

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	m ³ /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 ³	Max. operating pressure	401 kPa
Kin. viscosity	1.005 mm ² /s	Max. diff. pressure	401 kPa
Vapour pressure	2.34 kPa		

Pump

Make	MAS DAF	Impeller type	
Pump type	NMM 50-160	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	2900 1/min	Min.	132 mm
Stages	1	Flow	
Suction port		Nominal	72.8 m ³ /h
Pressure rating	PN16	Max.	107 m ³ /h
Nominal pipe size	DN65	Min.	0 m ³ /h
Standard	DIN	Head	
Discharge port		Nominal	34.5 m
Pressure rating	PN16	Min.	18.2 m
Nominal pipe size	DN50	Max.	41 m
Standard	DIN	Shut off head	41 m
Shaft power		NPSH3	m
Shaft power P2(Q=max.)	10.5 kW	Efficiency	%

Motor

Make/Type	11 KW-2900 RPM / 132M-C
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	11 kW
Electric voltage	3~ 400 V
Speed	2945 1/min
Electric current	19.5 A
Frame size	132M
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)

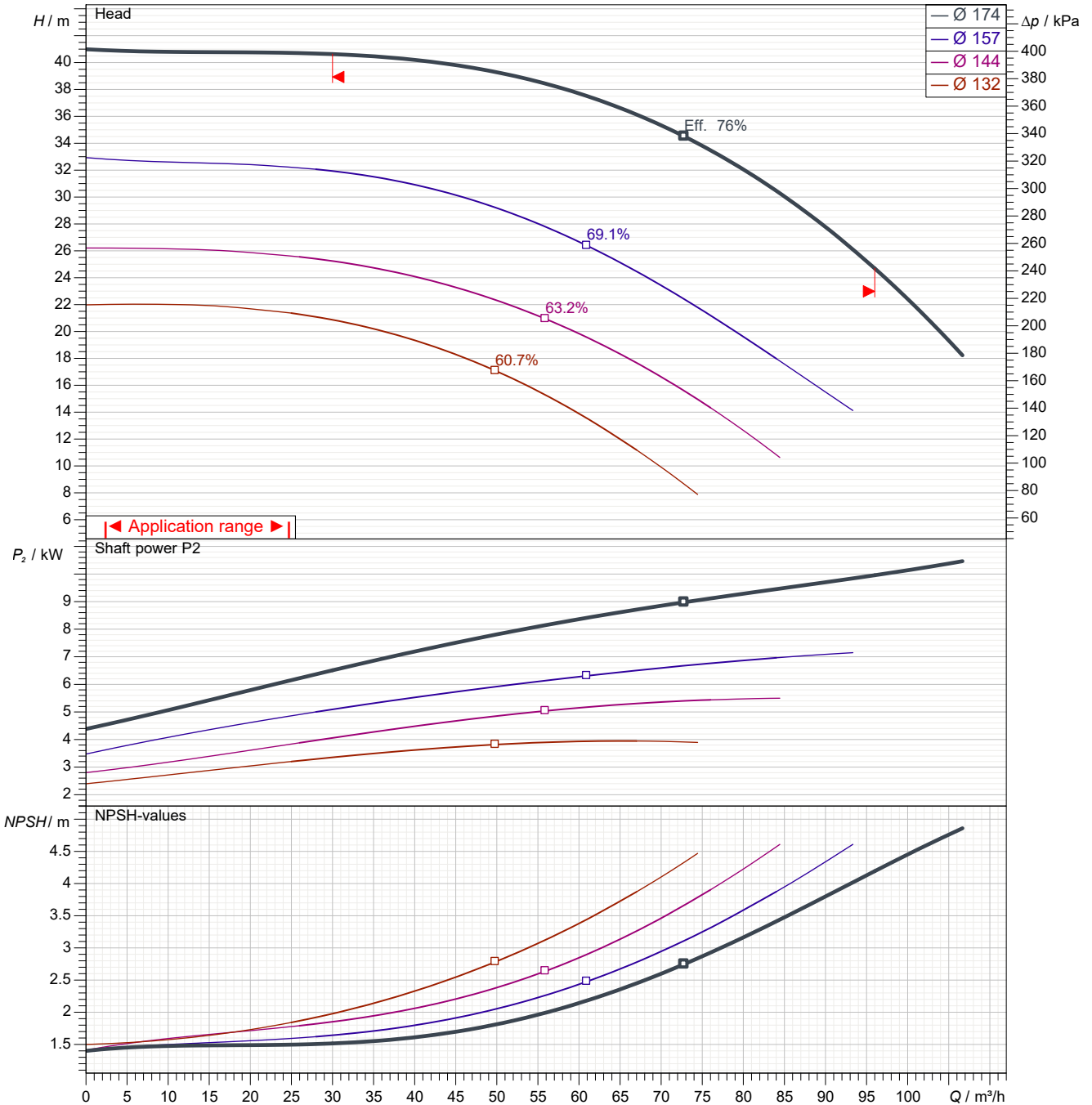
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Power data referred to: Water; 20°C; 998.3kg/m³; 1.005mm²/s Sense of rotation Clockwise from the drive end

