

**hydroo<sup>®</sup>**

**MDROO SERIES**

**MXO/MXC**

**Horizontal  
single-stage  
centrifugal pump**





## PRESENTATION

**HYDROO has set up a worldwide distribution network together with key partners, providing value to pump engineers and end users. Ours is a wide range product portfolio with high-end solutions for the pumping business in many applications including water supply, booster sets, fire-fighting sets, borehole wells, HVAC, drainage and sewage, utilities, irrigation, desalination and RO sets, OEM Integration among many others. We provide solutions for all the markets of 50 Hz and 60 Hz, including customized versions.**

**HYDROO has a factory in Palol de Revardit (Catalonia-Spain) sized to guarantee our reliable, long-term based, personalized treatment and best service to all our customers. We can provide a wide range of products in an extremely short delivery time from our factory, thanks to our Lean manufacturing processes and our qualified professional and enthusiastic team.**

**We have compiled our commitment with ethics and legislation in relation to third parties in a public document of principles. The document has been worked with the entire Hydroo team and its deployment has been started with a committee that will ensure compliance and strengthening of the business culture in the company.**

**The expansion of HYDROO by means of excellence in operations and successful business relationship with our partners is symbolized in the growth pace in the target markets and the valuable timely and effective service. We are yearly fully audited by SGS for ISO9001 and ISO14000.**

**At HYDROO we bet on a high level service to our value pump partners.**

# MXC MXO

Open impeller  
single stage pumps

## Applications

Cooling systems, main HVAC applications, industrial washing machines, supply of water in buildings, farms or fountains

## Description

Single stage pump, monobloc version, made of AISI304 SS with open (MXO) or semi open impeller (MXC) available for demanding applications with temperatures between -10 °C and +90 °C. Single stage version also available up to 2,2 kW.

## Performance range

Flow rate: up to 60 m<sup>3</sup>/h

Head: up to 22 m

Temperature: -10 °C to +90 °C

Speed: 2950 rpm

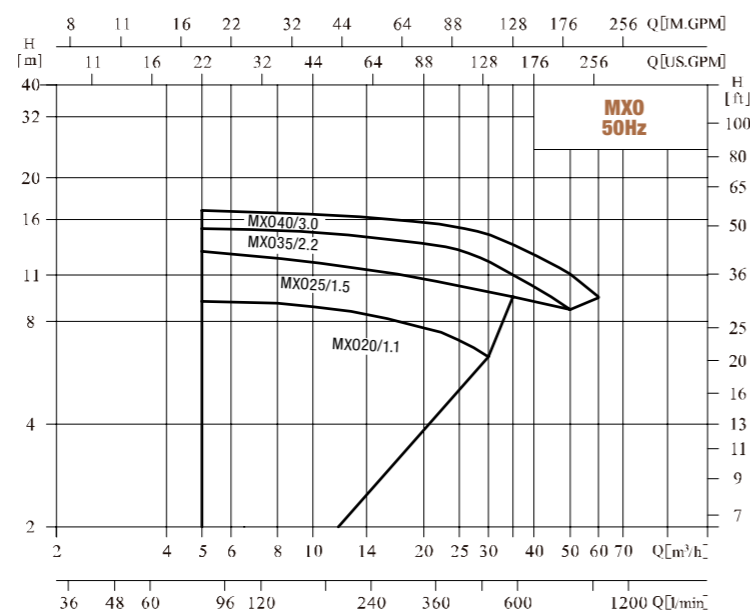
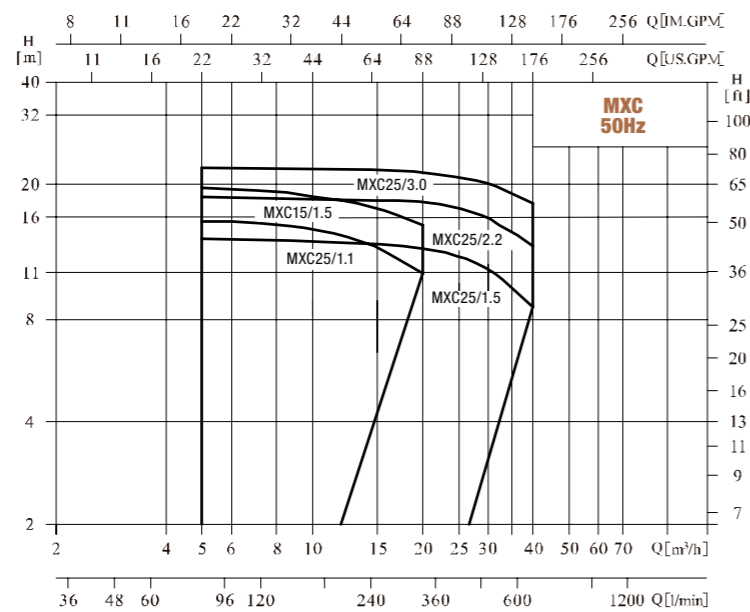
Power: up to 3 kW

## Standard material

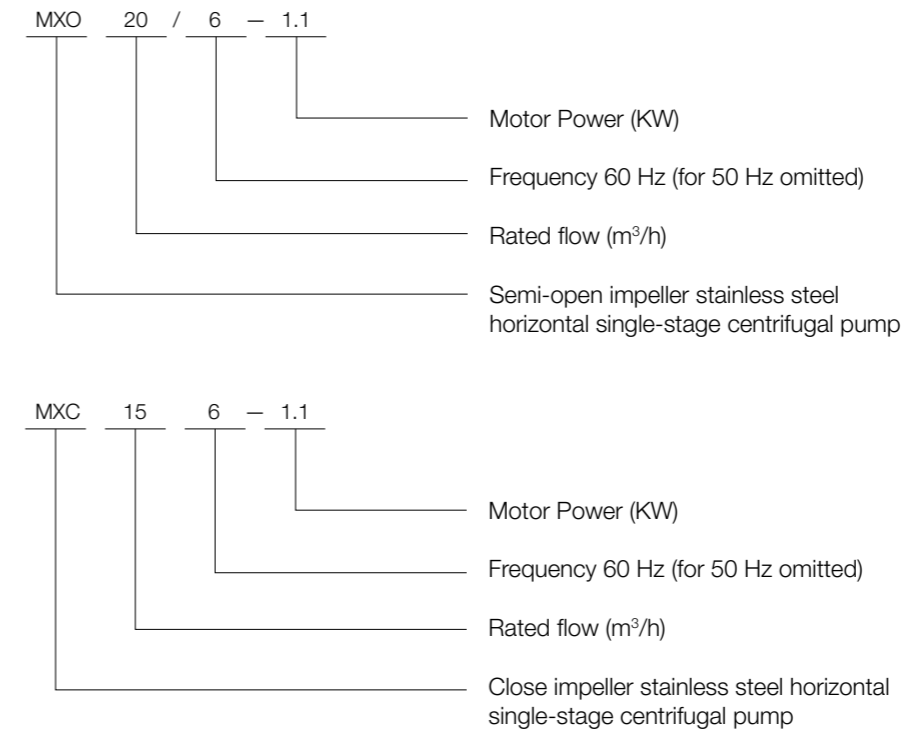
Fully made of AISI304 SS.



