

Horizontal High Pressure Multistage Centrifugal Pumps

OMK SERIES (50 Hz)



TECHNICAL MANUAL



OMK Series

High Pressure Multistage Pumps

General Specifications



Mas Grup

Fields of Application

For pumping of clear and slightly contaminated liquids in:

- 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.

Pumped Liquids

Thin, clean, non-aggressive and non-explosive liquids free from solid particles and fibres.

- Fresh water, potable water, boiler feed water, industrial water, sea and brackish water, hot water, condensate, lye, etc.

For special applications, please consult to MAS DAF MAKINA SAN. A.Ş.

Design

- 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.
- Flanges are acc. to DIN 2535. Flanges acc. to BS or ANSI are upon request.
- 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.

Please see the possible arrangements at "Different Mounting Arrangements" section.

Shaft

Chromium steel (AISI 420) fine grained shafts are used on OMK pumps. There is no big diameter difference along the shaft and it is possible and very easy to dismantling the pump beginning from suction or discharge ends.

Bearings

- On both ends, bearing houses equipped with grease lubricated heavy duty ball bearings.
- Bearing at the suction side is fixed. Extra axial load is carried by this bearing.
- Discharge side bearing is free at the axial direction and it carries only radial load.
- Throwers and lip seals on the shaft prevent leakage fluid from getting into bracket.

Shaft Seal

- Uncooled gland packing is standard (Up to 110 °C).
- Standardized, single acting, balanced and uncooled mechanical seal is optional (Up to 140 °C).
- Double-acting and cartridge seals are upon request.

Technical Data

- Suction Flanges..... : DN 50...DN 125 (PN 40) (DIN 2535)
- Discharge Flanges... : DN 32...DN 80 (PN 40) (DIN 2535)
- Operating Pressure.. : 40 Bar
- No of Stages..... : 2-14
- Capacity Range..... : 5-220 m³ / h
- Head Range..... : 30-400 m
- Temp. Range..... : -10..160°C; Mech. Seal :- 10..110°C; Soft packing
- Speed up to..... : 3600rpm

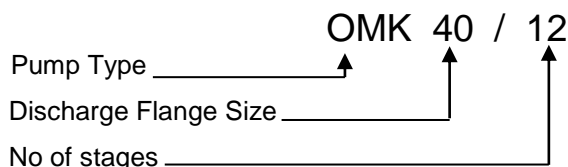
Shaft Coupling and Coupling Guard

Connection of pump with driver unit by flexible coupling without intermediate bushing. A coupling guard will be included if the scope of supply includes pump, base frame and coupling.

Driver

Common electric motors according to IEC. Also, OMK series can be driven by combustion engines or turbines.

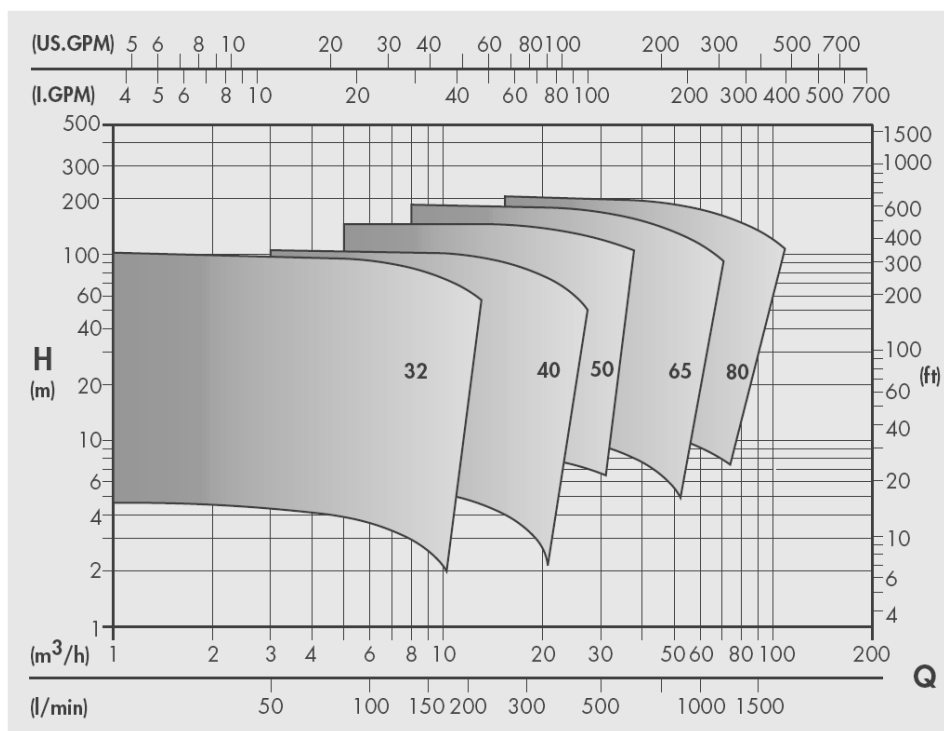
Identification Code for Pump



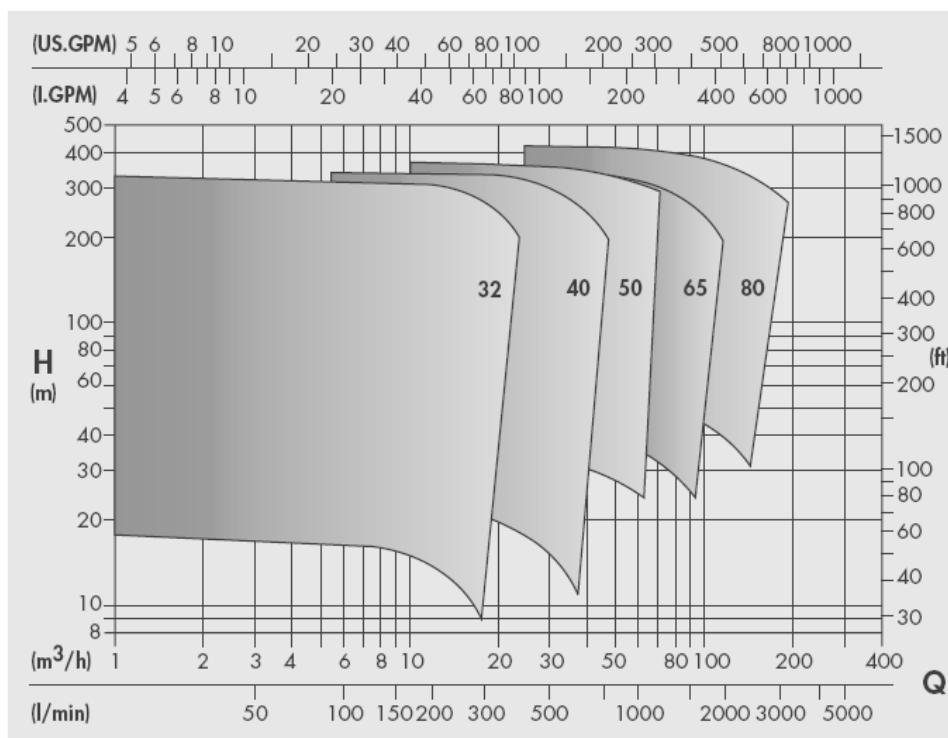
OMK Series
 High Pressure Multistage Pumps
 Performance Range – 50 Hz



Mas Grup



For 2900 RPM



Model Designation	Min Number of Stages	Max Stages	
		1450 rpm	2900 rpm
OMK 32	2	14	12
OMK 40	2	12	10
OMK 50	2	11	7
OMK 65	2	11	5
OMK 80	2	10	5

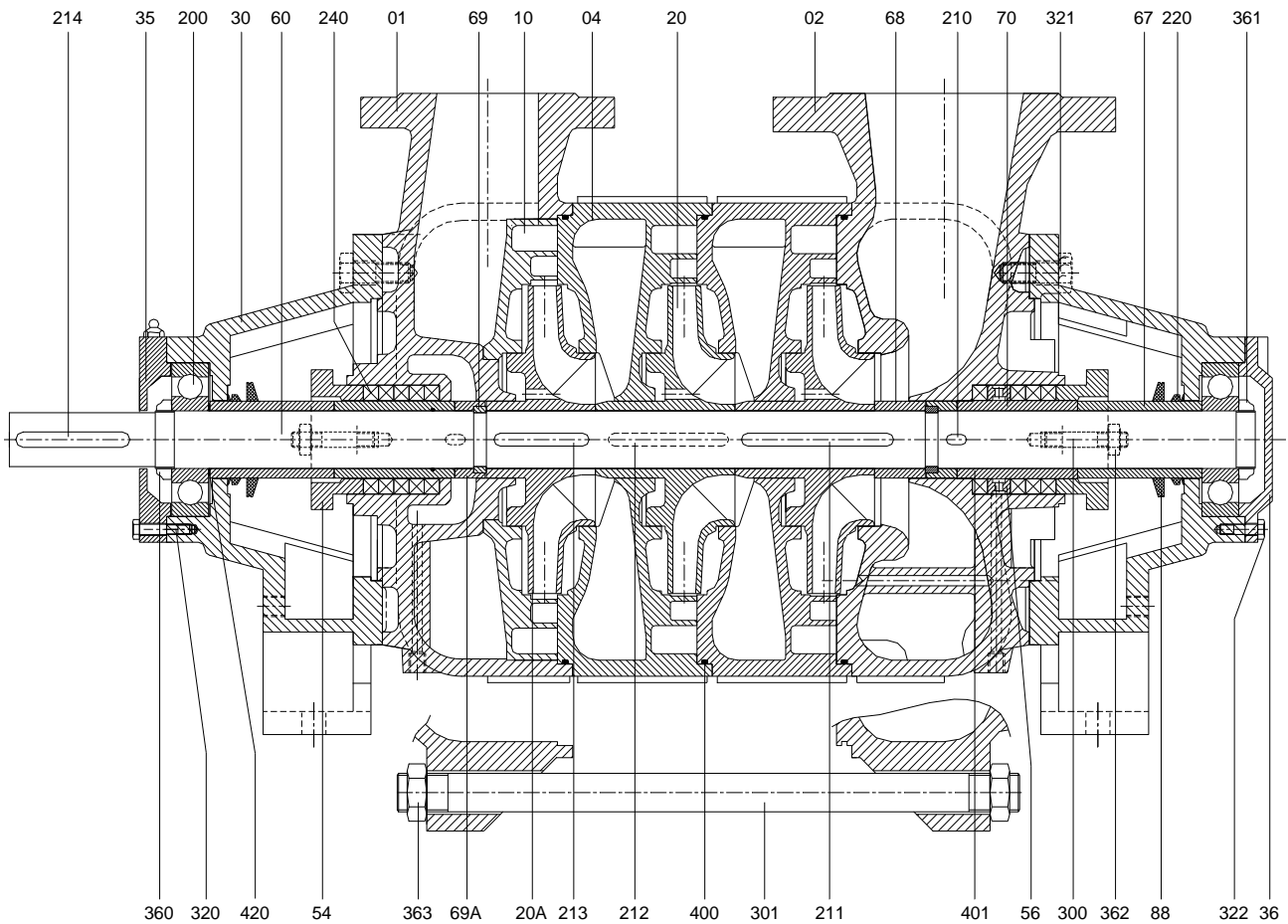
OMK Series

High Pressure Multistage Pumps

Sectional Drawing and Part List (Soft Packing Design)



Mas Grup



Part List

No		No	
01	Discharge Casing	210	Key, Sleeve
02	Suction Casing	211	Key, First Stage Impeller
04	Stage Casing With Diffuser	212	Key, Standard Impeller
10	Last Stage Diffuser	213	Key, Last Stage Impeller
20	Impeller	214	Key, Coupling
20A	Last Stage Impeller	220	V-Ring
30	Bearing Housing	240	Soft Packing
35	Bearing Cover (Discharge Side)	300	Stud For Gland
36	Bearing Cover (Suction Side)	301	Casing Stud
54	Gland	320	Bolt, Bearing Cover
56	Lantern Ring	321	Bolt, Bearing House
60	Pump Shaft	322	Bolt, Bearing Cover
67	Space Sleeve	360	Shaft Nut
68	Space Sleeve	361	Shaft Nut
69	Split Ring	363	Nut, Casing Stud
69A	Retaining Ring	400	O-Ring (Stage Casing)
70	Seal Sleeve	401	O-Ring (Seal Sleeve)
88	Thrower	420	Supporting Ring
200	Ball Bearing		

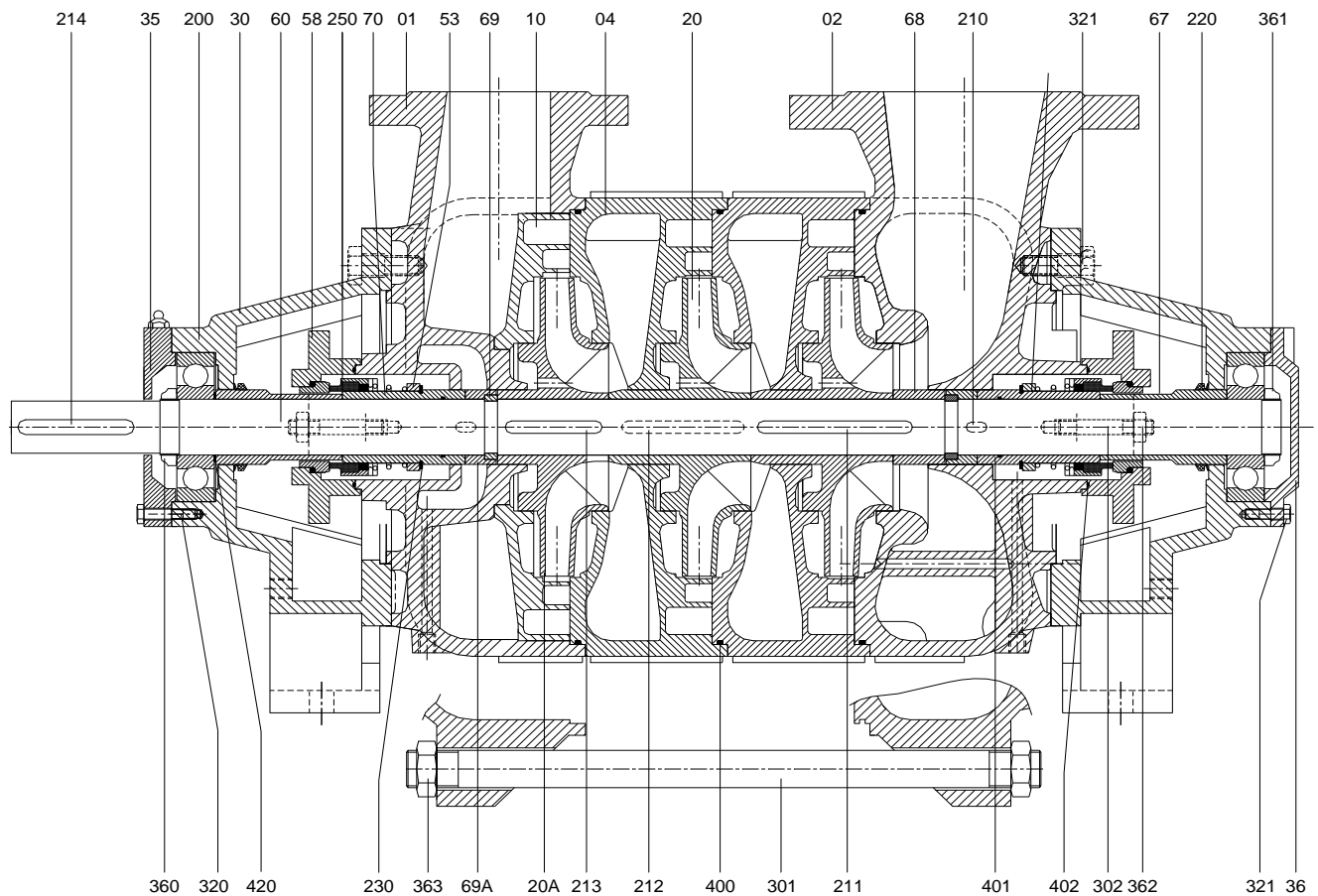
OMK Series

High Pressure Multistage Pumps

Sectional Drawing and Part List (Mechanical Seal Design)



Mas Grup



Part List

No		No	
01	Discharge Casing	212	Key, Standard Impeller
02	Suction Casing	213	Key, Last Stage Impeller
04	Stage Casing With Diffuser	214	Key, Coupling
10	Last Stage Diffuser	220	V-Ring
20	Impeller	230	Safety ring
20A	Last Stage Impeller	250	Mechanical Seal
30	Bearing Housing	300	Stud, Gland
35	Bearing Cover (Discharge Side)	301	Casing Stud
36	Bearing Cover (Suction Side)	302	Mech. Seal Cover Stud
53	Mech. Seal Front Sleeve	320	Bolt, Bearing Cover
58	Mech. Seal Cover	321	Bolt, Bearing
60	Pump Shaft	360	Shaft Nut
67	Space Sleeve	361	Shaft Nut
68	Space Sleeve	362	Stud, Mech. Seal cover
69	Split Ring	363	Nut, Casing Stud
69A	Retaining Ring	400	O-Ring (Stage Casing)
70	Seal Sleeve	401	O-Ring (Seal Sleeve)
200	Ball Bearing	402	O-Ring
210	Key, Sleeve	420	Supporting Ring
211	Key, First Stage Impeller		


OMK Series
 High Pressure Multistage Pumps
ATEX Description



Mas Grup

ATEX Codification

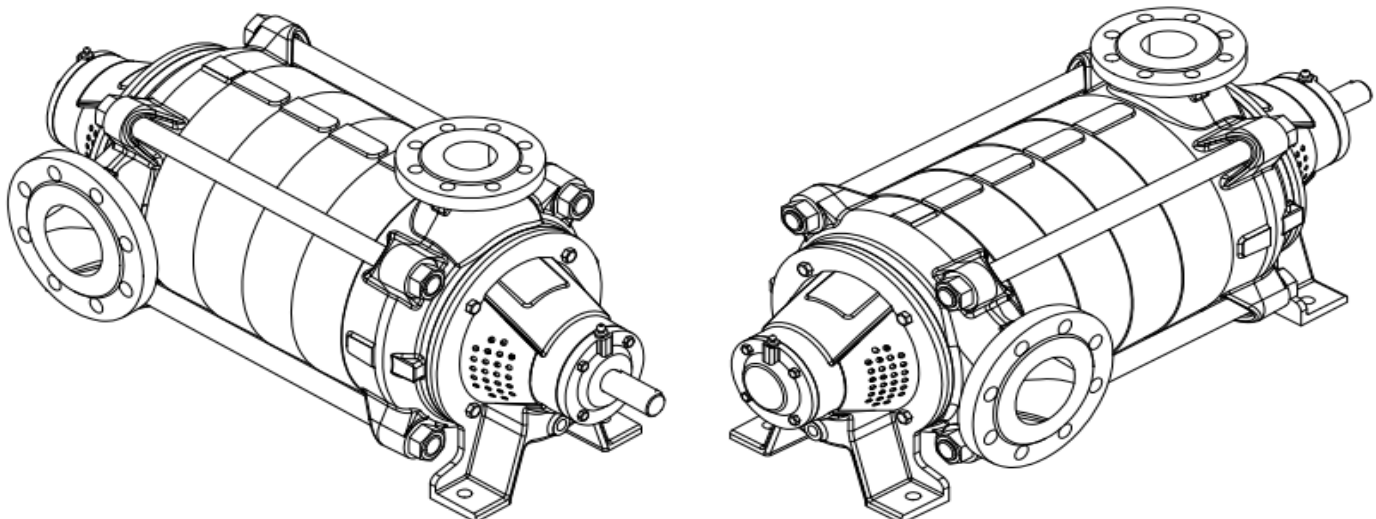
ATEX -95

 II 2G /D c Tx (85 °C – 200 °C)

Equipment Groups (Annex I of Directive 94/9/EC)							
Group I (mines, mine gas and dust)		Group II (other explosive atmospheres gas/dust)					
Category M 1	Category M 2	Category 1		Category 2		Category 3	
		G (gas) (Zone 0)	D (dust) (Zone 20)	G (gas) (Zone 1)	D (dust) (Zone 21)	G (gas) (Zone 2)	D (dust) (Zone 22)
For equipment providing a very high level of protection when endangered by an explosive atmosphere	For equipment providing a high level of protection when likely to be endangered by an explosive atmosphere	For equipment providing a very high level of protection when used in areas where an explosive atmosphere is very likely to occur		For equipment providing a high level of protection when used in areas where an explosive atmosphere is likely to occur		For equipment providing a normal level of protection when used in areas where an explosive atmosphere is less likely to occur	

TEMPERATURE CLASS		
Temperature class required by the area classification	Ignition temperature of gas or vapor	Allowable temperature classes of equipment
T1	> 450 °C	T1 - T6
T2	> 300 °C	T2 - T6
T3	> 200 °C	T3 - T6
T4	> 135 °C	T4 - T6
T5	> 100 °C	T5 - T6
T6	> 85 °C	T6

Code	Description
II	The Usage in other non-mining explosive atmospheres
2	2. Category: High level of protection
G	For potentially explosive environments due to gases or vapors
T	Temperature class
X	ATEX Marking of the motor manufacturer



OMK Series

High Pressure Multistage Pumps

Technical Data



Mas Grup

Material Options

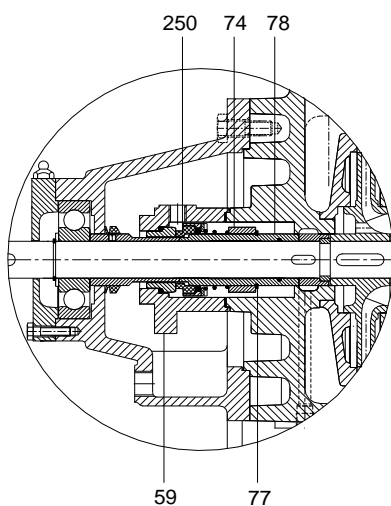
Components	Material. No						
		0.6025	0.7040	2.1050.01	1.4021	1.4301	1.4401
Suction & Discharge Casing		●	○	○		○	○
Stage Casing With Diffuser		●	○	○		○	○
Impeller		●	○	○		○	○
Last Stage Diffuser		●	○	○		○	○
Gland			●	○			
Shaft					●	○	○
Shaft Sleeve					●	○	○
Mech. Seal Cover		●	○	○		○	○
Bearing Housing		●	○				
Bearing Cover		●	○		○	○	○

● - Standard Manufacturing
○ - Optional

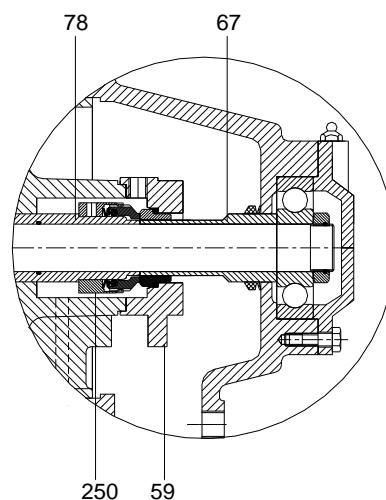
Material Equivalent

Description	DIN 17007	EN-DIN	ASTM
Cast Iron	0.6025	GJL-250 (GG25)	A 48 Class 40-B
Nodular Cast Iron	0.7040	GJS-400-15 (GGG40)	A 536 Gr.60-40-18
Cast Bronze	2.1050.01	G-Cu Sn 10	B 584 C 90700
Chrome Steel	1.4021	X20 Cr 13	A 276 Type 420
Chrome Nickel Steel	1.4301	X5 Cr Ni 18.9	A 276 Type 304
Chrome Nickel Molybdenum Steel	1.4401	X5 Cr Ni Mo 18.10	A 276 Type 316

Mechanical Seal Applications



Balanced Mechanical Seal
(Burgmann H12N – Up to 25 Bar)
(Dependent on direction of rotation)

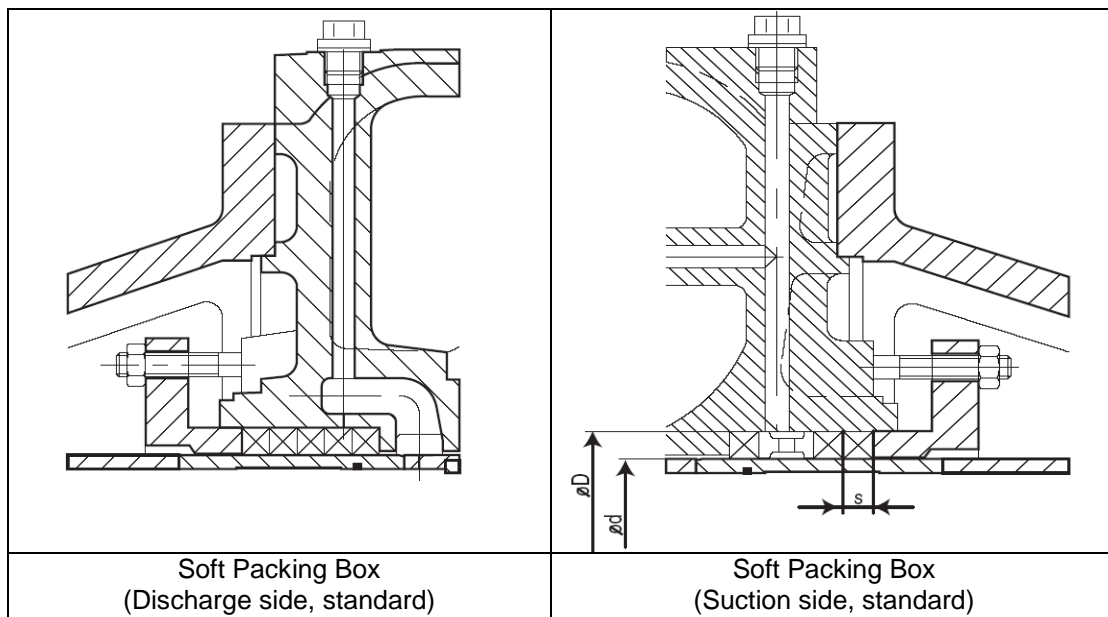


Balanced Mechanical Seal
(Burgmann H7N – Up to 40 Bar)
(Independent on direction of rotation)

- 59 Mech. Seal Cover
- 74 Mech. Seal Front Ring
- 77 Retaining Ring
- 78 Seal Sleeve
- 250 Balanced Mech. Seal

- 59 Mech. Seal Cover
- 67 Space Sleeve
- 78 Seal Sleeve
- 250 Balanced Mech. Seal

Soft Packing

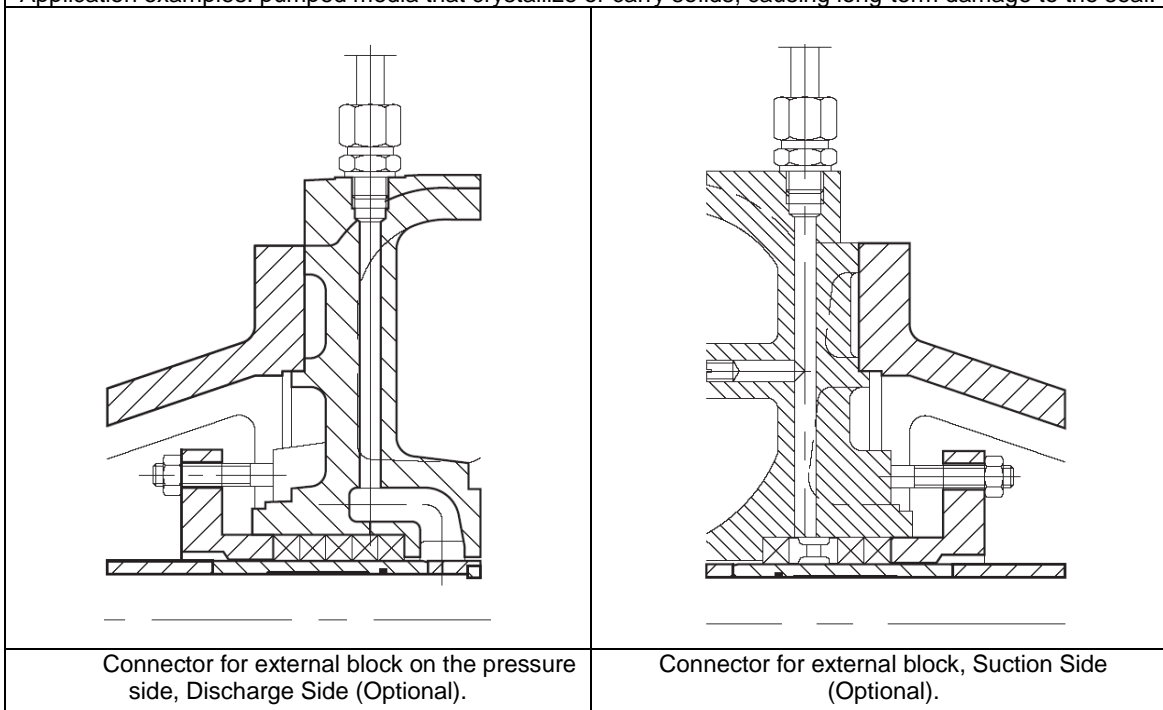


Soft Packing Dimensions

Pump Type	OMK 32	OMK 40	OMK 50	OMK 65	OMK 80
ØD	51	51	65	65	85
Ød	35	35	43	45	60
s	8	8	10	10	12

Number of Soft Packing	OMK 32	OMK 40	OMK 50	OMK 65	OMK 80
Suction Side	3 + Lant.R	3 + Lant.R	3 + Lant.R	3 + Lant.R	3 + Lantern R.
Discharge Side	5	5	5	5	5

When blocked, the pressure of the sealing medium exceeds the pressure of the pumped medium.
Application examples: pumped media that crystallize or carry solids, causing long-term damage to the seal.

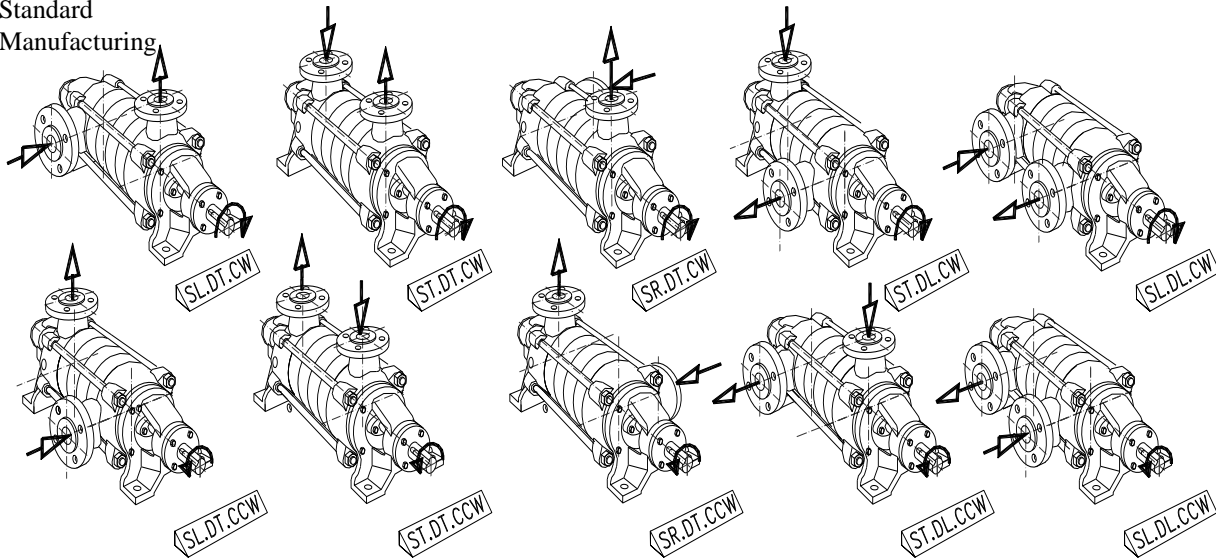


Connector for external block on the pressure side, Discharge Side (Optional).

Connector for external block, Suction Side (Optional).

Different Mounting Arrangements

Standard
Manufacturing



Example: **SL-DT-CW**
(**SL**: Suction Left - **DT** : Discharge Top - **CW** : Rotation Clock Wise)

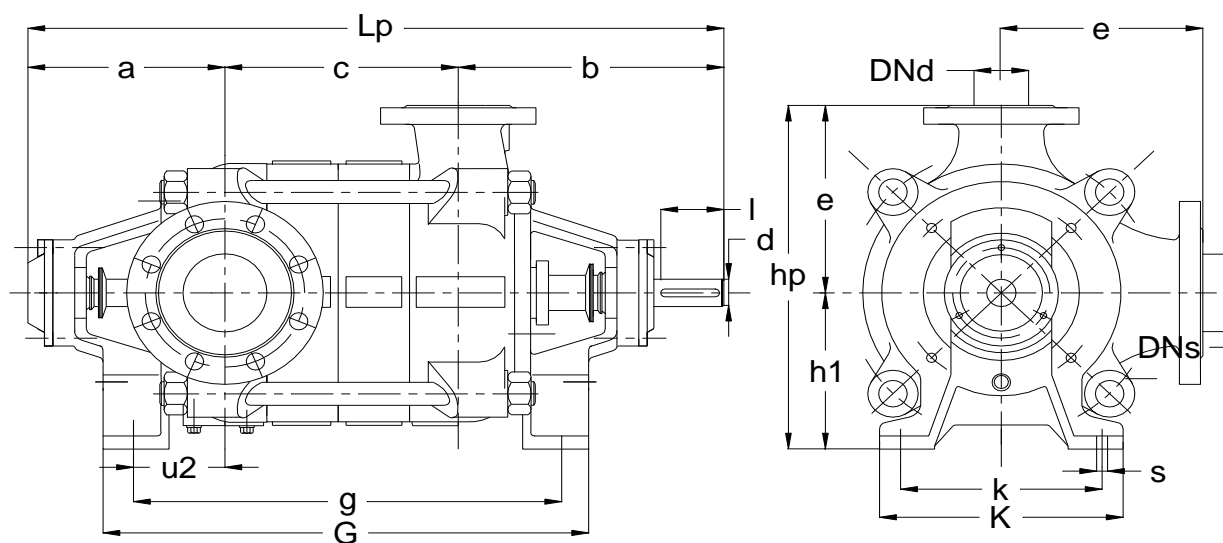
OMK Series

High Pressure Multistage Pumps

Pump Dimension Table



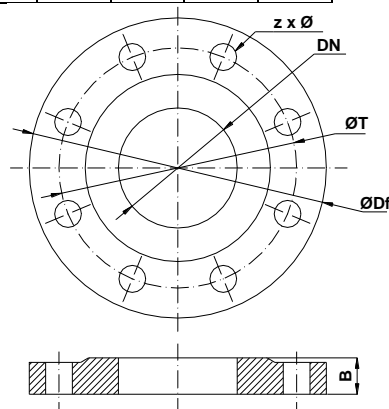
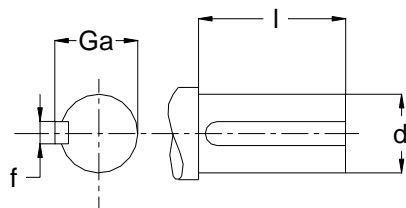
Mas Grup



Pump Size	DN s mm ø	DN d mm ø	a	b	Lp	g	G	u2	h1	e	hp	d	l	k	K	s
OMK 32	50	32	190	260	C+450	C+167	C+247	79	150	160	310	25	60	175	220	14
OMK 40	65	40	196	259	C+455	C+170	C+250	85	150	180	330	25	60	175	220	14
OMK 50	80	50	224	304	C+538	C+204	C+286	98	180	210	390	28	70	220	270	19
OMK 65	100	65	229	324	C+553	C+210	C+300	100	200	240	440	32	80	240	290	19
OMK 80	125	80	259	377	C+636	C+258	C+338	121	230	270	500	42	100	270	320	19

Dimension "C" according to the number of stages.

