

**Customer**

**Supplier**

Company name  
Editor  
Phone number  
E-mail

**Fields of Application**

Water supply systems.  
Booster sets in high rise buildings and industry.  
Water treatment.  
Industrial washdown systems.  
Fire extinguishing plants.  
Boiler feed and condensate transfer.  
Sanitary and cleaning installations.  
For industrial applications and public services.  
Water distribution services.  
Industrial applications.  
Shipbuilding, mining, power stations, filter units.  
Irrigation plants.  
Central heating systems.



**Design Specification**

The OMK Pump is a horizontal axis, radially split, ring section design multistage centrifugal pump of non-self priming type.

Impellers are between bearings, single entry, closed type and dynamically balanced. Impeller diameter will be corrected for optimal adherence to the required duty point.

The axial thrust is relieved by relieving boreholes in each impeller. The remaining thrust can be borne by large-sized bearings.

Pumps with exchangeable wear rings are available upon request.

The pump series consists of 5 sizes. OMK 32, 40, 50, 65 and 80. Stages are from 2 up to max. 14 stages.

Pump and motor are fitted on a common base plate and connected to each other via flexible coupling.

Normally, discharge part is at motor side on top, suction part is at dead end side on the right and rotation of direction is clockwise when viewed from driver.

Suction and discharge nozzles may be a choice of three 90° positions. By special request, it is possible to put the suction nozzle at the motor side. In this arrangement pump and motor rotation must be counter clockwise.

**Technical Data**

Suction Flanges	: DN50 - DN125 (PN25)
Discharge Flanges	: DN32 - DN80 (PN40)
Operating Pressure	: 40 bar
Flow Range	: 5 - 220 m <sup>3</sup> /h
Head Range	: 30 - 400 m
Temperature Range	: Up to 140 °C
Speed Range	: 1450 - 3600 rpm

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**Operating data specification**

Pumped fluid	Water		Rated flow		m <sup>3</sup> /h
Solids			Rated head		m
Kind			Geodetic head		m
Percentage of solid content	0		Available system NPSH		m
pH value			Inlet pressure (pin)	0	kPa
Temperature	20	°C	Altitude above sea level	100	m
Density	998.3	kg/m <sup>3</sup>	Max. operating pressure	2100	kPa
Kin. viscosity	1.005	mm <sup>2</sup> /s	Max. diff. pressure	2100	kPa
Vapour pressure	2.34	kPa			

**Pump**

Make	MAS DAF		Impeller type		
Pump type	OMK 40/ 7		Impeller construction		
Frame size			Impeller Ø		
Design			Max.	160	mm
Self priming	<input checked="" type="checkbox"/> No		designed	145	mm
Speed	2940	rpm	Min.	130	mm
Stages	7		Flow		
Suction port			Nominal	26.8	m <sup>3</sup> /h
Pressure rating	PN25		Max.	40	m <sup>3</sup> /h
Nominal pipe size	DN65		Min.	0	m <sup>3</sup> /h
Standard	DIN		Head		
Discharge port			Nominal	174	m
Pressure rating	PN40		Min.	118	m
Nominal pipe size	DN40		Max.	214	m
Standard	DIN		Shut off head	214	m
Shaft power		kW	NPSH3		m
Shaft power P2(Q=max.)	24.6	kW	Efficiency		%

**Motor**

Make/Type	22 KW-2900 RPM / 180M	
Specific design	IE3 / 50 Hz / Pole pairs 1	
Rated power	22	kW
Electric voltage	3~ 400	V
Speed	2950	rpm
Electric current	38	A
Frame size	180M	
Degree of protection	IP 55	
Type of protection		
Explosion protection		

**Coupling**

Make/Type	
Series	
Spacer length	mm
Frame size	

**Materials**

Pump		Shaft seal	Soft Packing
Pump Casing	GJL-250 (GG25)	Material code	
Impeller	GJL-250 (GG25)		
Shaft	A 276 Type 420 (X20Cr13)		
Bearing Housing	GJL-250 (GG25)		