Missing or invalid parameter (REFDIAM)



Pump curves in accordance with ISO 9906 2B

Pumped fluid	Water		Rated flow	m ³ /h
Temperature	20	°C	Rated head	m
Density	998.3	kg/m ³	Shaft power	kW
Kin. viscosity	1.005	mm ² /s	Speed	2900 1/min
Vapour pressure	2.34	kPa	NPSH3	m
Impeller Ø	174	mm	Efficiency	%

Subject to change

Projec

Issue date
2022-04-08

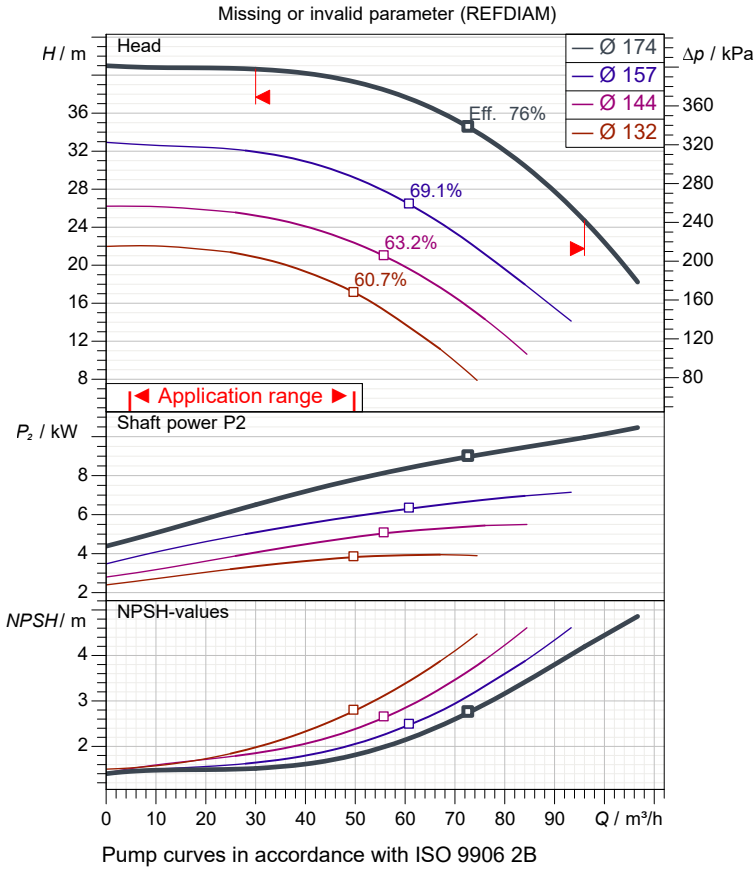
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Performance curves



Pump

Make	MAS DAF
Pump type	NMM 50-160
Design	End Suction Monoblock Type
Suction port	
Pressure rating	PN16
Nominal pipe size	DN65
Standard	DIN
Discharge port	
Pressure rating	PN16
Nominal pipe size	DN50
Standard	DIN

Operating data specification

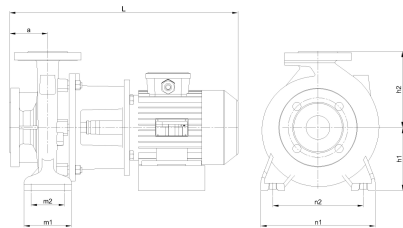
Pumped fluid	Water	
Temperature	20	°C
Density	998.3	kg/m ³
Kin. viscosity	1.005	mm ² /s
Vapour pressure	2.34	kPa
Rated flow		m ³ /h
Rated head		m
Shaft power		kW
Speed	2900	1/min
NPSH3		m
Efficiency		%
Impeller Ø	174	mm

Motor

Make/Type	11 KW-2900 RPM / 132M-C
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	11 kW
Speed	2945 1/min
Electric voltage	3~ 400 V
Electric current	19.5 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)



