HIGH PRESSURE VERTICAL MULTISTAGE CENTRIFUGAL PUMPS

KMU-V SERIES
(50-60 Hz)

TECHNICAL MANUAL

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MAS KMU-V – High Pressure Multistage Pumps
General Specifications

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 MAKİNA SAN. A.Ş.

Design

- The KMU-V Pump is a vertical axis, ring section design multistage centrifugal pump of non-self priming type.
- Impellers are single entry, closed type and dynamically balanced. Impeller diameter are full diameter for all KMU-V type pumps.
- The pump series consists of 4 sizes. KMU-V 25, 32, 40 and 50. Stages are from 3 up to max. 14 stages.
- Pump and motor are connected to each other via rigid coupling.
- Flanges are acc. to DIN 2535.
- Normally, discharge part is at motor side on top, suction part is at dead end side on the bottom and rotation of direction is clockwise when viewed from driver.
  Suction and discharge nozzles may be a choice of three 90° positions.

  Please see the possible arrangements at “Different Mounting Arrangements” section.

Shaft

Chromium steel (AISI 420) fine grained shafts are used on KMU-V pumps.

Bearings

There is a sliding bearing at the pump bottom. This bearing carries the radial load. There is no ball bearing on the pump.However, motor bearings carry the axial load occuring in the pump.

Shaft Seal

- Standardized, single acting and uncooled mechanical seal is standard. (Up to 110 °C).

Technical Data

- Suction Flanges…… : DN 25...DN 50 (PN 40) (DIN 2535)
- Discharge Flanges… : DN 25...DN 50 (PN 40) (DIN 2535)
- Operating Pressure.. : 25 Bar
- No of Stages…….. : 3-14
- Capacity Range…… : 1-16 m^3 / h
- Head Range…….. : 40-250 m
- Temp. Range……. : -10..110^{0}C; Mech. Seal
- Speed up to……. : 3600rpm

Idendification Code for Pump

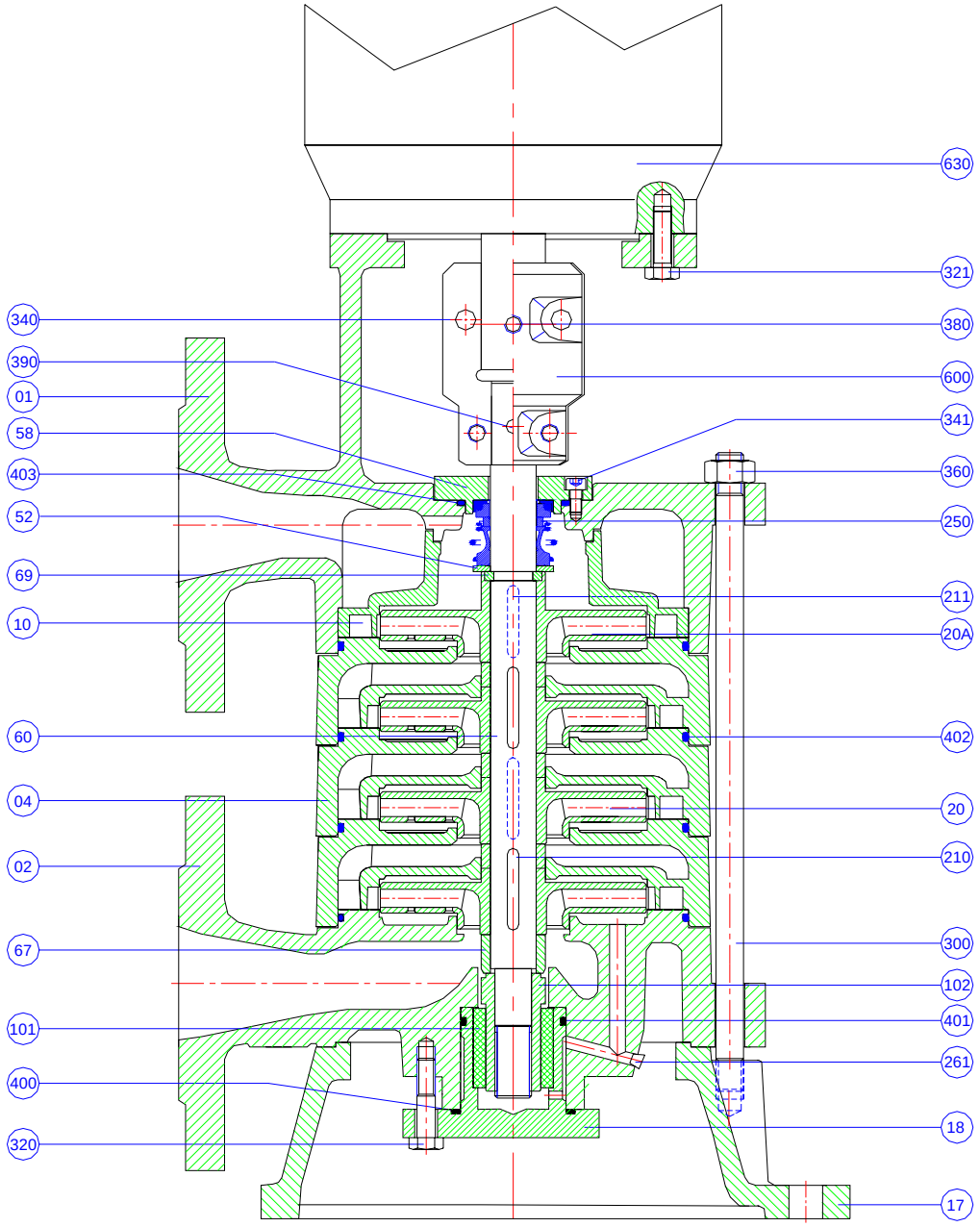
KMU-V 40 / 12

Pump Type

Discharge Flange Size

No of stages

MAS KMU-V – High Pressure Multistage Pumps
Sectional Drawing and Part List (Mechanical Seal Design)



Part List

No		No		No	
01	Discharge Casing	67	Space Sleeve	321	Hex Bolt
02	Suction Casing	69	Split Ring	340	Hex Socket Head Cap Screw
04	Stage Casing	101	Bronze Sliding Bearing	341	Hex Socket Head Cap Screw
10	Last Stage Diffuser	102	Bottom Shaft Nut	360	Nut
17	Bottom Plate	210	Key, Standard Impeller	380	Set-Screw
18	Sliding Bearing Cover	211	Key, Last Impeller	400	O-Ring, Sliding Bearing
20	Impeller	250	Mechanical Seal	401	O-Ring, Sliding Bearing
20A	Last Stage Impeller	261	Special Plug	402	O-Ring, Stage Casing
52	Back Ring, Mech. Seal	390	Cylindrical Pin	403	O-Ring, Mech. Seal Cover
58	Mech. Seal Cover	300	Stud For Casing	600	Coupling
60	Pump Shaft	320	Hex Bolt	630	Standard Motor

Material Options

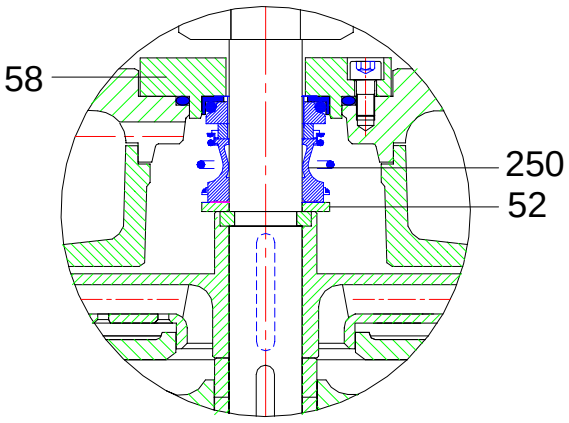
Components / Material. No	0.6025	0.7040	2.1050.01	1.4021	1.4301	1.4401
Suction & Discharge Casing	●	o	o		o	o
Stage Casing	●	o	o		o	o
Impeller	o	o	●		o	o
Last Stage Diffuser	●	o	o		o	o
Sliding Bearing Cover	●	o	o			
Shaft				●	o	o
Shaft Sleeve				●	o	o
Mech. Seal Cover	●	o	o		o	o

● - Standard Manufacturing
o - 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



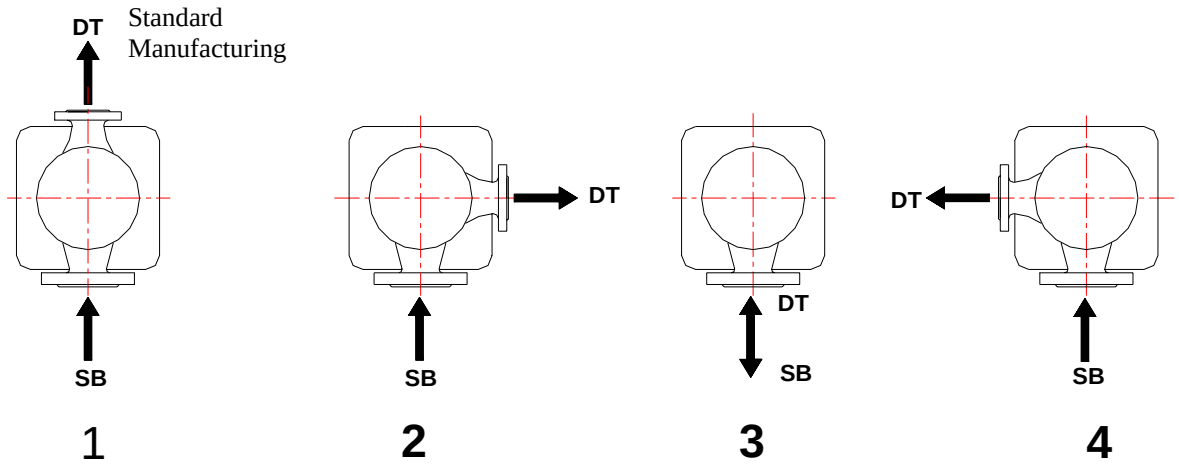
Unbalanced Mechanical Seal
(Burgmann MG1 – Up to 12 Bar)
(Independent on direction of rotation)

52	Back Ring
58	Mech. Seal Cover
250	Mech. Seal

Mechanical Seal Types

Pump Type	KMU-V 25	KMU-V 32	KMU-V 40	KMU-V 50
Unbalanced Mech. Seal (For Discharge Side)	Ø20 MG1-G60	Ø20 MG1-G60	Ø20 MG1-G60	Ø20 MG1-G60

Different Mounting Arrangements

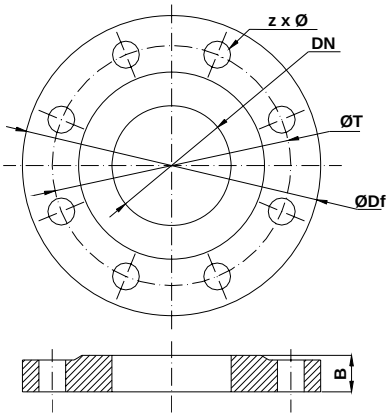


(SB : Suction Bottom - DT : Discharge Top – No : 3)

Max. and Min. Number of Stages

2900 RPM		
Model Designation	Min Number of Stages	Max Number of Stages
KMU-V 25	3	14
KMU-V 32	3	13
KMU-V 40	3	10
KMU-V 50	3	10

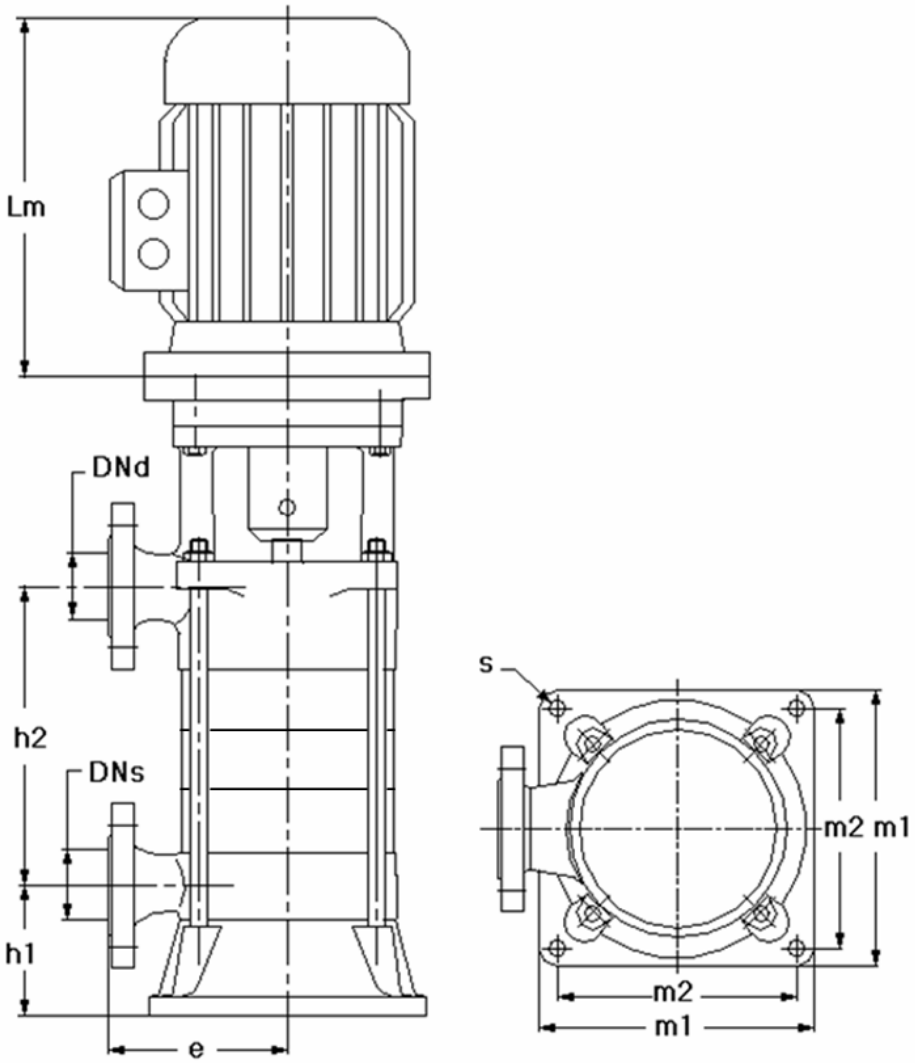
Flange Dimensions



Flange Dimensions (PN 40)

DN mm ø	Df mm ø	T mm ø	Z Each	ø mm ø	B mm
DN 25	115	85	4	14	18
DN 32	140	100	4	18	20
DN 40	150	110	4	18	20
DN 50	165	125	4	18	22

	PN 40	
Pump Type	Suction Flange	Discharge Flange
KMU-V 25	DN 25	DN 25
KMU-V 32	DN 32	DN 32
KMU-V 40	DN 40	DN 40
KMU-V 50	DN 50	DN 50

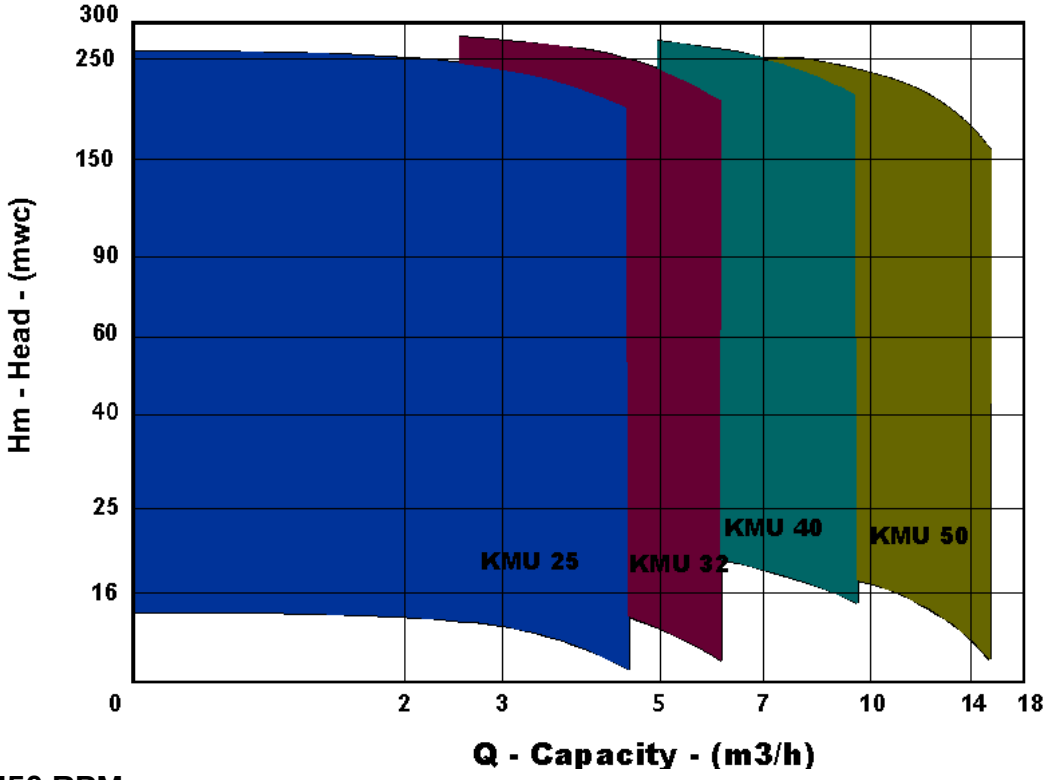


Pump Size	DNs	DNd	h1	e	m1	m2	s
KMU-V 25	25	25	90	125	194	160	14
KMU-V 32	32	32	90	125	194	160	14
KMU-V 40	40	40	104	146	220	180	16
KMU-V 50	50	50	104	146	220	180	16

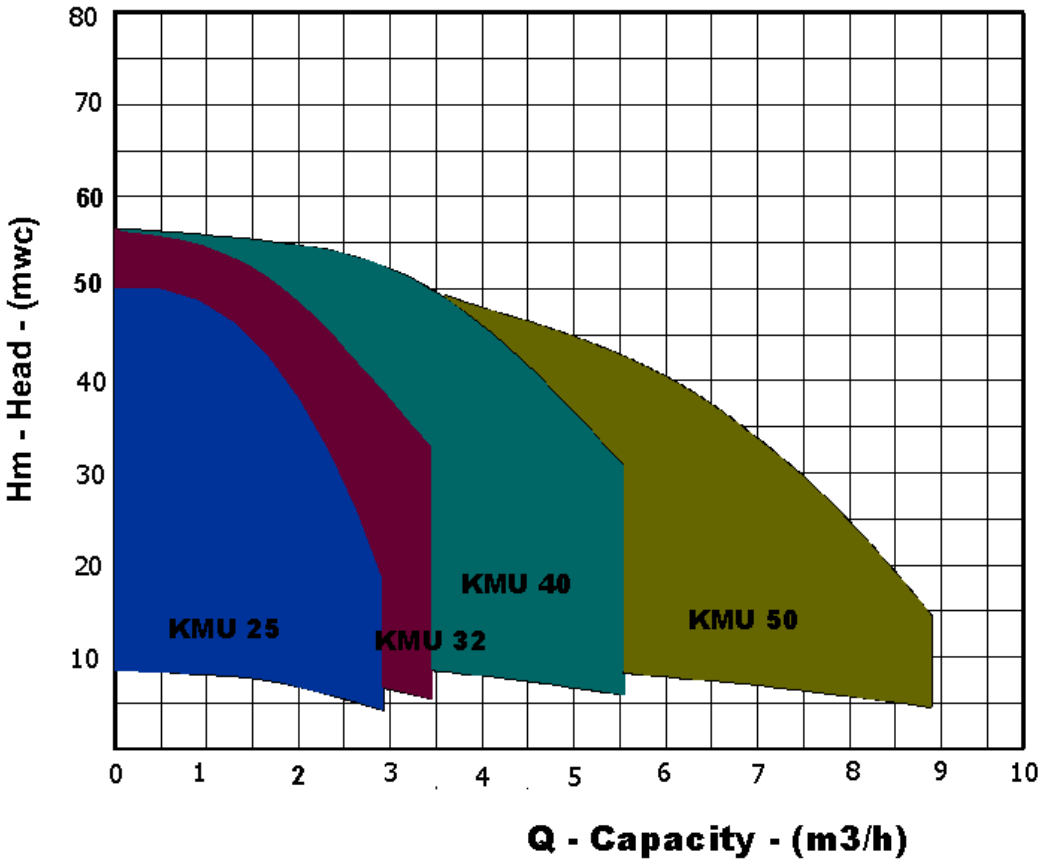
"h2" according to stage number

Pump Size	3	4	5	6	7	8	9	10	11	12	13	14
KMU-V 25	**145**	**177**	**209**	**241**	**273**	**305**	**337**	**369**	**401**	**433**	**465**	**497**
KMU-V 32	**145**	**177**	**209**	**241**	**273**	**305**	**337**	**369**	**401**	**433**	**465**	
KMU-V 40	**162**	**202**	**242**	**282**	**322**	**362**	**402**	**442**				
KMU-V 50	**162**	**202**	**242**	**282**	**322**	**362**	**402**	**442**				