Customer

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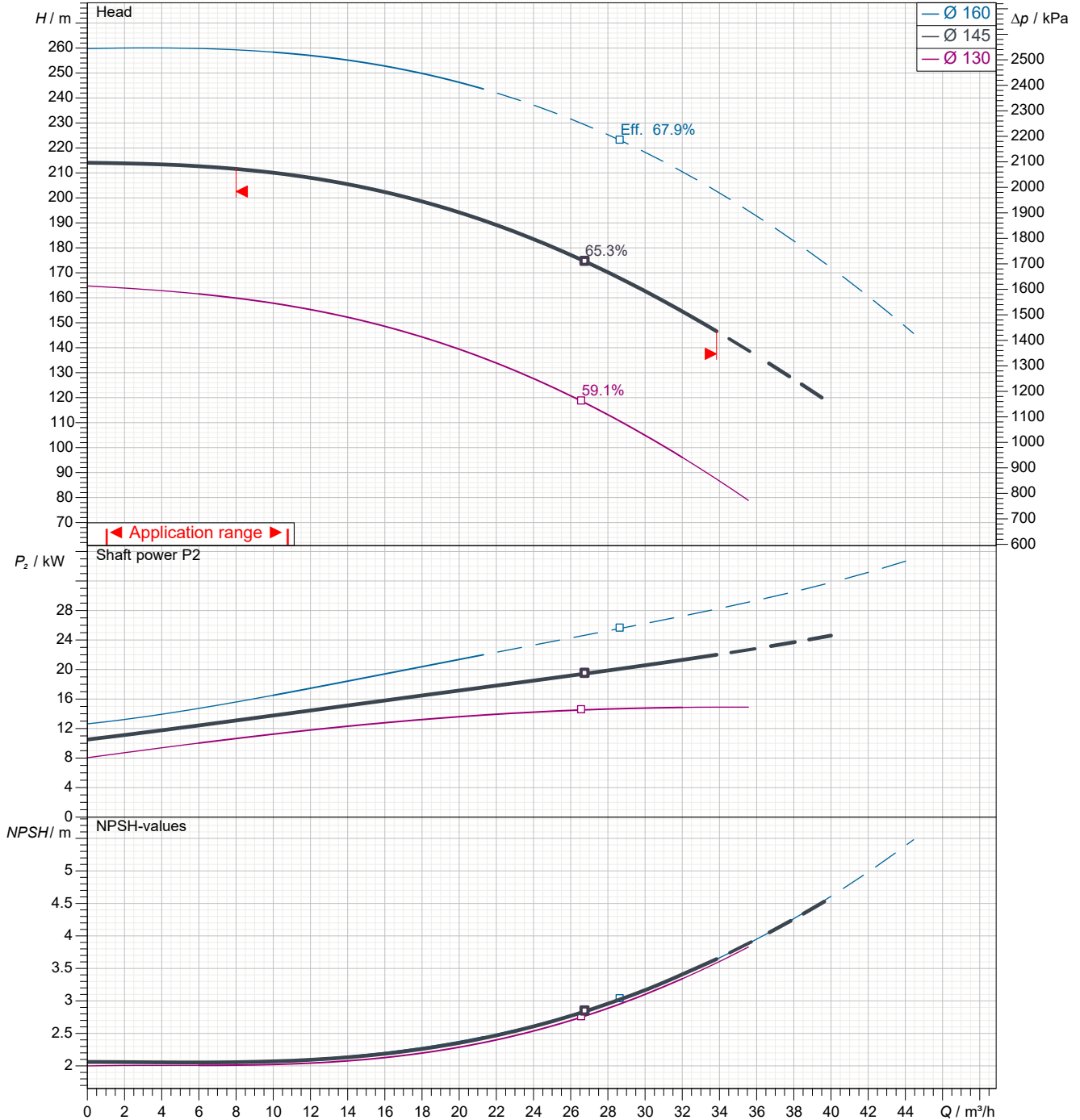
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Power data referred to:

