MTA

Immersible pumps

Pumping of cooling lubricants for machine tools, condensate transfer and similar applications.

Dimensions of mounting flange and discharge port in accordance with DIN 5440.

50 Hz and 60 Hz

TM01 8662 0600

GRUNDFOS

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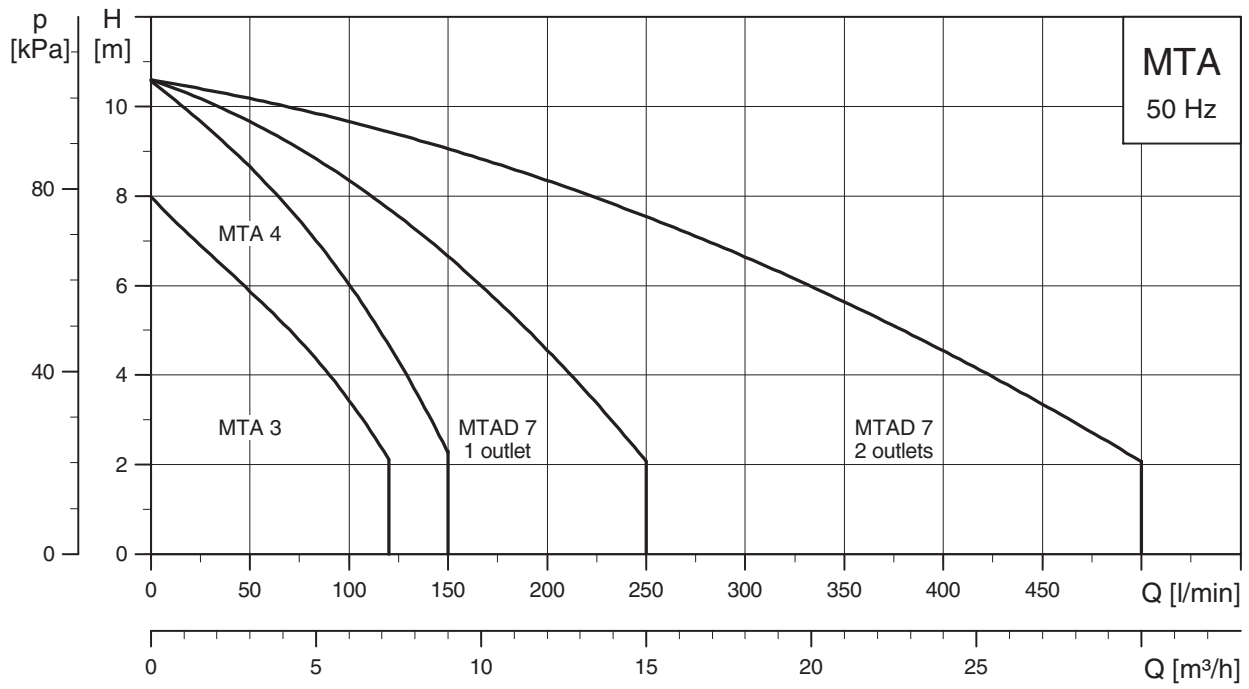
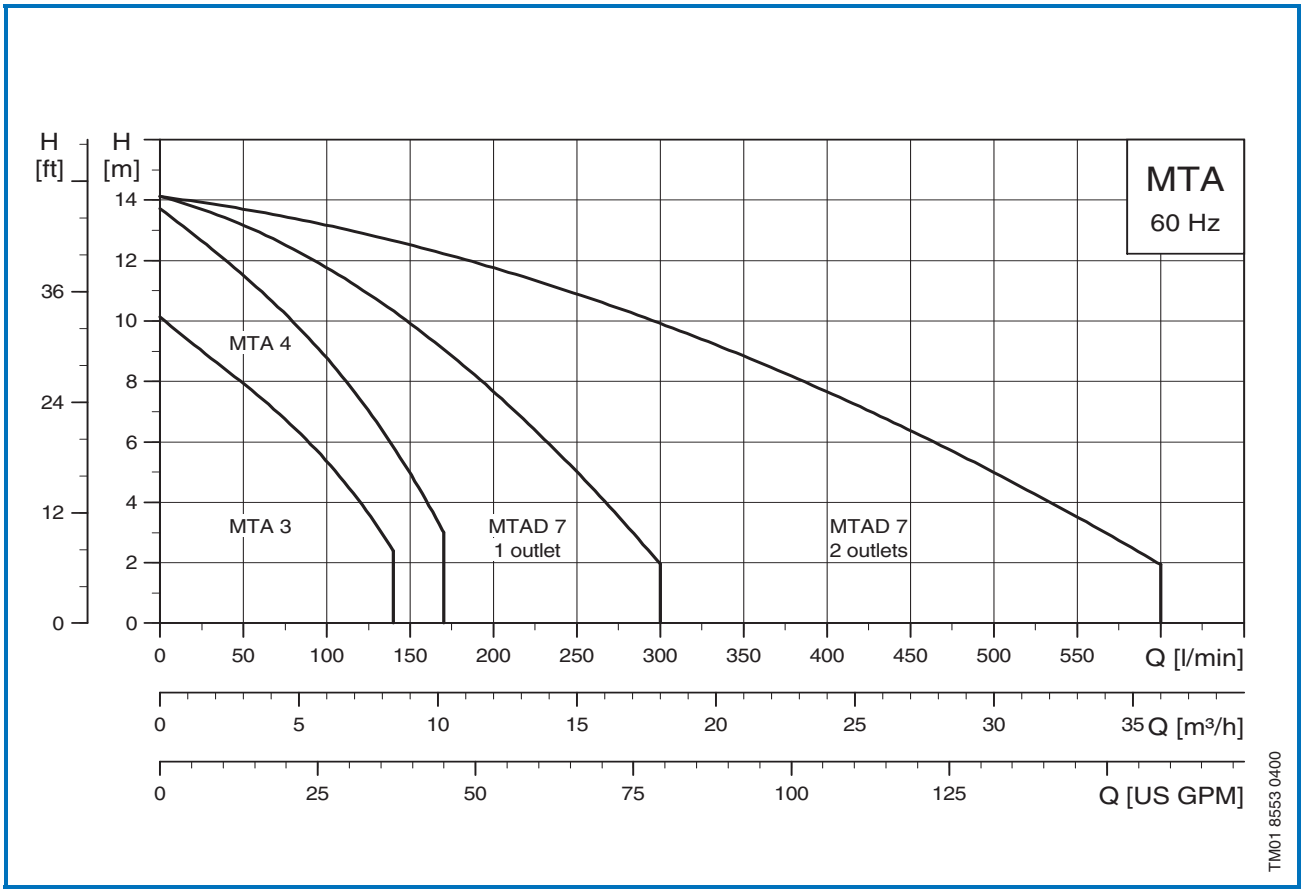




Product description

The MTA pumps are designed for pumping of cooling lubricants for machine tools, condensate transfer and other similar applications.

MTA pumps are suitable for applications involving spark machine tools, grinding machines, machining centres, cooling units, industrial washing machines, filtering systems, etc.

The pumps feature ...

- low pressure
- open impeller
- filled PTFE bearing for high vibration resistance
- stainless steel impeller and shaft
- easy installation.

In addition, the two separate outlets of the MTAD two-chamber pump allow for high flexibility and ease of use in applications requiring flows different places.

Pumped liquids

The pumps are suitable for pumping non-explosive liquids, including water and water-soluble coolants and cutting lubricants.

Pump

The MTA pumps are one-chamber or two-chamber centrifugal pumps, of which the latter type, MTAD, has two separate outlets. Mounting flange dimensions are according to DIN 5440/JEM 1242.

Motor

The pump is fitted with a totally enclosed, fan-cooled standard motor dimensioned according to IEC, DIN and British standards.

Enclosure class : IP 54.
Insulation class : F.

Standard voltages

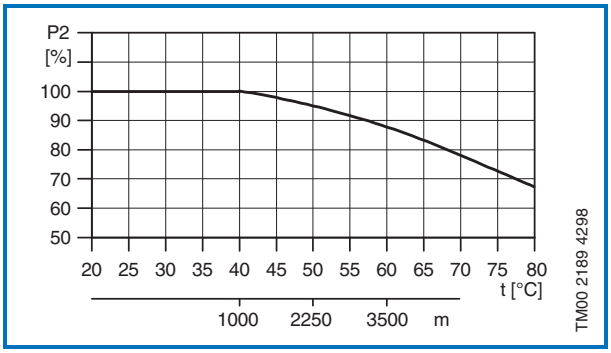
Motor	50 Hz	60 Hz
MG 63 0.18 kW and 0.25 kW*1	3 x 220-240/380-415 V 3 x 200-220/346-380 V	3 x 220-277/380-480 V 3 x 200-230/346-400 V 3 x 208-277/360-480 V
MG 80 0.75 kW and 1.10 kW*2	3 x 220-240/380-415 V 3 x 200-220/346-380 V	3 x 200-230/346-400 V 3 x 208-266/360-460 V

*1 Same motor for 50 and 60 Hz
*2 Different motor for 50 and 60 Hz.

Other voltages are available on request.
MTAD 7/7 is available with plug connector, HAN 10 ES, on request.

