

Customer**Supplier**

Company name
Editor
Phone number
E-mail

Fields of Application

Water supply and booster stations
Irrigation, overhead irrigation and draining
Filling and emptying of tanks and containers
Circulating of hot and cold water in HVAC systems
Pumping of condensate
Water circulating for swimming pools
Sanitary and cleaning installations
For industrial applications and public services
Fresh water supply on ships

**Design Specification**

NMM series pumps are volute casing, single stage, end suction, monoblock type centrifugal pumps with closed impeller and mechanical seal.

Main dimensions and the nominal flow rates of the pumps comply with the DIN 24255 and EN 733 standards.

Single entry, closed impeller is hydraulically thrust compensated and dynamically balanced.

Pump and motor are separate components. Motor shaft is passed into the pump shaft for coupling. After a certain motor power, a coupling system is used between the motor shaft and pump shaft.

Maintenance is very much easier, the impeller shaft and other rotating parts being removable with no need to disconnect the suction and delivery pipes, due to back pull-out design.

Maximum interchangeability of components, identical parts can be used along various pumps of the NMM series, which greatly simplifies and reduces stock of spare parts in addition to reduced delivery times.

Single-stage centrifugal pump coupled by means of a support, to a standard asynchronous motor, closed type, with external ventilation.

NMM series are fitted with mechanical shaft seal and pump shaft is supported by motor bearings.

Technical Data

Suction Flange	: DN50 - DN150
Discharge Flange	: DN32 - DN125
Operating Pressure	: 10 bar
Temperature Range	: Up to 120 °C
Speed Range	: 1450 - 3500 rpm
Flow Range	: 5 - 400 m ³ /h
Head Range	: 4 - 105 m

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Operating data specification

Pumped fluid	Water	Rated flow	150	m ³ /h
Solids		Rated head	40	m
Kind		Geodetic head	0	m
Percentage of solid content	0	Available system NPSH		m
pH value		Inlet pressure (pin)	0	kPa
Temperature	20	Altitude above sea level	100	m
Density	998.3	Max. operating pressure	406	kPa
Kin. viscosity	1.005	Max. diff. pressure	406	kPa
Vapour pressure	2.34			

Pump

Make	MAS DAF	Impeller type		
Pump type	NMM 80-200	Impeller construction		
Frame size		Impeller Ø		
Design	End Suction Monoblock Type	Max.	208	mm
Self priming	<input checked="" type="checkbox"/> No	designed	170	mm
Speed	2940	Min.	170	mm
Stages	1	Flow		
Suction port		Nominal	159	m ³ /h
Pressure rating	PN16	Max.	208	m ³ /h
Nominal pipe size	DN100	Min.	0	m ³ /h
Standard	DIN	Head		
Discharge port		Nominal	32.9	m
Pressure rating	PN16	Min.	22.8	m
Nominal pipe size	DN80	Max.	41.4	m
Standard	DIN	Shut off head	41.4	m
Shaft power	20.3	NPSH3	3.4	m
Shaft power P2(Q=max.)	21.8	Efficiency	67.2	%

Motor

Make/Type	22 KW-2900 RPM / 160L-C
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	22
Electric voltage	3~ 400
Speed	2950
Electric current	38
Frame size	160L
Degree of protection	IP 55
Type of protection	
Explosion protection	

