

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 ³ /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	47	m ³ /h
Solids			Rated head	211	m
Kind			Geodetic head	0	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 ³	Max. operating pressure	2380	kPa
Kin. viscosity	1.005	mm ² /s	Max. diff. pressure	2380	kPa
Vapour pressure	2.34	kPa			

Pump

Make	MAS DAF		Impeller type		
Pump type	OMK 50/ 5		Impeller construction		
Frame size			Impeller Ø		
Design			Max.	190	mm
Self priming	<input checked="" type="checkbox"/> No		designed	178	mm
Speed	2950	rpm	Min.	155	mm
Stages	5		Flow		
Suction port			Nominal	53.8	m ³ /h
Pressure rating	PN25		Max.	65.6	m ³ /h
Nominal pipe size	DN80		Min.	0	m ³ /h
Standard	DIN		Head		
Discharge port			Nominal	200	m
Pressure rating	PN40		Min.	178	m
Nominal pipe size	DN50		Max.	243	m
Standard	DIN		Shut off head	243	m
Shaft power	38.7	kW	NPSH3	2.91	m
Shaft power P2(Q=max.)	46.5	kW	Efficiency	69.6	%

Motor

Make/Type	45 KW-2900 RPM / 225M
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	45 kW
Electric voltage	3~ 400 V
Speed	2975 rpm
Electric current	77 A
Frame size	225M
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)		

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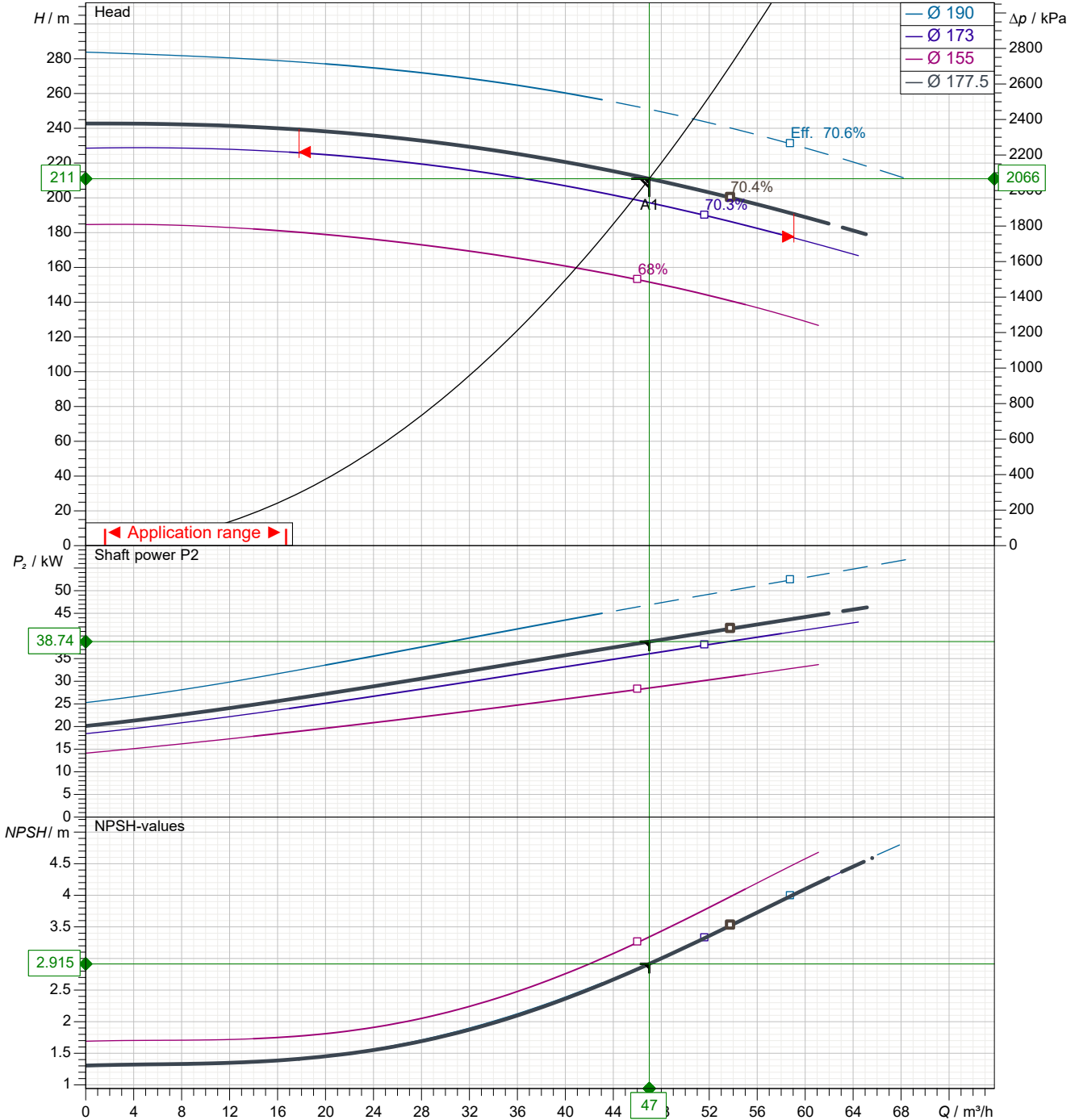
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Power data referred to:

