

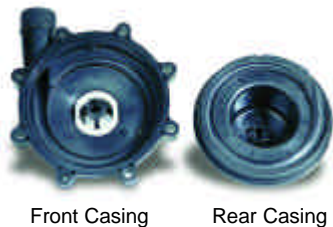
## MX MAGNETIC DRIVE PUMPS



The MX Series pumps represent the latest state of the art design in plastic magnetic drive pumps. With the experience gained from previous generations of MDH pumps, the MX Series has been designed to meet the most severe operating conditions.

When fitted with a carbon bearing, the MX will allow for brief periods of dry running. The new “self radiating structure” (patent pending), in addition to the existing proven non-contact principle and front and rear supported spindle, greatly improves the ability to withstand some cavitation and running against a closed discharge valve.

- **Split Volute casing** (international patent pending) – The MX Series is the first resin magnet pump that uses a split pump casing divided into two, front casing and the rear casing, to form a vortex chamber. The volute limits the liquid getting out of the impeller and returns it to the pump casing which is efficiently guided to the discharge port to enhance overall efficiency.

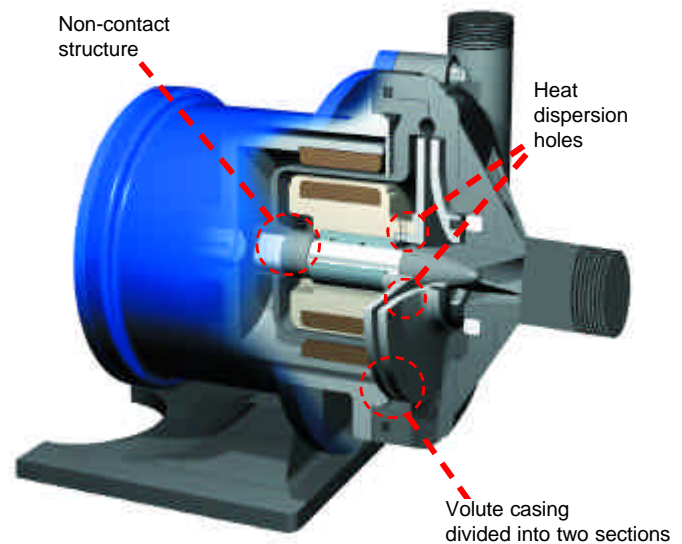


Front Casing

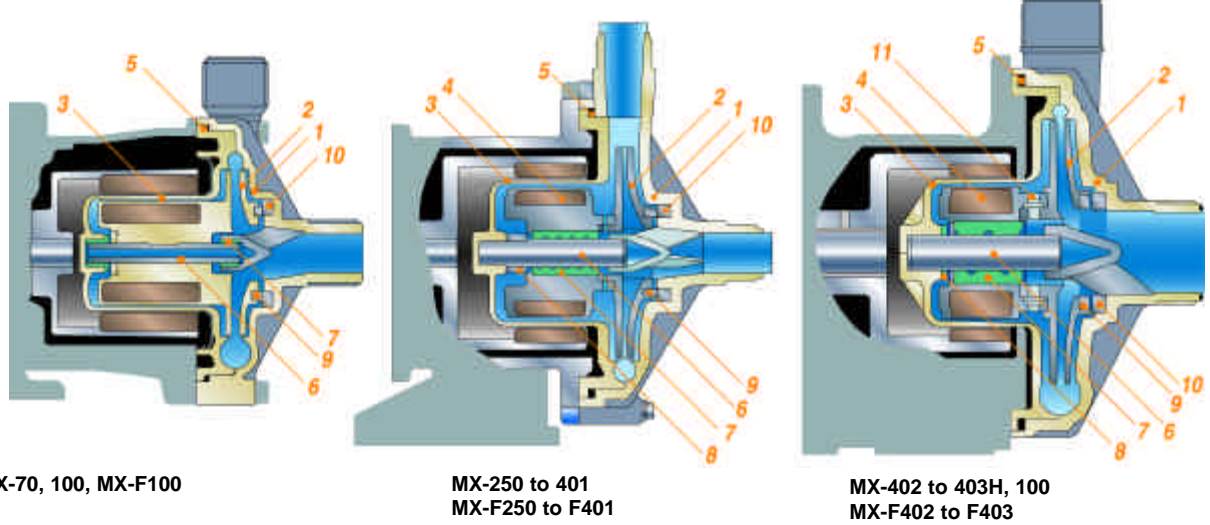
Rear Casing

MX Series pumps are highly recommended for use in various production processes such as filtering, spraying, washing and etching in surface treatment processes.

