

## Table of Contents

<b>1</b>	<b>Product Description</b> .....	<b>2</b>
1.1	Verwendungszweck.....	2
<b>2</b>	<b>Function</b> .....	<b>2</b>
2.1	Characteristics .....	2
<b>3</b>	<b>Technical Data</b> .....	<b>2</b>
<b>4</b>	<b>Ordering Information</b> .....	<b>2</b>
<b>5</b>	<b>Description of Characteristics in Accordance with Type Code</b> .....	<b>3</b>
5.1	Variant .....	3
5.2	Connections .....	3
5.3	Eingangsvolumenstrom .....	3
5.4	Maximum input pressure .....	3
5.5	switching level .....	3
<b>6</b>	<b>Installation</b> .....	<b>3</b>
6.1	General remarks .....	3
6.2	Connection suggestion.....	3
6.3	Installation - Space .....	4
<b>7</b>	<b>Notes, standards and safety requirements</b> .....	<b>4</b>
7.1	General remarks .....	4
7.2	Standards .....	4
<b>8</b>	<b>Accessories</b> .....	<b>4</b>

## 1 Product Description

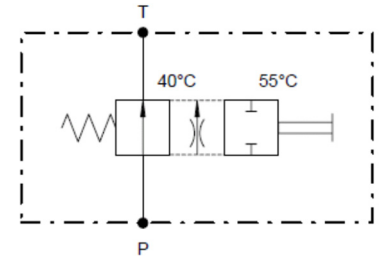
The oil temperature controller enables the temperature-dependent control of the oil flow. With the help of a thermo-element, a valve spool is switched continuously from the open to a closed position. This causes to a pressure increase in the cooling circuit, which leads to an increase in the flow rate through the cooling unit.

### 1.1 Verwendungszweck

The valve is used in the cooling circuit of hydraulic excavators. In the bypass to the cooling unit it controls the flow to the tank or through the cooling unit.

## 2 Function

This valve is used in the cooler circuit of hydraulic driven machines. It controls the flow which is lead to the tank respectively to the oilcooler. The oil control valve enables a temperature dependent control of the flow. With the help of a thermo-modul the valve spool is continuously moving from opened to closed position. The hereby caused pressure increase also increases the flow to the cooler. The valve is opened completely below 40°C and closed at 55°C.



### 2.1 Characteristics

- Connection M33x2, ISO 9974-1
- input flow rate: 250 l/min & 400 l/min
- Temperature-dependent volume flow throttling
- Robust function through high switching forces
- Easy installation
- Continuous adjustment of the flow cross-section
- Valve switches thermally delayed

## 3 Technical Data

	Units	Version 250 l/min	Version 400 l/min
Installation position		Any	
Weight, kg	kg	1,3	
Max. input pressure	bar	20	
Maximum tank pressure	bar	1 bar (recommended)	
Input flow rate	l/min	250	400
Hydraulic fluid		Mineral oil (HL, HLP) conforming with DIN 51524, other fluids upon request	
Hydraulic fluid pressure range	°C	-20 – +80 °C	
Ambient temperature	°C	< +50 °C	
Viscosity range	mm <sup>2</sup> /s	2.8 – 500	
Contamination grade		Filtering conforming with NAS 1638, class 9, with minimum retention rate β <sub>10</sub> ≥75	

## 4 Ordering Information

OTC	A1	011		20	40/55
00	01	02	03	04	05
00	Product group	Oil temperatur controller			OTC
01	Variant	Standard			A1
02	Connections	Pump (P), Tank (T)	M33x2, ISO 9974-1		011
03	Input flow	l/min	250 l/min	250	
			400 l/min	400	
04	Max. input pressure	20 bar	20		
05	Switching level	55°C	55		

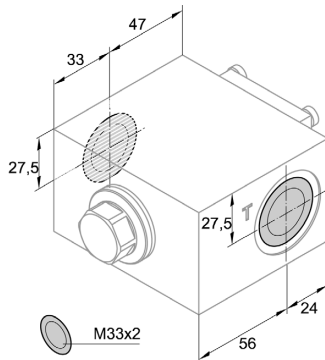
## 5 Description of Characteristics in Accordance with Type Code