## Performance scope



## Definition of model



## Structure features

– **MXO**: semi-open impeller stainless steel horizontal single-stage centrifugal pump. **MXC**: close impeller stainless steel horizontal single-stage centrifugal pump. They are axial suction and radial discharge.

– Compact structure, the pump is connected with motor directly and fit with the same shaft.

– Easy for connection. They are thread and cutting ferrule connection for inlet and outlet.

– Light weight, casing is welded by punching thin plate. MXO impeller is investment casting part. MXC impeller is welded by punching thin plate.

– A little corrosion proof. Wet parts are in AISI 304 or AISI 316 stainless steel.

## Application

### MXO:

– Domestic water.

– Water supply for industrial washing machine.

– Water supply and drainage.

– Washing and surface cleaning for households.

### MXC:

– Cooling, air condition and heating system.

– Cooling device.

– Washing device.

– Pressurization and transportation of water for domestic and industry.

## Operating condition

– Liquid temperature: -10 °C ~ +90 °C.

– Ambient temperature: up to +40 °C.

– Altitude: up to 1000m.

– Max. Pressure of the system is 8 bar.

## Motor

– TEFC motor, 2-pole.

– Protection class: IP 55.

– Insulation class: F.

– Standard voltage:

1 x 220 V

3 x 380V/3 x 220V

– Max. power of 1ph motor: 2.2 kW.

## Installation requirements

– The pump shall be fastened on the base horizontally. When installing, please ensure the pump will not be forced by tension of the pipeline.

– The installation of the pump shall ensure that the pump will not be influenced by the tension of the pipeline.

– The pump shall be installed on the ventilation and anti-freezing place. The pump will not be damaged by lack of phase, unstable voltage, current leakage and overload when electrical connection.

## Curves

The guidelines below apply to the curves shown on the next pages:

– All curves are based on the measured values of motor 3 x 380V, 50Hz: under the constant speed of 2900 rpm, 60 Hz: under the constant speed of 3450 rpm.

– Tolerances to ISO9906, Annex A, if indicated.

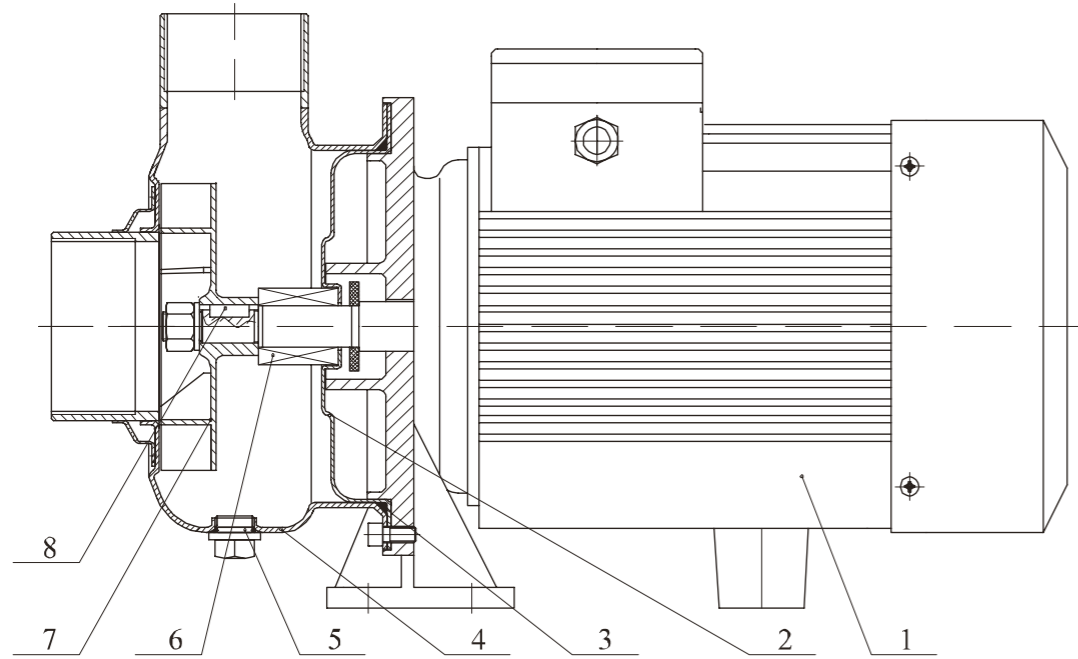
– Measurement were made with airless water temperature of 20 °C

– The curves apply to a kinematic viscosity of  $\mu=1\text{mm}^2/\text{sec}$  (1 cSt).

– The bold curves indicate the recommended performance range. Do not operate pump exceeding the performance scope to prevent from motor overload region to prevent overload.

# MXO

## Section drawing

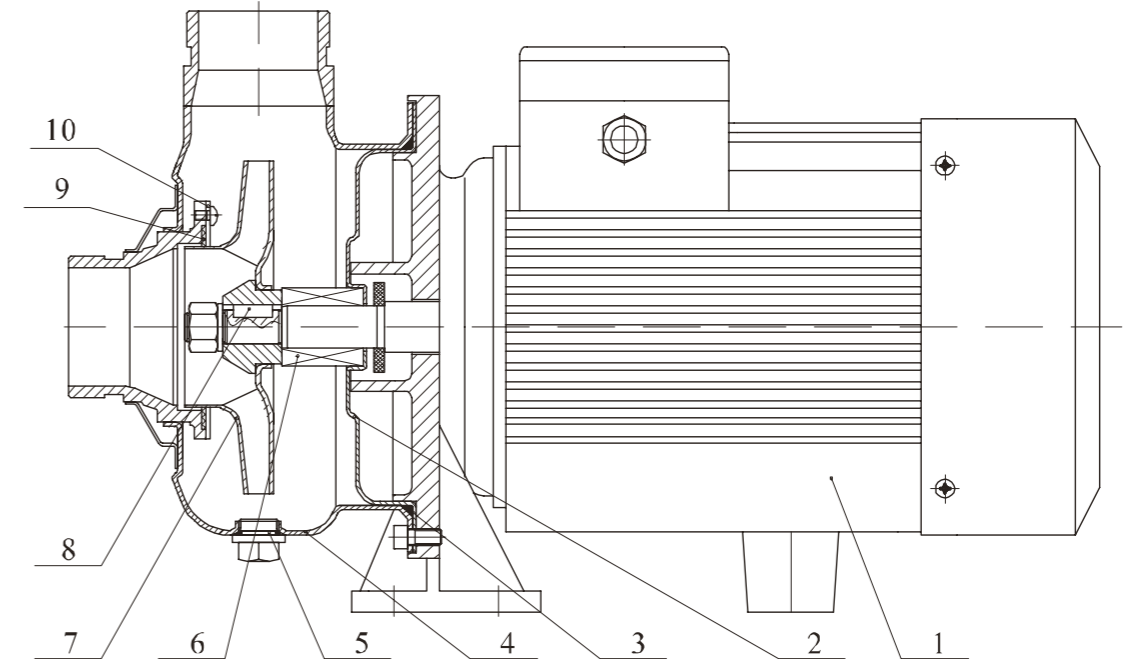


## Material

N°	Parts	Material	AISI/ASTM
1	Motor		
2	Seal base plate	Stainless steel	AISI304
3	O ring	NBR	
4	Casing	Stainless steel	AISI304
5	Plug	Stainless steel	AISI304
6	Mechanical seal	Carbon / Silicon Fluoride	
7	Impeller	Stainless steel	AISI304
8	Key	Stainless steel	AISI304

