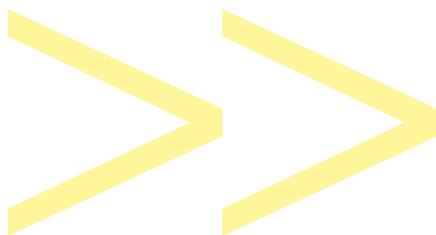


# Oil cooled power resistors 1000 kW

High protection class up to IP 65 – compact design – high voltage





Oil-cooled resistor 3PW3 with heat exchanger

for load resistors up to 800 kW

General, application

3PW3 resistors are equipped with cast iron 3PR3 resistors in a housing filled with insulating oil. The oil is used for cooling the resistors

The design combines the advantages of resistors with those of a more economical heat carrier (oil) and a high protection class for applications in difficult environments.

This type of resistors guarantees long service lives combined with low maintenance.

The additional heat exchanger allows a continuous operation with the rated load. The surface temperature reaches during full load a maximum of 80°C.

A combination of resistor units enables the realization of each load.

#### Designs

- 7 sizes of housings for loads from 50 to 800 kW
- Resistor units designed for voltages up to 24 kV
- Resistor units designed for different rated currents
- Tubular or plate heat exchanger including oil pump

#### Basic accessories

- Auxiliary switches required for the customer's control, wired to terminals
- Temperature monitoring, warning at 100°C, tripping at 130°C
- Cable inlets,
- Oil level gauge glass
- Painting RAL 7035

#### Extras

- Cable cover to protect the feeding cables against mechanical damages
- Level indicator
- Body insulation to reduce the touch temperature
- Anti-condensate heating

#### Standards and regulations

##### 3PW3 resistors comply with

- DIN VDE 0101 erection of power installations with rated voltage exceeding 1 kV

##### According to DIN 50010, T1 the resistors are suited for installation in

- closed locations
- roofed locations
- outdoor locations

#### Protection

IP54 as per DIN 40050 / IEC 144  
Higher protection classes on request

#### Ambient temperature

-25 ... +45°C, higher temperatures on request

#### Altitude

Up to 1000 m above sea level, higher altitudes on request

#### To be provided by the customer

- Plane foundation
- Oil catch basin
- Contactor or circuit breaker
- Emergency shut down
- Supply and filling in of the oil
- Complete secondary water circulation according to the requirements
- Auxiliary supply for the pump

#### Oil fill

For the oil fill, use acid-free insulating oil as specified by DIN 51507, DIN VDE 0370.

- Shell Diala D
- ESSO Univolt 56
- Energol JS R
- BP JSH-A

The transport of the resistors is only admissible without oil fill.



# Dimensions and weights

Order number **3PW3** ①②**0**-③④⑤⑥-⑦⑧⑨-**WT** - ⑩ accessories M... or full text

Oil cooled resistor with heat exchanger												
Model Order no. 3PW3 ①②	Technical data				Heat exchanger							
	Resistor				Oil pump 400 / 690 V 50 Hz <sup>1)</sup>			Water circulation <sup>2)</sup>				
	Con- tinuous load  ⑦⑧⑨ kW	Current  A	Voltage up to ④⑤⑥ kV	Oil volume  l	Oil flow  l/min	Power  kW		Cooling water flow  l/min	Cooling water temp.  °C	Piping con- nection  inch	Pres- sure drop  bar	
<b>02</b>	50	400	10	145	96	2,2		50	20	1	0,53	
<b>04</b>	100	400	12	205	142	4,0		70	20	1 <sup>1</sup> / <sub>4</sub>	0,14	
<b>05</b>	150	630	12	355	240	7,5		120	20	1 <sup>1</sup> / <sub>2</sub>	0,18	
<b>06</b>	270	630	12	500	376	11,0		180	20	1 <sup>1</sup> / <sub>2</sub>	0,22	
<b>07</b>	400	630	24	775	648	15,0		250	20	2	0,47	
<b>08</b>	540	630	24	1080	2x376	2x11,0		2x180	20	1 <sup>1</sup> / <sub>2</sub>	0,22	
<b>09</b>	800	630	24	1600	2x648	2x15,0		2x250	20	2	0,47	