Maximum ambient temperature

Due to the low density and consequently low cooling effect of the air, operation at an ambient temperature above 40°C or at an altitude exceeding 1000 m above sea level requires a reduction of P_2.



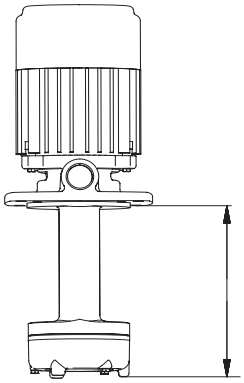
Example:
The above figure shows that P_2 must be reduced to 88% when the pump is installed 3500 m above sea level. At an ambient temperature of 70°C, P_2 must be reduced to 80% of rated output.

Sound pressure level

Motor [kW]	$\bar{L}_{pA}$ [dB(A)]	
	50 Hz	60 Hz
0.18	<70	<70
0.25	<70	<70
0.75	<70	-
1.10	<70	<70

Pump key

The pump key on the pump nameplate indicates whether the pump is a one-chamber or two-chamber pump. The pump nameplate also indicates flow rate and installation length.



Example	MT	A	D	7/7	-	250
Pump range (**M**achine **T**ool)						
Product type						
Two-chamber pump						
Nominal flow rate [m³/h]						
Installation length [mm]						

Curve conditions

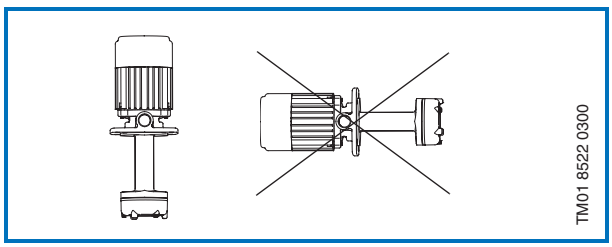
The performance curves are based on the folllowing conditions:

Tolerances: According to ISO 9906 Annex A, if indicated.

Pumped liquid

If the kinematic viscosity is ...	the test liquid is ...
υ = 1 mm²/s (1 cSt)	airless water of a temperature of 20°C

Installation

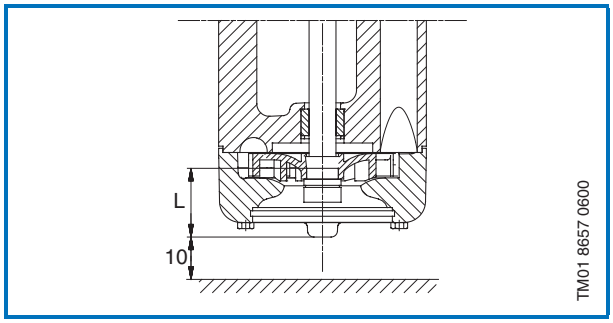


The MTA pump is designed for vertical mounting in a tank.

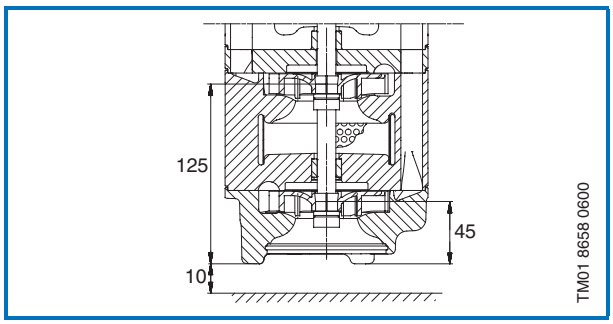
The distance between the bottom of the pump and the bottom of the tank must be at least 10 mm. The pumps are designed to provide full performance down to a level of L mm above the bottom of the pump, see below.

	MTA 3	MTA 4
L [mm]	35	45

MTA 3, MTA 4

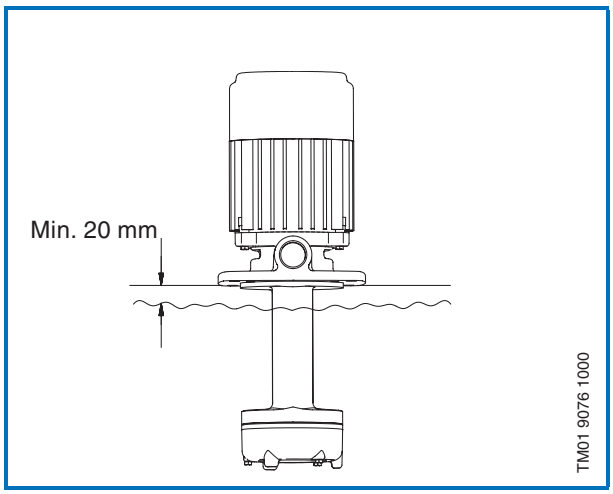


MTAD 7/7



Maximum liquid level

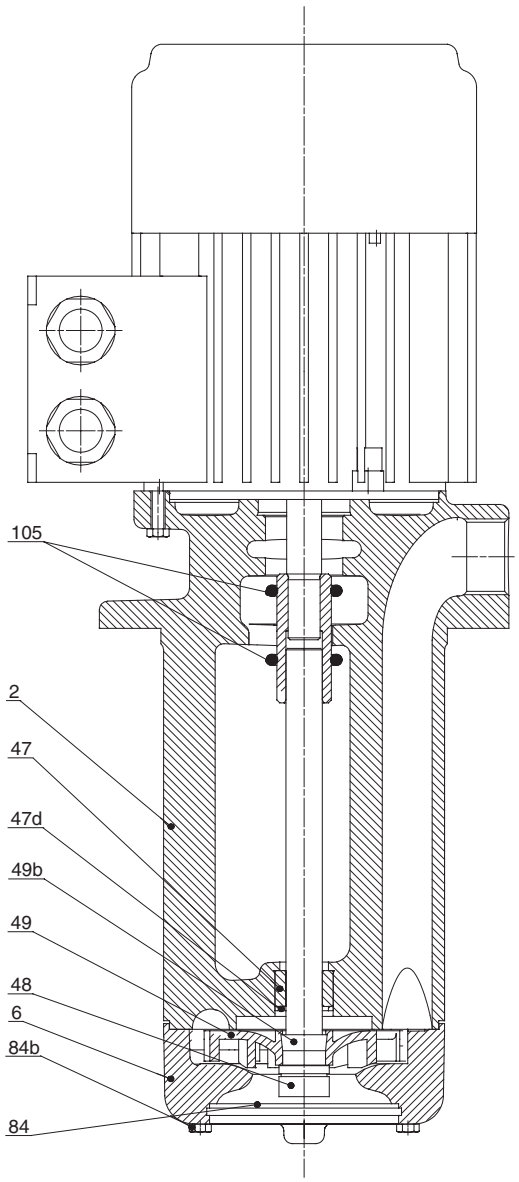
To protect the motor from the pumped liquid, the maximum liquid level in the installation tank must be 20 mm below the top of the tank. See the figure below.



Materials

Pos.	Description	Materials	DIN W.-Nr.	AISI/ASTM
2	Motor stool	Cast iron GG15	0.6015	ASTM 30 B
6	Pump housing	Cast iron GG15	0.6015	ASTM 30 B
47	Bearing	Filled PTFE	-	-
47d	Retaining ring	Stainless steel	1.4305	AISI 304
48	Split cone nut	Stainless steel	1.4401	AISI 316
49	Impeller	Stainless steel	1.4408	AISI 316
49b	Split cone	Stainless steel	1.4301	AISI 304
84	Strainer, ø4 mm holes	Stainless steel	1.4301	AISI 304
84b	Hexagon socket head screw	Stainless steel	1.4301	AISI 304
105	O-ring	NBR		