Coupling

Make/Type	
Series	
Spacer length	mm
Frame size	

Materials

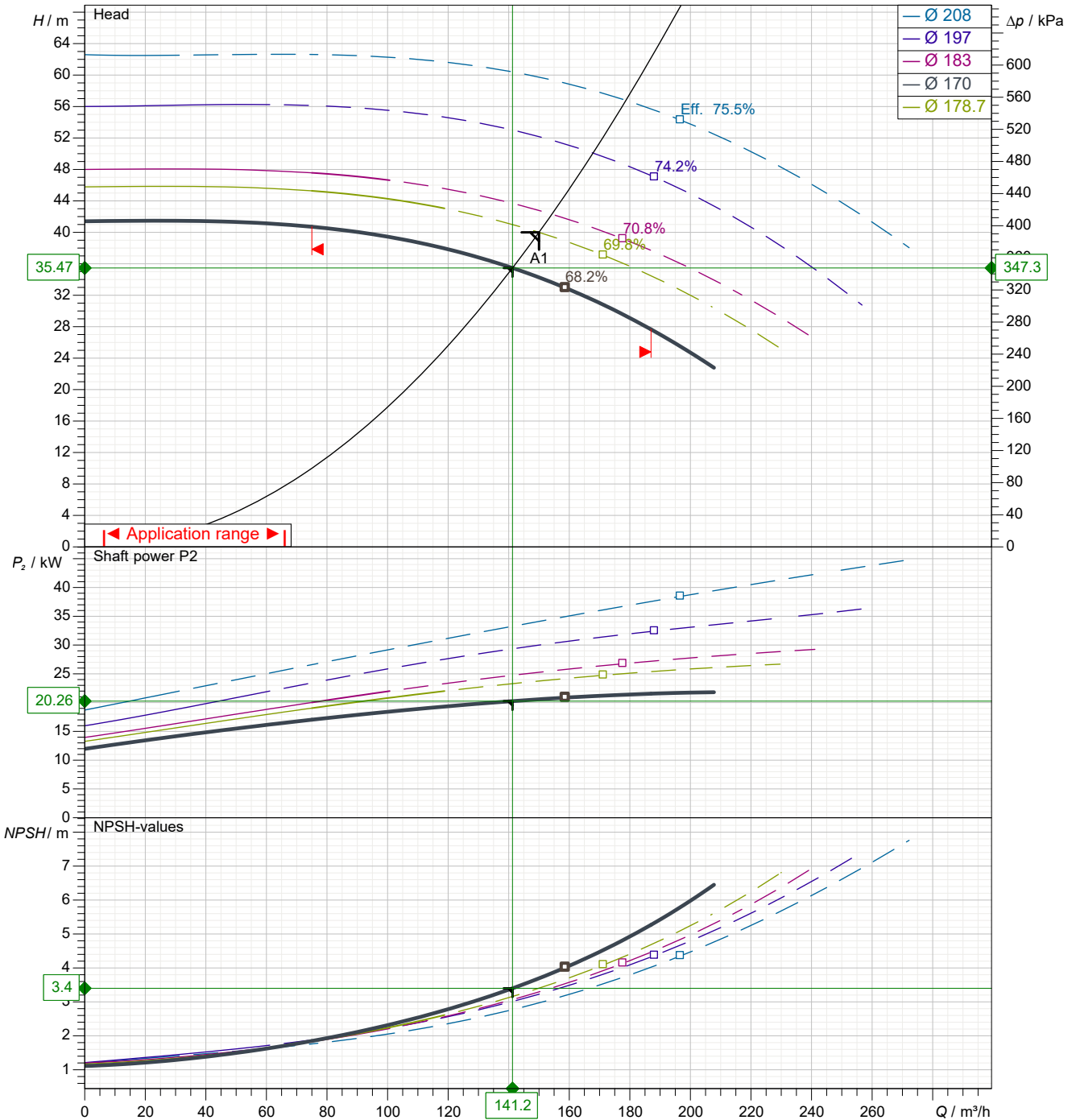
Pump		Shaft seal	AQ1EGG
Pump Casing	GJL-250 (GG25)	Material code	AQ1EGG
Impeller	GJL-250 (GG25)	Seal face	Carbon graphite antimony impregnated (A)
Shaft	A 276 Type 420 (X20Cr13)	Seat	Silicon carbide (Q1, eSiC-Q7)
		Elastomer	EPDM (E)
		Metal parts	CrNiMo steel (G)

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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	150	m ³ /h
Temperature	20	°C	Rated head	40	m
Density	998.3	kg/m ³	Shaft power	20.3	kW
Kin. viscosity	1.005	mm ² /s	Speed	2940	rpm
Vapour pressure	2.34	kPa	NPSH3	3.4	m
Impeller Ø	170	mm	Efficiency	67.2	%

