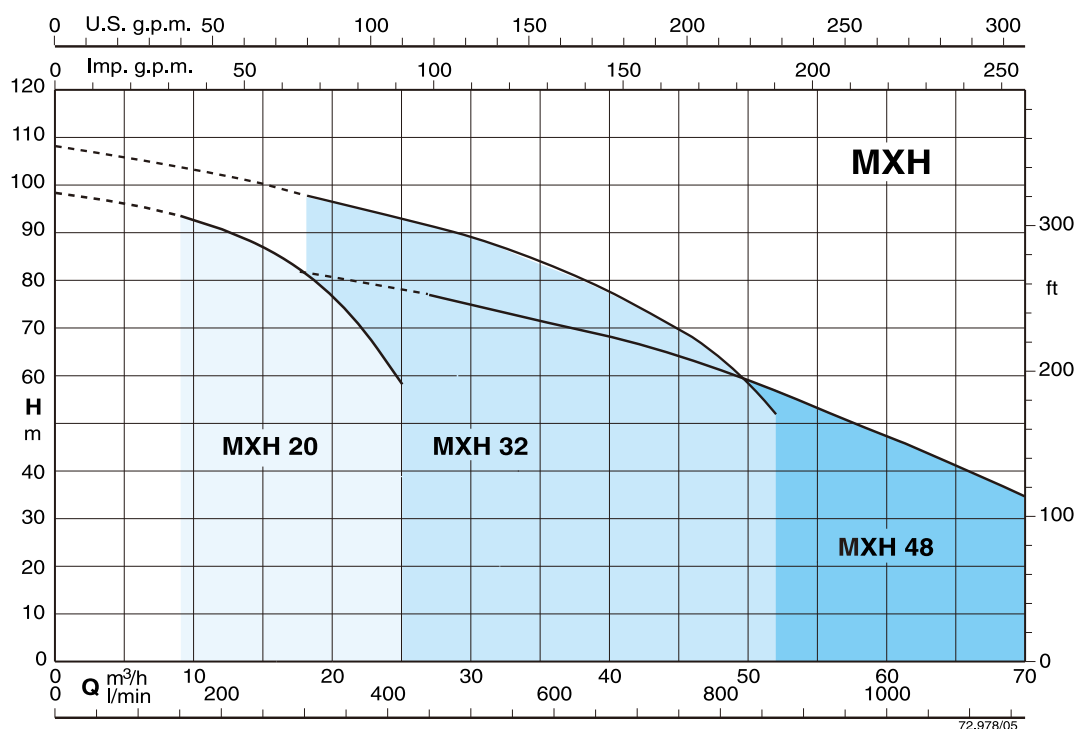


Horizontal multi-stage close coupled pumps in stainless steel 臥式多段直結式泵浦



Coverage chart - 性能總表

n ≈ 3450 rpm



Construction

Horizontal multi-stage close coupled pumps in **chrome-nickel stainless steel**.

Compact and robust construction, with compact lantern bracket and motor with feet.

Single-piece barrel casing, with front suction port above pumps axis and radial delivery at top. Filling and draining plugs on the middle of the pump, accessible from any side (like the terminal box).

Version with frequency converter (on request)

Applications

For water supply.

For clean liquids, without abrasives, which are non-aggressive for stainless steel (with suitable seal materials, on request).

Universal pump, for civil and industrial applications, for garden use and irrigation.

Operating conditions

Liquid temperature from - 15 °C to + 110 °C.

Ambient temperature up to 40 °C.

Maximum permissible pressure in the pump casing: 10 bar.

Continuous duty.

Motor

2-pole induction motor, 60 Hz (n = 3450 rpm).

MXH: three-phase 220/380 V, 220/440 V, up to 3 kW;
380/660 V, from 4 to 15 kW;

Insulation class F.

Protection IP 54.

Motor suitable for operation with frequency converter.

