

پمپ سانتریفیوژ چدنی ابارا سری MMD 80



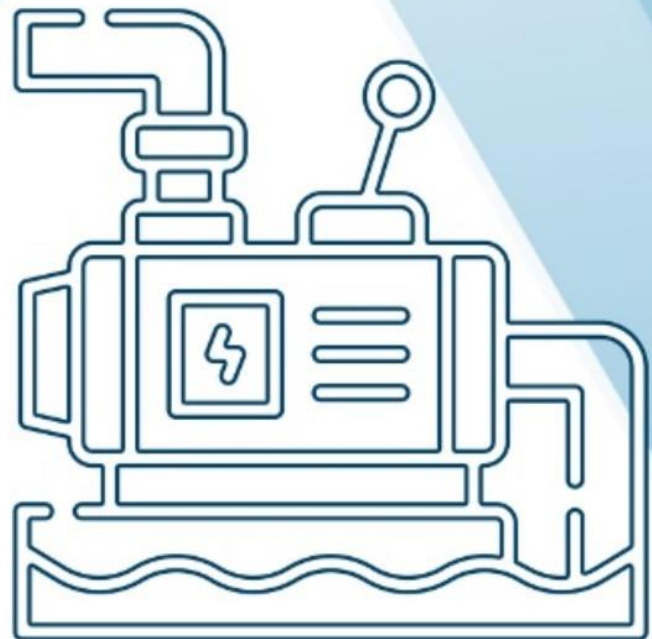
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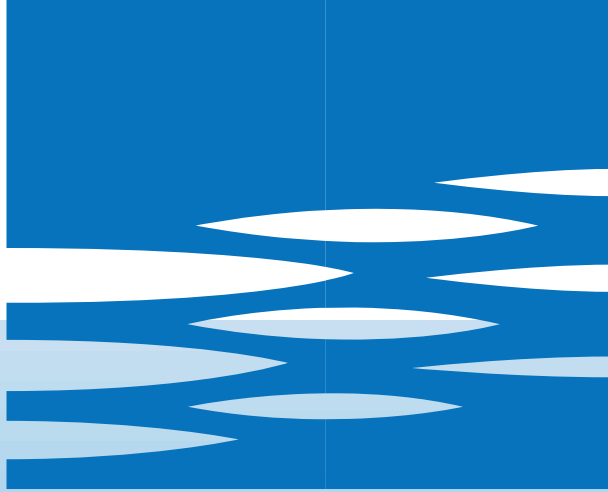


از این که کالا صنعتی را انتخاب کرده اید از شما ممنونیم. گروه کالا صنعتی را میتوان بهترین شرکت برای مشاوره و خرید کالای صنعتی دانست. این شرکت با ترکیب صنعت و تکنولوژی توانسته بهترین خدمات مشاوره ای در زمینه خرید کالای صنعتی و به طور تخصصی پمپ آلات خانگی و صنعتی موجود در بازار را ارائه دهد. انواع پمپ آب خانگی، کفکش، لجن کش، موتور پمپ، شناور، پمپ وکیوم، بیستونی، دیافراگمی، پمپ دنده ای و بسیاری کالاهای مرتبط با این دسته بندی ها، در سایت کالا صنعتی قابل خرید بوده و سعی بر آن است که قیمت های درج شده کاملاً به روز باشد تا اینکه تصمیم گیری برای مشتریان و کارشناسان فنی شرکت ها آسان شود.

در راستای ارزشمندی مشاوره برای انتخاب پمپ، آماده کردن دیتاشیت و کاتالوگ های با کیفیت در دستور کار این شرکت قرار گرفته است. در ذیل دیتاشیت پمپ ابارا آمده و این مشخصات مربوط به آخرین ویرایش شرکت سازنده می باشد.

- نکته: همواره سعی بر آن بوده که مشخصات و اطلاعات مربوط به کاتالوگ ها به صورت دقیق بازنویسی و نگارش شود. اما به صورت سهوی ممکن است اشکالات نگارشی در کاتالوگ وجود داشته باشد.





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SPECIFICATIONS

50Hz

Rev. Q

| PUMP | | | |
|-----------------------------|------------------|---|--|
| Liquid Handled | Type of liquid | Clean water | |
| | Temperature [°C] | min. -5 max. +90 max. +110 (H-HS-HW-HSW) max. +120 (E) | |
| Maximum working pressure | [MPa] | 1 | |
| Flange | | UNI 2236 | |
| Counterflange (On request) | | UNI 2247 | |
| Construction | Impeller | Closed centrifugal type | |
| | Shaft seal type | Mechanical seal | |
| | Bearing | Sealed ball bearing | |
| Pipe Connection | Suction | Flange to DIN 2532 (50 mm - 65 mm) | |
| | Discharge | Flange to DIN 2532 (32 mm - 40 mm - 50 mm) | |
| Material | Casing | Cast iron | |
| | Impeller | AISI 304 | |
| | Shaft seal | | Ceramic/Carbon/NBR (for MD) Ceramic/Carbon/FPM (for MDH) SiC/SiC/FPM (for MDHS) Tungsten Carbide/Tungsten Carbide/FPM (for MDHW) Carbon/Ceramic/EPDM VBEGF (for MDE) * SiC/Tungsten Carbide/FPM (for MDHSW) |
| | | Shaft | AISI 304 (wet extension) |
| | | Bracket | Cast iron |
| Applicable standard of test | | ISO 9906:2012- Grade 3B | |