Pump Size	2	3	4	5	6	7	8	9	10	11	12	13	14
OMK 32	124	178	232	286	340	394	448	502	556	610	664	718	772
OMK 40	133	191	249	307	365	423	481	539	597	655	713		
OMK 50	188	266	344	422	500	578	656	734	812	890			
OMK 65	193	278	363	448	533	618	703	788	873	958			
OMK 80	250	360	470	580	690	800	910	1020	1130				



Shaft End & Key Way Dimensions

Pump Size	d mm ø	l mm	f mm	Ga mm
OMK 32	25	60	8	28
OMK 40	25	60	8	28
OMK 50	28	70	8	31
OMK 65	32	80	10	35
OMK 80	42	100	12	45

Flange Dimensions (PN 40)

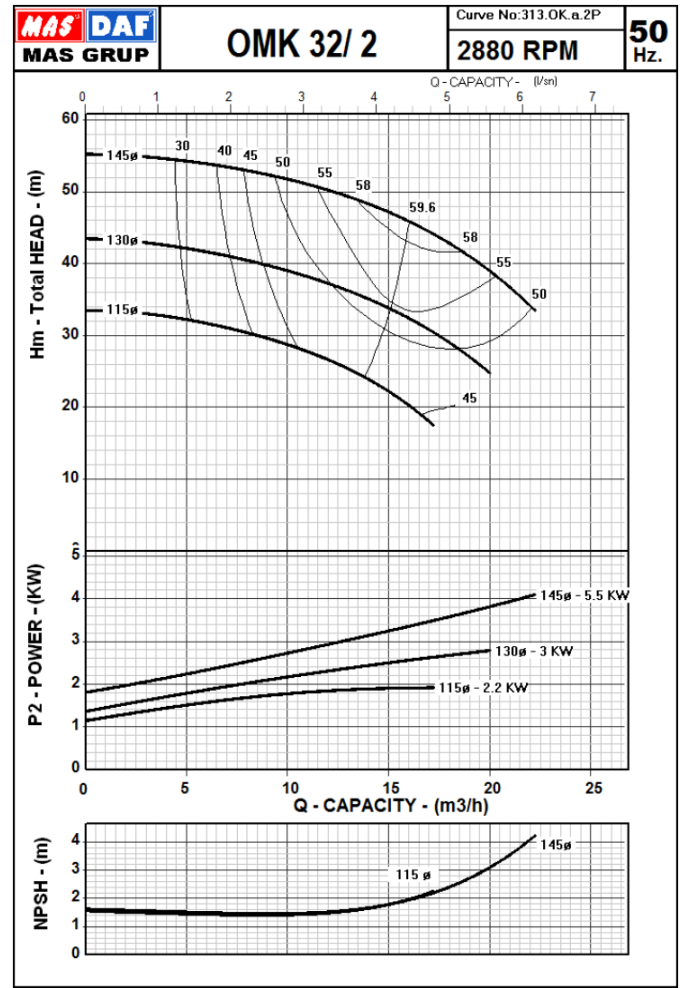
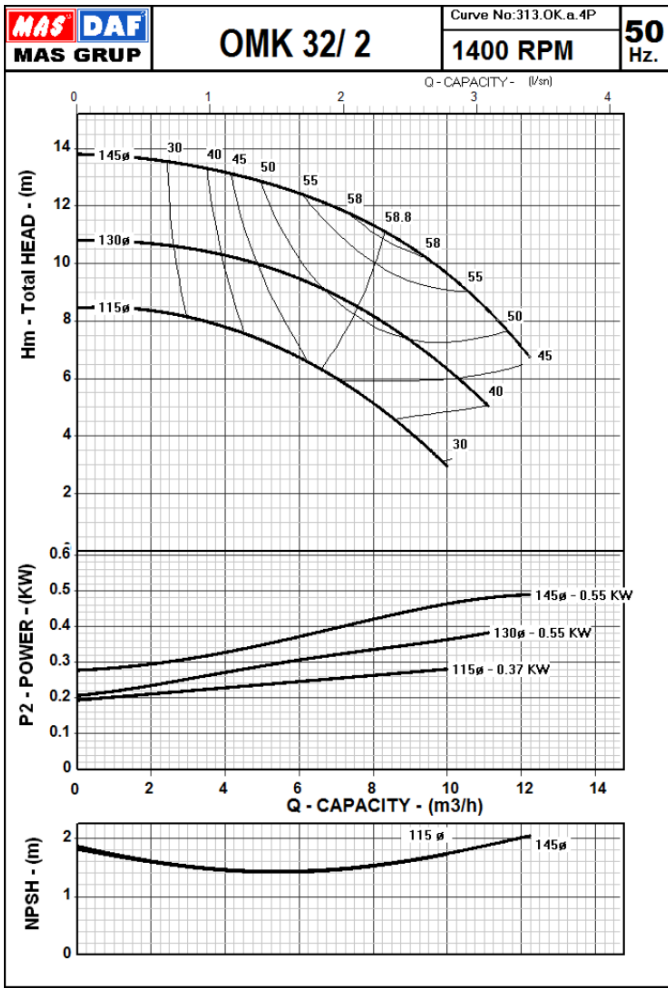
DN mm ø	Df mm ø	T mm ø	Z Each	ø mm ø	B mm
DN 32	140	100	4	18	20
DN 40	150	110	4	18	20
DN 50	165	125	4	18	22
DN 65	185	145	8	18	24
DN 80	200	160	8	18	26
DN 100	235	190	8	23	28
DN 125	270	220	8	27	30

OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 32/2

Mas Grup

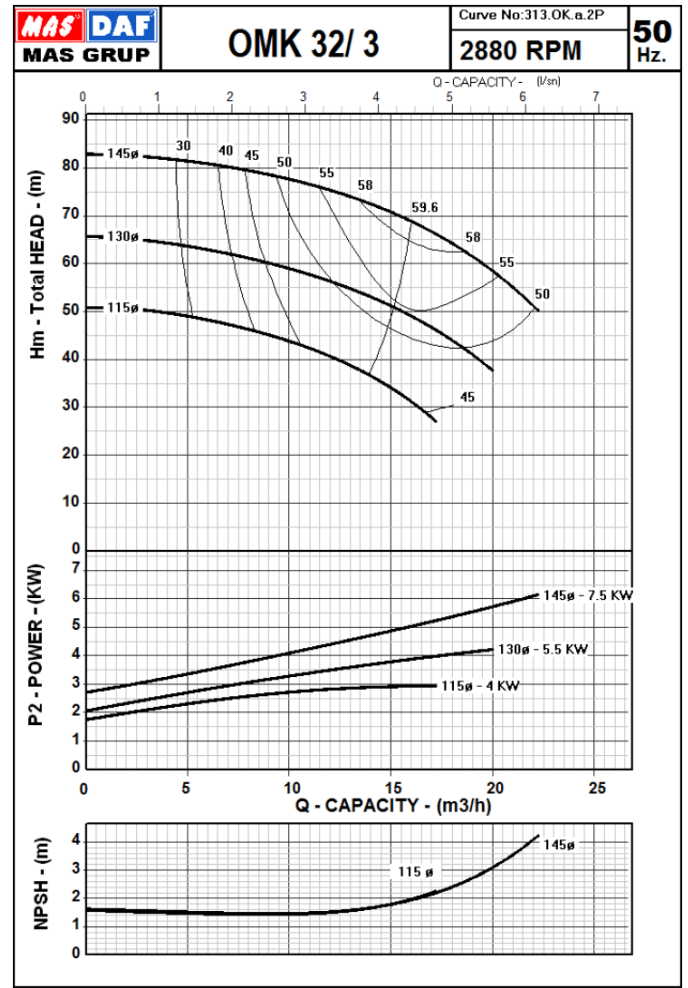
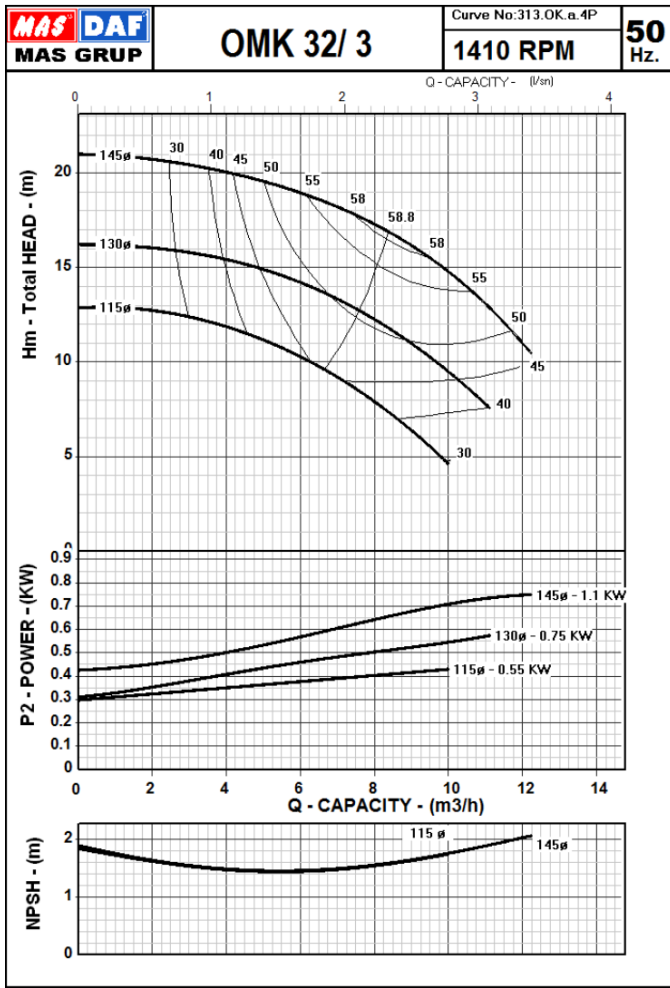


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 32/3

Mas Grup



OMK Series

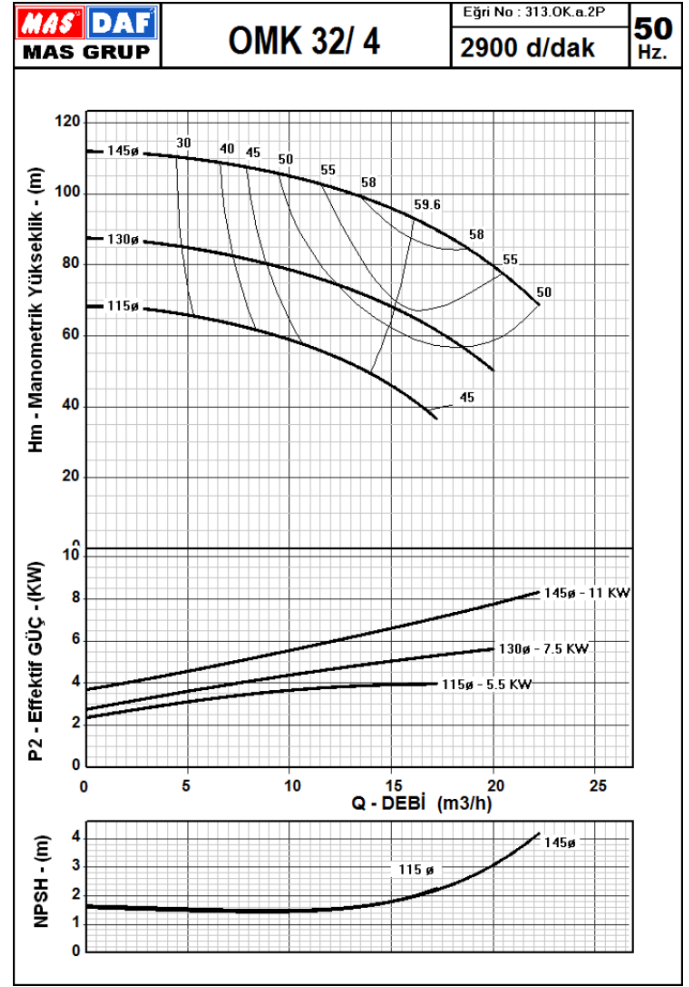
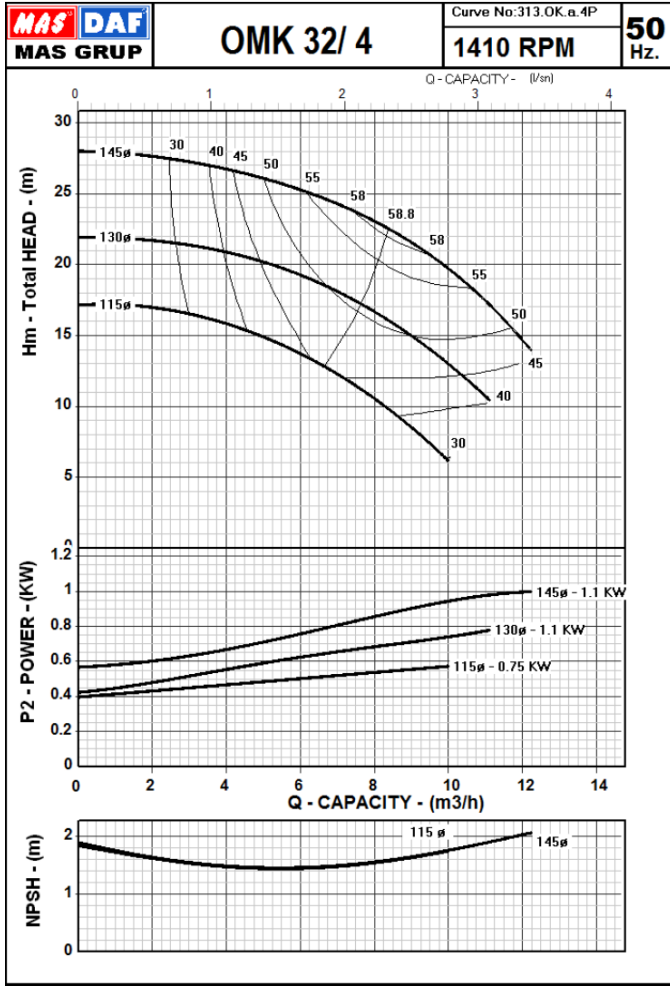
High Pressure Multistage Pumps

Performance Curves



OMK 32/4

Mas Grup

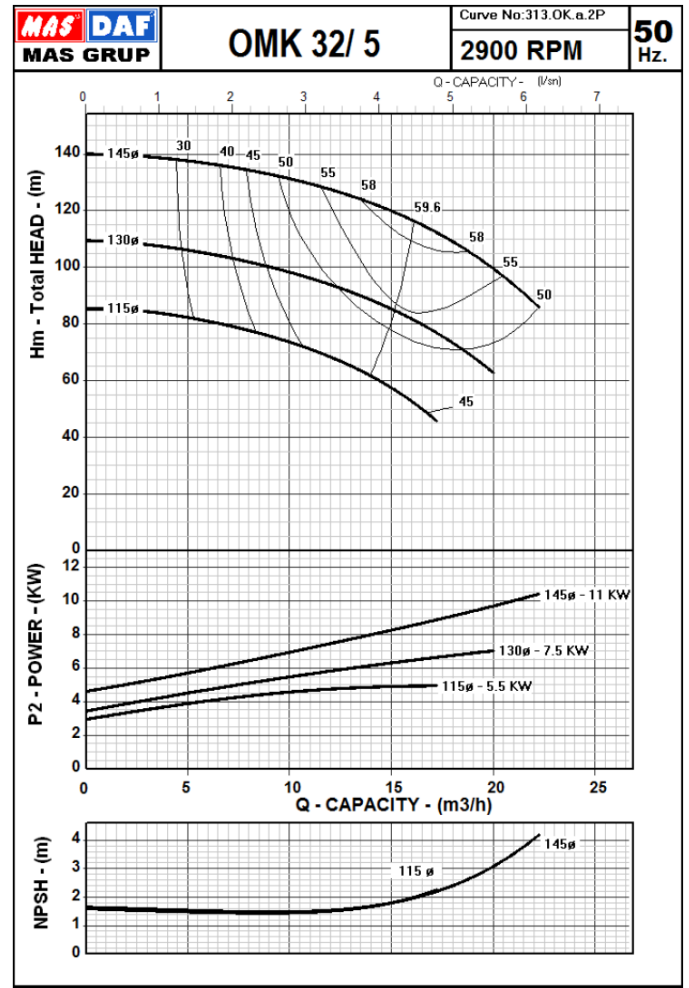
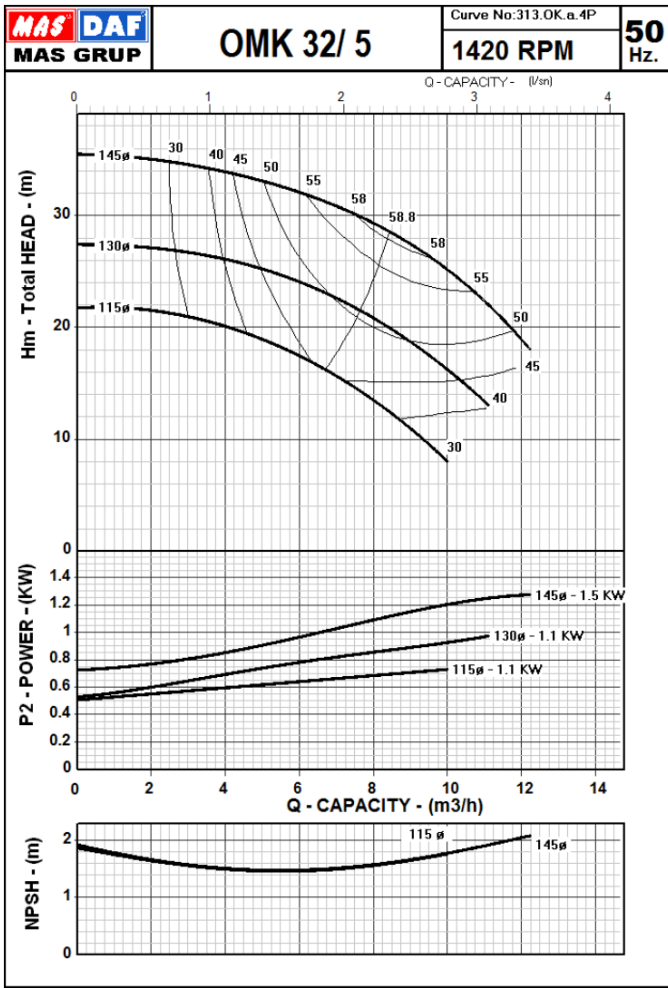


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 32/5

Mas Grup

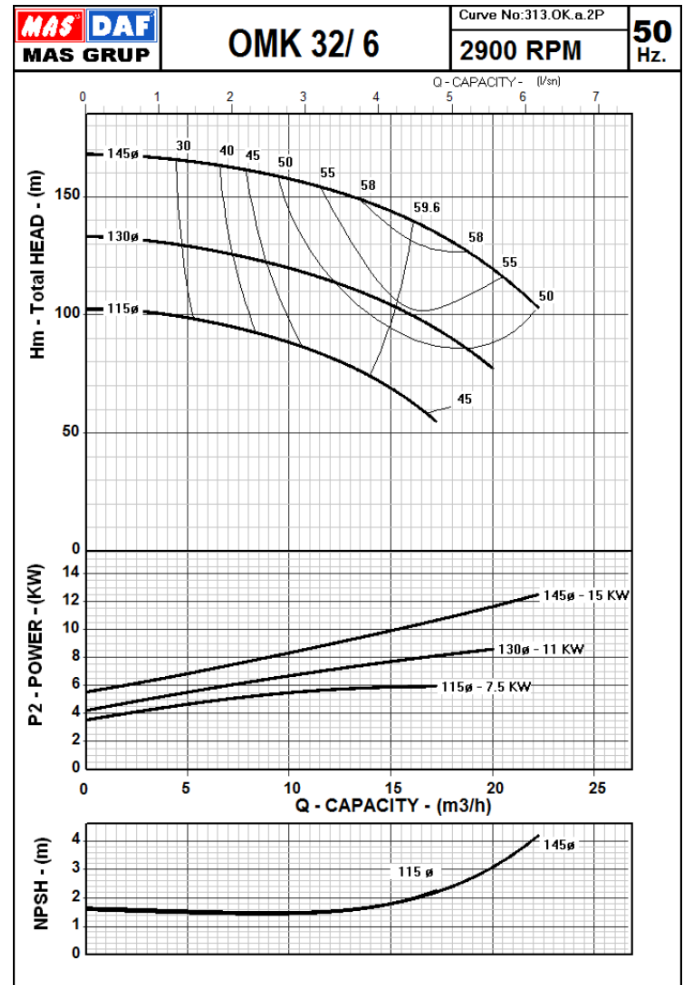
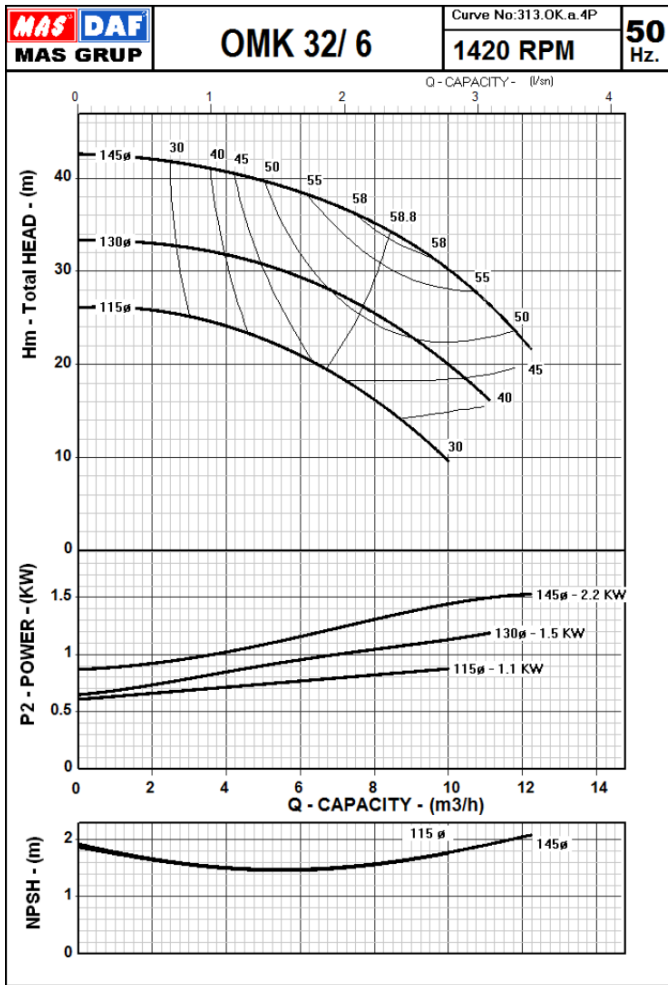


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 32/6

Mas Grup

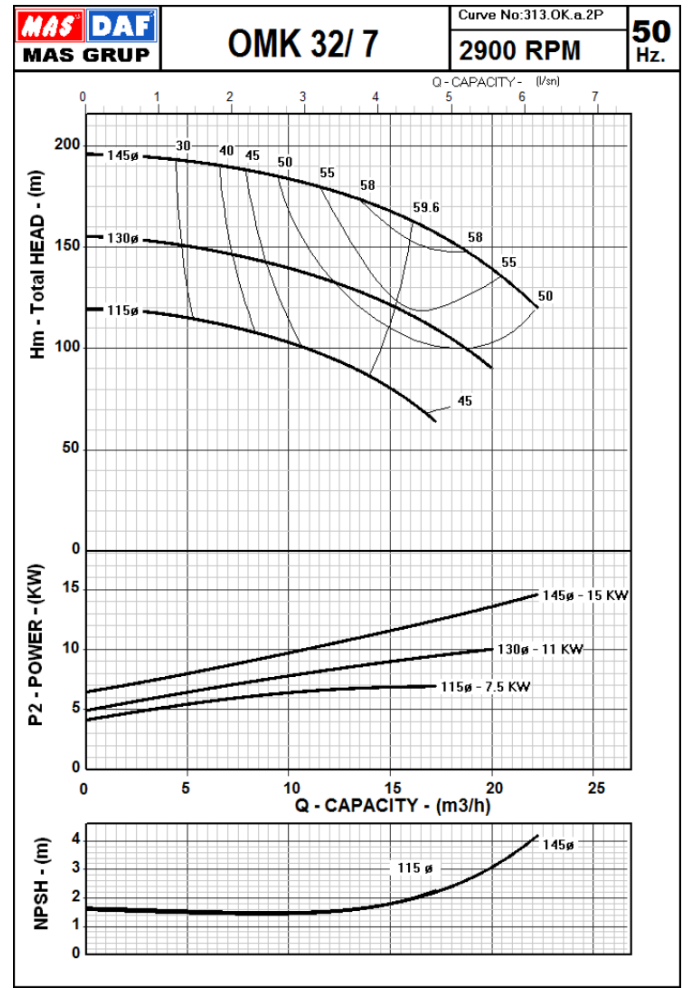
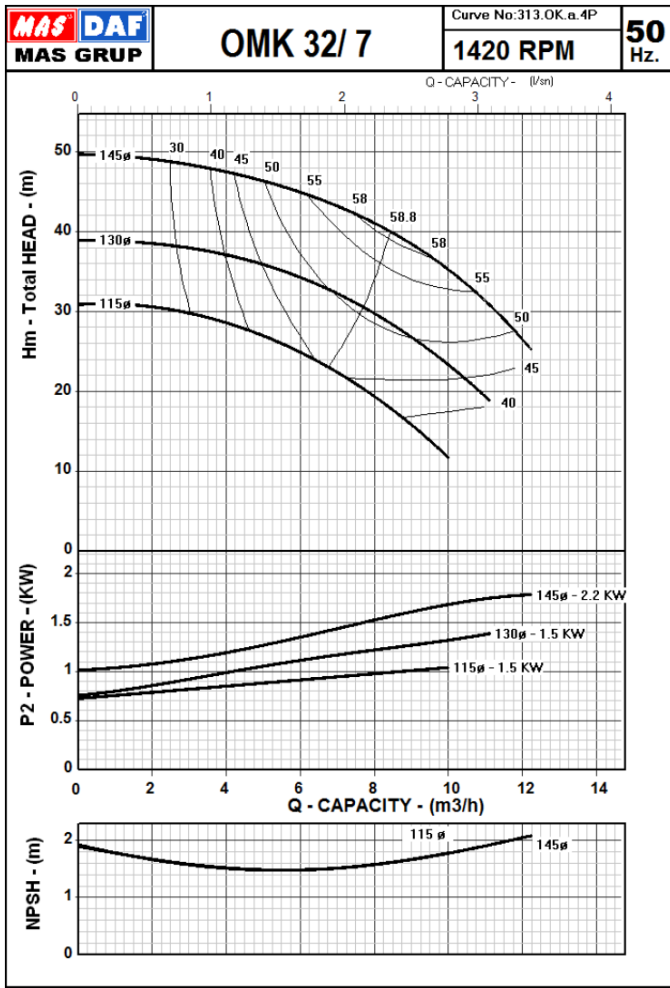


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



Mas Grup

OMK 32/7

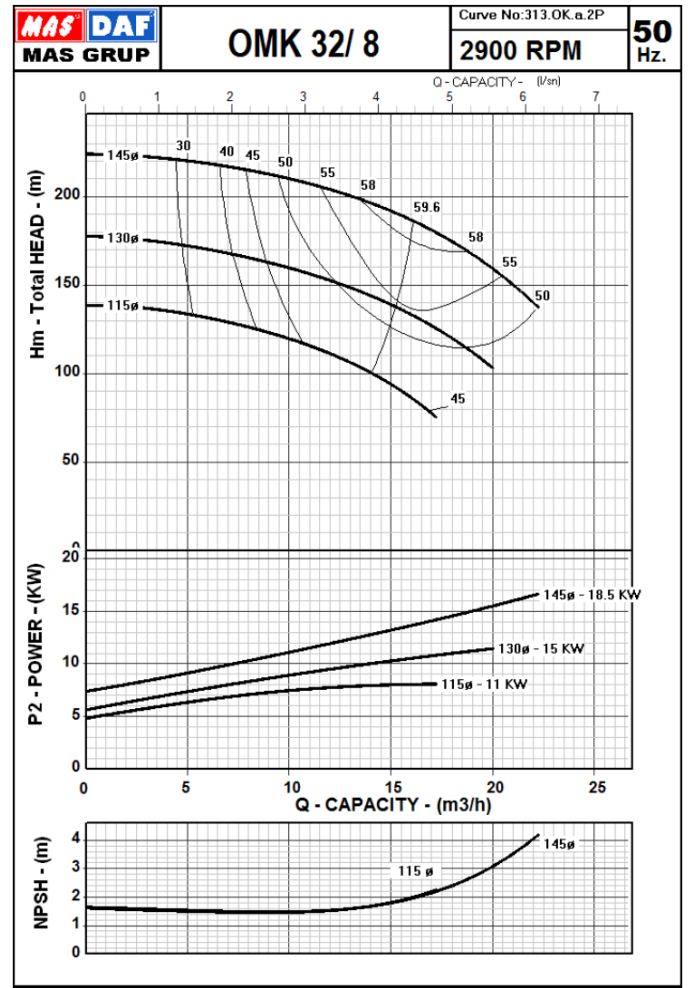
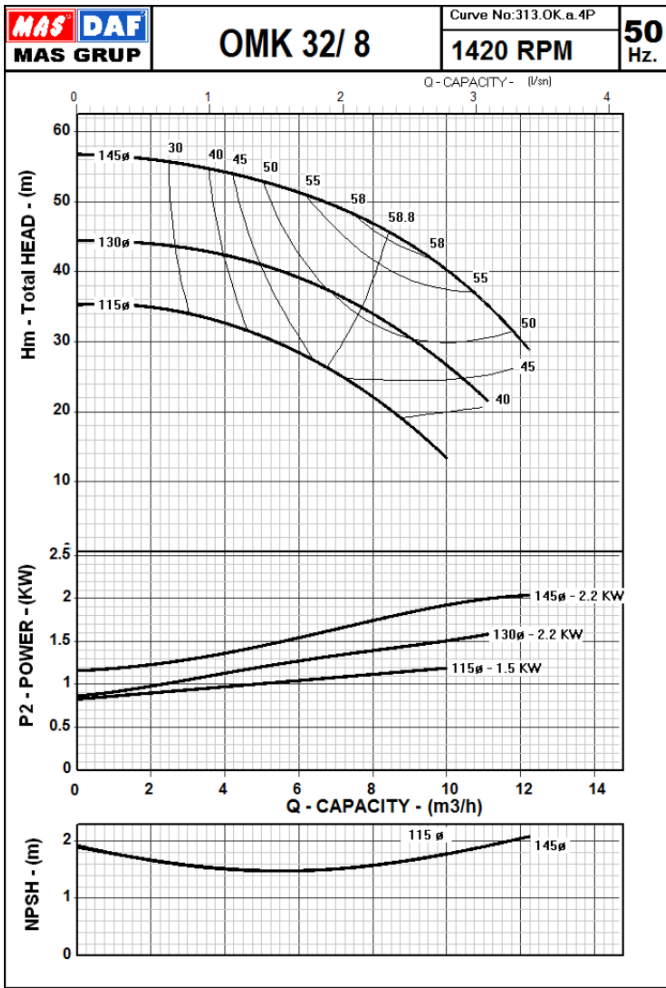


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



Mas Grup

OMK 32/8

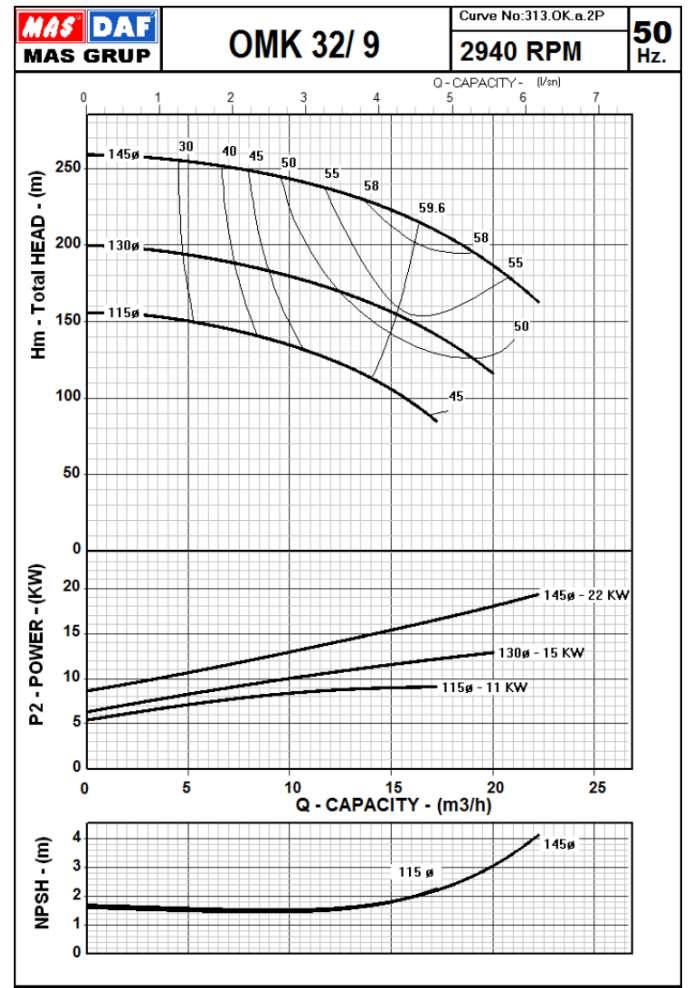
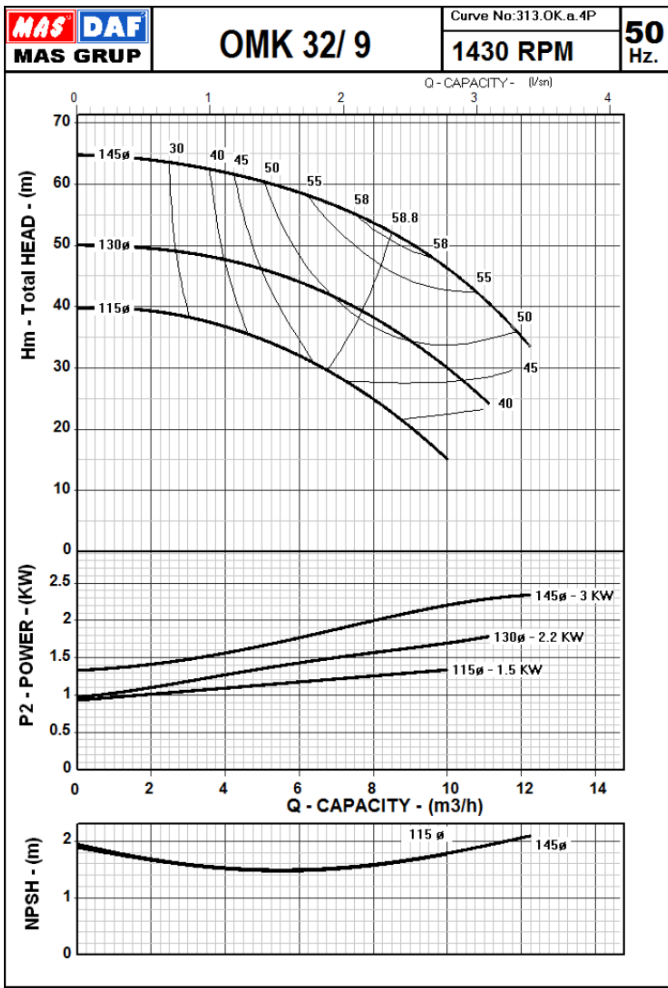


