

Customer

Company name
Editor
Phone number
E-mail

Supplier

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	120	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	401	kPa
Kin. viscosity	1.005	Max. diff. pressure	401	kPa
Vapour pressure	2.34			

Pump

Make	MAS DAF	Impeller type		
Pump type	NMM 80-160	Impeller construction		
Frame size		Impeller Ø		
Design	End Suction Monoblock Type	Max.	174	mm
Self priming	<input checked="" type="checkbox"/> No	designed	174	mm
Speed	2940	Min.	130	mm
Stages	1	Flow		
Suction port		Nominal	165	m ³ /h
Pressure rating	PN16	Max.	214	m ³ /h
Nominal pipe size	DN100	Min.	0	m ³ /h
Standard	DIN	Head		
Discharge port		Nominal	34.8	m
Pressure rating	PN16	Min.	24.5	m
Nominal pipe size	DN80	Max.	41	m
Standard	DIN	Shut off head	41	m
Shaft power	17	NPSH3	2.69	m
Shaft power P2(Q=max.)	21.2	Efficiency	74.2	%

Motor

Make/Type	18.5 KW-2900 RPM / 160L
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	18.5
Electric voltage	3~ 400
Speed	2945
Electric current	31.5
Frame size	160L
Degree of protection	IP 55
Type of protection	
Explosion protection	

Coupling

Make/Type	
Series	
Spacer length	mm
Frame size	

Materials

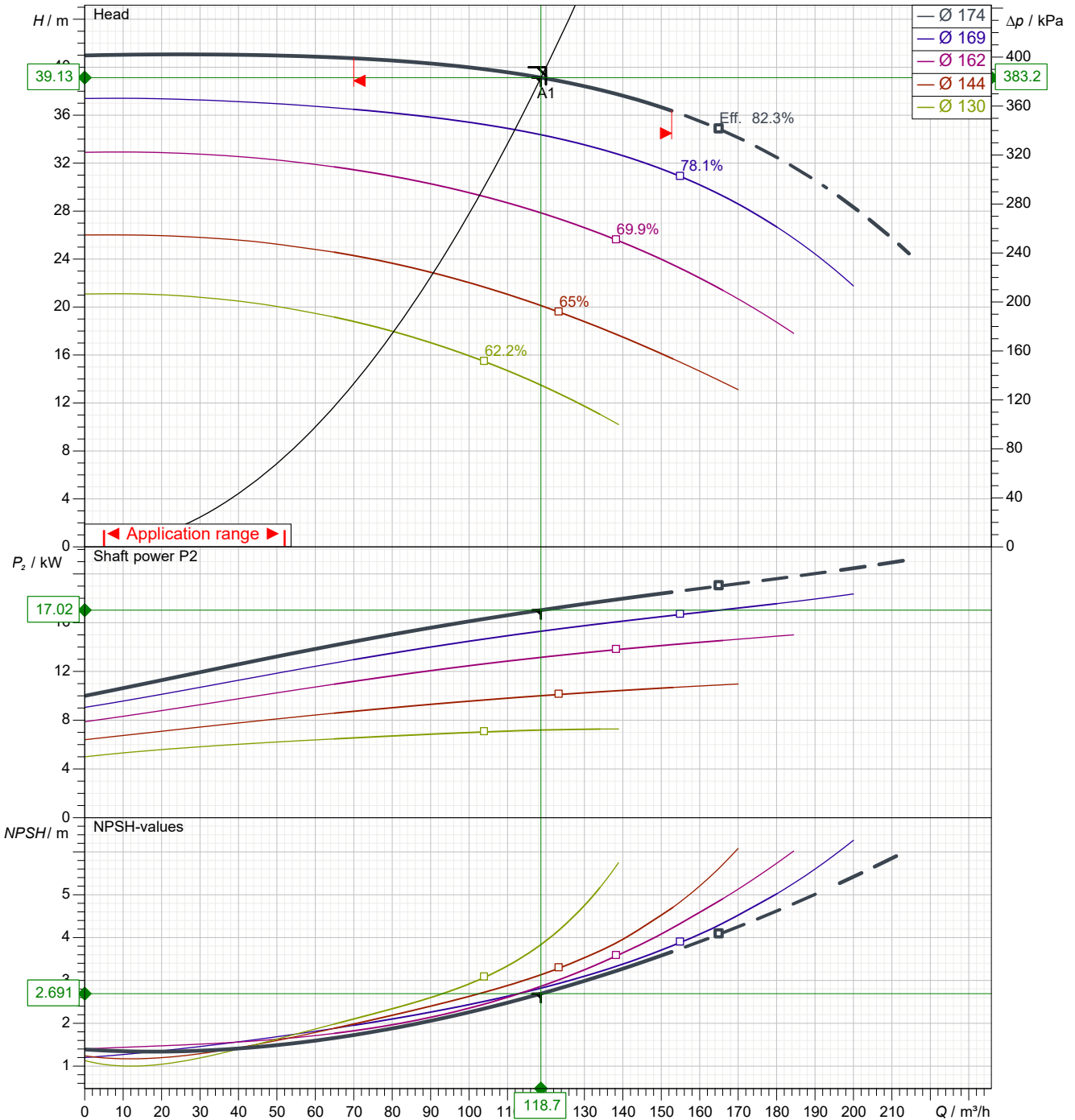
Pump		Shaft seal	AQ1EGG
Pump Casing	GJL-250 (GG25)	Material code	AQ1EGG
Impeller	GJL-250 (GG25)	Seal face	Carbon graphite antimony impregnated (A)
Shaft	A 276 Type 420 (X20Cr13)	Seat	Silicon carbide (Q1, eSiC-Q7)
		Elastomer	EPDM (E)
		Metal parts	CrNiMo steel (G)