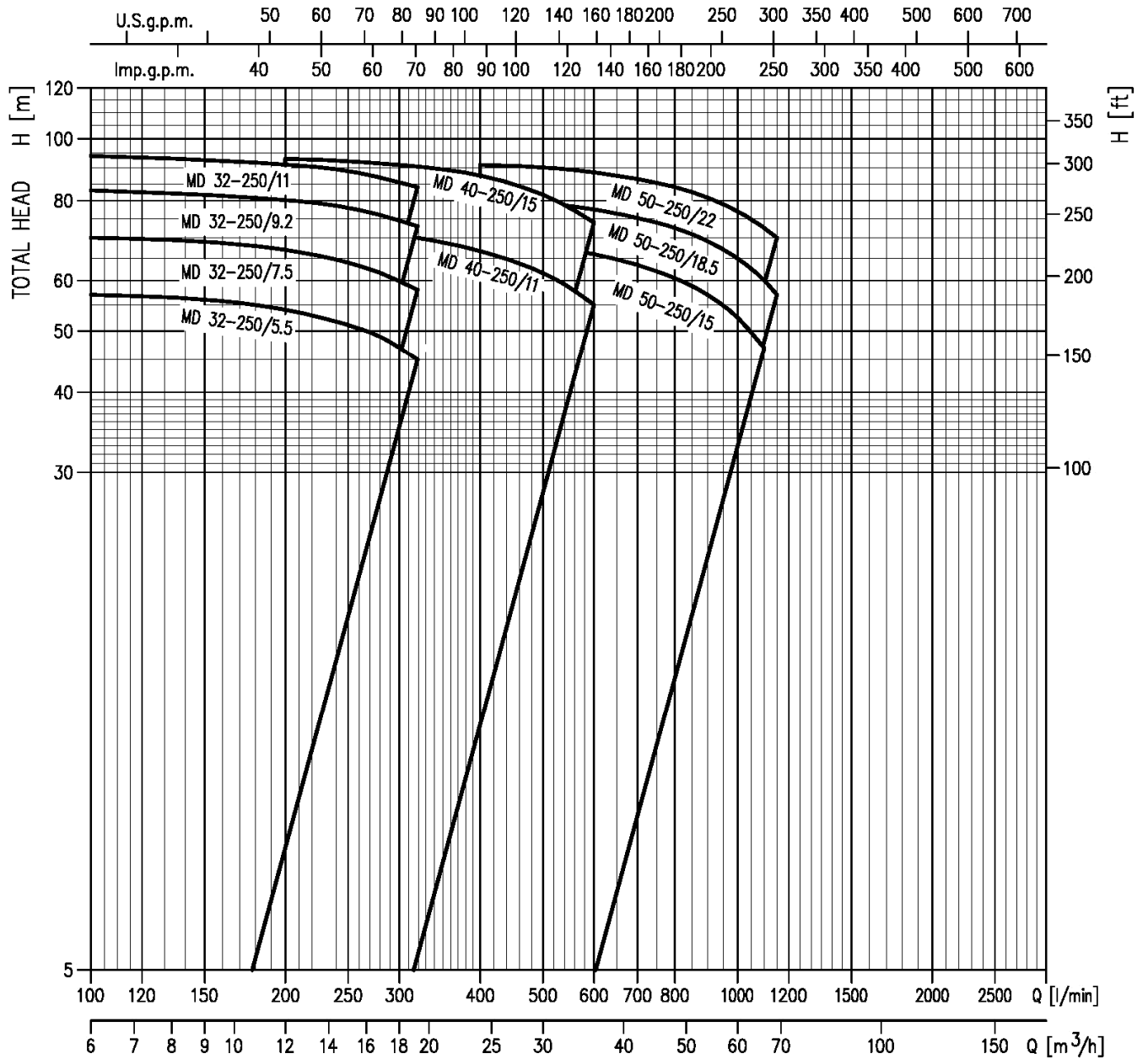
| MOTOR | | |
|------------------------------------|---------|--|
| Type | | Electric – TEFC Three Phase |
| Efficiency level (Reg. 640/2009) | | IE2 and IE3 from 5.5 kW up to 22 kW |
| No. of Poles | | 2 |
| Rotation speed | [min-1] | ≈2900 |
| Insulation Class | | F |
| Protection degree (CEI EN 60034-5) | | IP 55 |
| Power rating | [kW] | 5.5 ÷ 22 |
| | [HP] | 7.5 ÷ 30 |
| Frequency | [Hz] | 50 |
| Voltage | [V] | 400/690 ±10% |
| Over load protection | | Provided by the user |
| Casing material | | Aluminium |
| Base material/motor support | | Aluminium / Steel |
| Dimensions of cable entry | | PG 13.5 - PG 16 - PG 21 (see dimensions pages 400-401) |