Classification scheme IE2 for three-phase motors from 0,75 kW to 5,5 kW, IE3 from 7,5 kW.

Constructed in accordance with: EN 60034-1;

EN 60034-30.

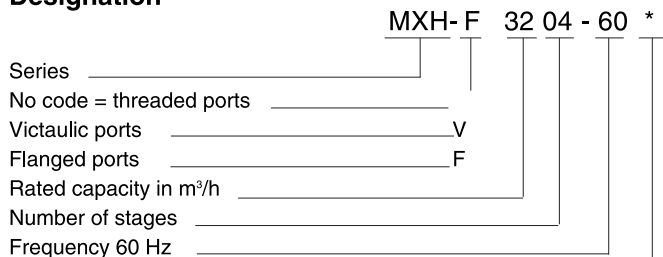
Special features on request

- Pump with Victaulic ports (MXH-V) for 32, 48.
- Pump with flanged ports (MXH-F).
- Other voltages.
- Protection IP 55.
- Special mechanical seal
- Seal rings in FPM.
- Higher or lower ambient temperatures.

Materials

Component	Material
Pump casing	Cr-Ni steel 1.4301 EN 10088 (AISI 304)
Stage casing	Cr-Ni steel 1.4301 EN 10088 (AISI 304)
Wear ring	PTFE
Impeller	Cr-Ni steel 1.4301 EN 10088 (AISI 304)
Casing cover	Cr-Ni steel 1.4301 EN 10088 (AISI 304)
Spacer sleeve	Cr-Ni steel 1.4301 EN 10088 (AISI 304)
Pump shaft	Cr-Ni steel 1.4305 EN 10088 (AISI 303)
Plug	Cr-Ni steel 1.4305 EN 10088 (AISI 303)
Mechanical seal	Ceramic alumina, carbon, EPDM
ISO 3069 - KU	(Other materials on request)

Designation



Construction variants

special seal code (no code = standard seal) _____

結構

臥式多段直結式鉻鎳不鏽鋼材質泵浦
簡潔堅固的結構，托架及底座一體成型，無突出法蘭口
外殼一體成型，入口高於泵浦軸心，出口端置於泵浦頂
部。

注入孔與排放孔位於泵浦中心部位，明顯容易操作（如
接線盒）。

搭配變頻器（依需求提供）

應用

- 供水系統
- 無雜質、不具腐蝕性之乾淨液體，且對不鏽鋼不具侵
蝕性（依需求搭配特殊軸封材質）。
- 廣泛型泵浦，適用於家庭、民生及工業應用。
- 園藝及農業灌溉之應用。

操作條件

液體溫度-15°C至+110°C。

周圍溫度至40°C。

泵浦本體可承受最大壓力值為10 bar。

連續運轉。

馬達

2極感應電動馬達60Hz(n=3450rpm)

MXH: 三相220/380V, 220/440V 至3kW
380/660V 4至15kW

絕緣等級：F

保護等級：IP54

馬達可直接搭配變頻器使用

三相馬達0.75kW至5.5kW為歐盟效能指標高效率IE2馬達，
7.5kW以上為IE3馬達。

結構設計符合EN 60034-1; EN 60034-30之規範。

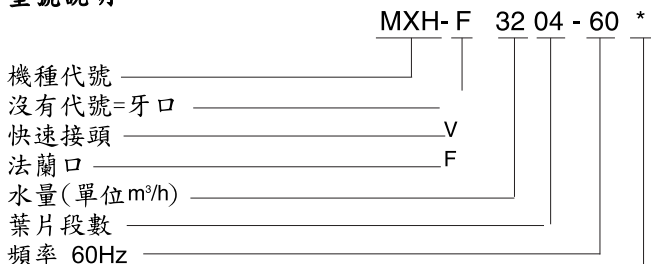
可依需求客製

- 泵浦配置32,48快速接頭(MXH-V)
- 泵浦配置法蘭口(MXH-F)
- 其他電壓
- 保護等級IP55
- 特殊機械軸封
- 可更換FPM材質之泵浦外殼墊片
- 更高/低液體或周圍溫度需求