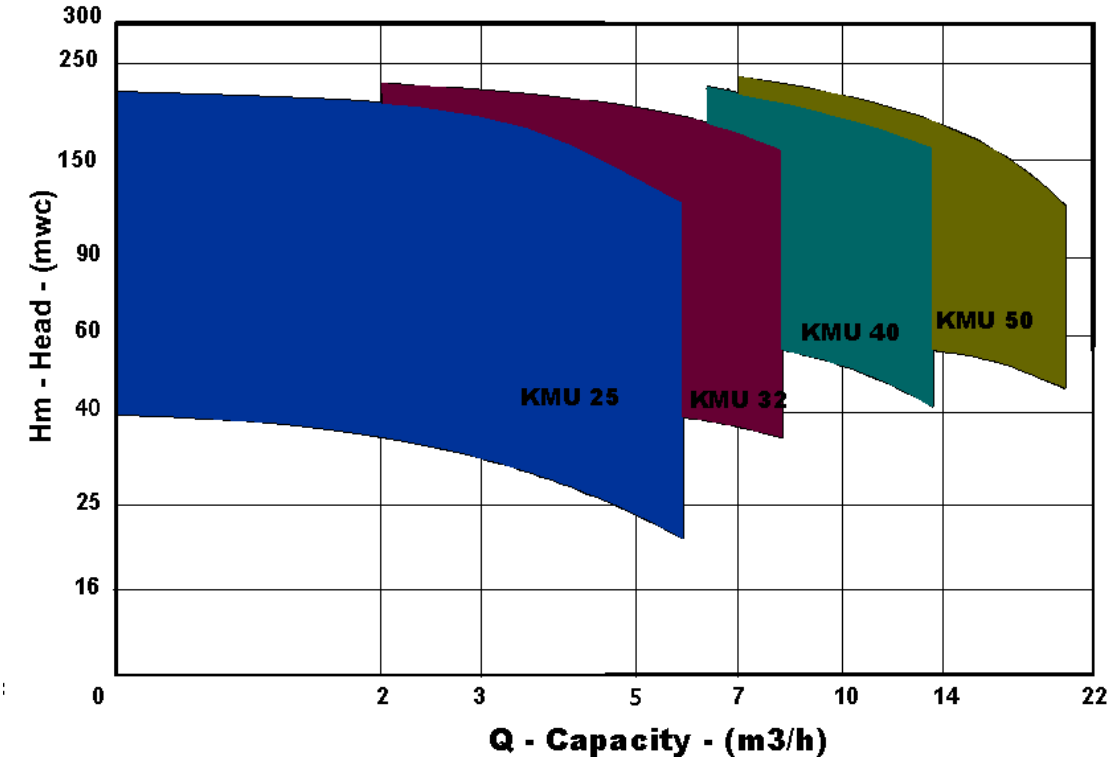
50 Hz - 2900 RPM



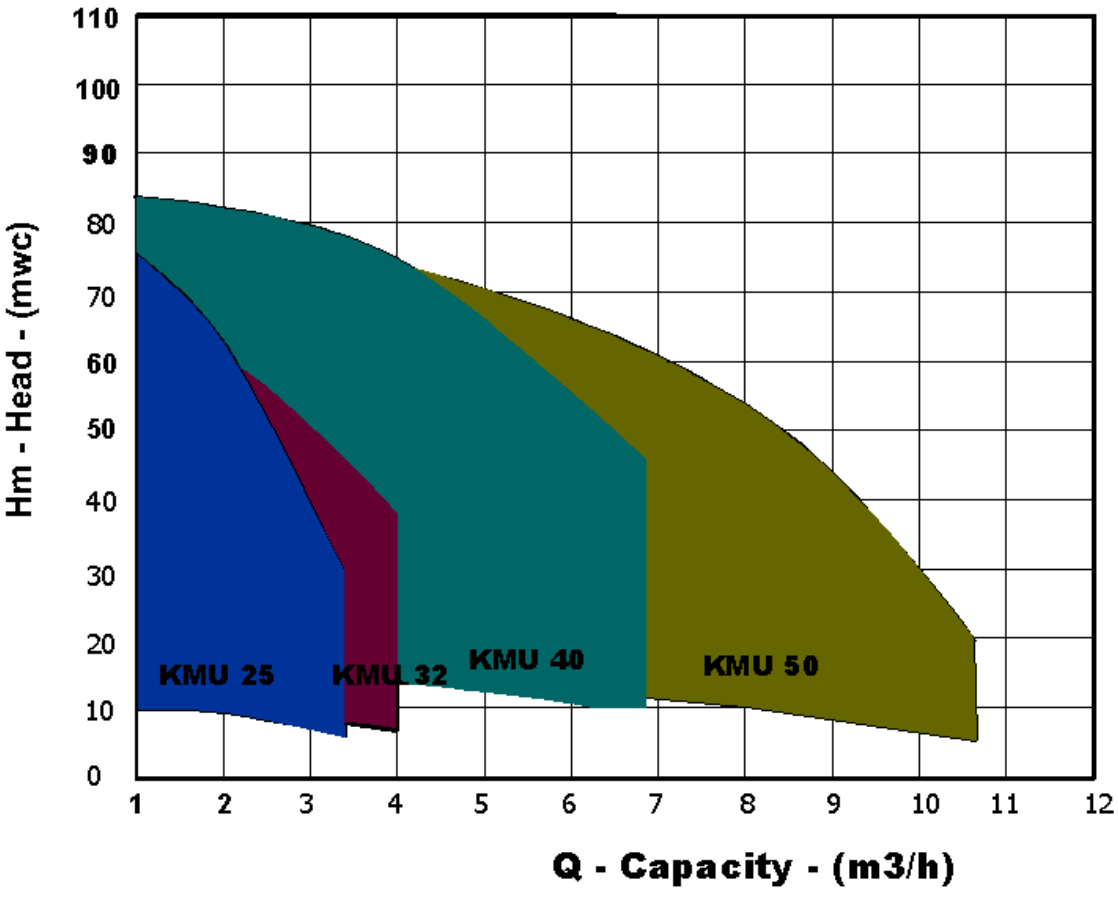
50 Hz - 1450 RPM

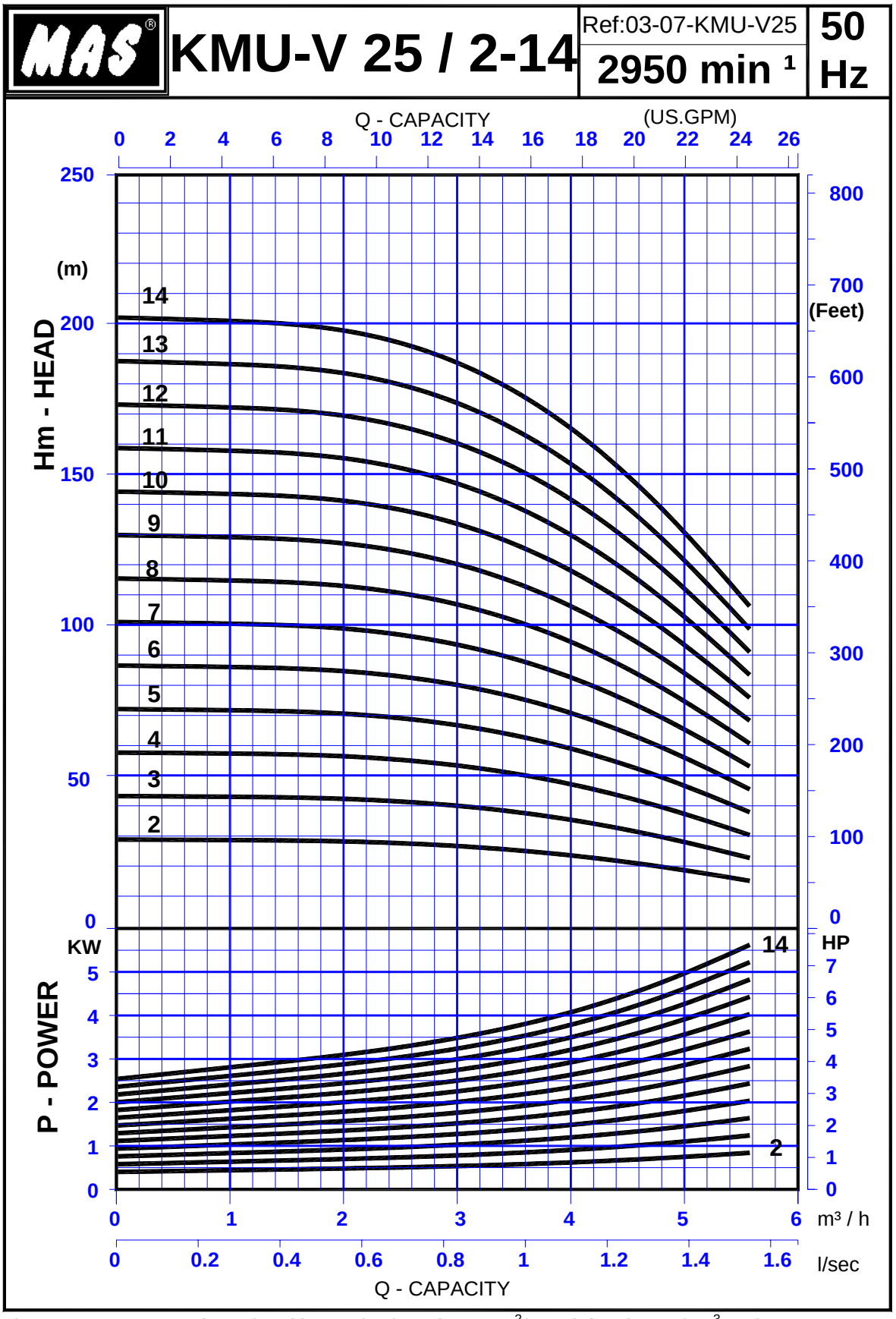


60 Hz - 3500 RPM

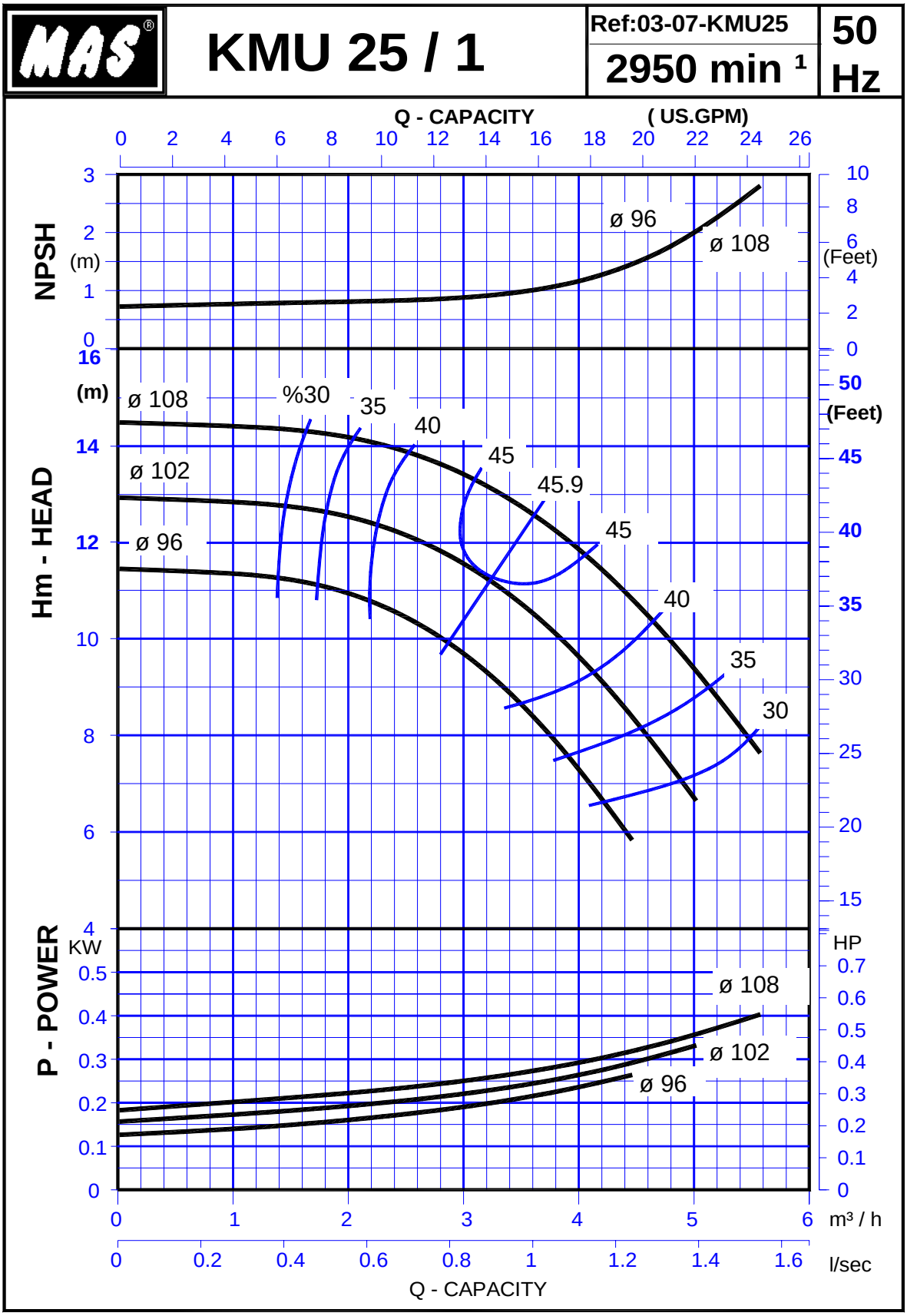


60 Hz - 1750 RPM





The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



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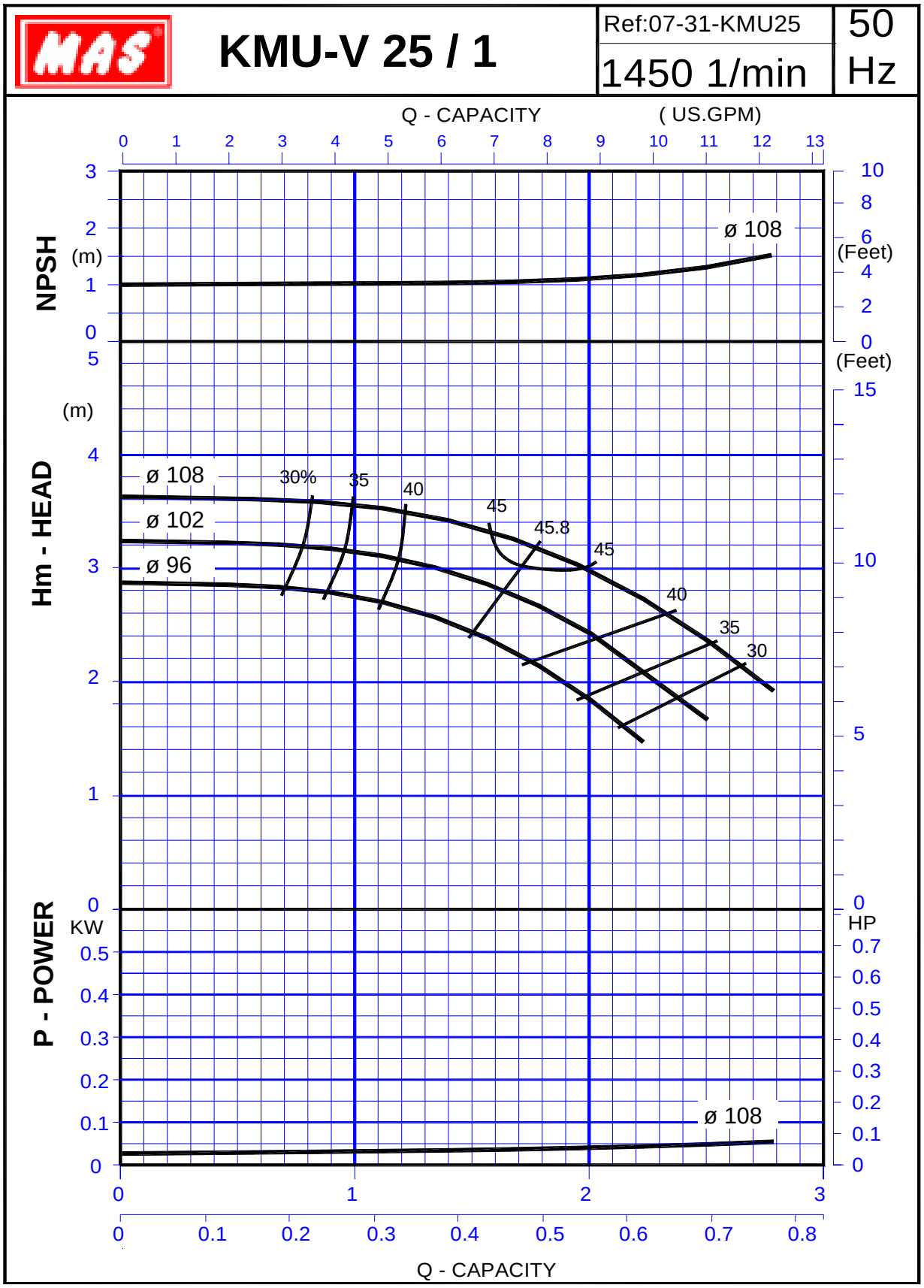

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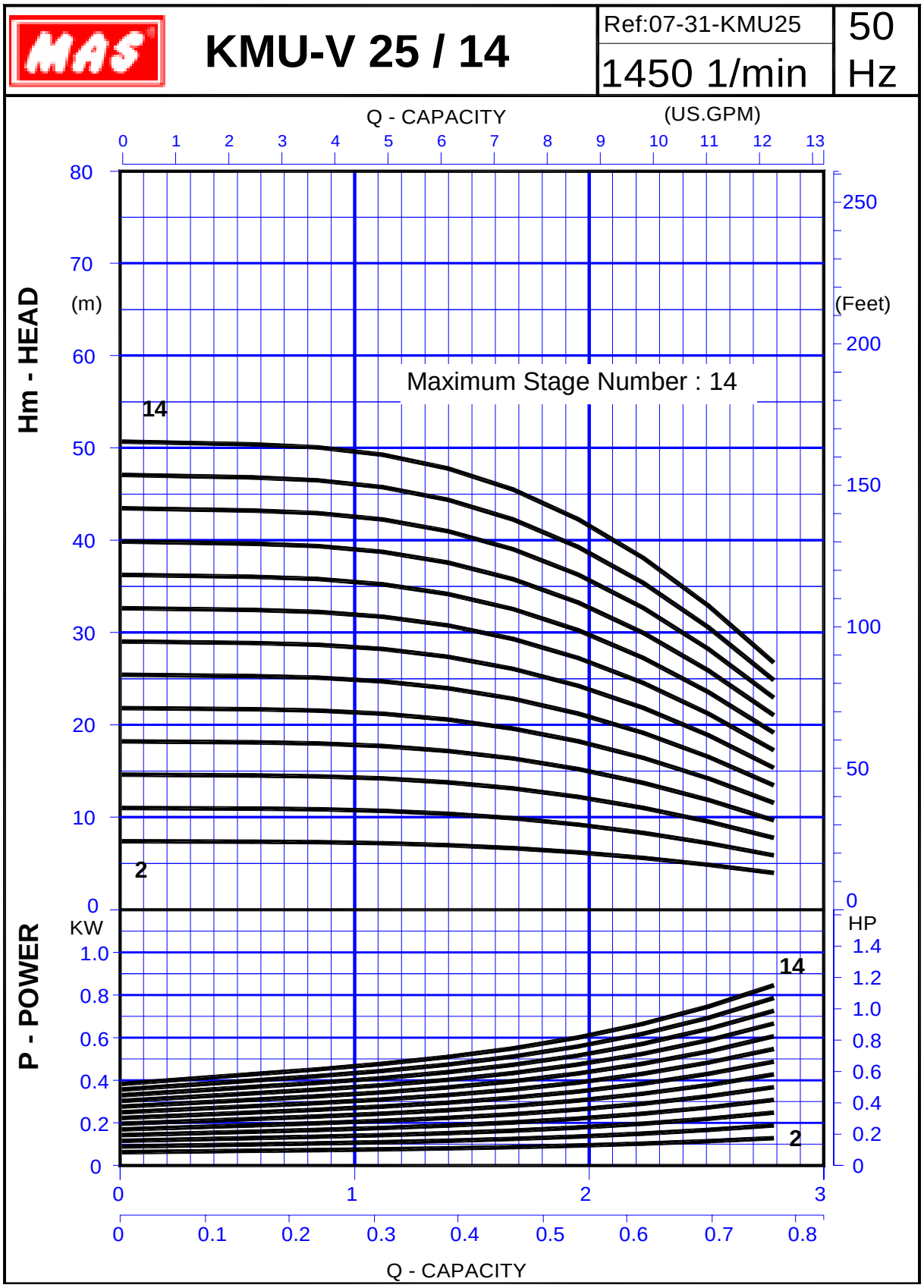

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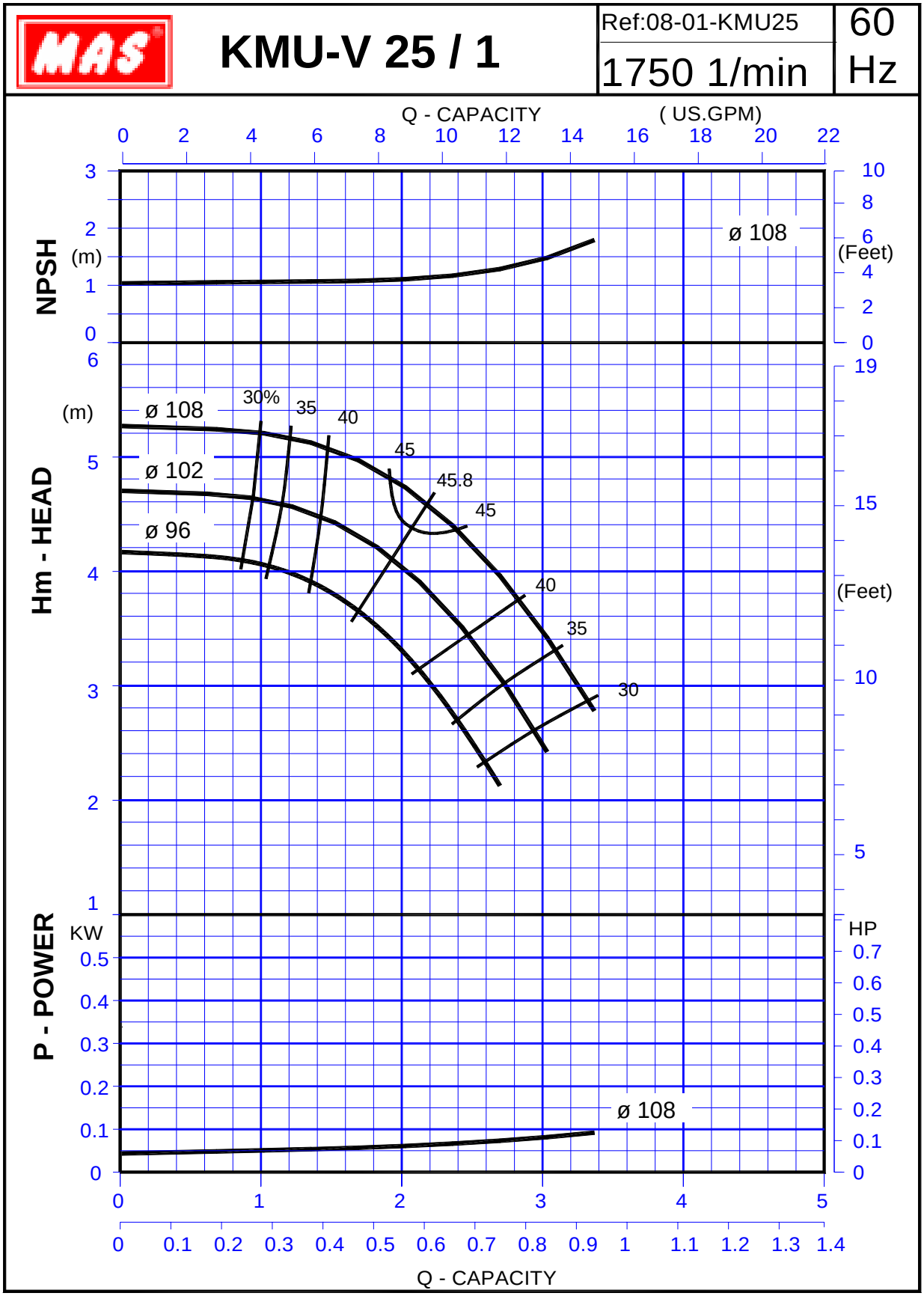

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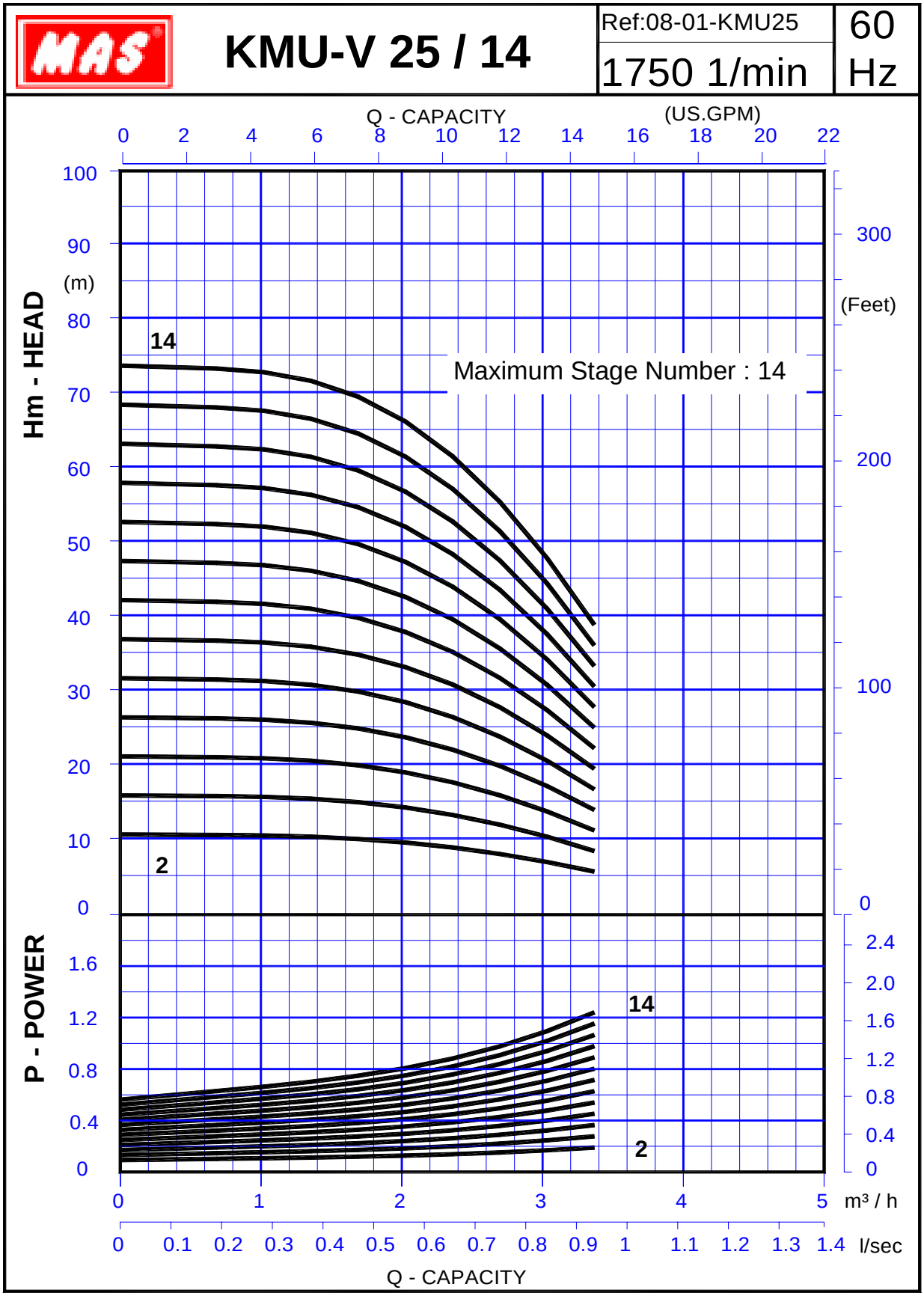

