



# HenaLine

Complete range of single-stage rotary vane pumps in various designs for low and medium vacuum applications. Robust. Flexible. High performance.

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## HenaLine

The HenaLine is a complete series of oil-sealed rotary vane pumps that are suitable for industrial applications, coating as well as for Research & Development. The exhaust air remains clean and oil-free thanks to the built-in oil mist separator. The HenaLine pumps are available with a pumping speed of 25 to 760 m<sup>3</sup>/h.

The HenaLine is available in different versions:

**Basic version:** It is characterized by the use of extremely robust slides and bearings, which guarantee maximum availability and operational safety.

**K version:** The pumping station version of the HenaLine. It has a special inlet flange and base frame so that OktaLine or HiLobe Roots pumps can be mounted directly on the Hena.

## What are the advantages?

Whether as a single pump or as a backing pump for our OktaLine and HiLobe in medium vacuum applications: The HenaLine stands for maximum flexibility and cost-efficiency at all times. As a backing pump in our CombiLine Roots pumping stations, it is the ideal solution for your applications in metallurgy, helium leak detection or vacuum drying and degassing.

## Efficient

Hena 202 and 302, in particular, are designed to be extremely efficient. They are characterized by a 20% lower power consumption compared to comparable products. Thanks to the optional water cooling, up to 50% of the waste heat can be used as process or heating energy. This also reduces the CO<sub>2</sub> emissions of the overall system.

## Safe

Oil mist separators, oil return and safety valve are integrated as standard in this series. They prevent pollution of the ambient air and protect both the pump and your system. The gas ballast device also ensures the pumping of water vapor and other process vapors. The HenaLine delivers top performance in every way!

## Customer benefits

- Clean exhaust air through the integrated oil mist separator with unparalleled high separation
- High energy efficiency thanks to intelligent design and optional energy recovery through cooling water
- Maximum reliability as well as process reliability thanks to oil-lubricated roller bearings and robust gate valves
- Worldwide network coverage with only two motor variants due to specially developed OEM motors
- Low maintenance costs thanks to direct drive and long oil change intervals



### Applications

#### Industry

- Electron beam welding
- Lithium ion batteries
- Surface coating
- Vacuum drying and degassing
- Leak detection
- Metallurgy
- Gas recovery
- Locks/transfer chambers
- General process technology

#### Research & Development

- Simulation chambers (air conditioning & refrigeration technology, aerospace)