材質

零件	材質
泵浦外殼	不鏽鋼1.4301 EN 10088 (AISI 304)
導葉輪	不鏽鋼1.4301 EN 10088 (AISI 304)
磨損環	鐵氟龍 PTFE
葉片	不鏽鋼1.4301 EN 10088 (AISI 304)
泵浦外殼	不鏽鋼1.4301 EN 10088 (AISI 304)
軸套	不鏽鋼1.4301 EN 10088 (AISI 304)
泵浦軸心	不鏽鋼1.4305 EN 10088 (AISI 303)
連接口	不鏽鋼1.4305 EN 10088 (AISI 303)
機械軸封	陶瓷、碳精、EPDM
依據 ISO 3069	(依需求供應其他材質)

型號說明



材質上特殊需求

軸封材質代號(沒有代號=標準軸封) _____

Pumps with frequency converter

The **MXH EI** pumps are available with power from 0,55 kW up to 4 kW, the pumps are equipped with **I-MAT** installed on board which allows to realize a variable-speed system extremely compact and efficient, ideal in applications of water supply and in the distribution of hot and cold water.

The pump is equipped with transducers suitable for operation and is already programmed at the factory.

Advantages

- Energy saving
- Compact design
- Easy to use
- Programmable to suit the system requirements
- Reliability

Costruction

The system comprises of:

- Pump
- Induction motor
- I-MAT Frequency converter
- Motor adapter for the motor mounting of the frequency converter
- Connection cable between frequency converter and induction motor
- Transducers

Main features

- Rated motor power output from 0,55 kW to 4 kW
- Control range from 1750 to 3450 rpm (2-pole)
- Protection against dry running
- Protection against operations with closed valve ports
- Protection against system leakages
- Protection against overcurrent in the motor
- Protection against overvoltage and undervoltage of the power supply
- Protection against current unbalances between phases

Operating modes



Constant pressure mode

with pressure transducer

In this mode, the system maintains the preset pressure when the flow required by the installation changes.



Proportional pressure mode

with pressure transducer

In this mode the system changes the working pressure according to the required flow rate.



Constant flow mode

with flow meter

In this mode the system maintains a constant flow rate value in a point of the installation according to the required pressure.



Fixed speed mode

with setting of the speed preferential rotation.

In this mode, by changing the working frequency, you may choose any operational curve included within the working range.



Constant temperature mode

with temperature transducer

In this mode the system keeps the temperature constant inside a system by changing the speed of the pump.

泵浦搭載變頻器

MXH EI 泵浦規格從0.55kW到4kW，在泵浦上配置**I-MAT**變頻器實現更簡單、高效能的變速系統，適用於供水設備及冷熱水設備。泵浦具感應器，且已完成程式設定，適用於各項操作。



優點

- 節能
- 設計簡潔
- 操作簡單
- 可依系統需求編輯程式
- 可靠

配備

該系統包括：

- 泵浦
- 電動馬達
- I-MAT變頻器
- 馬達固定座(變頻器安裝於馬達使用)
- 連接電纜(於變頻器及馬達之間)
- 壓力傳送器

主要特色

馬達額定輸出功率：0.55kW至4kW

控制範圍：1750至3450rpm(2極)