 Water; 20°C; 998.3kg/m³; 1.005mm²/s

Sense of rotation

Clockwise from the drive end



Pump curves in accordance with ISO 9906 2B

Pumped fluid	Water	Rated flow	47	m ³ /h
Temperature	20 °C	Rated head	211	m
Density	998.3 kg/m ³	Shaft power	38.7	kW
Kin. viscosity	1.005 mm ² /s	Speed	2950	rpm
Vapour pressure	2.34 kPa	NPSH3	2.91	m
Impeller \varnothing	178 mm	Efficiency	69.6	%

Subject to change

Projec

Issue date

2023-07-26

Last update

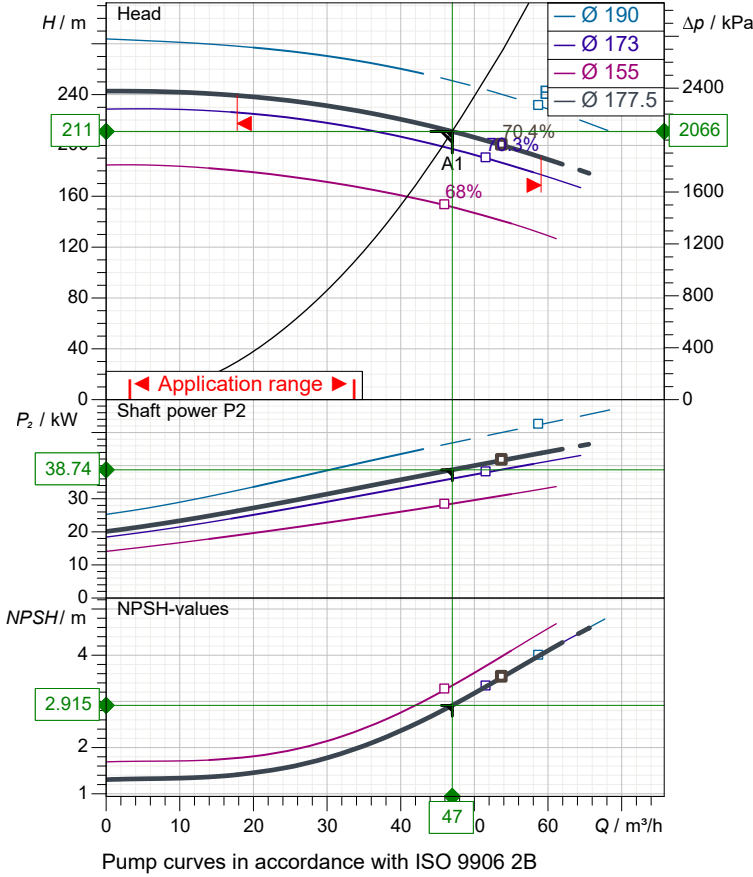
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Performance curves



Pump

Make	MAS DAF
Pump type	OMK 50/ 5
Design	
Suction port	
Pressure rating	PN25
Nominal pipe size	DN80
Standard	DIN
Discharge port	
Pressure rating	PN40
Nominal pipe size	DN50
Standard	DIN

