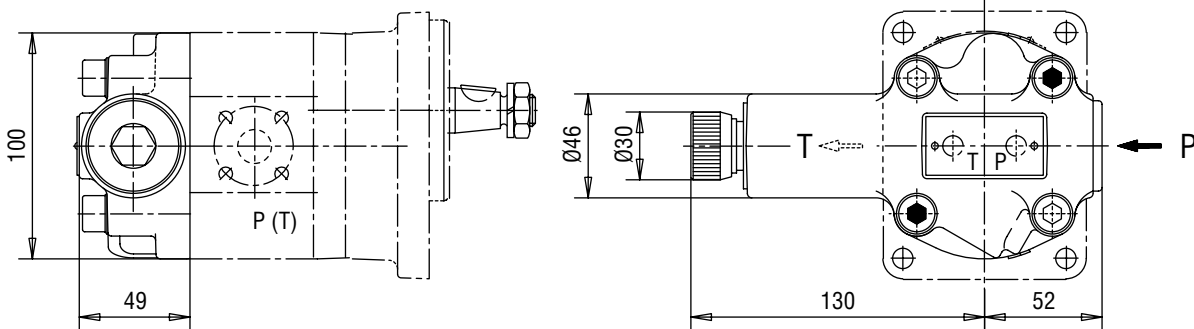
## Function "D"

### Pressure and temperature control

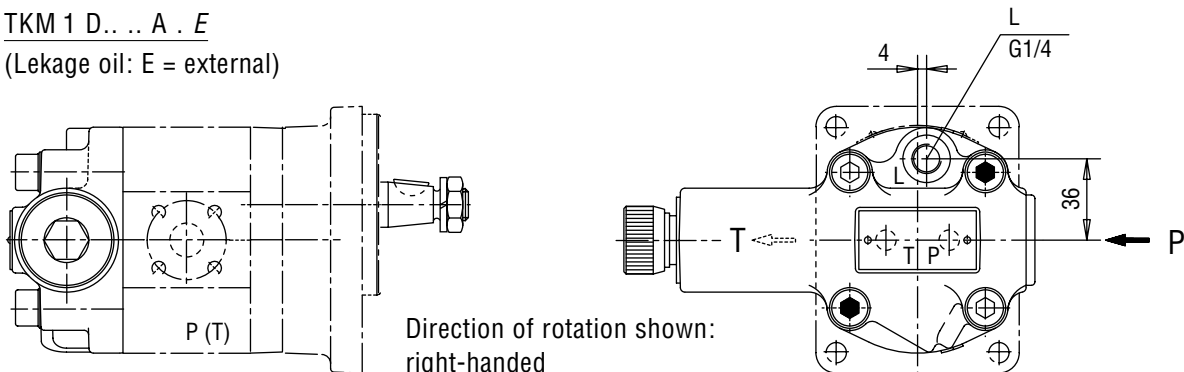


### Dimensions

Type: TKM 1 D... A . A  
(Leakage oil: A = internal)



Type: TKM 1 D... A . E  
(Leakage oil: E = external)



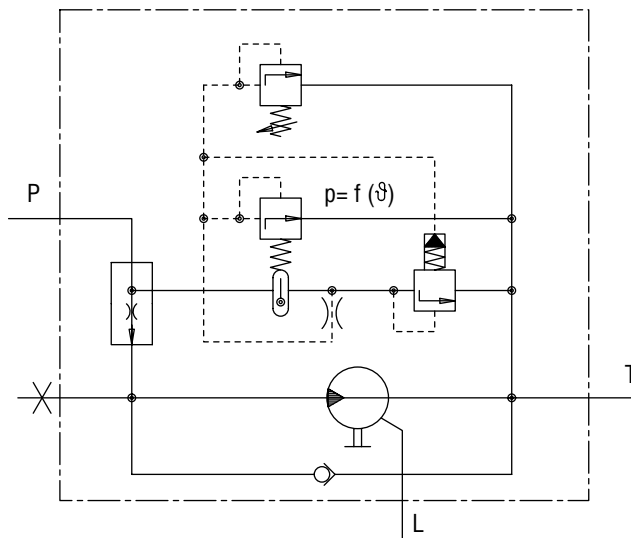
Direction of rotation shown:  
right-handed  
for left-handed direction of rotation,  
the thermostatic valve is rotated by 180°.