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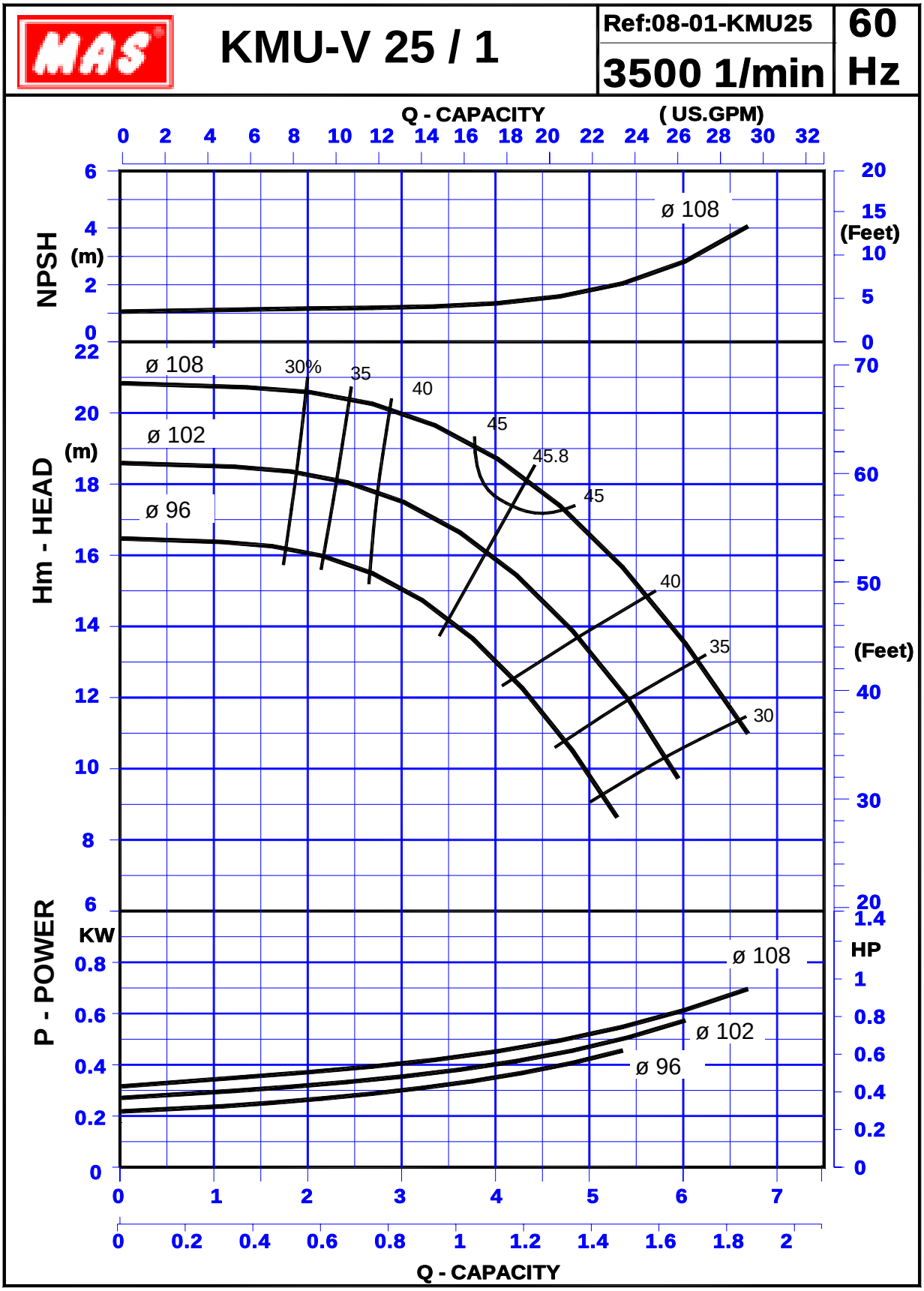
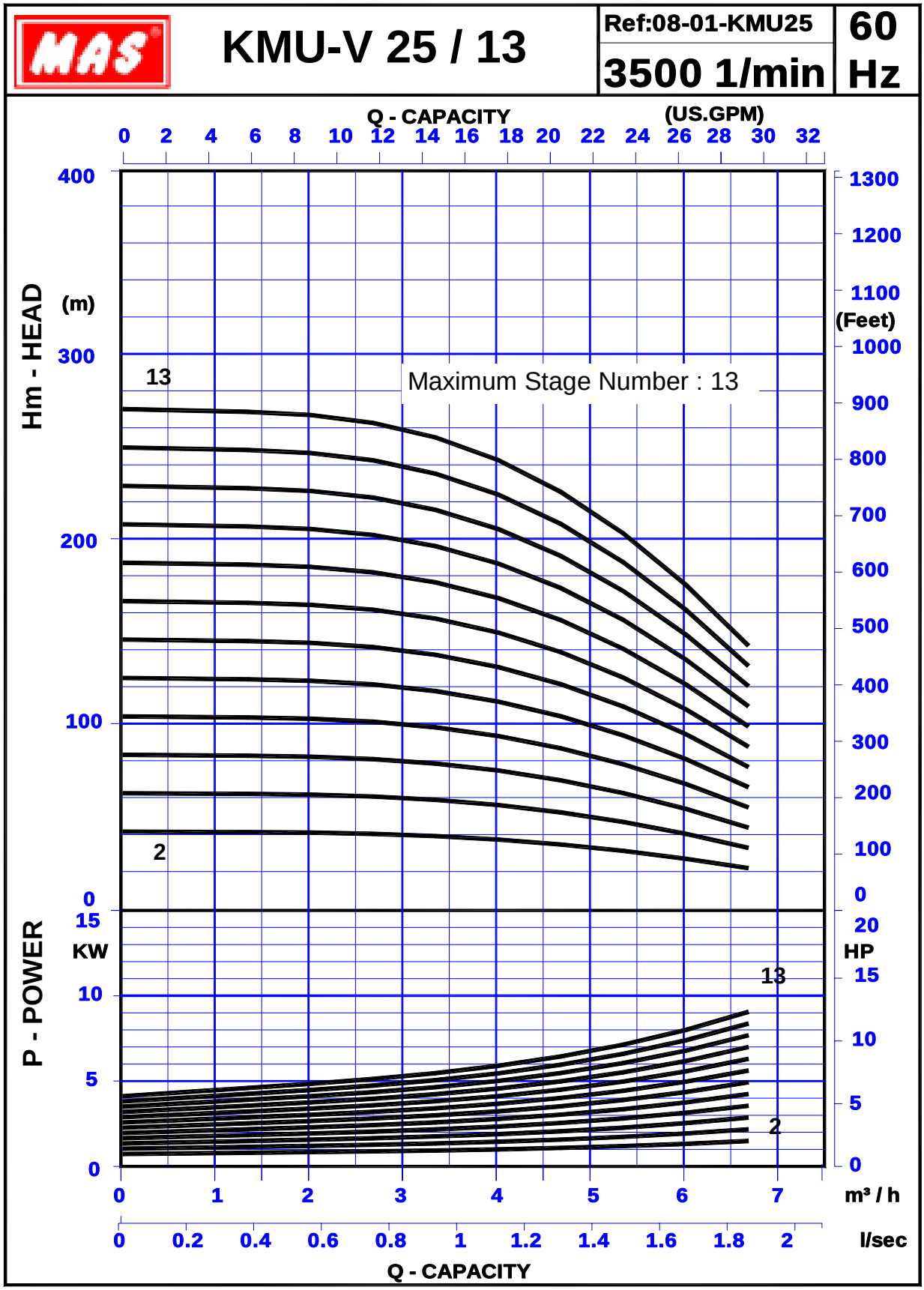
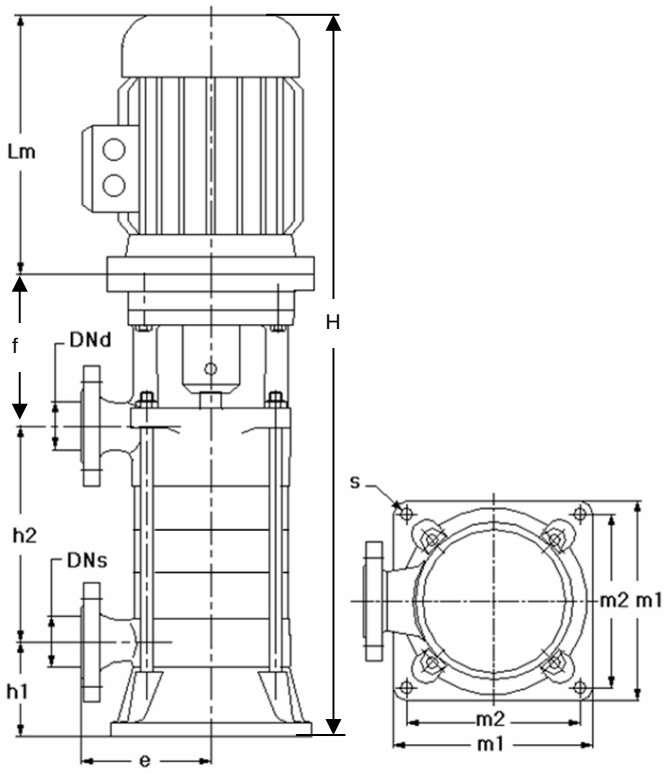


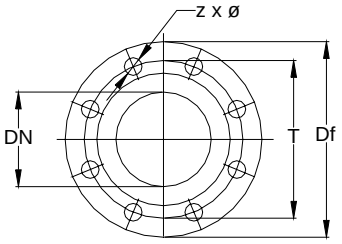
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.

MAS KMU-V – High Pressure Multistage Pumps
Dimension Table for KMU-V 25 – 1450 rpm – 50 Hz



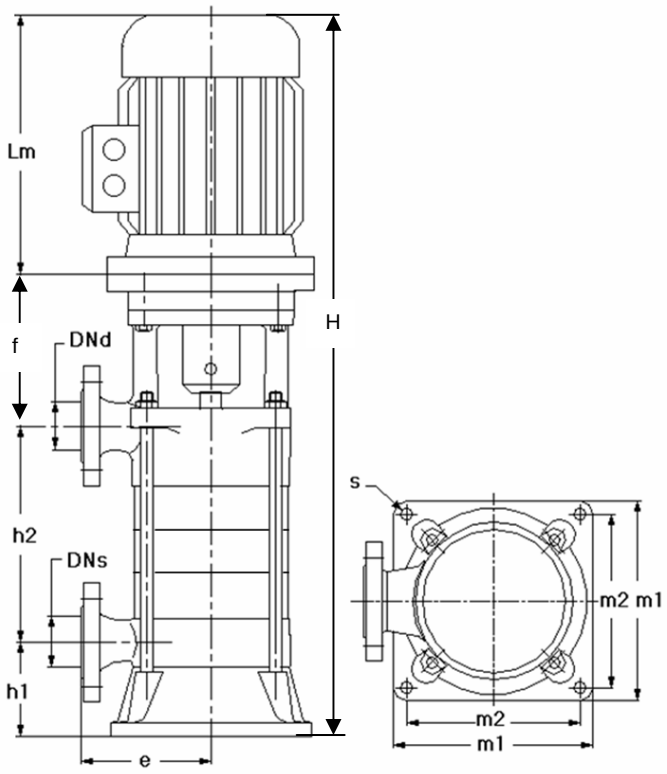


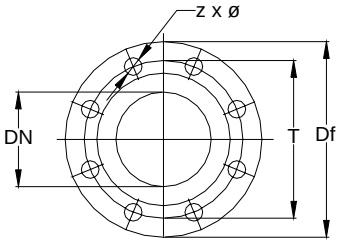
Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	25	115	85	4	14
Discharge	40	25	115	85	4	14

Dimensions – 1450 RPM – 50 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU 25/3	0.25	71	217	160	145	112	90	564	14	194	160	125
KMU 25/4	0.37	71	217	160	177	112	90	596	14	194	160	125
KMU 25/5	0.37	71	217	160	209	112	90	628	14	194	160	125
KMU 25/6	0.37	71	217	160	241	112	90	660	14	194	160	125
KMU 25/7	0.55	80	238	200	273	112	90	713	14	194	160	125
KMU 25/8	0.55	80	238	200	305	112	90	745	14	194	160	125
KMU 25/9	0.55	80	238	200	337	112	90	777	14	194	160	125
KMU 25/10	0.75	80	238	200	369	112	90	809	14	194	160	125
KMU 25/11	0.75	80	238	200	401	112	90	841	14	194	160	125
KMU 25/12	0.75	80	238	200	433	112	90	873	14	194	160	125
KMU 25/13	1.1	90S	258	200	465	112	90	925	14	194	160	125
KMU 25/14	1.1	90S	258	200	497	112	90	957	14	194	160	125

MAS KMU-V – High Pressure Multistage Pumps
Dimension Table for KMU-V 25 – 2900 rpm – 50 Hz

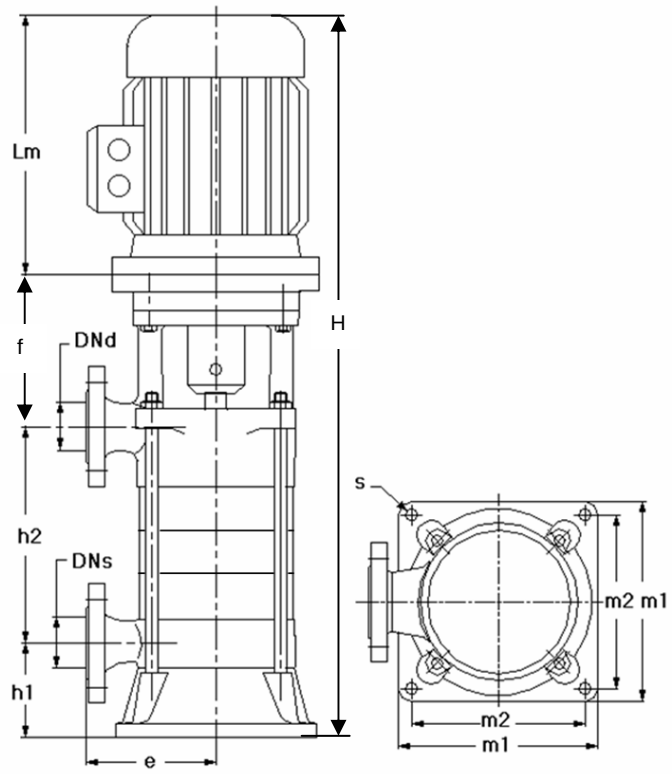


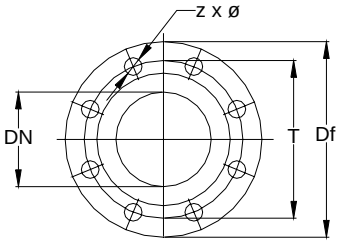


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	25	115	85	4	14
Discharge	40	25	115	85	4	14

Dimensions – 2900 RPM – 50 Hz

Pump	MOTOR				PUMP			OVERALL				
Type	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 25–3	1.5	90S	250	200	145	112	90	597	14	194	160	125
25–4	2.2	90L	275	200	177	112	90	654	14	194	160	125
25–5	2.2	90L	275	200	209	112	90	686	14	194	160	125
25–6	3	100L	305	250	241	127	90	763	14	194	160	125
25–7	3	100L	305	250	273	127	90	795	14	194	160	125
25–8	4	112M	324	250	305	127	90	846	14	194	160	125
25–9	4	112M	324	250	337	127	90	878	14	194	160	125
25–10	4	112M	324	250	369	127	90	910	14	194	160	125
25–11	5.5	C112M	324	250	401	127	90	942	14	194	160	125
25–12	5.5	C112M	324	250	433	127	90	974	14	194	160	125
25–13	5.5	C112M	324	250	465	127	90	1006	14	194	160	125
25–14	5.5	C112M	324	250	497	127	90	1038	14	194	160	125

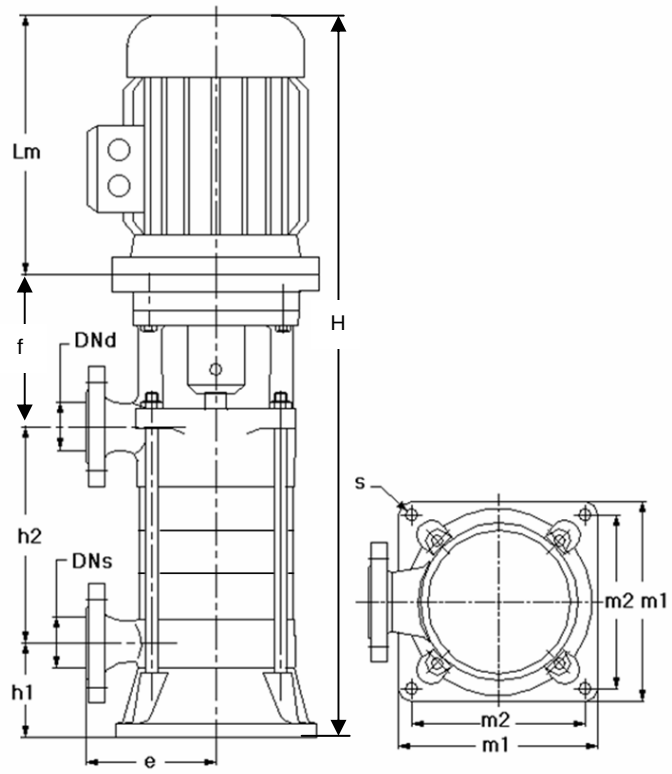


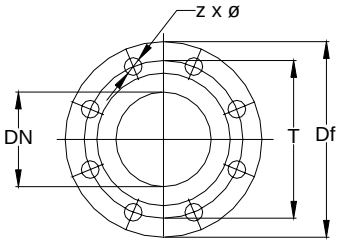


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	25	115	85	4	14
Discharge	40	25	115	85	4	14

Dimensions – 1750 RPM – 60 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU 25/3	0.37	71	217	160	145	112	90	564	14	194	160	125
KMU 25/4	0.37	71	217	160	177	112	90	596	14	194	160	125
KMU 25/5	0.55	80	238	200	209	112	90	649	14	194	160	125
KMU 25/6	0.55	80	238	200	241	112	90	681	14	194	160	125
KMU 25/7	0.75	80	238	200	273	112	90	713	14	194	160	125
KMU 25/8	0.75	80	238	200	305	112	90	745	14	194	160	125
KMU 25/9	1.1	90S	238	200	337	112	90	777	14	194	160	125
KMU 25/10	1.1	90S	238	200	369	112	90	809	14	194	160	125
KMU 25/11	1.1	90S	238	200	401	112	90	841	14	194	160	125
KMU 25/12	1.1	90S	238	200	433	112	90	873	14	194	160	125
KMU 25/13	1.5	90L	258	200	465	112	90	925	14	194	160	125
KMU 25/14	1.5	90L	258	200	497	112	90	957	14	194	160	125

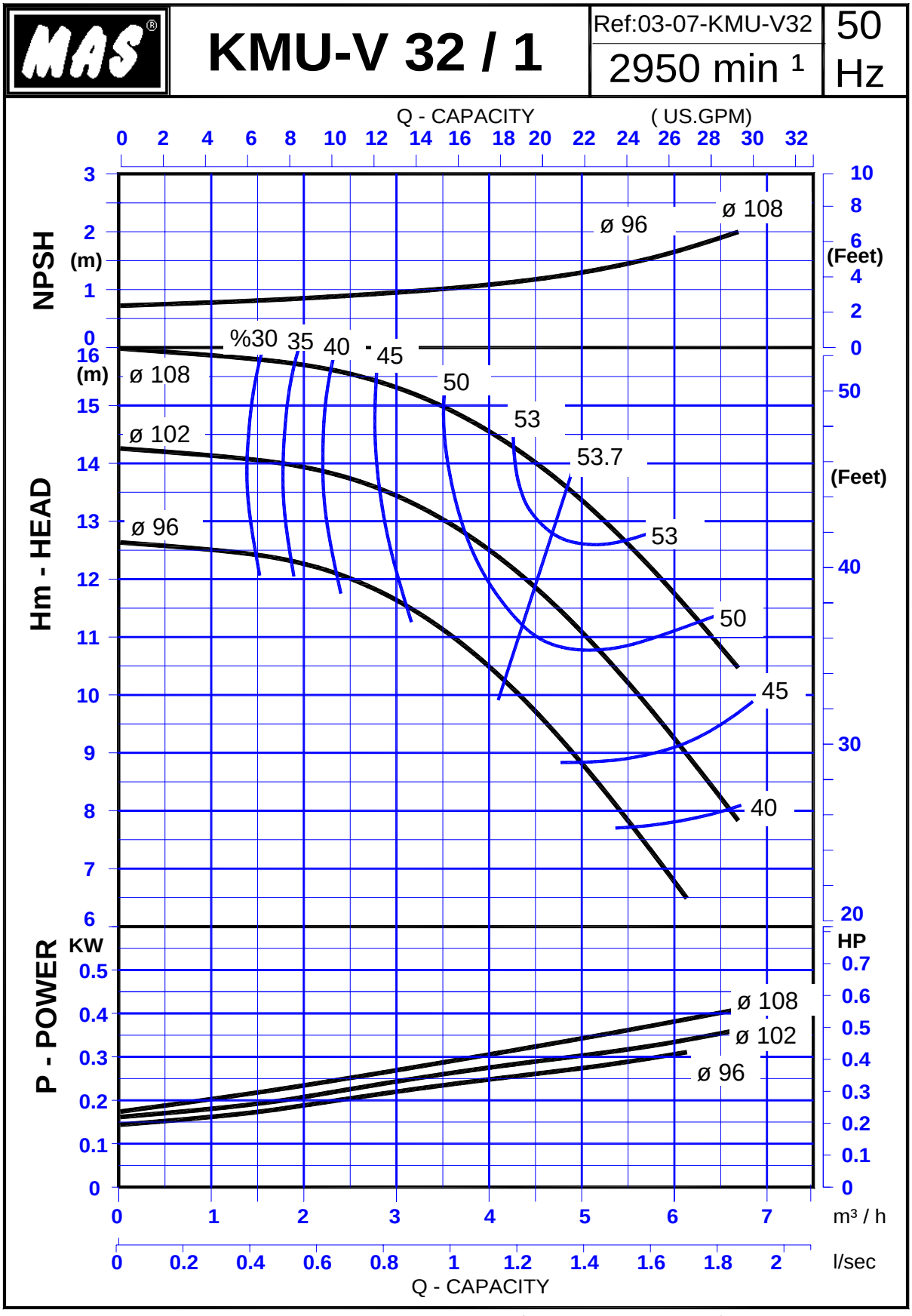




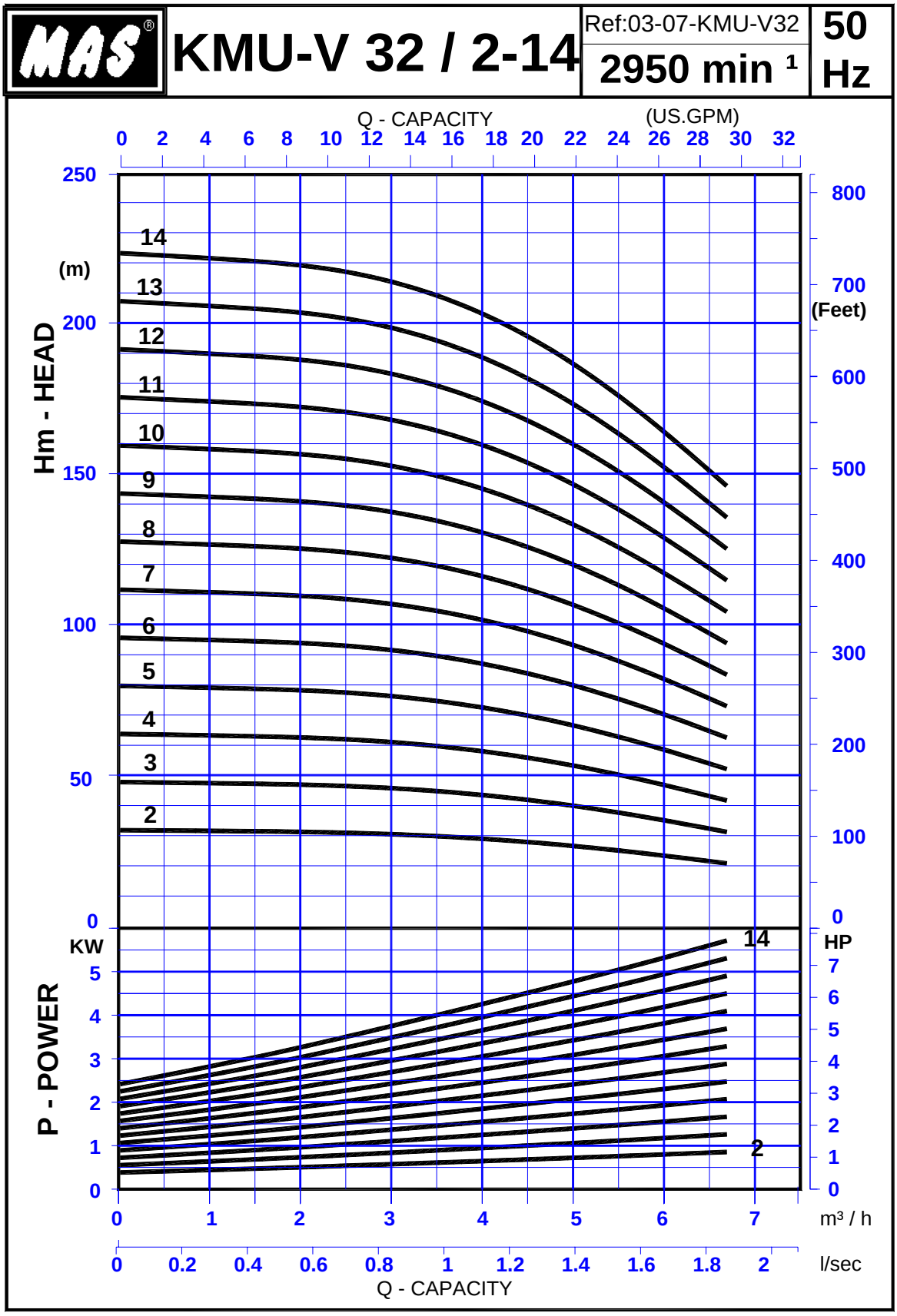
Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	25	115	85	4	14
Discharge	40	25	115	85	4	14