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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	120	m ³ /h
Temperature	20 °C	Rated head	40	m
Density	998.3 kg/m ³	Shaft power	17	kW
Kin. viscosity	1.005 mm ² /s	Speed	2940	rpm
Vapour pressure	2.34 kPa	NPSH3	2.69	m
Impeller Ø	174 mm	Efficiency	74.2	%

Subject to change

Projec

Issue date
2023-07-30

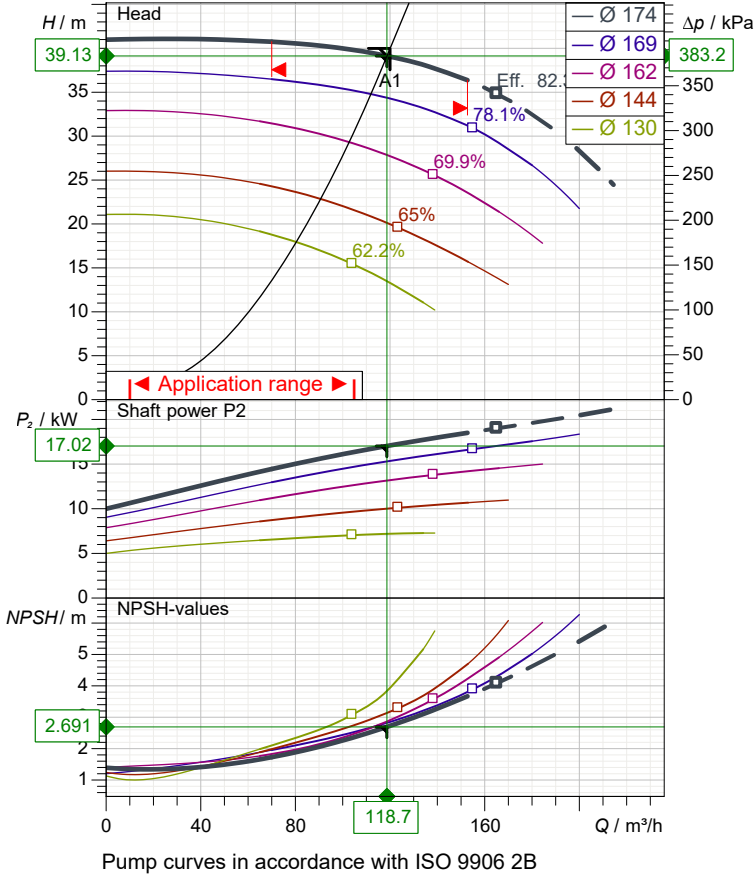
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Performance curves