# MXC

## Section drawing

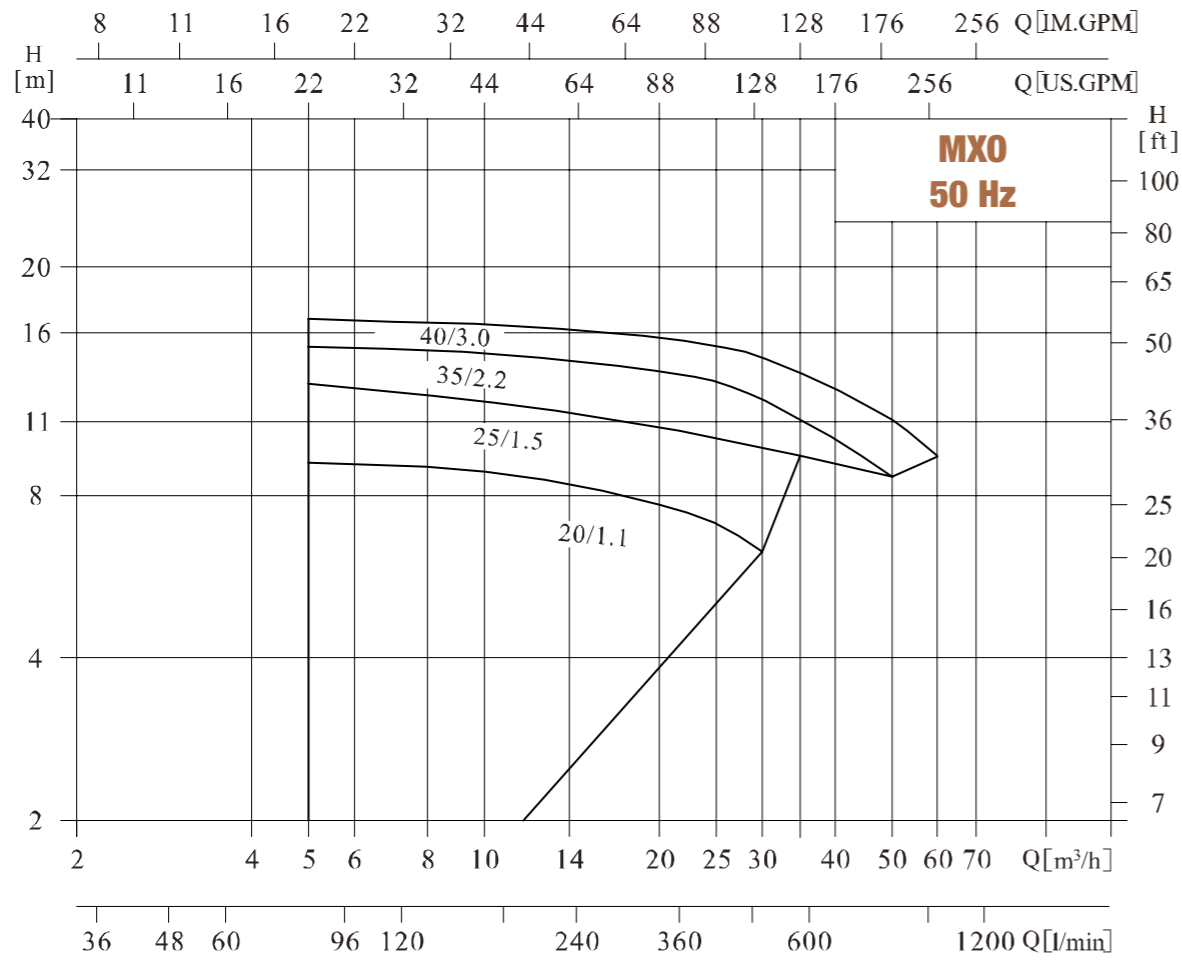


## Material

N°	Parts	Material	AISI/ASTM
1	Motor		
2	Seal base plate	Stainless steel	AISI304
3	O ring	NBR	
4	Casing	Stainless steel	AISI304
5	Plug	Stainless steel	AISI304
6	Mechanical seal	Carbon / Silicon Fluoride	
7	Impeller	Stainless steel	AISI304
8	Key	Stainless steel	AISI304
9	Neck ring	F4	
10	Neck ring cover	Stainless steel	AISI304