Dimensions – 3500 RPM – 60 Hz

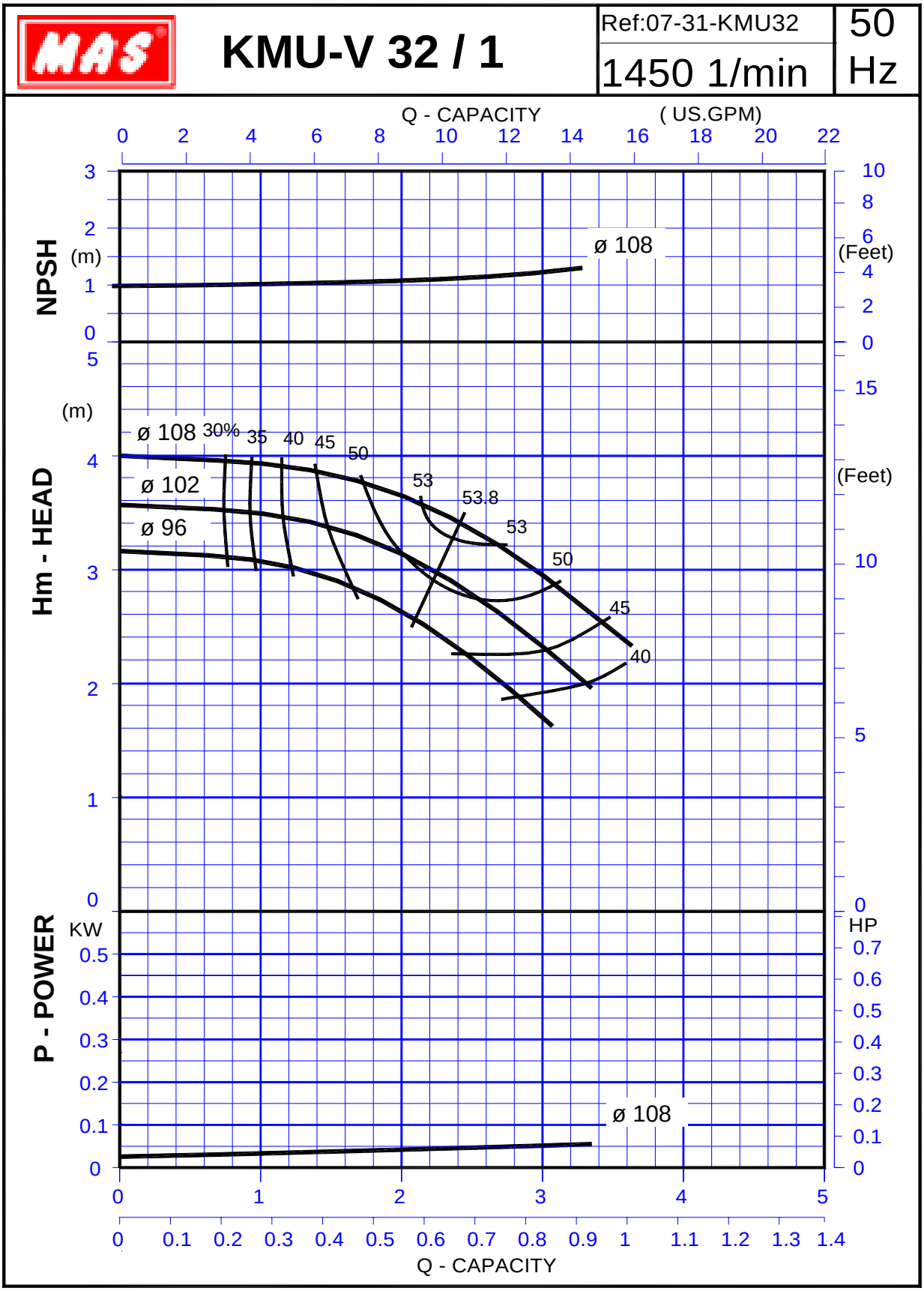
Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 25–3	2.2	90L	275	200	145	112	90	622	14	194	160	125
25–4	3	100L	305	250	177	127	90	699	14	194	160	125
25–5	4	112M	324	250	209	127	90	750	14	194	160	125
25–6	4	112M	324	250	241	127	90	782	14	194	160	125
25–7	5.5	132S	375	300	273	127	90	865	14	194	160	125
25–8	5.5	132S	375	300	305	127	90	897	14	194	160	125
25–9	7.5	132S	375	300	337	127	90	929	14	194	160	125
25–10	7.5	132S	375	300	369	127	90	961	14	194	160	125
25–11	11	160M	484	350	401	127	90	1102	14	194	160	125
25–12	11	160M	484	350	433	127	90	1134	14	194	160	125
25–13	11	160M	484	350	465	127	90	1166	14	194	160	125



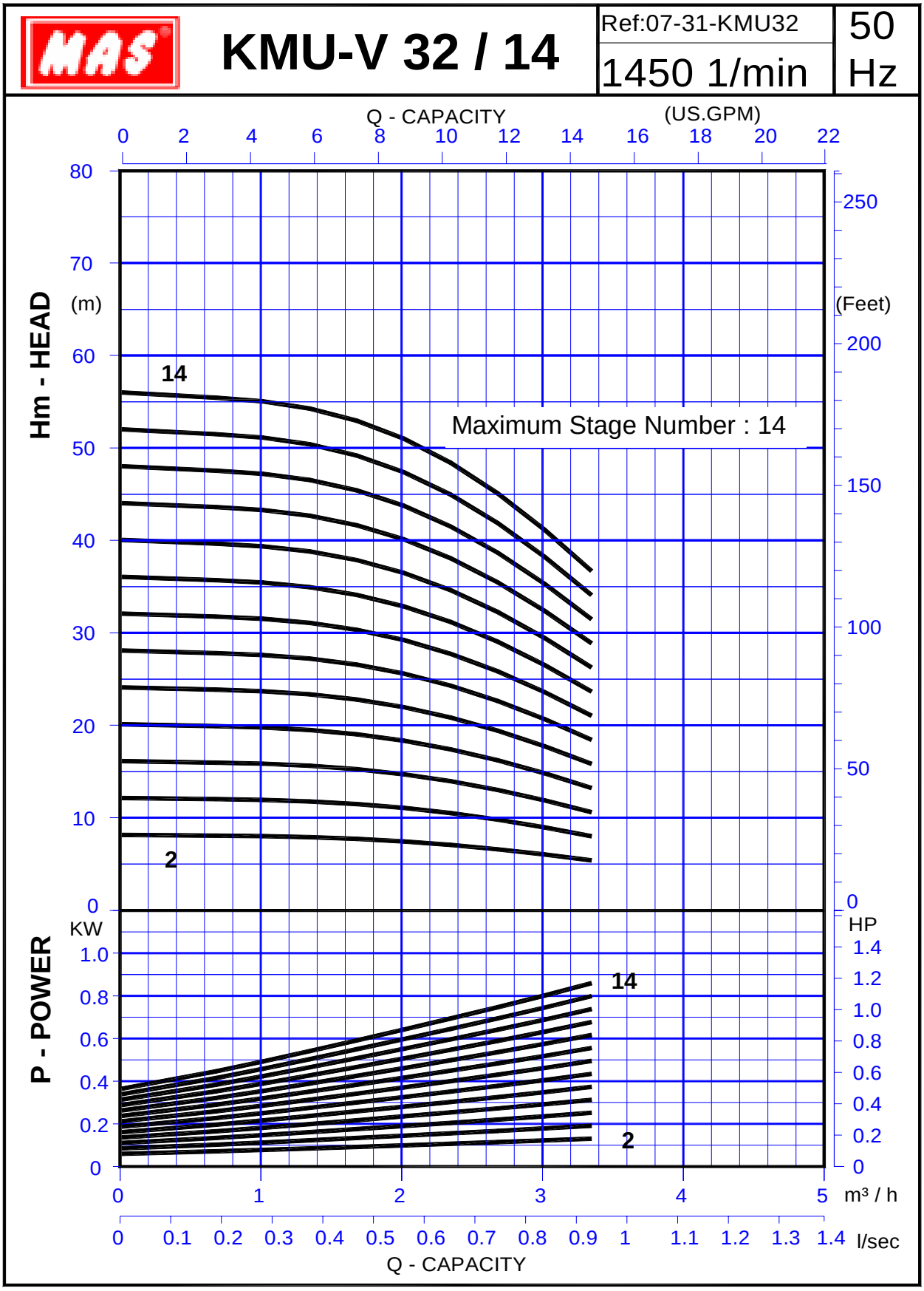
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



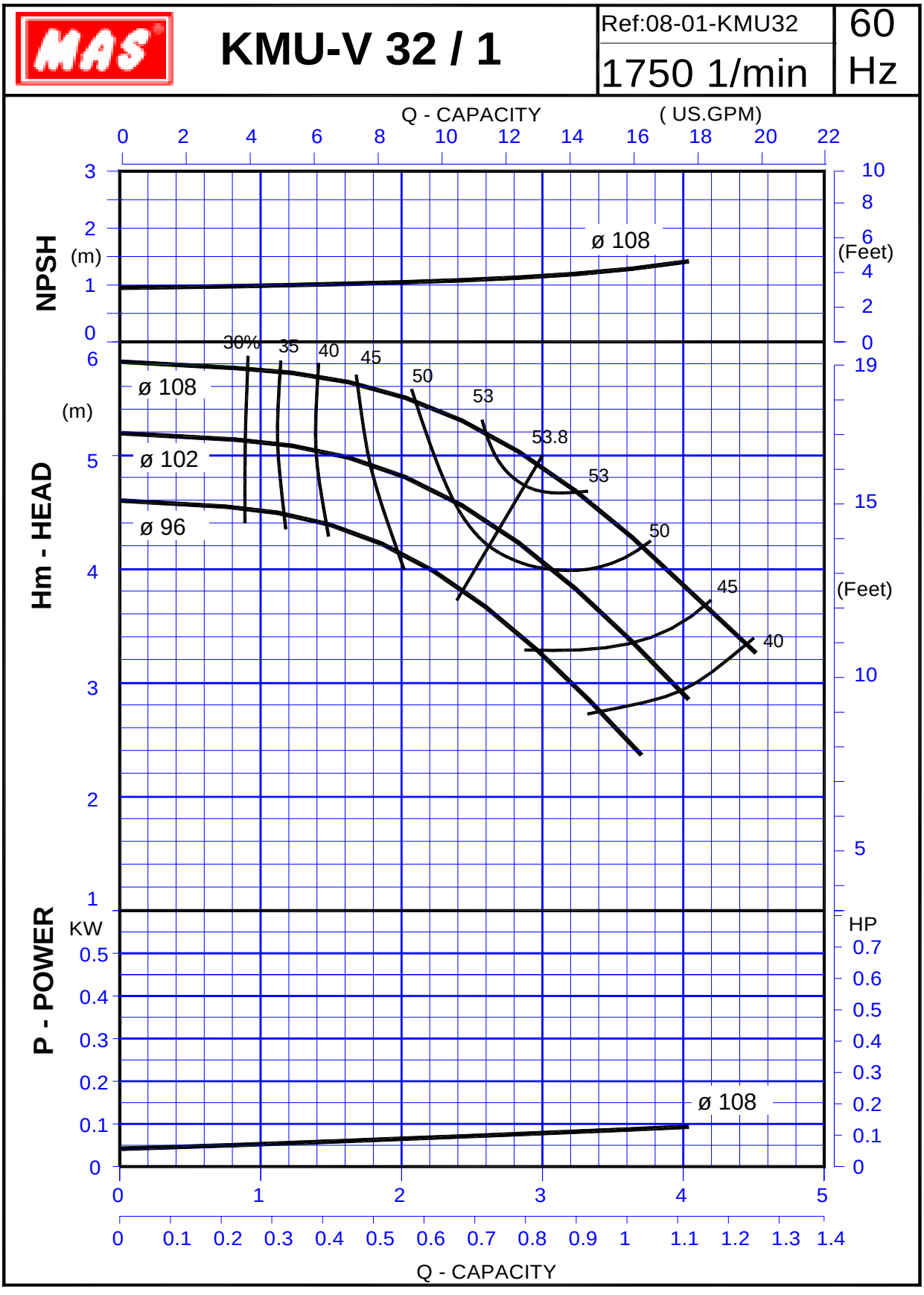
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



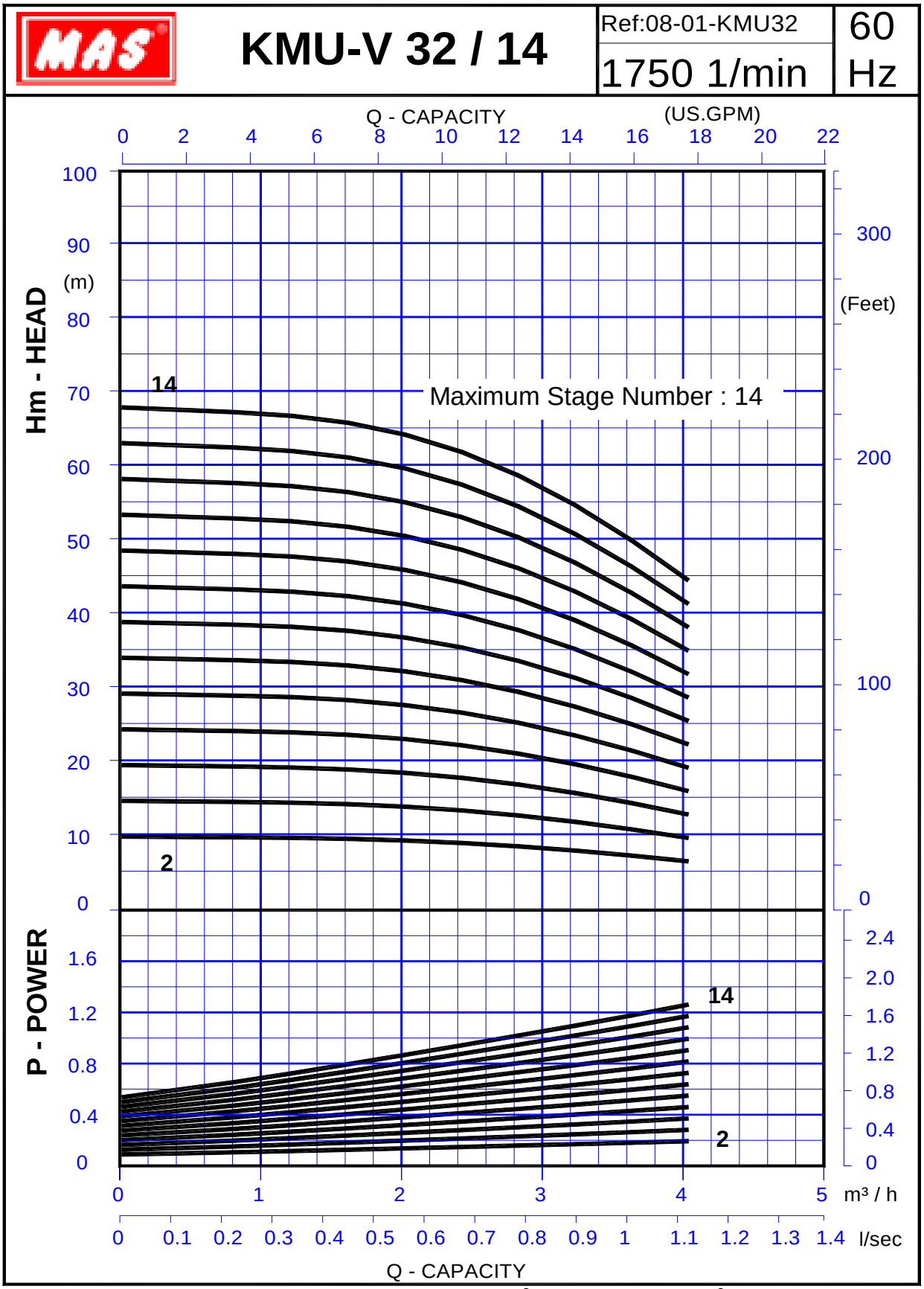
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



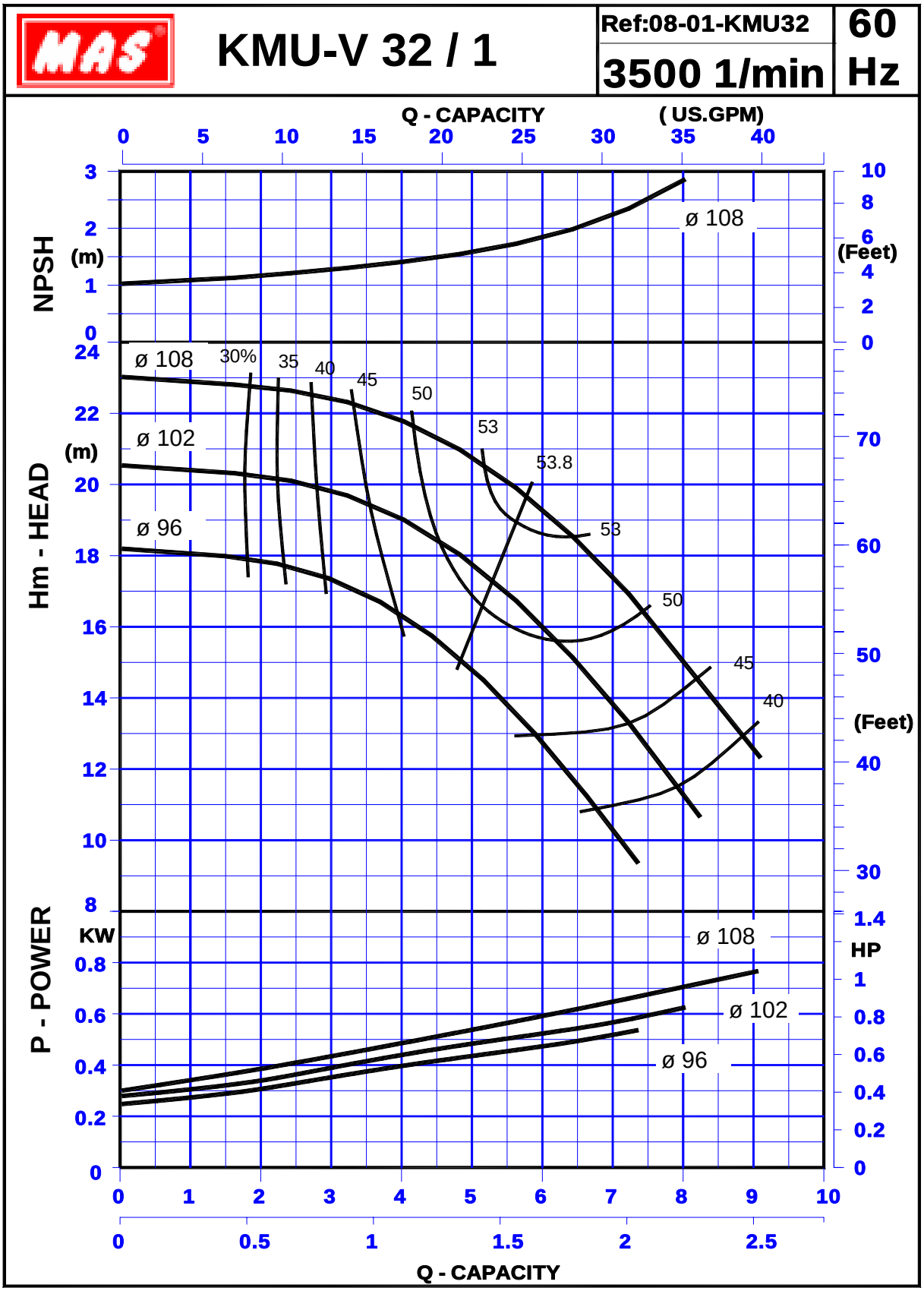
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



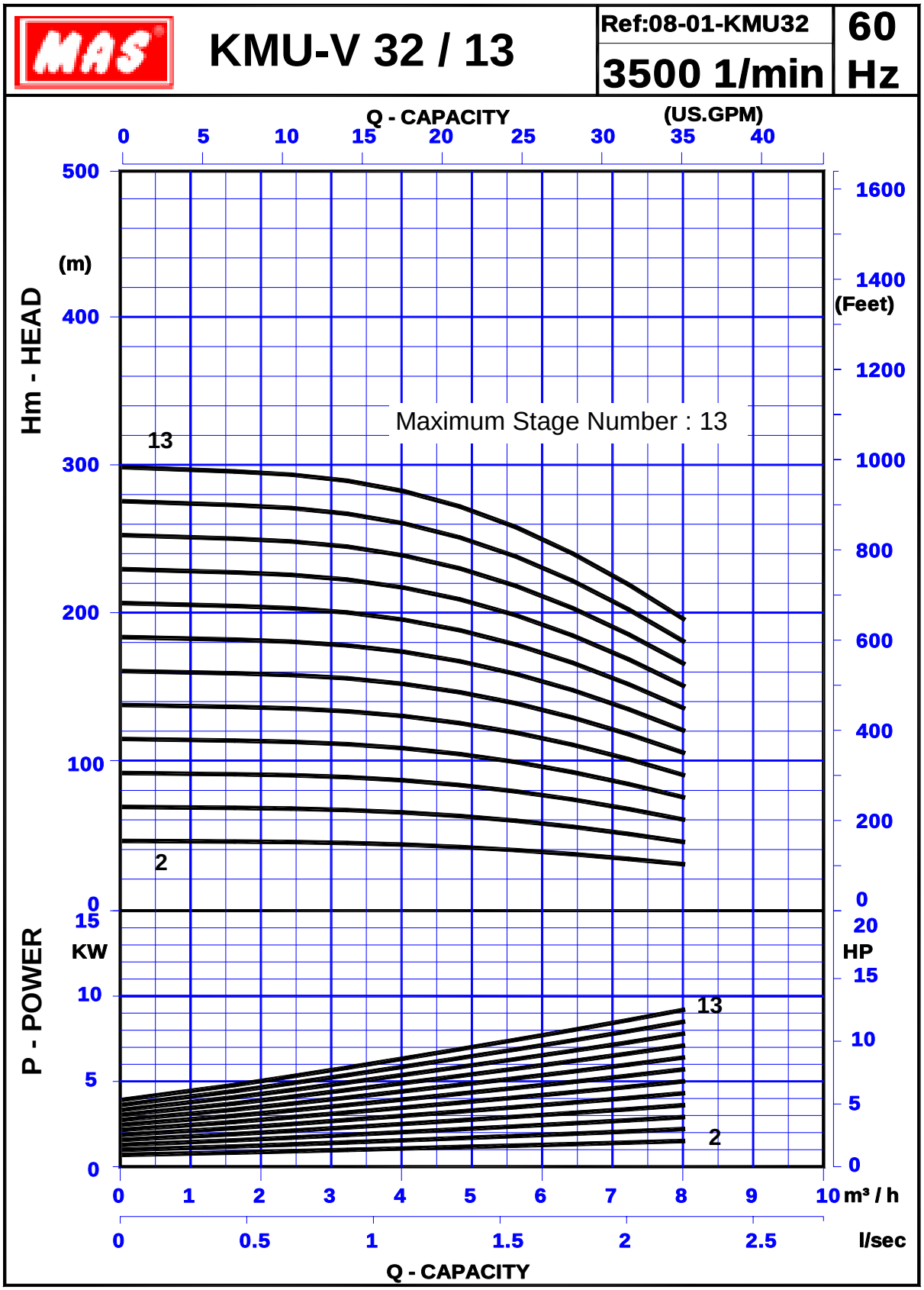
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



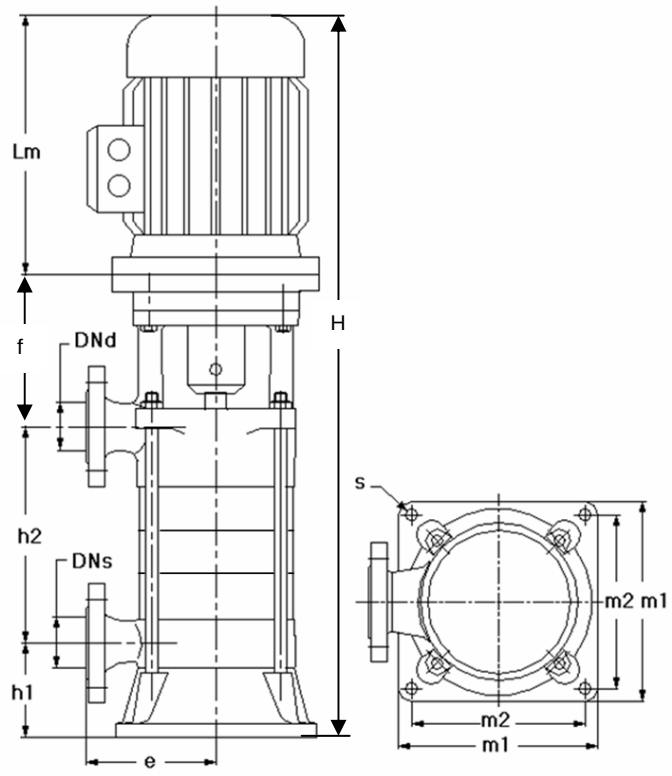
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.