Operating data specification

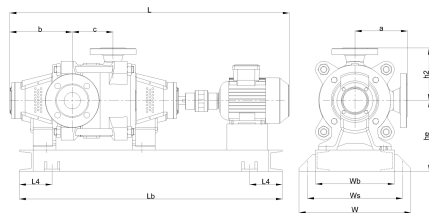
Pumped fluid	Water	
Temperature	20	°C
Density	998.3	kg/m ³
Kin. viscosity	1.005	mm ² /s
Vapour pressure	2.34	kPa
Rated flow	47	m ³ /h
Rated head	211	m
Shaft power	38.7	kW
Speed	2950	rpm
NPSH3	2.91	m
Efficiency	69.6	%
Impeller Ø	178	mm

Motor

Make/Type	45 KW-2900 RPM / 225M
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	45 kW
Speed	2975 rpm
Electric voltage	3~ 400 V
Electric current	77 A
Degree of protection	IP 55

Materials

Shaft seal	Soft Packing
Material code	



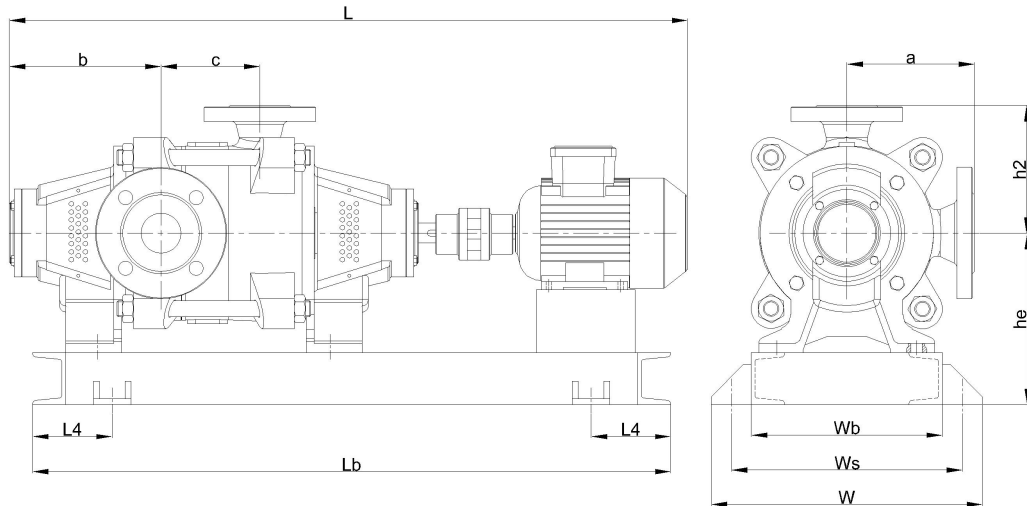
Dimensions	mm
a	210
b	223
c	422
h2	210
he	345
L	1778
L4	300
Lb	1650
w	600
wb	480
ws	540