# MXO 50 Hz

## Scope of performance

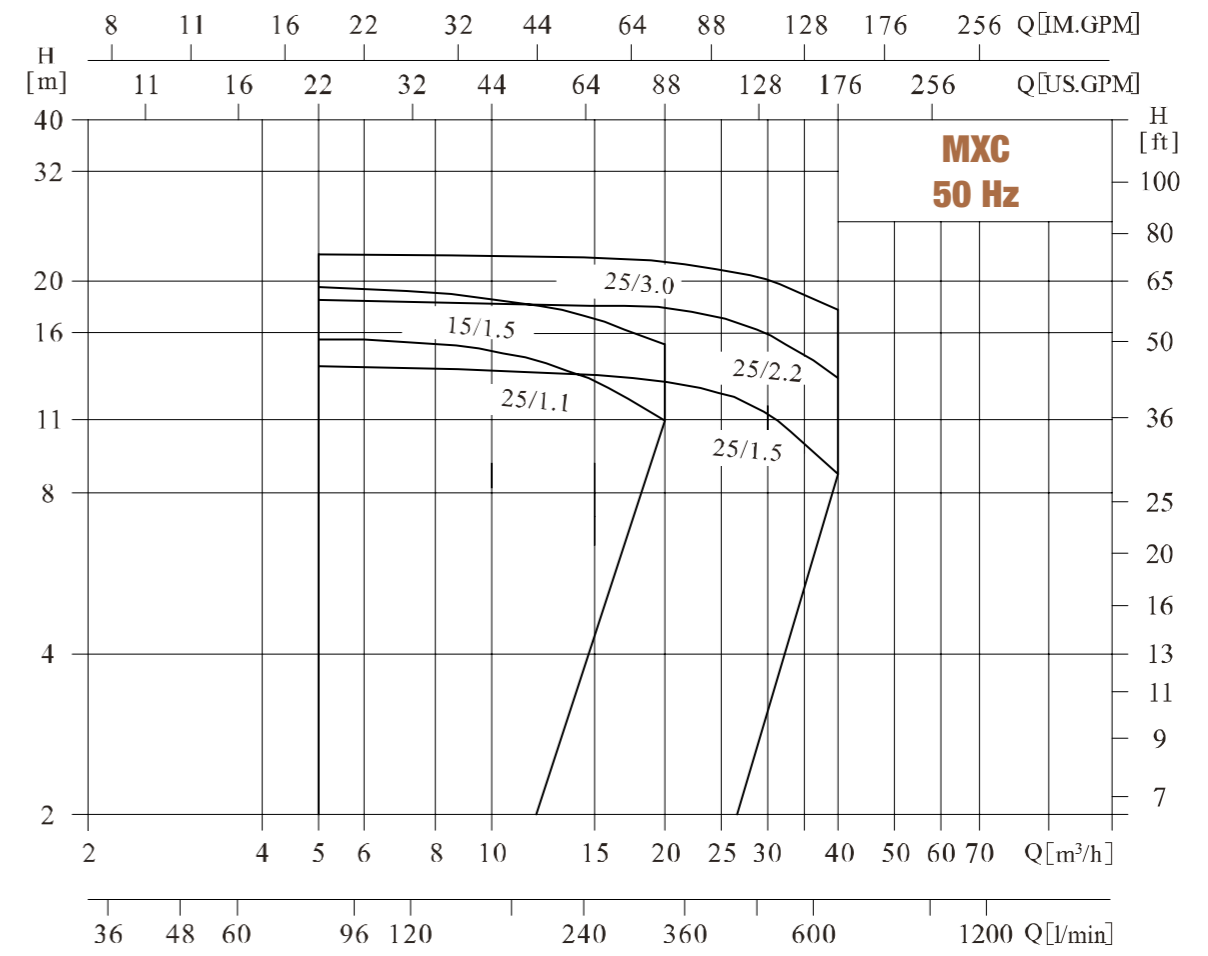


## Performance

Model	Motor (KW)	Q (m³/h)	5	10	20	25	30	35	40	50	60
MXO 20/1.1	1.1	H (m)	9.2	8.9	7.5	7.1	6.3				
MXO 25/1.5	1.5		12.5	11.9	11	10	9.5	9			
MXO 35/2.2	2.2		15.1	14.7	13.6	13	12.2	11	10.2	8.7	
MXO 40/3.0	3.0		17	16.6	15.7	15.2	14.5	13.5	12.5	11.3	9.5

# MXC 50 Hz

## Scope of performance

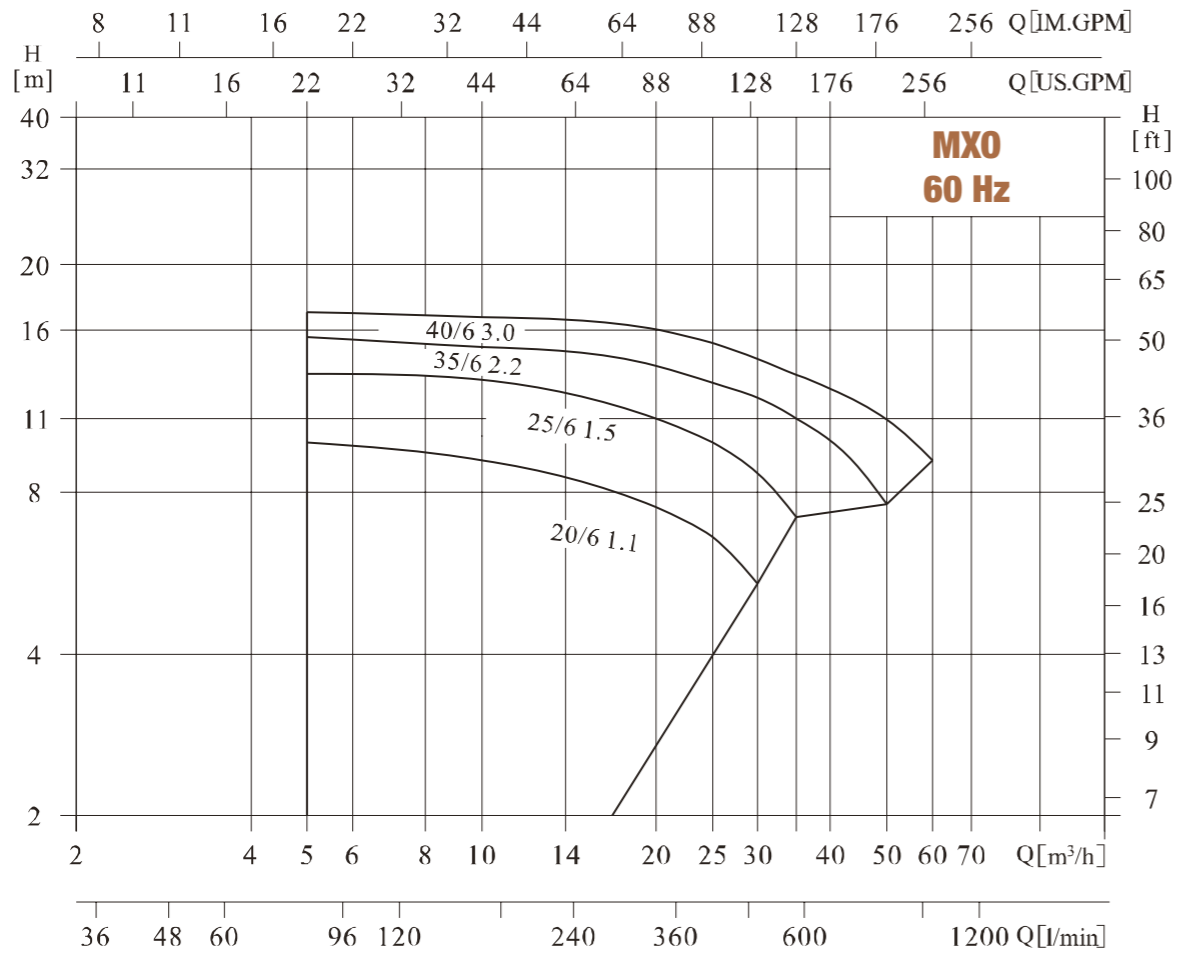


## Performance

Model	Motor (KW)	Q (m³/h)	5	10	15	20	25	30	35	40
MXC 15/1.1	1.1	H (m)	15.2	14.8	13	10.9				
MXC 15/1.5	1.5		19.5	18.5	17	15.2				
MXC 25/1.5	1.5		13.8	13.6	13.3	12.9	12	11.3	9.9	8.7
MXC 25/2.2	2.2		18.4	18.1	18	17.8	17	15.9	14.5	13.1
MXC 25/3.0	3.0		22.4	22.3	22.1	21.7	21	20.1	18.8	17.6