SELECTION CHART

50Hz

Rev. Q

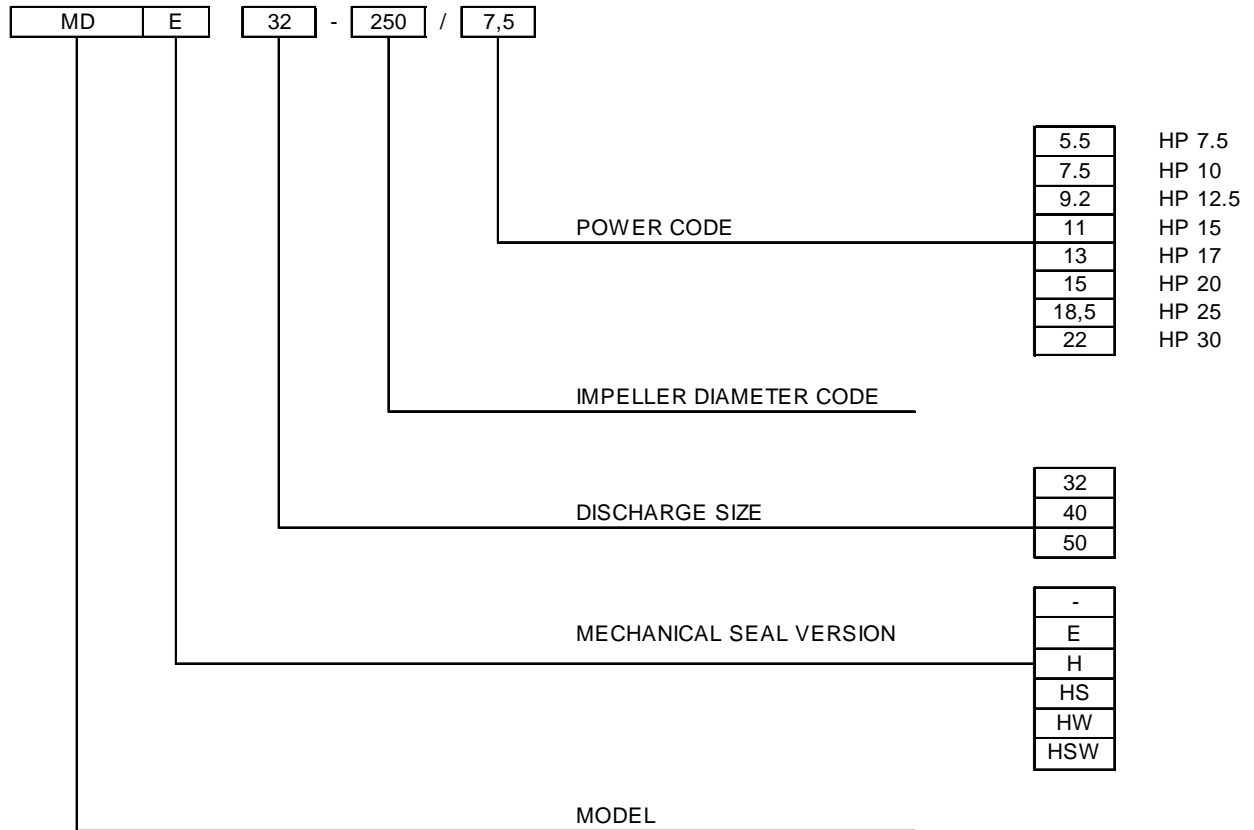
PERFORMANCE RANGE



SELECTION CHART

| Pump Type | Power | | Q=Capacity | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------|------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | [kW] | [HP] | l/min | 0 | 100 | 200 | 250 | 280 | 320 | 400 | 550 | 600 | 667 | 700 | 800 | 1000 | 1100 | 1150 | 1200 | 1300 | |
| | | | m ³ /h | 0 | 6 | 12 | 15 | 17 | 19 | 24 | 33 | 36 | 40 | 42 | 48 | 60 | 66 | 69 | 72 | 78 | |
| H=Total manometric head in meters | | | | | | | | | | | | | | | | | | | | | |
| MD 32-250/5.5 | 5,5 | 7,5 | 58 | 56,5 | 53 | 50,4 | 48,6 | 45,7 | 38 | - | - | - | - | - | - | - | - | - | - | - | |
| MD 32-250/7.5 | 7,5 | 10 | 71,5 | 70 | 67,1 | 64,5 | 62,7 | 60 | 53 | - | - | - | - | - | - | - | - | - | - | - | |
| MD 32-250/9.2 | 9,2 | 12,5 | 82,5 | 81,2 | 78,2 | 75,8 | 74 | 71,4 | 65 | - | - | - | - | - | - | - | - | - | - | - | |
| MD 32-250/11 | 11 | 15 | 91 | 89 | 86 | 84 | 82 | 79 | 73 | - | - | - | - | - | - | - | - | - | - | - | |
| MD 40-250/11 | 11 | 15 | 75 | - | 74 | 73 | 72,2 | 71 | 68,2 | 60,1 | 56,3 | 49,8 | 46 | - | - | - | - | - | - | - | |
| MD 40-250/15 | 15 | 20 | 93,8 | - | 92,7 | 92,1 | 91,7 | 90,8 | 88,1 | 81,2 | 78 | 72,9 | 70 | - | - | - | - | - | - | - | |