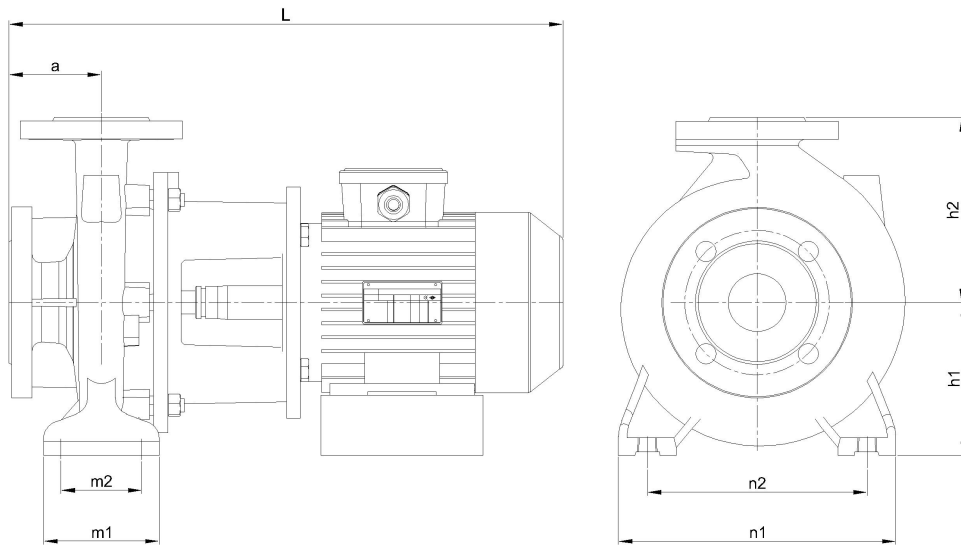
Dimensions	mm
a	100
h1	160
h2	180
L	675
m1	100
m2	70
n1	265
n2	212

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

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Dimensions	mm
a	100
h1	160
h2	180
L	675
m1	100
m2	70
n1	265
n2	212

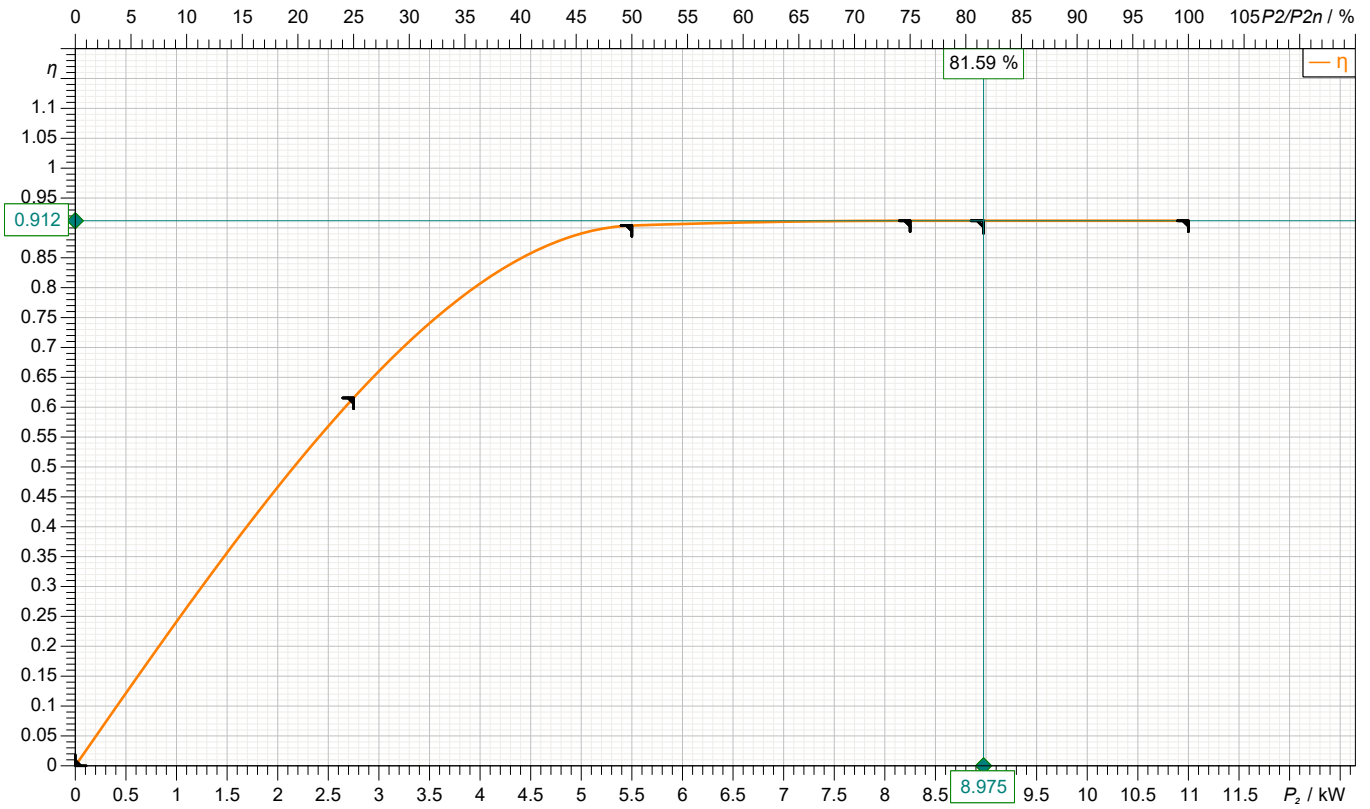
Inlet / outlet	
Suction port	Discharge port
DN65	DN50
PN16	PN16