 Water; 20°C; 998.3kg/m<sup>3</sup>; 1.005mm<sup>2</sup>/s

Sense of rotation

Clockwise from the drive end



Pump curves in accordance with ISO 9906 2B

Pumped fluid	Water		Rated flow	m <sup>3</sup> /h
Temperature	20	°C	Rated head	m
Density	998.3	kg/m <sup>3</sup>	Shaft power	kW
Kin. viscosity	1.005	mm <sup>2</sup> /s	Speed	2940 rpm
Vapour pressure	2.34	kPa	NPSH3	m
Impeller Ø	145	mm	Efficiency	%

Subject to change

Projec

Issue date

Last update

2023-07-29

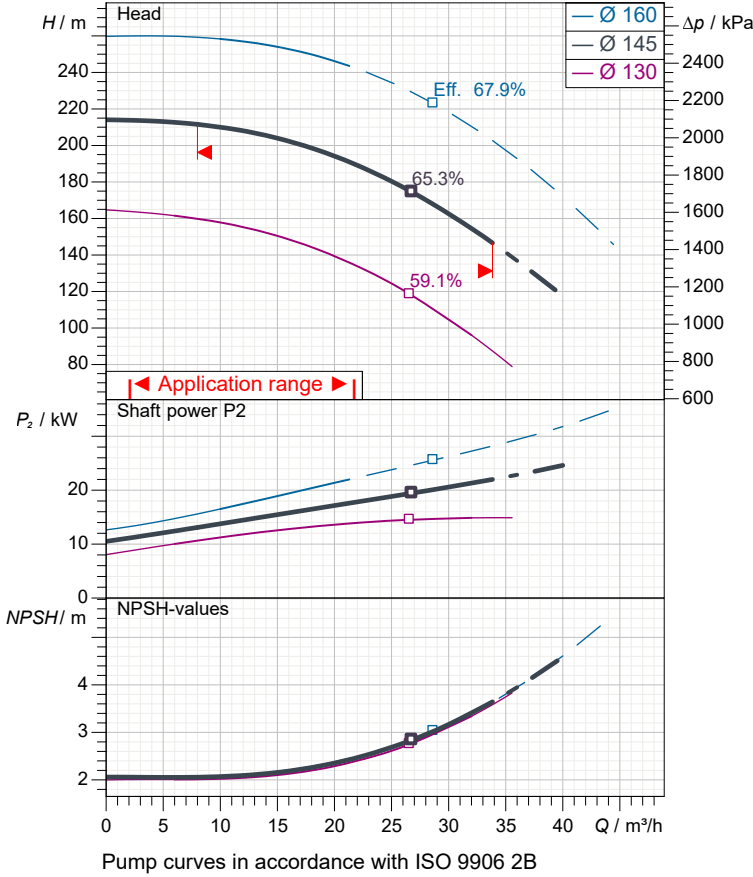
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**Performance curves**



**Pump**

Make	MAS DAF
Pump type	OMK 40/ 7
Design	
Suction port	
Pressure rating	PN25
Nominal pipe size	DN65
Standard	DIN
Discharge port	
Pressure rating	PN40
Nominal pipe size	DN40
Standard	DIN

**Operating data specification**

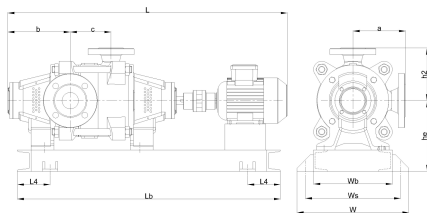
Pumped fluid	Water	
Temperature	20	°C
Density	998.3	kg/m <sup>3</sup>
Kin. viscosity	1.005	mm <sup>2</sup> /s
Vapour pressure	2.34	kPa
Rated flow		m <sup>3</sup> /h
Rated head		m
Shaft power		kW
Speed	2940	rpm
NPSH3		m
Efficiency		%
Impeller Ø	145	mm

**Motor**

Make/Type	22 KW-2900 RPM / 180M
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	22 kW
Speed	2950 rpm
Electric voltage	3~ 400 V
Electric current	38 A
Degree of protection	IP 55