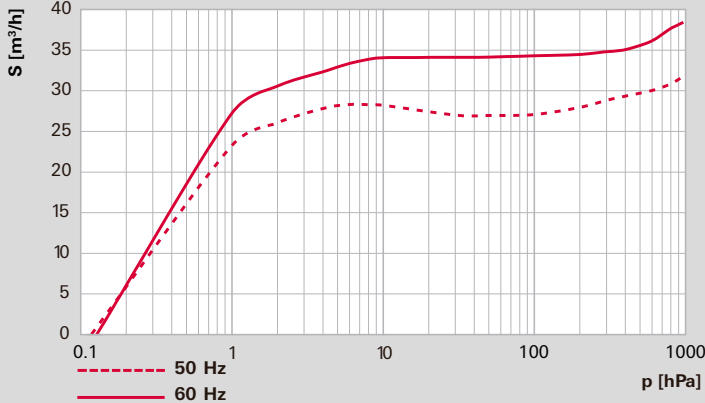
#### Coating

- Optical coating
- Wear protection

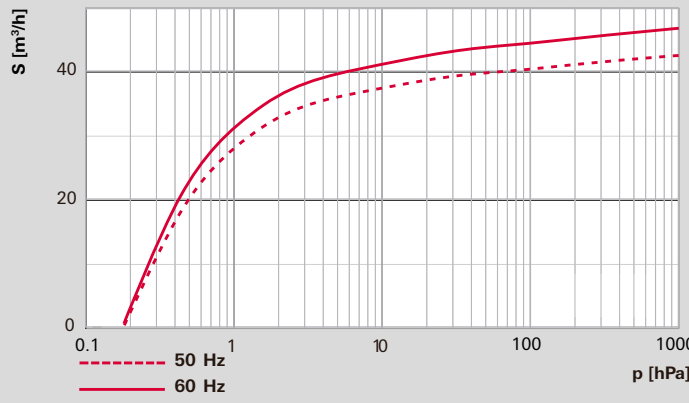
# HenaLine

## Nominal pumping speed

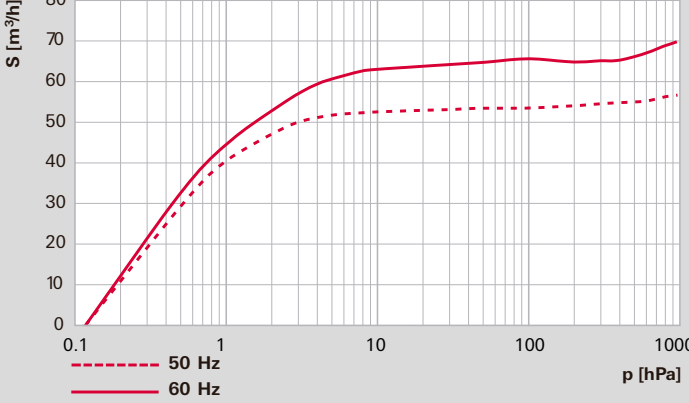
Hena 26



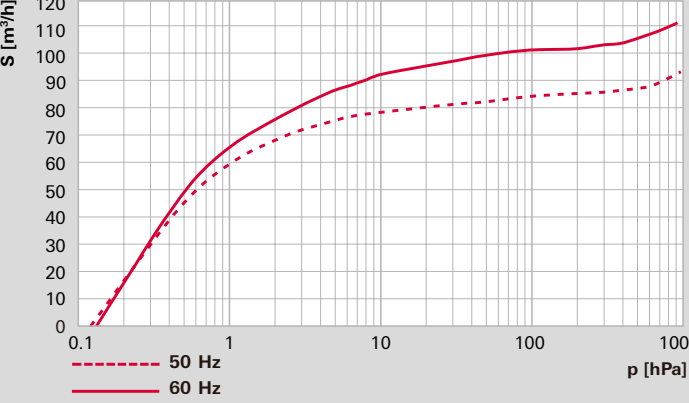
Hena 41



Hena 61



Hena 101



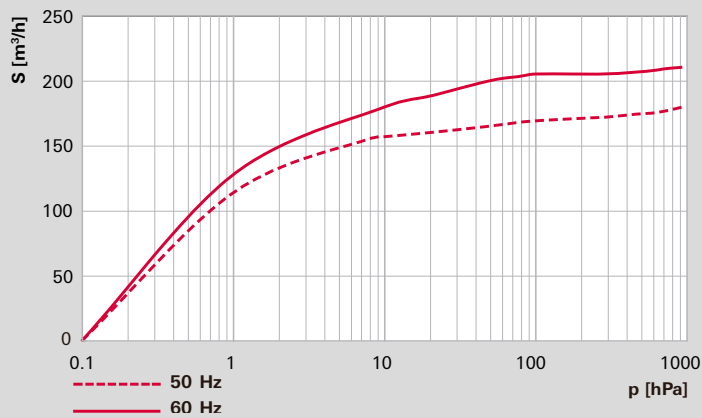


Carbide tool (turning tool), manufactured by sintering

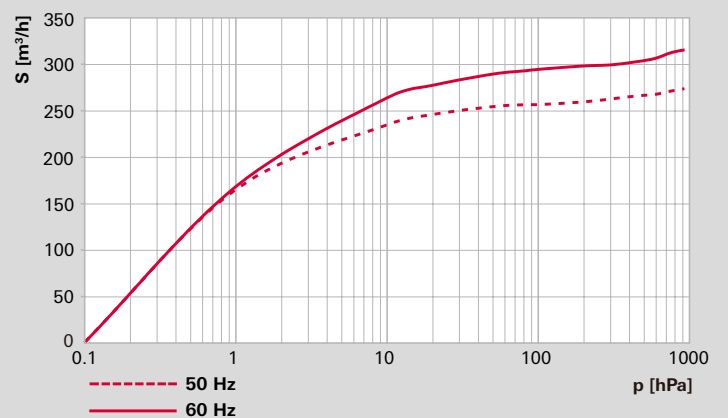


Leak detection