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 32/9

Mas Grup



OMK Series

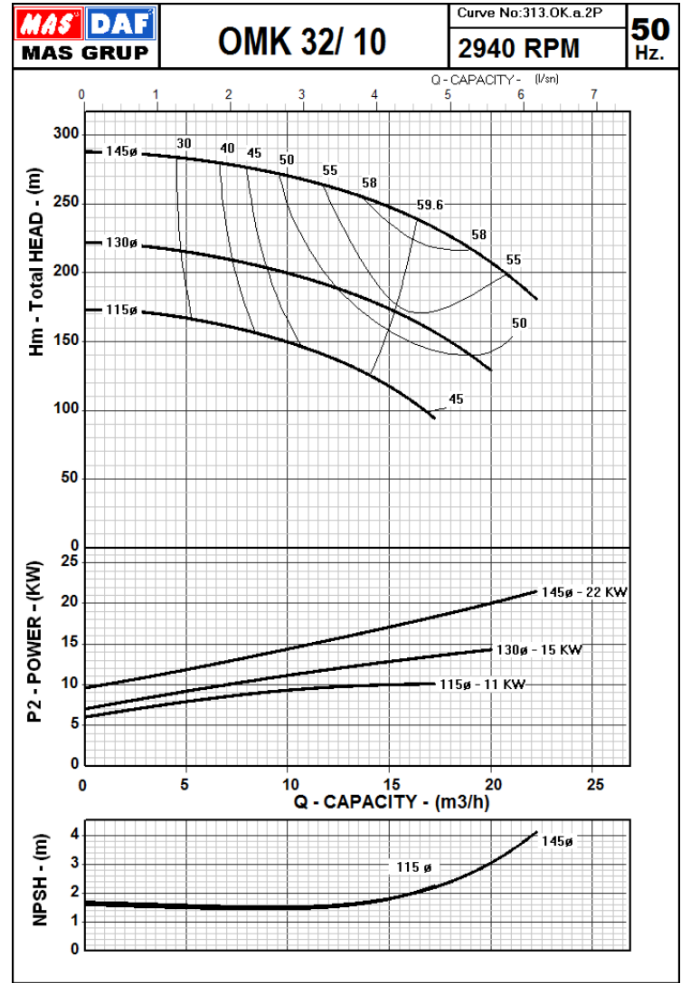
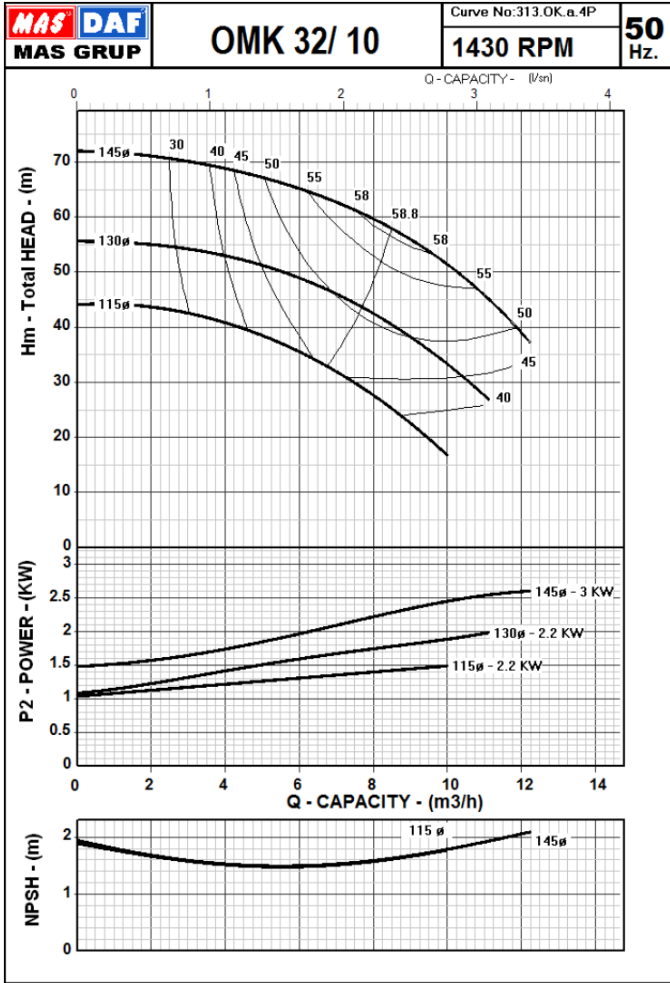
High Pressure Multistage Pumps

Performance Curves



OMK 32/10

Mas Grup

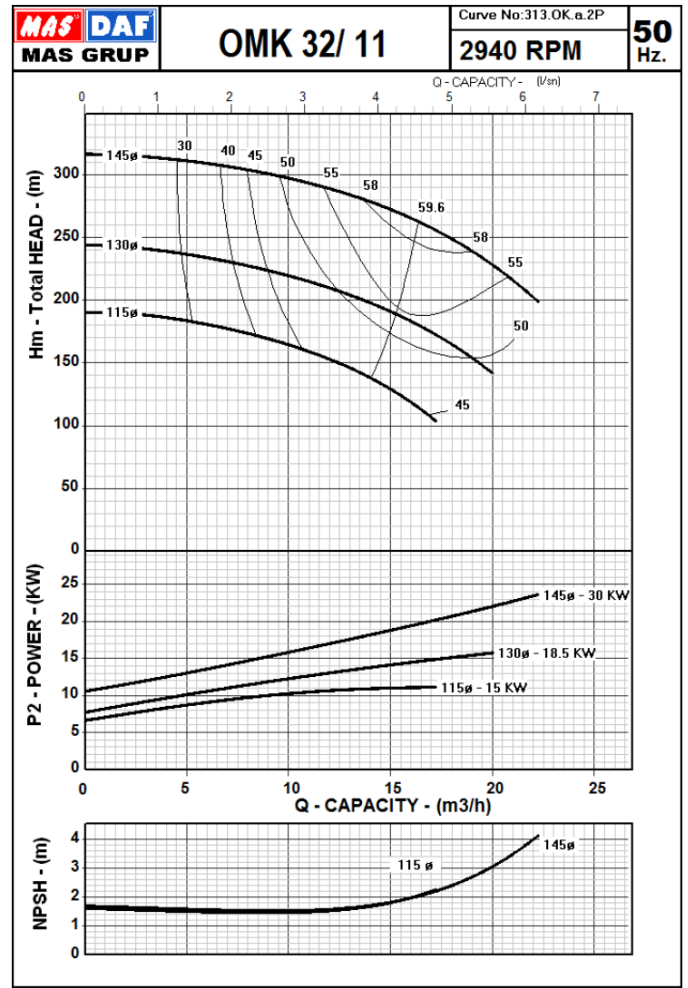
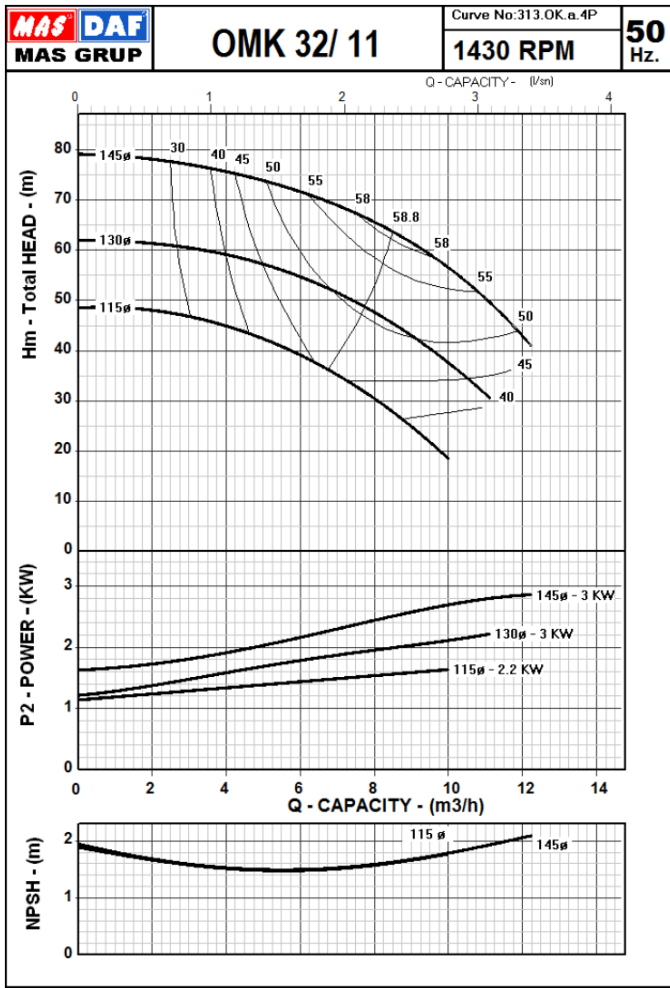


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 32/11

Mas Grup

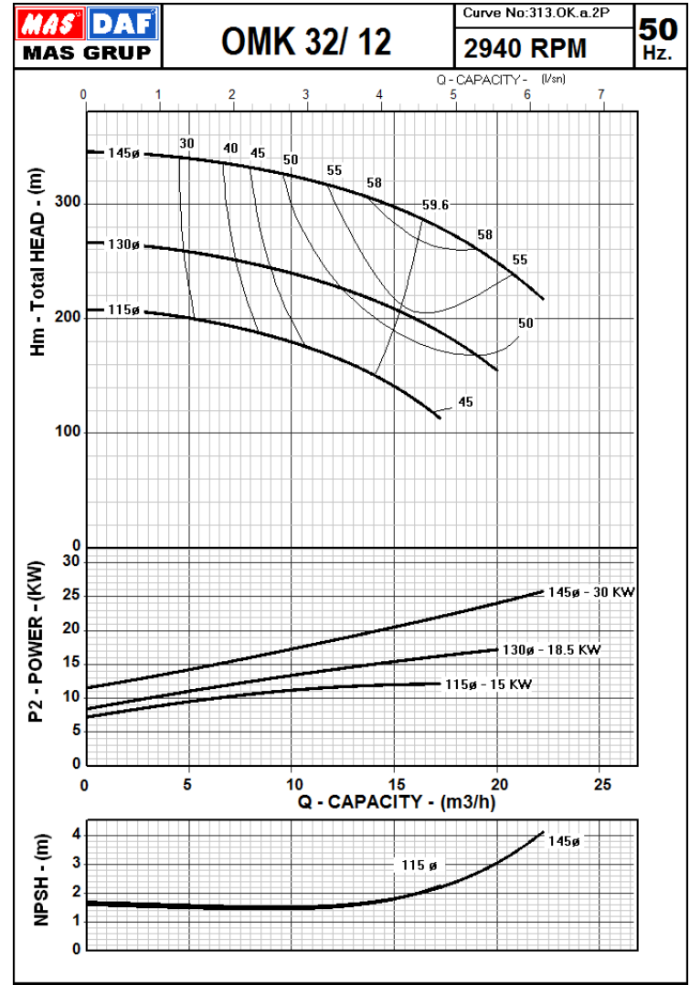
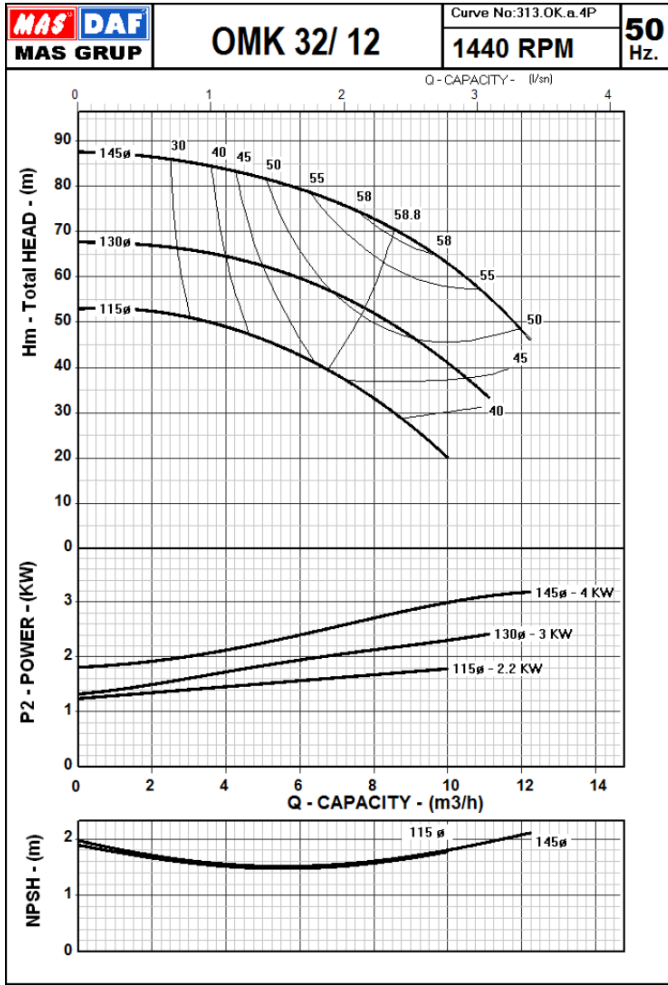


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



Mas Grup

OMK 32/12

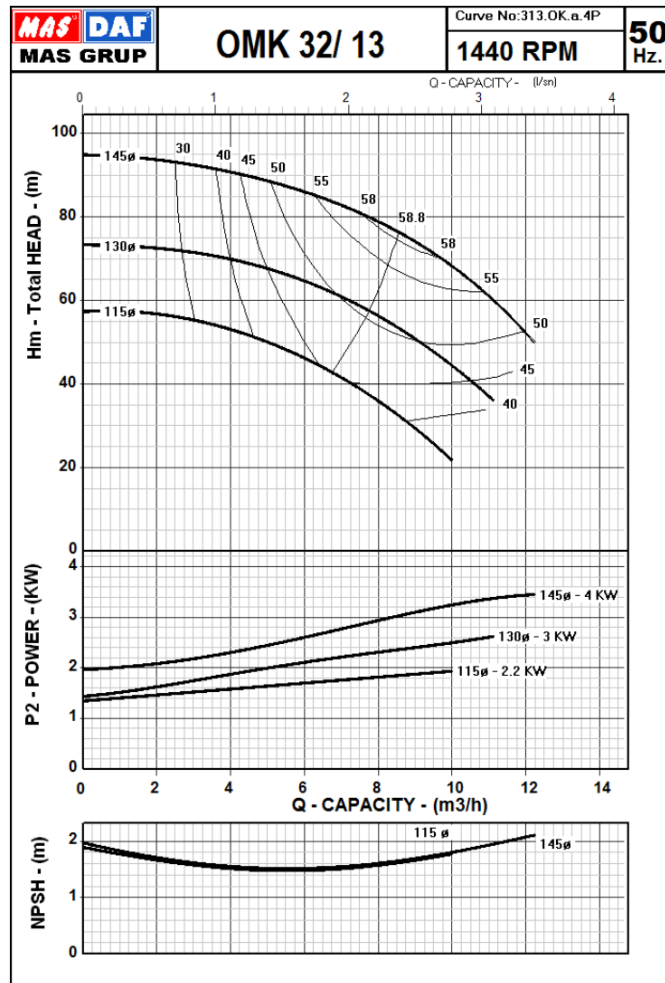


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 32/13



Mas Grup

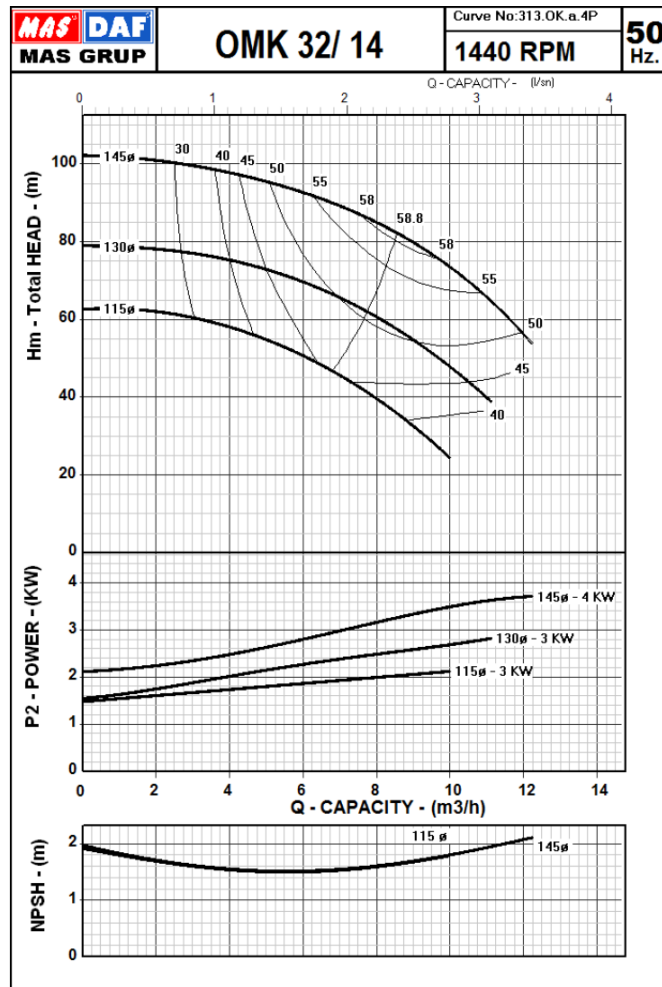


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 32/14



Mas Grup



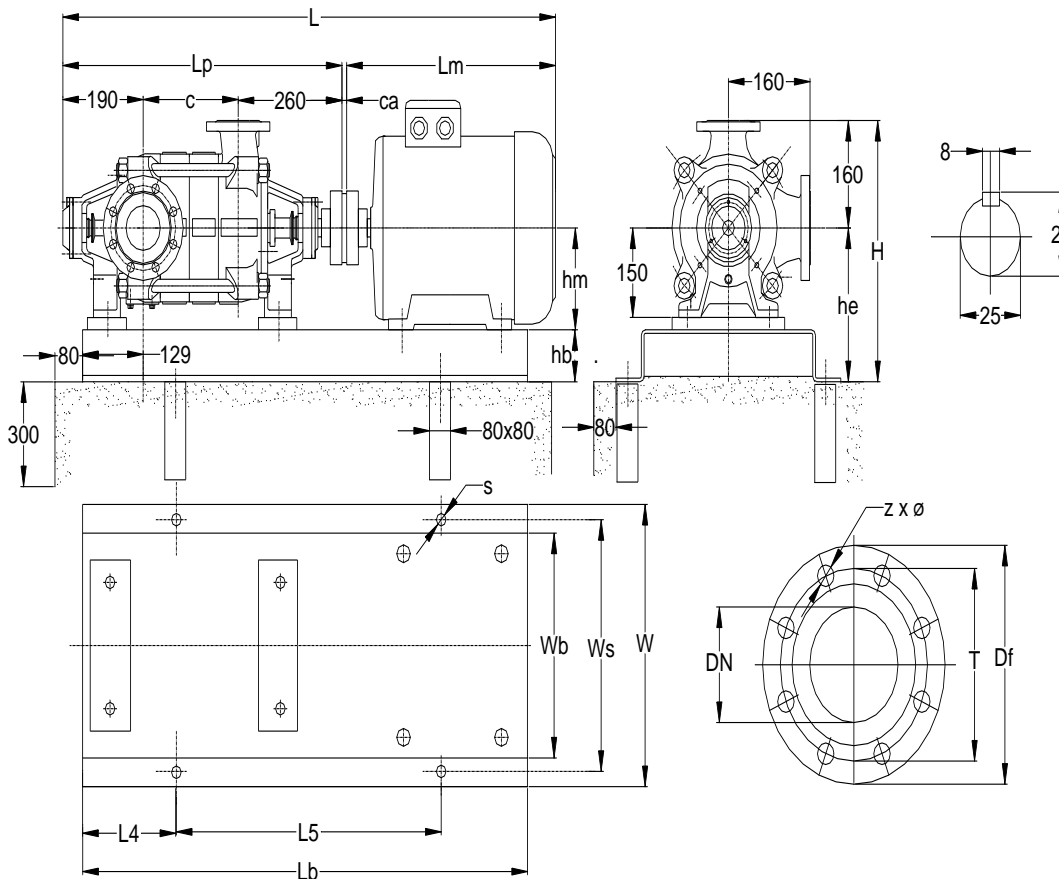
OMK Series

High Pressure Multistage Pumps

Dime



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	50	165	125	4	18
Discharge	40	32	140	100	4	18

Dimensions – 1450 RPM - 50 Hz

Pump Type	MOTOR			PUMP				Overall			Base Plate								
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	S
OMK 32 / 2	0.75	80	273	80	574	124	16	863	330	375	2.03	800	240	65	215	130	540	290	19
	0.55	80	273	80	574	124	16	863	330	375	2.03	800	240	65	215	130	540	290	19
32 / 3	1.1	90S	300	90	628	178	20	948	330	375	2.03	800	240	65	215	130	540	290	19
	0.75	80	273	80	628	178	16	917	330	375	2.03	800	240	65	215	130	540	290	19
32 / 4	1.5	90L	325	90	682	232	20	1027	330	375	2.04	900	240	65	215	150	600	290	19
	1.1	90S	300	90	682	232	20	1002	330	375	2.04	900	240	65	215	150	600	290	19
32 / 5	1.5	90L	325	90	736	286	20	1081	330	375	2.05	1000	240	65	215	170	660	290	19
	1.1	90S	300	90	736	286	20	1056	330	375	2.04	900	240	65	215	150	600	290	19
32 / 6	2.2	100L	365	100	790	340	20	1175	330	375	2.06	1120	240	65	215	190	740	290	19
	1.5	90L	325	90	790	340	20	1135	330	375	2.05	1000	340	65	215	170	660	270	19
32 / 7	2.2	100L	365	100	844	394	20	1229	330	375	2.06	1120	240	65	215	190	740	290	19
	1.5	90L	325	90	844	394	20	1189	330	375	2.06	1120	240	65	215	190	740	290	19
32 / 8	3	100L	365	100	898	448	20	1283	330	375	2.06	1120	240	65	215	190	740	290	19
	2.2	100L	365	100	898	448	20	1283	330	375	2.06	1120	240	65	215	190	740	290	19
32 / 9	3	100L	365	100	952	502	20	1337	330	375	2.07	1250	240	65	215	205	840	290	19
	2.2	100L	365	100	952	502	20	1337	330	375	2.07	1250	240	65	215	205	840	290	19
32 / 10	3	100L	365	100	1006	556	20	1391	330	375	2.07	1250	240	65	215	205	840	290	19
	2.2	100L	365	100	1006	556	20	1391	330	375	2.07	1250	240	65	215	205	840	290	19
32 / 11	4	112M	384	112	1060	610	21	1465	330	375	2.08	1400	240	65	215	230	940	290	19
	3	100L	365	100	1060	610	20	1445	330	375	2.08	1400	240	65	215	230	940	290	19
32 / 12	4	112M	384	112	1114	664	21	1519	330	375	2.08	1400	240	65	215	230	940	290	19
	3	100L	365	100	1114	664	20	1499	330	375	2.08	1400	240	65	215	230	940	290	19
32 / 13	4	112M	384	112	1168	718	21	1573	330	375	2.08	1400	240	65	215	230	940	290	19
	3	100L	365	100	1168	718	20	1553	330	375	2.08	1400	240	65	215	230	940	290	19
32 / 14	5.5	132S	455	132	1222	772	26	1703	360	375	3.09	1600	270	65	215	270	1060	320	19
	4	112M	384	112	1222	772	21	1627	330	375	2.09	1600	240	65	215	270	1060	290	19

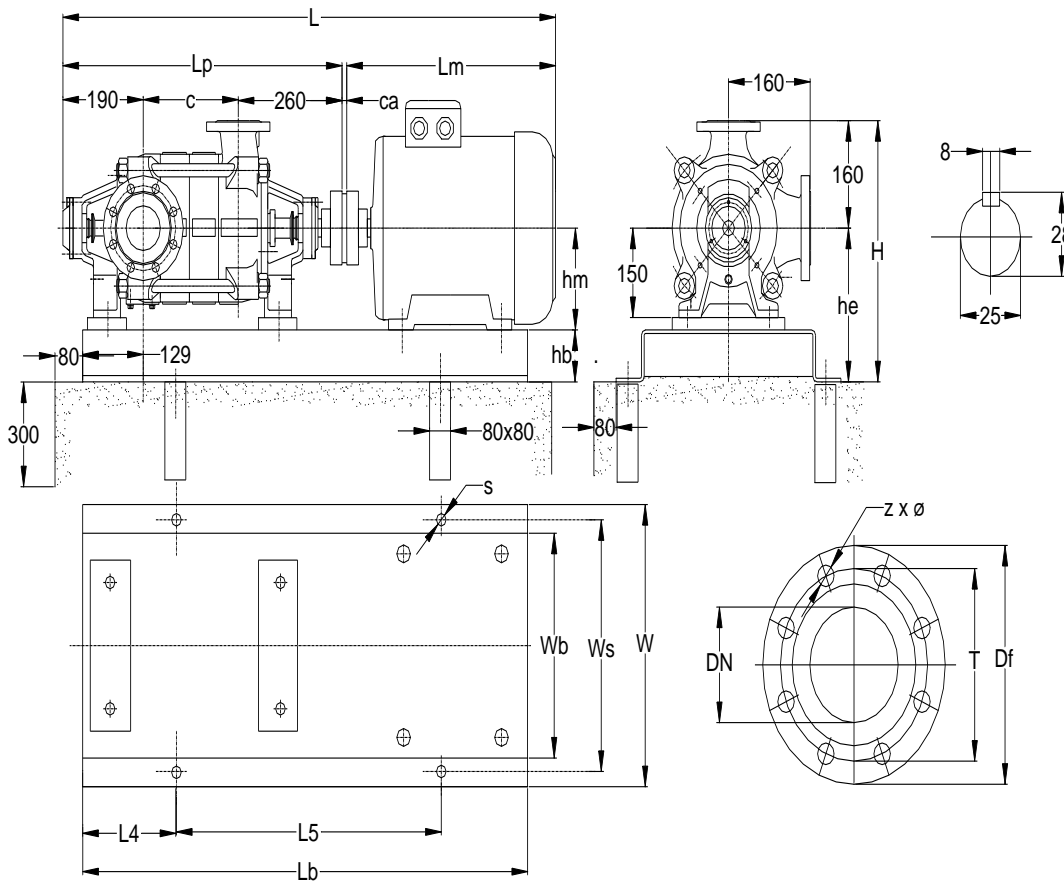
This leaflet is subject to alteration without notice.

Dimensions are in mm without obligation.

OMK Series



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200
24	4	M 20 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	50	165	125	4	18
Discharge	40	32	140	100	4	18

Dimensions – 2900 RPM - 50 Hz

Pump Type	MOTOR				PUMP			Overall			Base Plate								
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	S
OMK 32 / 2	5.5	132S	455	132	574	124	21	1050	360	375	3.04	900	270	65	215	150	600	320	19
	4	112M	384	112	574	124	20	978	330	375	3.03	800	270	65	215	130	540	320	19
32 / 3	7.5	132S	455	132	628	178	21	1104	360	375	3.04	900	270	65	215	150	600	320	19
	5.5	132S	455	132	628	178	21	1104	360	375	3.04	900	270	65	215	150	600	320	19
32 / 4	11	160M	594	160	682	232	26	1302	450	400	5.06	1120	340	80	240	190	740	400	24
	7.5	132S	455	132	682	232	21	1158	360	375	3.05	1000	270	65	215	170	660	320	19
32 / 5	11	160M	594	160	736	286	26	1356	450	400	5.07	1250	340	80	240	205	840	400	24
	7.5	132S	455	132	736	286	21	1212	360	375	3.06	1120	270	65	215	190	740	320	19
32 / 6	15	160M	594	160	790	340	26	1410	450	400	5.07	1250	340	80	240	205	840	400	24
	11	160M	594	160	790	340	26	1410	450	400	5.07	1250	340	80	240	205	840	400	24
32 / 7	18.5	160L	638	160	844	394	30	1512	450	400	5.08	1400	340	80	240	230	940	400	24
	15	160M	594	160	844	394	26	1464	450	400	5.07	1250	340	80	240	205	840	400	24
32 / 8	18.5	160L	638	160	898	448	30	1566	450	400	5.08	1400	340	80	240	230	940	400	24
	15	160M	594	160	898	448	26	1518	450	400	5.08	1400	340	80	240	230	940	400	24
32 / 9	22	180M	654	180	952	502	30	1636	490	420	6.08	1400	380	80	260	230	940	440	24
	18.5	160L	638	160	952	502	30	1620	450	400	5.08	1400	340	80	240	230	940	400	24
32 / 10	30	200L	747	200	1006	556	30	1783	540	440	7.09	1600	430	80	280	270	1060	490	24
	22	180M	654	180	1006	556	30	1690	490	420	6.09	1600	380	80	260	270	1060	440	24
32 / 11	30	200L	747	200	1060	610	30	1837	540	440	7.09	1600	430	80	280	270	1060	490	24
	22	180M	654	180	1060	610	30	1744	490	420	6.09	1600	380	80	260	270	1060	440	24
32 / 12	30	200L	747	200	1114	664	30	1891	540	440	7.10	1800	430	80	280	300	1200	490	24
	22	180M	654	180	1114	664	30	1798	490	420	6.09	1600	380	80	260	270	1060	440	24

This leaflet is subject to alteration without notice.

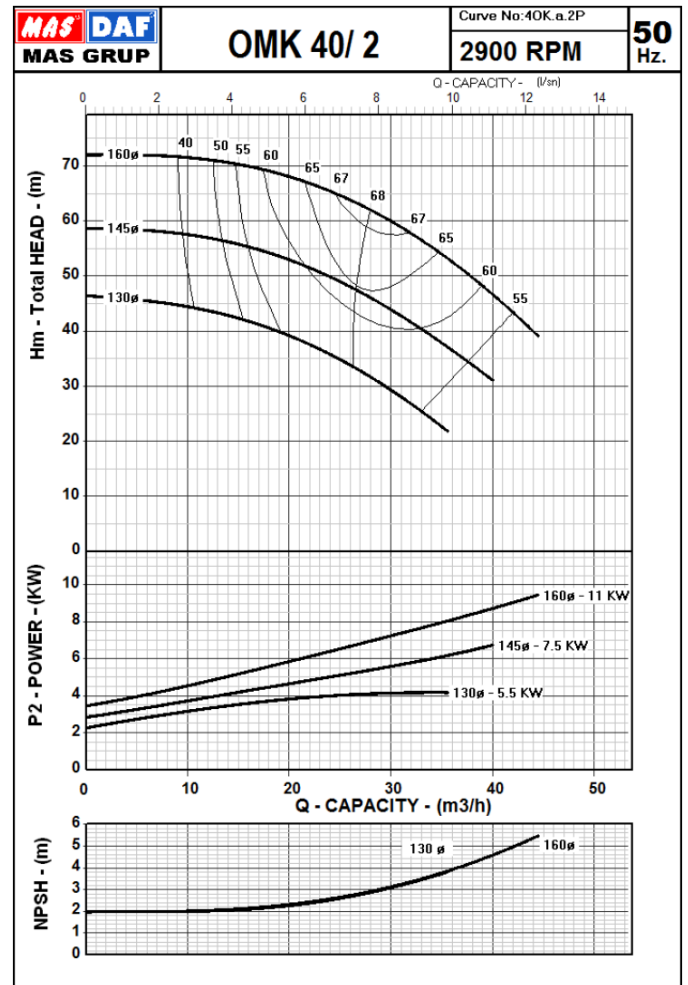
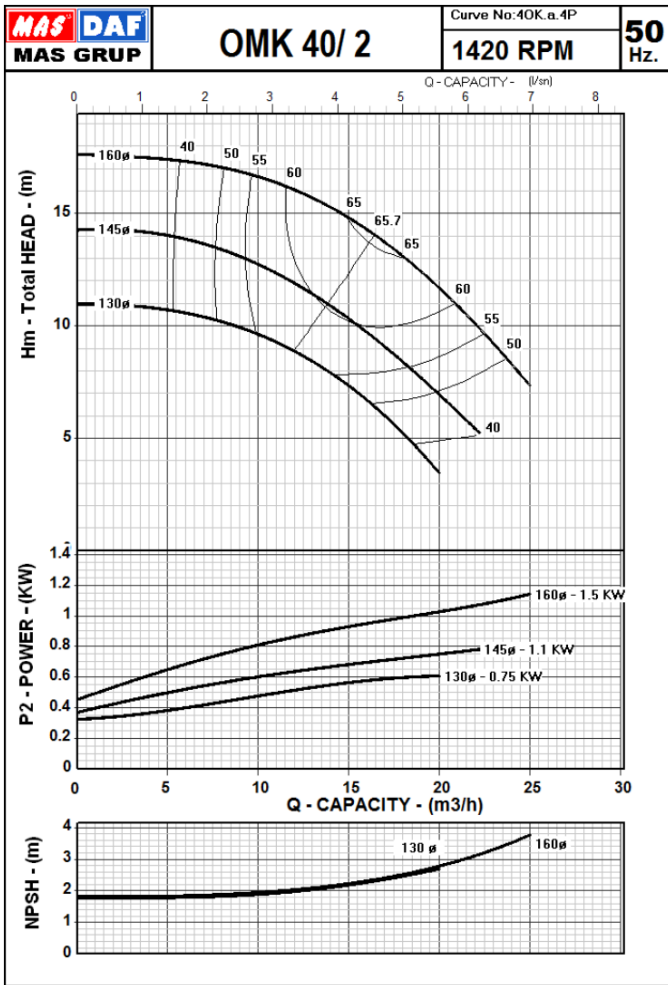
Dimensions are in mm without obligation.

OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/2

Mas Grup

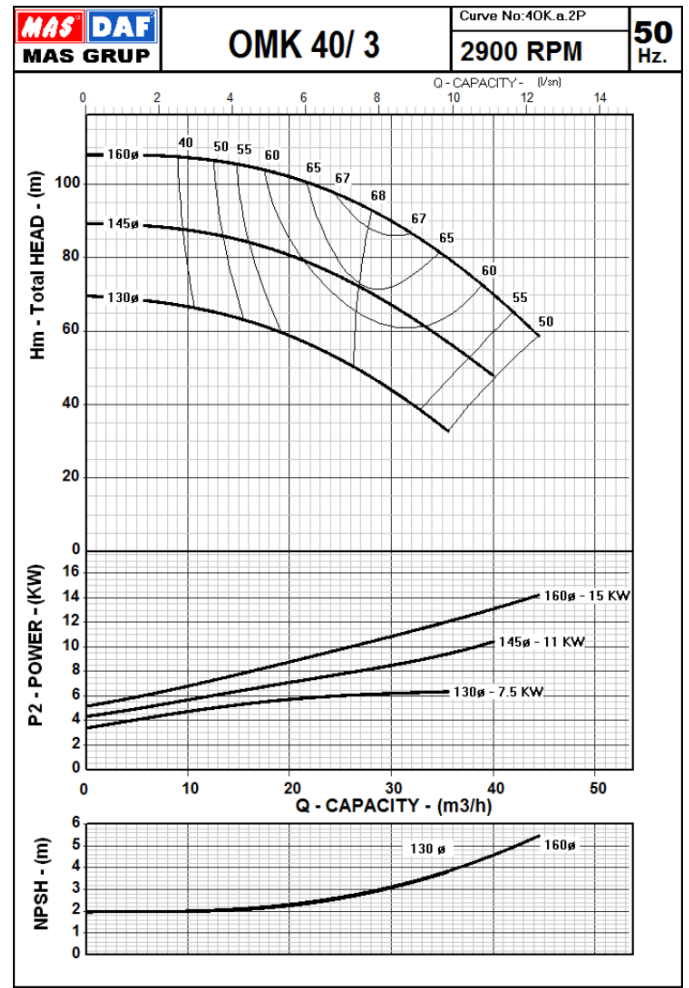
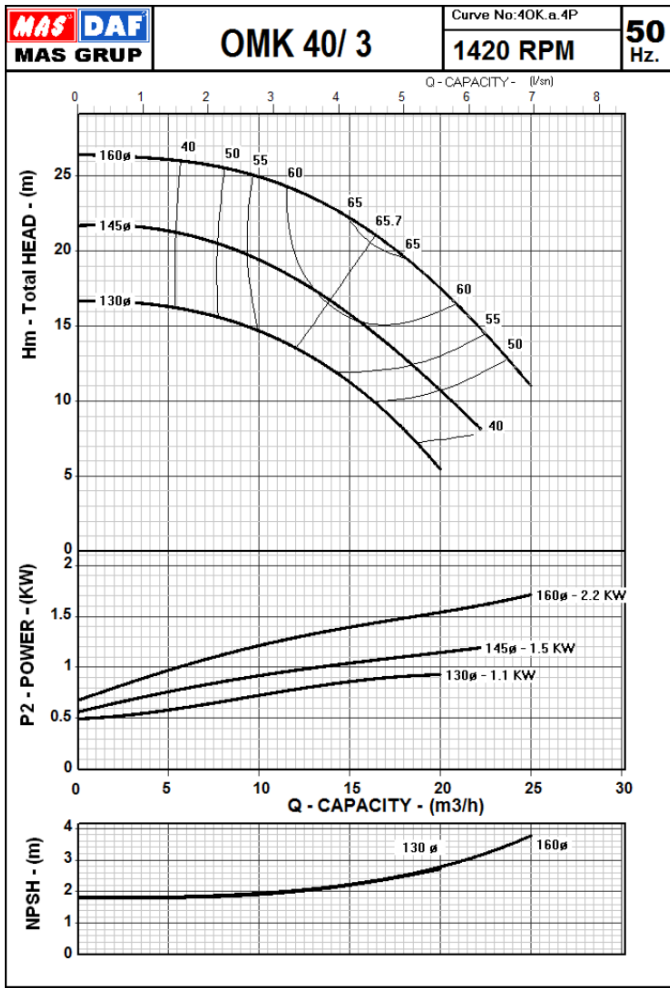


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/3

Mas Grup

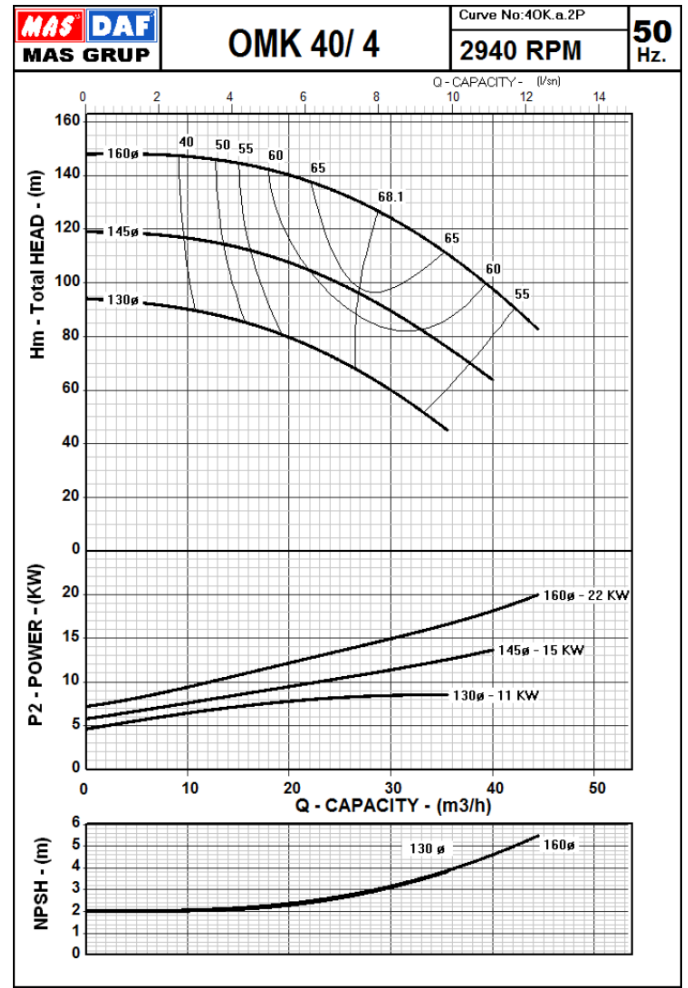
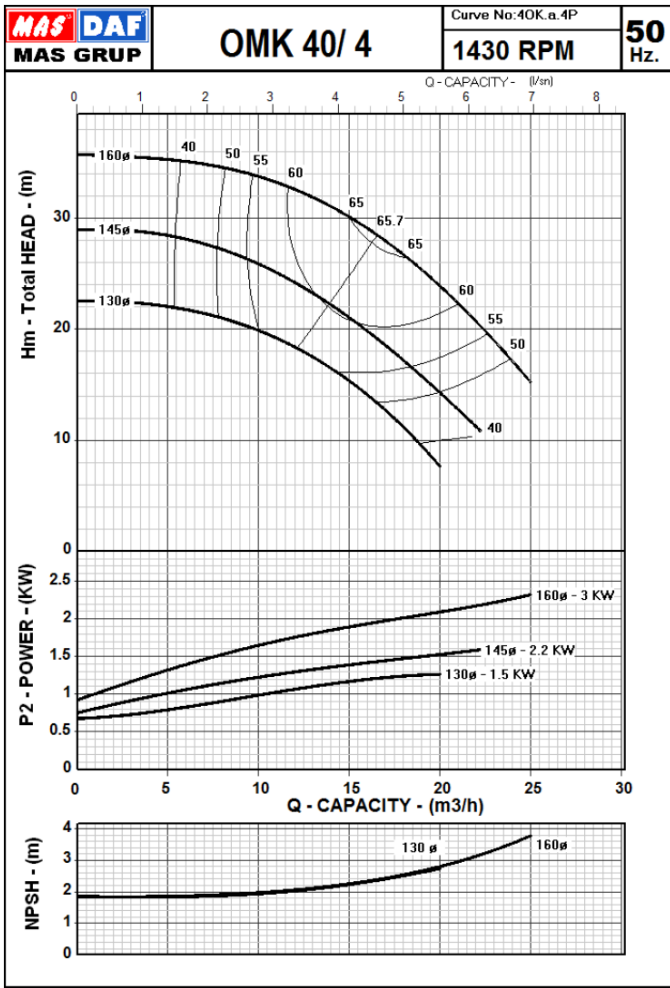


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/4

Mas Grup

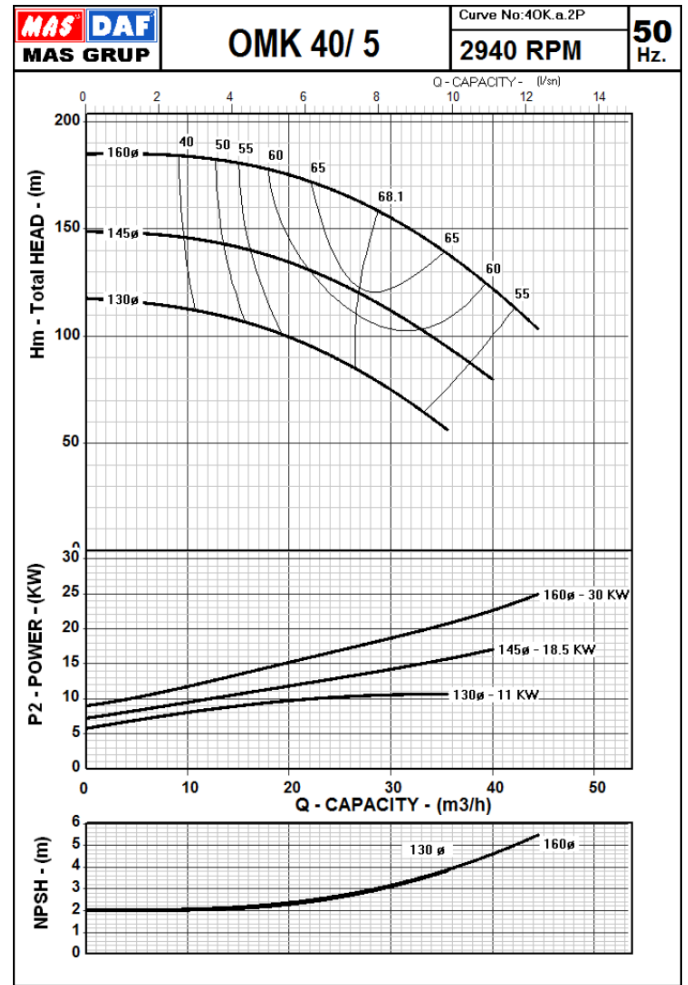
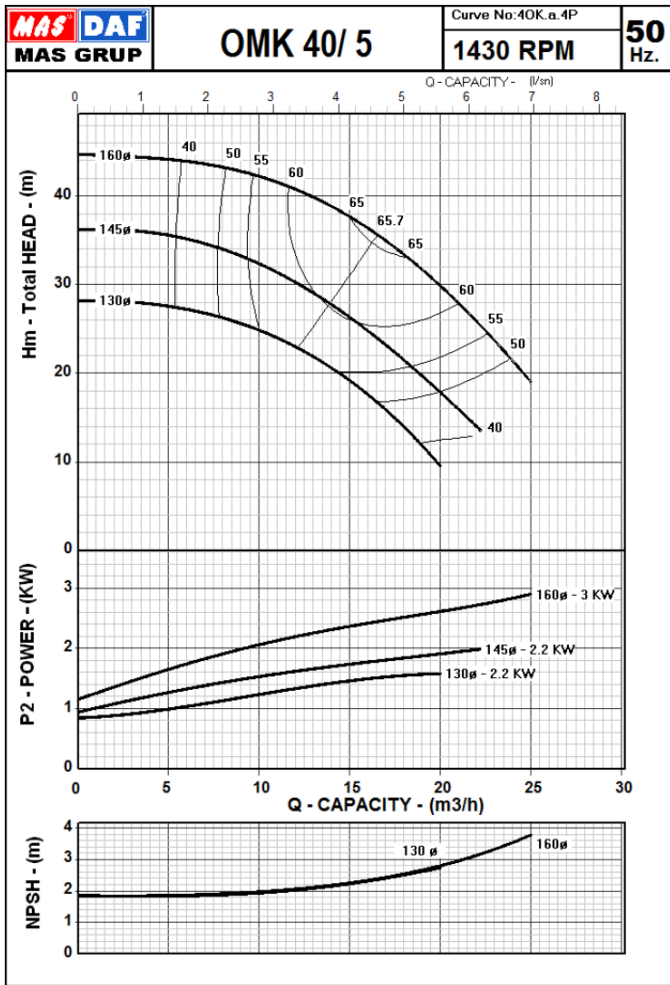


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/5

Mas Grup

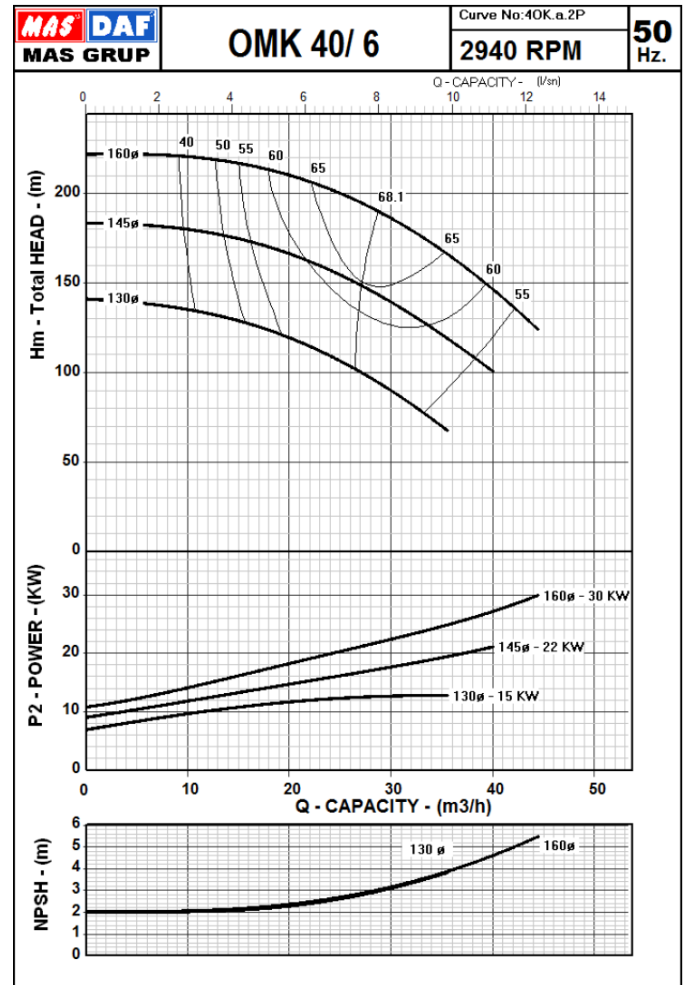
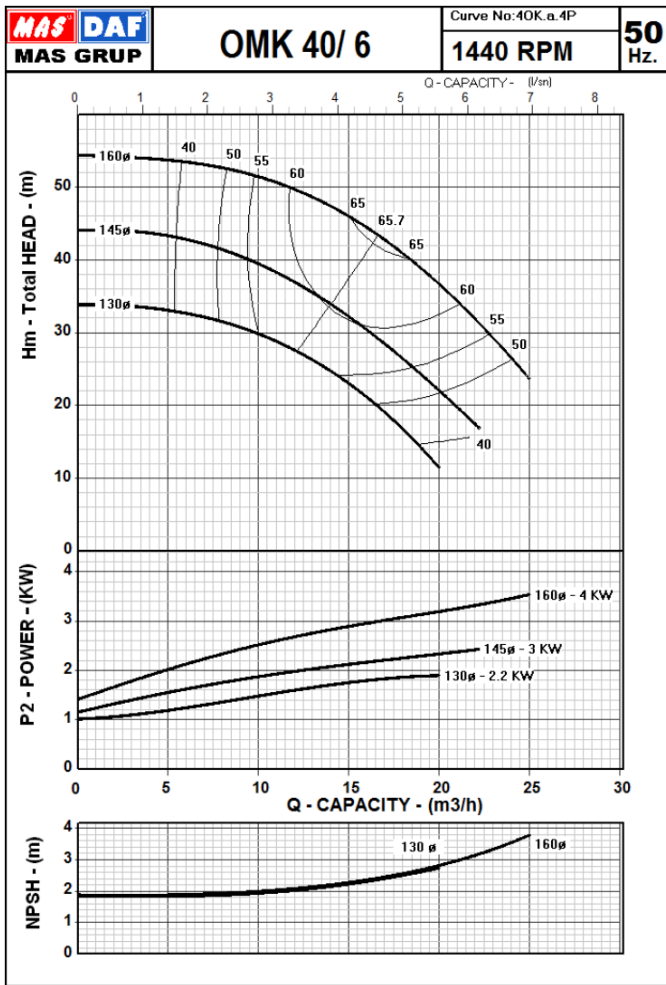


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/6

Mas Grup

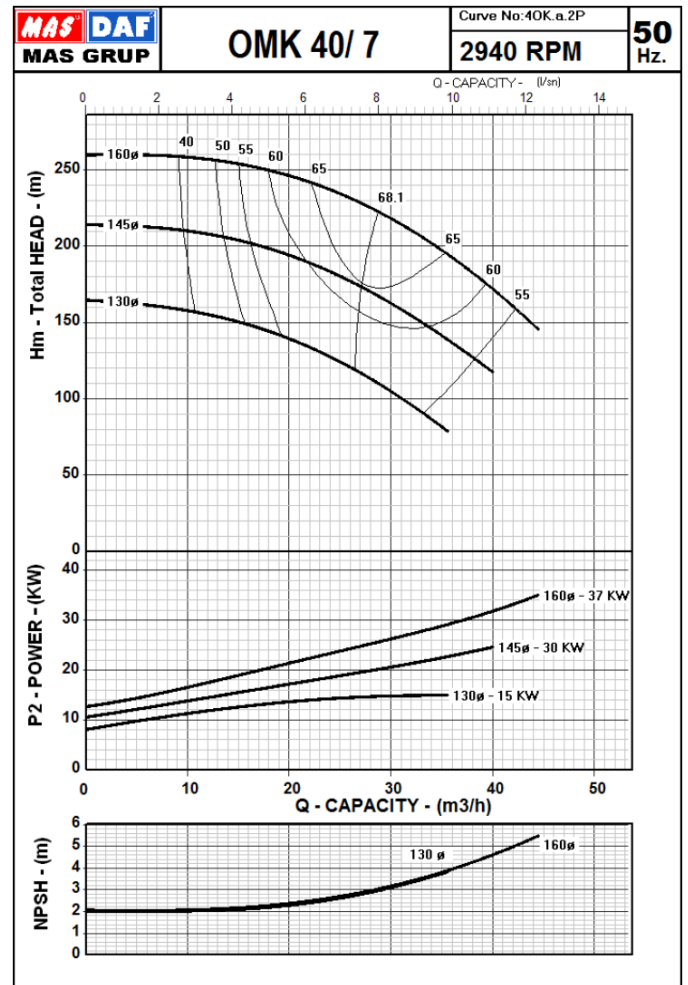
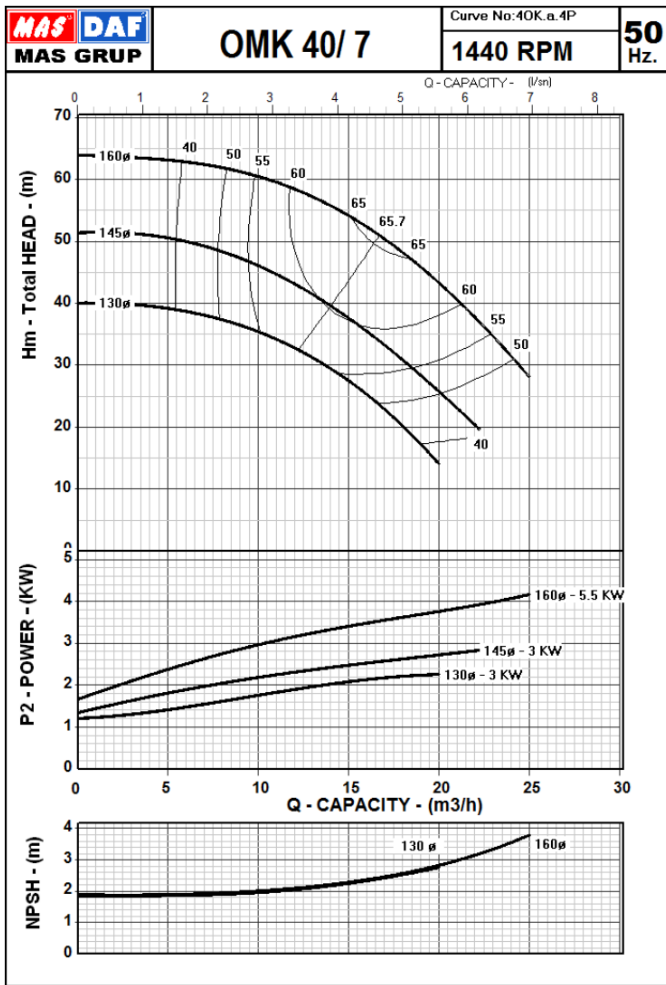


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/7

Mas Grup

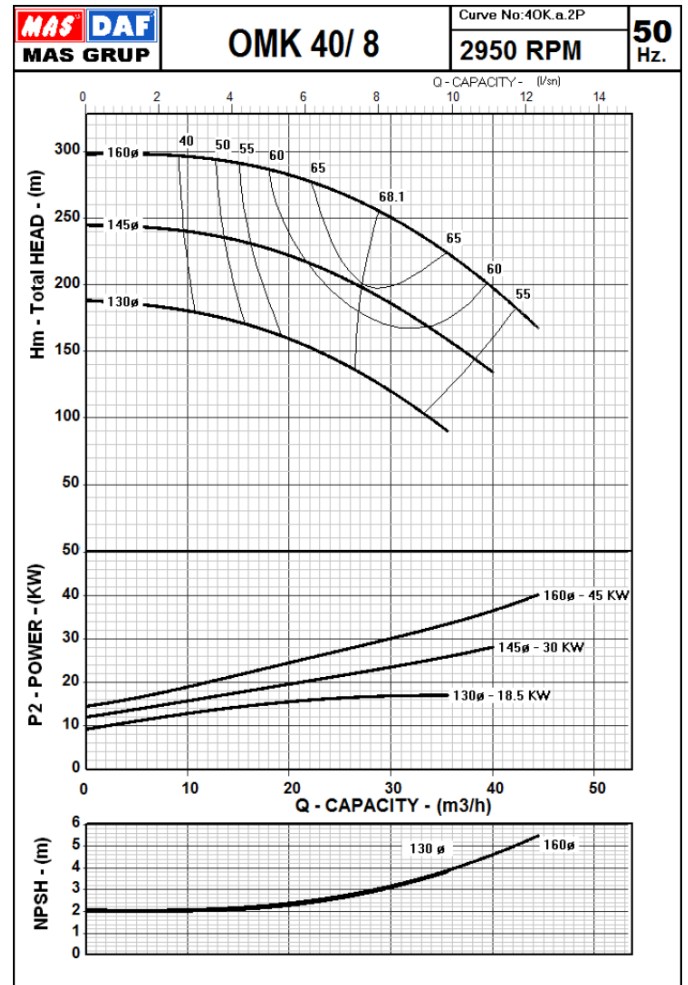
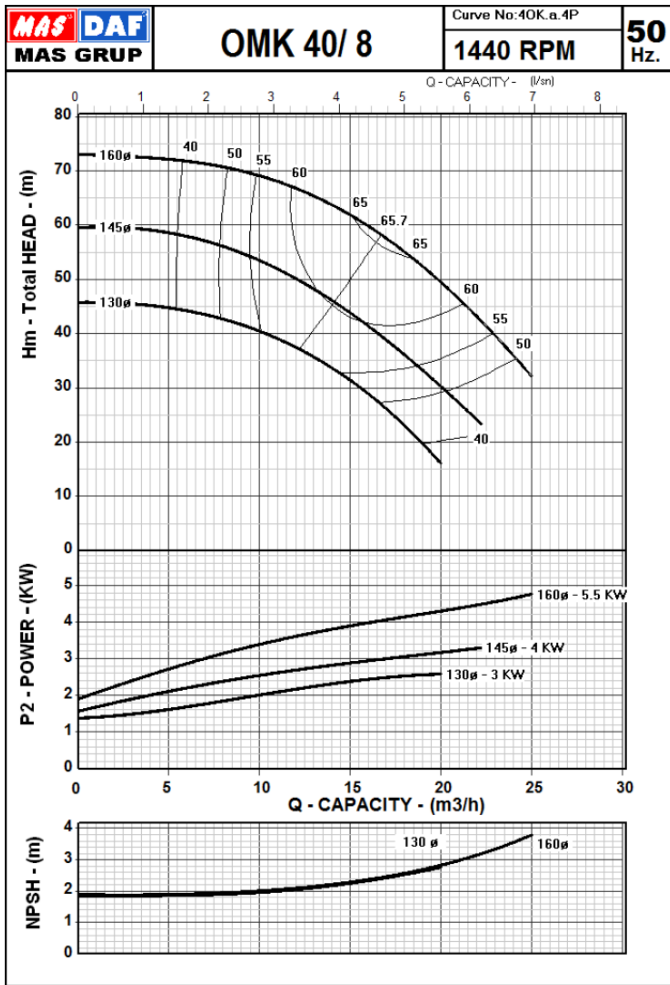


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/8

Mas Grup

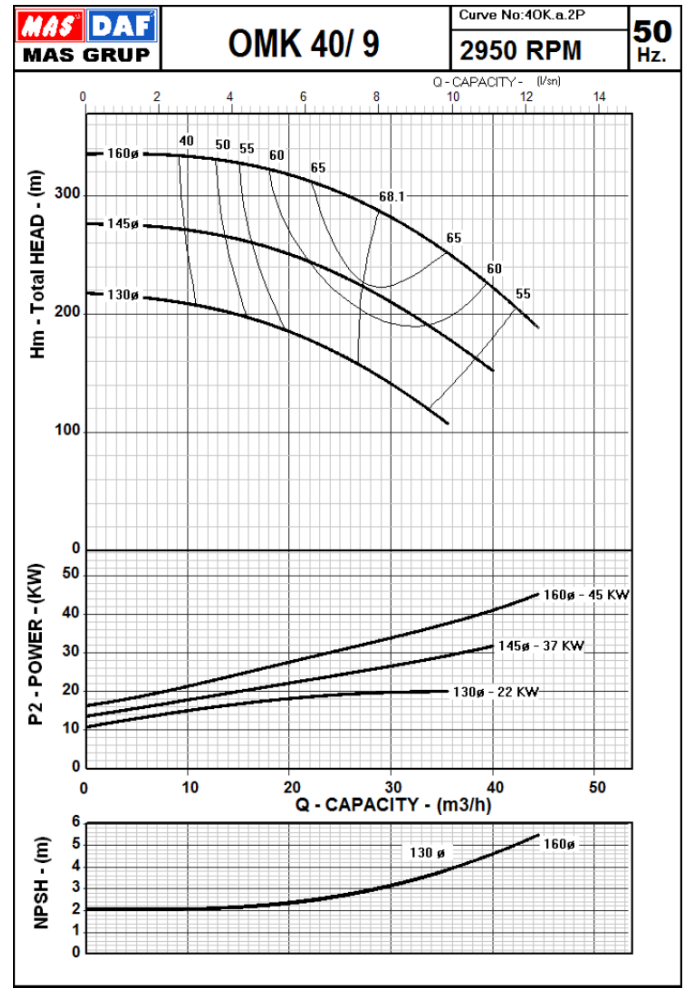
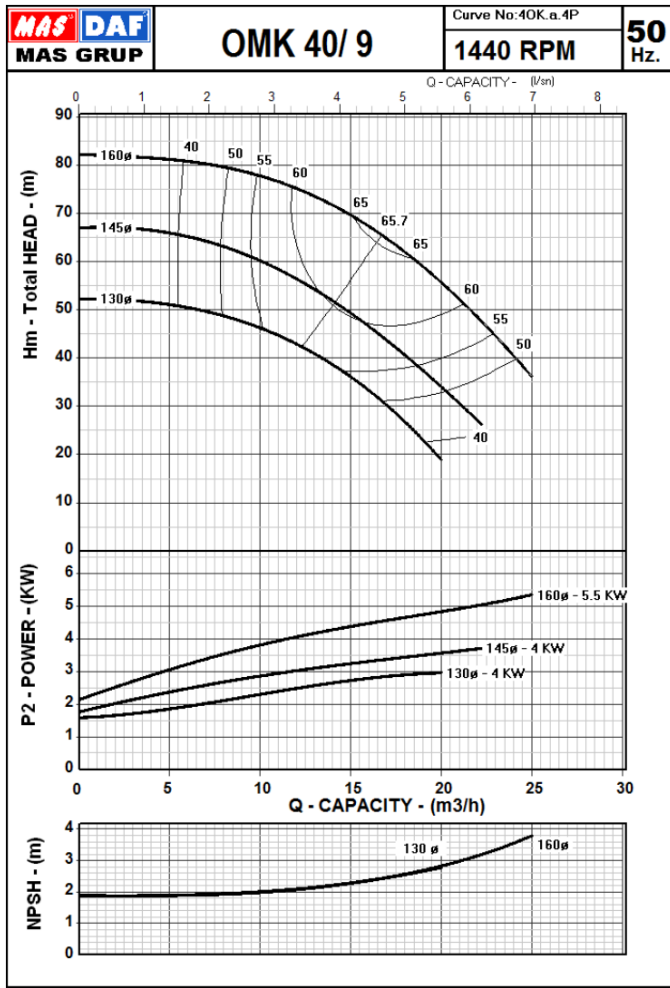


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/9

Mas Grup

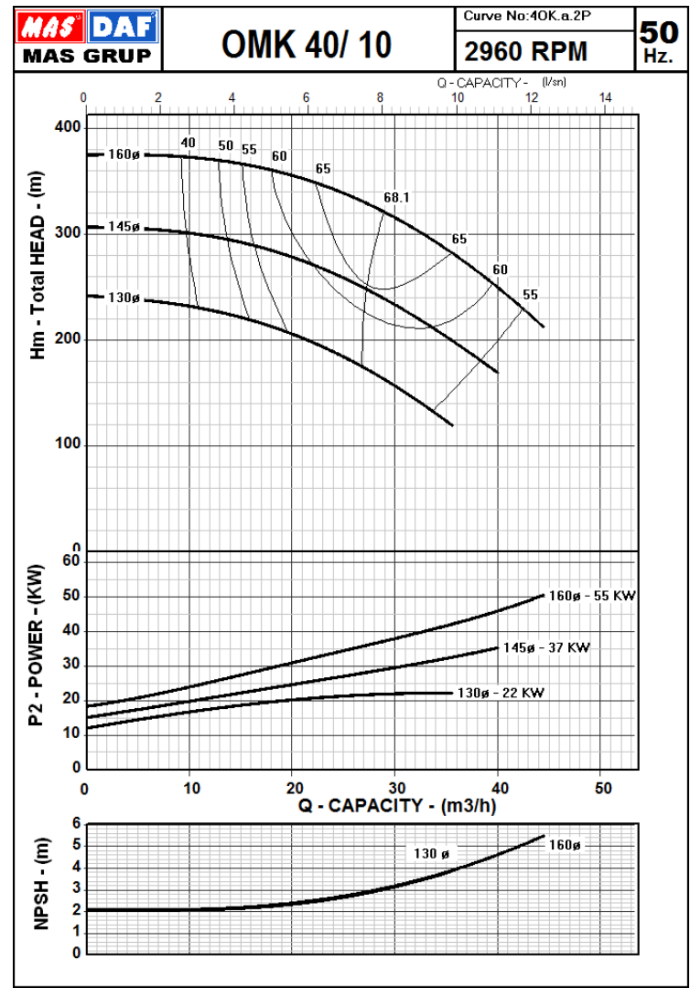
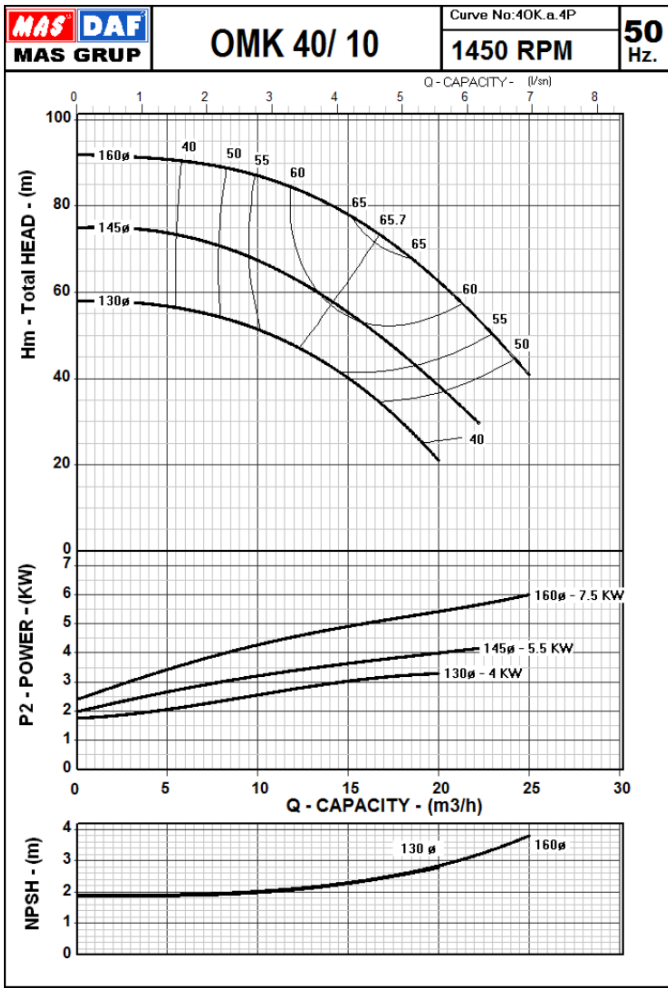


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 40/10

Mas Grup

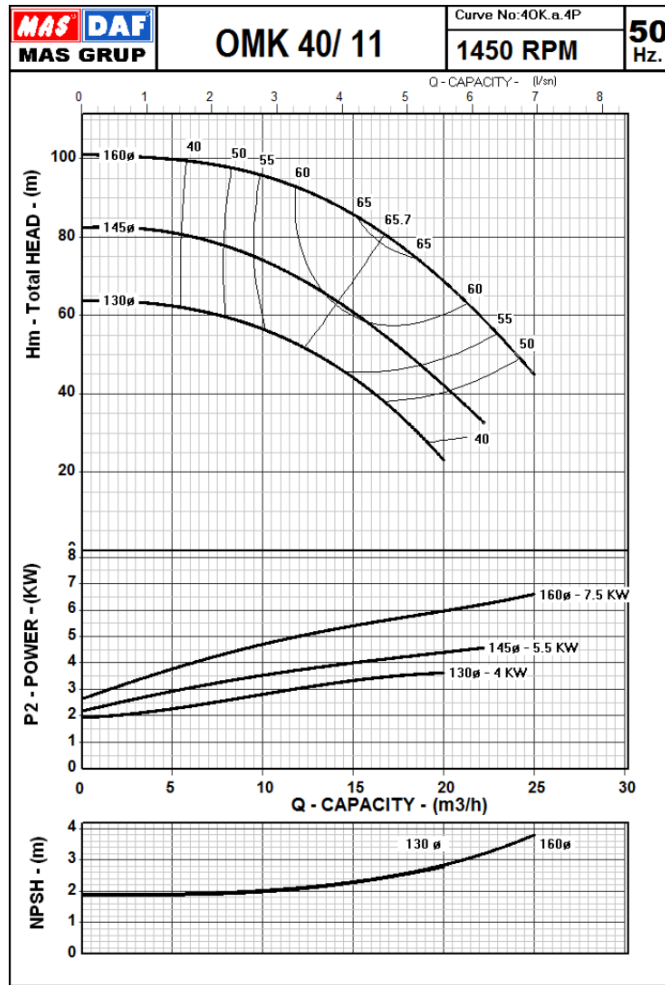


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 40/11



Mas Grup

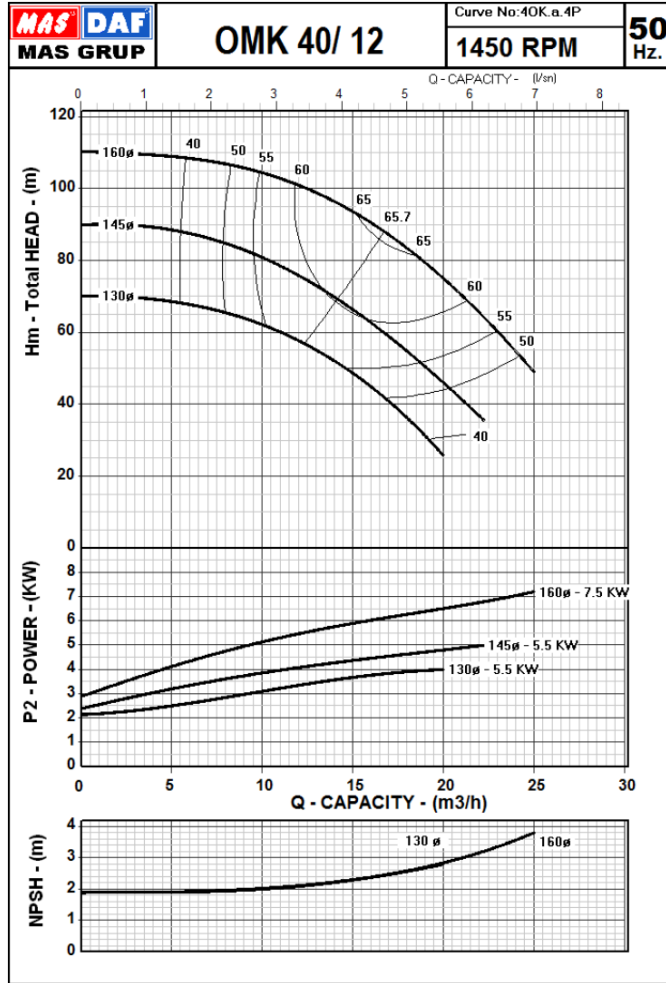


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 40/12



Mas Grup

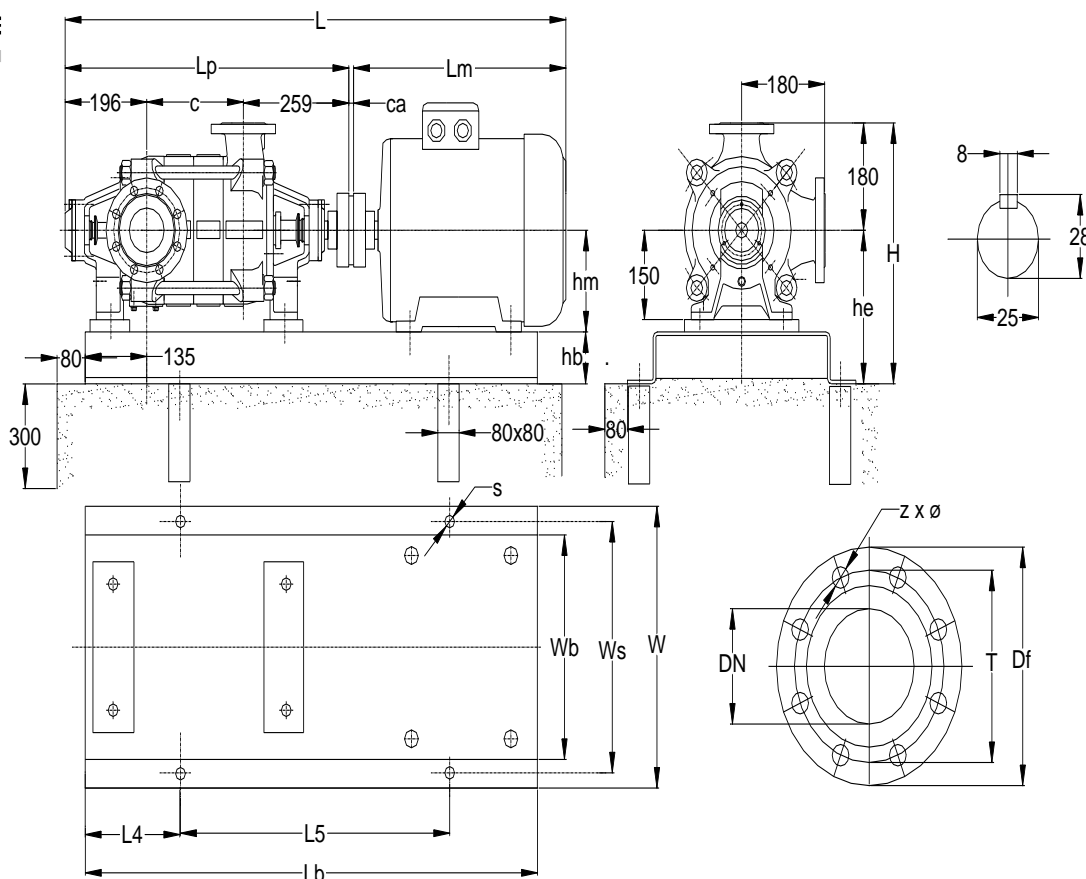


OMK Series

High
Dime



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200
24	4	M 20 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	65	185	145	8	18
Discharge	40	40	150	110	4	18

Dimensions – 1450 RPM - 50 Hz

Pump Type	MOTOR			PUMP				Overall			Base Plate								
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 40 / 2	1.5	90L	325	90	588	133	20	933	330	395	2.03	800	240	65	215	130	540	290	19
	1.1	90S	300	90	588	133	20	908	330	395	2.03	800	240	65	215	130	540	290	19
40 / 3	2.2	100L	365	100	646	191	20	1031	330	395	2.04	900	240	65	215	150	600	290	19
	1.5	90L	325	90	646	191	20	991	330	395	2.04	900	240	65	215	150	600	290	19
40 / 4	3	100L	365	100	704	249	20	1089	330	395	2.05	1000	240	65	215	170	660	290	19
	2.2	100L	365	100	704	249	20	1089	330	395	2.05	1000	240	65	215	170	660	290	19
40 / 5	4	112M	384	112	762	307	21	1167	330	395	2.05	1000	240	65	215	170	660	290	19
	3	100L	365	100	762	307	20	1147	330	395	2.05	1000	240	65	215	170	660	290	19
40 / 6	4	112M	384	112	820	365	21	1225	330	395	2.06	1120	240	65	215	190	740	290	19
	3	100L	365	100	820	365	20	1205	330	395	2.06	1120	240	65	215	190	740	290	19
40 / 7	5.5	132S	455	132	878	423	26	1359	360	395	3.07	1250	270	65	215	205	840	320	19
	4	112M	384	112	878	423	21	1283	330	395	2.06	1120	240	65	215	190	740	290	19
40 / 8	5.5	132S	455	132	936	481	26	1417	360	395	3.07	1250	270	65	215	205	840	320	19
	4	112M	384	112	936	481	21	1341	330	395	2.07	1250	240	65	215	205	840	290	19
40 / 9	7.5	132M	493	132	994	539	26	1513	360	395	3.08	1400	270	65	215	230	940	320	19
	5.5	132S	455	132	994	539	26	1475	360	395	3.08	1400	270	65	215	230	940	320	19
40 / 10	7.5	132M	493	132	1052	597	26	1571	360	395	3.08	1400	270	65	215	230	940	320	19
	5.5	132S	455	132	1052	597	26	1533	360	395	3.08	1400	270	65	215	230	940	320	19
40 / 11	7.5	132M	493	132	1110	655	26	1629	360	395	3.09	1600	270	65	215	270	1060	320	19
	5.5	132S	455	132	1110	655	26	1591	360	395	3.08	1400	270	65	215	230	940	320	19
40 / 12	9	C132M	493	132	1168	713	26	1687	360	395	3.09	1600	270	65	215	270	1060	320	19
	7.5	132M	493	132	1168	713	26	1687	360	395	3.09	1600	270	65	215	270	1060	320	19

This leaflet is subject to alteration without notice.