Subject to change

Projec

Issue date
2023-07-30

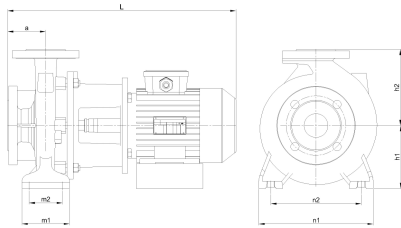
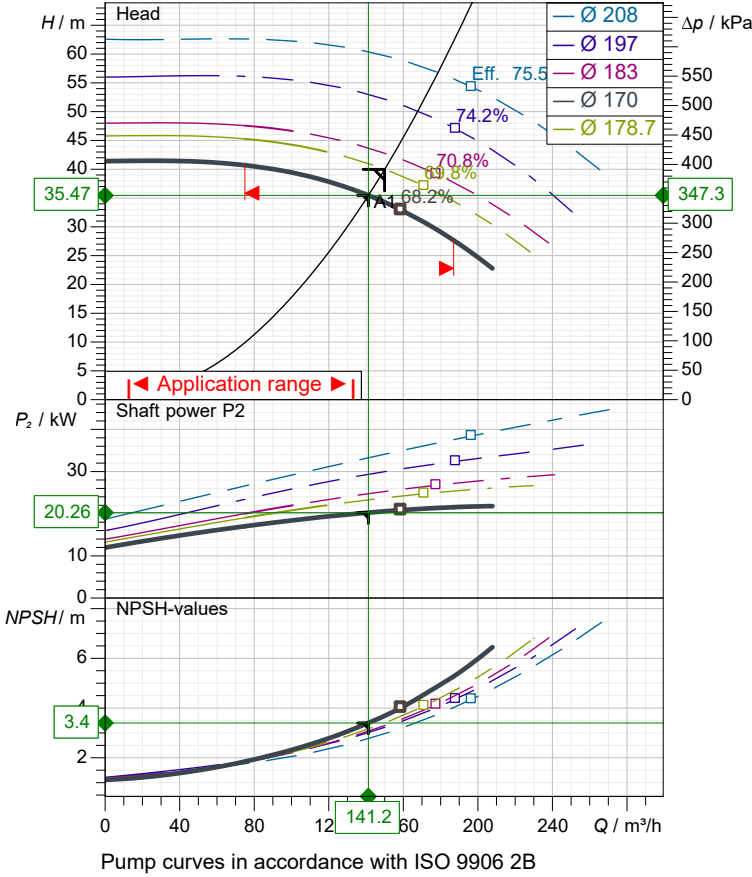
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Performance curves



Dimensions	mm
a	125
h1	180
h2	250
L	975
m1	125
m2	95
n1	345
n2	280

Pump

Make	MAS DAF
Pump type	NMM 80-200
Design	End Suction Monoblock Type
Suction port	
Pressure rating	PN16
Nominal pipe size	DN100
Standard	DIN
Discharge port	
Pressure rating	PN16
Nominal pipe size	DN80
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	150	m ³ /h
Rated head	40	m
Shaft power	20.3	kW
Speed	2940	rpm
NPSH3	3.4	m
Efficiency	67.2	%
Impeller Ø	170	mm

Motor

Make/Type	22 KW-2900 RPM / 160L-C
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

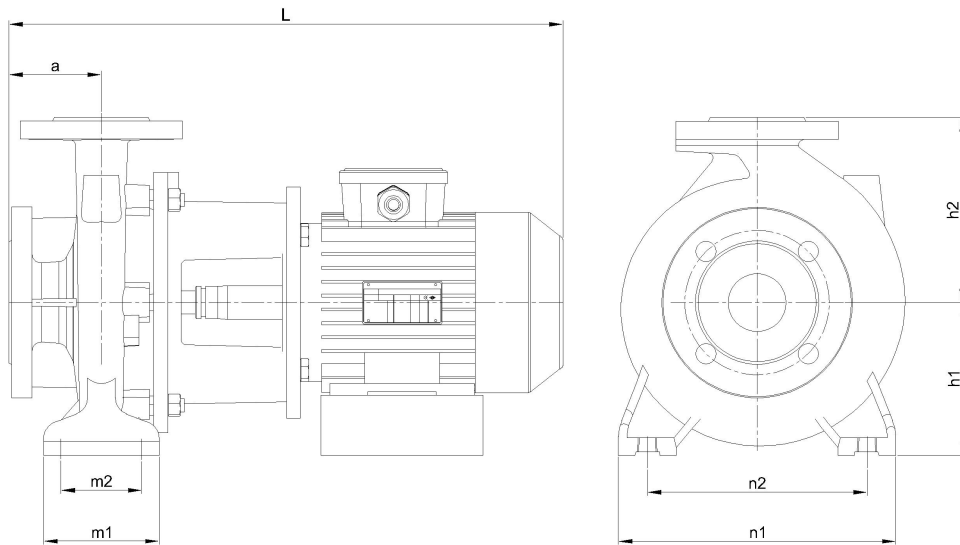
Shaft seal	AQ1EGG
Material code	AQ1EGG
Seal face	Carbon graphite antimony impregnated (A)
Seat	Silicon carbide (Q1, eSiC-Q7)
Elastomer	EPDM (E)
Metal parts	CrNiMo steel (G)