- **Self-radiating structure** (international patent pending) – Through heat dispersion holes provided in fixed portions of the impeller and the magnet capsule, the liquid around the spindle and bearing is forced to circulate so that heat generated by sliding can be reduced effectively, thus preventing melting and thermal deformation.



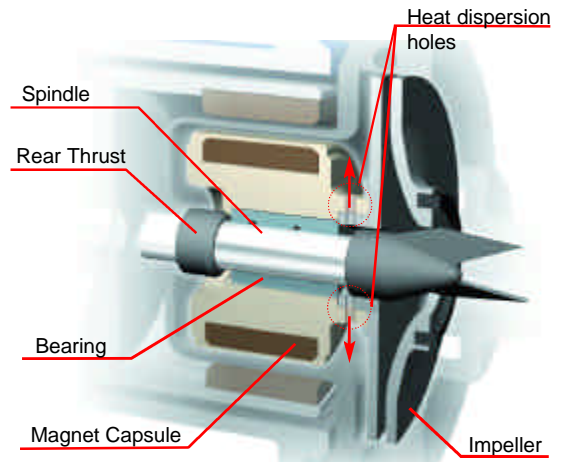
# Wet End Materials



## MX Materials

| Model                       | MX-70           | MX-100 | MX-250 to 403H                  |         | MX-250 to 401   |
|-----------------------------|-----------------|--------|---------------------------------|---------|-----------------|
| Mark                        | V (E)           |        | CV (CE)                         | RV (RE) | AV (AE)         |
| 1 <i>Front casing</i>       | GFRPP           |        | GFRPP                           |         |                 |
| 2 <i>Impeller</i>           | CFRPP           |        | GFRPP                           |         |                 |
| 3 <i>Rear casing</i>        | GFRPP           |        | GFRPP                           |         |                 |
| 4 <i>Magnet capsule</i>     | ---             |        | PP                              |         |                 |
| 5 <i>O-ring*</i>            | FKM (EPDM)      |        | FKM (EPDM)                      |         |                 |
| 6 <i>Spindle</i>            | Alumina Ceramic |        | Alumina Ceramic                 |         |                 |
| 7 <i>Bearing</i>            | CFRPPS          | PTFE   | Carbon                          | PTFE    | Alumina Ceramic |
| 8 <i>Rear thrust</i>        | ---             |        | CFRPPS                          |         |                 |
| 9 <i>Mouth ring</i>         | ---             | PTFE   | PTFE                            |         |                 |
| 10 <i>Thrust/Liner ring</i> | Alumina Ceramic |        | Alumina Ceramic                 |         |                 |
| 11 <i>Lock pin</i>          | ---             |        | GFRPPS<br>(only on 402 to 403H) |         | ---             |

\* AFLAS® O-ring also available



## MX-F Materials

| Model                       | MX-F100                     |                       | MX-F250 to F403             |      |     |
|-----------------------------|-----------------------------|-----------------------|-----------------------------|------|-----|
| Mark                        | RV                          | KV                    | CFV                         | RFV  | KKV |
| 1 <i>Front casing</i>       | CFRETFE                     |                       | CFRETFE                     |      |     |
| 2 <i>Impeller</i>           | CFRETFE                     |                       | CFRETFE                     |      |     |
| 3 <i>Rear casing</i>        | CFRETFE                     |                       | CFRETFE                     |      |     |
| 4 <i>Magnet capsule</i>     | CFRETFE                     |                       | CFRETFE                     |      |     |
| 5 <i>O-ring*</i>            | FKM                         |                       | FKM                         |      |     |
| 6 <i>Spindle</i>            | High purity alumina ceramic | SiC                   | Alumina Ceramic             | SiC  |     |
| 7 <i>Bearing</i>            | PTFE                        | SiC                   | Carbon                      | PTFE | SiC |
| 8 <i>Rear thrust</i>        | High purity alumina ceramic | SiC<br>(front & rear) | CFRETFE                     |      |     |
| 9 <i>Mouth ring</i>         | PTFE                        | ---                   | PTFE                        |      | SiC |
| 10 <i>Thrust/Liner ring</i> | High purity alumina ceramic | ---                   | Alumina Ceramic             | SiC  |     |
| 11 <i>Lock pin</i>          | ---                         |                       | CFRETFE (only on 402 & 403) |      |     |