| MD 50-250/15 | 15 | 20 | 72,8 | - | - | - | - | - | 71,2 | 69,2 | 68,2 | 66,6 | 65,7 | 62,6 | 54,2 | 49 | 46,1 | 43 | - | - | |
| MD 50-250/18.5 | 18,5 | 25 | 82,8 | - | - | - | - | - | 81,5 | 79,5 | 78,5 | 77 | 76,1 | 73,2 | 66 | 61,4 | 58,9 | 56,1 | 50 | - | |
| MD 50-250/22 | 22 | 30 | 93 | - | - | - | - | - | 91,6 | 89,7 | 88,9 | 87,6 | 86,9 | 84,3 | 77,4 | 73 | 70,4 | 67,7 | 61,5 | - | |

TYPE KEY



CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906:2012 - Grade 3B

The curves refer to effective speed of asynchronous motors at 50 Hz, 2 poles.

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.

The continuous curves indicate the recommended working range. The dotted curve is only a guide.

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

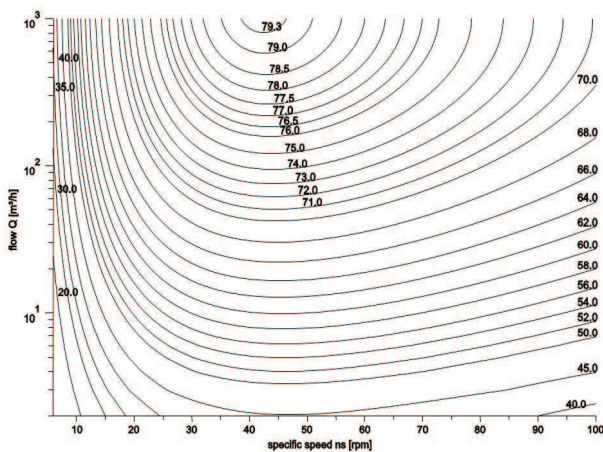
- Q = volume flow rate
- H = total head
- P_2 = pump power input (shaft power)
- η = pump efficiency
- NPSH = net positive suction head required by the pump
- MEI = minimum efficiency index

The minimum efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

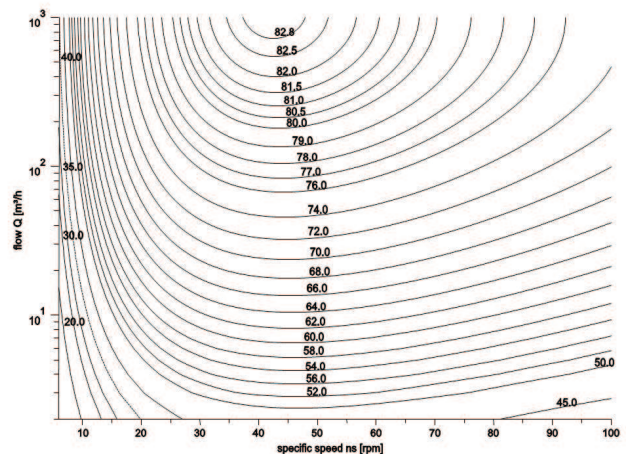
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