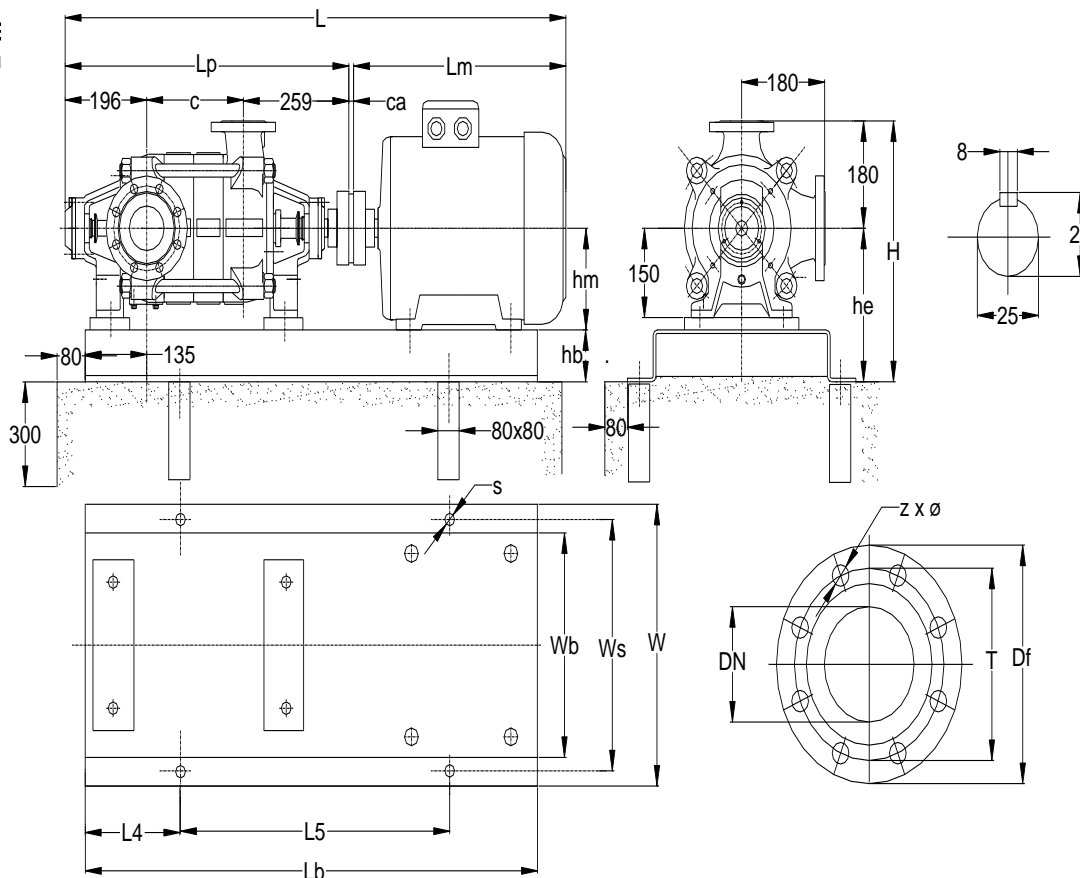
Dimensions are in mm without obligation.

OMK Series

High
Dimc



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200
24	4	M 20 x 200
28	4	M 24 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	65	185	145	8	18
Discharge	40	40	150	110	4	18

Dimensions – 2900 RPM - 50 Hz

Pump Type	MOTOR				PUMP			Overall			Base Plate								
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 40 / 2	11	160M	594	160	588	133	26	1208	450	420	5.05	1000	340	80	240	170	660	400	24
	7.5	132S	455	132	588	133	21	1064	360	395	3.04	900	270	65	215	150	600	320	19
40 / 3	15	160M	594	160	646	191	26	1266	450	420	5.06	1120	340	80	240	190	740	400	24
	11	160M	594	160	646	191	26	1266	450	420	5.06	1120	340	80	240	190	740	400	24
40 / 4	22	180M	654	180	704	249	30	1388	490	440	6.07	1250	380	80	260	205	840	440	24
	18.5	160L	638	160	704	249	30	1372	450	420	5.07	1250	340	80	240	205	840	400	24
40 / 5	30	200L	747	200	762	307	30	1539	540	460	7.08	1400	430	80	280	230	940	490	24
	22	180M	654	180	762	307	30	1446	490	440	6.07	1250	380	80	260	205	840	440	24
40 / 6	30	200L	747	200	820	365	30	1597	540	460	7.08	1400	430	80	280	230	940	490	24
	22	180M	654	180	820	365	30	1504	490	440	6.08	1400	380	80	260	230	940	440	24
40 / 7	37	200L	747	200	878	423	33	1658	540	460	7.09	1600	430	80	280	270	1060	490	24
	30	200L	747	200	878	423	30	1655	540	460	7.08	1400	430	80	280	230	940	490	24
40 / 8	45	225M	790	225	936	481	43	1769	610	505	8.09	1600	480	100	325	270	1060	550	28
	37	200L	747	200	936	481	33	1716	540	460	7.09	1600	430	80	280	270	1060	490	24
40 / 9	55	250M	890	250	994	539	42	1926	660	530	9.10	1800	530	100	350	300	1200	600	28
	45	225M	790	225	994	539	43	1827	610	505	8.09	1600	480	100	325	270	1060	550	28
40 / 10	55	250M	890	250	1052	597	42	1984	660	530	9.10	1800	530	100	350	300	1200	600	28
	45	225M	790	225	1052	597	43	1885	610	505	8.10	1800	480	100	325	300	1200	550	28

This leaflet is subject to alteration without notice.

Dimensions are in mm without obligation.

OMK Series

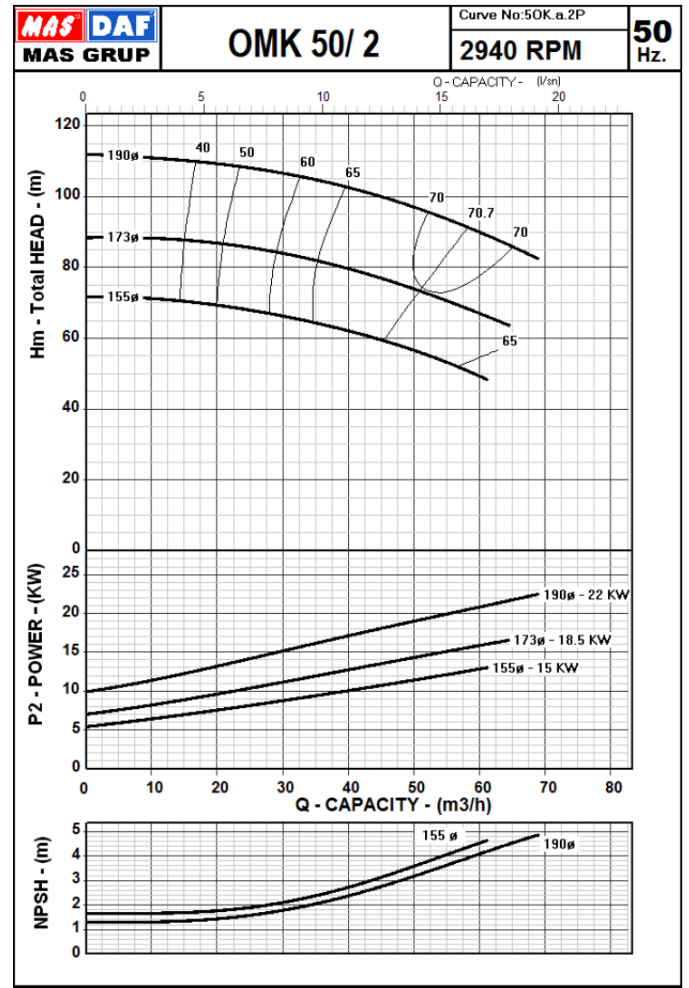
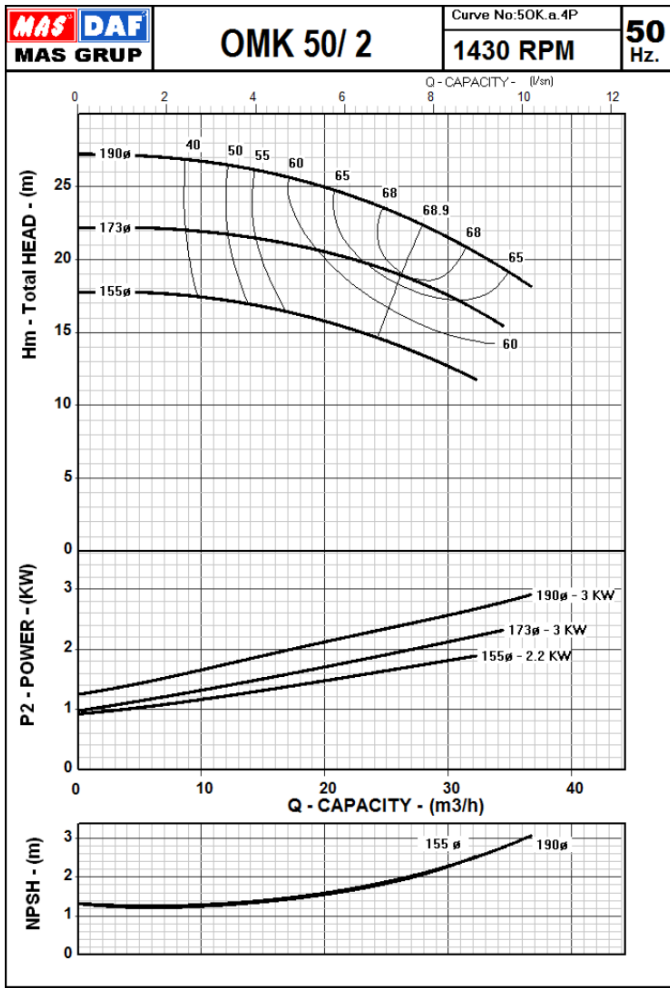
High Pressure Multistage Pumps

Performance Curves



Mas Grup

OMK 50/2

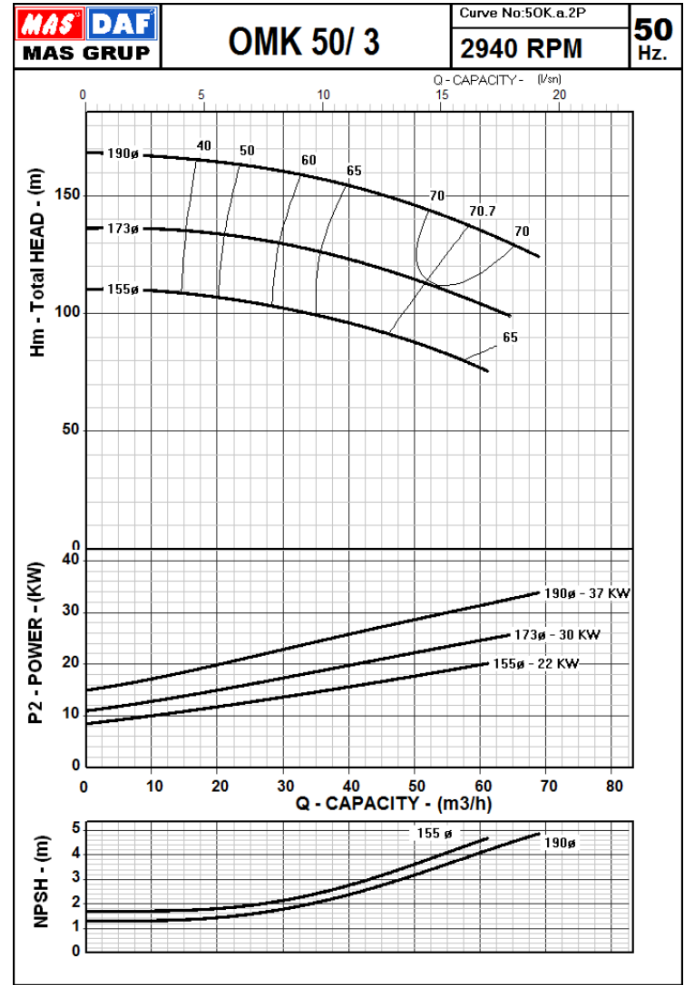
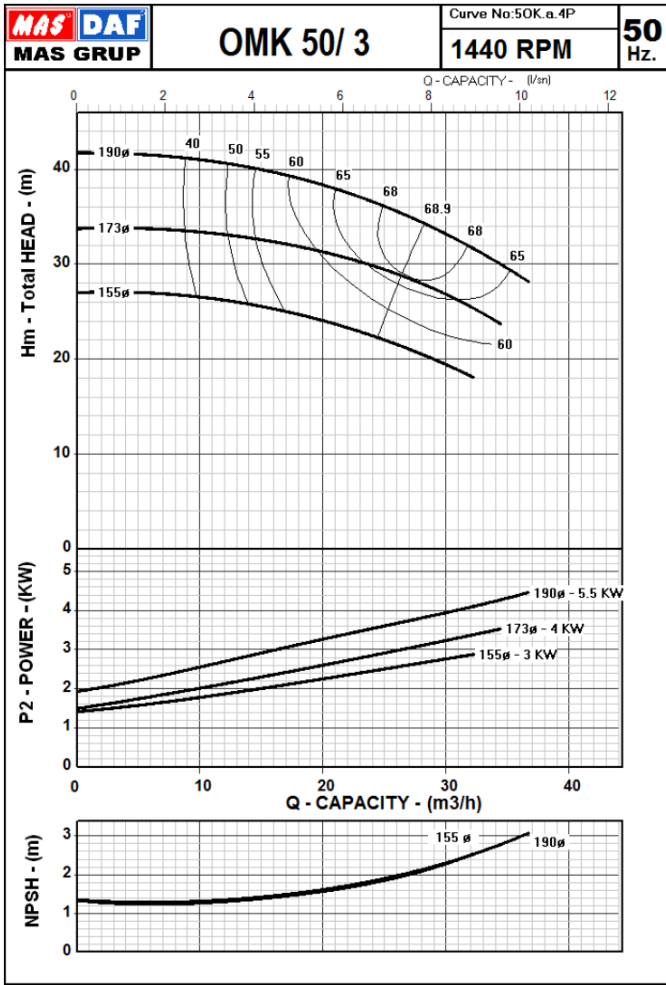


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 50/3

Mas Grup

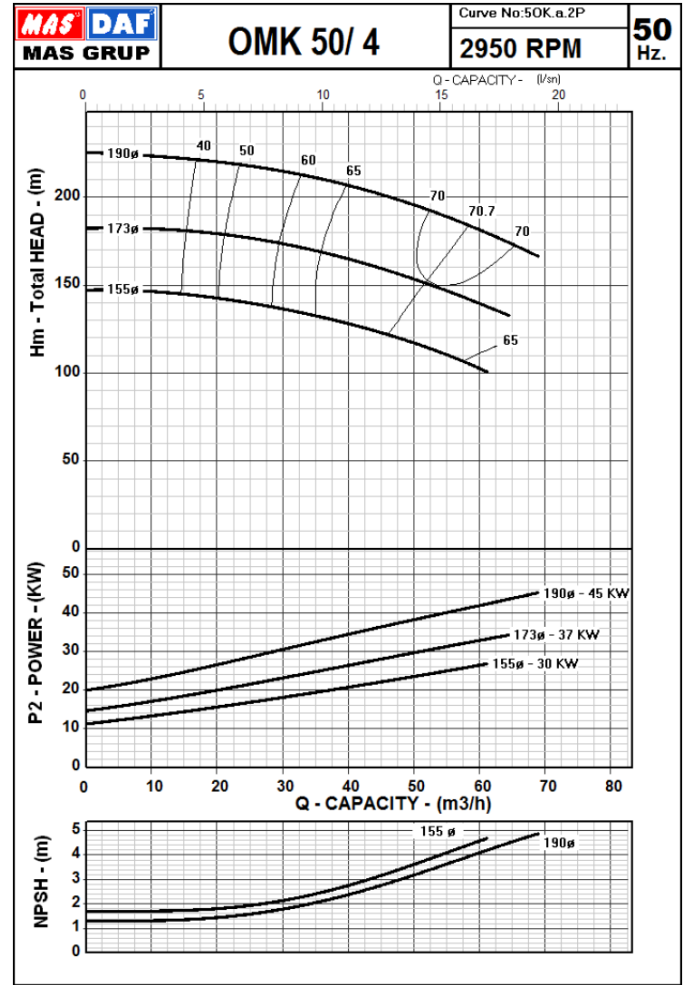
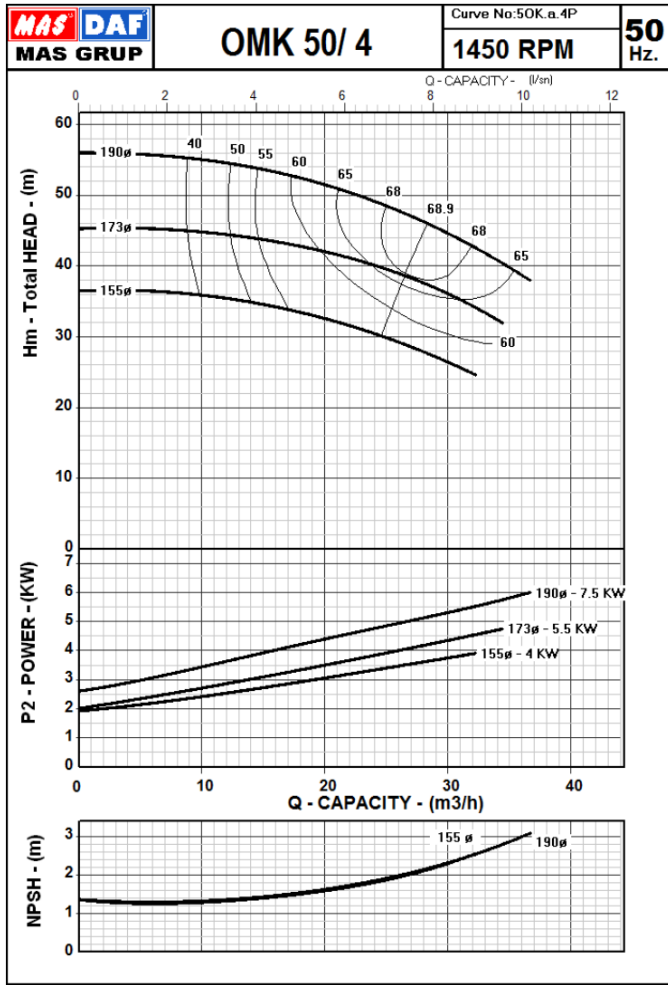


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 50/4

Mas Grup

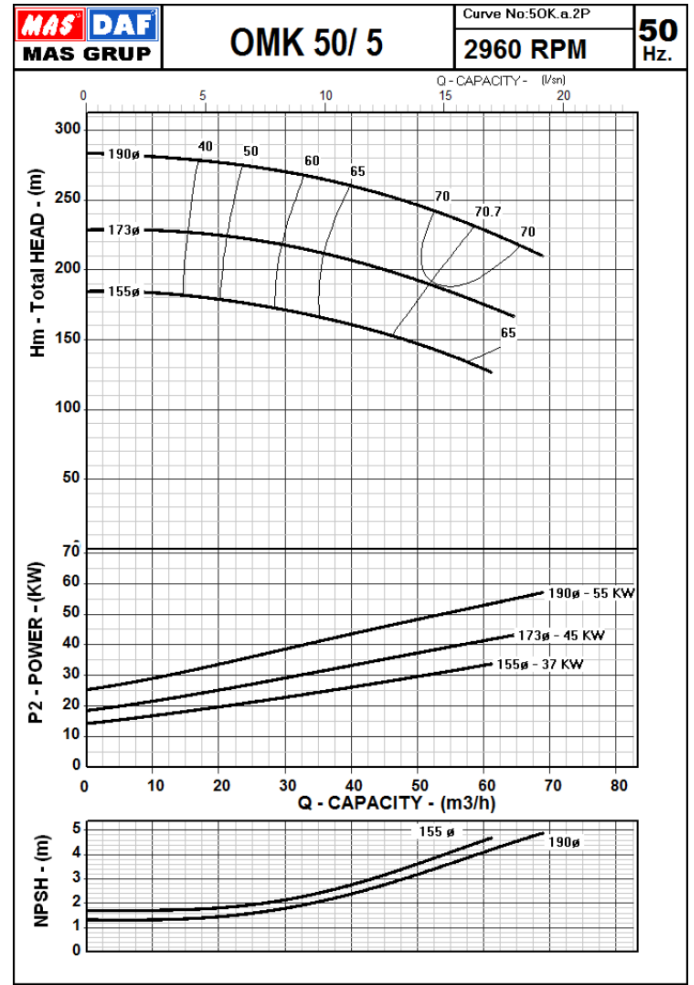
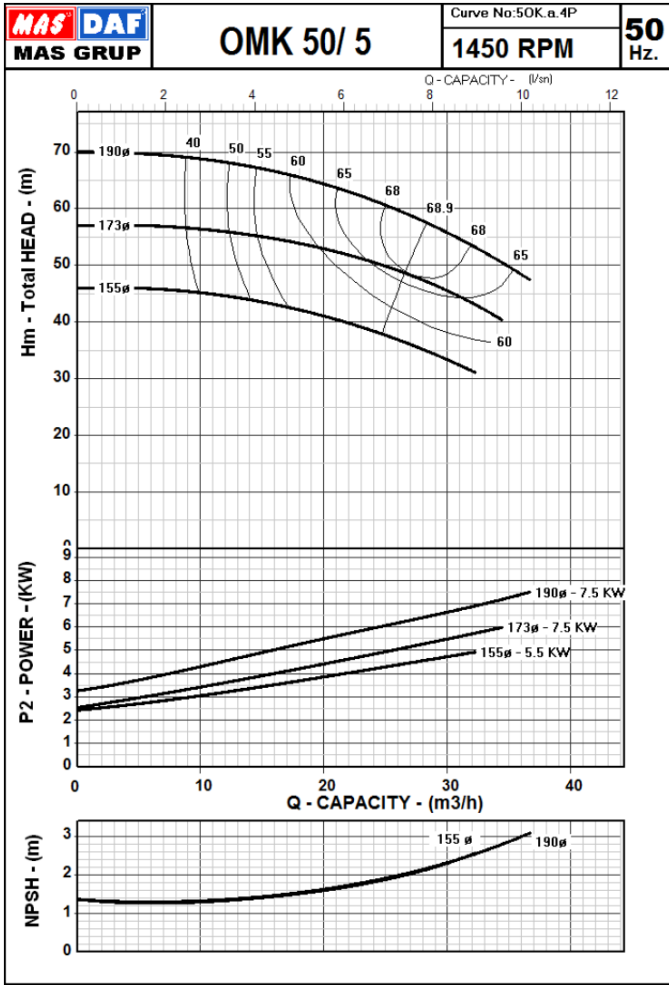


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



Mas Grup

OMK 50/5

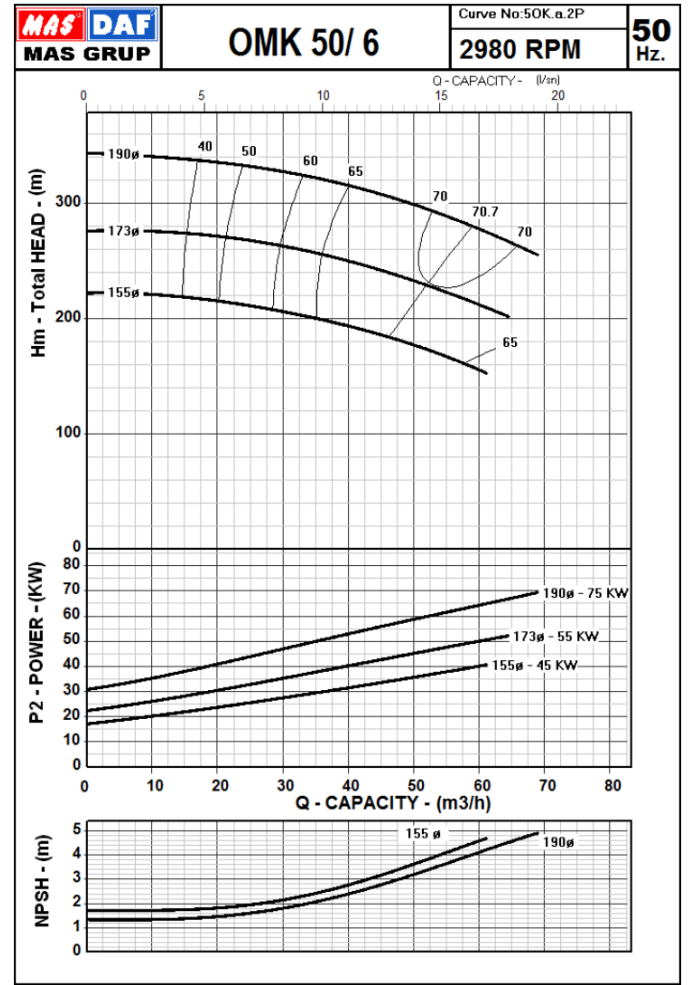
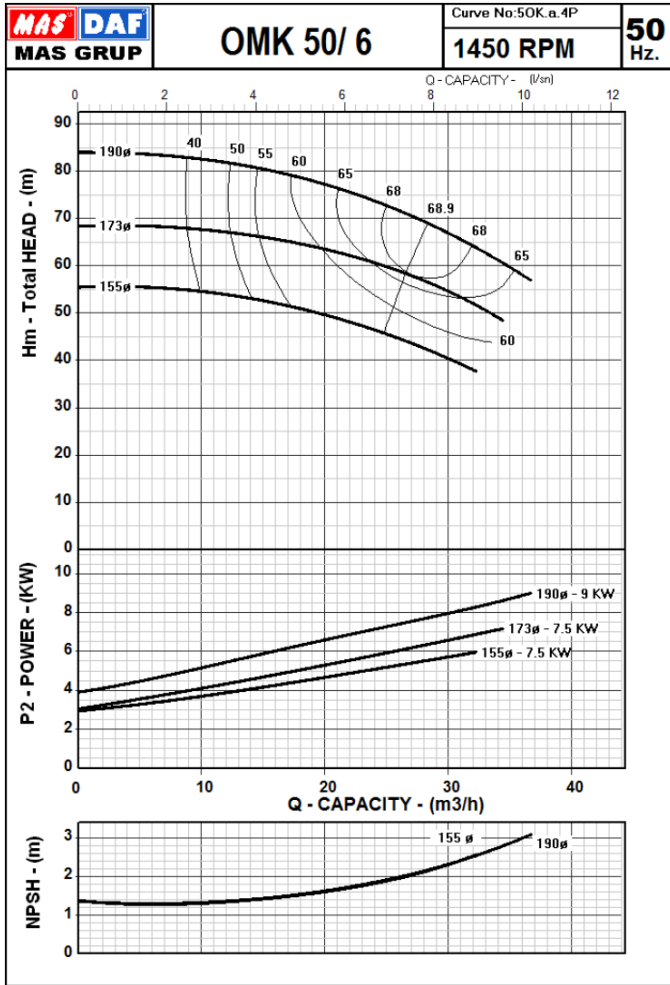


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



Mas Grup

OMK 50/6

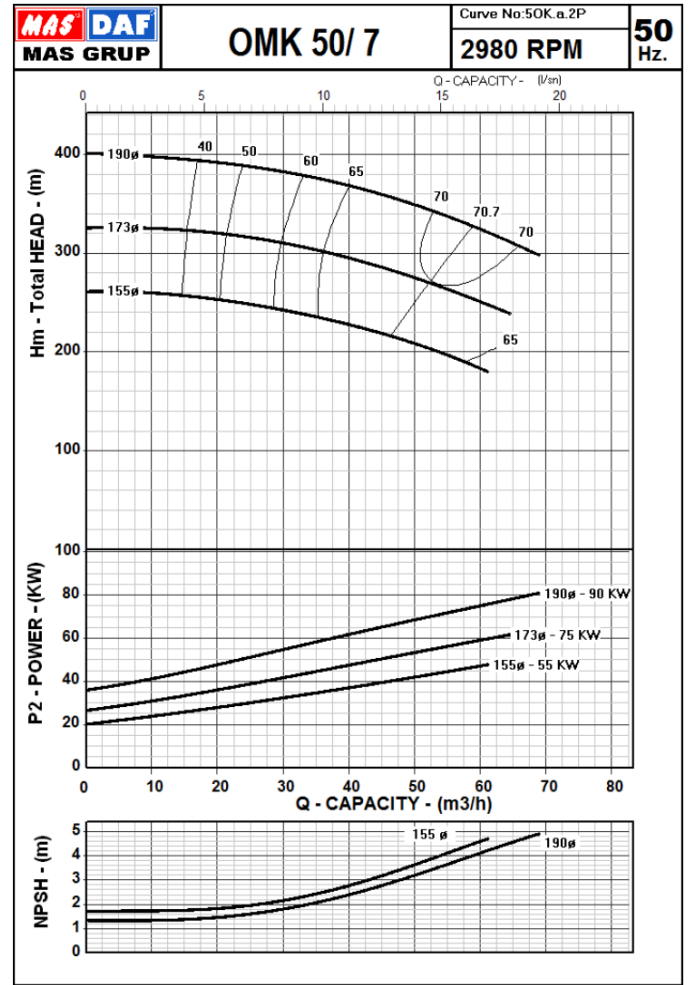
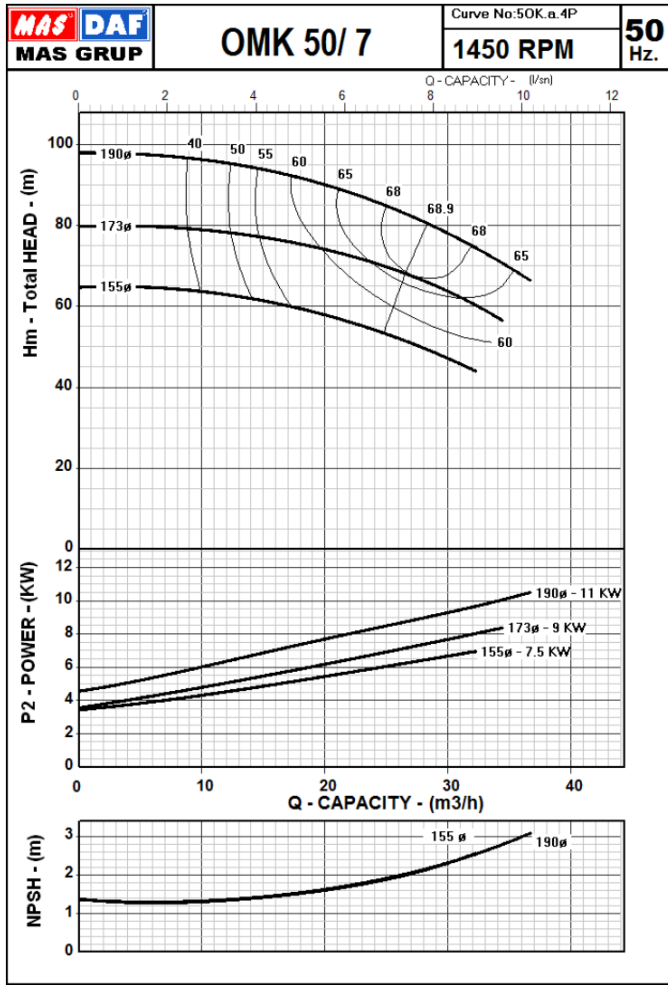