Pump

Make	MAS DAF
Pump type	NMM 80-160
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

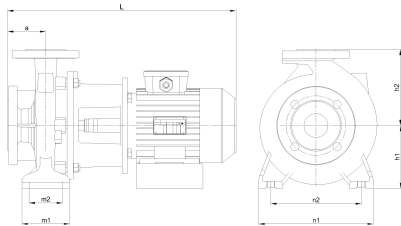
Pumped fluid	Water	
Temperature	20	°C
Density	998.3	kg/m ³
Kin. viscosity	1.005	mm ² /s
Vapour pressure	2.34	kPa
Rated flow	120	m ³ /h
Rated head	40	m
Shaft power	17	kW
Speed	2940	rpm
NPSH3	2.69	m
Efficiency	74.2	%
Impeller Ø	174	mm

Motor

Make/Type	18.5 KW-2900 RPM / 160L
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	18.5 kW
Speed	2945 rpm
Electric voltage	3~ 400 V
Electric current	31.5 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)



Dimensions

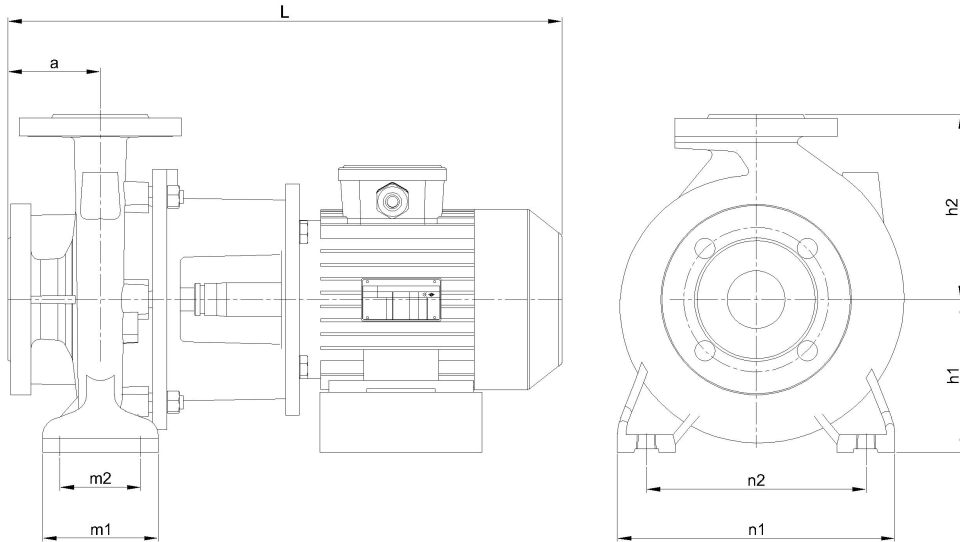
	mm
a	125
h1	180
h2	225
L	889
m1	125
m2	95
n1	320
n2	250

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	225
L	889
m1	125
m2	95
n1	320
n2	250