Sectional drawing MTA 3, MTA 4



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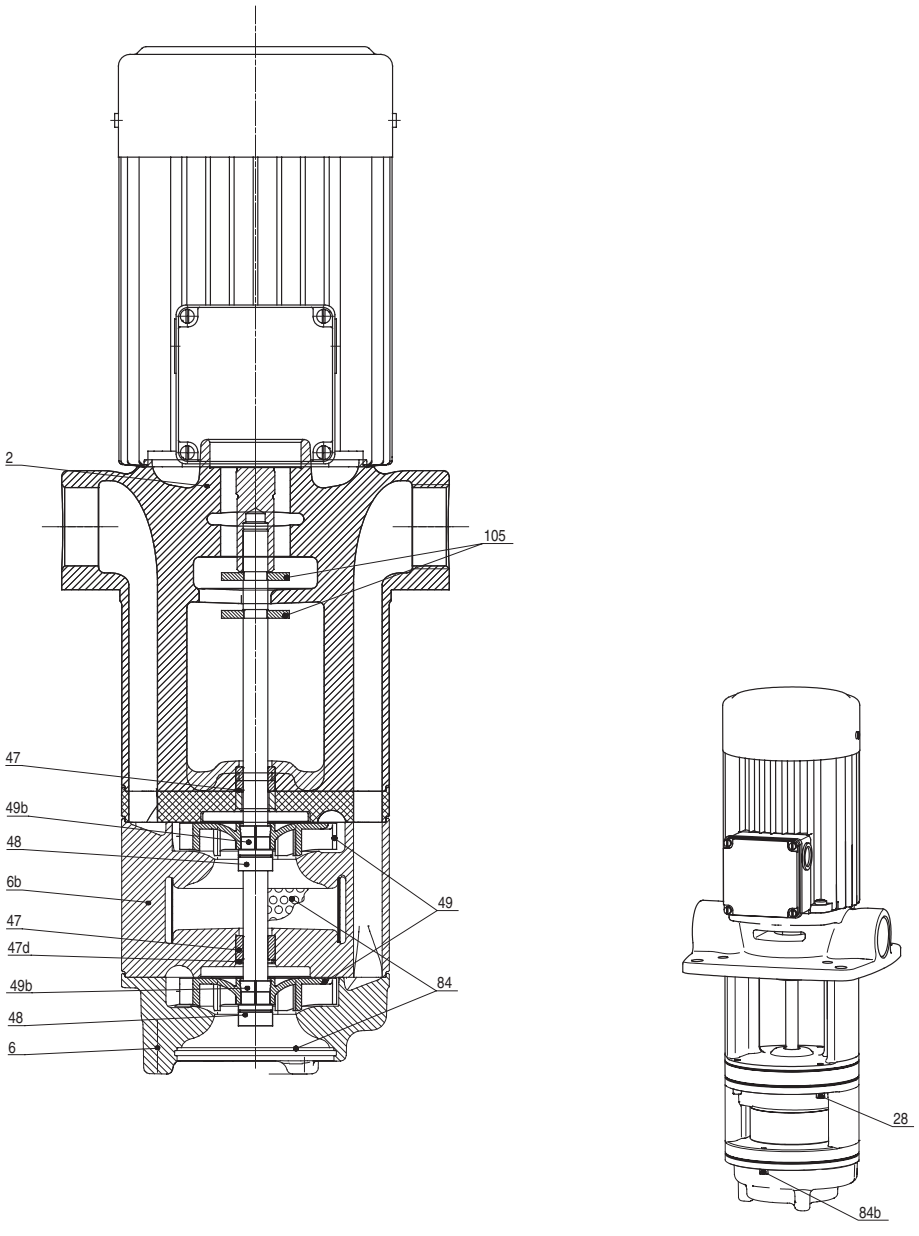
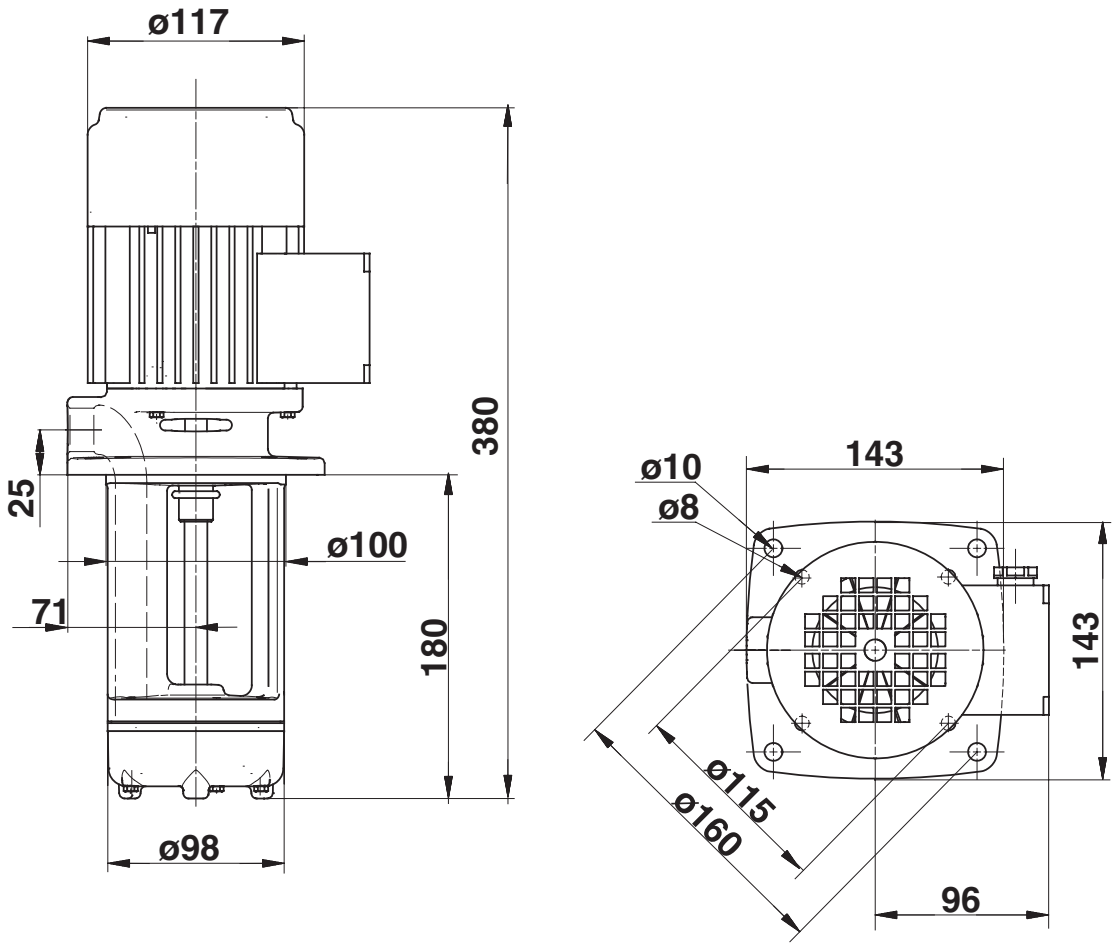
Materials

Pos.	Description	Materials	DIN W.-Nr.	AISI/ASTM
2	Motor stool	Cast iron GG15	0.6015	ASTM 30 B
6	Pump housing lower	Cast iron GG15	0.6015	ASTM 30 B
6b	Pump housing upper	Cast iron GG15	0.6015	ASTM 30 B
47	Bearing	Filled PTFE	-	-
47d	Retaining ring	Stainless steel	1.4305	-
48	Split cone nut	Stainless steel	1.4401	AISI 316
49	Impeller	Stainless steel	1.4408	AISI 316
49b	Split cone	Stainless steel	1.4301	AISI 304
84	Strainer, ø4 mm holes	Stainless steel	1.4301	AISI 304
84b	Hexagon socket head screw	Stainless steel	1.4301	AISI 304
105	Diverting disc	NBR		