# MXO 60 Hz

## Scope of performance

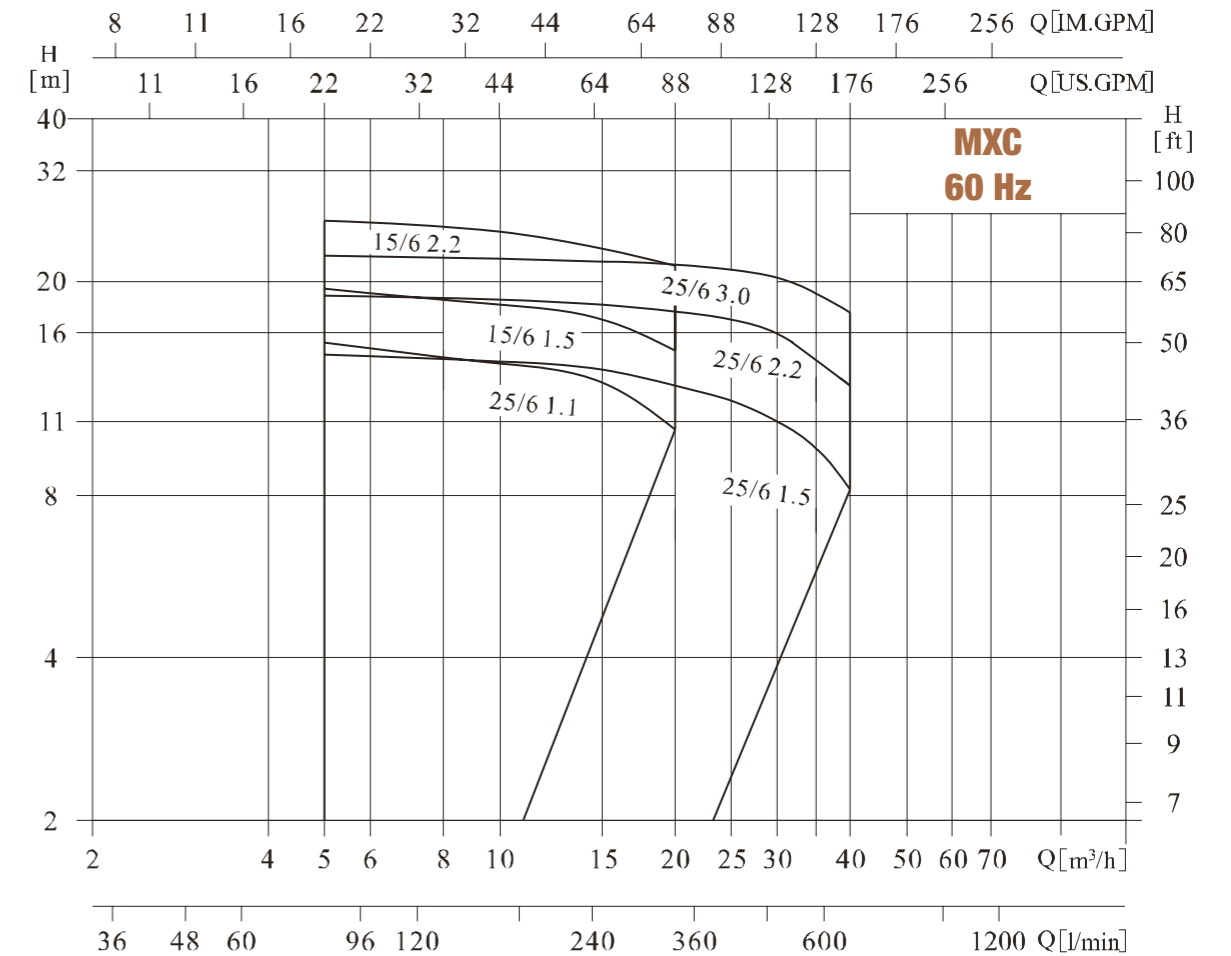


## Performance

Model	Motor (KW)	Q (m³/h)	5	10	20	25	30	35	40	50	60
MXO 20/6 1.1	1.1	H (m)	9.9	9.2	7.5	6.6	5.4				
MXO 25/6 1.5	1.5		13.3	12.6	10.8	10	8.7	7.2			
MXO 35/6 2.2	2.2		15.6	15	13.8	12.8	12	11	10	7.6	
MXO 40/6 3.0	3.0		17.6	17	16	15.2	14.2	13.2	12.5	11	9.2