防乾轉保護裝置

防止系統在閘門於關閉情況下操作

防止系統漏水

馬達過電流或電壓過載保護裝置

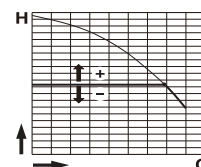
防止欠相保護裝置

操作模式

恆壓模式

與壓力感應器

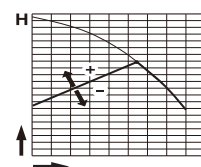
此模式依水量變化來維持壓力設定值。



比例壓力模式

與壓力感應器

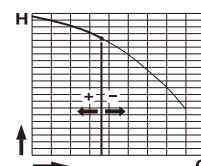
此模式依據流量來更變系統運轉壓力。



定量模式

與流量計

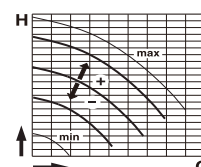
此模式依據需求壓力來維持流量值。



定速模式

與先取轉速設置

此模式可依工作頻率選擇運作曲線及範圍(等比例運作)。



恆溫模式

與溫度感應器

依照泵浦速度變換，維持系統內部溫度。

Performance - 性能

n ≈ 3450rpm

3 ~	P ₂		Q m ³ /h l/min	0	9	12	14	16	18	20	22	25	
	kW	HP		0	150	200	233	266	300	333	366	416	
MXH 2001-60	1,5	2	H m	25,3	22,7	21,8	21	20	18,8	17,4	15,7	12,4	
MXH 2002-60	3	4		51,9	47	45,3	44	42,4	40,4	38	35,1	29,6	
MXH 2003-60	5,5	7,5		78	71,5	69	67	65	62,5	59	54,5	45,5	
MXH 2004-60	7,5	10		103,5	95	91,5	89	86	82,5	78	72,5	62	

3 ~	P ₂		Q m ³ /h l/min	0	18	22	26	30	34	38	42	47	52
	kW	HP		0	300	366	433	500	566	633	700	783	866
MXH 3201-60/A	4	5,5	H m	27	24,5	23,7	23	22	20,5	19	17,5	15	11
MXH 3202-60/A	7,5	10		54	49	47,5	46	44	41,5	38,5	35	29	23
MXH 3203-60/A	11	15		81	73,5	71	69	66,5	63,5	60	55	47,5	37,5
MXH 3204-60/A	15	20		107	98	94,5	92	89	84,5	80	73,5	64,5	52

3 ~	P ₂		Q m ³ /h l/min	0	27	33	39	45	48	54	60	65	70
	kW	HP		0	450	550	650	750	800	900	1000	1083	1166
MXH 4801-60/A	4	5,5	H m	29,5	25,5	24,5	23	21	20	17,5	15	13	10,5
MXH 4802-60/A	9,2	12,5		59	51	49	46	42,5	40,5	36,5	32	27,5	23,5
MXH 4803-60/A	15	20		88,5	76,5	73,5	68,5	63,5	61	54,5	47,5	40,5	34,5