Sectional drawing MTAD 7/7



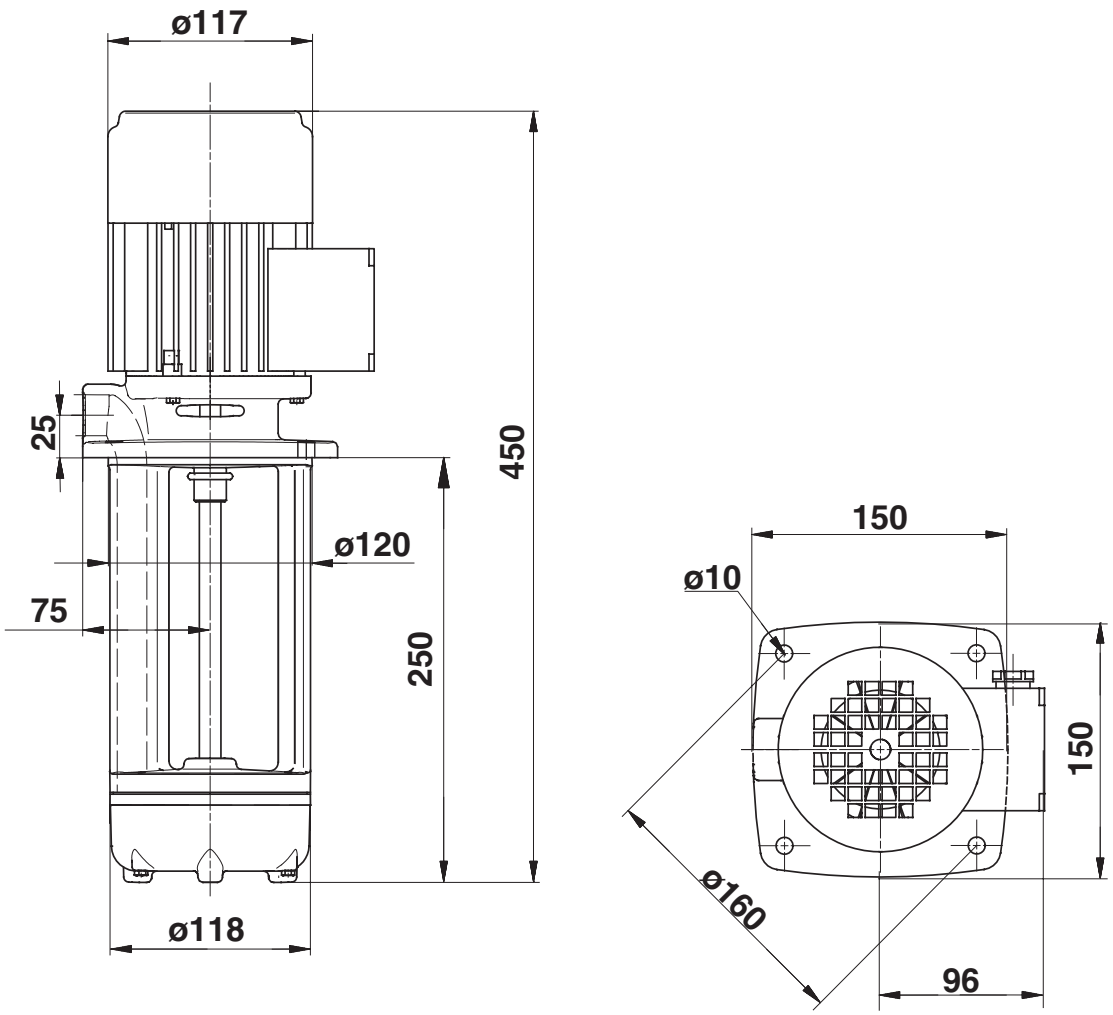
Dimensional sketches MTA 3



Electrical data

Electrical data		Europe	Japan	USA
Supply voltage		3 x 220-240/380-415 V, 50 Hz 3 x 220-277/380-480 V, 60 Hz	3 x 200-220/346-380 V, 50 Hz 3 x 200-230/346-400 V, 60 Hz	3 x 220-240/380-415 V, 50 Hz 3 x 208-277/360-480V, 60 Hz
Motor P1 [W]		220 320	230 320	220 320
I_{MAX} [A]	50 Hz	1.1/0.65	1.45/0.85	1.1/0.65
	60 Hz	1.2/0.7	1.4/0.8	1.2/0.7
$I_{1/1}$ [A]	50 Hz	0.9/0.5	1.3/0.75	0.9/0.5
	60 Hz	1.0/0.6	1.2/0.7	1.0/0.6
Weight [kg]		8.7	8.7	8.7
Connections		Rp ¾	Rp ¾	¾ NPT
Product number		96 43 04 85	96 43 23 36	96 43 31 35

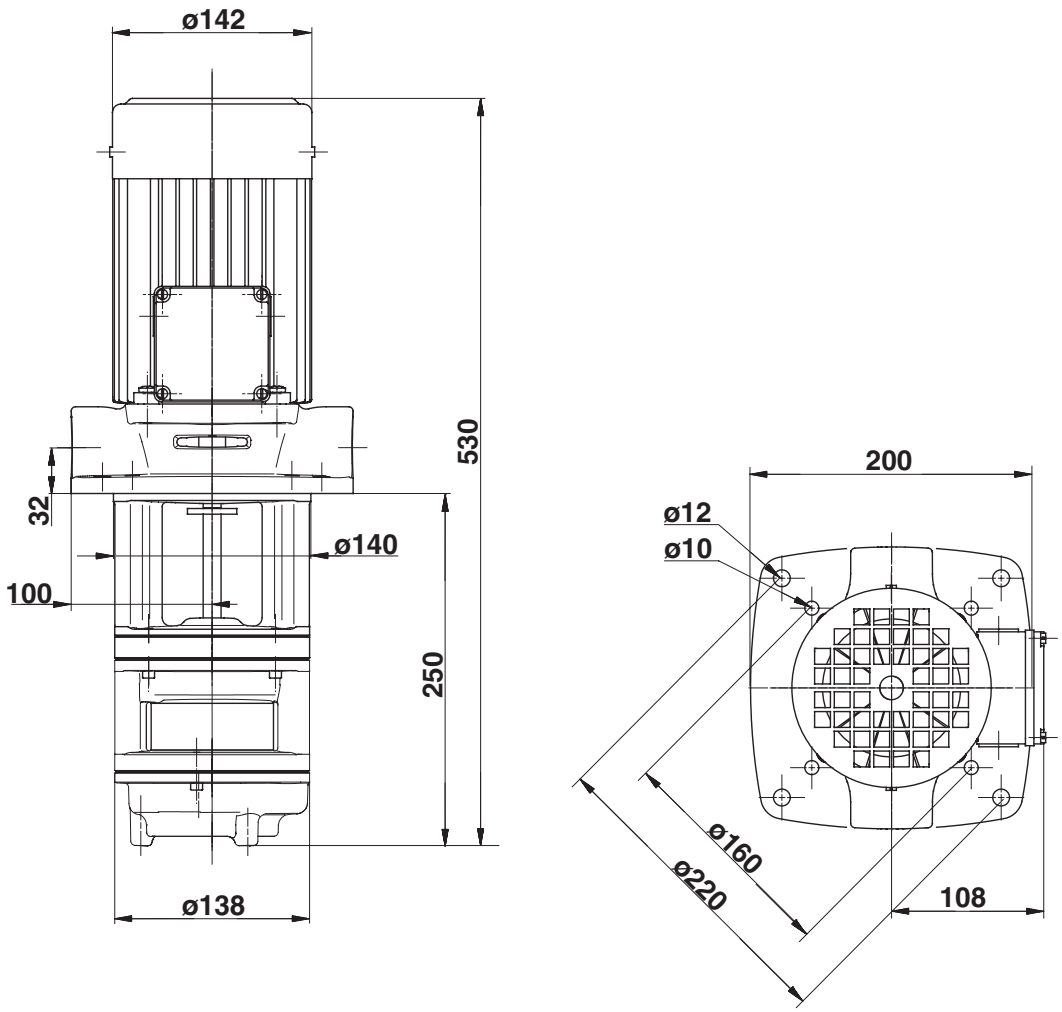
Dimensional sketches MTA 4



Electrical data

Electrical data		Europe	Japan	USA
Supply voltage		3 x 220-240/380-415 V, 50 Hz 3 x 220-277/380-480 V, 60 Hz	3 x 200-220/346-380 V, 50 Hz 3 x 200-230/346-400 V, 60 Hz	3 x 220-240/380-415 V, 50 Hz 3 x 208-277/360-480V, 60 Hz
Motor P1 [W]		360 560	370 550	360 560
I_{MAX} [A]	50 Hz	1.45/0.85	1.9/1.1	1.45/0.85
	60 Hz	1.8/1.05	2.0/1.15	1.80/1.05
$I_{1/1}$ [A]	50 Hz	1.3/0.75	1.65/0.95	1.3/0.75
	60 Hz	1.65/0.95	1.80/1.05	1.65/0.95
Weight [kg]		10.5	10.5	10.5
Connections		Rp ¾	Rp ¾	¾ NPT
Product number		96 43 04 91	96 43 23 37	96 43 31 36