# MXC 60 Hz

## Scope of performance

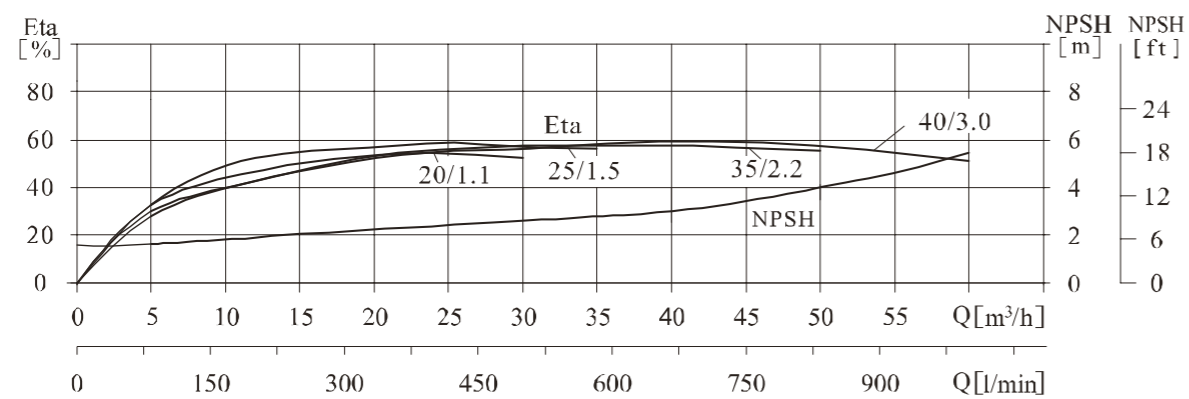
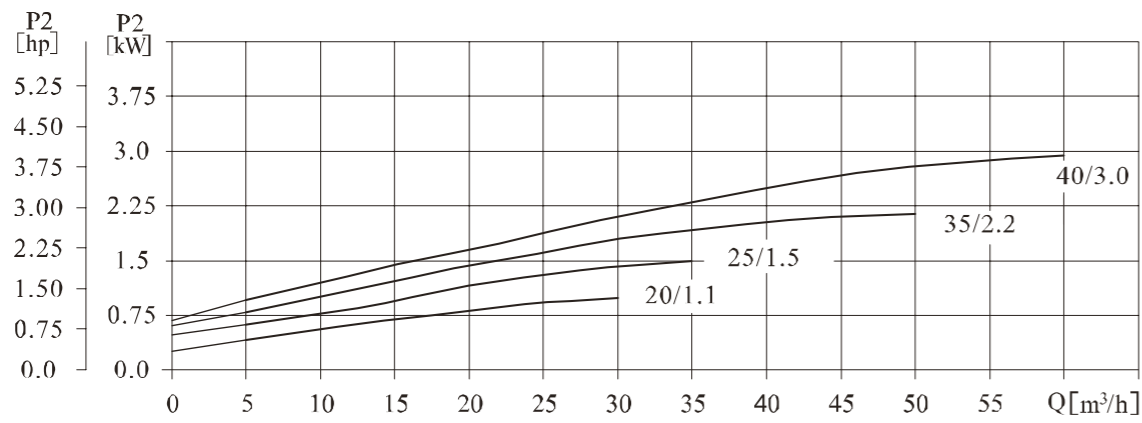
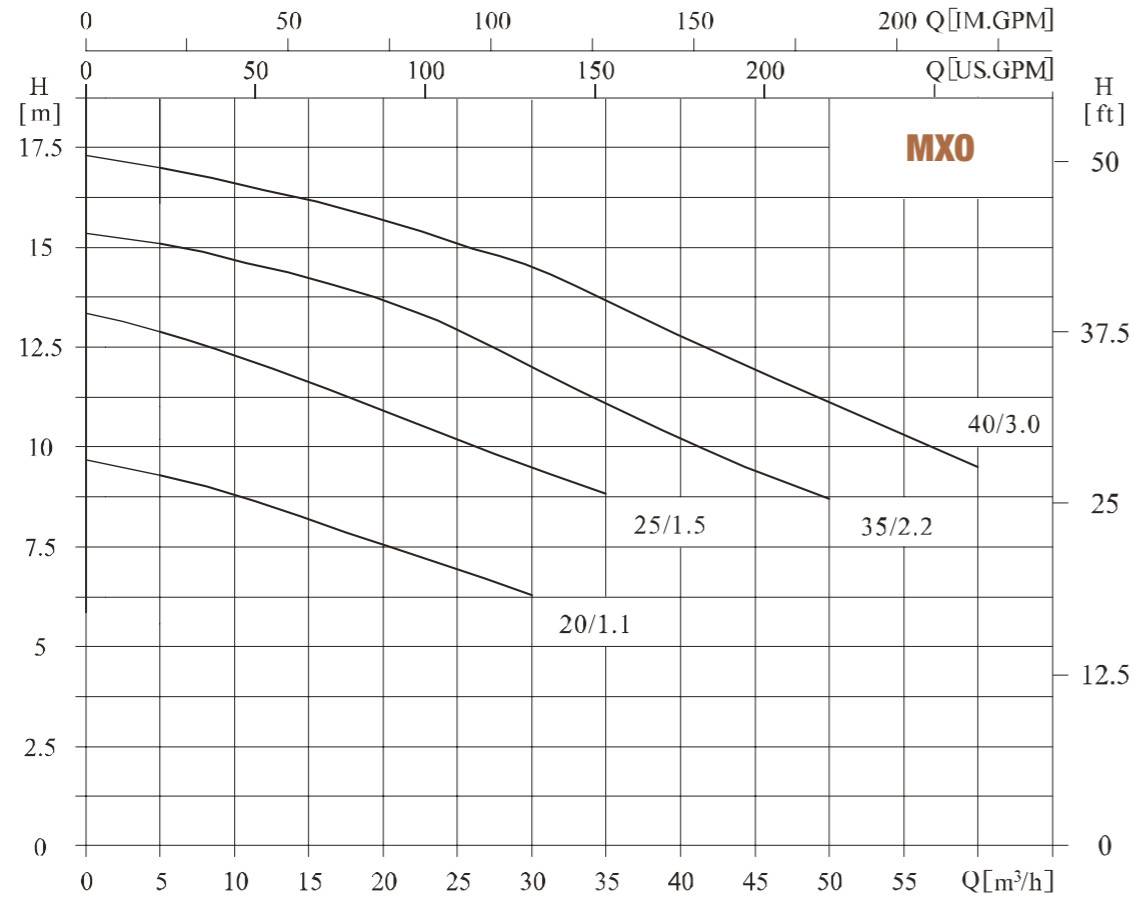


## Performance

Model	Motor (KW)	Q (m³/h)	5	10	15	20	25	30	35	40
MXC 15/6 1.1	1.1	H (m)	15.4	14.1	13	10.6				
MXC 15/6 1.5	1.5		19.4	18.4	17	14.9				
MXC 15/6 2.2	2.2		25.9	24.7	23	21.4				
MXC 25/6 1.5	1.5		14.6	14.2	13.7	12.8	12	11	9.8	8.2
MXC 25/6 2.2	2.2		18.8	18.5	18.1	17.6	17	16	14.3	12.8
MXC 25/6 3.0	3.0		22.3	22	22.8	21.5	21	20.3	19	17.5