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

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Dimensions	mm
a	125
h1	180
h2	250
L	975
m1	125
m2	95
n1	345
n2	280

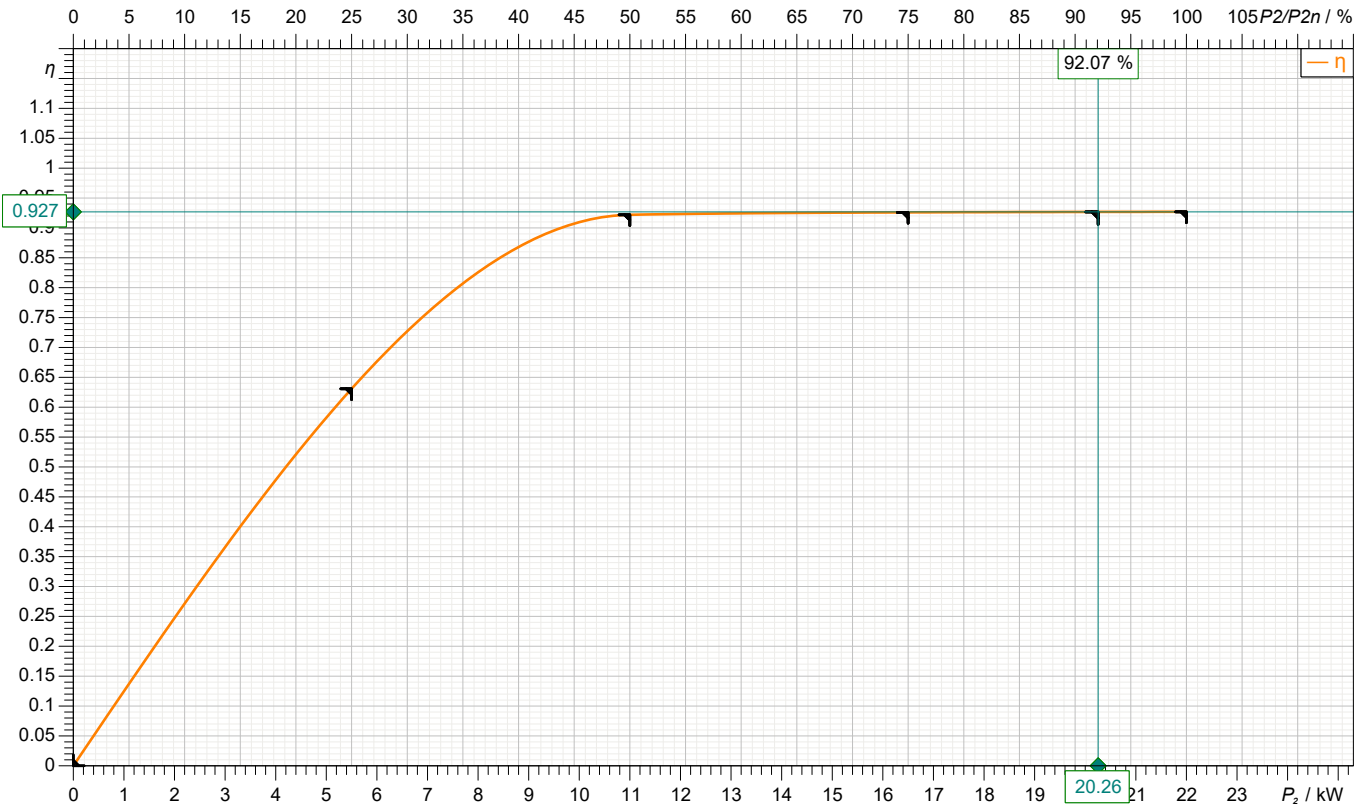
Inlet / outlet	
Suction port	Discharge port
DN100	DN80
PN16	PN16

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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	
η / %	0	63.09	92.2	92.6	92.7	