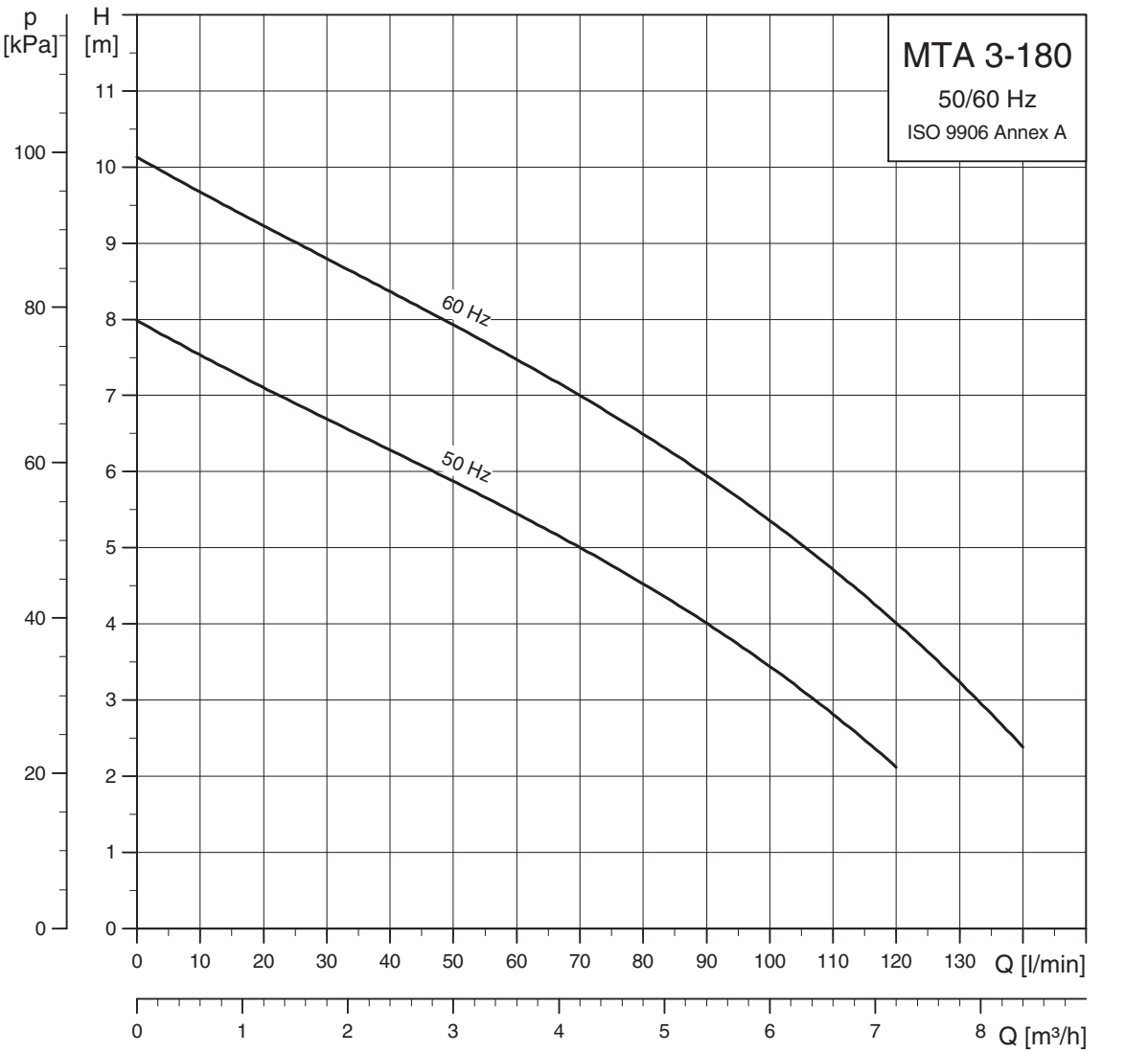
Dimensional sketches MTAD 7/7

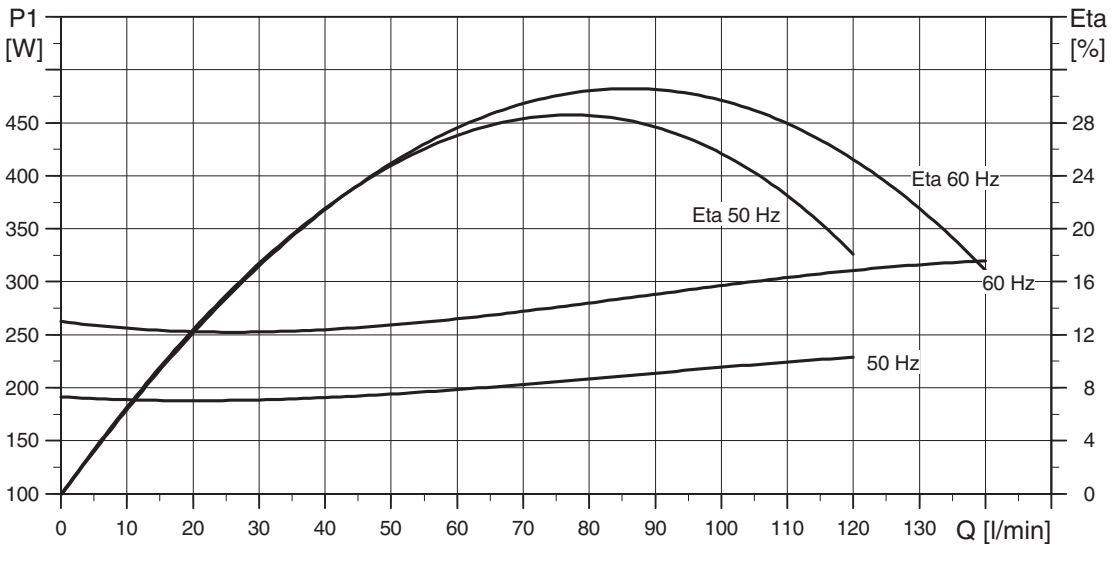


Electrical data

Electrical data		Europe	Japan	USA
Supply voltage		3 x 220-240/380-415 V, 50 Hz	3 x 200-220/346-380 V, 50 Hz 3 x 200-230/346-400 V, 60 Hz	3 x 208-266/360-460V, 60 Hz
Motor P1 [W]		1050	1050 1600	1600
I_{MAX} [A]	50 Hz	4.0/2.2	5.7/3.3	-
	60 Hz	-	6.6/3.8	5.7/3.3
$I_{1/1}$ [A]	50 Hz	3.6/2.0	5.4/3.1	-
	60 Hz	-	5.9/3.4	5.4/3.1
Weight [kg]		24.2	24.4	24.4
Connections		Rp 1¼	Rp 1¼	1¼ NPT
Product number		96 43 05 00	96 43 23 38	96 43 31 37