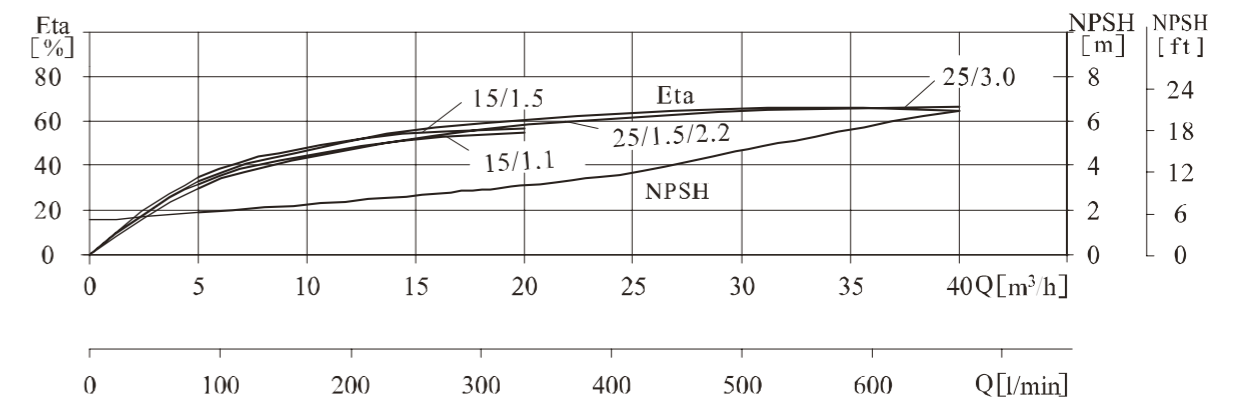
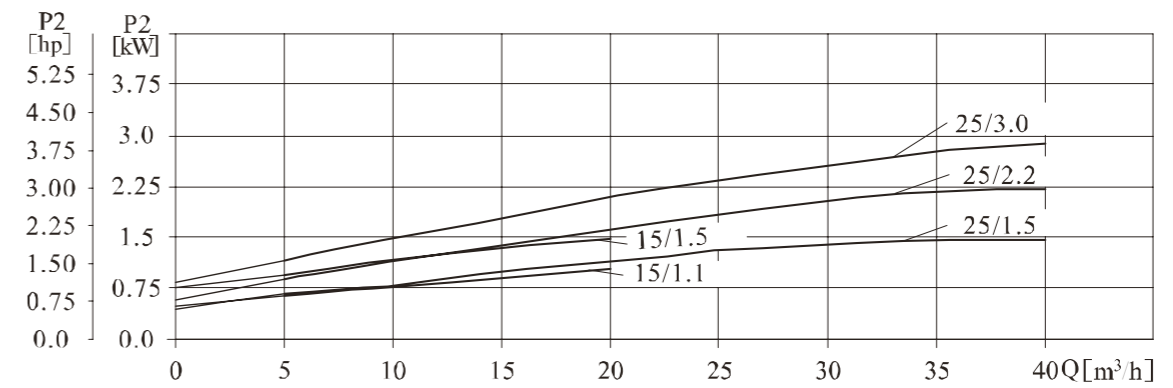
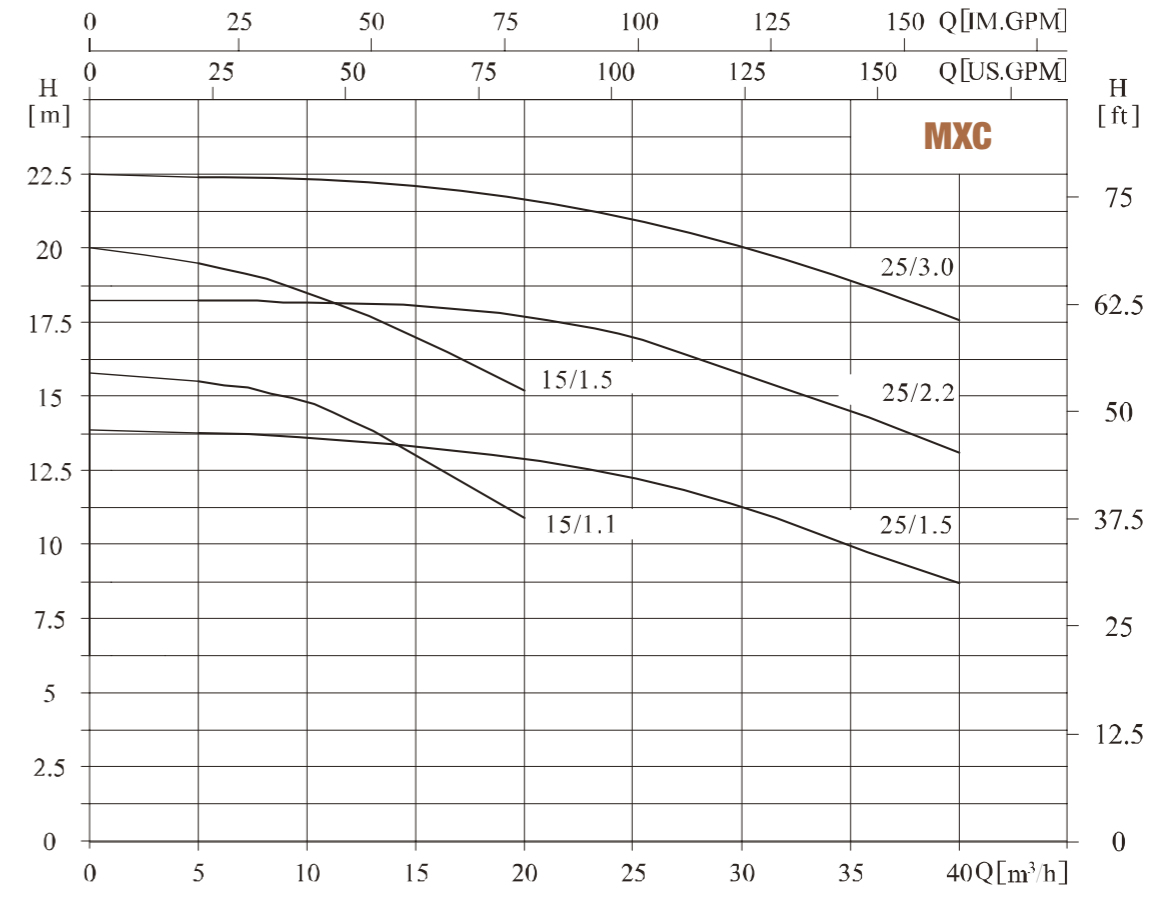
# MXO