① Other voltages on request

③④⑤⑥ rated voltage

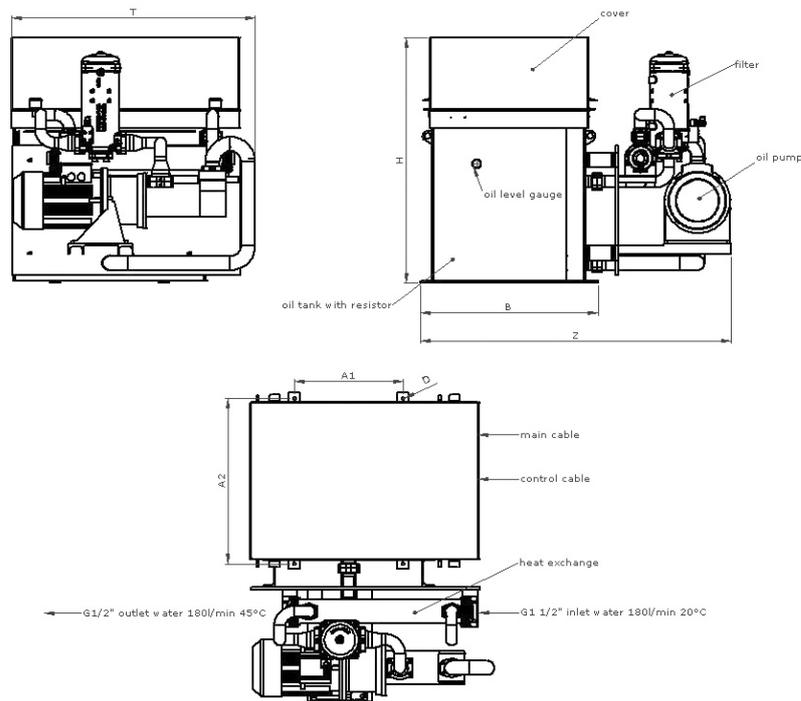
② Water quality; service water

⑦⑧⑨ rated power

Deviations of the water consumption depending on the design are possible

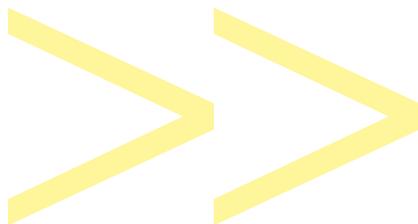
Table 6 Accessoires, order supplement Z	
<b>M30</b>	Cable cover as protection against mechanical damage of power cables
<b>M40</b>	Level control, tripping function: changeover contact wired to terminals
<b>M65</b>	Anti-condensate heating
<b>M82</b>	Terminal box for power cables
<b>M83</b>	Body insulation to reduce the touch temperature

# Dimensions and weights



## Dimensions and weights for a typical design

3PW3 Model	B	H	T	Z	A1	A2	Weight w/o oil ca. kg	Oil volume ca. l
<b>Oil cooled resistor with heat exchanger</b>								
02	560	870	1101	1060	430	510	265	165
04	560	1255	962	1160	430	510	295	225
05	836	1257	1169	1436	500	776	450	385
06	951	1327	1221	1662	580	891	530	550
07	1048	1600	1221	1750	640	988	790	825
08	1048	1630	1641	2500	820	988	1120	1180
09	1118	1940	1706	2518	860	1058	1550	1700



**GINO AG**  
**Elektrotechnische Fabrik**  
 Friedrich-Wöhler-Str. 65  
 D-53117 Bonn

Telefon: +49 228 98 98 6-0  
 Fax: +49 228 98 98 6-34

[info@gino.de](mailto:info@gino.de) | [www.gino.de/en](http://www.gino.de/en)