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 50/7

Mas Grup

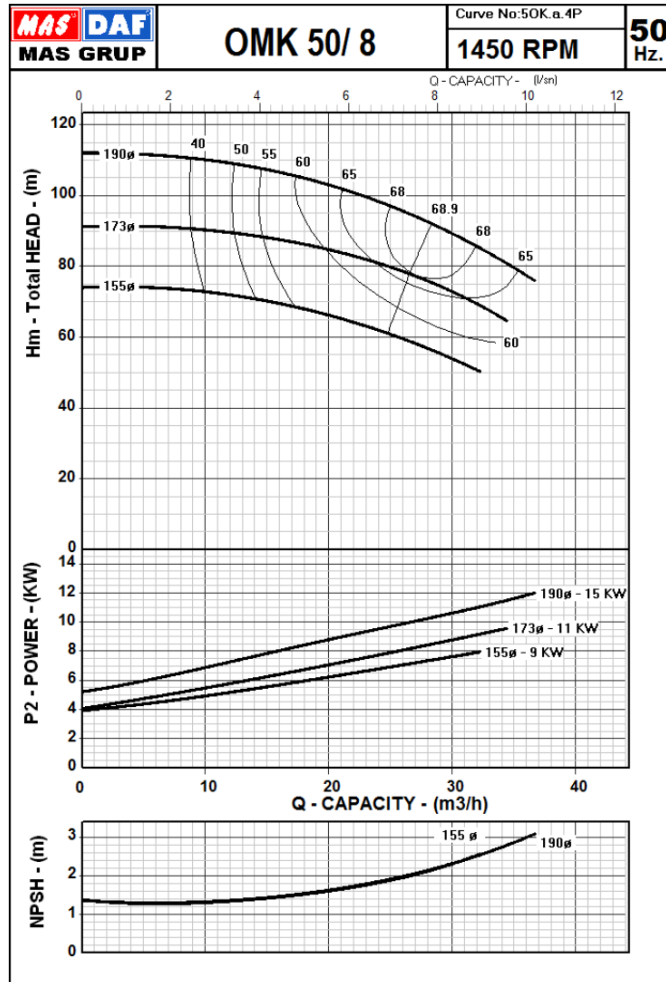


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 50/8



Mas Grup

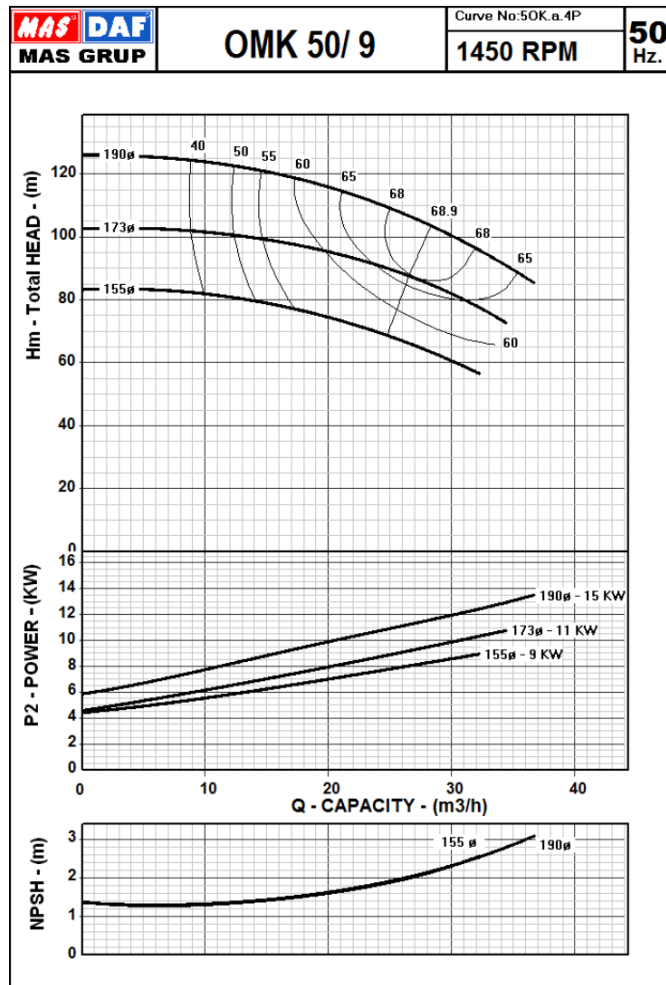


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 50/9



Mas Grup

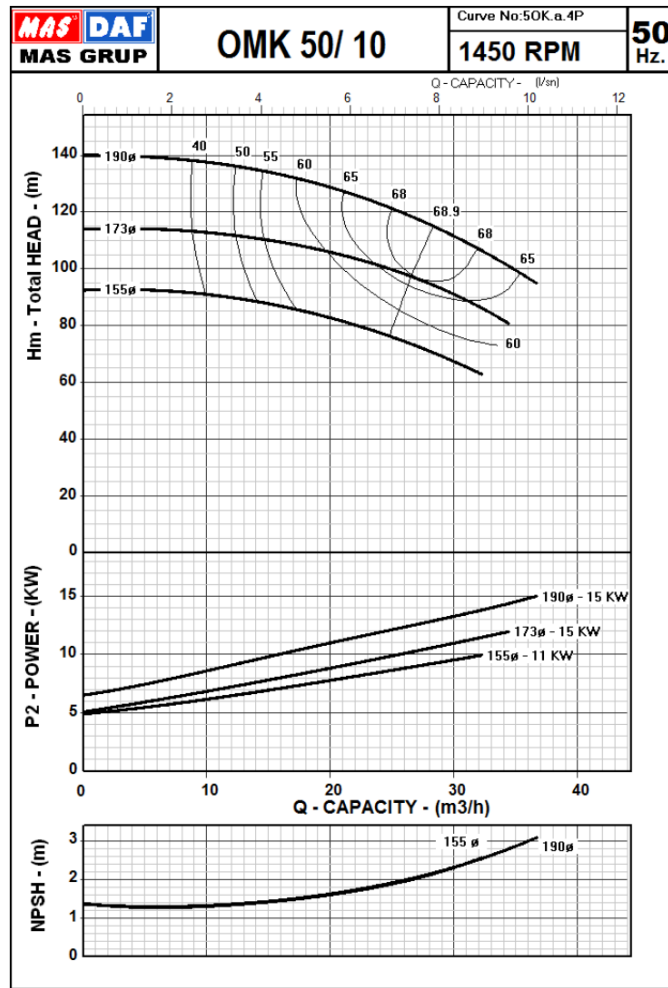


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 50/10



Mas Grup

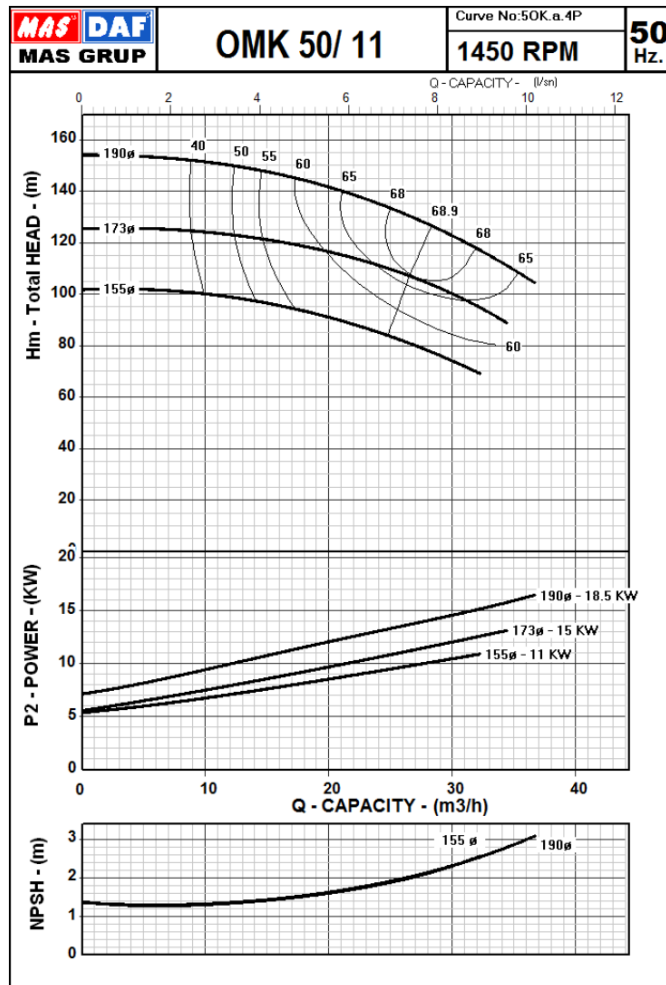


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 50/11



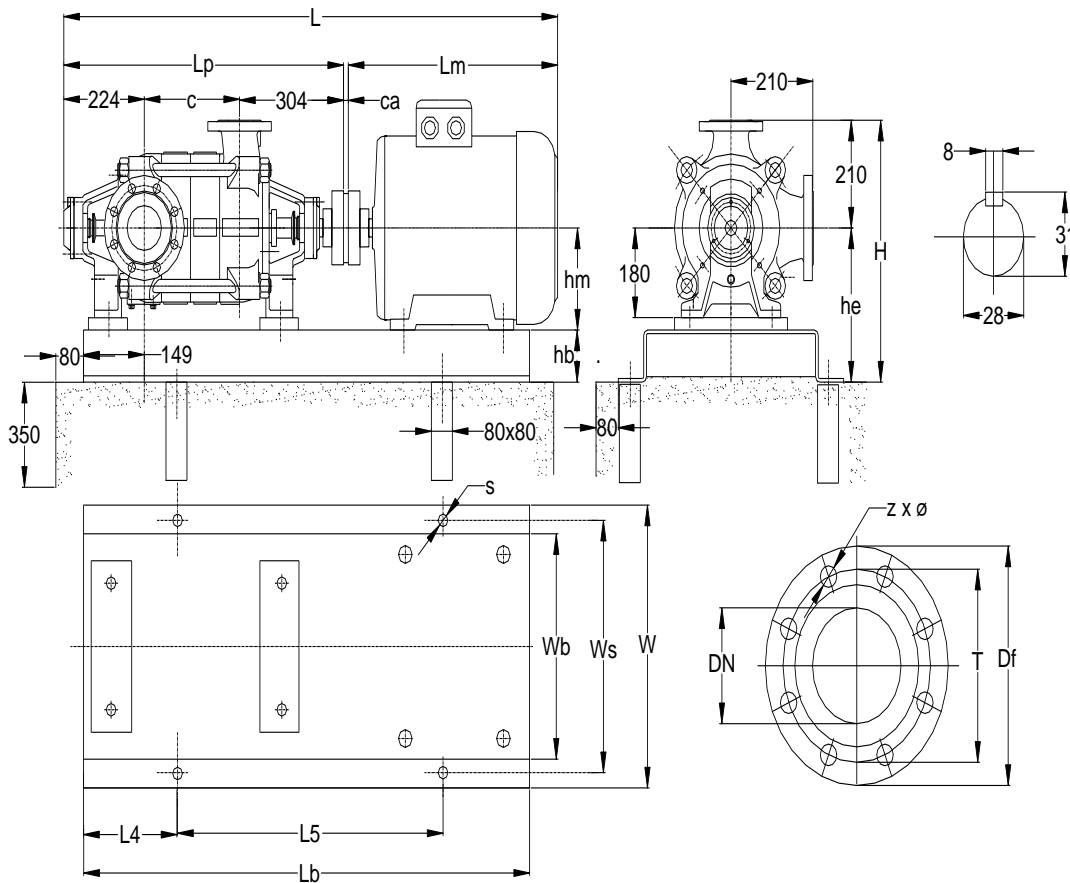
Mas Grup



OMK Series



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200
24	4	M 20 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	80	200	160	8	18
Discharge	40	50	165	125	4	18

Dimensions – 1450 RPM - 50 Hz

Pump Type	MOTOR			PUMP			Overall			Base Plate									
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 50 / 2	4	112M	365	100	716	188	20	1101	360	455	3.05	1000	270	65	245	170	660	320	19
	3	100L	365	100	716	188	20	1101	360	455	3.05	1000	270	65	245	170	660	320	19
50 / 3	5.5	132S	455	132	794	266	26	1275	360	455	3.06	1120	270	65	245	190	740	320	19
	4	112M	384	112	794	266	21	1199	360	455	3.06	1120	270	65	245	190	740	320	19
50 / 4	7.5	132M	493	132	872	344	26	1391	360	455	3.07	1250	270	65	245	205	840	320	19
	5.5	132S	455	132	872	344	26	1353	360	455	3.07	1250	270	65	245	205	840	320	19
50 / 5	9	C132M	493	132	950	422	26	1469	360	455	3.07	1250	270	65	245	205	840	320	19
	7.5	132M	493	132	950	422	26	1469	360	455	3.07	1250	270	65	245	205	840	320	19
50 / 6	11	160M	594	160	1028	500	30	1652	450	470	5.09	1600	340	80	260	270	1060	400	24
	9	C132M	493	132	1028	500	26	1547	360	455	3.08	1400	270	65	245	230	940	320	19
50 / 7	11	160M	594	160	1106	578	30	1730	450	470	5.09	1600	340	80	260	270	1060	400	24
	9	C132M	493	132	1106	578	26	1625	360	455	3.09	1600	270	65	245	270	1060	320	19
50 / 8	15	160L	638	160	1184	656	30	1852	450	470	5.10	1800	340	80	260	300	1200	400	24
	11	160M	594	160	1184	656	30	1808	450	470	5.09	1600	340	80	260	270	1060	400	24
50 / 9	15	160L	638	160	1262	734	30	1930	450	470	5.10	1800	340	80	260	300	1200	400	24
	11	160M	594	160	1262	734	30	1886	450	470	5.10	1800	340	80	260	300	1200	400	24
50 / 10	18.5	180M	654	180	1340	812	33	2027	490	470	6.10	1800	380	80	260	300	1200	440	24
	15	160L	638	160	1340	812	30	2008	450	470	5.10	1800	340	80	260	300	1200	400	24
50 / 11	18.5	180M	654	180	1418	890	33	2105	490	470	6.11	2000	380	80	260	340	1320	440	24
	15	160L	638	160	1418	890	30	2086	450	470	5.11	2000	340	80	260	340	1320	400	24

This leaflet is subject to alteration without notice.

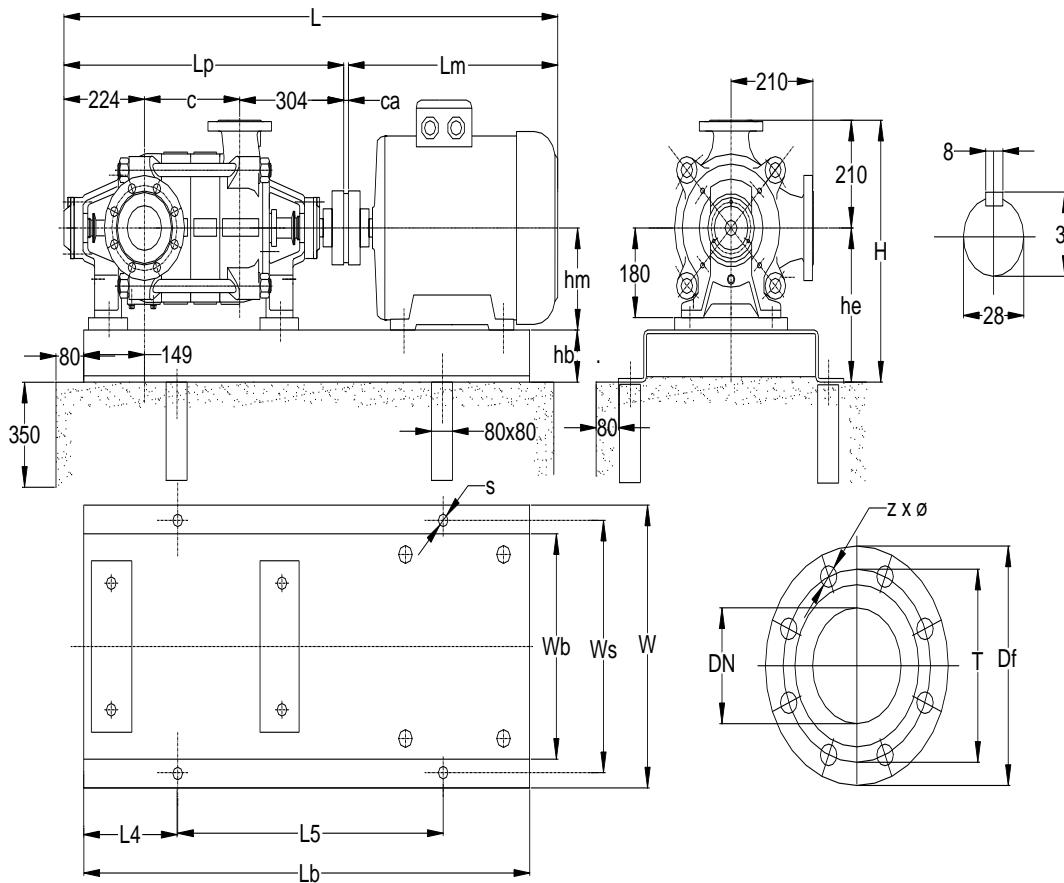
Dimensions are in mm without obligation.

OMK Series

High I
Dime



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
24	4	M 20 x 200
28	4	M 24 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	80	200	160	8	18
Discharge	40	50	165	125	4	18

Dimensions – 2900 RPM - 50 Hz

Pump Type	MOTOR			PUMP			Overall			Base Plate									
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 50 / 2	30	200L	747	200	716	188	30	1493	540	490	8.07	1250	430	80	280	205	840	490	24
	22	180M	654	180	716	188	30	1400	490	470	6.07	1250	380	80	260	205	840	440	24
50 / 3	37	200L	747	200	794	266	33	1571	540	490	7.08	1400	430	80	280	230	940	490	24
	30	200L	747	200	794	266	30	1571	540	490	7.08	1400	430	80	280	230	940	490	24
50 / 4	45	225M	790	225	872	344	43	1705	610	535	8.09	1600	480	100	325	270	1060	550	28
	37	200L	747	200	872	344	33	1652	540	490	7.08	1400	430	80	280	230	940	490	24
50 / 5	75	280S	958	280	950	422	43	1951	730	590	10.10	1800	600	100	380	300	1200	670	28
	55	250M	890	250	950	422	42	1882	660	560	9.10	1800	530	100	350	300	1200	600	28
50 / 6	75	280S	958	280	1028	500	43	2029	730	590	10.10	1800	600	100	380	300	1200	670	28
	55	250M	890	250	1028	500	42	1960	660	560	9.10	1800	530	100	350	300	1200	600	28
50 / 7	90	280M	1010	280	1106	578	43	2159	730	590	10.11	2000	600	100	380	340	1320	670	28
	75	280S	958	280	1106	578	43	2107	730	590	10.10	1800	600	100	380	300	1200	670	28

This leaflet is subject to alteration without notice.

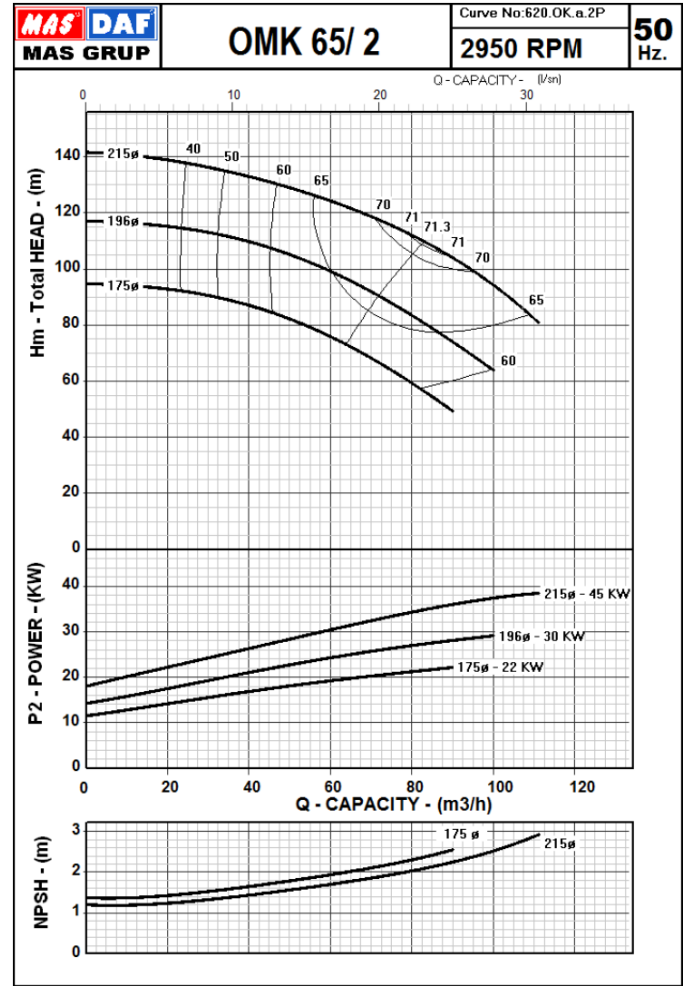
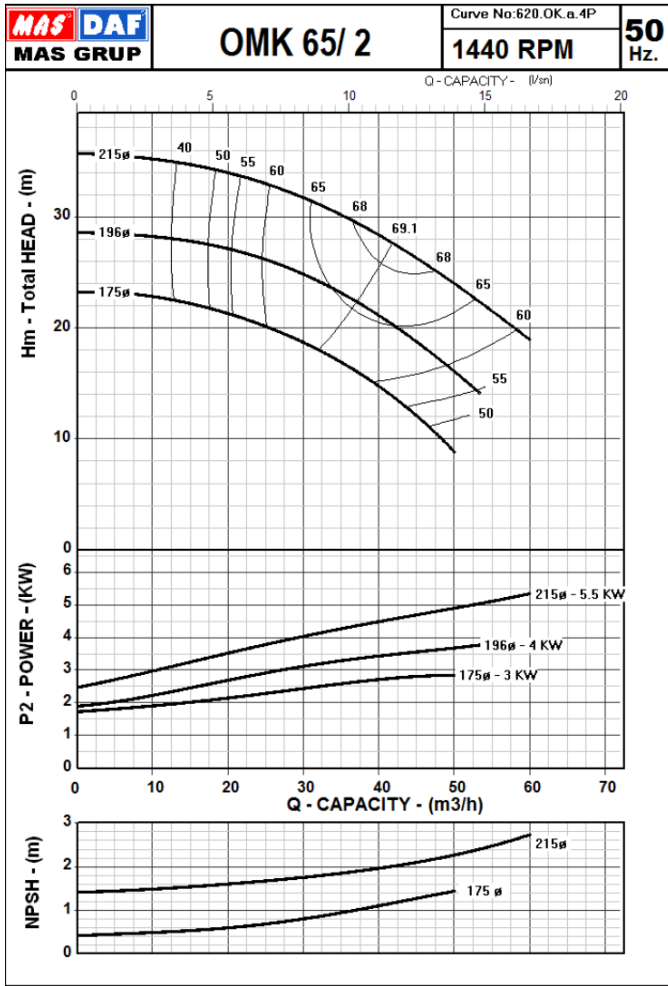
Dimensions are in mm without obligation.

OMK Series
 High Pressure Multistage Pumps
 Performance Curves



Mas Grup

OMK 65/2

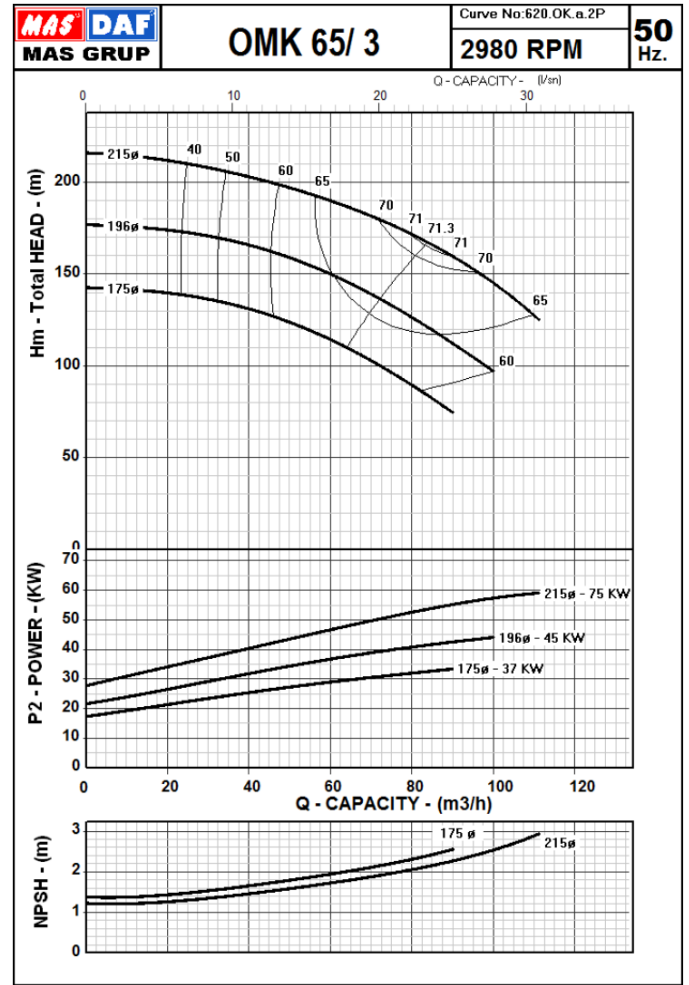
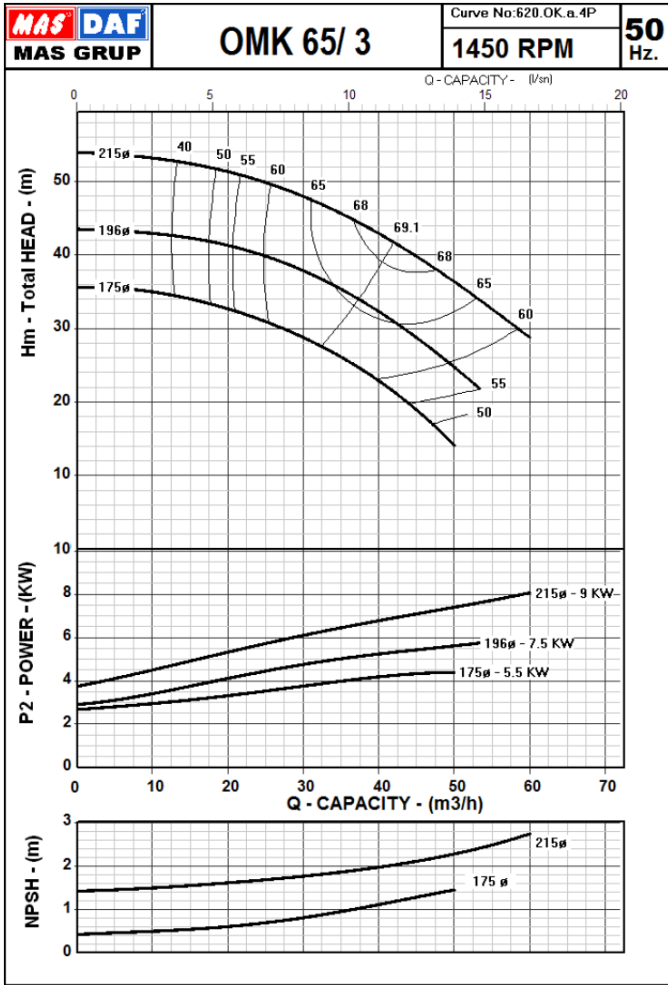


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 65/3

Mas Grup

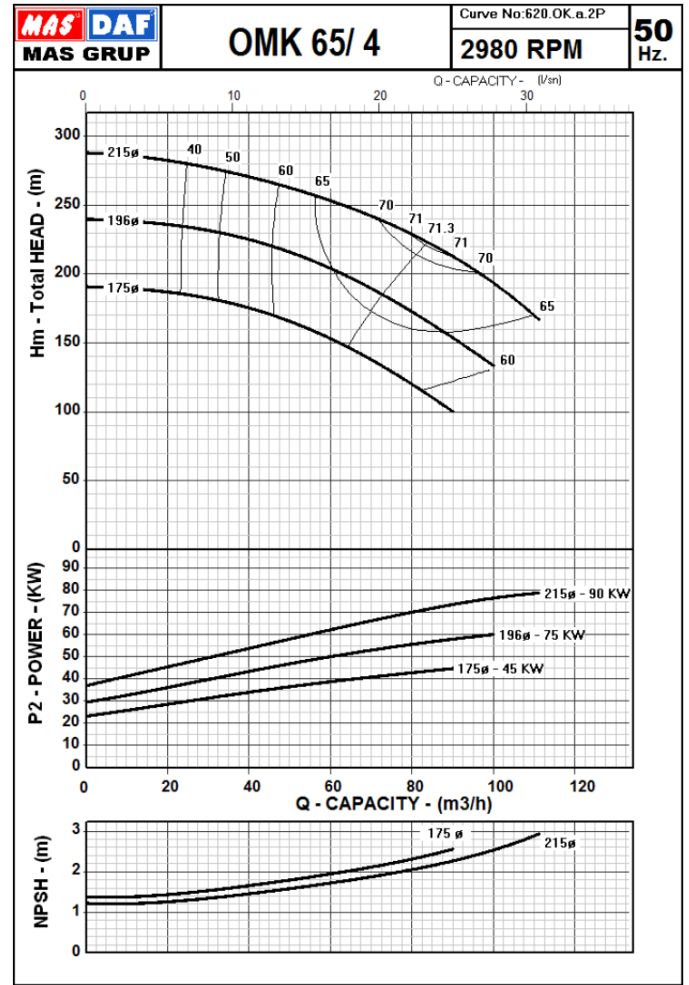
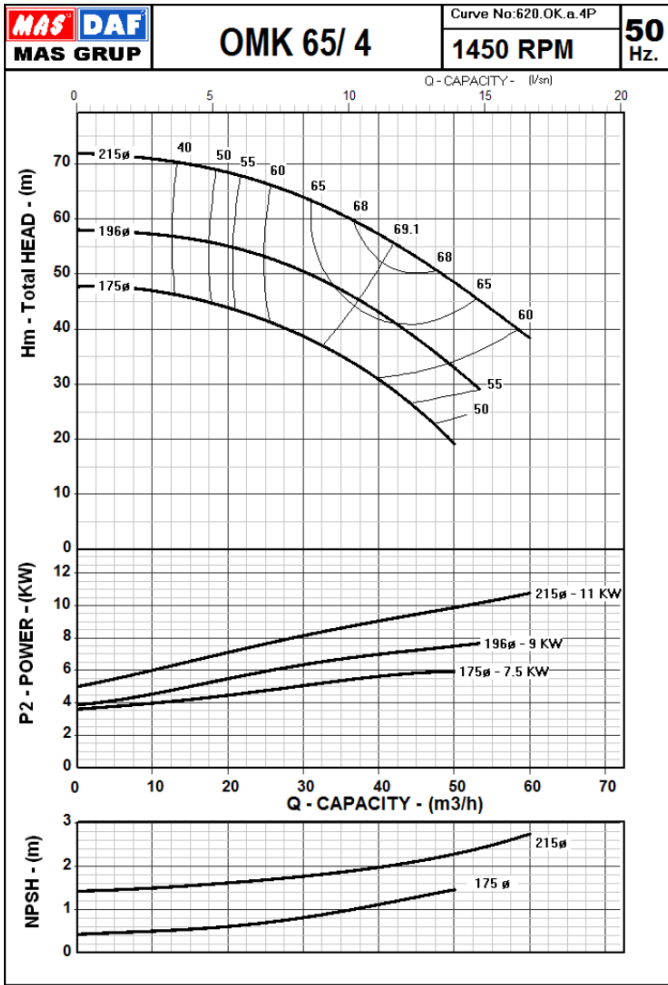


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 65/4

Mas Grup

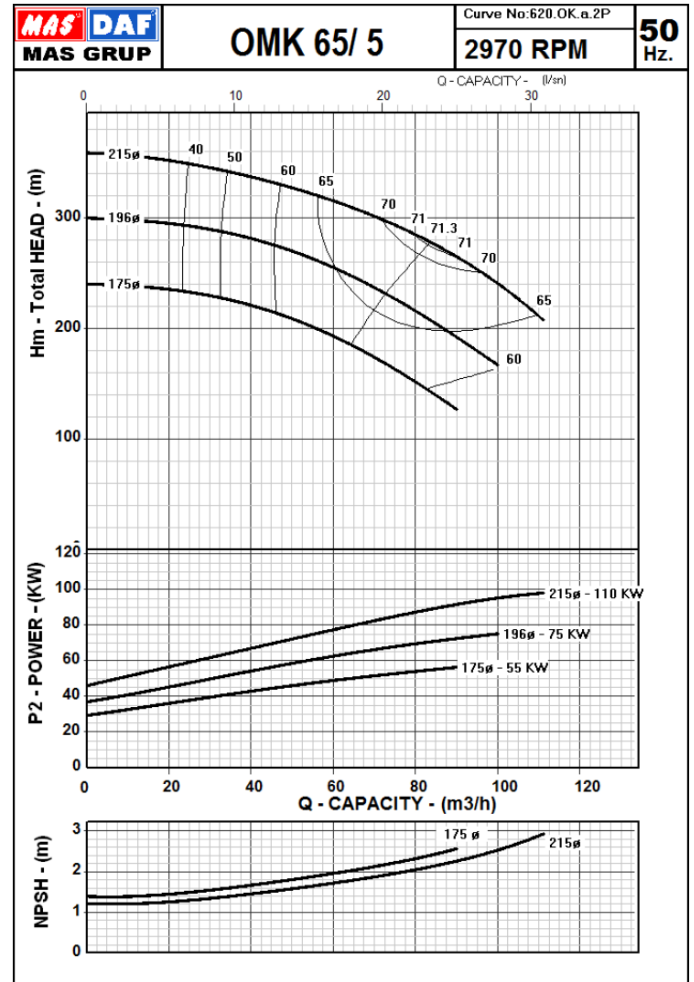
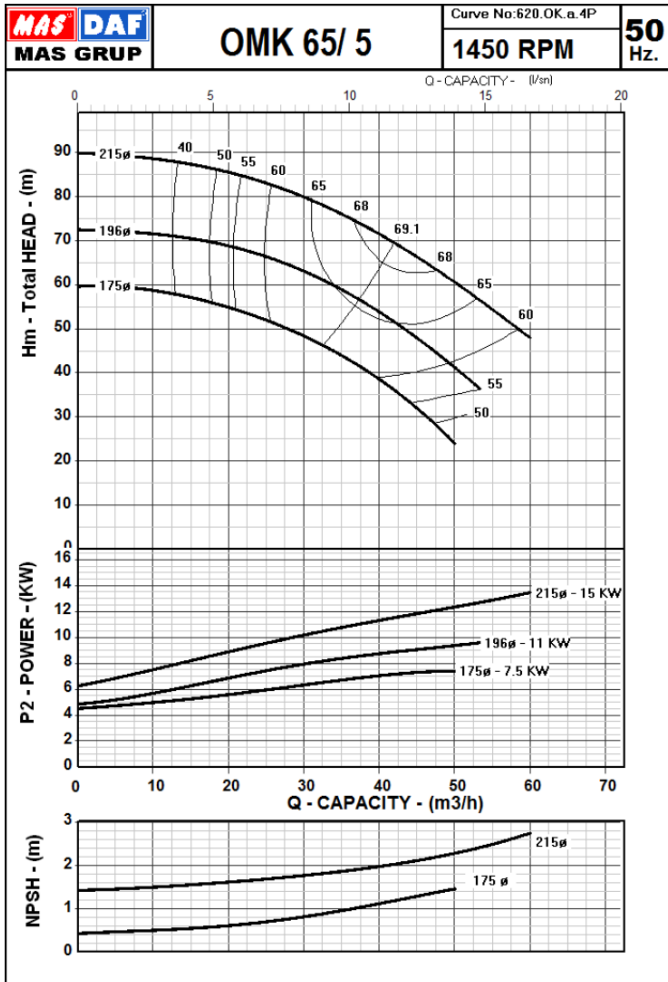