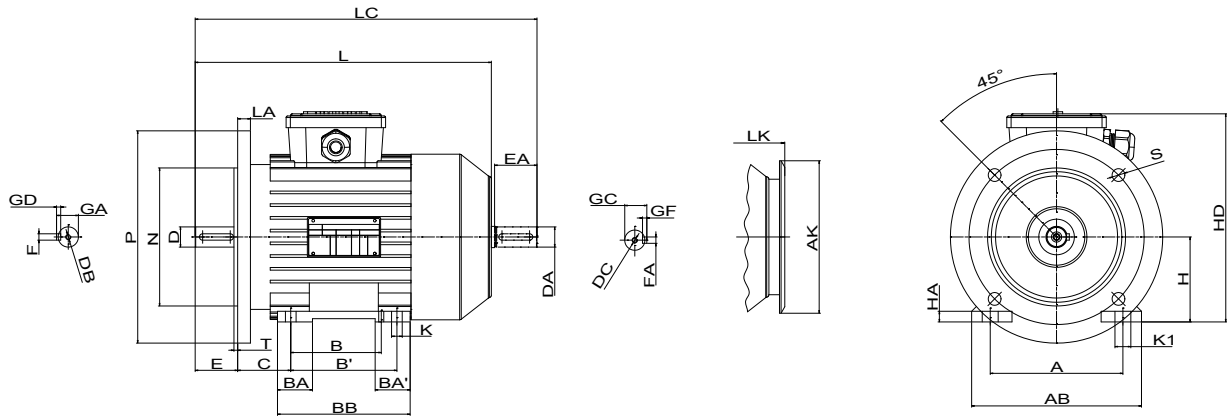
Motor

Make/Type	22 KW-2900 RPM / 160L-C	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	160L	Rated torque	71.2 Nm
Efficiency class	IE3	Insulation class	F (155C°)

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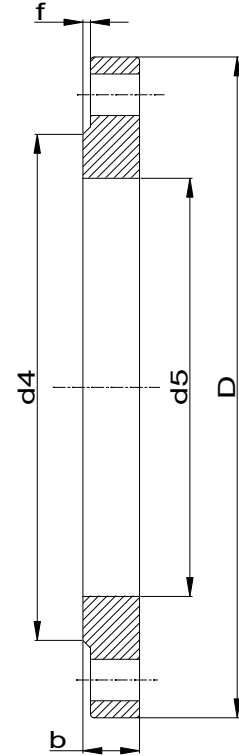
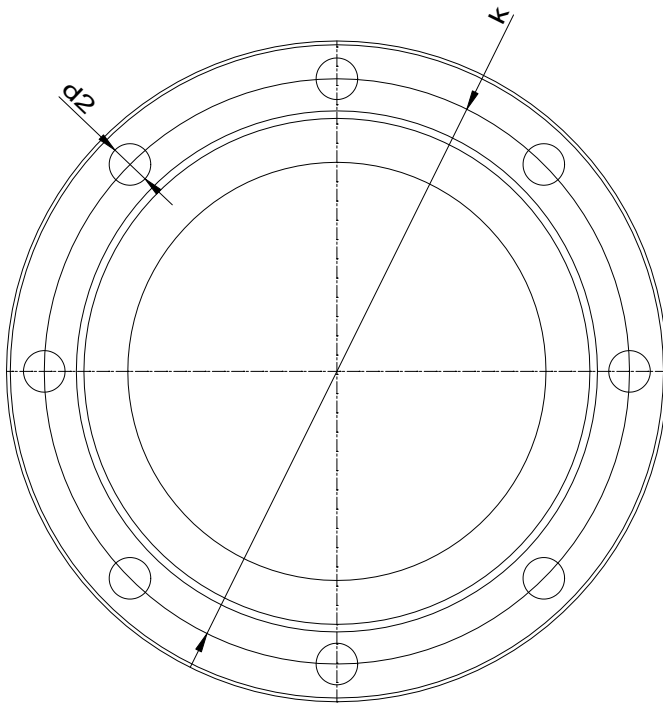


Dimensions	mm		
A	254	FxGD	12X9
AB	312	GA	45
AK	303	GC	45
B	-	H	160
B'	62	HA	22
BA	-	HD	380
BA'	304	K	15
C	108	K1	254
D	42	L	600
DA	42	LA	20
DB	M17	LC	716
DC	M17	LK	657
E	110	M	300
EA	110	N	250
FxGF	12X9	NO	4

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Suction connection

DN100
PN16

Discharge connection

DN80
PN16

Dimensions	mm
b	22
D	220
d2	18
d4	158
d5	116
DN	100
f	2
k	180
n	8

Dimensions	mm
b	20
D	200
d2	18
d4	160
d5	90.5
DN	80
f	2
k	160
n	8



Spare part list
NMM 80-200

Revision number

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Subject to change

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Spare part list
NMM 80-200

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