Note: The existing oil discharge can only be converted in the factory.  
(Attention: Connection "L" must not be sealed.)

# Gear motor with thermovalve KM 1 + TKM

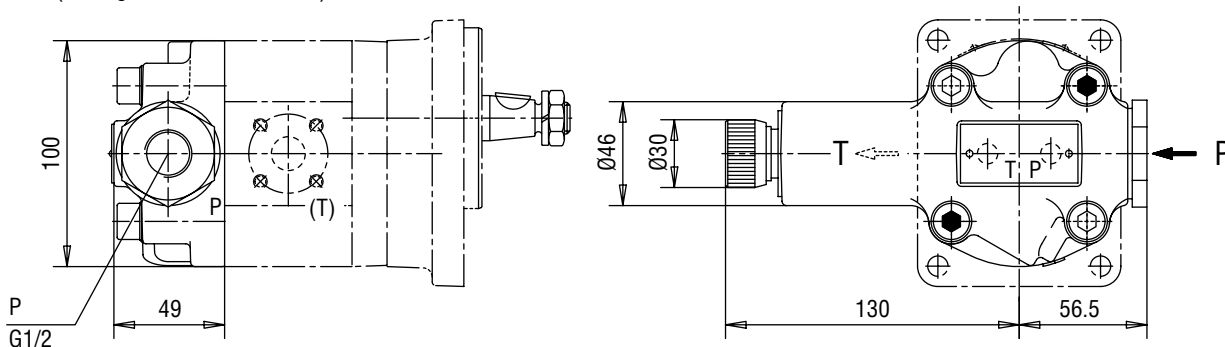
## Function "M"

### Flow-, pressure temperature control

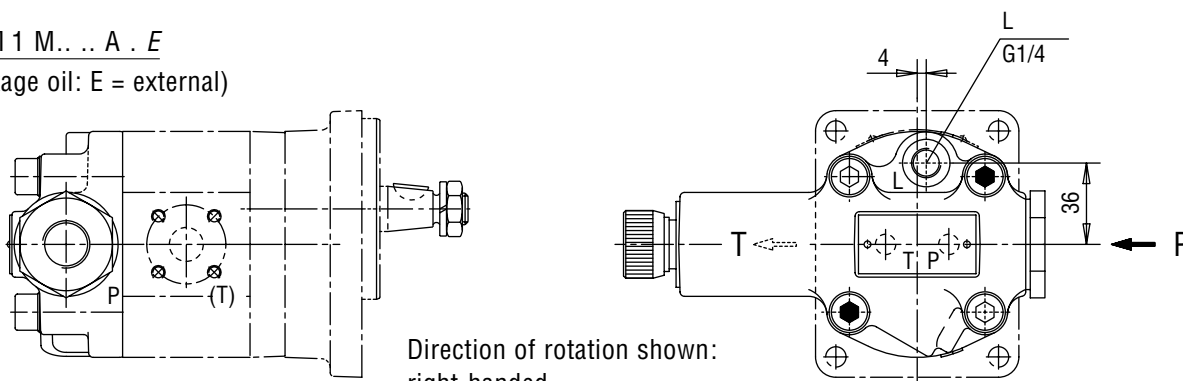


### Dimensions

Type: TKM 1 M... A . A  
(Leakage oil: A = internal)



Type: TKM 1 M... A . E  
(Leakage oil: E = external)