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 65/5

Mas Grup

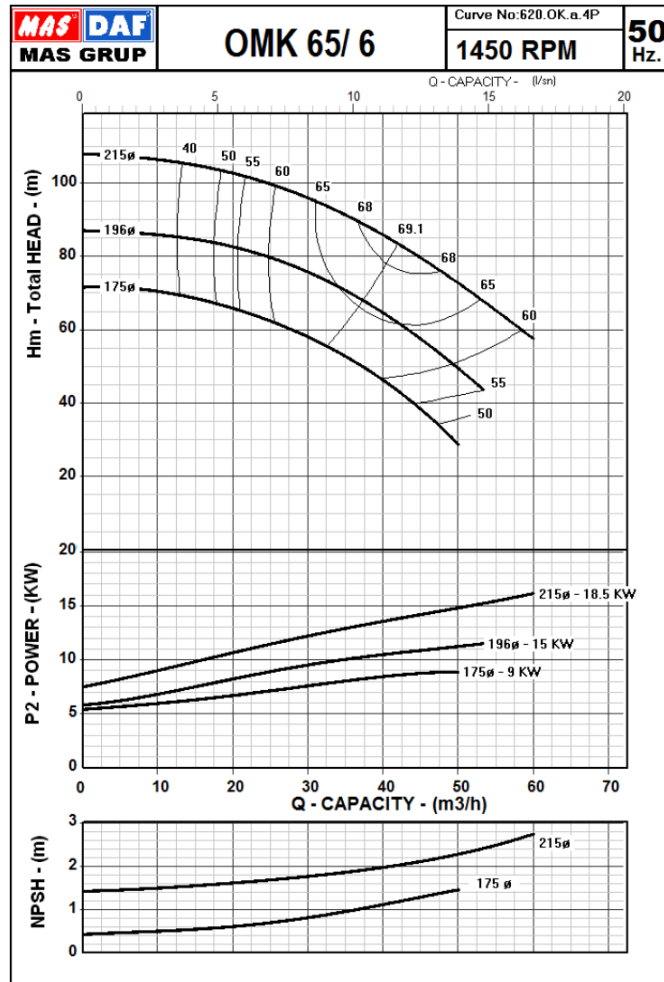


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 65/6



Mas Grup

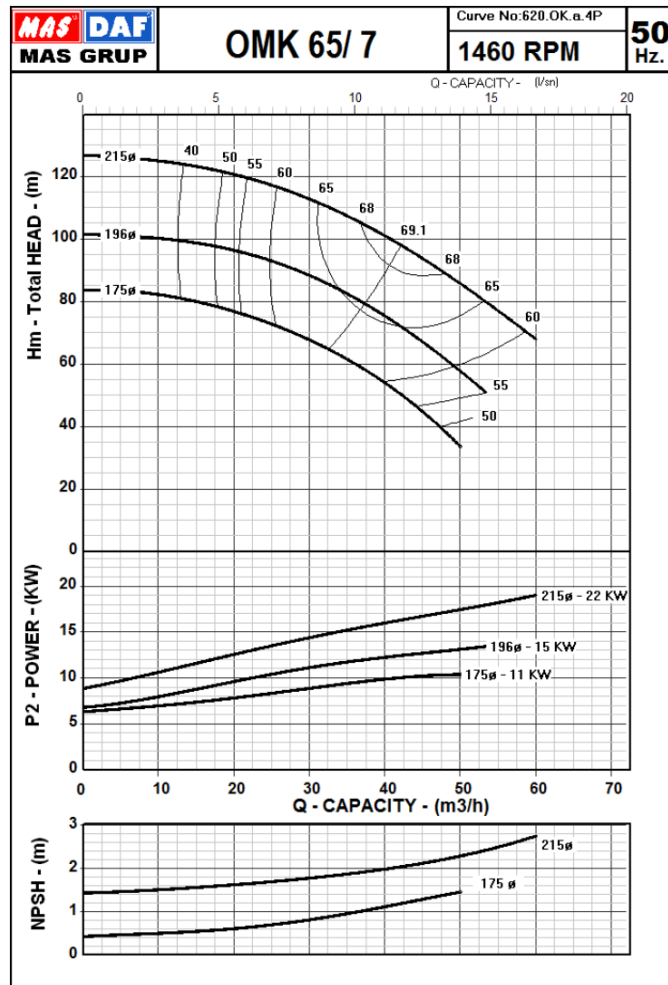


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 65/7



Mas Grup

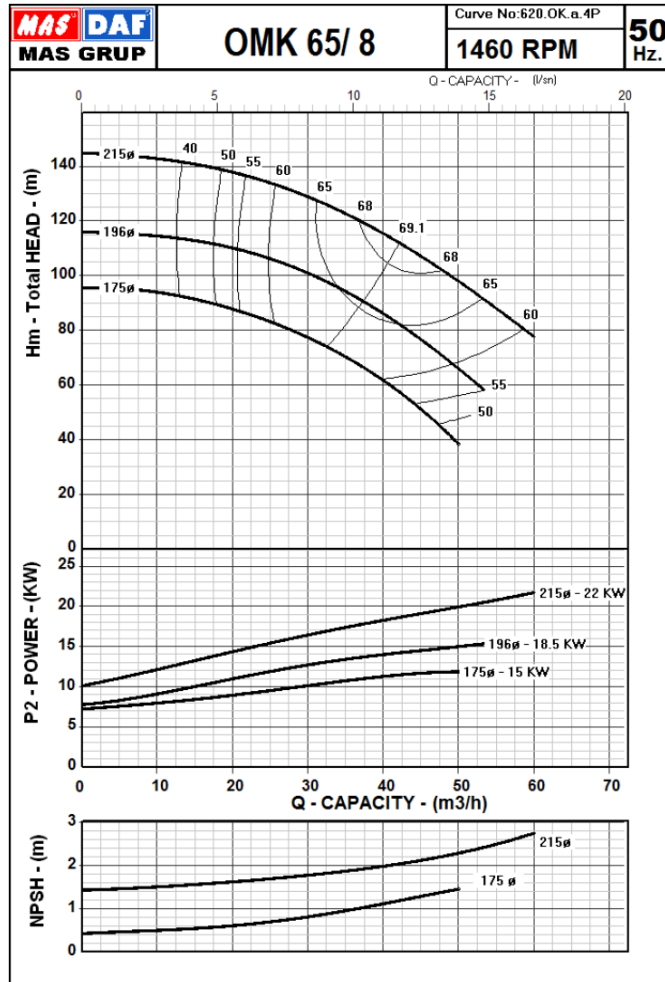


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 65/8



Mas Grup

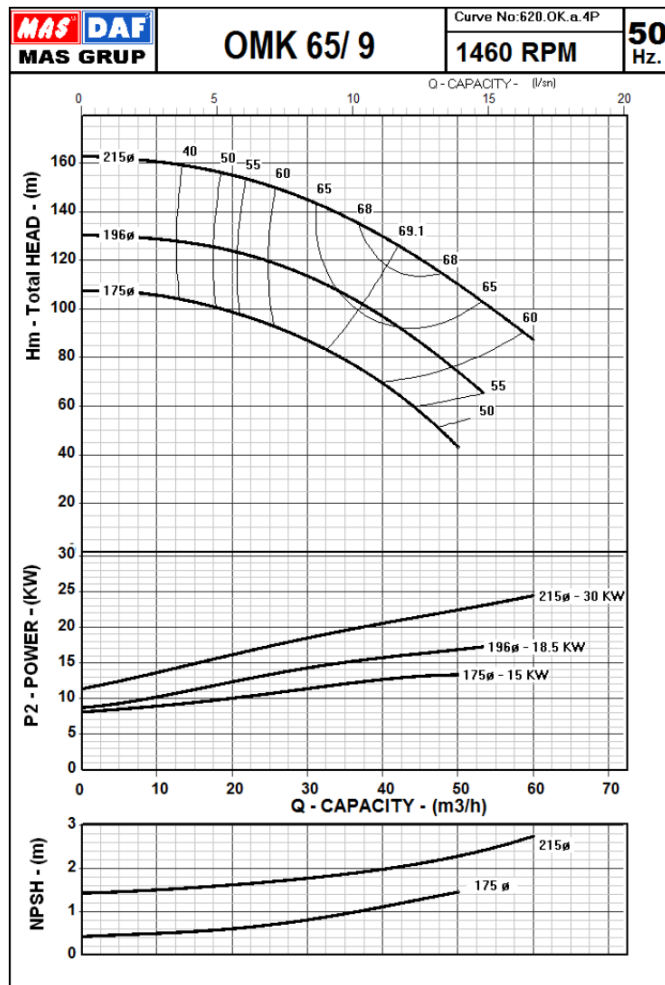


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 65/9



Mas Grup

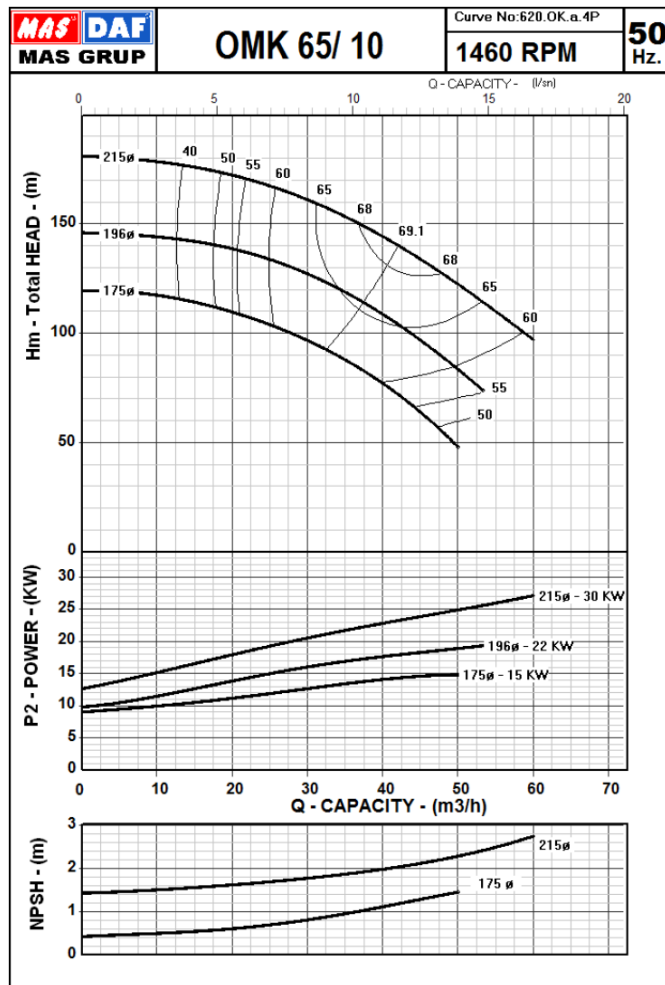


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 65/10



Mas Grup

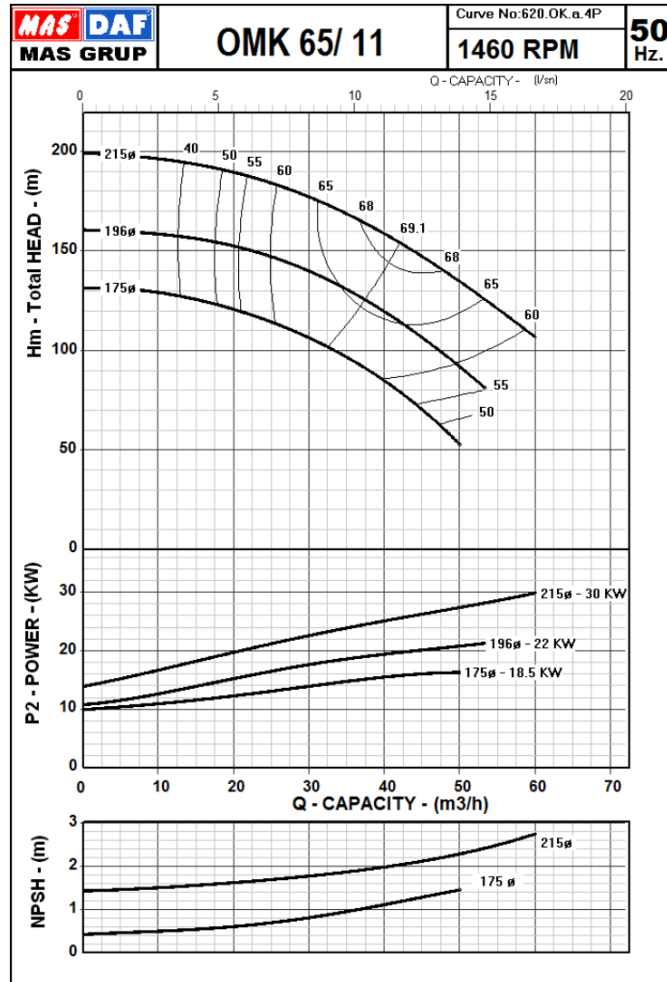


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 65/11



Mas Grup

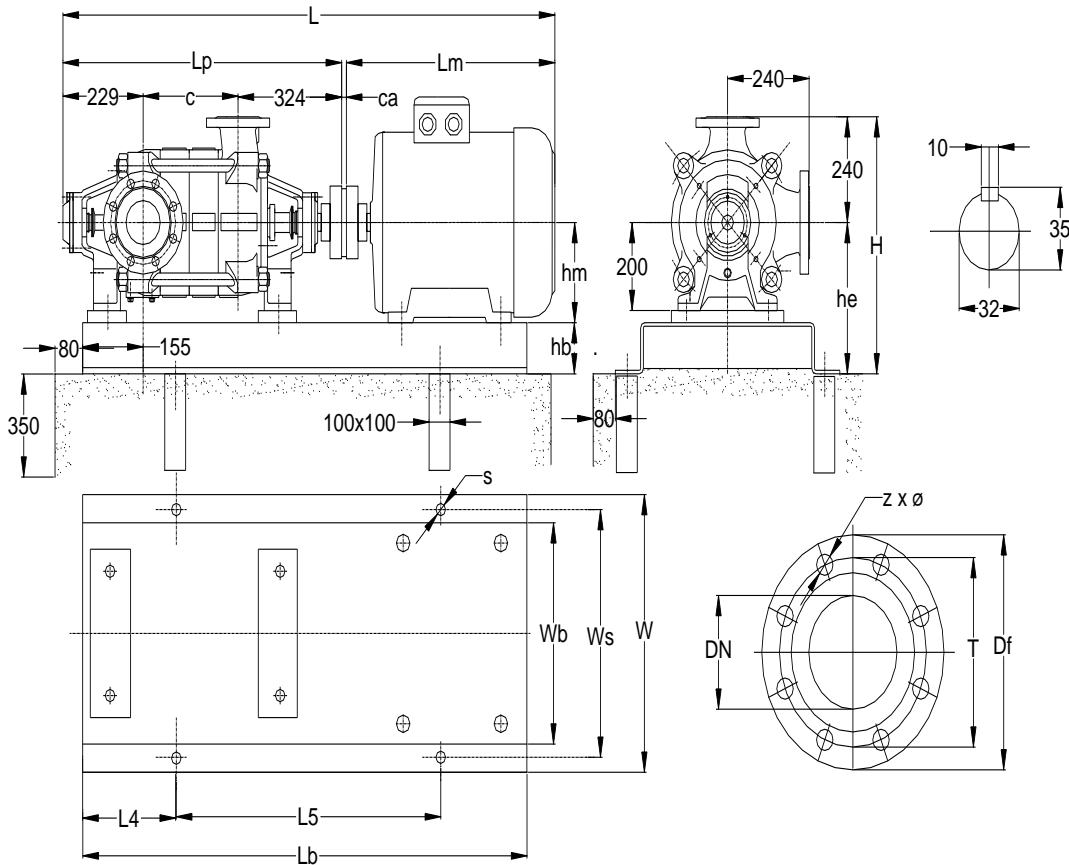


OMK Series

High
Dim



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200
24	4	M 20 x 200
28	4	M 24 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	100	235	190	8	23
Discharge	40	65	185	145	8	18

Dimensions – 1450 RPM - 50 Hz

Pump Type	MOTOR			PUMP			Overall			Base Plate									
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 65 / 2	5.5	132S	455	132	746	193	26	1227	390	505	4.06	1120	300	65	265	190	740	350	19
	4	112M	384	112	746	193	21	1151	390	505	4.05	1000	300	65	265	170	660	350	19
65 / 3	9	C132M	493	132	831	278	26	1350	390	505	4.07	1250	300	65	265	205	840	350	19
	7.5	132M	493	132	831	278	26	1350	390	505	4.07	1250	300	65	265	205	840	350	19
65 / 4	15	160L	638	160	916	363	30	1584	450	520	5.08	1400	340	80	280	230	940	400	24
	11	160M	594	160	916	363	30	1540	450	520	5.08	1400	340	80	280	230	940	400	24
65 / 5	15	160L	638	160	1001	448	30	1669	450	520	5.09	1600	340	80	280	270	1060	400	24
	11	160M	594	160	1001	448	30	1625	450	520	5.08	1400	340	80	280	230	940	400	24
65 / 6	18.5	180M	654	180	1086	533	33	1773	490	520	6.09	1600	380	80	280	270	1060	440	24
	15	160L	638	160	1086	533	30	1754	450	520	5.09	1600	340	80	280	270	1060	400	24
65 / 7	22	180L	692	180	1171	618	33	1896	490	520	6.10	1800	380	80	280	300	1200	440	24
	18.5	180M	654	180	1171	618	33	1858	490	520	6.10	1800	380	80	280	300	1200	440	24
65 / 8	30	200L	747	200	1256	703	42	2045	540	520	7.10	1800	430	80	280	300	1200	490	24
	22	180L	692	180	1256	703	33	1981	490	520	6.10	1800	380	80	280	300	1200	440	24
65 / 9	30	200L	747	200	1341	788	42	2130	540	520	7.11	2000	430	80	280	340	1320	490	24
	22	180L	692	180	1341	788	33	2066	490	520	6.11	2000	380	80	280	340	1320	440	24
65 / 10	30	200L	747	200	1426	873	42	2215	540	520	7.11	2000	430	80	280	340	1320	490	24
	22	180L	692	180	1426	873	33	2151	490	520	6.11	2000	380	80	280	340	1320	440	24
65 / 11	37	225S	795	225	1511	958	43	2349	610	565	8.12	2250	480	100	325	390	1470	550	28
	30	200L	747	200	1511	958	42	2300	540	520	7.12	2250	430	80	280	390	1470	490	24

This leaflet is subject to alteration without notice.

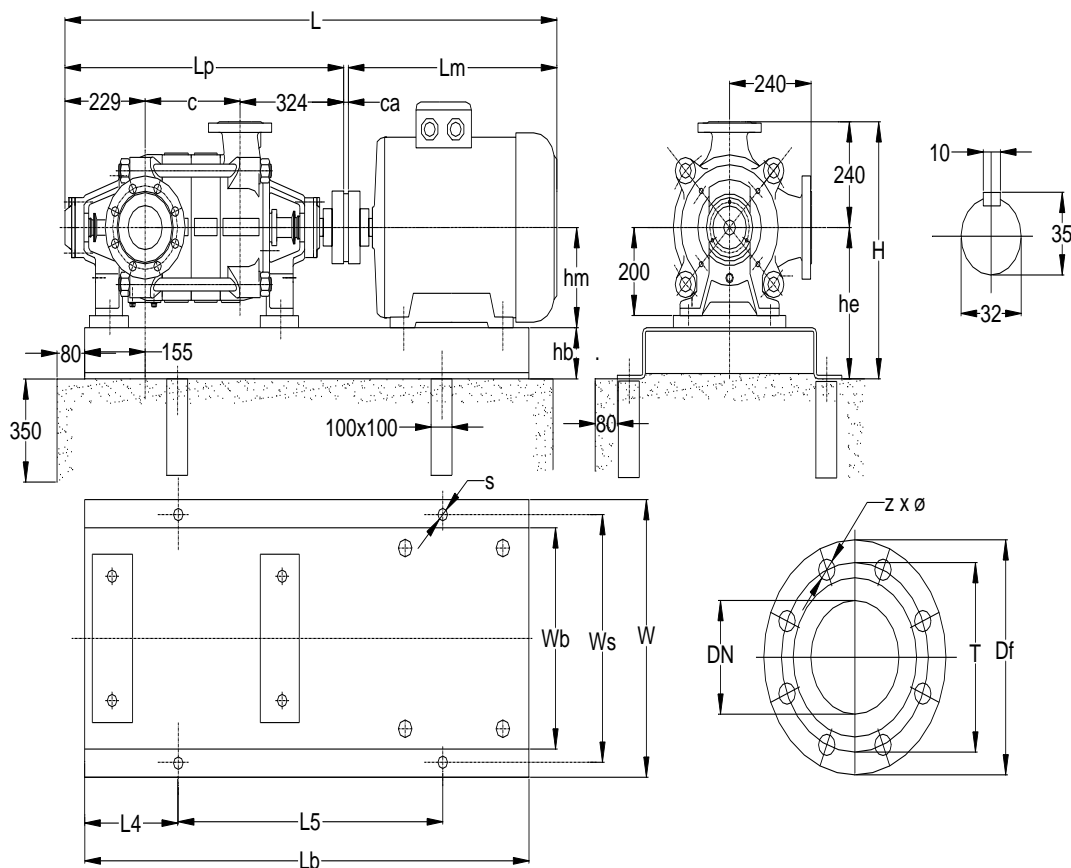
Dimensions are in mm without obligation.

OMK Series

High
Dim



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
24	4	M 20 x 200
28	4	M 24 x 200
33	4	M 30 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	100	235	190	8	23
Discharge	40	65	185	145	8	18

Dimensions – 2900 RPM - 50 Hz

Pump Type	MOTOR			PUMP			Overall			Base Plate									
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 65 / 2	45	225M	790	225	746	193	43	1579	610	565	8.08	1400	480	100	325	230	940	550	28
	37	200L	747	200	746	193	33	1526	540	520	7.08	1400	430	80	280	230	940	490	24
65 / 3	75	280S	958	280	831	278	43	1832	730	620	10.09	1600	600	100	380	270	1060	670	28
	55	250M	890	250	831	278	42	1763	660	590	9.09	1600	530	100	350	270	1060	600	28
65 / 4	90	280M	1010	280	916	363	43	1969	730	620	10.10	1800	600	100	380	300	1200	670	28
	75	280S	958	280	916	363	43	1917	730	620	10.09	1600	600	100	380	270	1060	670	28
65 / 5	110	315S	1078	315	1001	448	43	2122	830	675	11.10	1800	680	120	435	300	1200	760	33
	90	280M	1010	280	1001	448	43	2054	730	620	10.10	1800	600	100	380	300	1200	670	28

This leaflet is subject to alteration without notice.

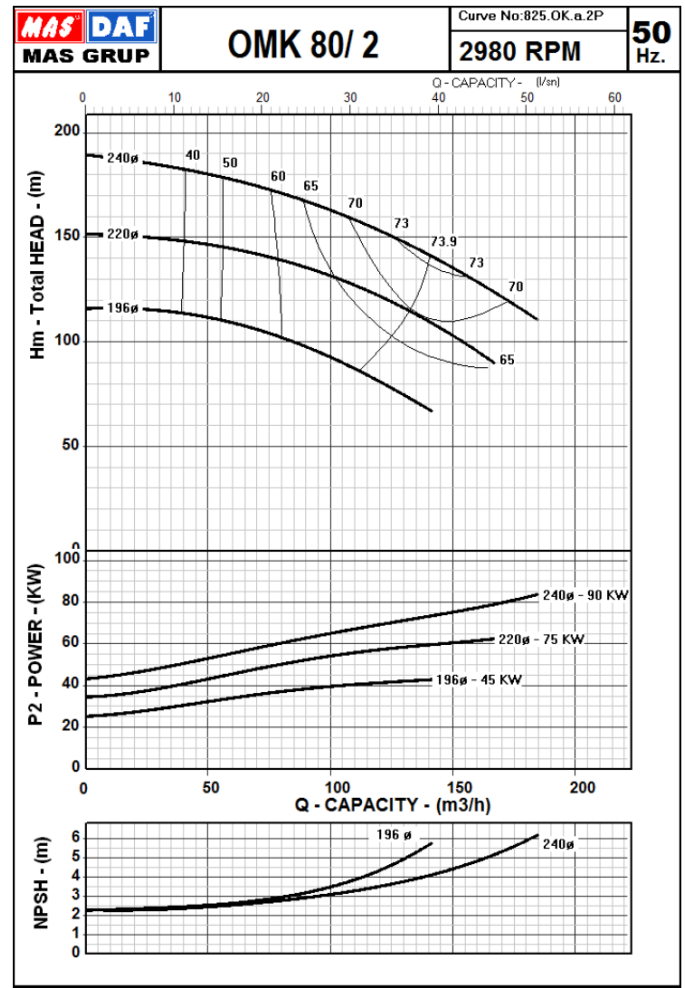
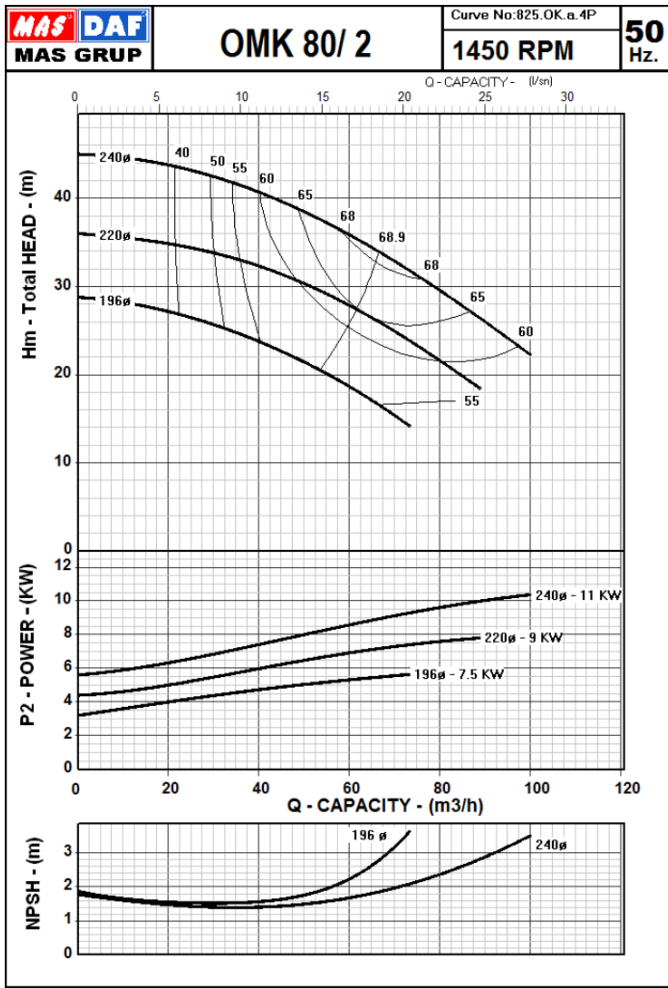
Dimensions are in mm without obligation.

OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 80/2

Mas Grup

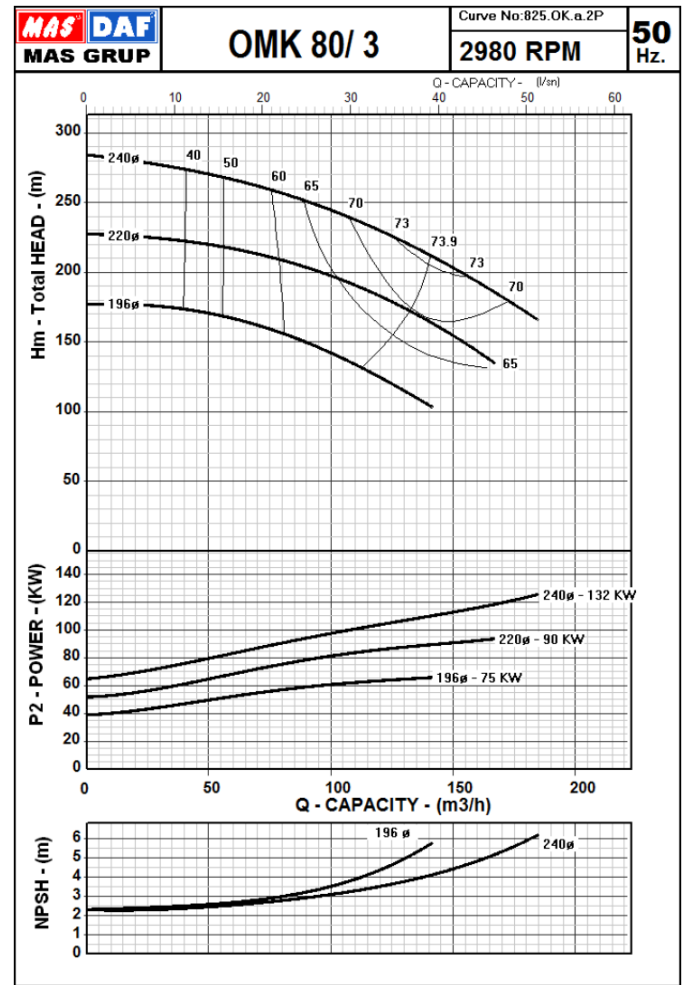
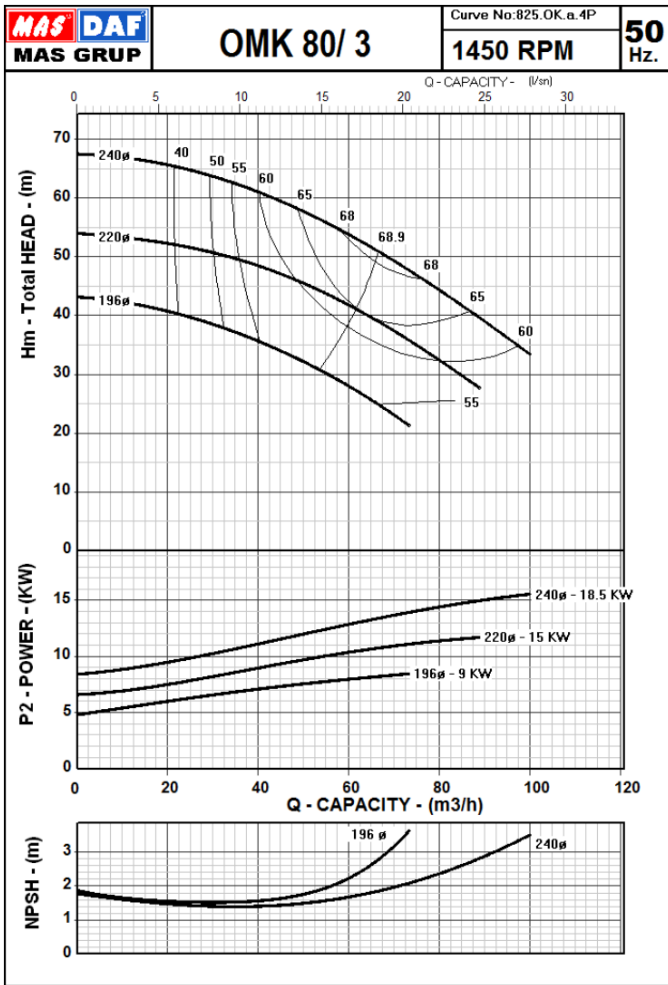


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 80/3

Mas Grup

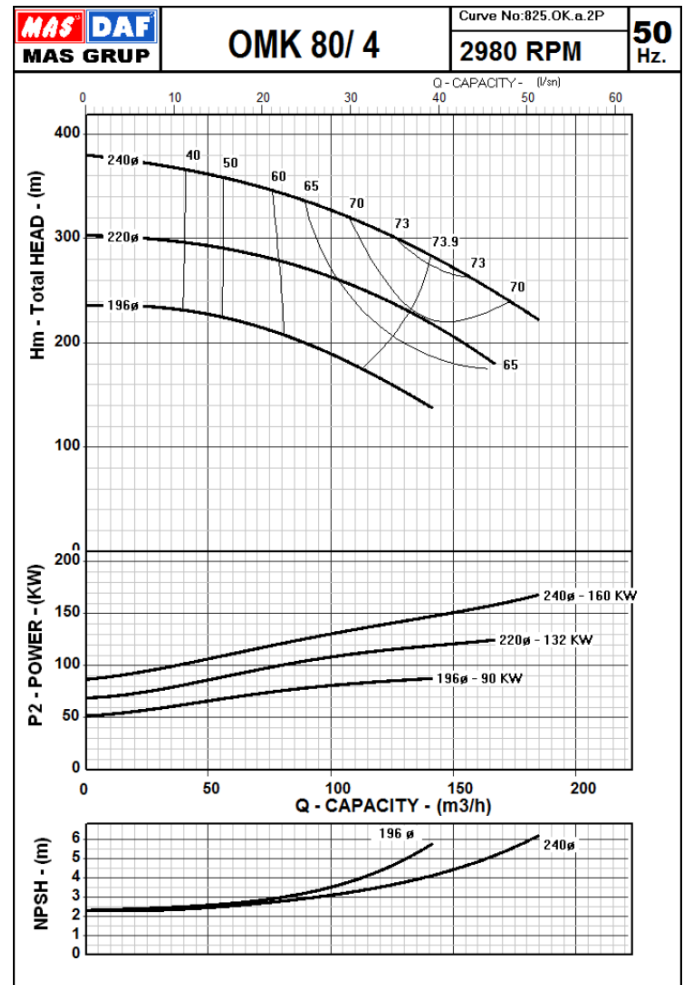
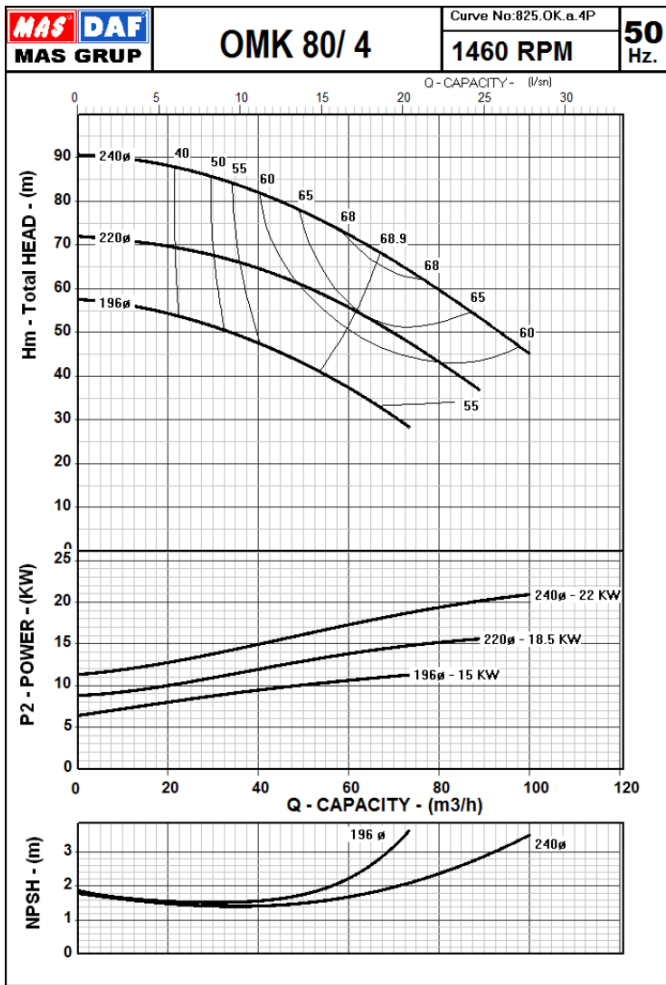


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 80/4

Mas Grup

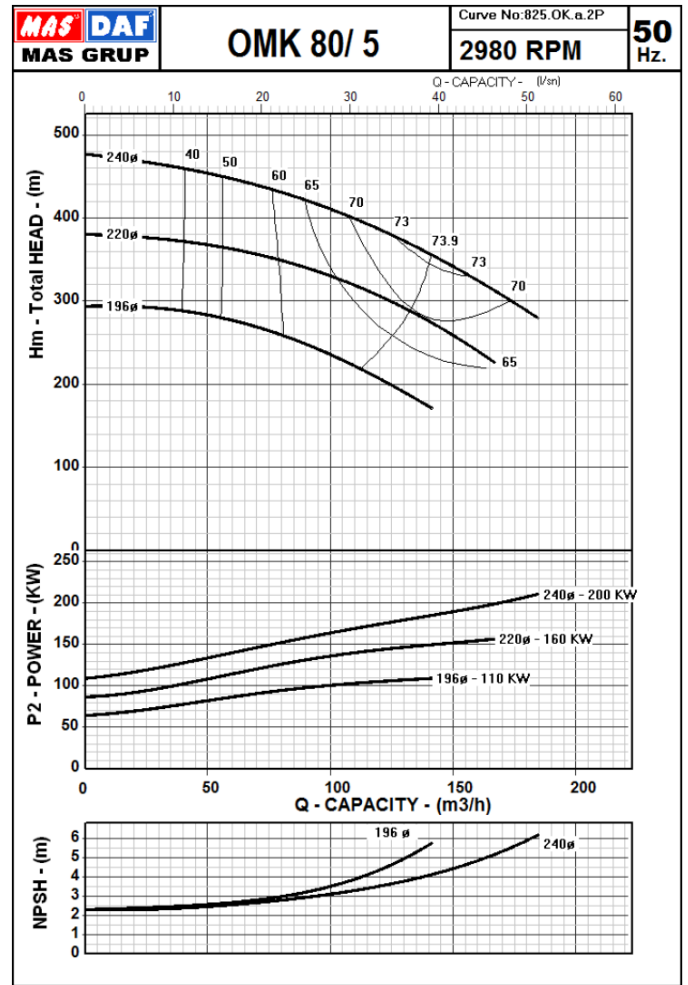
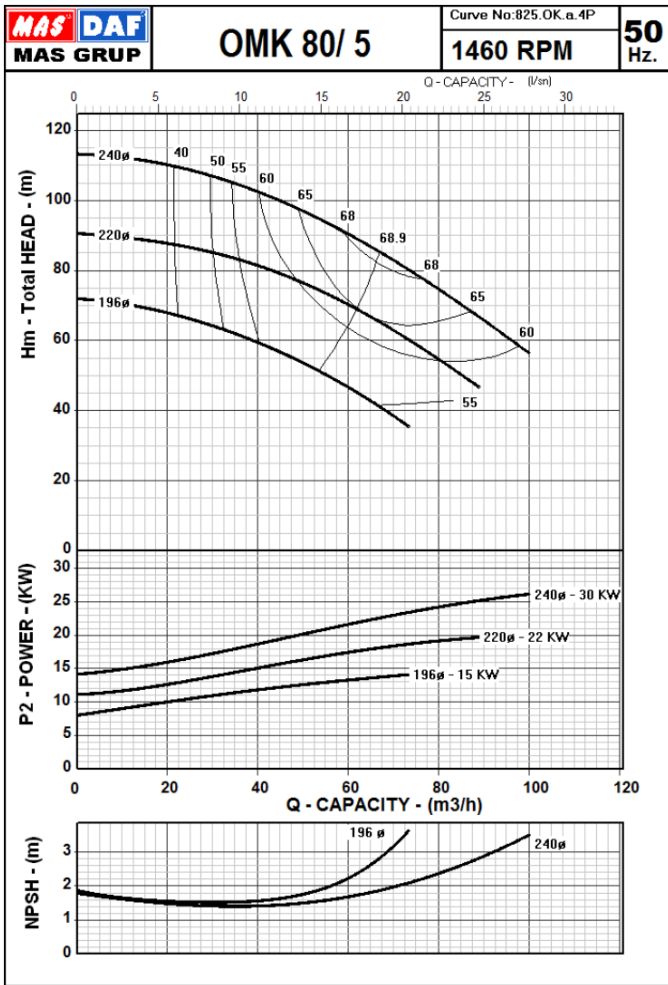