P₂ Rated motor power output.
馬達額定輸出功率。

Tolerances according to UNI EN ISO 9906:2012.
水量誤差值依據UNI EN ISO 9906:2012之標準。

+ 0,5 m security margin on NPSH-value is necessary.
NPSH安全範圍值需為 + 0,5 m。

Test results with clean cold water, without gas content.
此為未含氣體之乾淨冷水所得的測試數據。

Rated currents - 額定電流

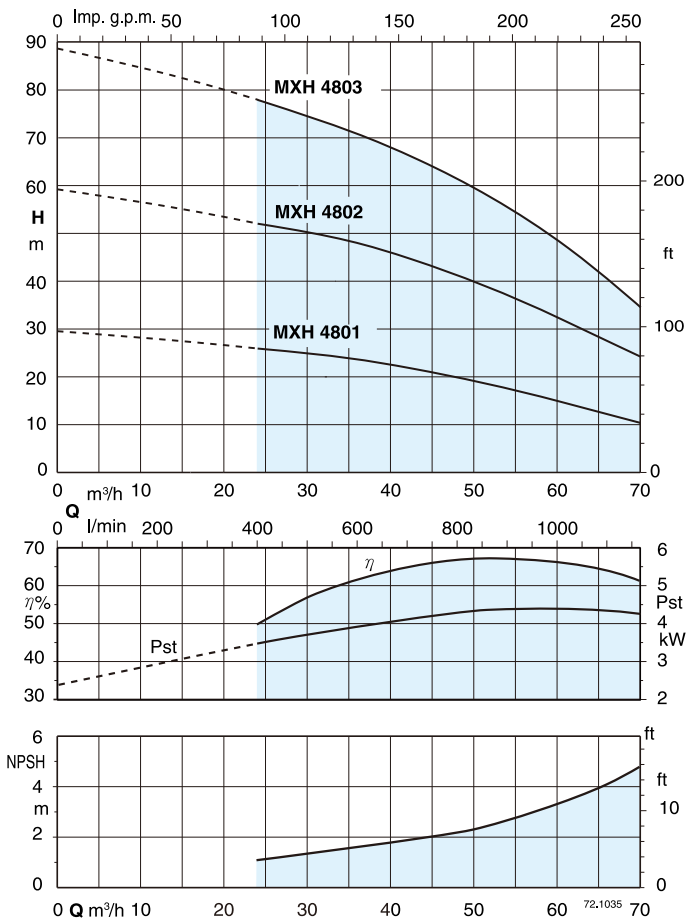