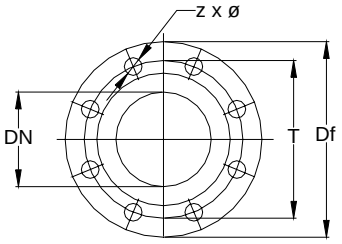


The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.

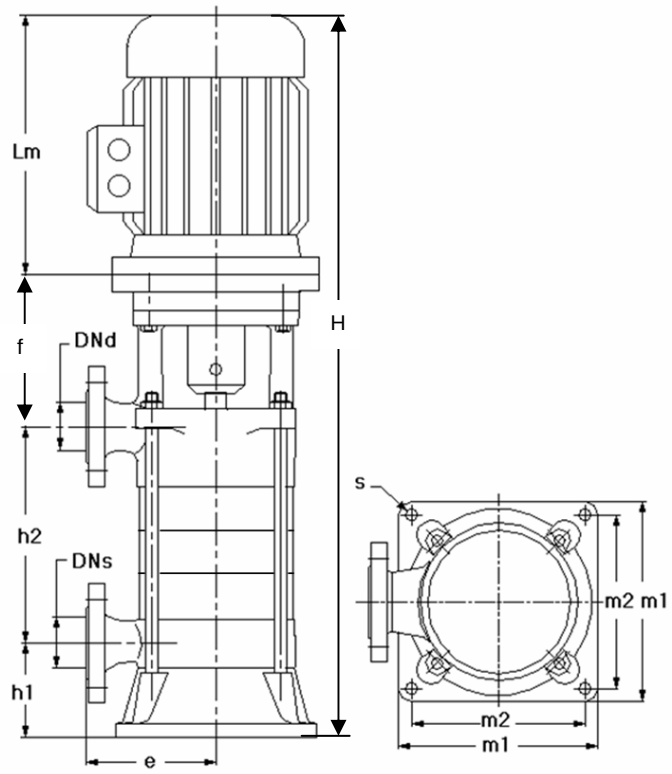


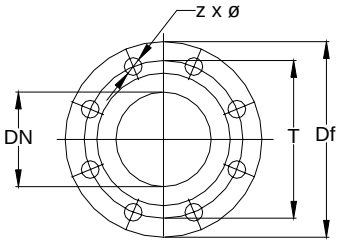


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	32	145	100	4	18
Discharge	40	32	140	100	4	18

Dimensions – 1450 RPM – 50 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 32–3	0.25	71	217	160	145	112	90	564	14	194	160	125
32–4	0.37	71	217	160	177	112	90	596	14	194	160	125
32–5	0.37	71	217	160	209	112	90	628	14	194	160	125
32–6	0.37	71	217	160	241	112	90	660	14	194	160	125
32–7	0.55	80	238	200	273	112	90	713	14	194	160	125
32–8	0.55	80	238	200	305	112	90	745	14	194	160	125
32–9	0.75	80	238	200	337	112	90	777	14	194	160	125
32–10	0.75	80	238	200	369	112	90	809	14	194	160	125
32–11	0.75	80	238	200	401	112	90	841	14	194	160	125
32–12	0.75	80	238	200	433	112	90	873	14	194	160	125
32–13	1.1	90S	258	200	465	112	90	925	14	194	160	125
32–14	1.1	90S	258	200	497	112	90	957	14	194	160	125

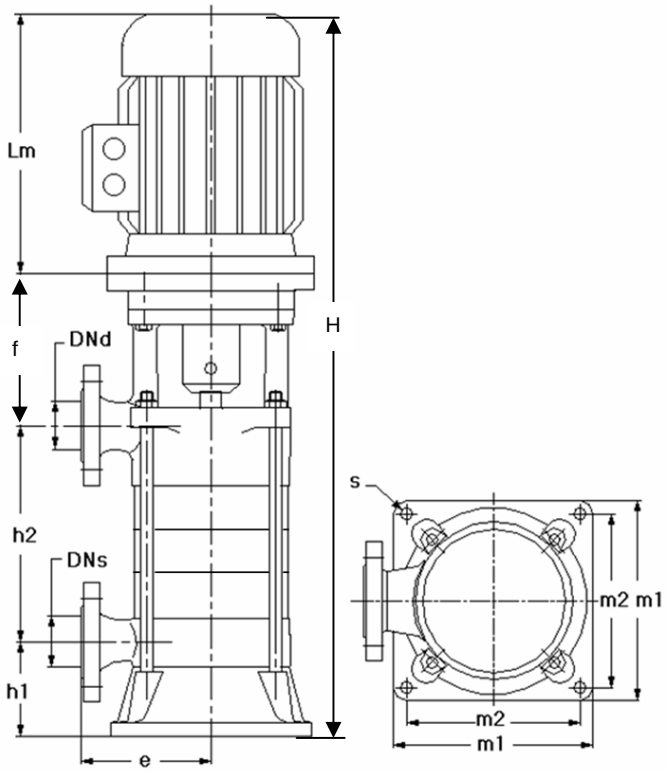


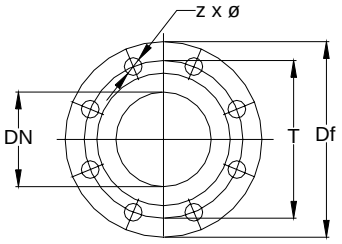


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	32	145	100	4	18
Discharge	40	32	140	100	4	18

Dimensions – 2900 RPM – 50 Hz

Pump	MOTOR				PUMP			OVERALL				
Type	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 32–3	1.5	90S	250	200	145	112	90	597	14	194	160	125
32–4	2.2	90L	275	200	177	112	90	654	14	194	160	125
32–5	2.2	90L	275	200	209	112	90	686	14	194	160	125
32–6	3	100L	305	250	241	127	90	748	14	194	160	125
32–7	3	100L	305	250	273	127	90	780	14	194	160	125
32–8	4	112M	324	250	305	127	90	831	14	194	160	125
32–9	4	112M	324	250	337	127	90	878	14	194	160	125
32–10	5.5	C112M	324	250	369	127	90	910	14	194	160	125
32–11	5.5	C112M	324	250	401	127	90	942	14	194	160	125
32–12	5.5	C112M	324	250	433	127	90	974	14	194	160	125
32–13	5.5	C112M	324	250	465	127	90	1006	14	194	160	125
32–14	5.5	C112M	324	250	497	127	90	1038	14	194	160	125



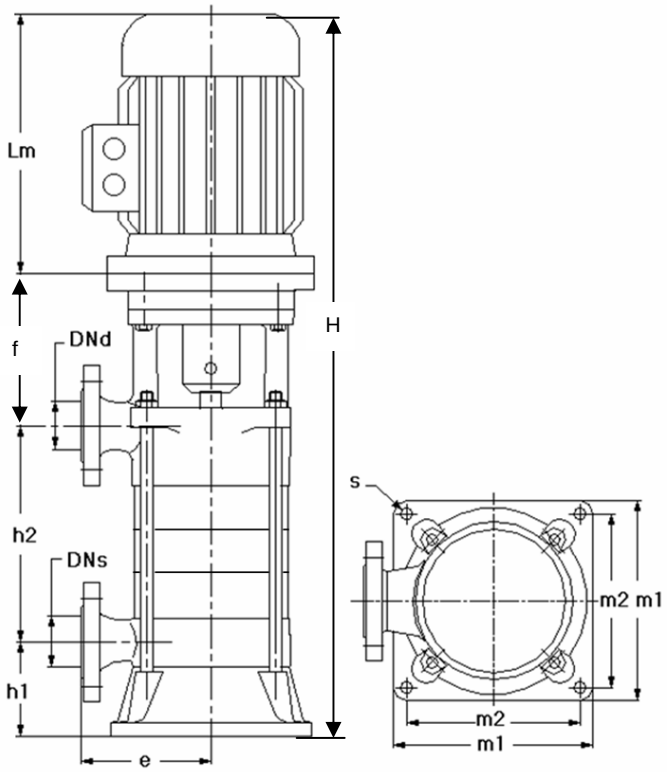


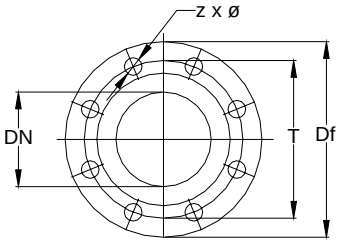
Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	32	145	100	4	18
Discharge	40	32	140	100	4	18

Dimensions –1750 RPM – 60 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 32–3	0.37	71	217	160	145	112	90	564	14	194	160	125
32–4	0.55	71	217	160	177	112	90	596	14	194	160	125
32–5	0.55	71	217	160	209	112	90	628	14	194	160	125
32–6	0.55	80	238	200	241	112	90	681	14	194	160	125
32–7	0.75	80	238	200	273	112	90	713	14	194	160	125
32–8	0.75	80	238	200	305	112	90	745	14	194	160	125
32–9	1.1	90S	258	200	337	112	90	797	14	194	160	125
32–10	1.1	90S	258	200	369	112	90	829	14	194	160	125
32–11	1.1	90S	258	200	401	112	90	861	14	194	160	125
32–12	1.1	90S	258	200	433	112	90	893	14	194	160	125
32–13	1.1	90S	258	200	465	112	90	925	14	194	160	125
32–14	1.5	90L	283	200	497	112	90	982	14	194	160	125

MAS KMU-V – High Pressure Multistage Pumps
Dimension Table for KMU-V 32 – 3500 rpm - 60 Hz

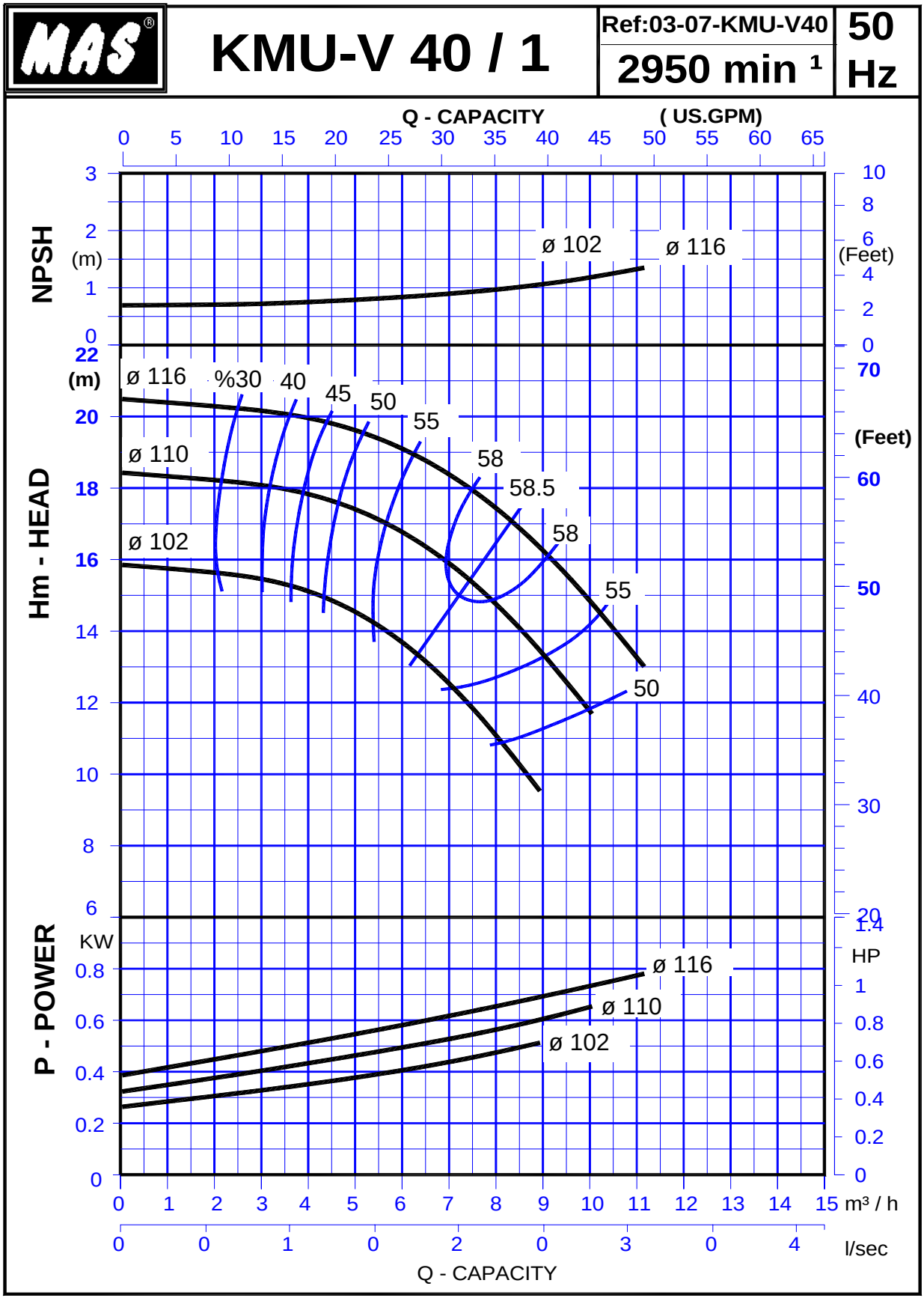




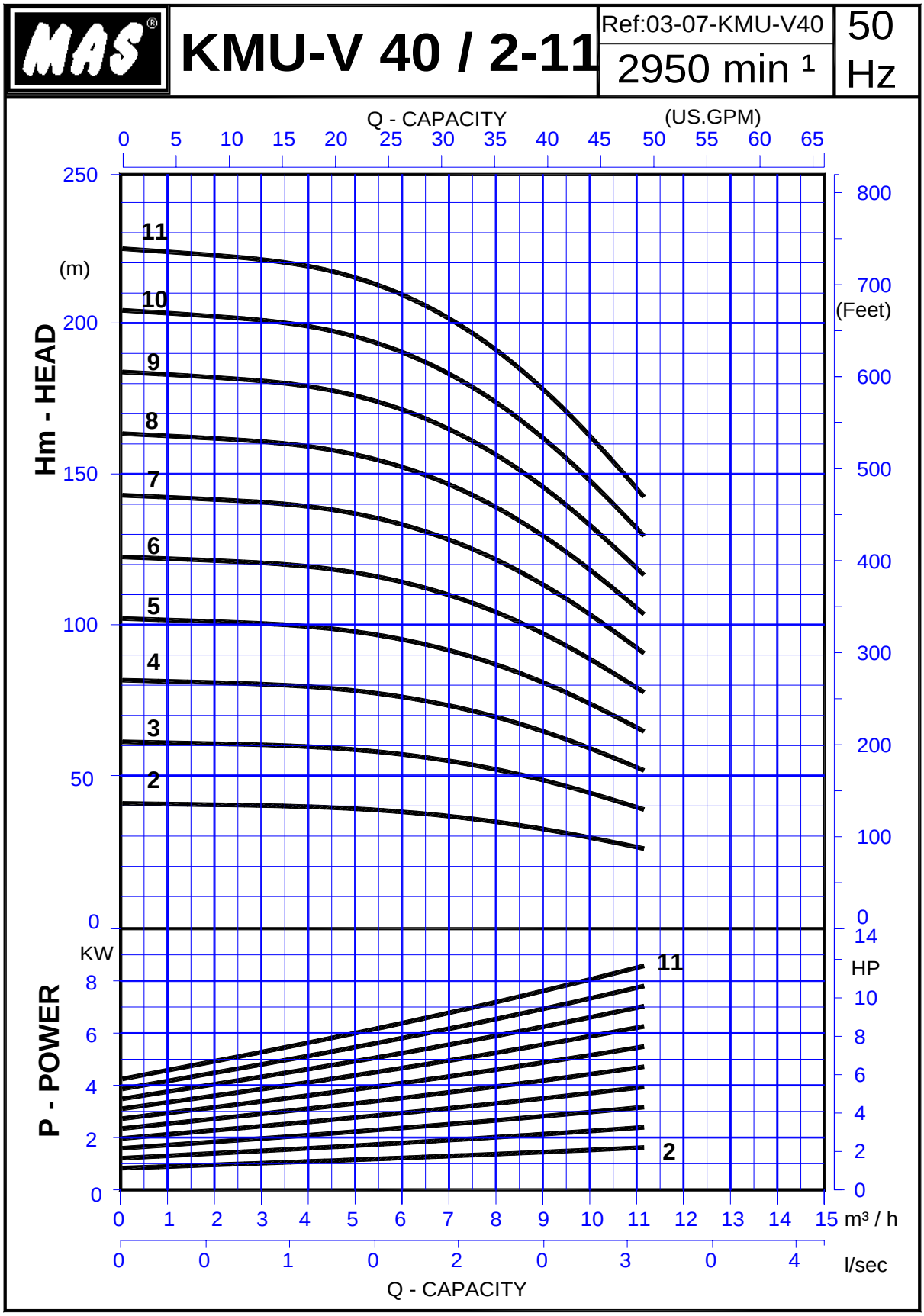
Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	32	145	100	4	18
Discharge	40	32	140	100	4	18

Dimensions – 3500 RPM – 60 Hz

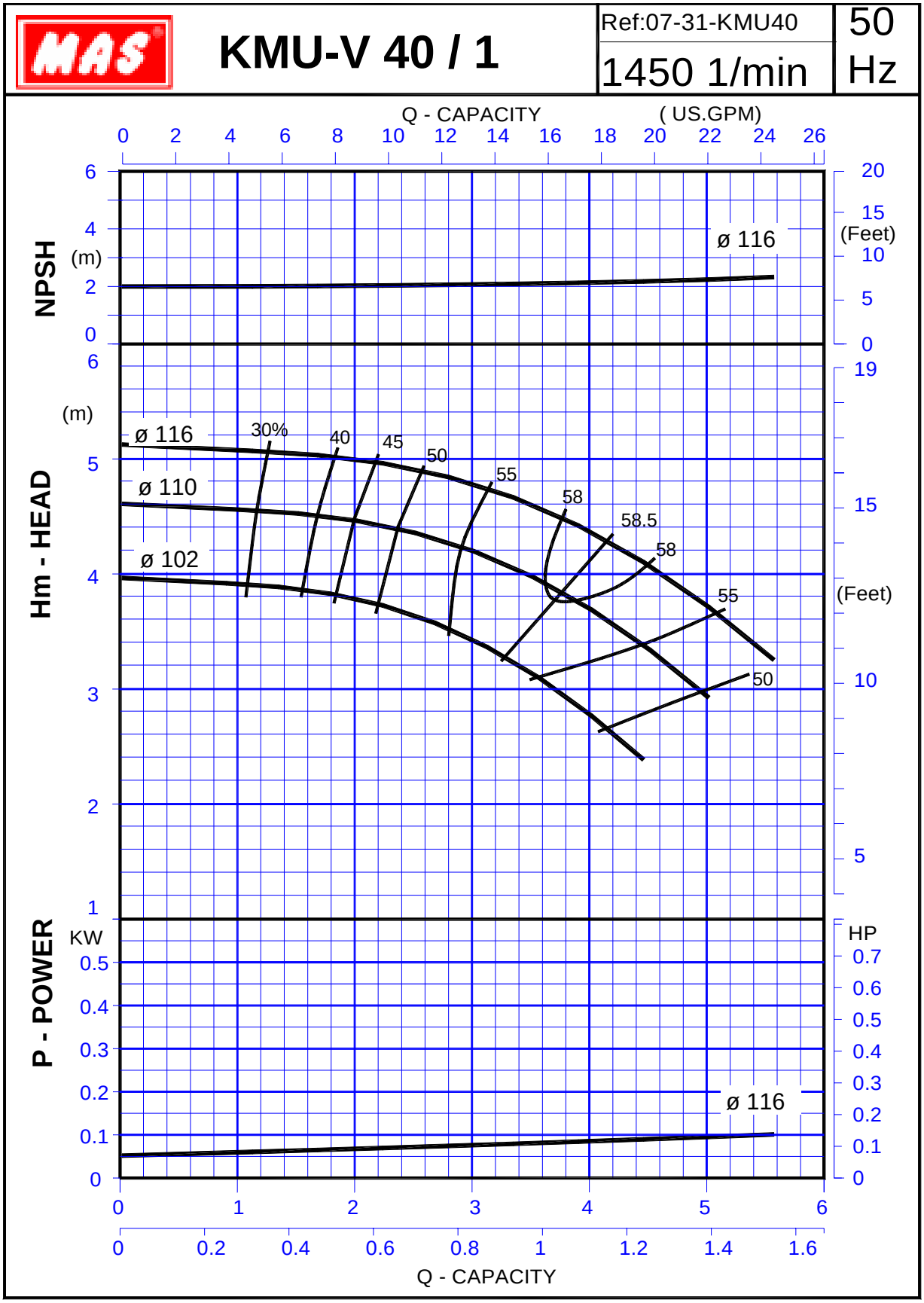
Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 32–3	2.2	90L	275	200	145	112	90	622	14	194	160	125
32–4	3	100L	305	250	177	127	90	699	14	194	160	125
32–5	4	112M	324	250	209	127	90	750	14	194	160	125
32–6	5.5	132S	375	300	241	127	90	833	14	194	160	125
32–7	5.5	132S	375	300	273	127	90	865	14	194	160	125
32–8	7.5	132S	375	300	305	127	90	897	14	194	160	125
32–9	7.5	132S	375	300	337	127	90	929	14	194	160	125
32–10	7.5	132S	375	300	369	127	90	961	14	194	160	125
32–11	11	160M	484	350	401	127	90	1102	14	194	160	125
32–12	11	160M	484	350	433	127	90	1134	14	194	160	125
32–13	11	160M	484	350	465	127	90	1166	14	194	160	125