\* AFLAS® and EPDM O-ring also available

MX(F)250 - 403(H)

**Model Code** MX - 250 CFV 6

1                      2                      3                      4

- 1 Series symbol**  
*MX* GFRPP casing  
*MX-F* CFRETFE casing
  
- 2 Pump size**  
 250: 1" x 1"                      0.5 HP  
 251: 1" x 1"                      1.0 HP  
 400: 1.5" x 1.5"                      0.5 HP (0.75 HP larger impeller)  
 401: 1.5" x 1.5"                      1.0 HP (1.5 HP larger impeller)  
 402H: 2" x 1.5"                      2.0 HP  
 403H: 2" x 1.5"                      3.0 HP
  
- 3 Materials of Bearing/Spindle/O-ring**  
*MX*  
 CV, CE: Carbon/Alumina ceramic/FKM (EPDM)  
 RV, RE: PTFE/Alumina ceramic/FKM (EPDM)  
 AV, AE: Alumina ceramic/Alumina ceramic/FKM (EPDM)  
 (models MX-250 to MX-401)  
  
*MX -F*  
 CFV: High density carbon/High purity alumina ceramic/FKM  
 RFV: PTFE/High purity alumina ceramic/FKM  
 KKV: SiC/SiC/FKM
  
- 4 Impeller mark**  
*MX*  
 5: 50 Hz only    6: 60 Hz only    7: Larger impeller  
*MX-F*  
 T, V, W 5: 50 Hz only    X, Y, Z 6: 60 Hz only  
 7: Larger impeller

## Specifications

| Model       | Suction x Discharge | Max. Discharge Pressure (ft) | Max Flow (GPM) | Specific Gravity | Motor Output @ 50/60 Hz | Weight (less motor) lbs. |      |
|-------------|---------------------|------------------------------|----------------|------------------|-------------------------|--------------------------|------|
| MX-70       | 1" x 1"             | 36.1                         | 26.4           | 1.0              | 180 W                   | 14.3                     |      |
| MX-100      |                     | 38.4                         | 33.0           | 1.2              | 260 W                   | 18.1                     |      |
| MX-250      |                     | 50.9                         | 39.6           | 1.0              | 0.5 HP                  | 17.0                     |      |
| MX-251      |                     | 72.2                         | 39.6           | 1.0              | 1 HP                    | 22.5                     |      |
| MX-400      | 1.5" x 1.5"         | 37.7                         | 74.0           | 1.2              | 0.5 HP (0.75*)          | 13.7                     |      |
| MX-401      |                     | 55.8                         | 84.5           | 1.2              | 1 HP (1.5*)             | 22.5                     |      |
| MX-402      | 2" x 1.5"           | 75.5                         | 118.9          | 1.2              | 2 HP                    | 29.8                     |      |
| MX-402H     |                     | 101.7                        | 42.3           | 1.0              |                         | 29.8                     |      |
| MX-403      |                     | 98.4                         | 132.1          | 1.2              | 3 HP                    | 32.0                     |      |
| MX-403H     |                     | 121.4                        | 66.0           | 1.0              |                         | 32.0                     |      |
|             |                     |                              |                |                  |                         |                          |      |
| MX-F100 Y   | 1" x 1"             | 37.7                         | 33.0           | 1.9 / 1.2        | 260 W                   | 18.7                     |      |
| MX-F100 Z   |                     | 26.9                         | 29.1           | -1.8             | 260 W                   | 18.7                     |      |
| MX-F250 T/X |                     | 44.0                         | 39.6           | 1.2              | .5 HP (0.75*)           | 17.0                     |      |
| MX-F250 V/Y |                     | 35.1                         | 37.0           | 1.5              |                         | 17.0                     |      |
| MX-F250 W/Z |                     | 28.9                         | 34.3           | 1.8 to 2.0       |                         | 17.0                     |      |
| MX-F400 T/X |                     | 33.8                         | 66.0           | 1.2              |                         | 13.7                     |      |
| MX-F400 V/Y |                     | 28.2                         | 60.8           | 1.5              |                         | 13.7                     |      |
| MX-F400 W/Z |                     | 23.6                         | 55.5           | 1.8 to 2.0       | 13.7                    |                          |      |
| MX-F401 T/X |                     | 1.5" x 1.5"                  | 50.2           | 71.3             | 1.2                     | 1 HP (1.5*)              | 22.5 |
| MX-F401 V/Y |                     |                              | 42.7           | 68.7             | 1.5                     |                          | 22.5 |
| MX-F401 W/Z | 31.5                |                              | 60.8           | 1.8 to 2.0       | 22.5                    |                          |      |
| MX-F402 T/X | 69.6                |                              | 116.2          | 1.2              | 2 HP                    |                          | 29.8 |
| MX-F402 V/Y | 57.7                | 113.6                        | 1.5            | 29.8             |                         |                          |      |
| MX-F402 W/Z | 45.3                | 105.7                        | 1.8 to 2.0     | 29.8             |                         |                          |      |
| MX-F403 T/X | 87.6                | 134.7                        | 1.2            | 3 HP             |                         | 32.0                     |      |
| MX-F403 V/Y | 73.5                | 132.1                        | 1.5            |                  |                         | 32.0                     |      |
| MX-F403 W/Z | 58.4                | 126.8                        | 1.8 to 2.0     |                  | 32.0                    |                          |      |