**Materials**

Shaft seal	Soft Packing
Material code	



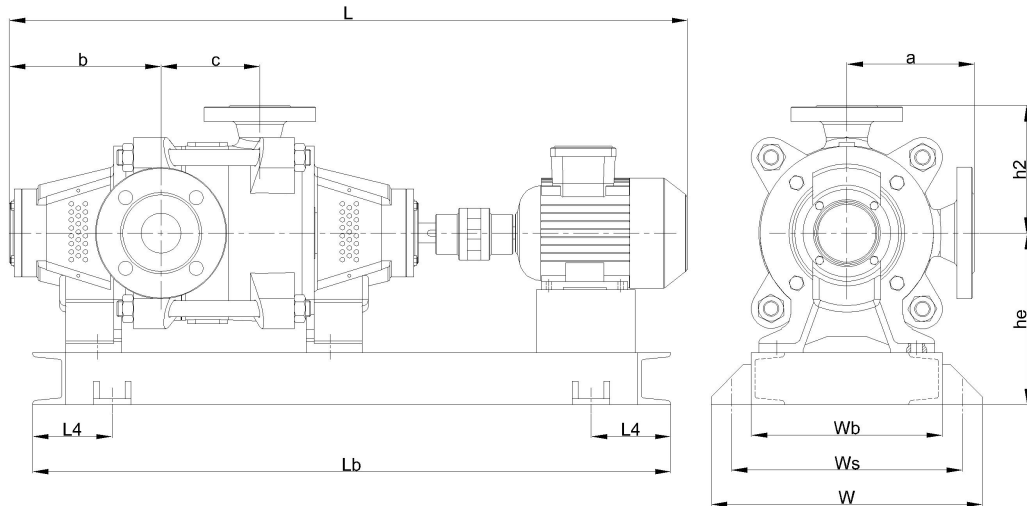
Dimensions	mm
a	180
b	196
c	423
h2	180
he	240
L	1576
L4	200
Lb	1500
w	440
wb	340
ws	390

Pump Casing	GJL-250 (GG25)
Impeller	GJL-250 (GG25)
Shaft	A 276 Type 420 (X20Cr13)
Bearing Housing	GJL-250 (GG25)