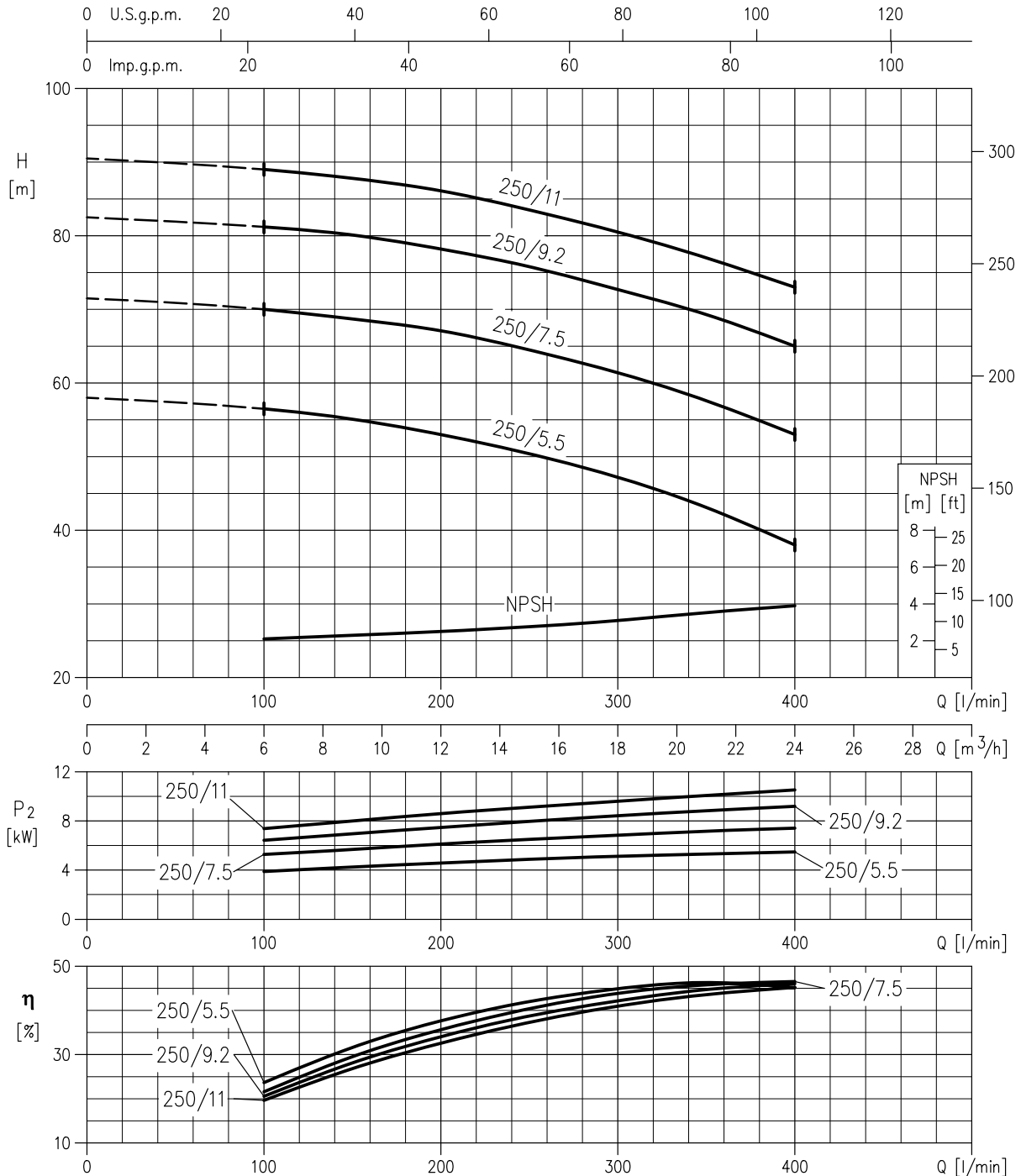
MEI = 0.4 for Multistage Vertical 2900rpm