Performance curves, Europe





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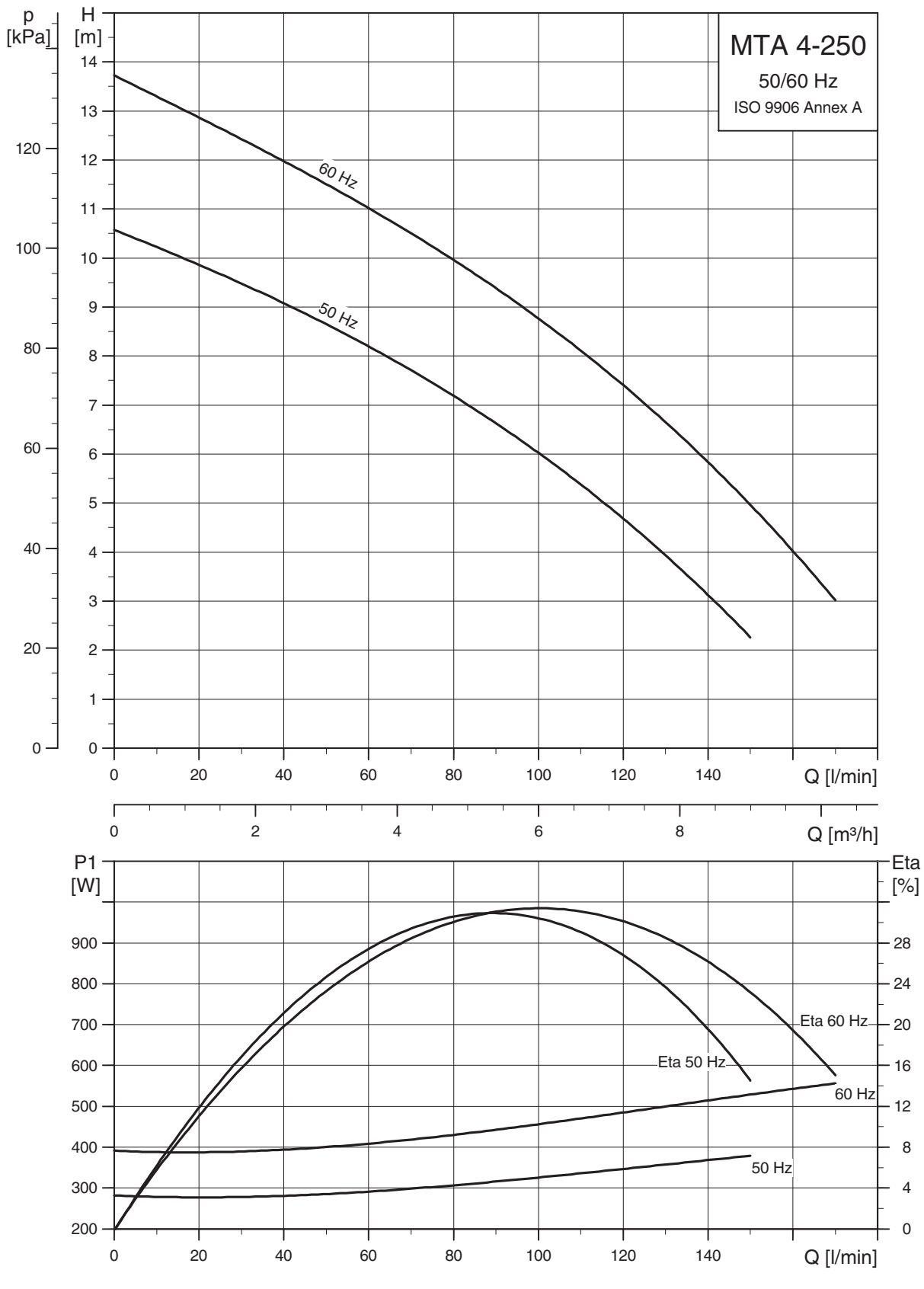
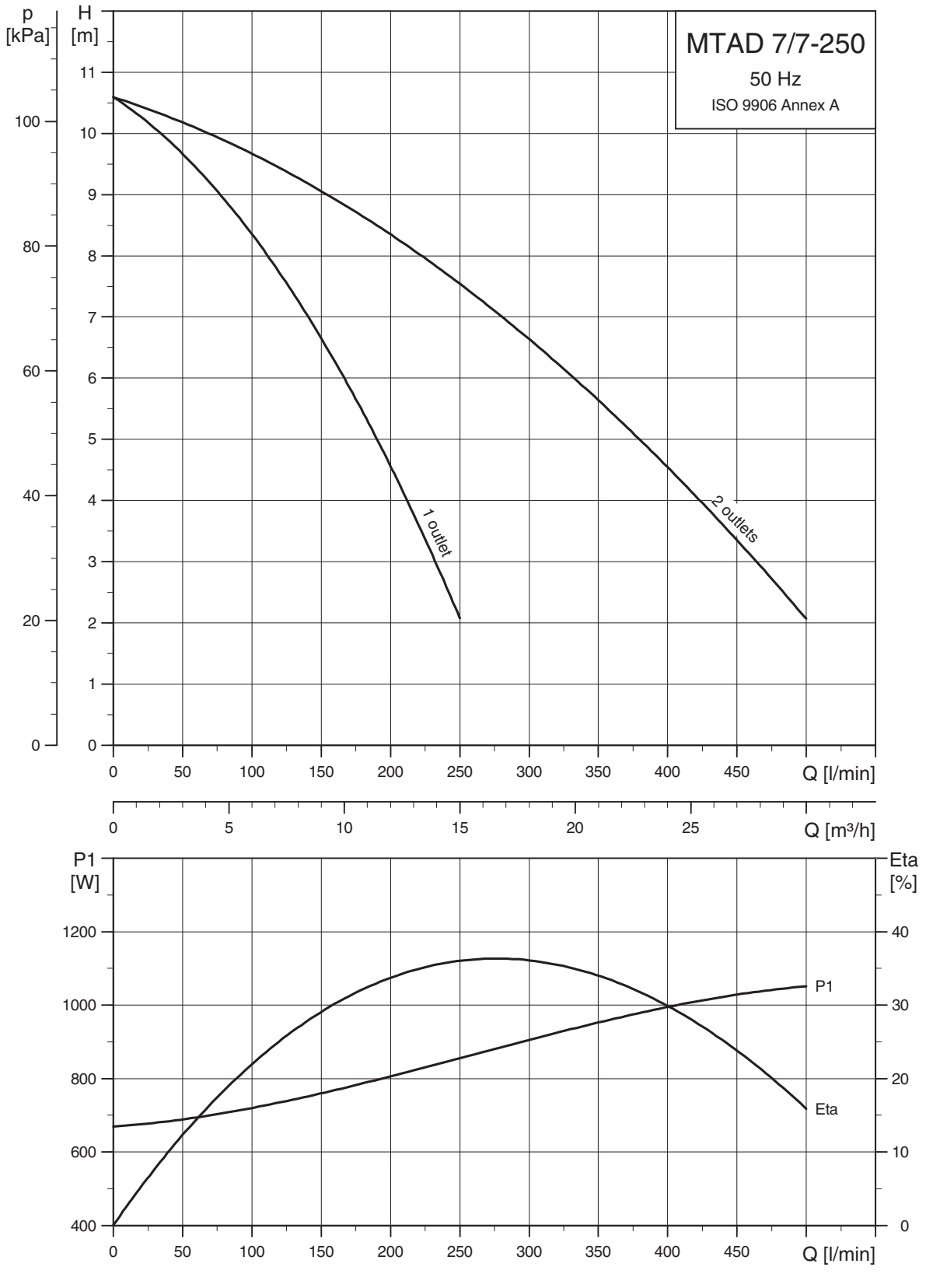
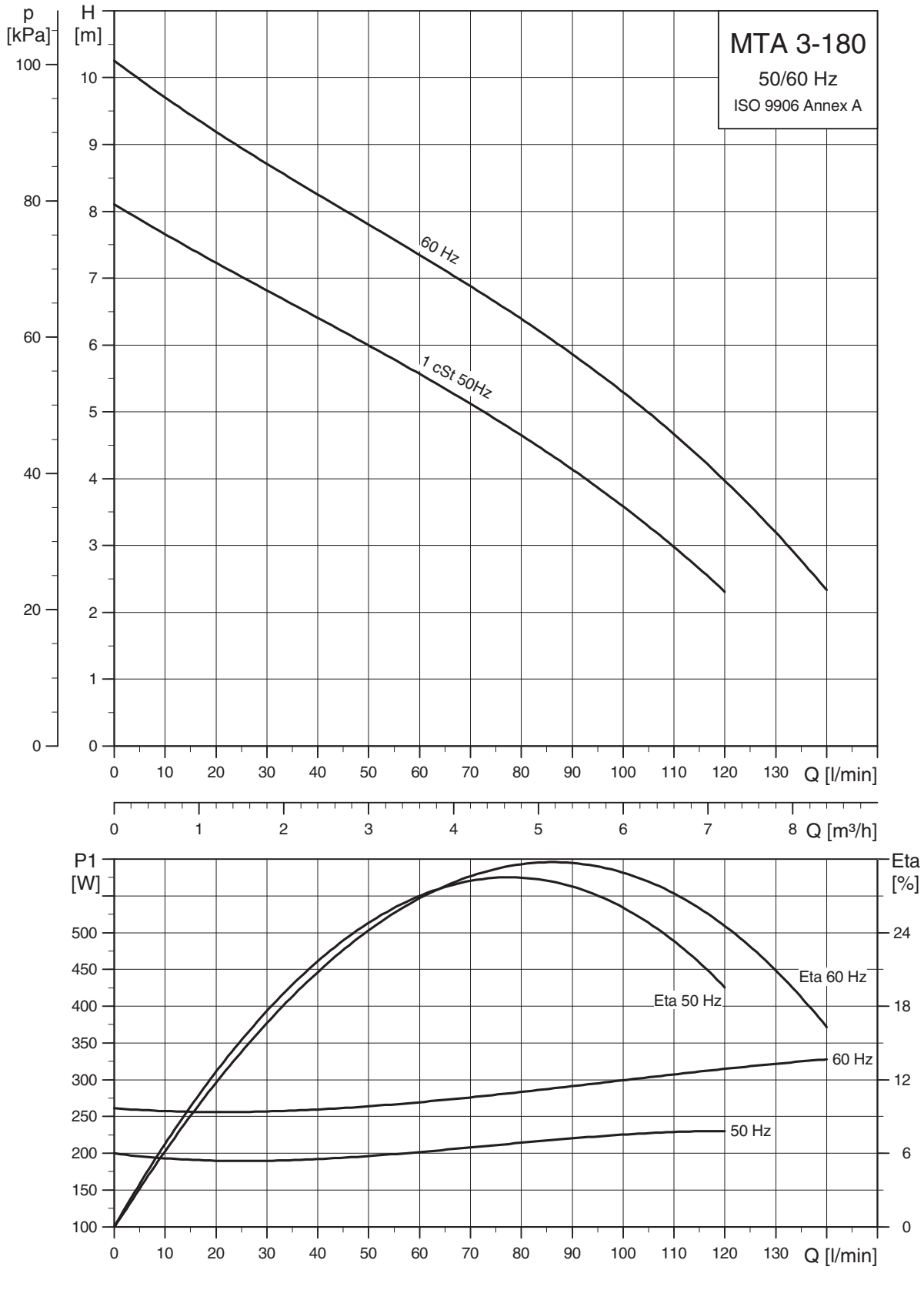
Performance curves, Europe