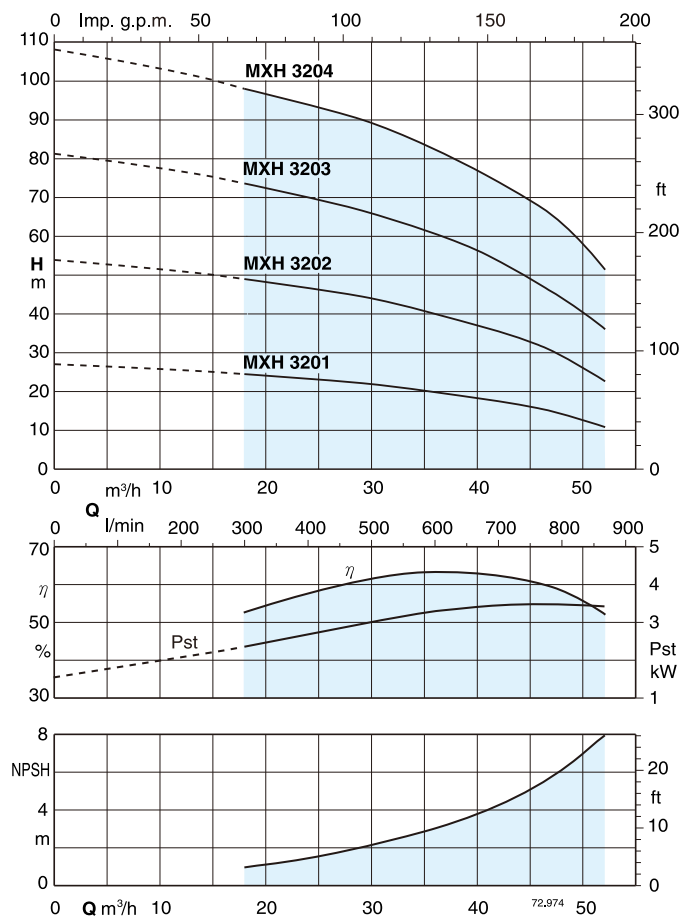
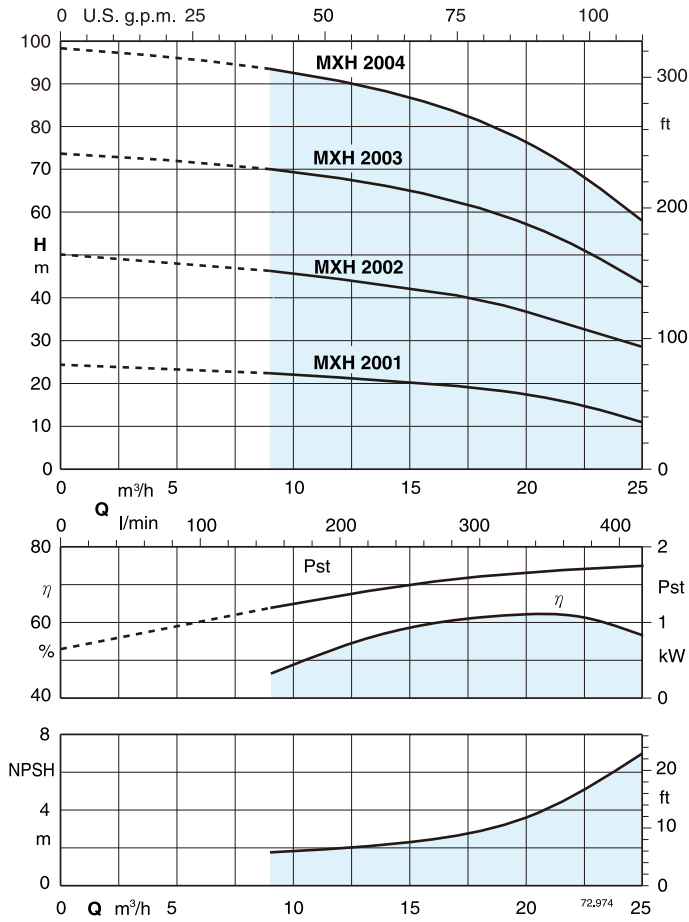
P ₂		three-phase - 三相 3~			I _A /I _N
kW	HP	220/380V I _N A	380/660V I _N A	220/440V I _N A	
1,5	2	7,4/4,3	-	7,8/4,5	7,3
3	4	13,4/7,7	-	14,0/8,1	8,4
4	5,5		11,2/6,5		9,2
5,5	7,5		13,7/7,9		8,7
7,5	10		17/9,8		9,2
9,2	12,5		22/12,7		8,3
11	15		25,8/14,9		8,9
15	18,5		33,2/19,2		9,4

