

# Roots pumps

For all low and medium vacuum applications





## Features at a glance

	Connection flange (inlet)								Coating								Leak rate		Version				Page		
	DN 63	DN 100	DN 150	DN 160	DN 250	DN 300	DN 320	DN 400	250 m <sup>3</sup> /h	500 m <sup>3</sup> /h	1,000 m <sup>3</sup> /h	1,500 m <sup>3</sup> /h	2,000 m <sup>3</sup> /h	4,000 m <sup>3</sup> /h	6,000 m <sup>3</sup> /h	8,000 m <sup>3</sup> /h	18,000 m <sup>3</sup> /h	1 · 10 <sup>-2</sup> hPa l/s	1 · 10 <sup>-5</sup> hPa l/s	Standard with motor	Standard without motor	Standard with motor and magnetic coupling		ATEX with motor and magnetic coupling <sup>1)</sup>	
<b>Roots pumps</b>																									
<b>Convection-cooled OktaLine</b>																									
Okta 250	■								■									■	■	■	■	■	■	■	220
Okta 500		■								■								■	■	■	■	■	■	■	222
Okta 1000				■							■							■	■	■	■	■	■	■	224
Okta 2000				■								■						■	■	■	■	■	■	■	226
Okta 4000					■								■					■	■	■	■	■	■	■	228
Okta 6000					■									■				■	■	■	■	■	■	■	230
Okta 8000						■										■		■	■	■	■	■	■	■	232
Okta 18000								■ <sup>2)</sup>									■	■	■	■	■	■	■	■	234
<b>Gas-circulation-cooled OktaLine G</b>																									
Okta 500 G		■								■								■	■	■	■	■	■	■	236
Okta 1500 G				■							■							■	■	■	■	■	■	■	238
Okta 4000 G					■							■						■	■	■	■	■	■	■	240
Okta 8000 G						■									■			■	■	■	■	■	■	■	242
<b>OktaLine ATEX</b>																									
Okta 500 ATEX		■ <sup>3)</sup>								■								■	■	■	■	■	■	■	244
Okta 1000 ATEX			■ <sup>3)</sup>								■							■	■	■	■	■	■	■	246
Okta 2000 ATEX			■ <sup>3)</sup>									■						■	■	■	■	■	■	■	248
Okta 4000 ATEX				■ <sup>3)</sup>									■					■	■	■	■	■	■	■	250

<sup>1)</sup> With blocked overflow valve, ATEX in accordance with directive 94/ EC: group II, device category 3G, IIB, temperature class T3 X for ambient temperatures of + 5 °C to + 40 °C

<sup>2)</sup> PN 10

<sup>3)</sup> PN 16

## Okta 250



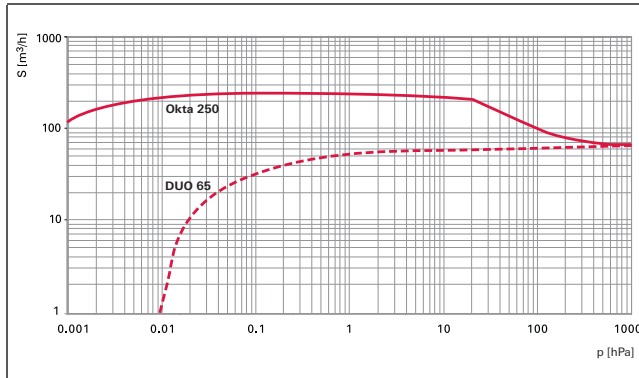
### Roots pumps with a pumping speed from 145 to 440 m³/h:

- High-performance Roots pump with a pumping speed of 145 to 440 m³/h
- With 3-phase motor, IE2
- No thermal overload thanks to integral overflow valve
- For applications in the low and medium vacuum

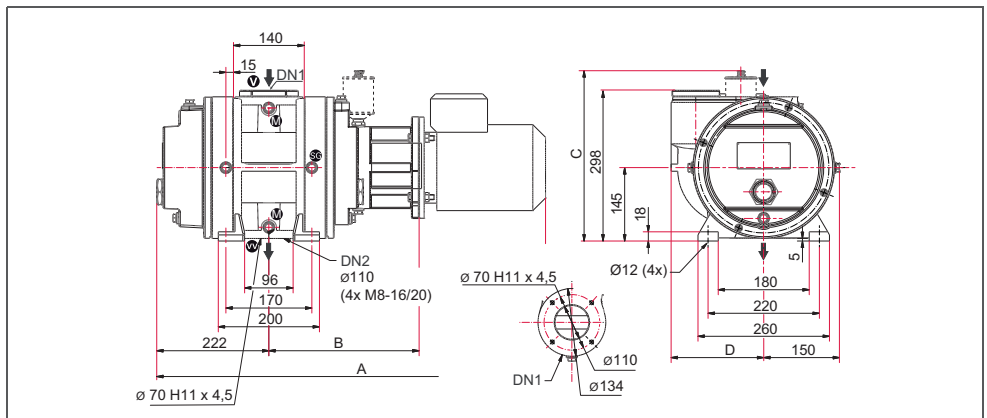
Okta = Standard pumps with radial shaft sealing rings, housing parts made of gray cast iron or nodular graphite cast iron, flange connection in accordance with ISO-F