\* Larger impeller size  
 Note 1: The specific gravity limit values shown above are with maximum discharges. The specific gravity limit varies with the discharge. For details, contact your local distributor.  
 Range of ambient temperature: 0 to 40°C

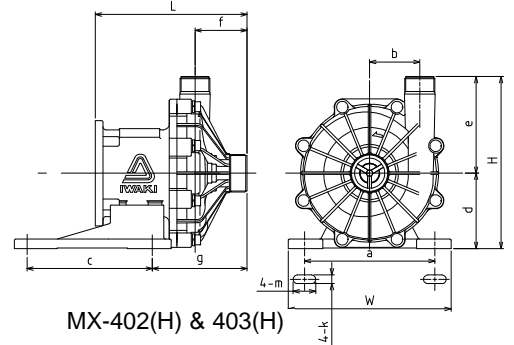
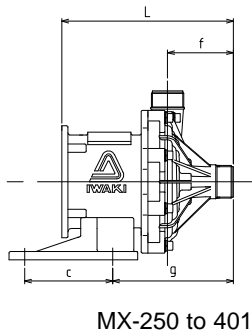
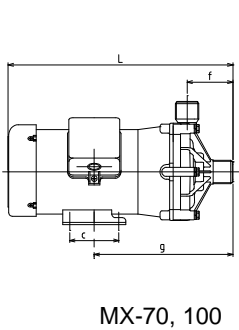
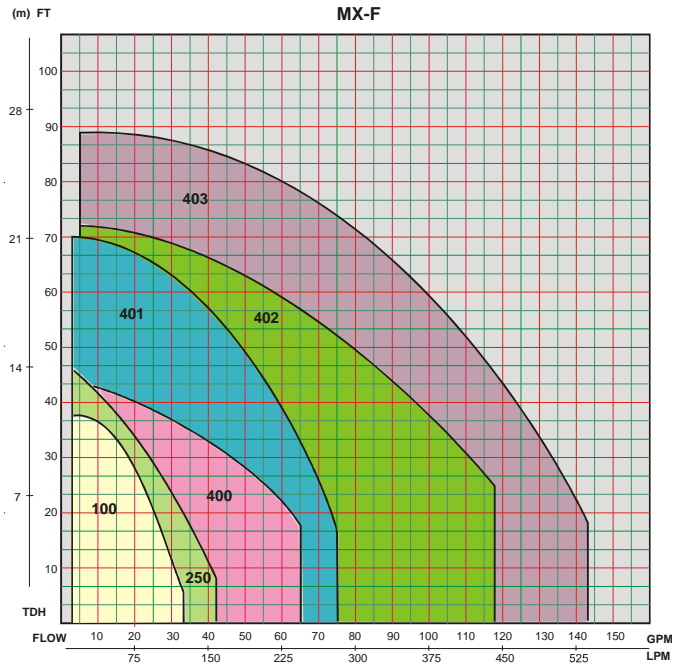
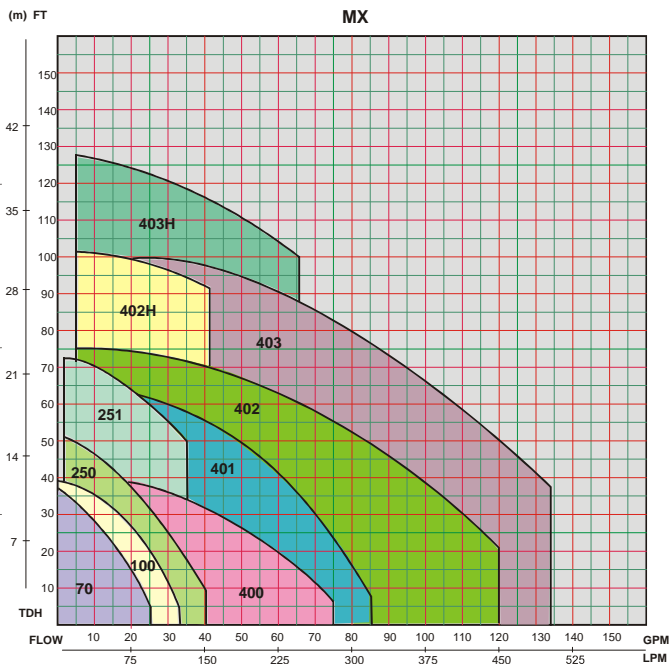
MX-70 - (F)100