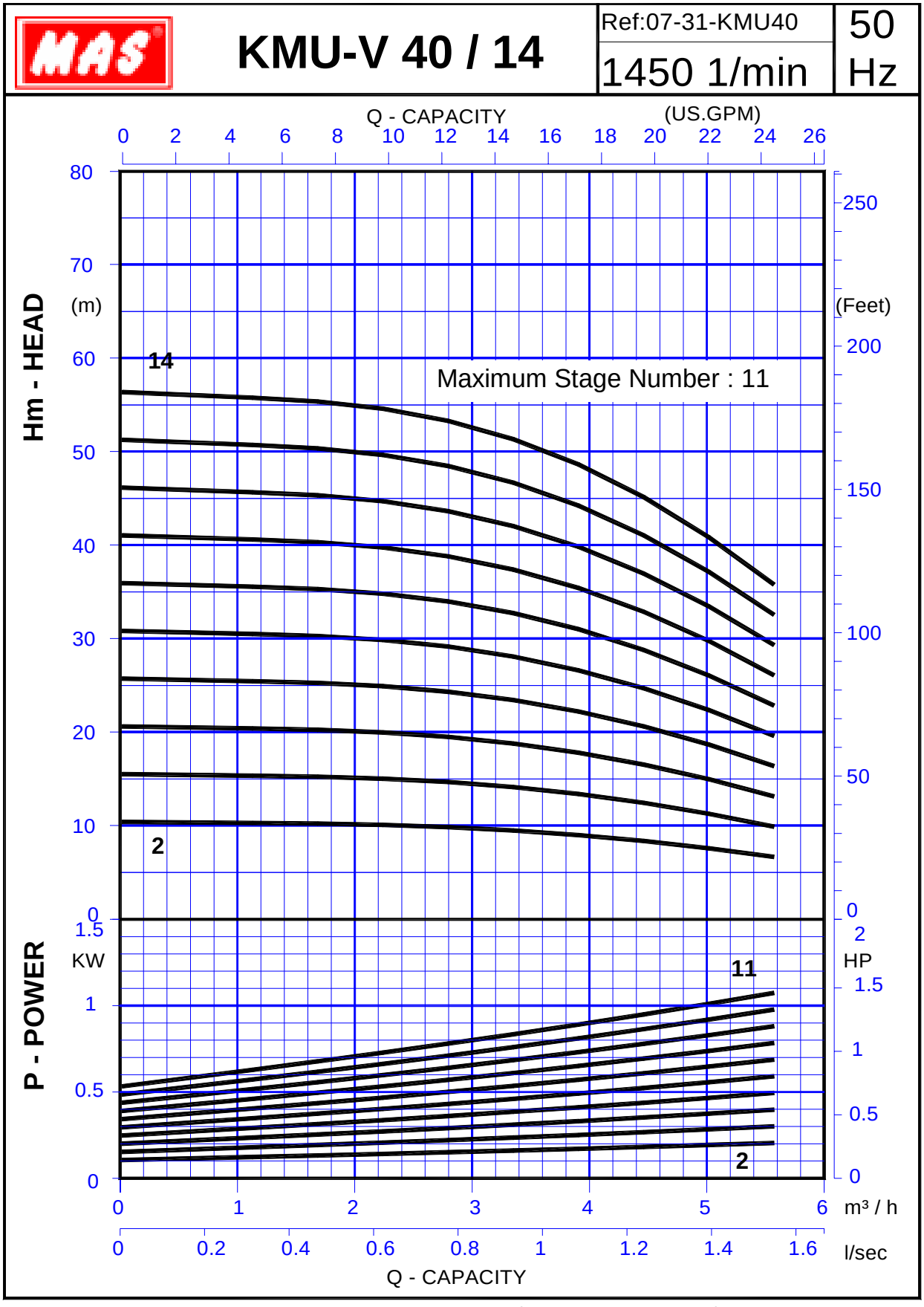
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



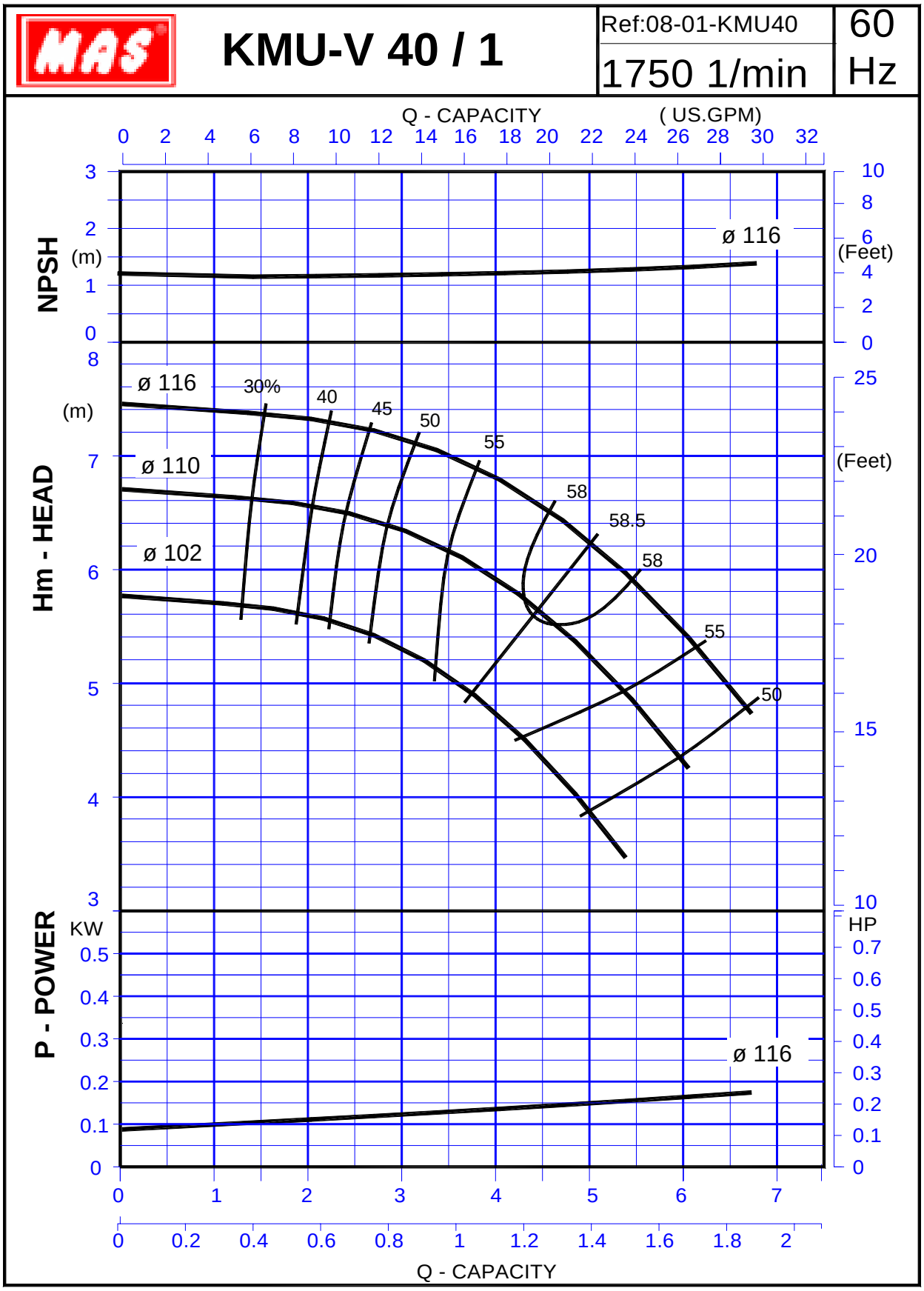
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



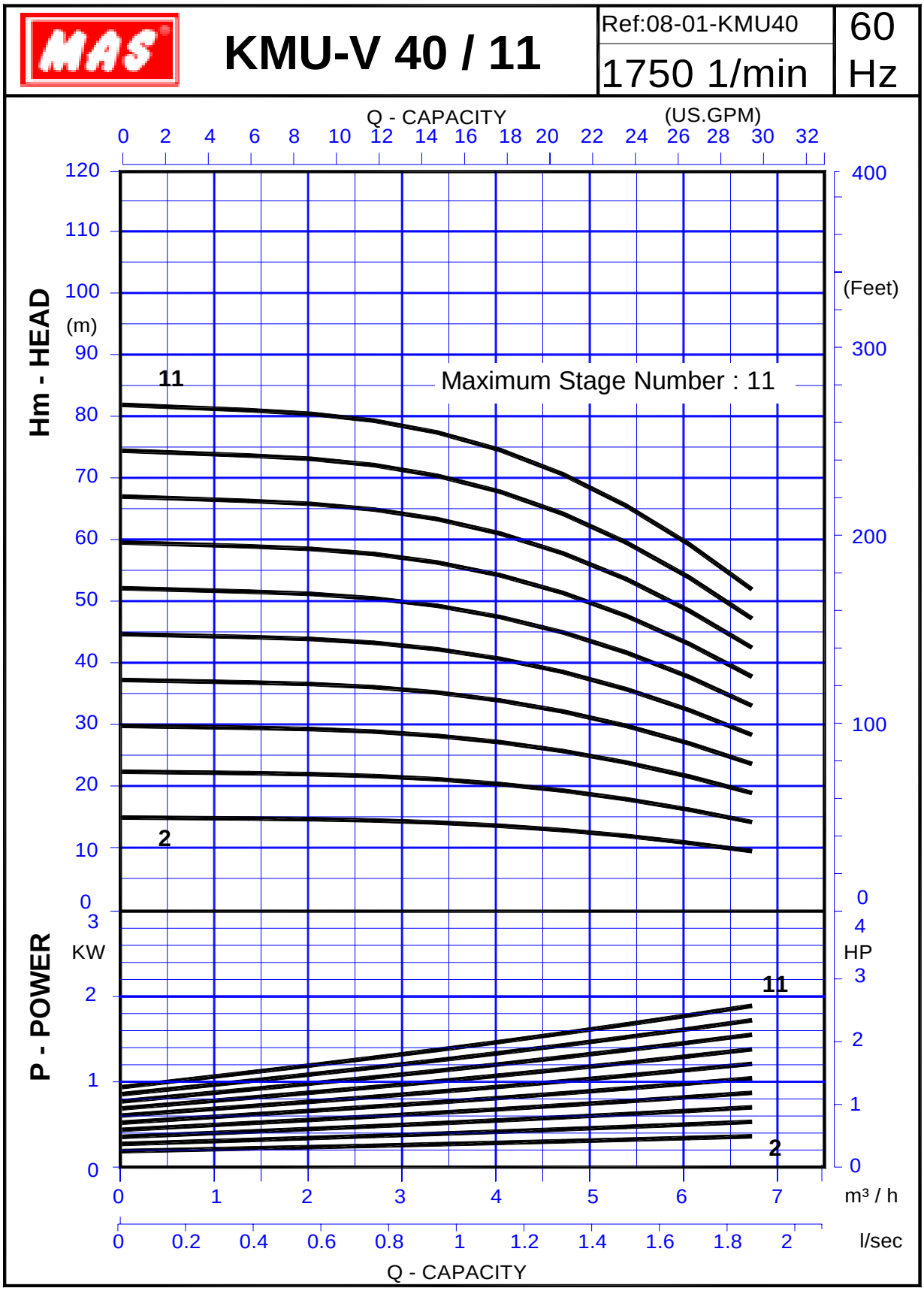
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



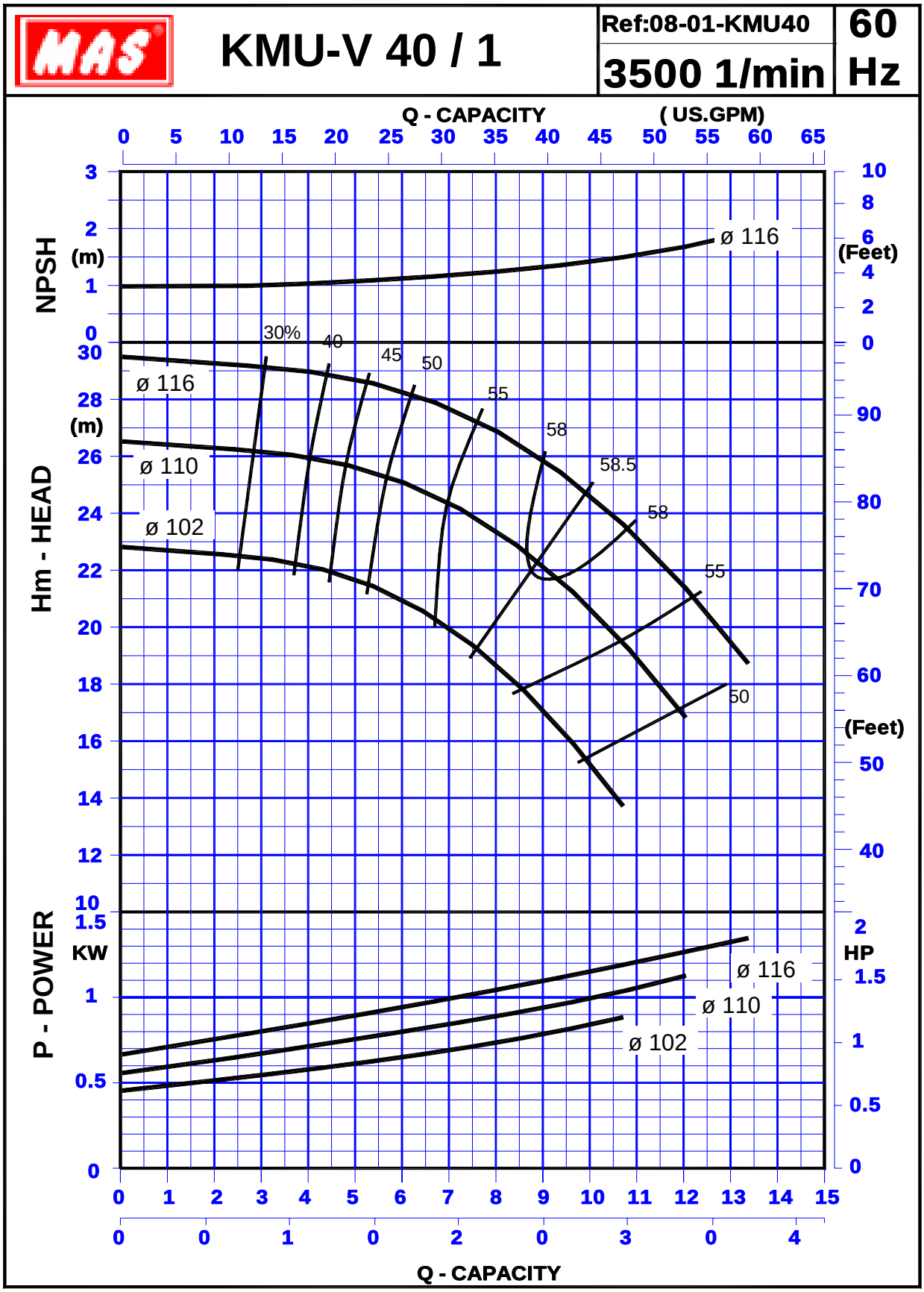
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



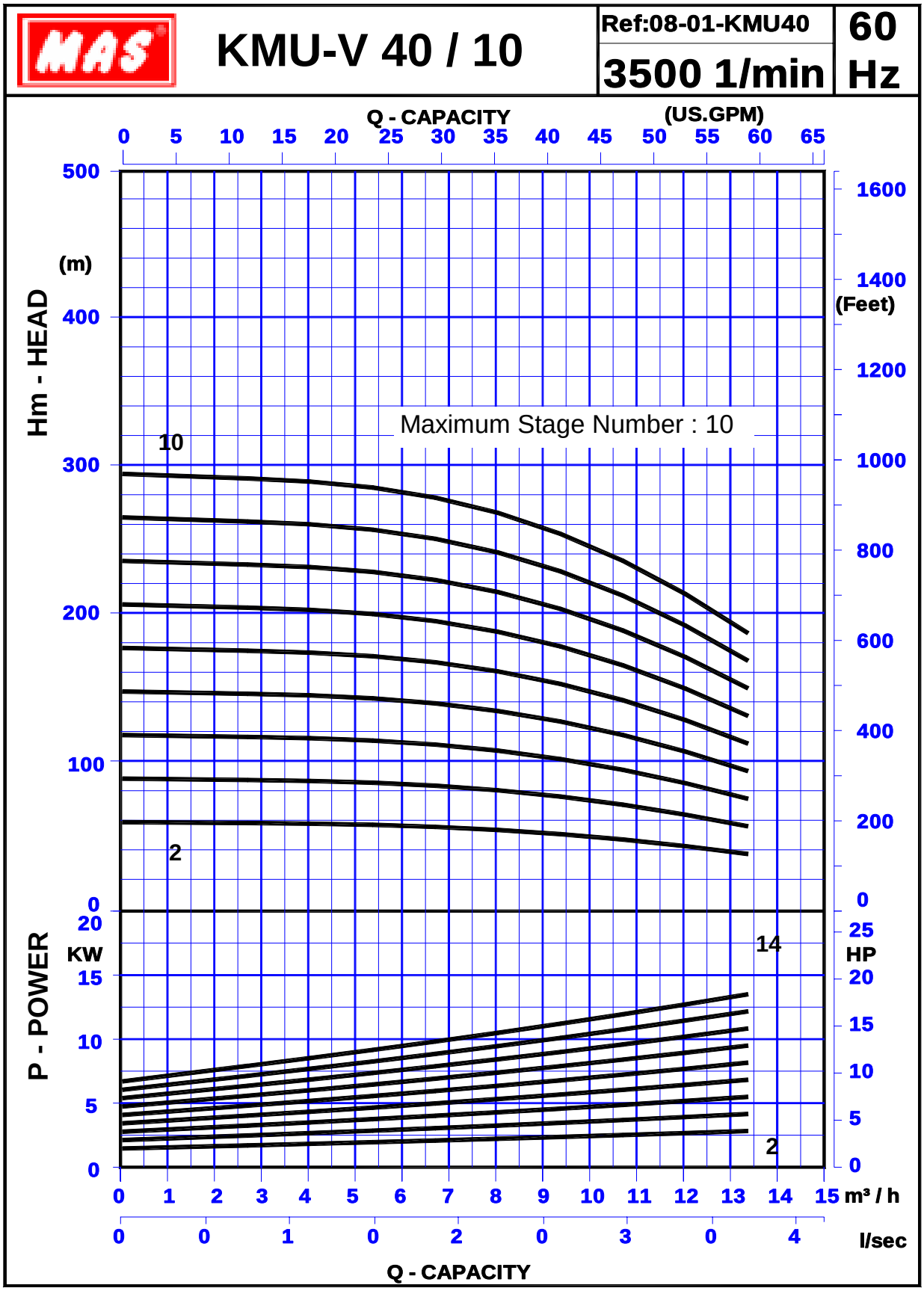
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



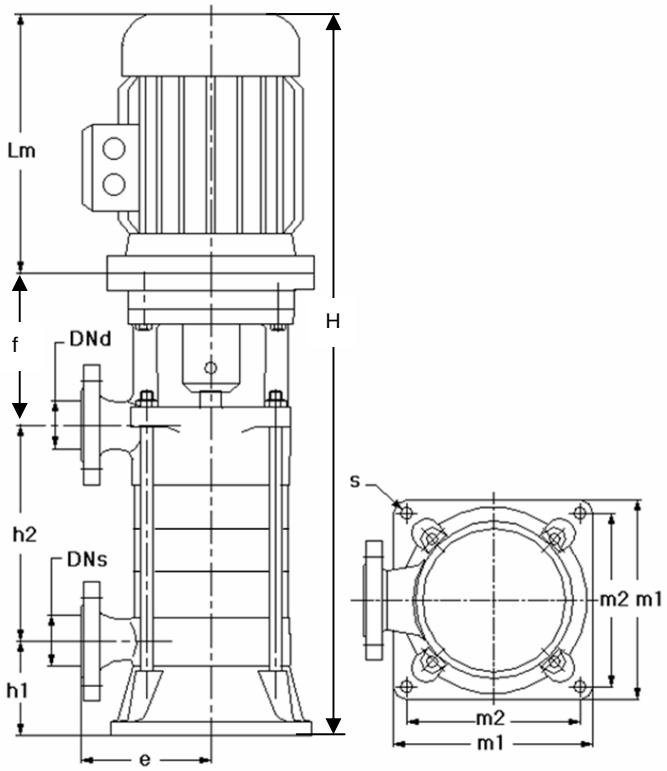
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.

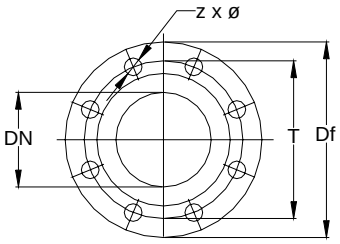


The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



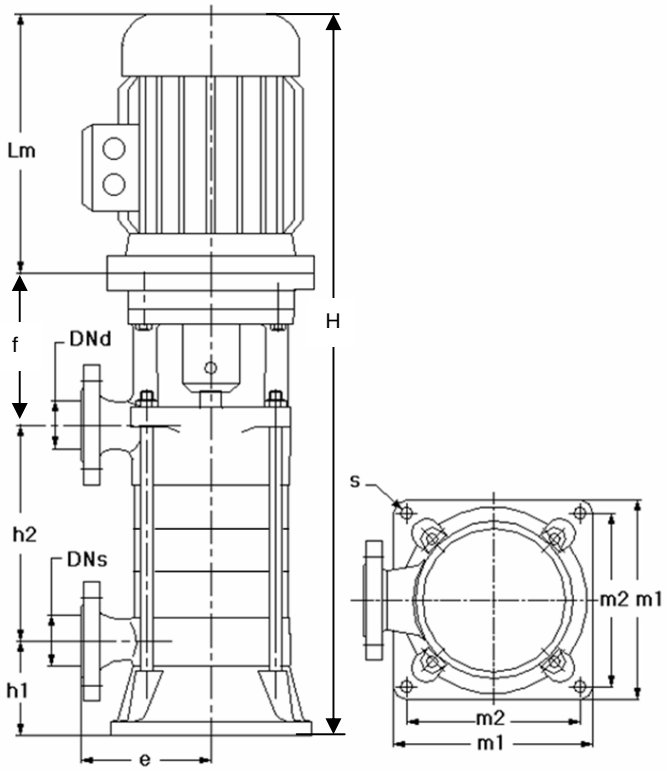


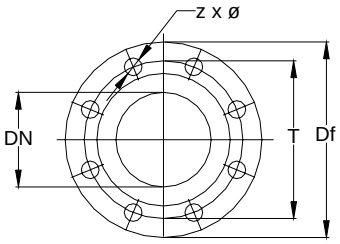
Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	40	150	110	4	18
Discharge	40	40	150	110	4	18

Dimensions –1450 RPM – 50 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 40-3	0.37	71	217	160	162	129	104	612	16	220	180	146
40-4	0.55	71	217	160	202	129	104	652	16	220	180	146
40-5	0.55	80	238	200	242	129	104	713	16	220	180	146
40-6	0.75	80	238	200	282	129	104	753	16	220	180	146
40-7	0.75	80	238	200	322	129	104	793	16	220	180	146
40-8	1.1	90S	258	200	362	129	104	853	16	220	180	146
40-9	1.1	90S	258	200	402	129	104	893	16	220	180	146
40-10	1.1	90S	258	200	442	129	104	933	16	220	180	146
40-11	1.1	90S	258	200	482	129	104	973	16	220	180	146

MAS KMU-V – High Pressure Multistage Pumps
Dimension Table for KMU 40 – 2900 rpm - 50 Hz

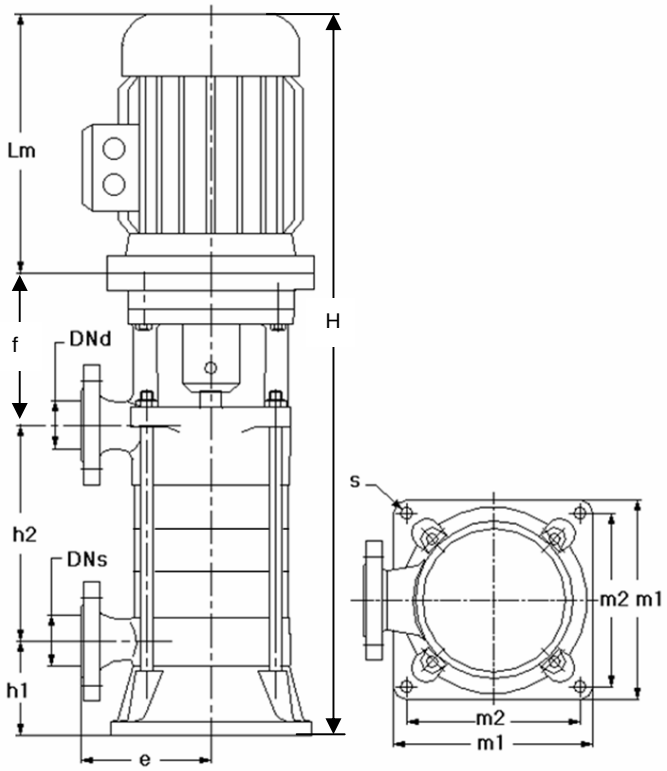


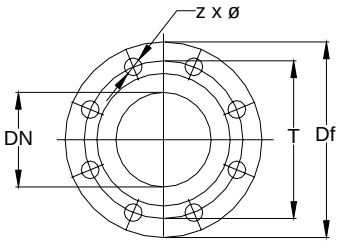


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	40	150	110	4	18
Discharge	40	40	150	110	4	18

Dimensions – 2900 RPM – 50 Hz

Pump	MOTOR				PUMP			OVERALL				
Type	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 40-3	3	100L	305	250	162	129	104	700	16	220	180	146
40-4	4	112M	324	250	202	129	104	759	16	220	180	146
40-5	4	112M	324	250	242	129	104	799	16	220	180	146
40-6	5.5	132S	375	300	282	149	104	910	16	220	180	146
40-7	5.5	132S	375	300	322	149	104	950	16	220	180	146
40-8	7.5	132S	375	300	362	149	104	990	16	220	180	146
40-9	7.5	132S	375	300	402	149	104	1030	16	220	180	146
40-10	11	C132M	413	300	442	149	104	1108	16	220	180	146
40-11	11	C132M	451	300	482	149	104	1148	16	220	180	146