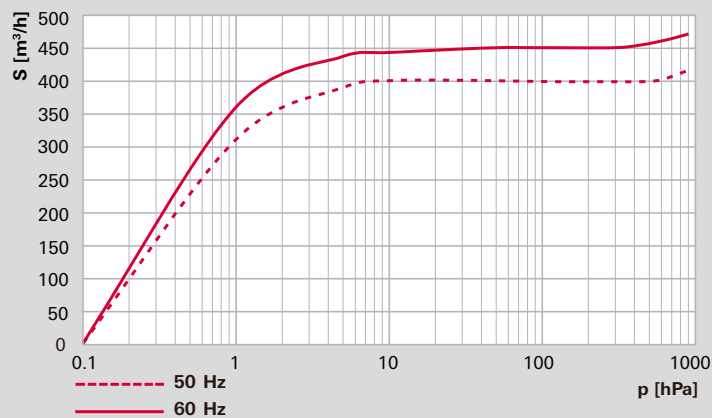
Hena 201 R / Hena 202 / Hena 202 K



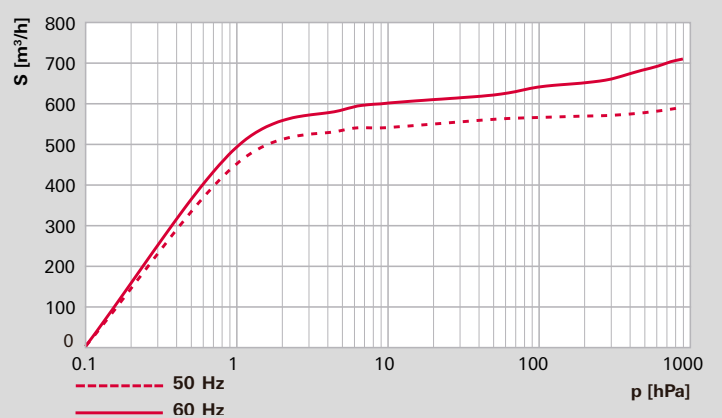
Hena 301 R / Hena 302 / Hena 302 K



Hena 401 / Hena 401 K



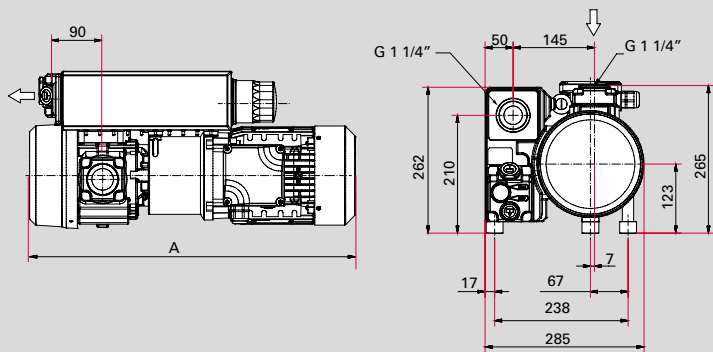
Hena 631 / Hena 631 K



# HenaLine

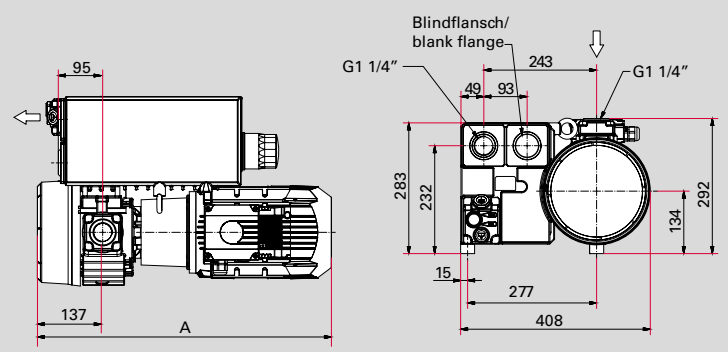
## Dimensions

Hena 26 / Hena 41



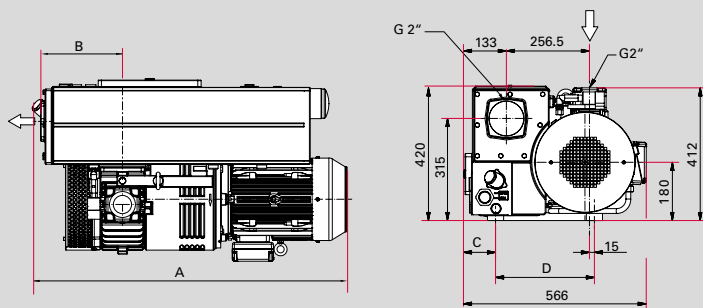
	Hena 26	Hena 41
A	589	629

Hena 61 / Hena 101



	Hena 61	Hena 101