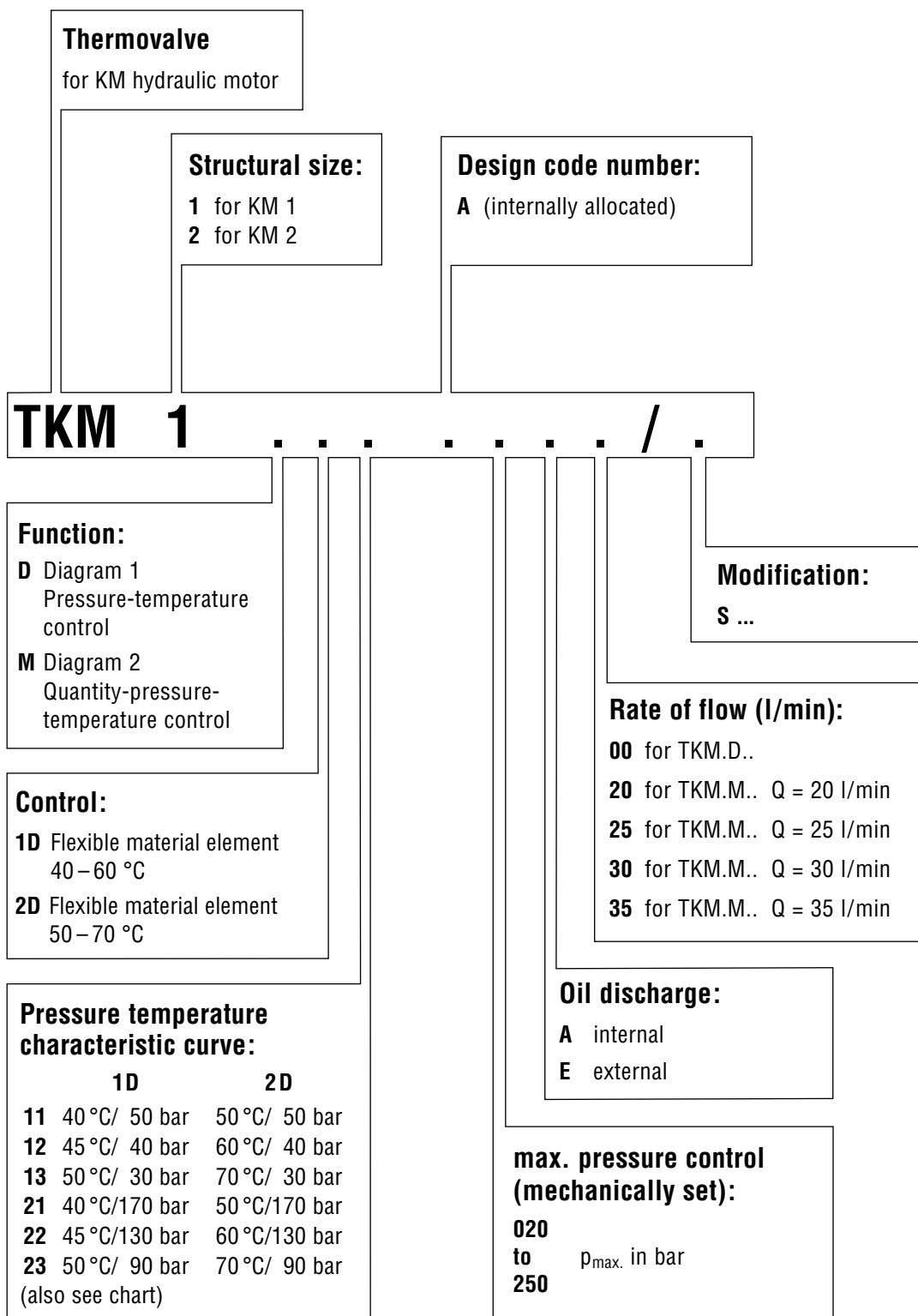


Direction of rotation shown:  
right-handed  
for left-handed direction of rotation,  
the thermovalve is rotated by 180°.

Note: The existing oil discharge can only be converted in the factory.  
(Attention: Connection "L" must not be sealed.)