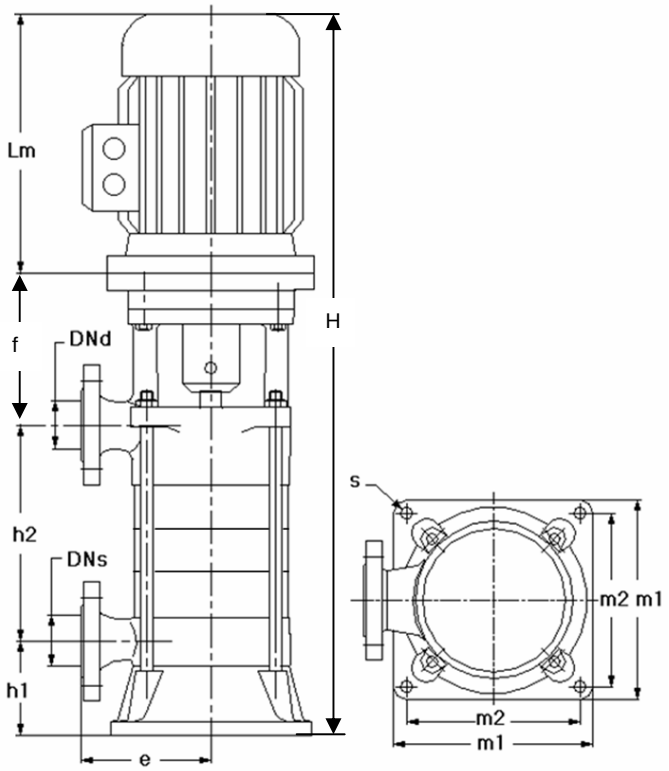


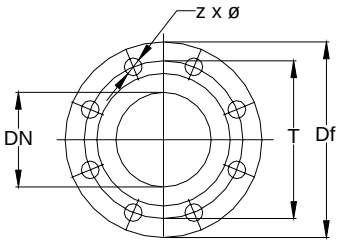


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	40	150	110	4	18
Discharge	40	40	150	110	4	18

Dimensions –17500 RPM – 60 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 40-3	0.75	80	238	200	162	129	104	633	16	220	180	146
40-4	1.1	90S	258	200	202	129	104	693	16	220	180	146
40-5	1.1	90S	258	200	242	129	104	733	16	220	180	146
40-6	1.1	90S	258	200	282	129	104	773	16	220	180	146
40-7	1.1	90S	258	200	322	129	104	813	16	220	180	146
40-8	1.5	90L	283	200	362	129	104	878	16	220	180	146
40-9	2.2	100L	315	250	402	129	104	950	16	220	180	146
40-10	2.2	100L	315	250	442	129	104	990	16	220	180	146
40-11	2.2	100L	315	250	482	129	104	1030	16	220	180	146

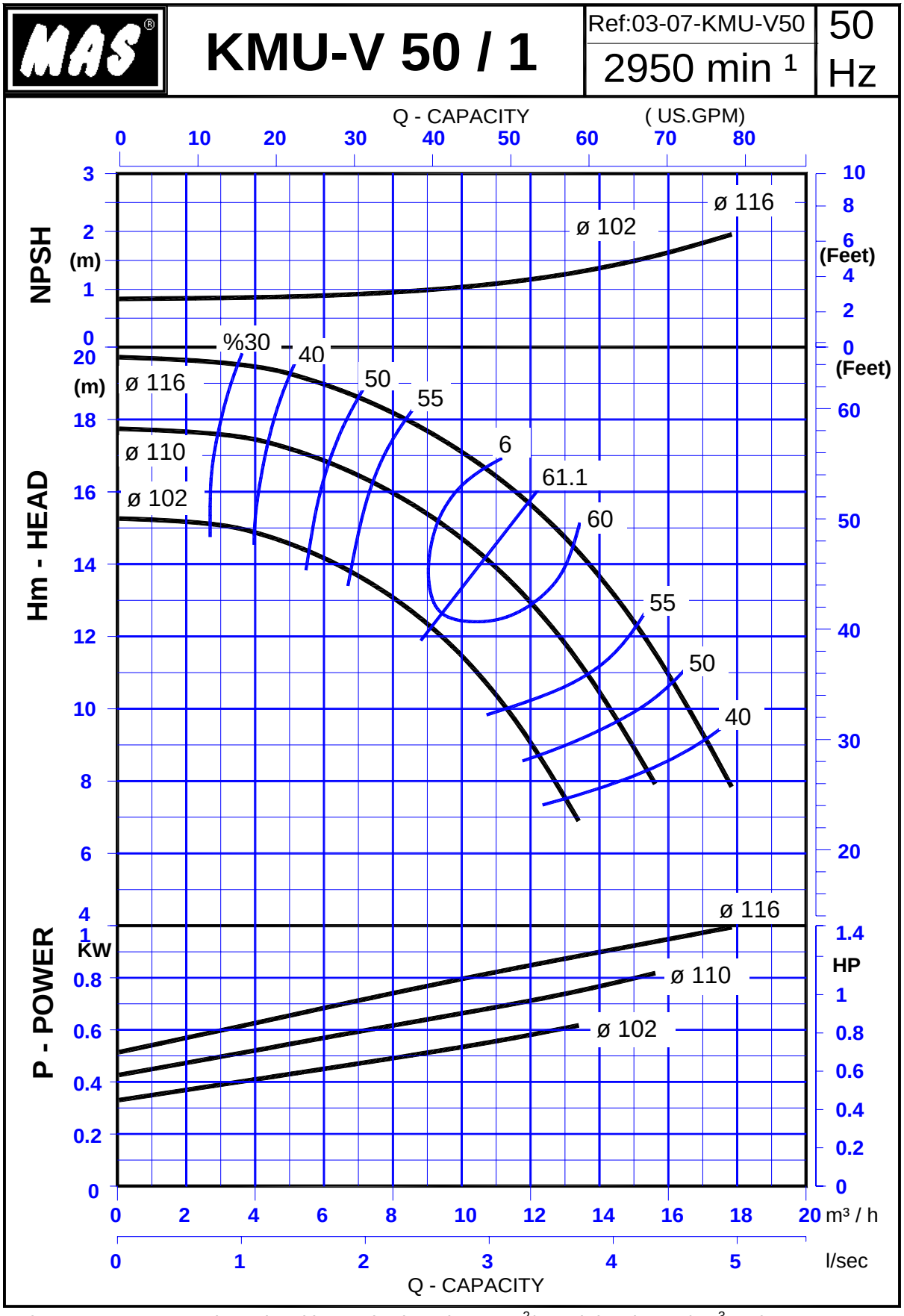




Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	40	150	110	4	18
Discharge	40	40	150	110	4	18

Dimensions –3500 RPM – 60 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 40-3	5.5	132S	375	300	162	149	104	790	16	220	180	146
40-4	5.5	132S	375	300	202	149	104	830	16	220	180	146
40-5	7.5	132S	375	300	242	149	104	870	16	220	180	146
40-6	11	160M	484	350	282	149	104	1019	16	220	180	146
40-7	11	160M	484	350	322	149	104	1059	16	220	180	146
40-8	11	160M	484	350	362	149	104	1099	16	220	180	146
40-9	15	160M	484	350	402	149	104	1139	16	220	180	146
40-10	15	160M	484	350	442	149	104	1179	16	220	180	146



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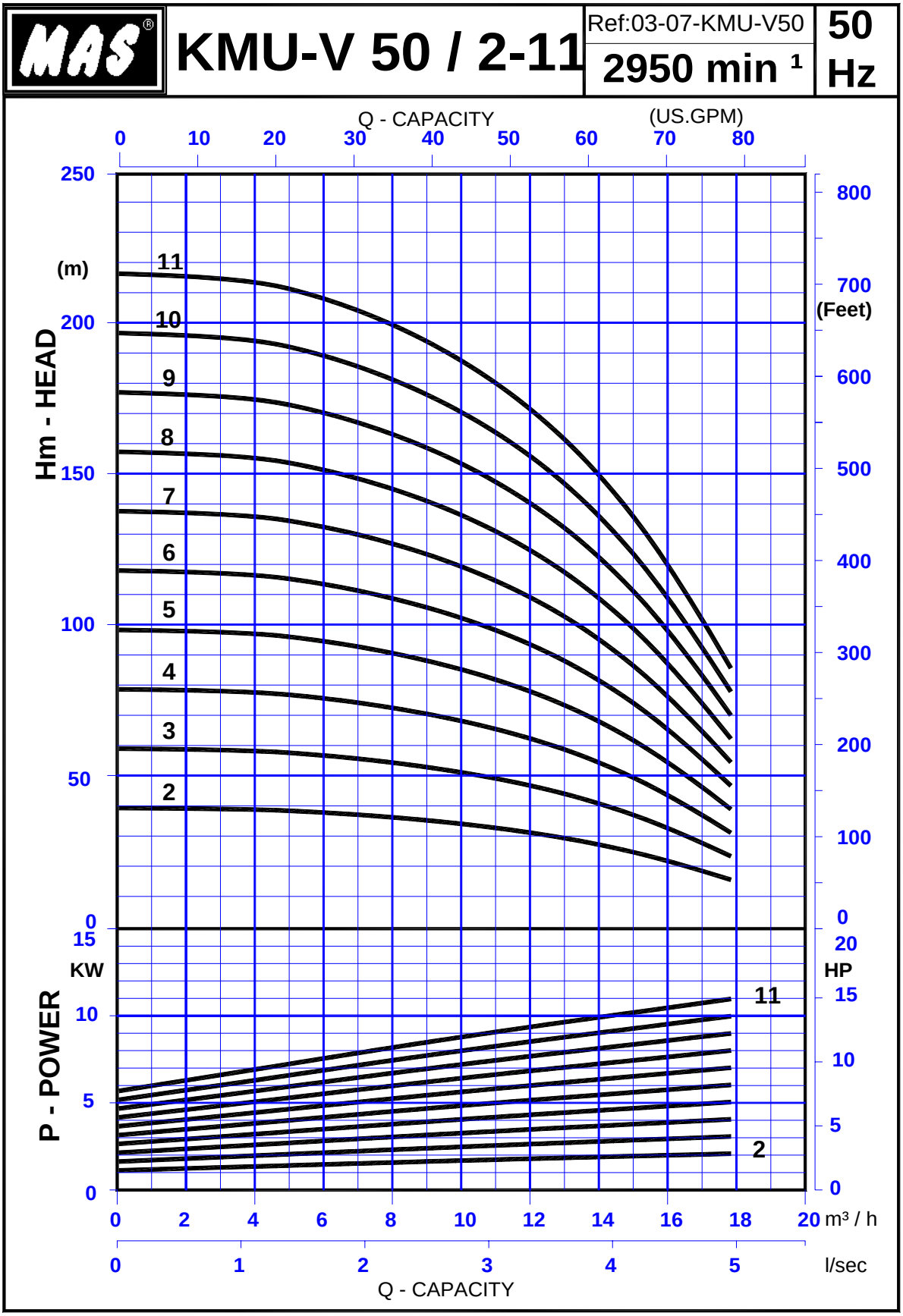
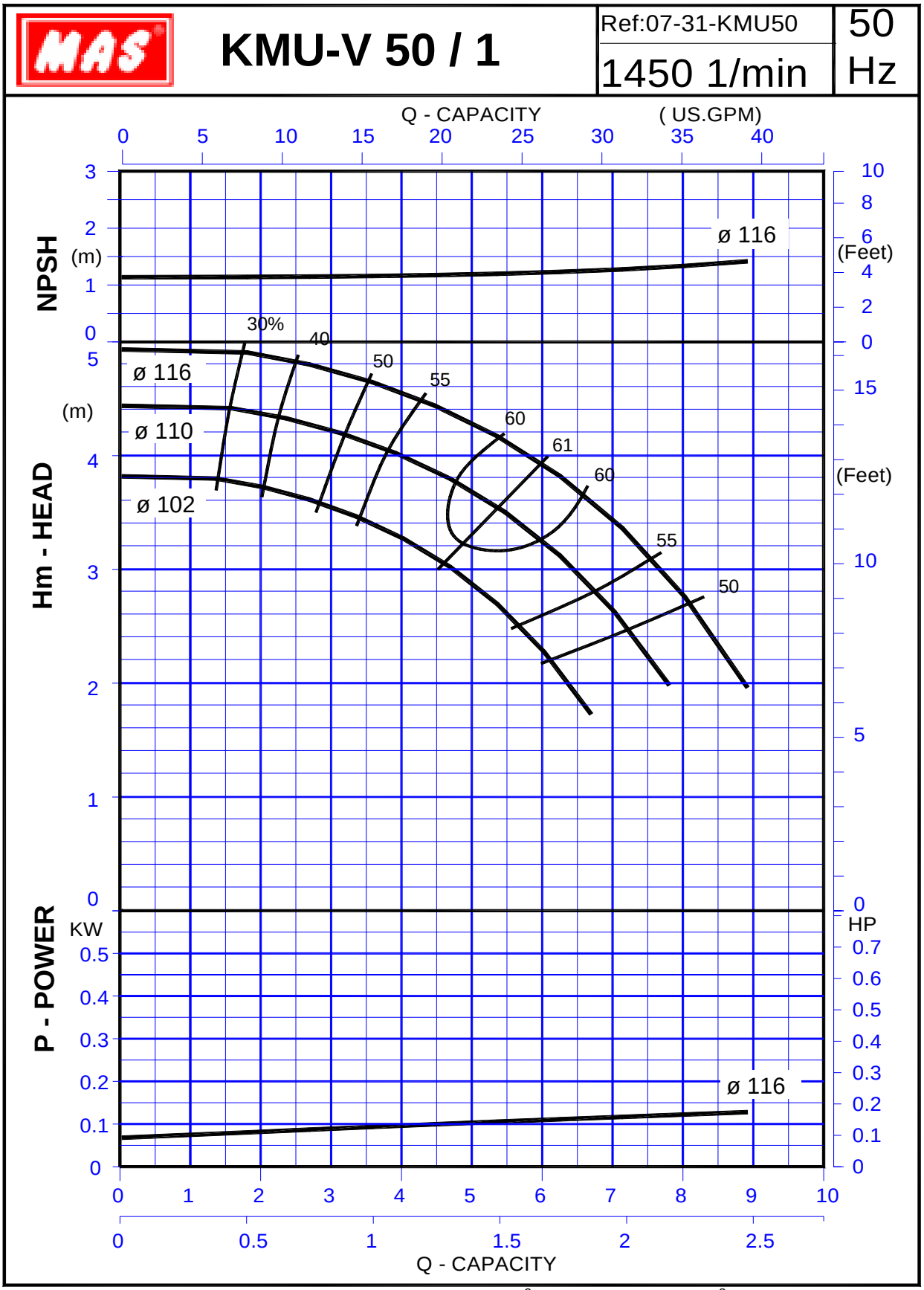
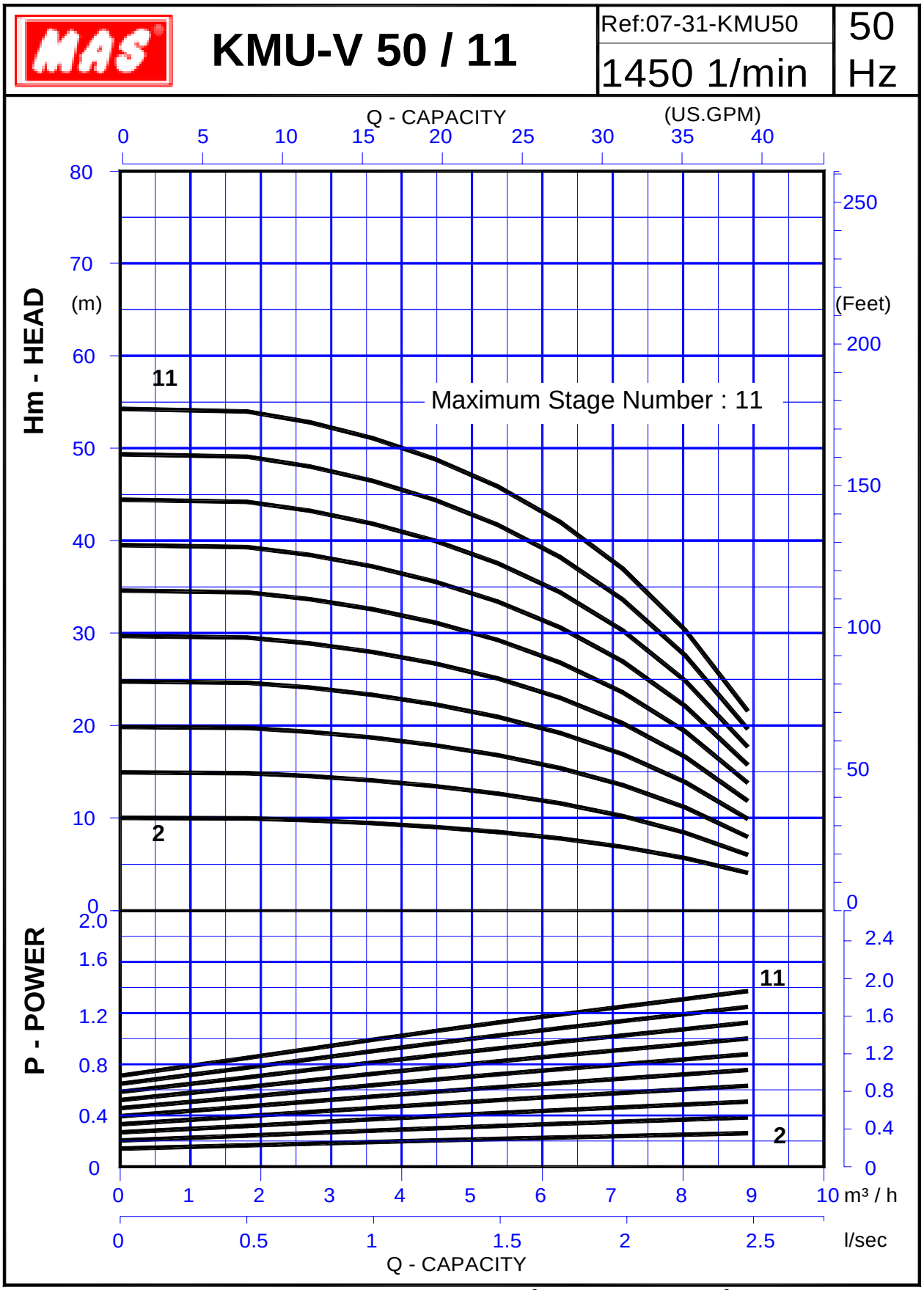
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



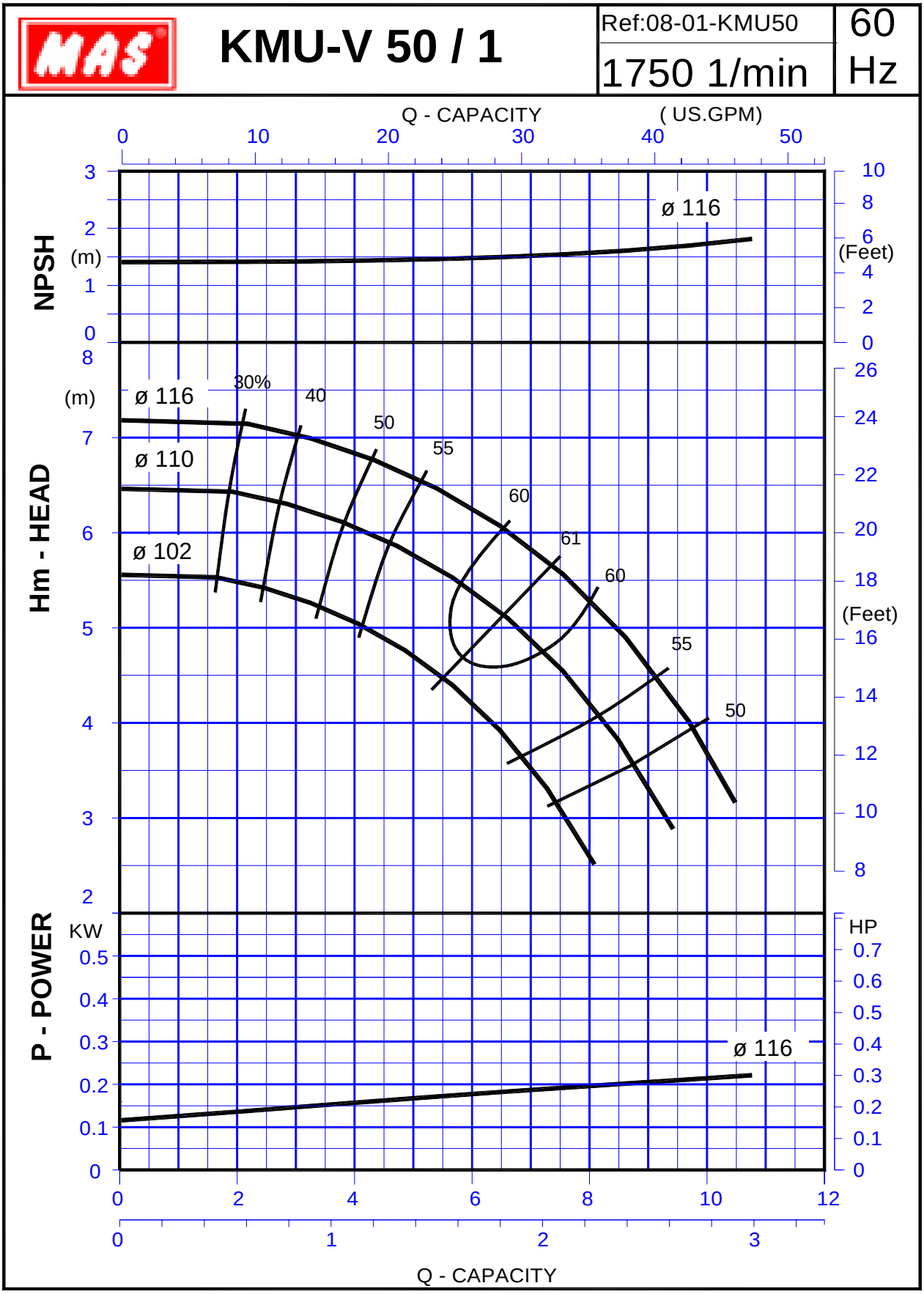
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



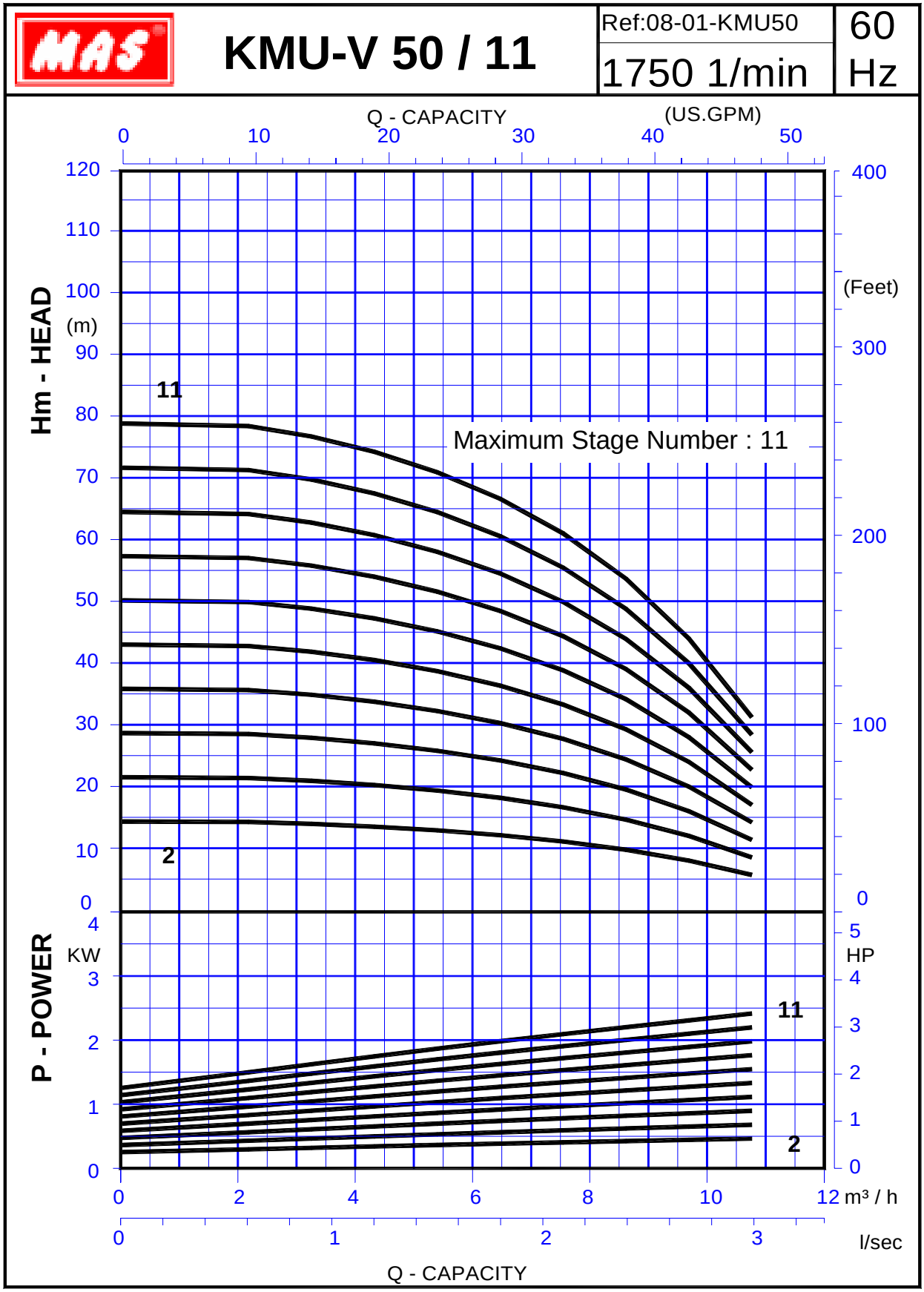
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