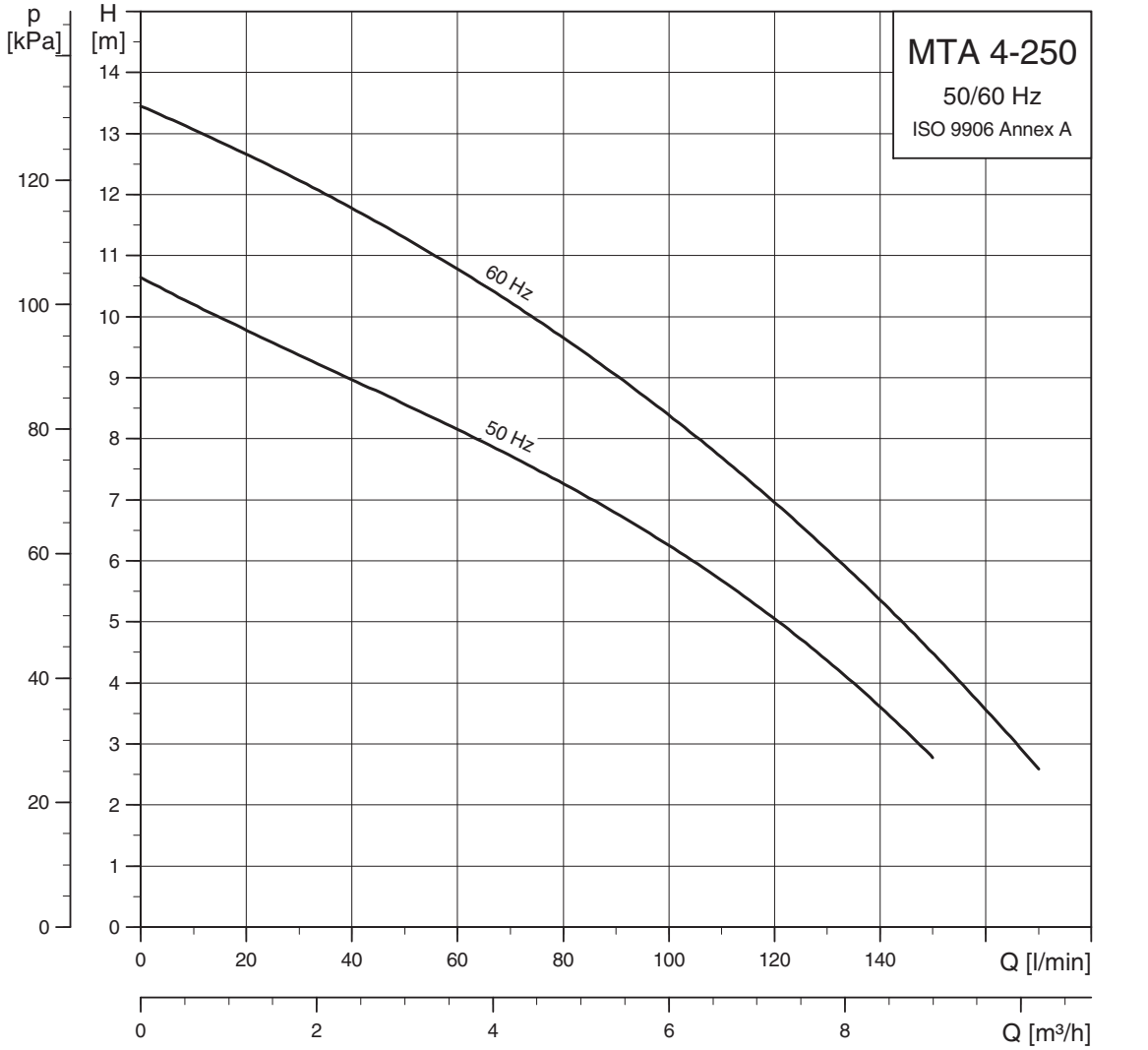
Performance curves, Europe

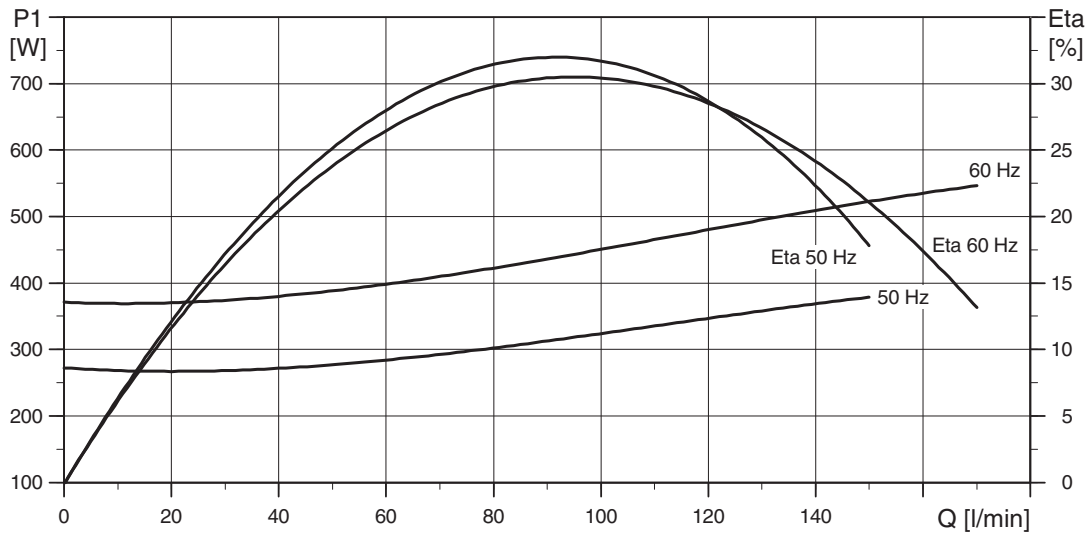


Performance curves, Japan



Performance curves, Japan





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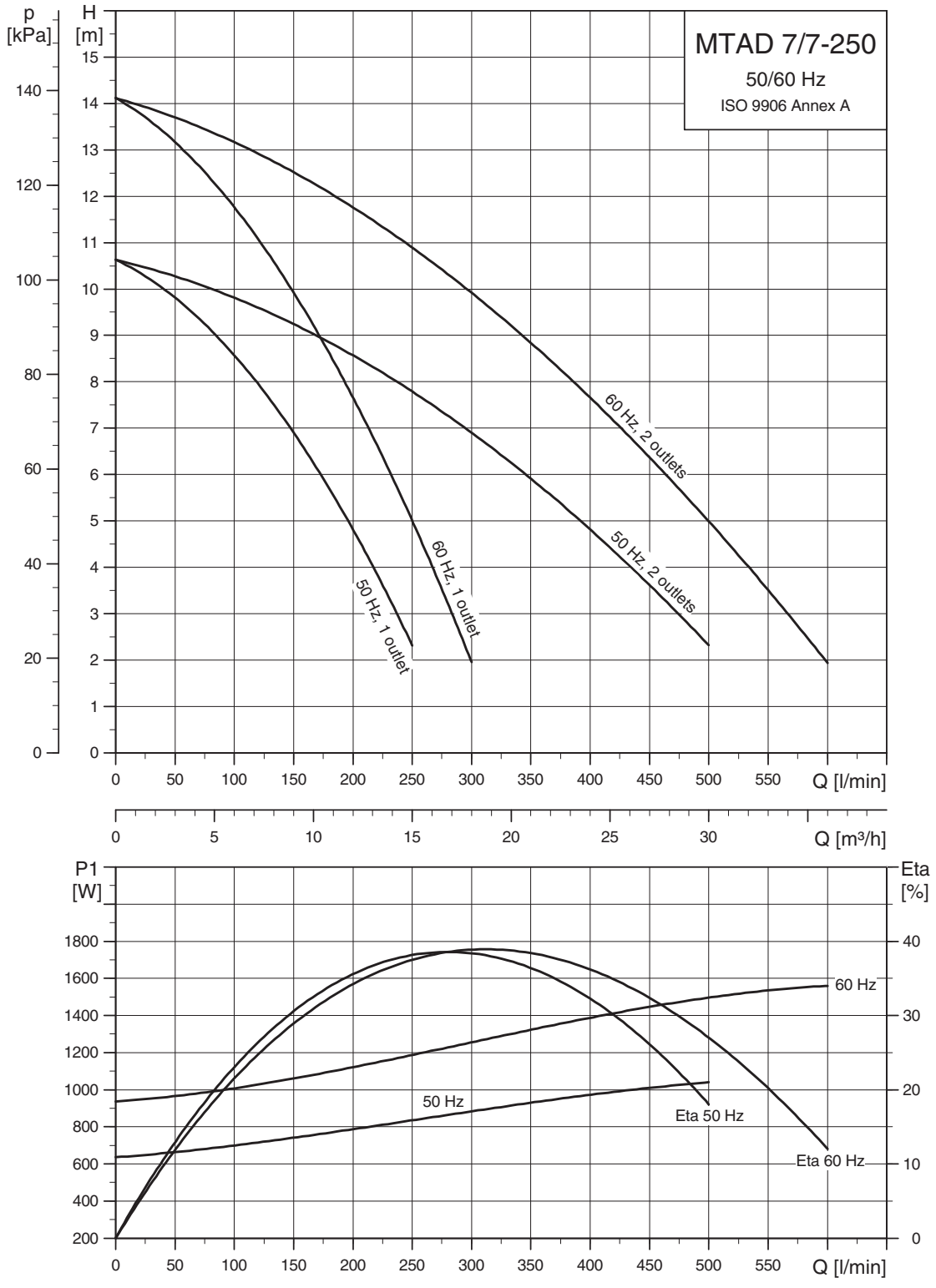
Performance curves, Japan