P₂ Rated motor power output.
馬達額定輸出功率。

I_A/I_N D.O.L. starting current / Rated current
啟動電流 / 額定電流。

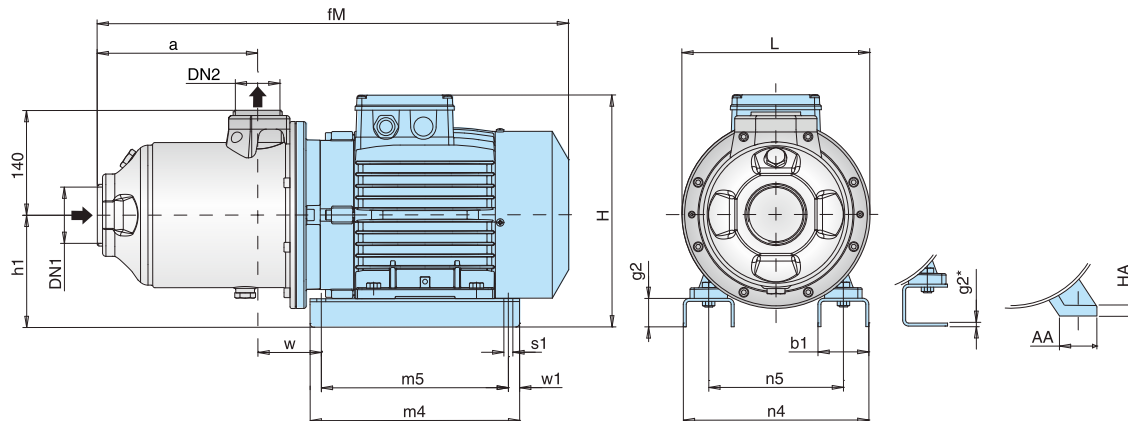
Characteristic curves - 性能

$n \approx 3450 \text{ rpm}$



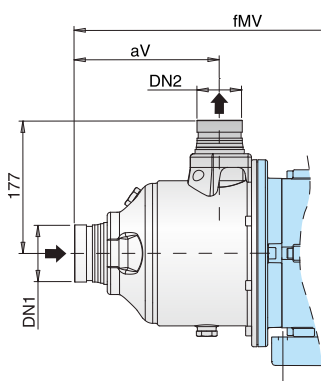
Dimensions and weights - 尺寸與重量

Threaded ports 牙口



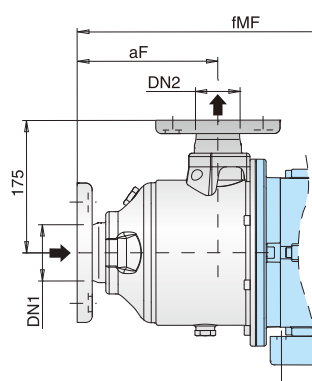
TYPE 型號	DN1 ISO 228	DN2 ISO 228	mm															kg		
			fM	a	L	h1	H	m4	m5	n4	n5	w1	AA	b1	s1	w	g2		g2*	HA
MXH 2001-60	G 2	G 1 1/2	507	127	250	150	280	205	175	130	130	15	-	54	10	95	-	6*	-	30
MXH 2002-60	G 2	G 1 1/2	521	127	250	150	290	205	175	170	130	15	-	54	10	95	-	6*	-	38
MXH 2003-60	G 2	G 1 1/2	561	146	250	150	310	280	250	258	190	15	-	68	12	84	38	-	-	50
MXH 2004-60	G 2	G 1 1/2	596	180,5	250	150	310	280	250	258	190	15	-	68	12	84	38	-	-	55
MXH 3201-60/A	G 2 1/2	G 2	482	120,5	250	150	290	205	175	180	140	15	-	54	10	112	-	6*	-	39
MXH 3202-60/A	G 2 1/2	G 2	534	120,5	250	150	310	280	250	258	190	15	-	68	12	84	38	-	-	55,5
MXH 3203-60/A	G 2 1/2	G 2	658	166,5	270	132	318	218	178	260	216	20	52	-	12	171,5	-	-	18	
MXH 3204-60/A	G 2 1/2	G 2	779	212,5	270	132	318	218	178	260	216	20	52	-	12	171,5	-	-	18	
MXH 4801-60/A	G 3	G 2 1/2	545	136	250	150	290	205	175	180	140	15	-	54	10	127	-	6*	-	41
MXH 4802-60/A	G 3	G 2 1/2	643	136	270	132	318	218	178	260	216	20	52	-	12	186,5	-	-	18	
MXH 4803-60/A	G 3	G 2 1/2	779	197,5	270	132	318	218	178	260	216	20	52	-	12	186,5	-	-	18	110

Victaulic ports 快速接頭



TYPE 型號	DN1 mm	DN2 mm	mm	
			fMV	aV
MXH-V 3201-60/A	76,1 (DN65)	60,3 (DN50)	522	160
MXH-V 3202-60/A	76,1 (DN65)	60,3 (DN50)	574	160
MXH-V 3203-60/A	76,1 (DN65)	60,3 (DN50)	698	206
MXH-V 3204-60/A	76,1 (DN65)	60,3 (DN50)	819	252
MXH-V 4801-60/A	88,9 (DN80)	76,1 (DN65)	585	175
MXH-V 4802-60/A	88,9 (DN80)	76,1 (DN65)	683	175
MXH-V 4803-60/A	88,9 (DN80)	76,1 (DN65)	819	237