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motor data



Symbol	No load	25 %	50 %	75 %	100 %	125 %
P_2 / kW	0	2.75	5.5	8.25	11	
P_1 / kW		4.467	6.084	9.046	12.06	
η / %	0	61.56	90.4	91.2	91.2	

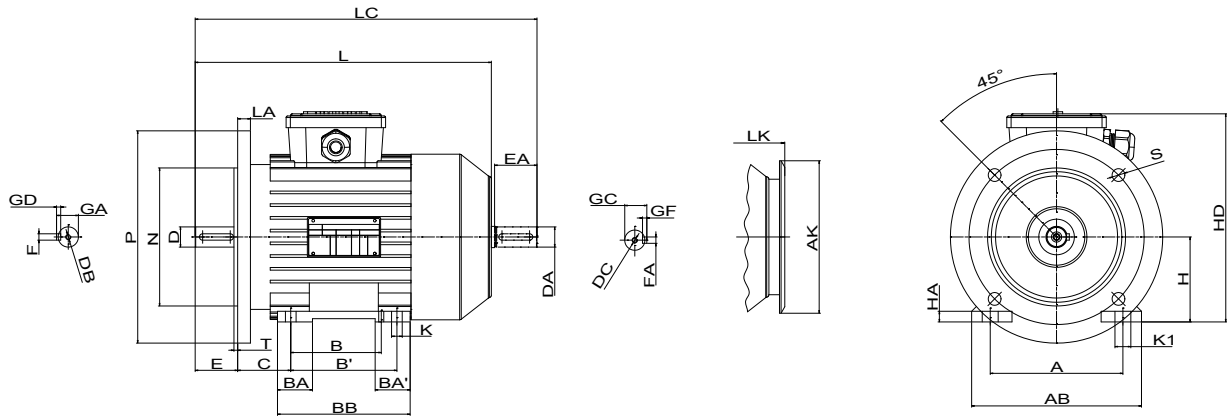
Motor

Make/Type	11 KW-2900 RPM / 132M-C	Degree of protection	IP 55
Specific design	IE3 / 50 Hz / Pole pairs 1	Type of protection	
Rated power	11 kW	Explosion protection	
Electric voltage	3~ 400 V	Service factor	1.15
Number of poles	2	Starting current	
Speed	2945 1/min	Starting torque	
Electric current	19.5 A	Moment of inertia	
Power factor	0.89	No. starts per hour	
Frame size	132M	Rated torque	35.7 Nm
Efficiency class	IE3	Insulation class	F (155C°)

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Dimensions	mm		
A	216	FxGD	10X9
AB	260	GA	41
AK	239	GC	41
B	178	H	132
B'	46	HA	15
BA	84	HD	300
BA'	218	K	12
C	89	K1	-
D	38	L	498
DA	38	LA	20
DB	M13	LC	584
DC	M13	LK	535
E	80	M	265
EA	80	N	230
FxGF	10X9	NO	4

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Suction connection

DN65
PN16

Discharge connection

DN50
PN16

Dimensions	mm
b	20
D	185
d2	18
d4	122
d5	77.5
DN	65
f	2
k	145
n	8

Dimensions	mm
b	19
D	165
d2	18
d4	102
d5	61.5
DN	50
f	2
k	125
n	4



Spare part list
NMM 50-160

Revision number

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Subject to change

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