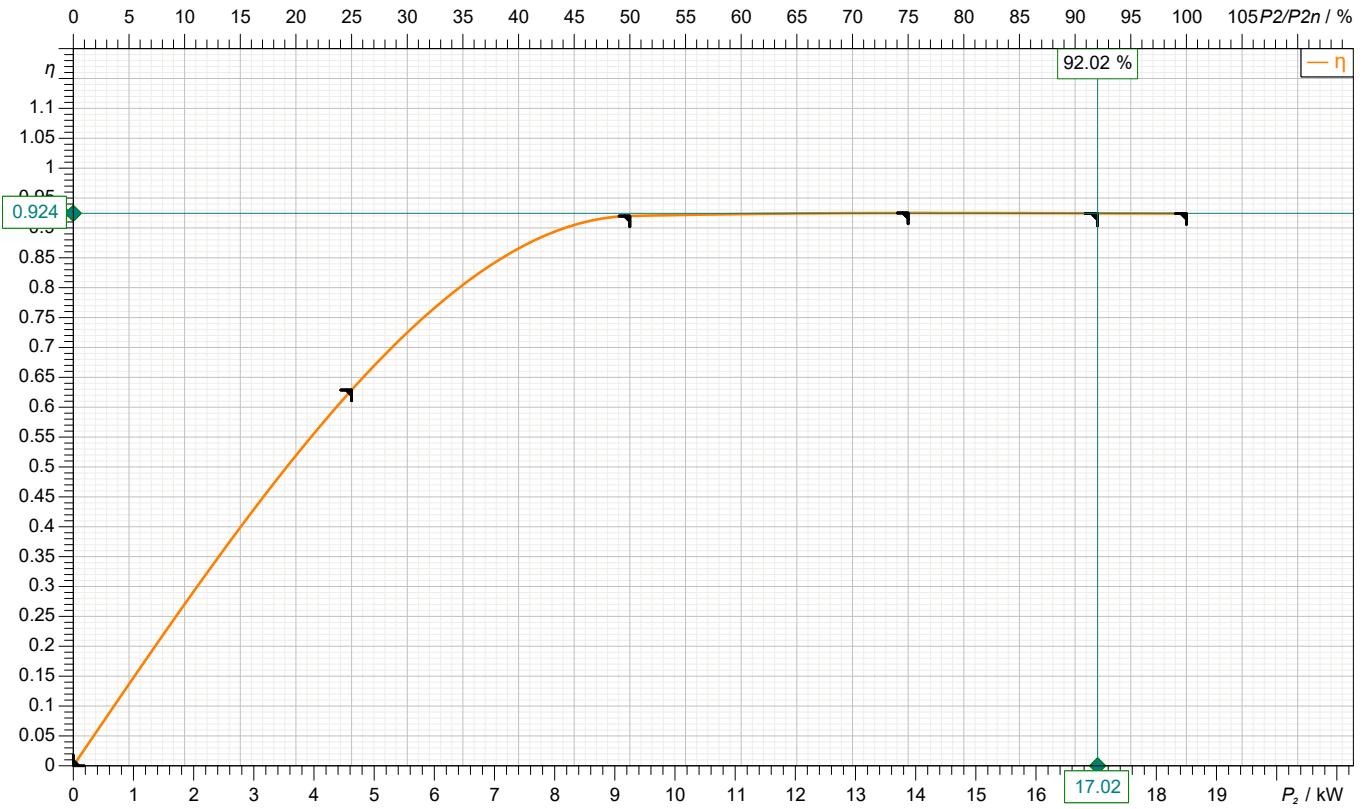
Inlet / outlet	
Suction port	Discharge port
DN100	DN80
PN16	PN16

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motor data



Symbol	No load	25 %	50 %	75 %	100 %	125 %
P ₂ / kW	0	4.625	9.25	13.88	18.5	
P ₁ / kW		7.354	10.05	15	20.02	
η / %	0	62.88	92	92.5	92.4	