MEI=0.7 for Mutistage Vertical 2900 rpm

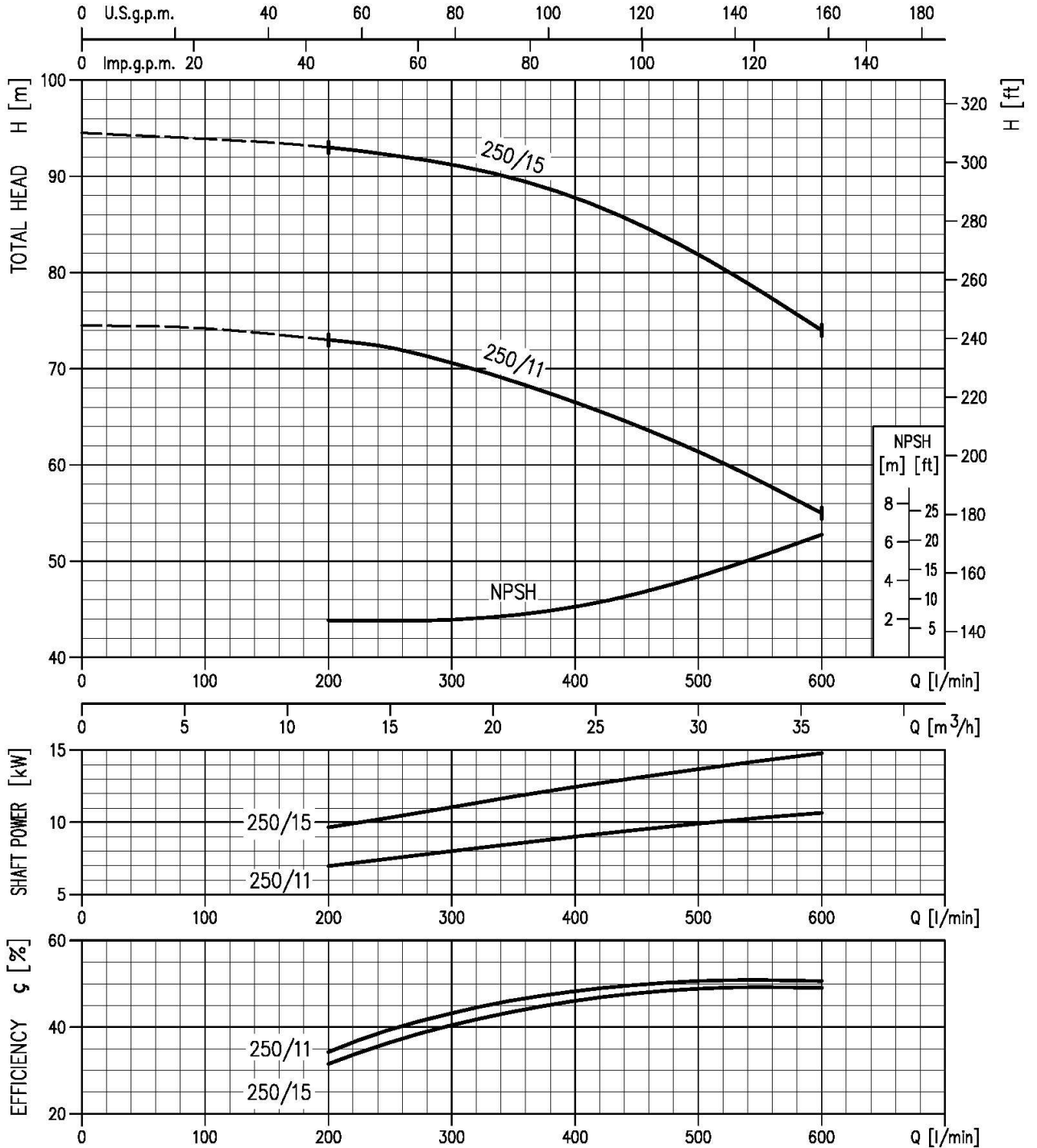


MD 32-250/5.5 (5.5 kW) MEI > 0.70 – Impeller diameter = 218 mm
 MD 32-250/7.5 (7.5 kW) MEI > 0.70 – Impeller diameter = 240 mm
 MD 32-250/9.2 (9.2 kW) MEI > 0.70 – Impeller diameter = 254 mm
 MD 32-250/11 (11 kW) MEI > 0.70 – Impeller diameter = 265 mm



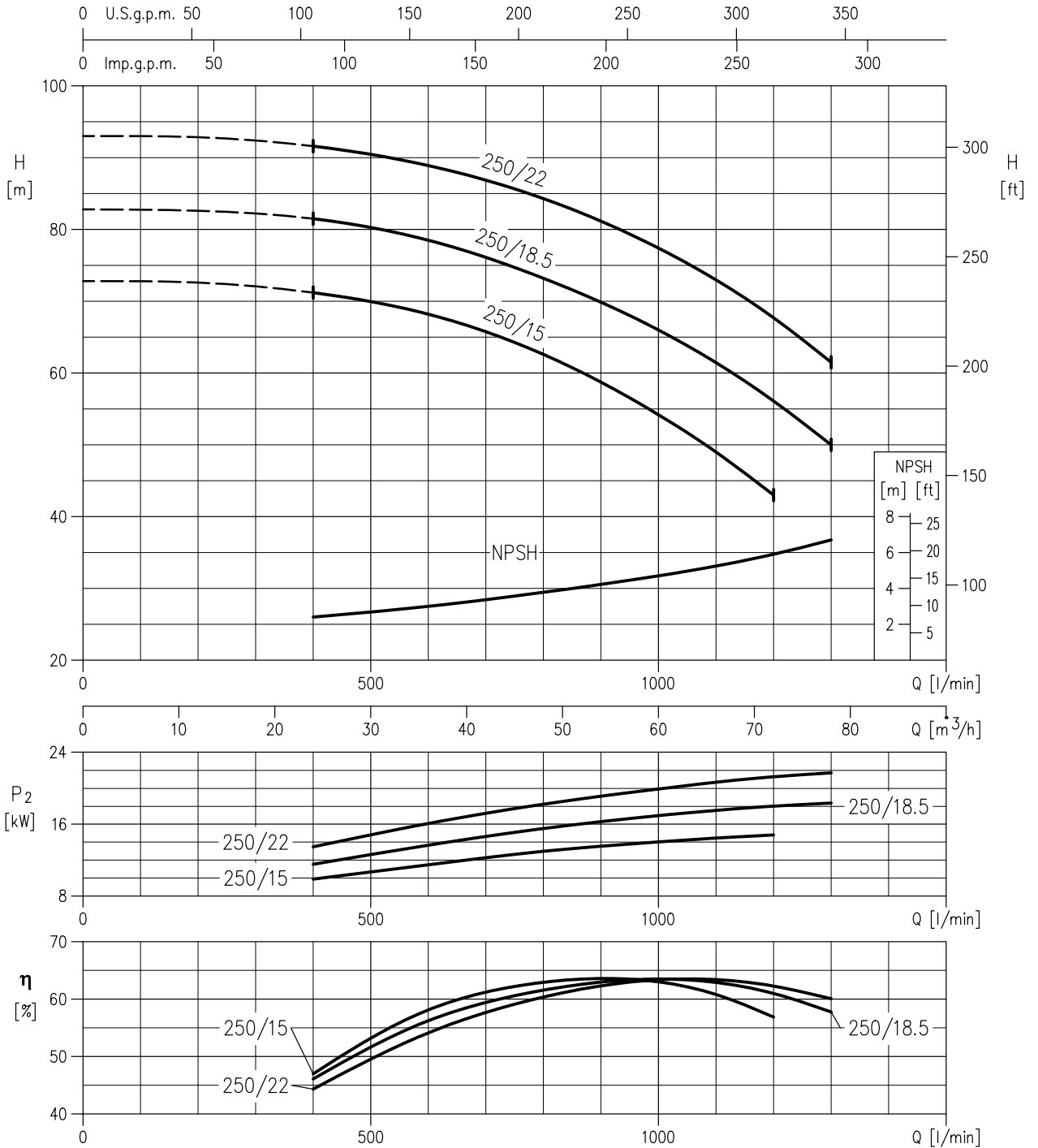
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