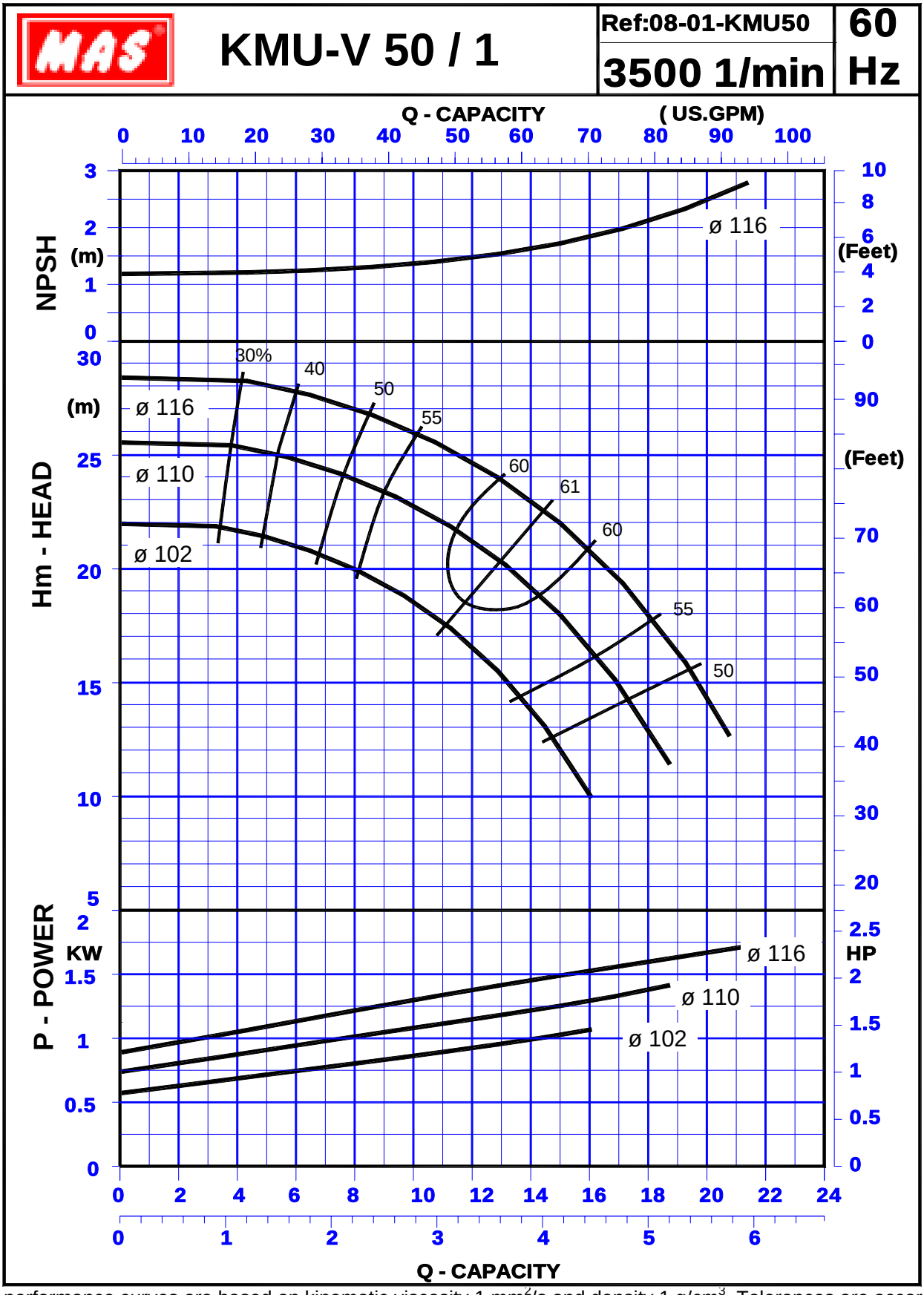
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



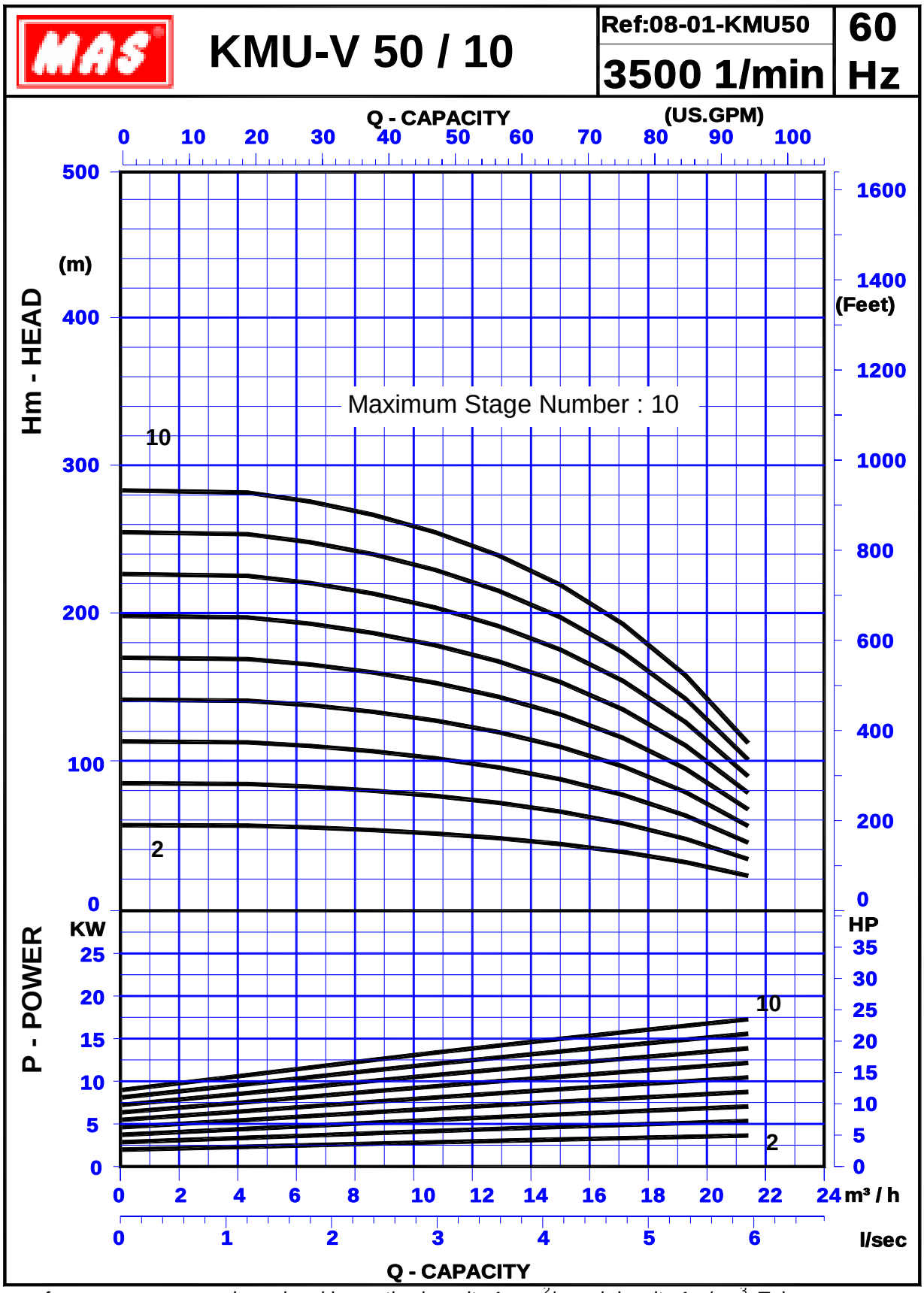
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.

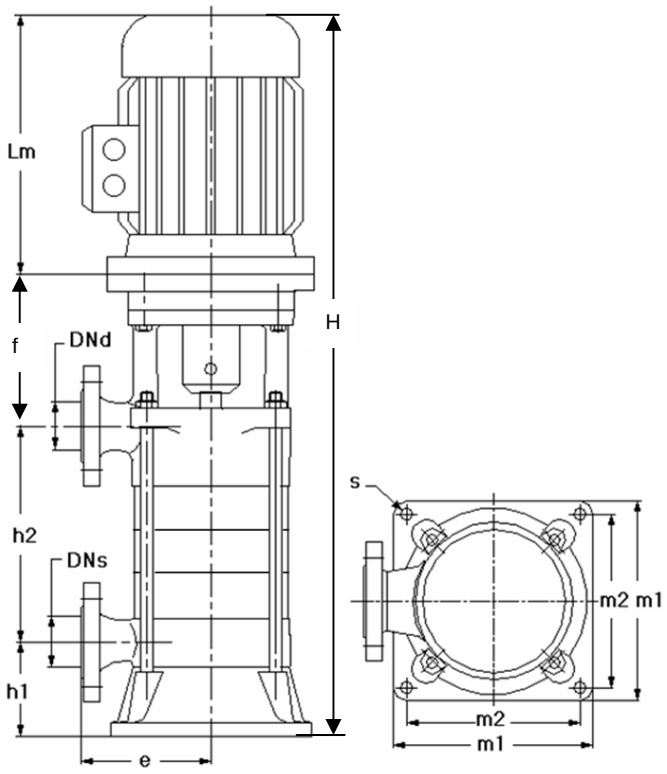


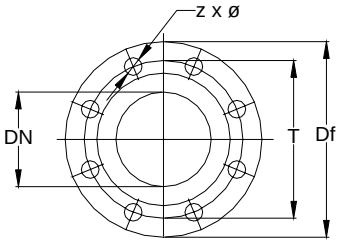
The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.



The performance curves are based on kinematic viscosity 1 mm^2/s and density 1 g/cm^3. Tolerances are according to ISO 9906 Annex A.

MAS KMU-V – High Pressure Multistage Pumps
Dimension Table for KMU 50 – 1450 rpm – 50 Hz



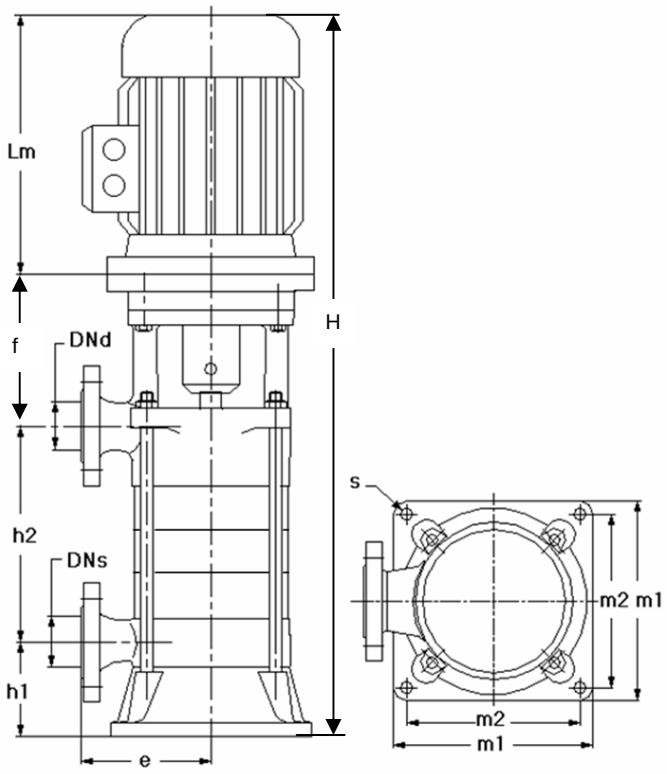


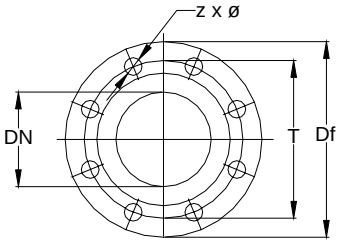
Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	50	165	125	4	18
Discharge	40	50	165	125	4	18

Dimensions – 1450 RPM – 50 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 50-3	0.55	80	238	200	162	129	104	633	16	220	180	146
50-4	0.55	80	238	200	202	129	104	673	16	220	180	146
50-5	0.75	80	238	200	242	129	104	713	16	220	180	146
50-6	0.75	80	238	200	282	129	104	753	16	220	180	146
50-7	1.1	90S	258	200	322	129	104	813	16	220	180	146
50-8	1.1	90S	258	200	362	129	104	853	16	220	180	146
50-9	1.1	90S	258	200	402	129	104	893	16	220	180	146
50-10	1.5	90L	283	200	442	129	104	958	16	220	180	146
50-11	1.5	90L	283	200	482	129	104	998	16	220	180	146

MAS KMU-V – High Pressure Multistage Pumps
Dimension Table for KMU 50 – 2900 rpm – 50 Hz

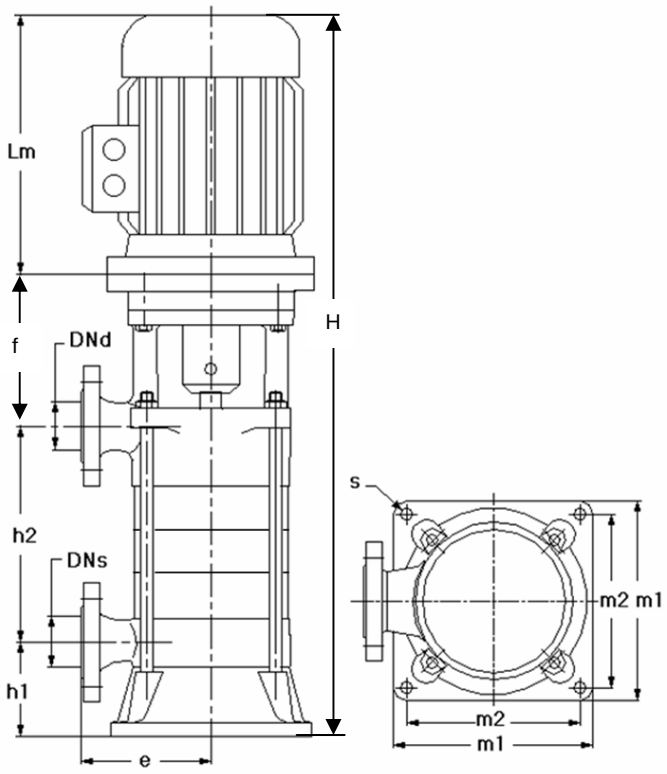


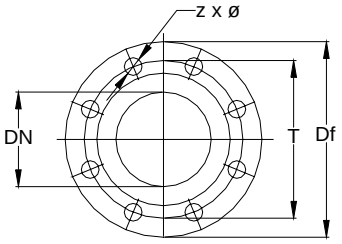


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	50	165	125	4	18
Discharge	40	50	165	125	4	18

Dimensions – 2900 RPM – 50 Hz

Pump	MOTOR				PUMP			OVERALL				
Type	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 50-3	3	100L	305	250	162	129	104	700	16	220	180	146
50-4	4	112M	324	250	202	129	104	759	16	220	180	146
50-5	5.5	132S	375	300	242	149	104	870	16	220	180	146
50-6	7.5	132S	375	300	282	149	104	910	16	220	180	146
50-7	7.5	132S	375	300	322	149	104	950	16	220	180	146
50-8	11	C132M	413	300	362	149	104	1028	16	220	180	146
50-9	11	C132M	413	300	402	149	104	1068	16	220	180	146
50-10	11	C132M	413	300	442	149	104	1108	16	220	180	146
50-11	11	C132M	413	300	482	149	104	1148	16	220	180	146

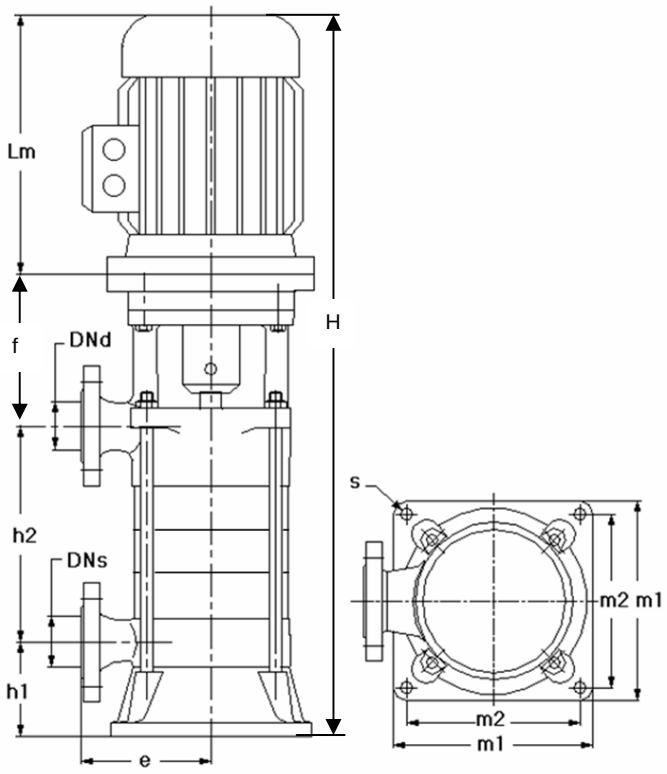


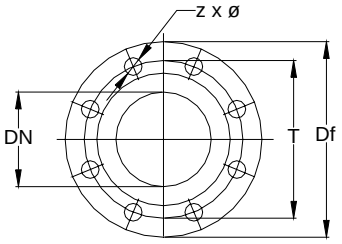


Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	50	165	125	4	18
Discharge	40	50	165	125	4	18

Dimensions – 1750 RPM – 60 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 50-3	0.75	80	238	200	162	129	104	633	16	220	180	146
50-4	1.1	80	238	200	202	129	104	673	16	220	180	146
50-5	1.1	80	238	200	242	129	104	713	16	220	180	146
50-6	1.5	90L	283	200	282	129	104	798	16	220	180	146
50-7	1.5	90L	283	200	322	129	104	838	16	220	180	146
50-8	2.2	100L	258	200	362	129	104	853	16	220	180	146
50-9	2.2	100L	315	250	402	129	104	950	16	220	180	146
50-10	2.2	100L	315	250	442	129	104	990	16	220	180	146
50-11	2.2	100L	315	250	482	129	104	1030	16	220	180	146

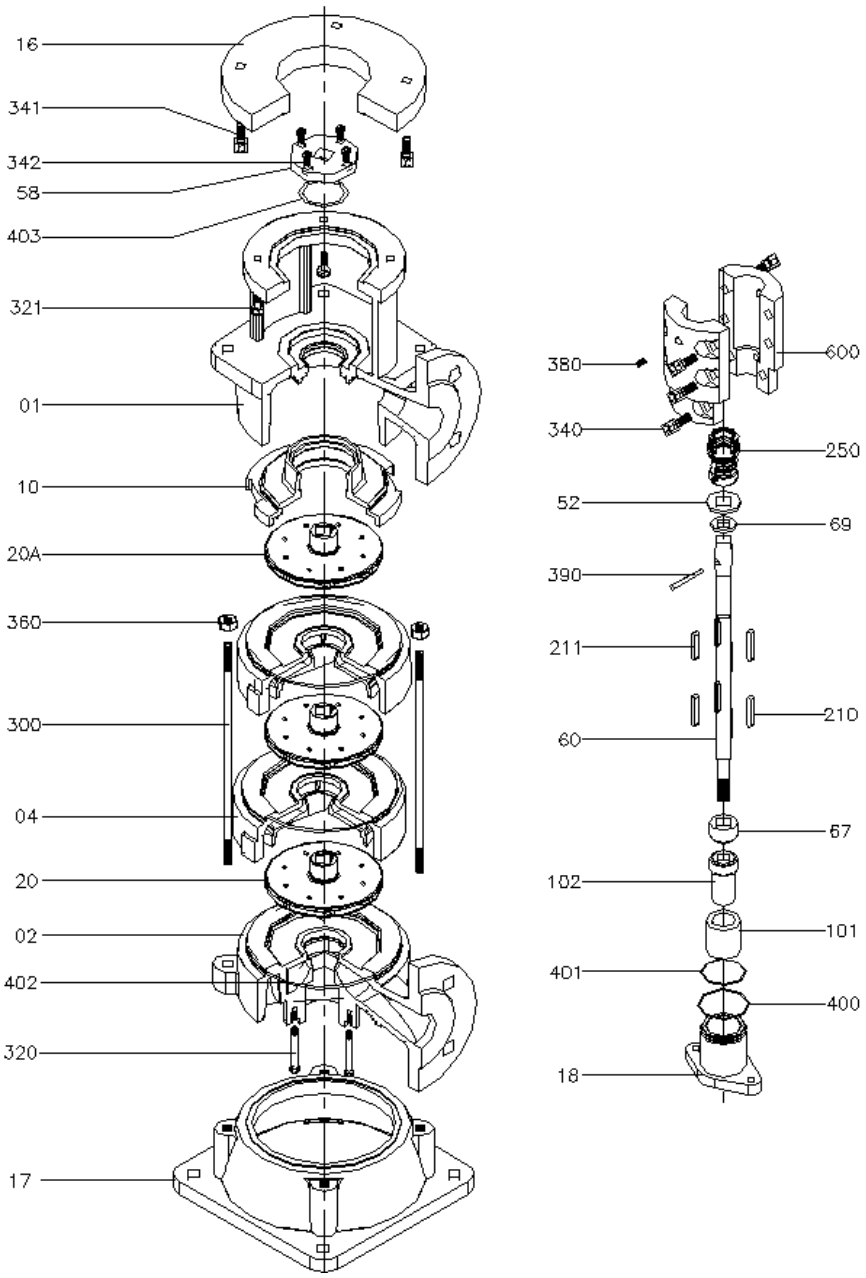




Flange Dimensions						
	PN	DN	Df	T	z	ø
Suction	40	50	165	125	4	18
Discharge	40	50	165	125	4	18

Dimensions – 3500 RPM – 60 Hz

Pump Type	MOTOR				PUMP			OVERALL				
	KW	IEC	Lm	ØP	h2	f	h1	H	s	m1	m2	e
KMU-V 50-3	5.5	132S	375	300	162	149	104	770	16	220	180	146
50-4	7.5	132S	375	300	202	149	104	810	16	220	180	146
50-5	11	160M	484	350	242	149	104	959	16	220	180	146
50-6	11	160M	484	350	282	149	104	999	16	220	180	146
50-7	15	160M	484	350	322	149	104	1039	16	220	180	146
50-8	15	160M	484	350	362	149	104	1079	16	220	180	146
50-9	18.5	160L	528	350	402	149	104	1163	16	220	180	146
50-10	18.5	160L	528	350	442	149	104	1203	16	220	180	146



Part List

No		No		No	
01	Discharge Casing	60	Pump Shaft	321	Hex Bolt
02	Suction Casing	67	Space Sleeve	340	Hex Socket Head Cap Screw
04	Stage Casing	69	Split Ring	341	Hex Socket Head Cap Screw
10	Last Stage Diffuser	101	Bronze Sliding Bearing	342	Hex Bolt
16	Adapter Flange	102	Bottom Shaft Nut	360	Nut
17	Bottom Plate	210	Key, Standard Impeller	380	Set-Screw
18	Sliding Bearing Cover	211	Key, Last Impeller	400	O-Ring, Sliding Bearing
20	Impeller	250	Mechanical Seal	401	O-Ring, Sliding Bearing
20A	Last Stage Impeller	390	Cylindrical Pin	402	O-Ring, Stage Casing
52	Back Ring, Mech. Seal	300	Stud For Casing	403	O-Ring, Mech. Seal Cover
58	Mech. Seal Cover	320	Hex Bolt	600	Coupling