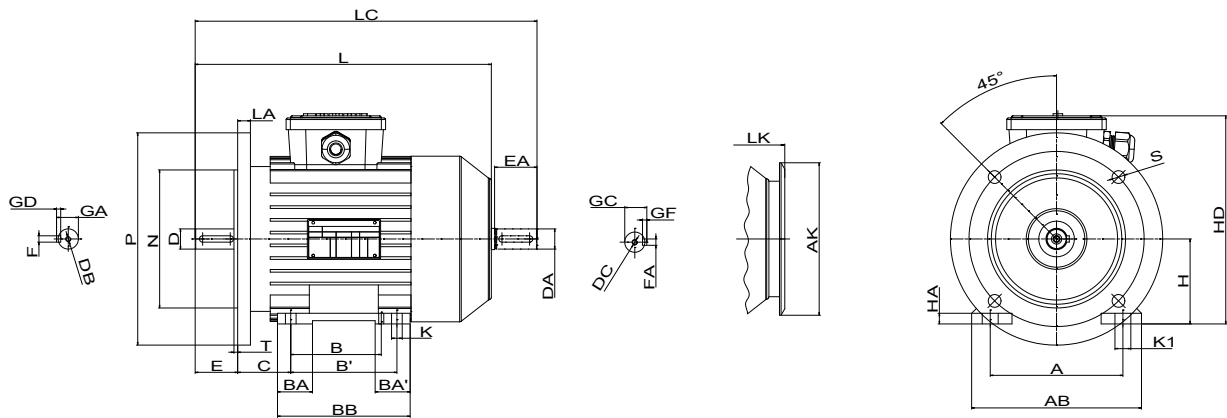
Motor

Make/Type	18.5 KW-2900 RPM / 160L	Degree of protection	IP 55
Specific design	IE3 / 50 Hz / Pole pairs 1	Type of protection	
Rated power	18.5 kW	Explosion protection	
Electric voltage	3~ 400 V	Service factor	1.15
Number of poles	2	Starting current	
Speed	2945 rpm	Starting torque	
Electric current	31.5 A	Moment of inertia	
Power factor	0.92	No. starts per hour	
Frame size	160L	Rated torque	60 Nm
Efficiency class	IE3	Insulation class	F (155C°)

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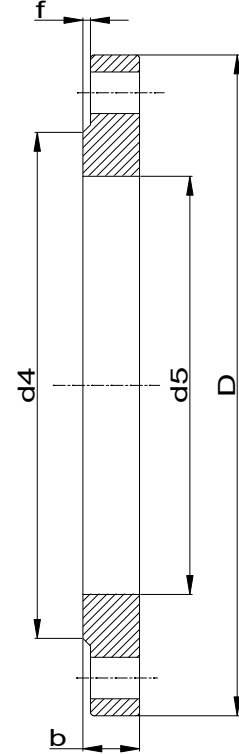
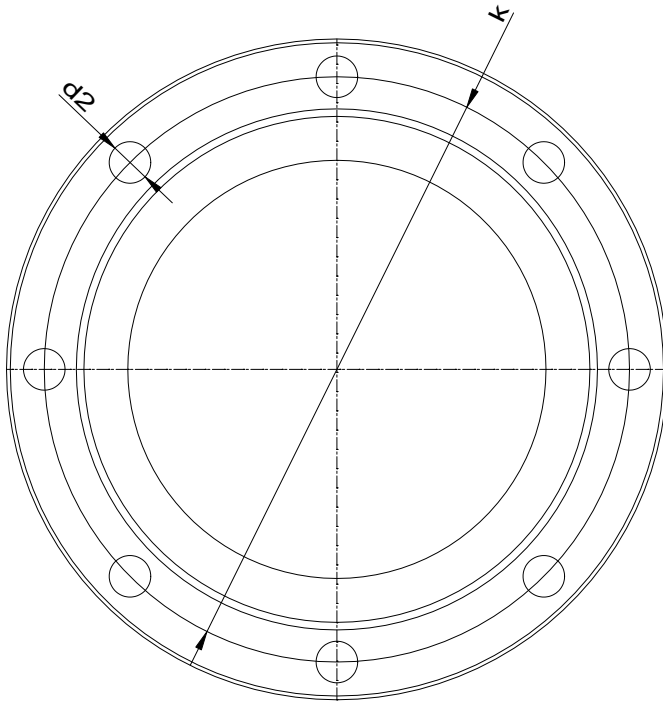


Dimensions	mm		
A	254	FxGD	12X9
AB	312	GA	45
AK	303	GC	45
B	-	H	160
B'	62	HA	22
BA	-	HD	380
BA'	304	K	15
C	108	K1	254
D	42	L	600
DA	42	LA	20
DB	M17	LC	716
DC	M17	LK	657
E	110	M	300
EA	110	N	250
FxGF	12X9	NO	4

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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 80-160

Revision number

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Subject to change

Projec

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Spare part list
NMM 80-160

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