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

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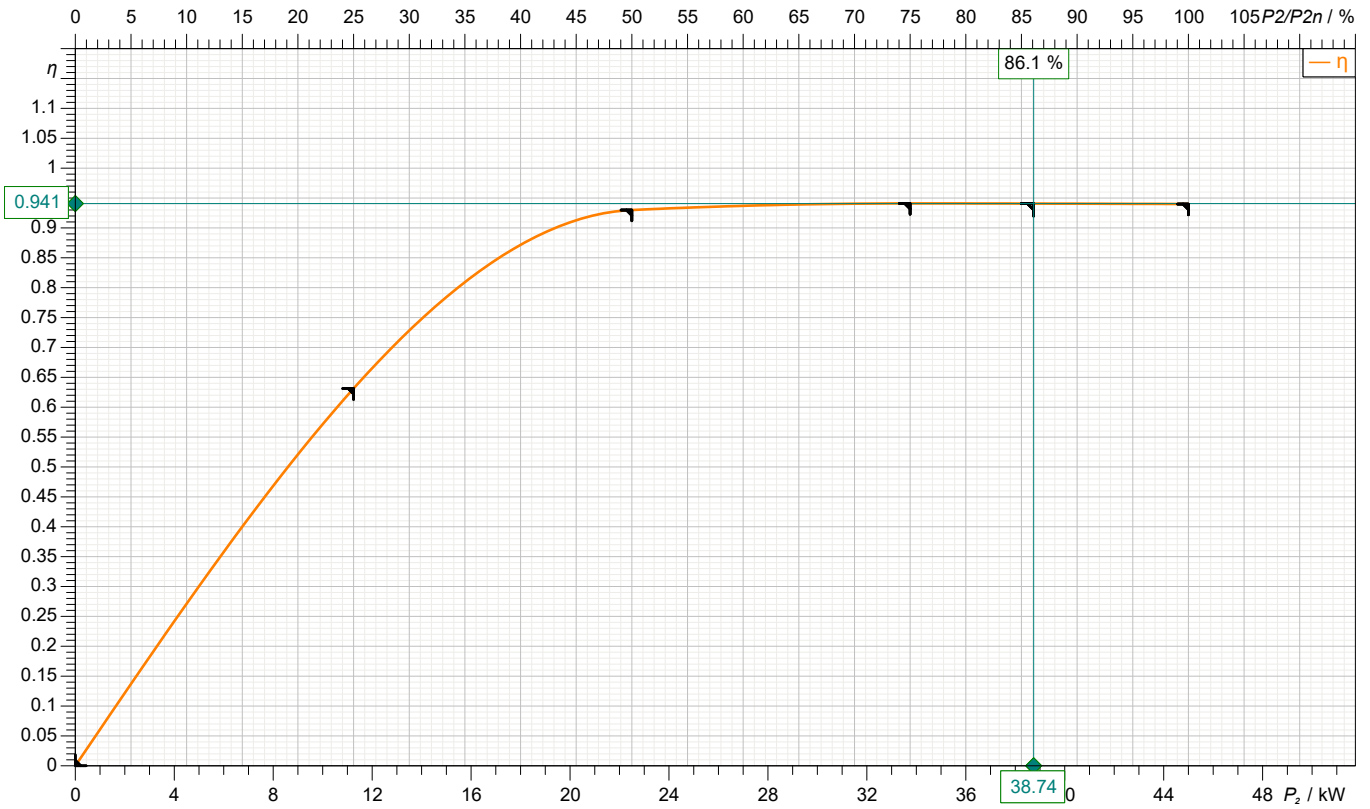
Dimensions	mm	Inlet / outlet	
a	210	Suction port	Discharge port
b	223	DN80	DN50
c	422	PN25	PN40
h2	210		
he	345		
L	1778		
L4	300		
Lb	1650		
w	600		
wb	480		
ws	540		

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motor data



Symbol	No load	25 %	50 %	75 %	100 %	125 %
P ₂ / kW	0	11.25	22.5	33.75	45	
P ₁ / kW		17.82	24.19	35.87	47.87	
η / %	0	63.13	93	94.1	94	