A	633	695

Hena 201 R / Hena 301 R



	Hena 201 R	Hena 301 R
A	974	1075
B	253	298
C	99	49
D	253	298

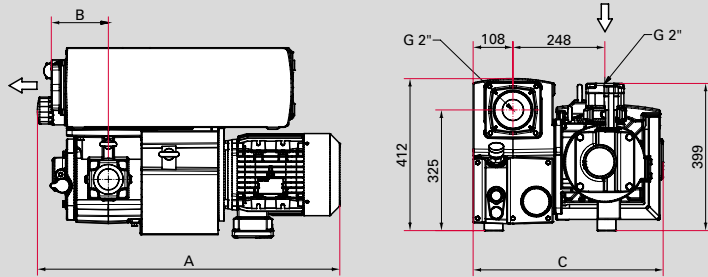


Optical coating



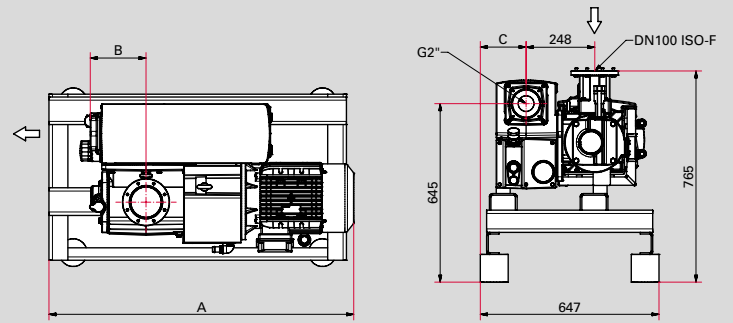
Wear protection

Hena 202 / Hena 302



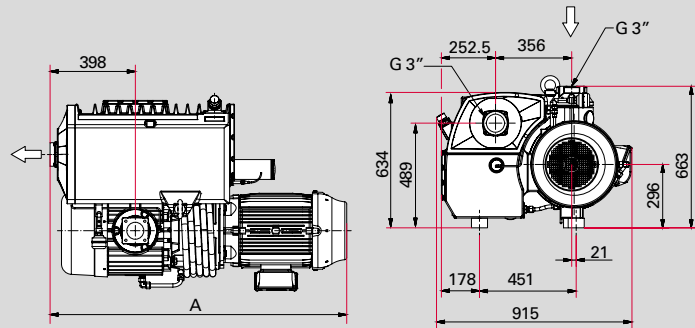
	Hena 202	Hena 302
A	817	990
B	153	201
C	514	537

Hena 202 K / Hena 302 K



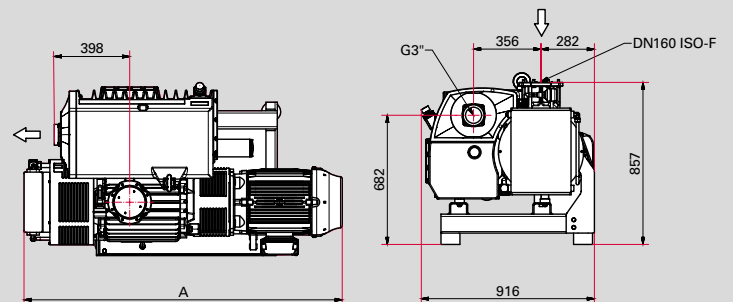
	Hena 202 K	Hena 302 K
A	1076	1102
B	153	201
C	135	165