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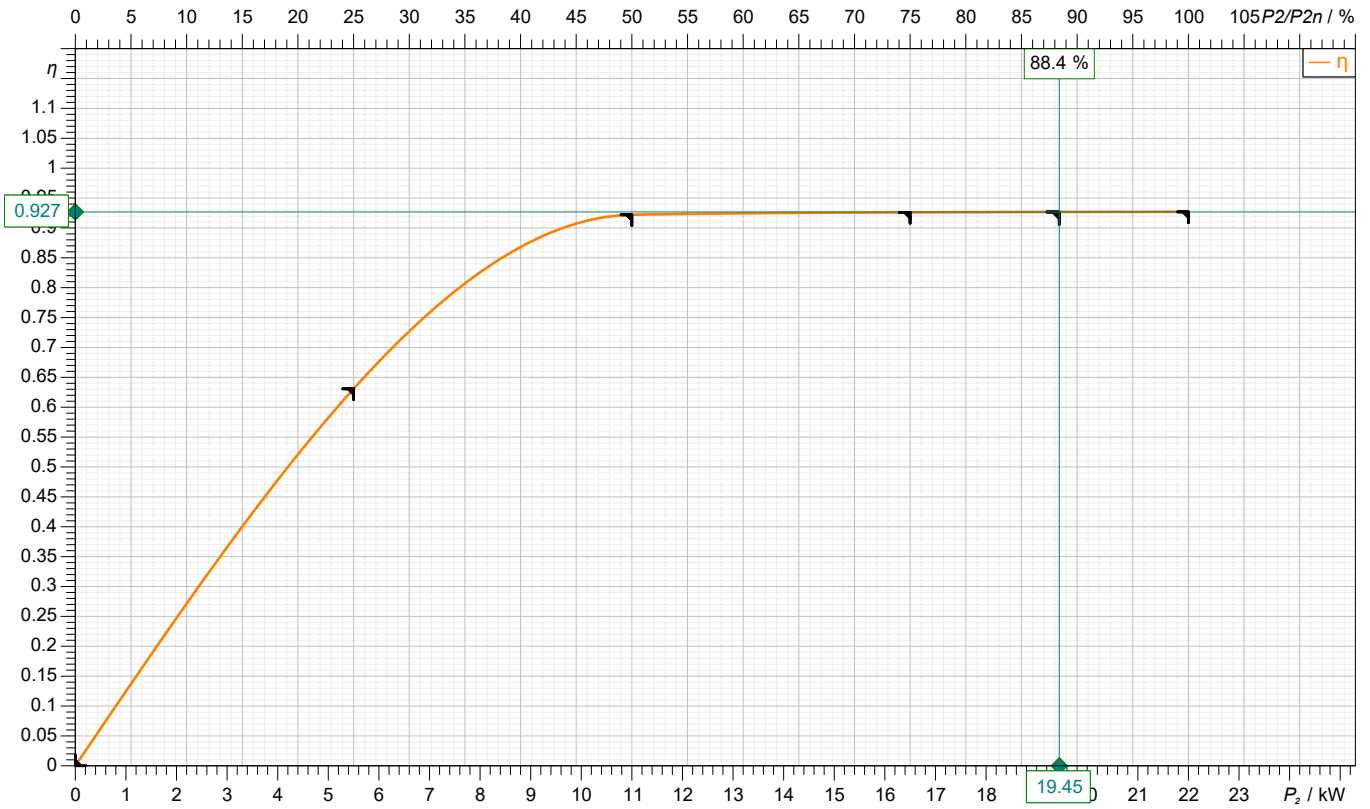
Dimensions	mm	Inlet / outlet	
a	180	Suction port	Discharge port
b	196	DN65	DN40
c	423	PN25	PN40
h2	180		
he	240		
L	1576		
L4	200		
Lb	1500		
w	440		
wb	340		
ws	390		

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**motor data**



Symbol	No load	25 %	50 %	75 %	100 %	125 %
$P_2$ / kW	0	5.5	11	16.5	22	
$P_i$ / kW		8.717	11.93	17.82	23.73	
$\eta$ / %	0	63.09	92.2	92.6	92.7	