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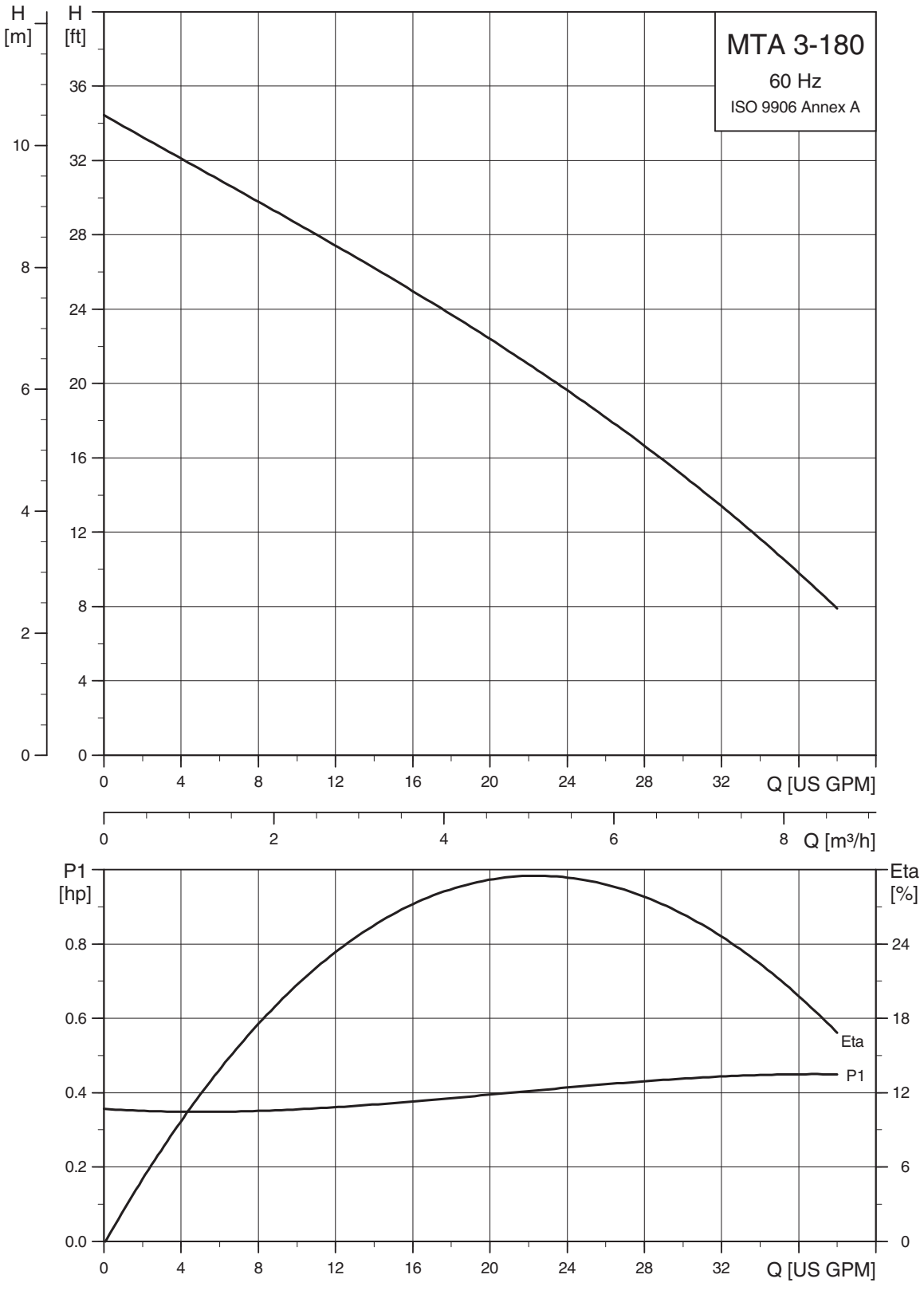
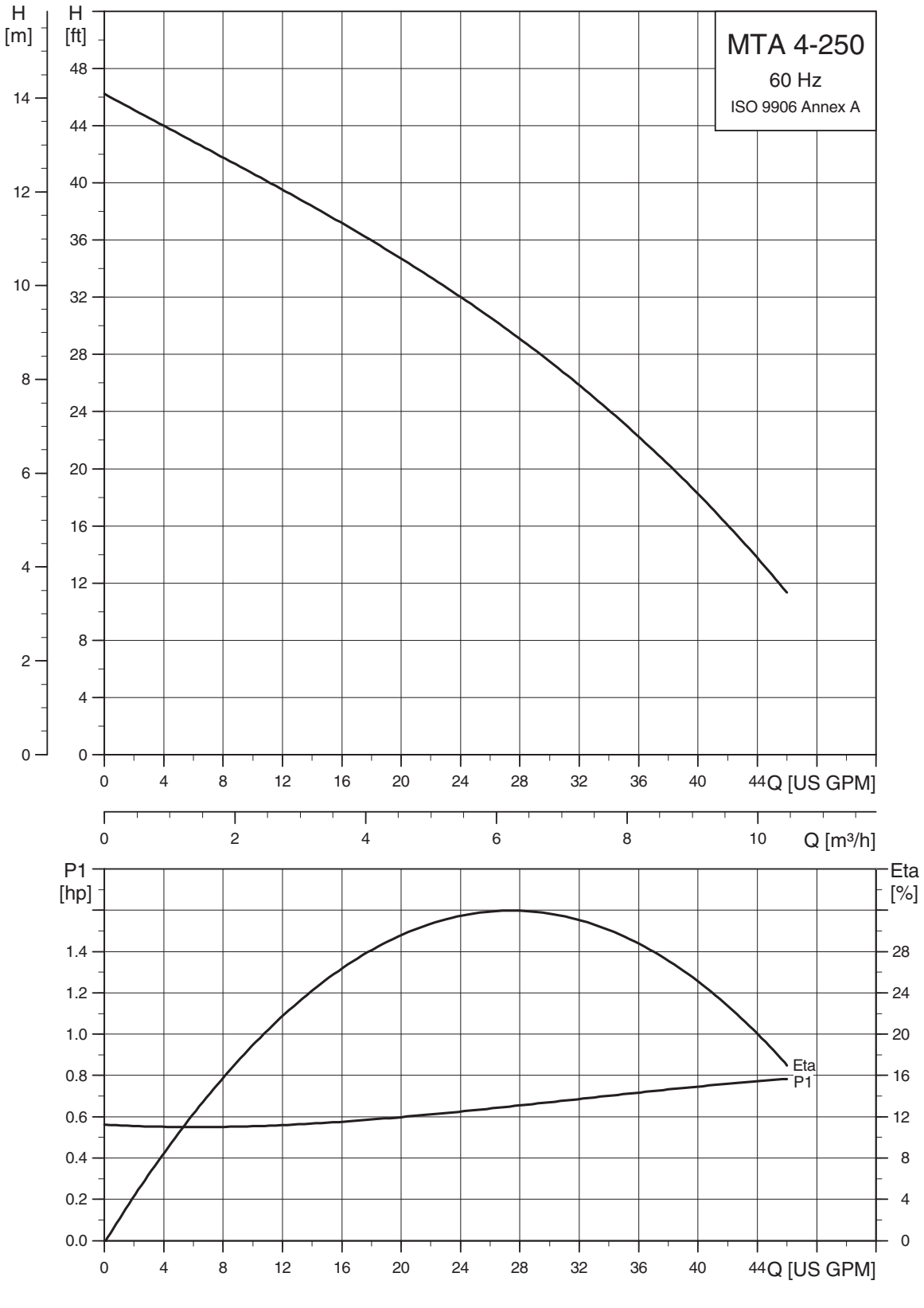
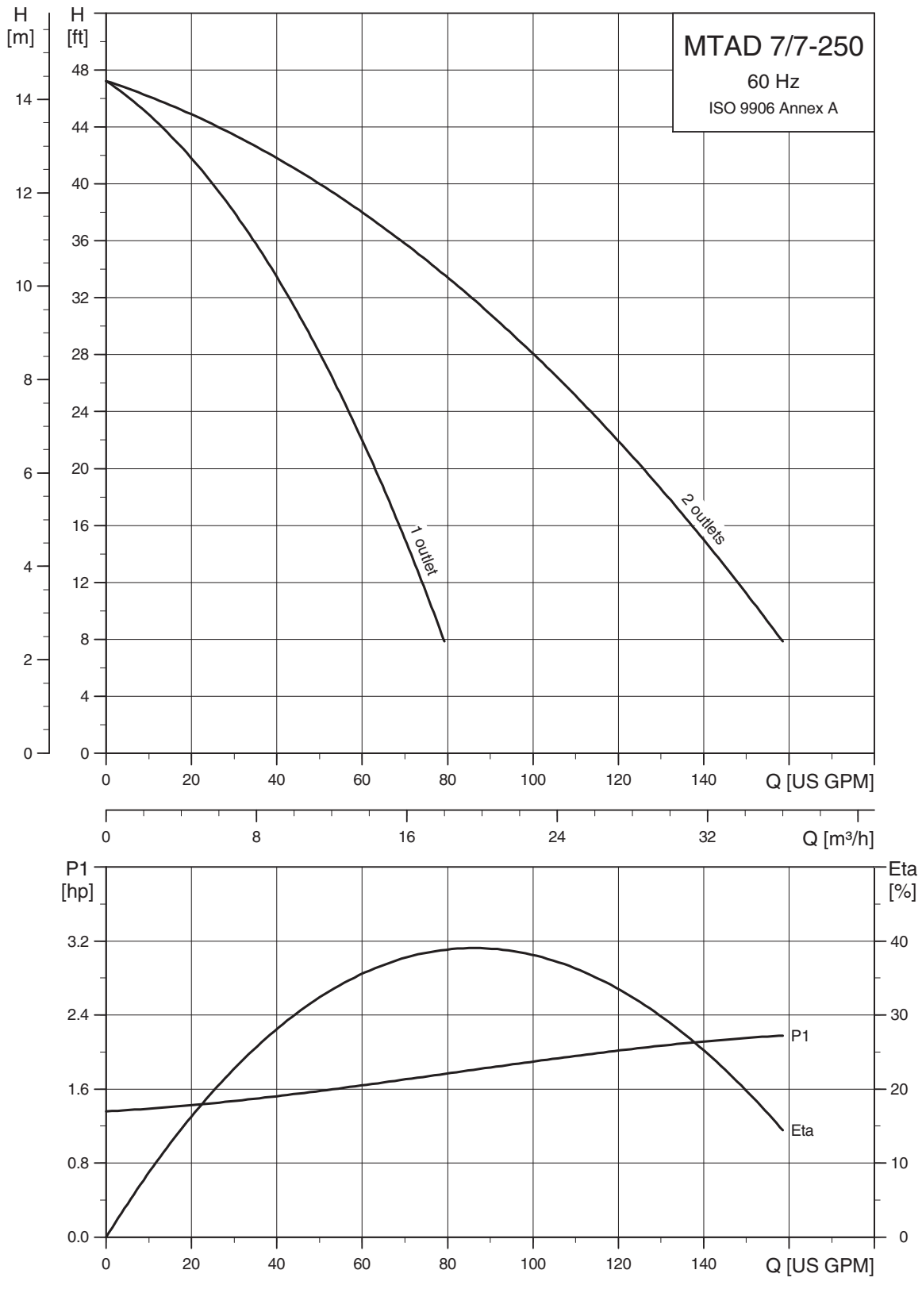
Performance curves, USA



Performance curves, USA



Performance curves, USA



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Subject to alterations.

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