Hena 401 / Hena 631



	Hena 401	Hena 631
A	1387	1684

Hena 401 K / Hena 631 K



	Hena 401 K	Hena 631 K
A	1387	1682

Dimensions in mm

# HenaLine

## Technical data

	Hena 26	Hena 41	Hena 61	Hena 101	Hena 201 R
Nominal pumping speed 50 Hz	25 m <sup>3</sup> /h	40 m <sup>3</sup> /h	63 m <sup>3</sup> /h	100 m <sup>3</sup> /h	200 m <sup>3</sup> /h
Nominal pumping speed 60 Hz	30 m <sup>3</sup> /h	48 m <sup>3</sup> /h	76 m <sup>3</sup> /h	120 m <sup>3</sup> /h	240 m <sup>3</sup> /h
Final pressure with gas ballast (P3)	≤1.5 hPa	≤1.5 hPa	≤1.5 hPa	≤1.5 hPa	≤0.5 hPa
Final pressure without gas ballast (P3)	≤0.15 hPa	≤0.15 hPa	≤0.15 hPa	≤0.15 hPa	≤0.1 hPa
Rated power 50 Hz	1 kW	1.4 kW	2 kW	2.7 kW	5.5 kW
Rated power 60 Hz	1.2 kW	1.7 kW	2.4 kW	3.4 kW	6.6 kW
RPM at 50 Hz	1,500 min <sup>-1</sup>	1,500 min <sup>-1</sup>	1,500 min <sup>-1</sup>	1,500 min <sup>-1</sup>	1,500 min <sup>-1</sup>
RPM at 60 Hz	1,800 min <sup>-1</sup>	1,800 min <sup>-1</sup>	1,800 min <sup>-1</sup>	1,800 min <sup>-1</sup>	1,800 min <sup>-1</sup>
Gas ballast	Yes, without shut-off valve				Yes
Inlet pressure in continuous operation, max.	< 800 hPa	< 800 hPa	< 800 hPa	< 800 hPa	< 800 hPa
Emission sound pressure level without gas ballast at 50 Hz	≤ 60 dB (A)	≤ 63 dB (A)	≤ 64 dB (A)	≤ 65 dB (A)	≤ 72 dB (A)
Emission sound pressure level without gas ballast at 60 Hz	≤ 63 dB (A)	≤ 66 dB (A)	≤ 67 dB (A)	≤ 68 dB (A)	≤ 74 dB (A)
Operating fluid quantity	1 l	1 l	2 l	2 l	6.5 l



Hena 26 / Hena 41



Hena 61 / Hena 101



Hena 202 / Hena 202 K	Hena 301 R	Hena 302 / Hena 302 K	Hena 401 / Hena 401 K	Hena 631 / Hena 631 K
200 m <sup>3</sup> /h	300 m <sup>3</sup> /h	300 m <sup>3</sup> /h	410 m <sup>3</sup> /h	630 m <sup>3</sup> /h
240 m <sup>3</sup> /h	360 m <sup>3</sup> /h	360 m <sup>3</sup> /h	480 m <sup>3</sup> /h	760 m <sup>3</sup> /h
≤0.5 hPa	≤0.5 hPa	≤0.5 hPa	≤0.5 hPa	≤0.5 hPa
≤0.1 hPa	≤0.1 hPa	≤0.1 hPa	≤0.1 hPa	≤0.1 hPa
4.0 kW	7.5 kW	5.5 kW	13.5 kW	15 kW
4.2 kW	9.2 kW	6.6 kW	15 kW	18.5 kW
1,500 min <sup>-1</sup>	1,500 min <sup>-1</sup>	1,500 min <sup>-1</sup>	1,000 min <sup>-1</sup>	1,000 min <sup>-1</sup>
1,800 min <sup>-1</sup>	1,800 min <sup>-1</sup>	1,800 min <sup>-1</sup>	1,200 min <sup>-1</sup>	1,200 min <sup>-1</sup>
Yes	Yes	Yes	Yes	Yes
< 100 hPa	< 800 hPa	< 100 hPa	< 800 hPa	< 800 hPa
≤ 68 dB (A)	≤ 74 dB (A)	≤ 70 dB (A)	≤ 77 dB (A)	≤ 77 dB (A)
≤ 72 dB (A)	≤ 76 dB (A)	≤ 72 dB (A)	≤ 79 dB (A)	≤ 79 dB (A)
7 l	6.5 l	7 l	12 l	15 l



Hena 201 R / Hena 301 R



Hena 401 / Hena 631

## Order number matrix, accessories

### HenaLine order matrix

### PO number

**PK D04 XXa bcd**

Size	XX
Hena 26	10
Hena 41	11
Hena 61	12
Hena 101	13
Hena 201/202	14
Hena 301/302	16
Hena 401	17
Hena 631	18

Version	a
Standard <sup>4)</sup>	1
Rough Vacuum (R) <sup>1)</sup>	6
Combi Version (K) <sup>2)</sup>	7
No gas ballast <sup>5)</sup>	9

Cooling method	b
Air cooling	1
Water cooling <sup>2)</sup>	2

Motor	c
Three-phase world motor	1
Three-phase Brazil/Japan/Korea motor	2
NEMA Motor	3
without motor	4
Without motor, NEMA flange	5
Single-phase motor <sup>3)</sup>	6