# Gear motor with thermovalve KM 1 + TKM

## Type TKM 1

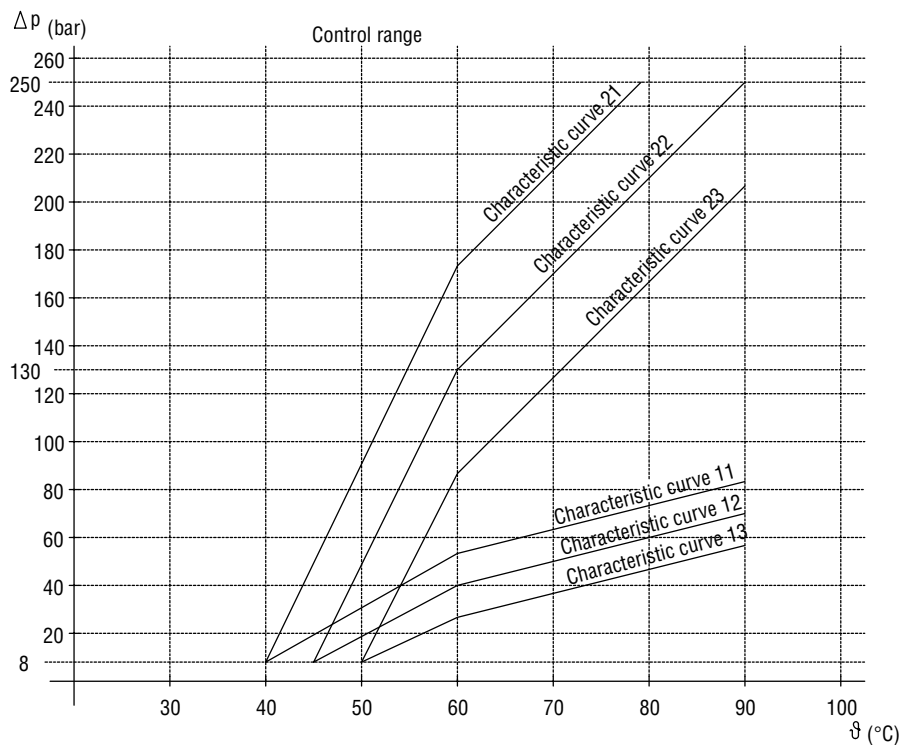


See KM 1 – KM1.d.05.2000 leaflet.

# Gear motor with thermovalve KM 1 + TKM

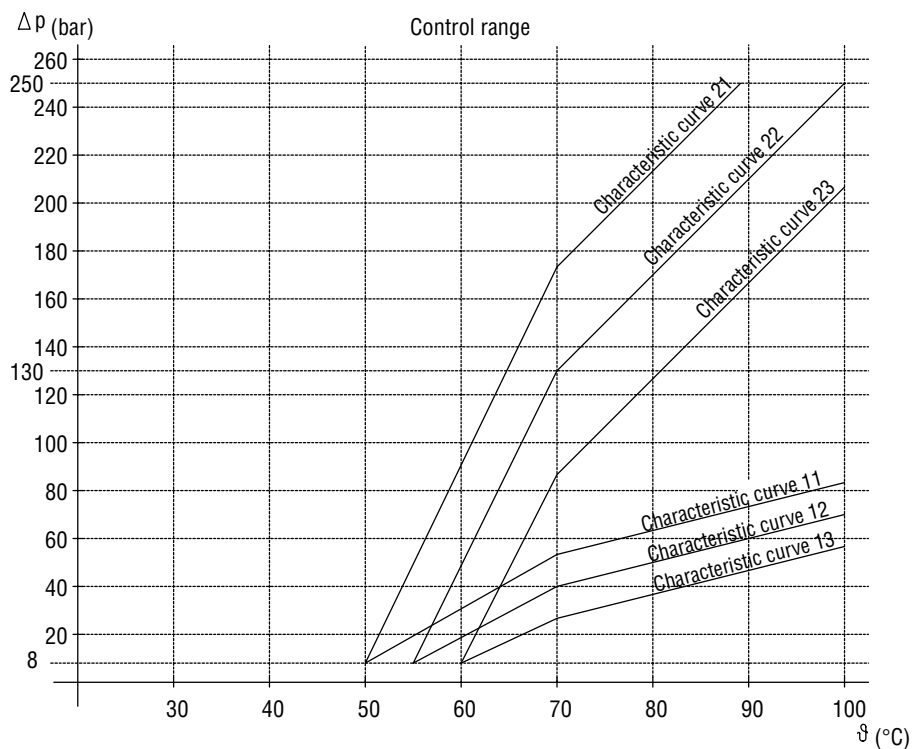
## Pressure-temperature characteristic curve – 1D

Control: 1D  $\hat{=}$   $\vartheta = 40 - 60^\circ\text{C}$  control range  $\vartheta_{\text{max}} = 90^\circ\text{C}$



## Pressure-temperature characteristic curve – 2D

Control: 2D  $\hat{=}$   $\vartheta = 50 - 70^\circ\text{C}$  control range  $\vartheta_{\text{max}} = 100^\circ\text{C}$



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KM1+TKM.e.11.2002