### 5.1 Variant

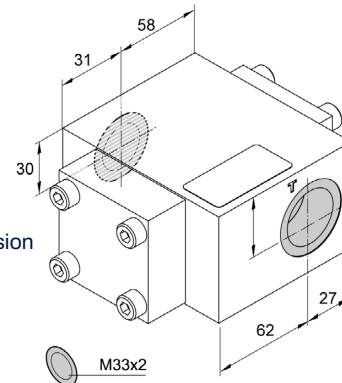
Pipeline installation

### 5.2 Connections

250 l/min Version



400 l/min Version



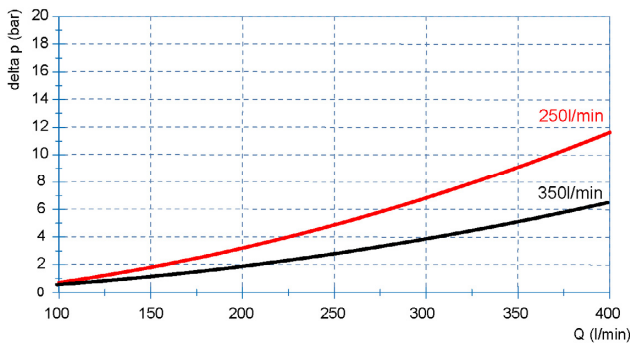
M33x2 - ISO 9974-1

### 5.3 Eingangsvolumenstrom

**250** Nominal flow 250 l/min

**400** Nominal flow 400 l/min

Pressure loss in relation to input volume flow: P to T



### 5.4 Maximum input pressure

The max. input pressure of the valve: 20bar

### 5.5 switching level

Above 55°C, the entire flow goes through the cooling unit.

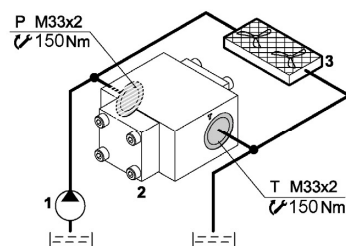
## 6 Installation

### 6.1 General remarks

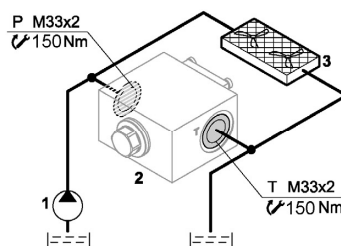
- Observe all installation and safety information of the construction machine manufacturer.
- Only technically permitted changes are to be made on the construction machine.
- The user has to ensure that the device is suitable for the respective application.
- Application exclusively for the range of application specified by the manufacturer.
- Before installation or dismantling, the hydraulic system is to be depressurized.
- Settings are to be made by qualified personnel only.
- May only be opened with the approval of the manufacturer, otherwise the warranty is invalidated.

### 6.2 Connection suggestion

250 l/min Version

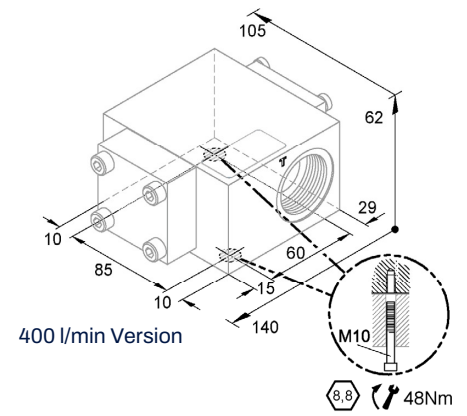
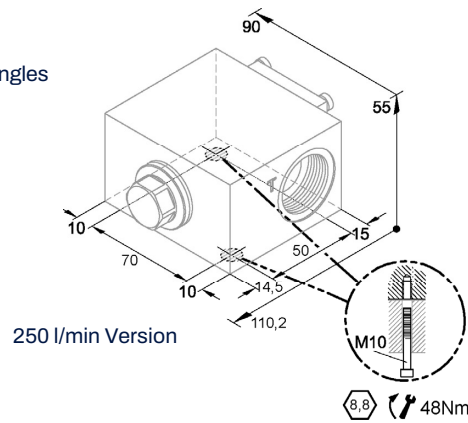


400 l/min Version



### 6.3 Installation - Space

- Pipeline installation
- Installation on level surfaces or flange angles
- Install pipe and tube free of distortion
- Select an easily serviceable space.



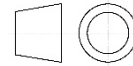
## 7 Notes, standards and safety requirements

### 7.1 General remarks

The views in drawings are shown in accordance with the European normal projection variant

### 7.2 Standards

The following standards must be observed when installing and operating the valve:  
 EN 563, Temperatures on accessible surfaces  
 EN 982, Safety requirements for fluid technology systems and their components.



## 8 Accessories