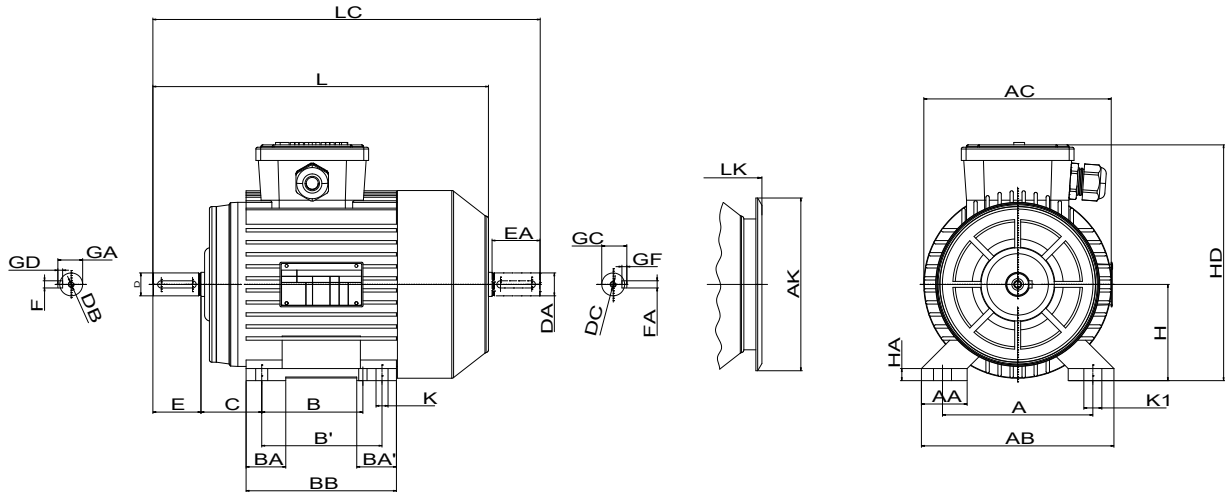
**Motor**

Make/Type	22 KW-2900 RPM / 180M	Degree of protection	IP 55
Specific design	IE3 / 50 Hz / Pole pairs 1	Type of protection	
Rated power	22 kW	Explosion protection	
Electric voltage	3~ 400 V	Service factor	1.15
Number of poles	2	Starting current	
Speed	2950 rpm	Starting torque	
Electric current	38 A	Moment of inertia	
Power factor	0.9	No. starts per hour	
Frame size	180M	Rated torque	71.2 Nm
Efficiency class	IE3	Insulation class	F (155C°)

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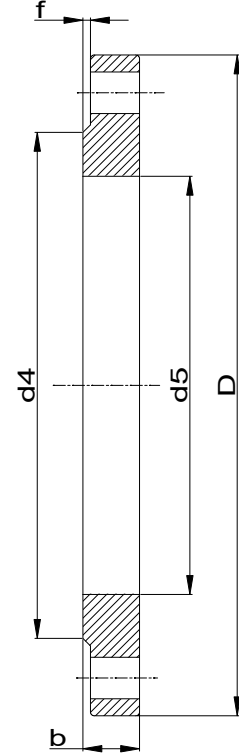
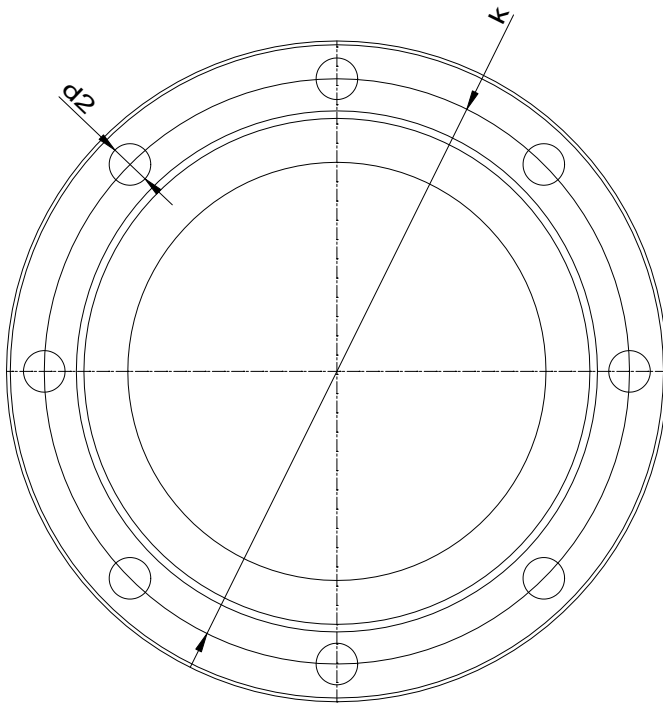


Dimensions	mm		
A	279	E	110
AA	68	EA	110
AB	354	FxGF	14X9
AC	348	FxGD	14X9
AK	303	GA	51.5
B	241	GC	51.5
B'	279	H	180
BA	57	HA	24
BA'	85	HD	421
BB	319	K	15
C	121	L	657
D	48	LC	773
DA	48	LK	714
DB	M16		
DC	M16		

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**Suction connection**

DN65  
PN25

**Discharge connection**

DN40  
PN40

Dimensions	mm
b	22
D	185
d2	18
d4	122
d5	77.5
DN	65
f	2
k	145
n	8

Dimensions	mm
b	18
D	150
d2	18
d4	88
d5	49.5
DN	40
f	2
k	110
n	4





**Spare part list**  
OMK 40/ 7

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