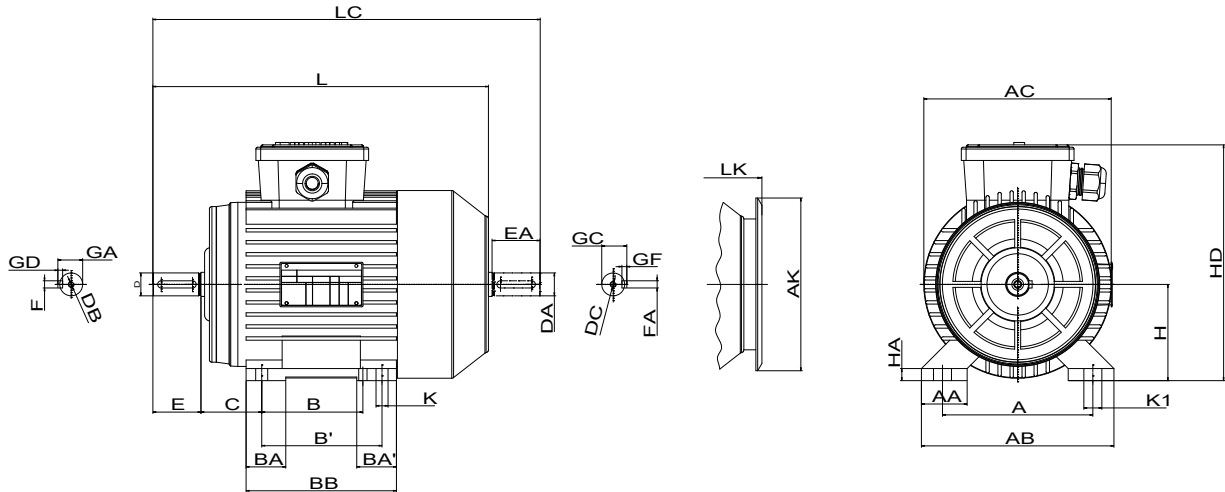
Motor

Make/Type	45 KW-2900 RPM / 225M	Degree of protection	IP 55
Specific design	IE3 / 50 Hz / Pole pairs 1	Type of protection	
Rated power	45 kW	Explosion protection	
Electric voltage	3~ 400 V	Service factor	1.15
Number of poles	2	Starting current	
Speed	2975 rpm	Starting torque	
Electric current	77 A	Moment of inertia	
Power factor	0.91	No. starts per hour	
Frame size	225M	Rated torque	144 Nm
Efficiency class	IE3	Insulation class	F (155C°)

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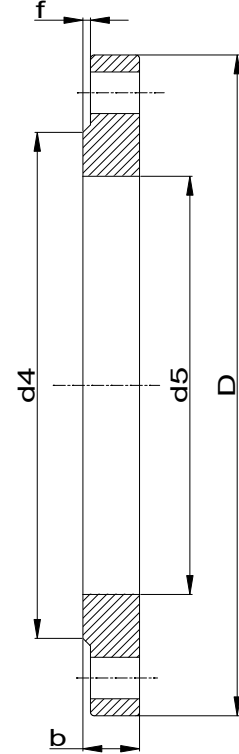
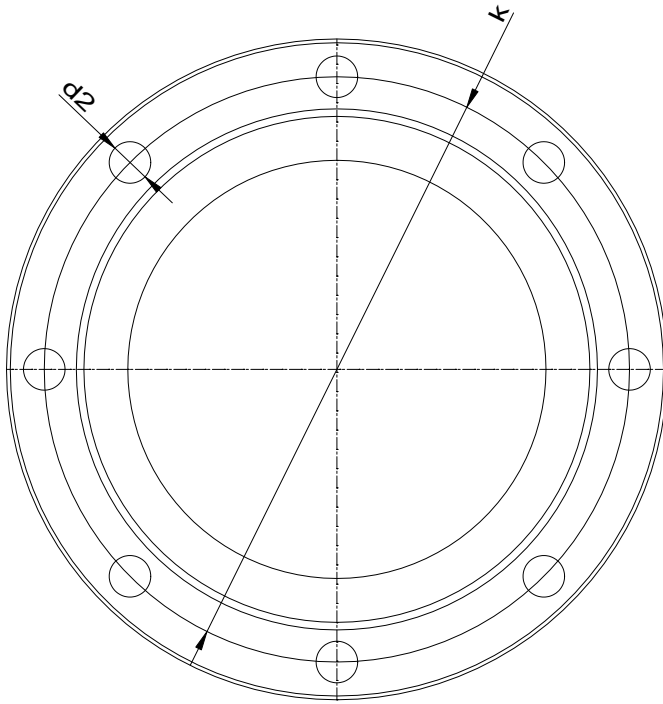


Dimensions	mm		
A	356	E	140
AA	82	EA	140
AB	438	FxGF	18X11
AC	434	FxGD	18X11
AK	370	GA	64
B	311	GC	64
B'	-	H	225
BA	76	HA	30
BA'	-	HD	510
BB	371	K	19
C	149	L	820
D	60	LC	968
DA	60	LK	876
DB	M20		
DC	M20		

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Suction connection

DN80
PN25

Discharge connection

DN50
PN40

Dimensions	mm
b	24
D	200
d2	18
d4	138
d5	90.5
DN	80
f	2
k	160
n	8

Dimensions	mm
b	20
D	165
d2	18
d4	102
d5	61.5
DN	50
f	2
k	125
n	4



Spare part list
OMK 50/ 5

Revision number

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