Oil	d
D1	1
P3	2
H1	3

<sup>1)</sup> Not for Hena 201/301

<sup>2)</sup> Not available for Hena 26-101

<sup>3)</sup> Not for Hena 26

<sup>4)</sup> Open gas ballast for Hena 26 and 41

<sup>5)</sup> Only available for Hena 26 and 41

## Accessories

Type	Hena 26	Hena 41	Hena 61	Hena 101
Screw-in flange for inlet and outlet	DN 40 ISO-KF <b>PK 300 525</b>	DN 40 ISO-KF <b>PK 300 525</b>	DN 40 ISO-KF <b>PK 300 525</b>	DN 40 ISO-KF <b>PK 300 525</b>
Dust separators	SAS 40 <b>PK Z60 510</b>	SAS 40 <b>PK Z60 510</b>	SAS 40 <b>PK Z60 510</b>	SAS 40 <b>PK Z60 510</b>
Condensate separator	KAS 40 <b>PK Z10 008</b>	KAS 40 <b>PK Z10 008</b>	KAS 40 <b>PK Z10 008</b>	KAS 40 <b>PK Z10 008</b>
Manual gas ballast valve manually	–	–	<b>PK 100 150</b>	<b>PK 100 150</b>
24 V gas ballast solenoid valve	–	–	<b>PK 100 143 -U</b>	<b>PK 100 144 -U</b>
Gas ballast screw plug	–	–	<b>N 3191 431 5P</b>	<b>N 3191 431 5P</b>
Manometer for air deoiling element	<b>PK 100 126</b>	<b>PK 100 126</b>	<b>PK 100 126</b>	<b>PK 100 126</b>
PTC-resistor tripping device 24 V AC/DC	<b>P 4768 052 FE</b>	<b>P 4768 052 FE</b>	<b>P 4768 052 FE</b>	<b>P 4768 052 FE</b>
PTC-resistor tripping device 220–240V AC	<b>P 4768 052 FQ</b>	<b>P 4768 052 FQ</b>	<b>P 4768 052 FQ</b>	<b>P 4768 052 FQ</b>
Oil level switch/unit	<b>PK 100 138 -T</b>	<b>PK 100 138 -T</b>	<b>PK 100 138 -T</b>	<b>PK 100 138 -T</b>
Oil temperature switch	–	–	–	–
Oil level/temperature combination switch for operating fluid D1	–	–	–	–

Type	Hena 202 / Hena 201 R	Hena 302 / Hena 301 R	Hena 401	Hena 631
Screw-in flange for inlet and outlet	DN 63 ISO-K <b>PK 100 059</b>	DN 63 ISO-K <b>PK 100 059</b>	–	–
Screw-in flange for inlet and outlet	DN 100 ISO-K <b>PK 100 058</b>	DN 100 ISO-K <b>PK 100 058</b>	DN 100 ISO-K <b>PK 100 061</b>	DN 100 ISO-K <b>PK 100 061</b>
Dust separators	SAS 63 <b>PK Z60 511</b>	SAS 63 <b>PK Z60 511</b>	SAS 100 <b>PK Z60 512</b>	SAS 100 <b>PK Z60 512</b>
Condensate separator	KAS 63 <b>PK Z10 010</b>	KAS 63 <b>PK Z10 010</b>	KAS 100 <b>PK Z10 012</b>	KAS 100 <b>PK Z10 012</b>
Manual gas ballast valve	Series	Series	Series	Series
24 V gas ballast solenoid valve	<b>PK 100 145 -U</b>	<b>PK 100 145 -U</b>	<b>PK 100 141 -U</b>	<b>PK 100 141 -U</b>
Gas ballast screw plug	–	–	–	–
Manometer for air deoiling element	Series	Series	Series	Series
PTC-resistor tripping device 24 V AC/DC	<b>P 4768 052 FE</b>	<b>P 4768 052 FE</b>	<b>P 4768 052 FE</b>	<b>P 4768 052 FE</b>
PTC-resistor tripping device 220–240V AC	<b>P 4768 052 FQ</b>	<b>P 4768 052 FQ</b>	<b>P 4768 052 FQ</b>	<b>P 4768 052 FQ</b>
Oil level switch	<b>PK 100 116</b>	<b>PK 100 116</b>	<b>PK 100 116</b>	<b>PK 100 116</b>
Oil temperature switch	<b>PK 100 125</b>	<b>PK 100 125</b>	<b>PK 100 125</b>	<b>PK 100 125</b>
Oil level/temperature combination switch for operating fluid D1	<b>PK 100 137 -T</b>	<b>PK 100 137 -T</b>	<b>PK 100 137 -T</b>	<b>PK 100 137 -T</b>

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