Flanged ports 法蘭口



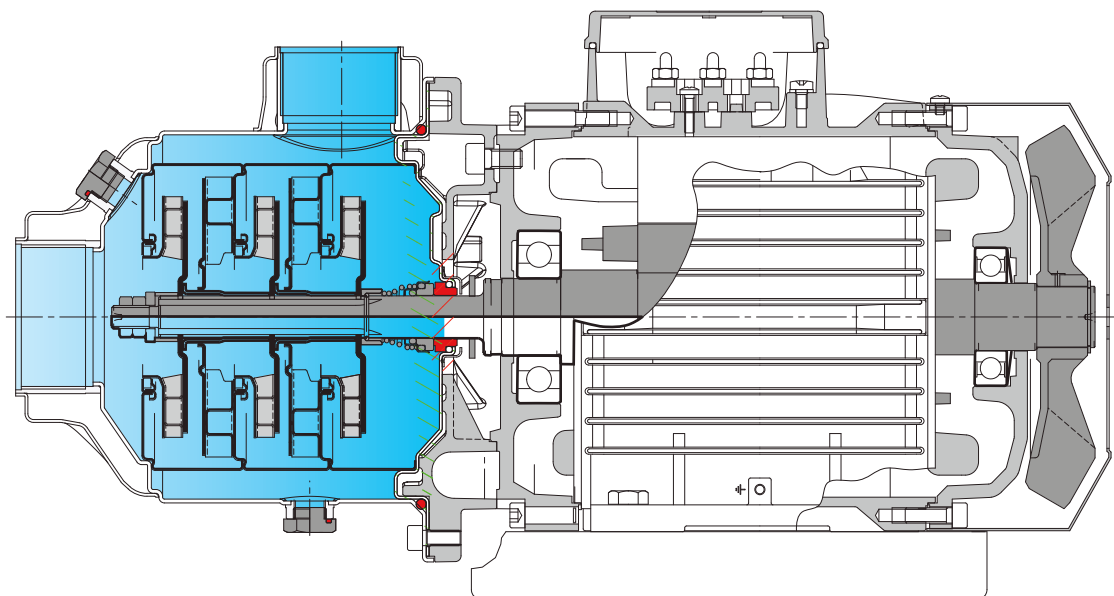
TYPE TIPO	DN1 mm	DN2 mm	mm	
			fMF	aF
MXH-F 2001-60	50	40	542	161,5
MXH-F 2002-60	50	40	556	161,5
MXH-F 2003-60	50	40	596	180,5
MXH-F 2004-60	50	40	631	215
MXH-F 3201-60/A	65	50	512	151
MXH-F 3202-60/A	65	50	564	151
MXH-F 3203-60/A	65	50	688	197
MXH-F 3204-60/A	65	50	809	243
MXH-F 4801-60/A	80	65	565	156
MXH-F 4802-60/A	80	65	663	156
MXH-F 4803-60/A	80	65	799	218

法蘭* EN 1092-2

DN	DE	DK	DG	Holes 孔徑	
				N.	Ø
40	150	110	81	4	19
50	165	125	99	4	19
65	185	145	118	4	19
80	200	160	132	8	19

* ASME 150 lb (ex ANSI 150 lb)

Features - 特色



Flexibility

Three versions of ports: threaded, flanged and Victaulic.

Extra safety

With front axis suction port for optimum suction conditions.

Reliable

All hydraulic parts in contact with the pumped liquid are made in stainless steel.

For liquids from -15°C to 110°C .

Robust

Single-piece, thick barrel casing, open on one side only, with reinforced threaded ports.

Compact

The bracket between pump and motor is extremely compact.

Greater protection

Against leakage, with the pump casing cover separated from the motor shield.

Possibility of inspecting the seal through the side apertures between the two walls.

多種接口

三種接口：牙口、法蘭口、快速接頭。

更加安全

吸入端位於泵浦中心線上方，可預防乾轉。

可靠

不銹鋼結構，液體溫度可達 -15°C 至 $+110^{\circ}\text{C}$ 。

堅固

一體成型，堅固耐用外殼之構造及強化牙口。

簡潔

泵浦與馬達間的托架設計簡潔。

加倍防護

泵浦外殼與馬達分開，可預防漏水。

可於外殼側身縫隙檢查軸封之狀態。

托架上加長型泵浦外殼，可避免外部的水流入馬達內。