Okta M = Standard pumps, hermetically sealed thanks to magnetic coupling, housing parts made of gray cast iron nodular graphite cast iron, flange connection in accordance with ISO-F

### Pumping speed



### Dimensions (in mm)



	Okta 250, Roots pump, 230/400 V, 50 Hz; 265/460 V, 60 Hz	Okta 250, Roots pump without motor	Okta 250 M, Roots pump, 230/400 V, 50 Hz; 265/460 V, 60 Hz
A	769 mm	-	799 mm
B	297 mm	297 mm	327 mm
C	337 mm	337 mm	298 mm
D	183 mm	183 mm	183 mm
<b>Connections</b>			
DN 1	DN 63 ISO-F	DN 63 ISO-F	DN 63 ISO-F
DN 2	DN 63 ISO-F	DN 63 ISO-F	DN 63 ISO-F

Technical data	Okta 250, Roots pump, 230/400 V, 50 Hz; 265/460 V, 60 Hz	Okta 250, Roots pump without motor	Okta 250 M, Roots pump, 230/400 V, 50 Hz; 265/460 V, 60 Hz
Flange (out)	DN 63 ISO-F	DN 63 ISO-F	DN 63 ISO-F
Flange (in)	DN 63 ISO-F	DN 63 ISO-F	DN 63 ISO-F
Version	Standard with motor	Standard without motor	Standard with motor and magnetic coupling
Operating fluid	P3	P3	P3
Operating fluid filling	1.5 l	1.5 l	1.5 l
Differential pressure at the overflow valve	75 hPa	75 hPa	75 hPa
Rotation speed	from 1500 to 4500 min <sup>-1</sup>	from 1500 to 4500 min <sup>-1</sup>	from 1500 to 4500 min <sup>-1</sup>
Rotation speed max.	4500 min <sup>-1</sup>	4500 min <sup>-1</sup>	4500 min <sup>-1</sup>
Rotation speed min.	1500 min <sup>-1</sup>	1500 min <sup>-1</sup>	1500 min <sup>-1</sup>
Emission sound pressure level (EN ISO 2151) at intake pressure 10 hPa	75 dB (A)	75 dB (A)	75 dB (A)
Emission sound pressure level (EN ISO 2151) at intake pressure 1 hPa	70 dB (A)	70 dB (A)	70 dB (A)
Weight: with motor	95 kg		122 kg
Weight: without motor		85 kg	
Cooling method, standard	Air	Air	Air
Leak rate	1 · 10 <sup>-3</sup> Pa m <sup>3</sup> /s	1 · 10 <sup>-3</sup> Pa m <sup>3</sup> /s	1 · 10 <sup>-6</sup> Pa m <sup>3</sup> /s
Motor protection	3TF		3TF
Nominal rotation speed at 50 Hz	3000 min <sup>-1</sup>	3000 min <sup>-1</sup>	3000 min <sup>-1</sup>
Nominal rotation speed at 60 Hz	3600 min <sup>-1</sup>	3600 min <sup>-1</sup>	3600 min <sup>-1</sup>
Rated power 50 Hz	0.75 kW		0.75 kW
Rated power 60 Hz	0.90 kW		0.90 kW
Nominal pumping speed	145-440 m <sup>3</sup> /h	145-440 m <sup>3</sup> /h	145-440 m <sup>3</sup> /h
Nominal pumping speed at 50 Hz	290 m <sup>3</sup> /h	290 m <sup>3</sup> /h	290 m <sup>3</sup> /h
Nominal pumping speed at 60 Hz	350 m <sup>3</sup> /h	350 m <sup>3</sup> /h	350 m <sup>3</sup> /h
Mains requirement: voltage 50 Hz	230/400 V		230/400 V
Mains requirement: voltage 60 Hz	265/460 V		265/460 V
Protection category	IP 55	IP 55	IP 55
Ambient temperature	5-40 °C	5-40 °C	5-40 °C

Order number			
Okta 250	PP W21 000	PP W21 001	PP W22 000

Accessories			
Splinter shield for Okta 250 / 250 M	PK 300 010 -X	PK 300 010 -X	PK 300 010 -X