**Model Code** MX-F 100 V T Y - 13 L

1                      2                      3                      4                      5                      6                      7

- 1 Series symbol**  
*MX* GFRPP casing  
*MX-F* CFRETFE casing
  
- 2 Pump size**  
 70: 1" x 1"    180W    (MX series only)  
 100: 1" x 1"    260W
  
- 3 Materials**  
*MX*  
 V: FKM (O-ring)  
 E: EPDM (O-ring)  
  
*MX -F*  
 RV: PTFE/FKM (Bearing/O-ring)  
 KV: SiC/FKM (Bearing/O-ring)
  
- 4 Connection**  
 No mark: Tube connection (1" diameter)  
 T: Thread connection
  
- 5 Impeller Mark**  
*MX* No mark    50/60 Hz  
*MX-F* Y:                      50/60 Hz
  
- 6 Motor**  
 13: 1 phase    230V  
 15: 1 phase    115V
  
- 7** L: UL Approved

# MX Performance Curves



## Dimensions in inches (mm)

| Models                       | W           | H           | L             | a          | b         | c          | d          | e          | f         | g          | k        | m         |
|------------------------------|-------------|-------------|---------------|------------|-----------|------------|------------|------------|-----------|------------|----------|-----------|
| MX-70                        | 5.12 (130)  | 6.10 (155)  | 10.18 (258.5) | 4.33 (110) | 1.89 (48) | 1.57 (40)  | 2.56 (65)  | 3.54 (90)  | 2.09 (53) | 7.07 (180) | .28 (7)  | .43 (11)  |
| MX-100                       | 5.90 (150)  | 6.89 (175)  | 12.58 (319.5) | 4.33 (110) | 2.01 (51) | 2.76 (70)  | 2.95 (75)  | 3.94 (100) | 2.56 (65) | 7.76 (197) | .35 (9)  | 1.06 (27) |
| MX-250                       | 6.30 (160)  | 9.75 (248)  | 9.39 (239)    | 5.12 (130) | 2.56 (65) | 5.12 (130) | 4.53 (115) | 5.22 (133) | 3.25 (83) | 6.12 (155) | .47 (12) | ---       |
| MX-251                       | 6.30 (160)  | 9.75 (248)  | 9.39 (239)    | 5.12 (130) | 3.00 (76) | 5.12 (130) | 4.53 (115) | 5.22 (133) | 3.25 (83) | 6.44 (164) | .47 (12) | ---       |
| MX-400                       | 5.51 (140)  | 8.62 (219)  | 9.37 (238)    | 4.33 (110) | 2.13 (54) | 3.86 (98)  | 3.74 (95)  | 4.88 (124) | 3.19 (81) | 5.67 (144) | .47 (12) | ---       |
| MX-401                       | 6.30 (160)  | 9.81 (249)  | 9.96 (253)    | 5.12 (130) | 2.83 (72) | 5.12 (130) | 4.53 (115) | 5.28 (134) | 3.82 (97) | 7.01 (178) | .47 (12) | ---       |
| MX-(F)402(H)<br>MX-(F)403(H) | 10.24 (260) | 10.78 (274) | 9.53 (242)    | 8.19 (208) | 3.15 (80) | 7.87 (200) | 4.72 (120) | 6.06 (154) | 3.27 (83) | 5.94 (151) | .55 (14) | 1.42 (36) |

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