MD 40-250/11 (11 kW) MEI > 0.70 – Impeller diameter = 236 mm
 MD 40-250/15 (15 kW) MEI > 0.70 – Impeller diameter = 259 mm



Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

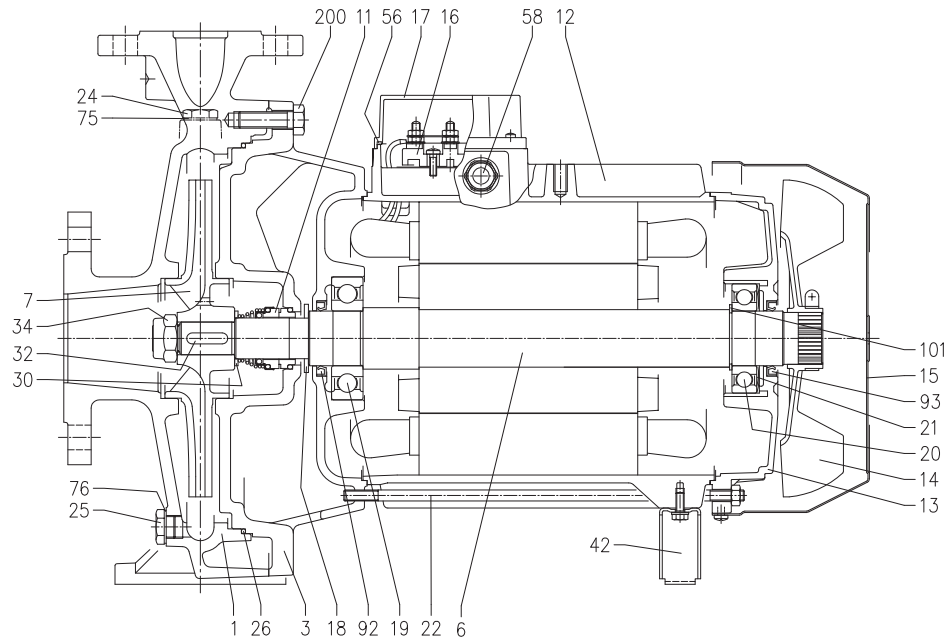
MD 50-250/15 (15 kW) MEI > 0.40 – Impeller diameter = 234 mm
 MD 50-250/18.5 (18.5 kW) MEI > 0.40 – Impeller diameter = 248 mm
 MD 50-250/22 (22 kW) MEI > 0.40 – Impeller diameter = 261 mm