OMK Series
 High Pressure Multistage Pumps
 Performance Curves



OMK 80/5

Mas Grup

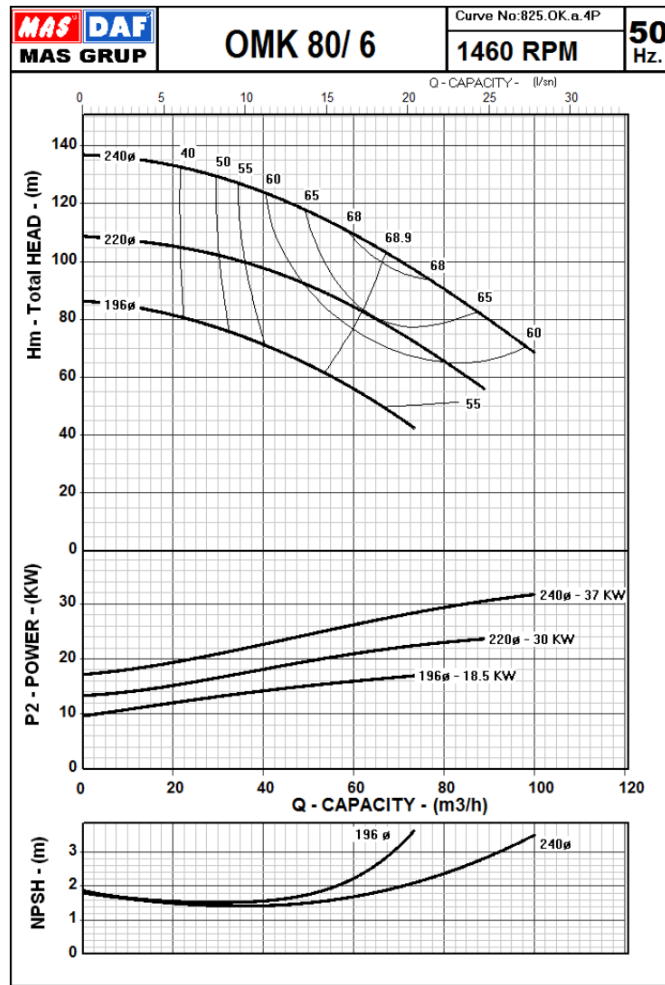


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 80/6



Mas Grup

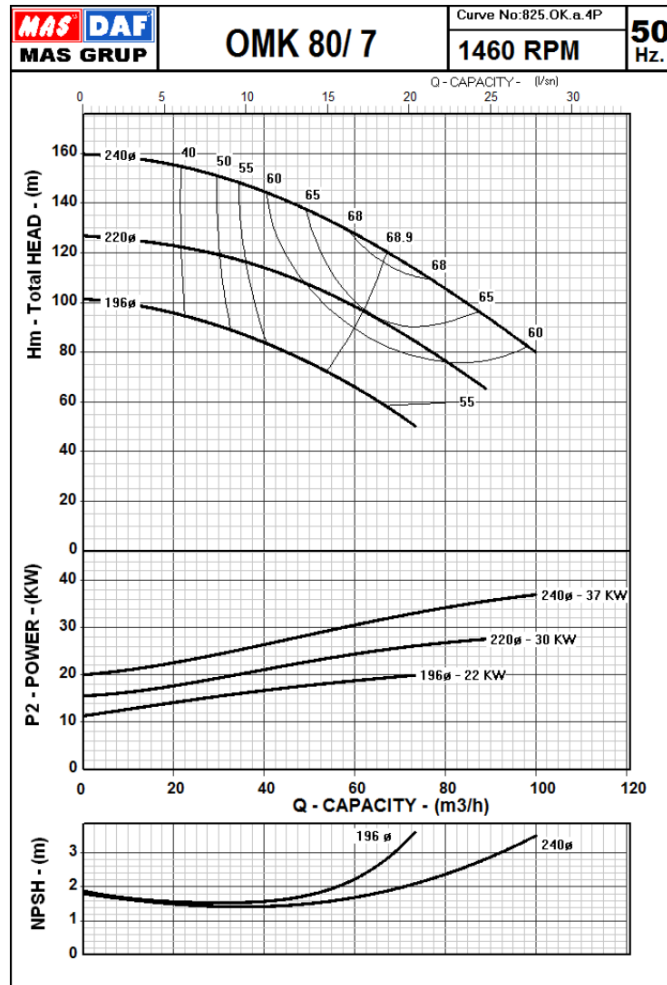


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 80/7



Mas Grup

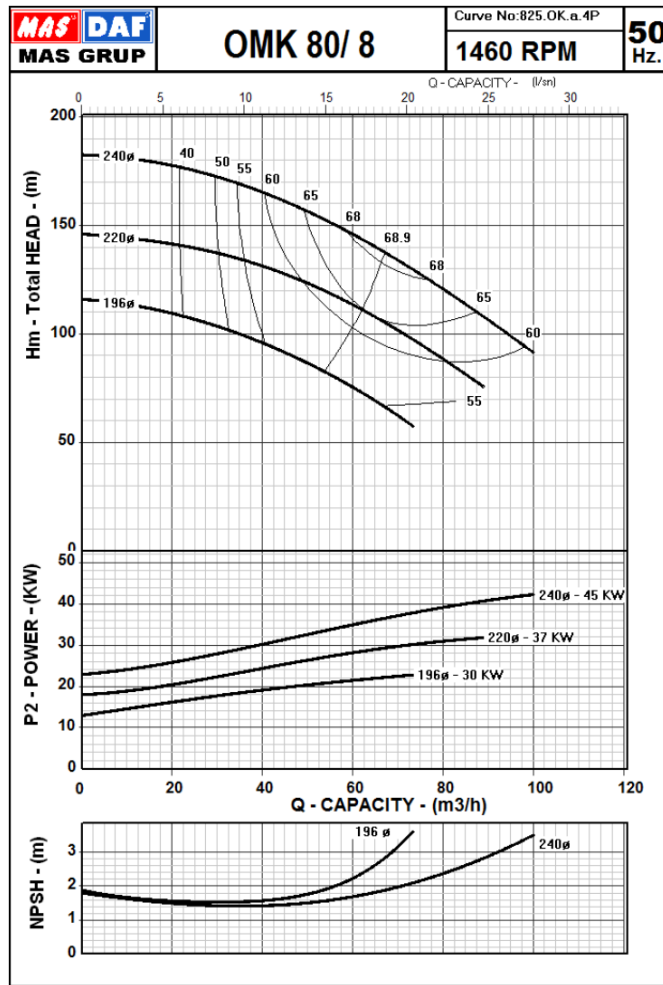


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 80/8



Mas Grup

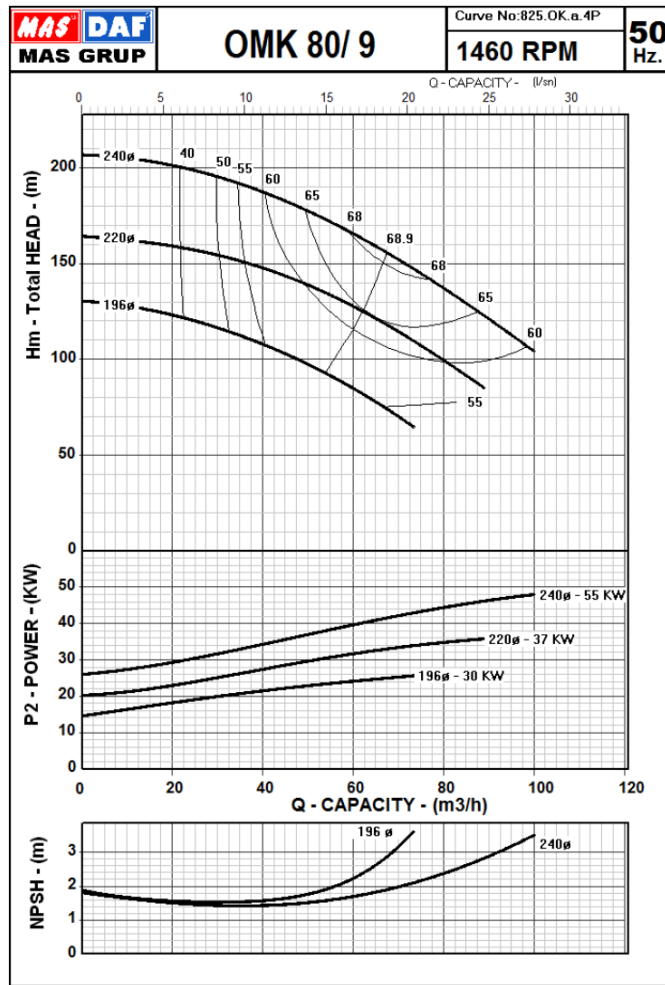


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 80/9



Mas Grup

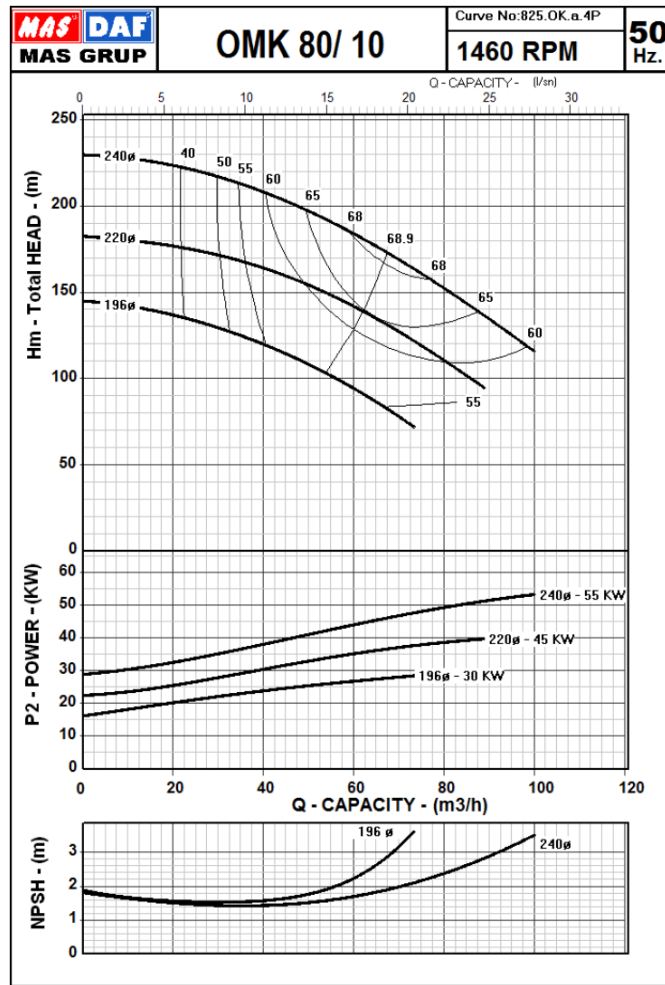


OMK Series
 High Pressure Multistage Pumps
Performance Curves

OMK 80/10



Mas Grup

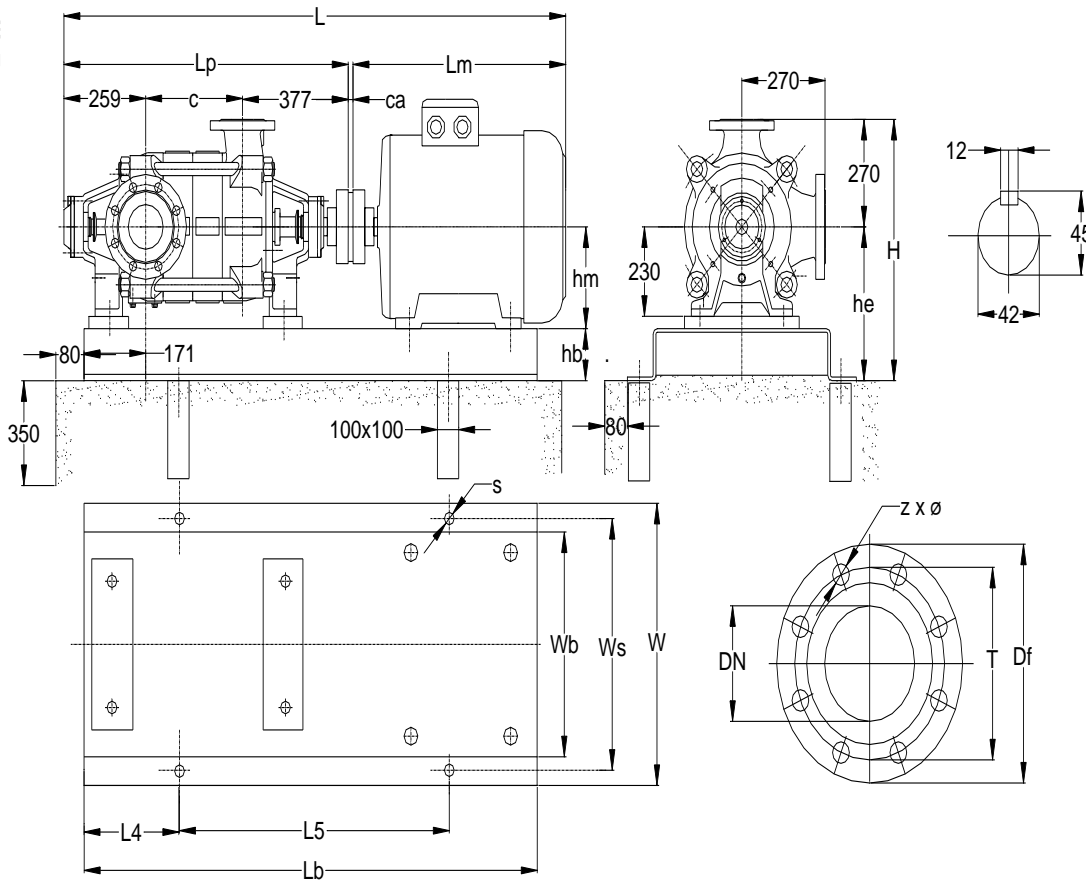


OMK Series

High
Dimc



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
19	4	M 16 x 200
24	4	M 20 x 200
28	4	M 24 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	125	270	220	8	27
Discharge	40	80	200	160	8	18

Dimensions – 1450 RPM - 50 Hz

Pump Type	MOTOR		PUMP					Overall			Base Plate								
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 80 / 2	11	160M	594	160	886	250	30	1510	450	580	5.08	1400	340	80	310	230	940	400	24
	9	C132M	493	132	886	250	26	1405	450	580	5.07	1250	340	80	310	205	840	400	24
80 / 3	18.5	180M	654	180	996	360	33	1683	490	580	6.09	1600	380	80	310	270	1060	440	24
	15	160L	638	160	996	360	30	1664	450	580	5.09	1600	340	80	310	270	1060	400	24
80 / 4	22	180L	692	180	1106	470	33	1831	490	580	6.09	1600	380	80	310	270	1060	440	24
	18.5	180M	654	180	1106	470	33	1793	490	580	6.09	1600	380	80	310	270	1060	440	24
80 / 5	30	200L	747	200	1216	580	42	2005	540	580	7.10	1800	430	80	310	300	1200	490	24
	22	180L	692	180	1216	580	33	1941	490	580	6.10	1800	380	80	310	300	1200	440	24
80 / 6	37	225S	795	225	1326	690	43	2164	610	600	8.11	2000	480	100	330	340	1320	550	28
	30	200L	747	200	1326	690	42	2115	540	580	7.11	2000	430	80	310	340	1320	490	24
80 / 7	45	225M	820	225	1436	800	43	2299	610	600	8.12	2250	480	100	330	390	1470	550	28
	37	225S	795	225	1436	800	43	2274	610	600	8.11	2000	480	100	330	340	1320	550	28
80 / 8	45	225M	820	225	1546	910	43	2409	610	600	8.12	2250	480	100	330	390	1470	550	28
	37	225S	795	225	1546	910	43	2384	610	600	8.12	2250	480	100	330	390	1470	550	28
80 / 9	55	250M	890	250	1656	1020	43	2589	660	620	9.13	2500	530	100	350	440	1620	600	28
	45	225M	820	225	1656	1020	43	2519	610	600	8.12	2250	480	100	330	390	1470	550	28
80 / 10	55	250M	890	250	1766	1130	43	2699	660	620	9.13	2500	530	100	350	440	1620	600	28
	45	225M	820	225	1766	1130	43	2629	610	600	8.13	2500	480	100	330	440	1620	550	28

This leaflet is subject to alteration without notice.

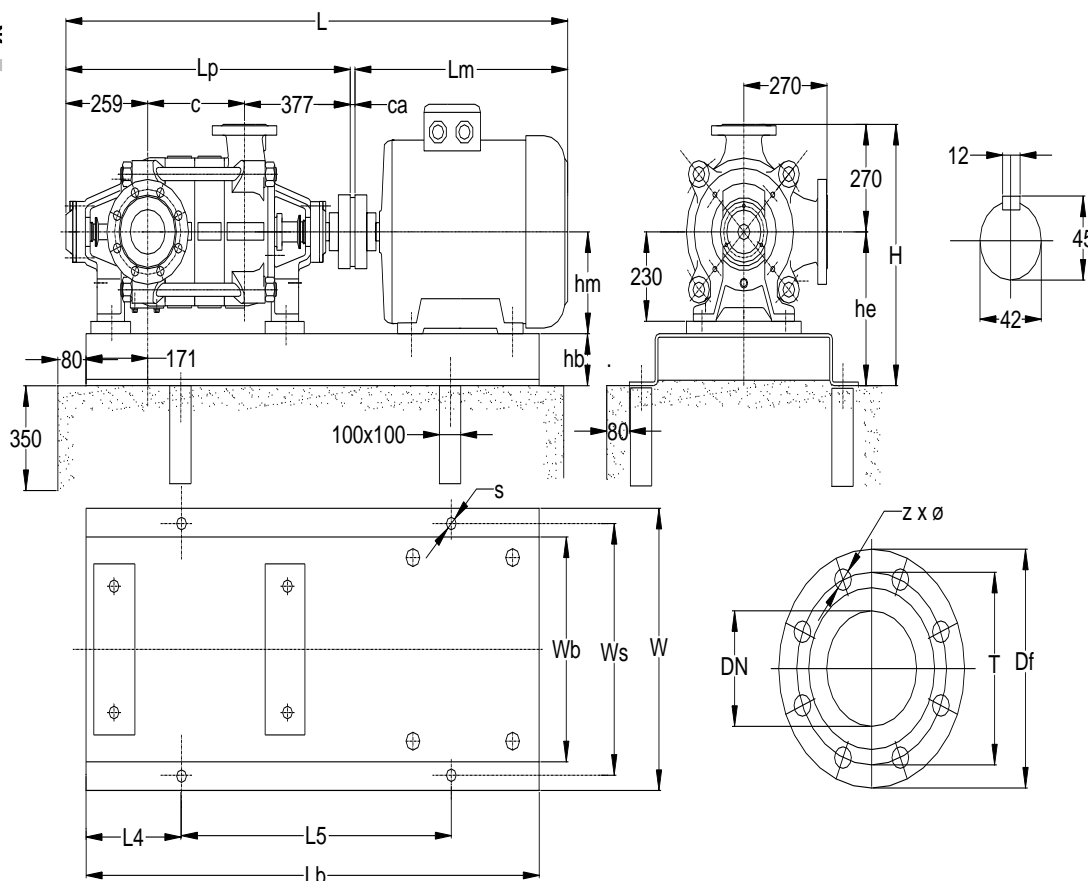
Dimensions are in mmm without obligation.

OMK Series

High
Dimc



Mas Grup



Foundation Bolts		
Hole Dia. (s)	Number	Dimensions
28	4	M 24 x 200
33	4	M 30 x 200

Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	125	270	220	8	27
Discharge	40	80	200	160	8	18

Dimensions – 2900 RPM - 50 Hz

Pump Type	MOTOR			PUMP			Overall			Base Plate									
	KW	IEC	Lm	Hm	Lp	C	ca	L	W	H	Base Plate	Lb	Wb	hb	he	L4	L5	Ws	s
OMK 80 / 2	90	280M	1010	280	886	250	43	1939	730	650	10.10	1800	600	100	380	300	1200	670	28
	75	280S	958	280	886	250	43	1887	730	650	10.09	1600	600	100	380	270	1060	670	28
80 / 3	132	315M	1130	315	996	360	43	2169	830	705	11.10	1800	680	120	435	300	1200	760	33
	110	315S	1078	315	996	360	43	2117	830	705	11.10	1800	680	120	435	300	1200	760	33
80 / 4	185	315L	1220	315	1106	470	43	2369	830	705	11.10	1800	680	120	435	300	1200	760	33
	132	315M	1130	315	1106	470	43	2279	830	705	11.11	2000	680	120	435	340	1320	760	33
80 / 5	250	355M	1330	355	1216	580	43	2589	915	775	12.12	2250	750	150	505	390	1470	840	33
	200	315L	1220	315	1216	580	43	2479	830	705	11.11	2000	680	120	435	340	1320	760	33

This leaflet is subject to alteration without notice.

Dimensions are in mmm without obligation.

OMK Series

High Pressure Multistage Pumps

Permissible Forces and Moments on Pump Flanges



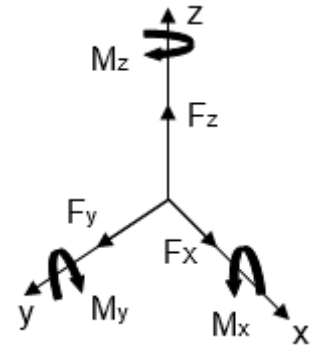
Mas Grup

Note: The total forces and the total moments are the sum of the individual forces and moments in the direction of x, y, z.

$$\sum F = \sqrt{(F_x + F_y + F_z)} \text{ [N]} \quad \sum M = \sqrt{(M_x + M_y + M_z)} \text{ [Nm]}$$

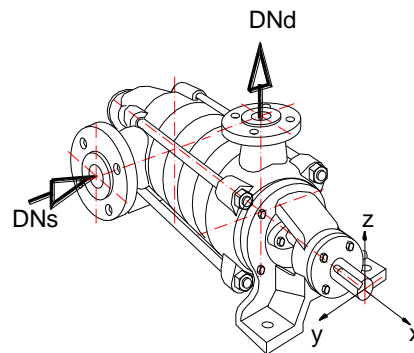
- Suction and discharge flanges should be considered separate.
- If the loads applied do not act simultaneously at their maximum values, it will be permissible for one of the loads to exceed its permissible value to a maximum of 1.4 times.
- The actual forces and moments can be connected by the relation below.

$$((\sum F_{\text{calculated}} / \sum F_{\text{max. permissible}})^2 + (\sum M_{\text{calculated}} / \sum M_{\text{max. permissible}})^2) \leq 2$$

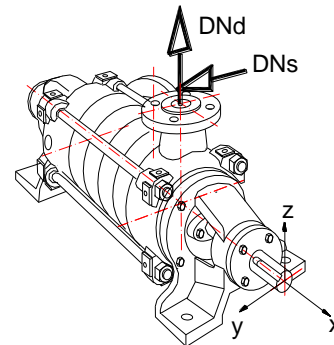


PERMISSIBLE FORCES AND MOMENTS ON PUMP SUCTION FLANGE

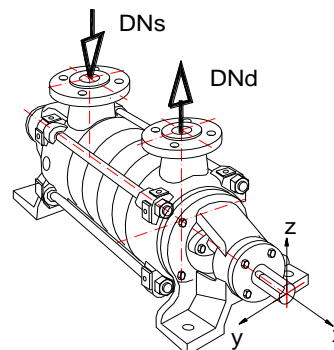
PUMP TYPE	FORCES (N)				MOMENTS (Nm)			
	F _x	F _y	F _z	ΣF	M _x	M _y	M _z	ΣM
OMK 32	431	477	392	753	269	154	200	369
OMK 40	560	620	510	979	350	200	260	480
OMK 50	730	815	660	1278	395	230	295	544
OMK 65	900	1010	810	1577	440	260	330	608
OMK 80	1125	1263	1013	1971	550	325	413	760



PUMP TYPE	FORCES (N)				MOMENTS (Nm)			
	F _x	F _y	F _z	ΣF	M _x	M _y	M _z	ΣM
OMK 32	431	477	392	753	269	154	200	369
OMK 40	560	620	510	979	350	200	260	480
OMK 50	730	815	660	1278	395	230	295	544
OMK 65	900	1010	810	1577	440	260	330	608
OMK 80	1125	1263	1013	1971	550	325	413	760



PUMP TYPE	FORCES (Nm)				MOMENTS (Nm)			
	F _x	F _y	F _z	ΣF	M _x	M _y	M _z	ΣM
OMK 32	431	392	477	753	269	154	200	369
OMK 40	560	510	620	979	350	200	260	480
OMK 50	730	660	815	1278	395	230	295	544
OMK 65	900	810	1010	1577	440	260	330	608
OMK 80	1125	1013	1263	1971	550	325	413	760



This leaflet is subject to alteration without notice.

OMK Series

High Pressure Multistage Pumps

Permissible Forces and Moments on Pump Flanges



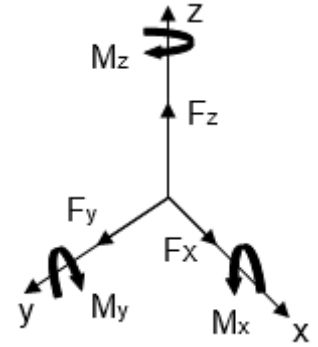
Mas Grup

Note: The total forces and the total moments are the sum of the individual forces and moments in the direction of x, y, z.

$$\sum F = \sqrt{(F_x + F_y + F_z)} \text{ [N]} \quad \sum M = \sqrt{(M_x + M_y + M_z)} \text{ [Nm]}$$

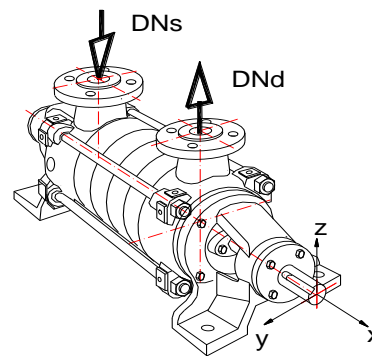
- Suction and discharge flanges should be considered separate.
- If the loads applied do not act simultaneously at their maximum values, it will be permissible for one of the loads to exceed its permissible value to a maximum of 1.4 times.
- The actual forces and moments can be connected by the relation below.

$$\left(\frac{\sum F_{\text{calculated}}}{\sum F_{\text{max. permissible}}} \right)^2 + \left(\frac{\sum M_{\text{calculated}}}{\sum M_{\text{max. permissible}}} \right)^2 \leq 2$$

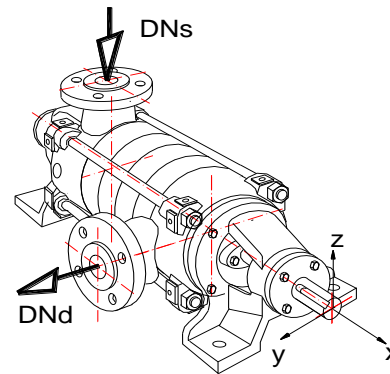


PERMISSIBLE FORCES AND MOMENTS ON PUMP DISCHARGE FLANGES

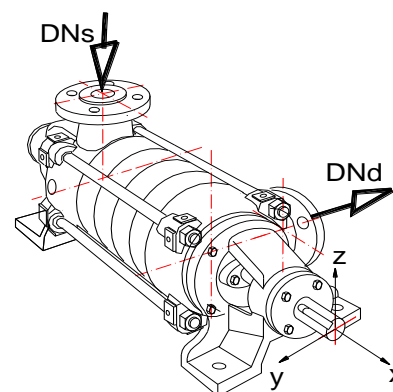
PUMP TYPE	FORCES (N)				MOMENTS (Nm)			
	F _x	F _y	F _z	∑F	M _x	M _y	M _z	∑M
OMK 32	264	240	304	469	224	112	152	293
OMK 40	330	300	380	586	280	140	190	366
OMK 50	445	405	500	782	315	170	225	423
OMK 65	560	510	620	979	350	200	260	480
OMK 80	689	627	763	1204	431	246	320	590



PUMP TYPE	FORCES (N)				MOMENTS (Nm)			
	F _x	F _y	F _z	∑F	M _x	M _y	M _z	∑M
OMK 32	264	304	240	469	224	112	152	293
OMK 40	330	380	300	586	280	140	190	366
OMK 50	445	500	405	782	315	170	225	423
OMK 65	560	620	510	979	350	200	260	480
OMK 80	689	763	627	1204	431	246	320	590



PUMP TYPE	FORCES (N)				MOMENTS (Nm)			
	F _x	F _y	F _z	∑F	M _x	M _y	M _z	∑M
OMK 32	264	304	240	469	224	112	152	293
OMK 40	330	380	300	586	280	140	190	366
OMK 50	445	500	405	782	315	170	225	423
OMK 65	560	620	510	979	350	200	260	480
OMK 80	689	763	627	1204	431	246	320	590



This leaflet is subject to alteration without notice.

OMK Series

High Pressure Multistage Pumps

Moment of Inertia (Without Coupling)



Mas Grup

PUMP TYPE	MOMENT OF INERTIA I [kgm ²]					
	Impeller GG25		Impeller Bronze		Impeller Stainless Steel	
	without	with	without	with	without	with
	water	water	water	water	water	water
OMK 32 / 1	0.00310	0.00335	0.00342	0.00389	0.00307	0.00355
32 / 2	0.00605	0.00656	0.00669	0.00765	0.00601	0.00697
32 / 3	0.00893	0.00970	0.00990	0.01134	0.00888	0.01031
32 / 4	0.01181	0.01284	0.01311	0.01503	0.01175	0.01366
32 / 5	0.01476	0.01605	0.01639	0.01878	0.01468	0.01708
32 / 6	0.01764	0.01919	0.01960	0.02766	0.01755	0.02042
32 / 7	0.02059	0.02787	0.02288	0.02623	0.02049	0.02384
32 / 8	0.02347	0.02554	0.02609	0.02992	0.02336	0.02718
32 / 9	0.02634	0.02869	0.02930	0.03360	0.02623	0.03053
32 / 10	0.02929	0.03190	0.03258	0.03736	0.02916	0.03395
32 / 11	0.03217	0.03504	0.03579	0.04105	0.03203	0.03729
32 / 12	0.03505	0.03818	0.03900	0.04474	0.03490	0.04064
32 / 13	0.03793	0.04132	0.04221	0.04843	0.03777	0.04399
32 / 14	0.03793	0.04132	0.04221	0.04843	0.03777	0.04399

OMK 40 / 1	0.00375	0.00405	0.00413	0.00471	0.00372	0.00430
40 / 2	0.00732	0.00793	0.00810	0.00926	0.00727	0.00843
40 / 3	0.01080	0.01174	0.01198	0.01372	0.01074	0.01248
40 / 4	0.01429	0.01554	0.01587	0.01818	0.01421	0.01653
40 / 5	0.01786	0.01942	0.01983	0.02273	0.01777	0.02066
40 / 6	0.02134	0.02322	0.02372	0.03347	0.02124	0.02471
40 / 7	0.02491	0.03372	0.02769	0.03174	0.02479	0.02884
40 / 8	0.02839	0.03091	0.03157	0.03620	0.02826	0.03289
40 / 9	0.03188	0.03471	0.03545	0.04066	0.03174	0.03694
40 / 10	0.03545	0.03860	0.03942	0.04521	0.03529	0.04107
40 / 11	0.03893	0.04240	0.04331	0.04967	0.03876	0.04512
40 / 12	0.04241	0.04620	0.04719	0.05413	0.04223	0.04917

OMK 50 / 1	0.00628	0.00571	0.00583	0.00664	0.00524	0.00606
50 / 2	0.01216	0.01119	0.01142	0.01305	0.01025	0.01189
50 / 3	0.01800	0.01655	0.01690	0.01934	0.01515	0.01760
50 / 4	0.02384	0.02191	0.02237	0.02564	0.02004	0.02331
50 / 5	0.02973	0.02738	0.02797	0.03205	0.02505	0.02913
50 / 6	0.03552	0.03274	0.03344	0.04719	0.02995	0.03484
50 / 7	0.04141	0.04754	0.03904	0.04475	0.03496	0.04067
50 / 8	0.04725	0.04358	0.04451	0.05104	0.03985	0.04638
50 / 9	0.05309	0.04894	0.04999	0.05733	0.04475	0.05209
50 / 10	0.05897	0.05442	0.05558	0.06374	0.04976	0.05791
50 / 11	0.06476	0.05978	0.06106	0.07003	0.05465	0.06362

This leaflet is subject to alteration without notice.

OMK Series

High Pressure Multistage Pumps

Moment of Inertia (Without Coupling)



Mas Grup

PUMP TYPE	MOMENT OF INERTIA I [kgm ²]					
	Impeller GG25		Impeller Bronze		Impeller Stainless Steel	
	without	with	without	with	without	with
	water	water	water	water	water	water
OMK 65 / 1	0.00942	0.01134	0.01102	0.01295	0.00984	0.01177
65 / 2	0.01819	0.02204	0.02140	0.02525	0.01905	0.02290
65 / 3	0.02696	0.03274	0.03178	0.03756	0.02825	0.03403
65 / 4	0.03574	0.04344	0.04216	0.04986	0.03745	0.04515
65 / 5	0.04451	0.05414	0.05254	0.06217	0.04665	0.05628
65 / 6	0.05318	0.06474	0.06281	0.07437	0.05575	0.06730
65 / 7	0.06195	0.07544	0.07319	0.08667	0.06495	0.07843
65 / 8	0.07073	0.08614	0.08357	0.09898	0.07415	0.08956
65 / 9	0.07950	0.09684	0.09395	0.11128	0.08335	0.10069
65 / 10	0.08828	0.10754	0.10433	0.12359	0.09256	0.11182
65 / 11	0.09694	0.11813	0.11460	0.13578	0.10165	0.12284

OMK 80 / 1	0.01267	0.01526	0.01742	0.01325	0.01325	0.01584
80 / 2	0.02448	0.02966	0.03398	0.02563	0.02563	0.03082
80 / 3	0.03629	0.04406	0.05054	0.03802	0.03802	0.04579
80 / 4	0.04810	0.05846	0.06710	0.05040	0.05040	0.06077
80 / 5	0.05990	0.07286	0.08366	0.06278	0.06278	0.07574
80 / 6	0.07157	0.08712	0.10008	0.07502	0.07502	0.09058
80 / 7	0.08338	0.10152	0.11664	0.08741	0.08741	0.10555
80 / 8	0.09518	0.11592	0.13320	0.09979	0.09979	0.12053
80 / 9	0.10699	0.13032	0.14976	0.11218	0.11218	0.13550
80 / 10	0.11880	0.14472	0.16632	0.12456	0.12456	0.15048

This leaflet is subject to alteration without notice.



Mas Grup

Head Office / Center Service:

Aydınlı Mah. Birlik OSB. 1.No'lu Cadde No:17 Tuzla - İSTANBUL / TURKEY
Tel: +90 (216) 456 47 00 pbx Fax: +90 (216) 455 14 24

Ankara Regional Directorate:

Aşağı Öveçler Mah. 1329 Sok. No:6/9 Öveçler ANKARA / TURKEY
Tel: +90 (312) 472 81 60-67 Fax: +90 (312) 472 82 51

Factory:

1. Organize Sanayi Bölgesi Parsel 249/5 Beyköy - DÜZCE / TURKEY
Tel: +90 (380) 553 73 88 Fax: +90 (380) 553 71 29