Performance curve  
50 Hz ISO9906 Annex A



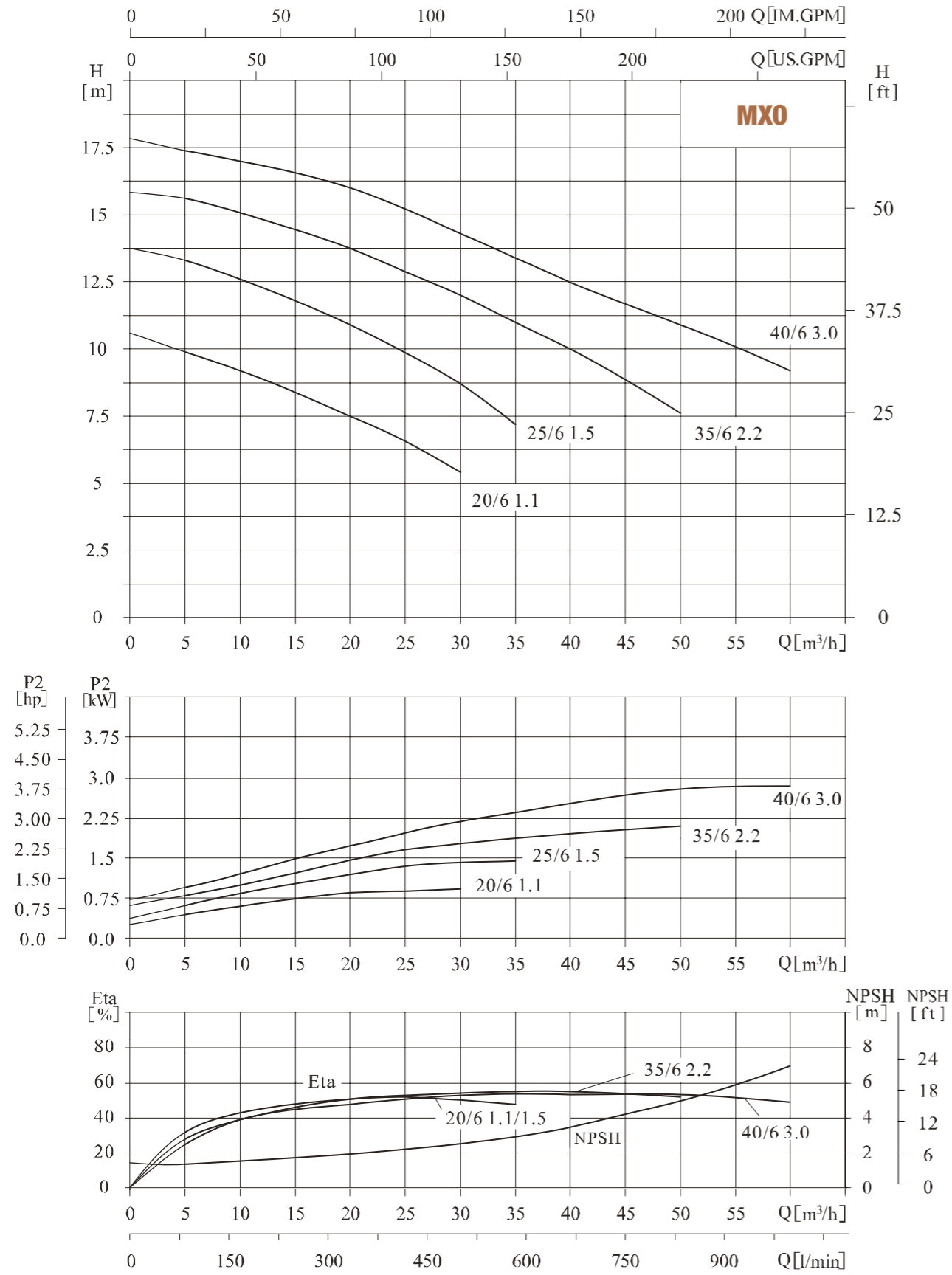
# MXC

Performance curve  
50 Hz ISO9906 Annex A



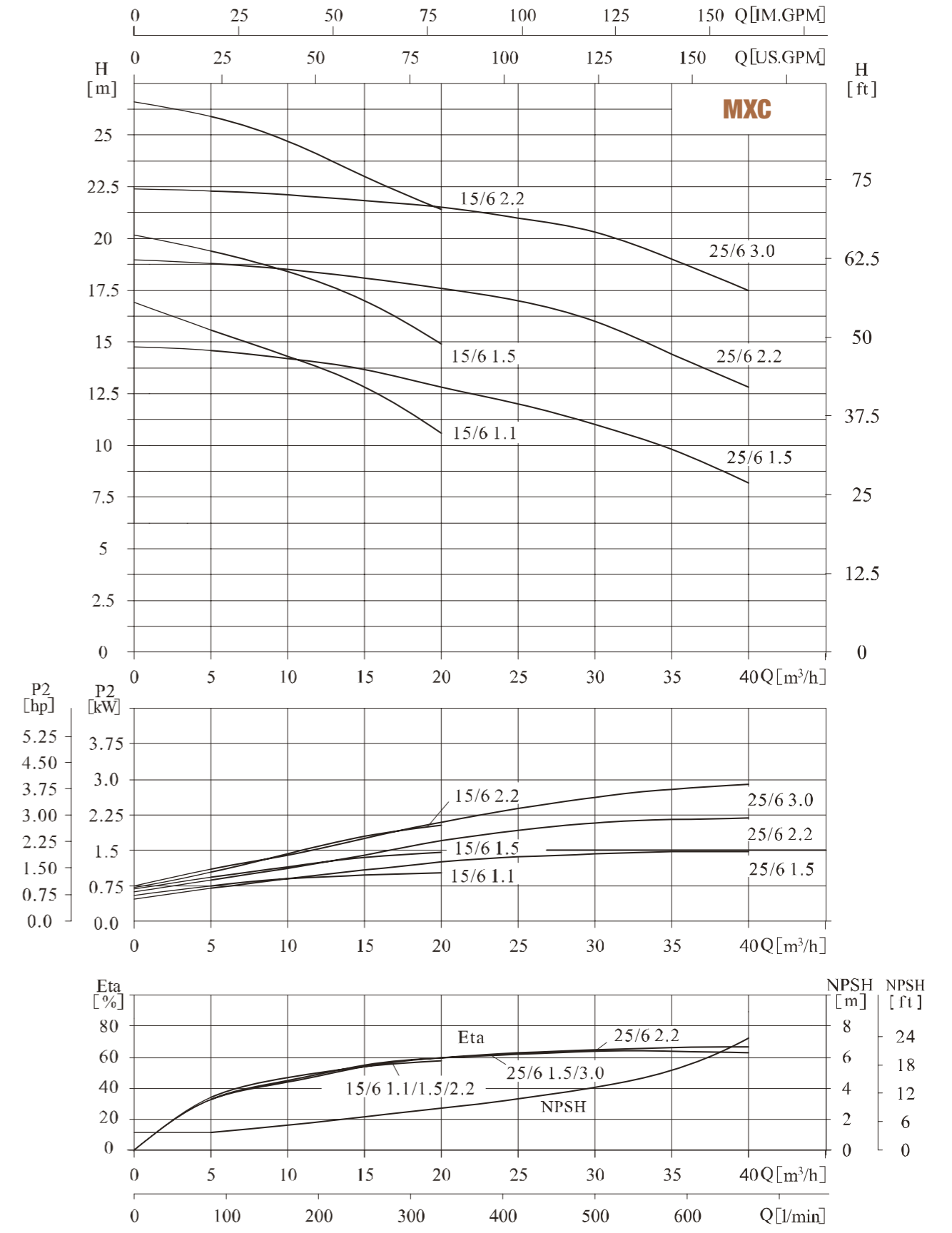
# MXO

Performance curve  
60 Hz ISO9906 Annex A



# MXC

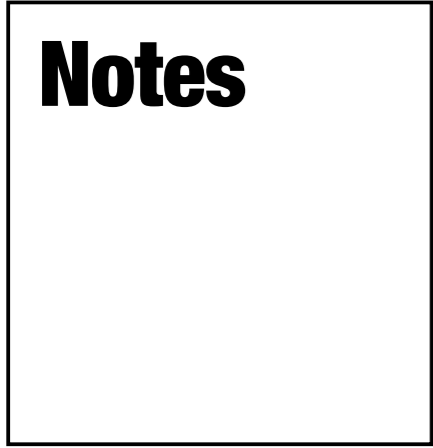
Performance curve  
60 Hz ISO9906 Annex A







# Notes



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Be pumping partners

**HYDROO**  
**Pump Industries SL**

Carrer La Banyeta Nova, 11  
Polígon Industrial La Banyeta  
17843 Palol de Revardit  
Catalonia. Spain  
Tel. +34 972 394 654  
E-mail: [info@hydroo.com](mailto:info@hydroo.com)  
[www.hydroo.com](http://www.hydroo.com)

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