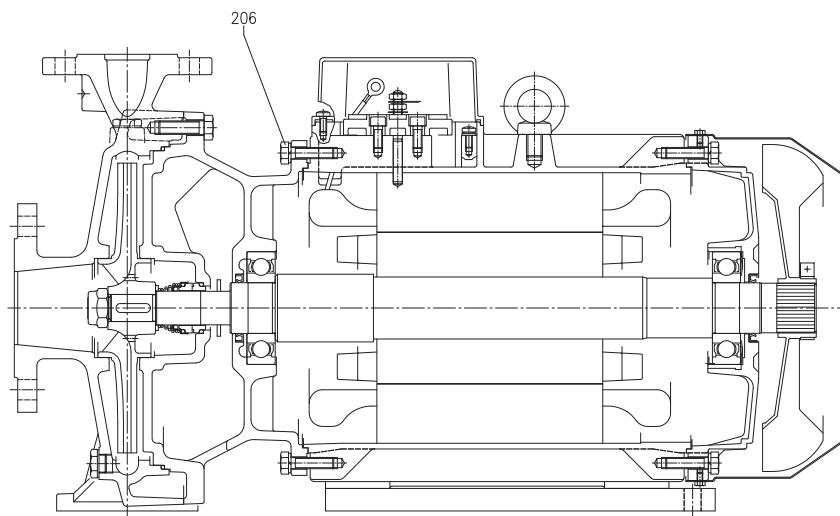
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

SECTIONAL VIEW DRAWING

UP TO 13 kW



15 kW AND ABOVE



SECTIONAL VIEW TABLE

| N° | PART NAME | MATERIAL | DIMENSIONS | STANDARD | N. FOR 1 UNIT | |
|-----|--------------------------------|--|--|--|----------------------------|-------------|
| 1 | Casing | Cast iron EN-GJL-200-EN 1561 | | | 1 | |
| 3 | Motor bracket | Cast iron EN-GJL-200-EN 1561 | | | 1 | |
| 6 | Shaft with rotor | AISI 304 (Part in contact with liquid) | | | 1 | |
| 7 | Impeller | AISI 304 | | | 1 | |
| 11 | Mechanical seal [1] | Carbon/Ceramic/NBR | | | 1 | |
| 12 | Motor frame with stator | - | | | 1 | |
| 13 | Motor cover | Aluminium | | | 1 | |
| 14 | Fan | PP | | | 1 | |
| 15 | Fan cover | Fe P04 Galvanized | | | 1 | |
| 16 | Terminal box | - | | | 1 | |
| 17 | Terminal box cover | Aluminium | | | 1 | |
| 18 | Splash ring | NBR | Up to 7.5 kW | 40x21.5x3 | EPE DRAWING | 1 |
| | | | 9.2 kW and above | 50x29.5x3 | | |
| 19 | Pump side ball bearing | - | See table p.302 | | 1 | |
| 20 | Fan side ball bearing | - | See table p.302 | | 1 | |
| 21 | Adjusting ring | Steel C70 | | | 1 | |
| 22 | Tie rod | Fe 42 Galvanized | | EPE DRAWING | 4 | |
| | Screw | | | | | Up to 11 Kw |
| | | | 15 kW and above | Gv. steel 8.8 strenght class ISO 898/1 | UNI 5739 | |
| 24 | Priming plug | Brass | | EPE DRAWING | 1 | |
| 25 | Drain plug | Brass | | EPE DRAWING | 1 | |
| 26 | O-ring | NBR [2] | 277x3.53 | EPE DRAWING | 1 | |
| 30 | Spacer | AISI 304 | 22.5x26.9x2.5 (up to 7.5kW) | EPE DRAWING | 1 | |
| | | | 30.5x40x2.5 (9.2 kW and above) | | | |
| 32 | Key | AISI 316 | 6x6x25 (up to 7.5kW) | UNI 6604 | 1 | |
| | | | 8x7x30 (9.2 kW and above) | | | |
| 34 | Impeller nut | AISI 304 | M16x1.5 (up to 7.5kW) | UNI 7474 | 1 | |
| | | | M20x1.5 (9.2 kW and above) | | | |
| 42 | Foot | Fe P04 | | EPE DRAWING | 1 | |
| 56 | Box gasket | NBR | | | 1 | |
| 58 | Cable entry | - | | | 1 | |
| 75 | Washer | Aluminium | ∅ 17 - G3/8 | | 1 | |
| 76 | Washer | Aluminium | ∅ 17 - G3/8 | | 1 | |
| 85 | Kit counterflange [3] | Flange | Galvanized steel | See table p.304 | EPE DRAWING | 2 |
| | | Screw for flange | AISI 304 | M16x55 | UNI 5737 | 8 |
| | | Gasket | EPDM | See table p.304 | | 2 |
| 92 | Lip seal | - | Up to 7.5 kW | 30x47x7 | DIN 3760 without spring | 1 |
| | | | From 9.2 to 11 kW | 40x55x7 | | |
| | | | From 15 to 22 kW | 45x60x7 | | |
| 93 | Lip seal | - | Up to 7.5 kW | 30x47x7 | DIN 3760 without spring | 1 |
| | | | From 9.2 to 11 kW | 40x55x7 | | |
| | | | From 15 to 22 kW | 45x60x7 | | |
| 101 | Snap ring (only for 9.2-11 kW) | Carbon tool steels TC 80 | ∅ 40 | UNI 7435 | 1 | |
| 200 | Screw | Gv. steel 8.8 strenght class ISO 898/1 | M12x40 | UNI 5739 | 12 | |
| 206 | Screw | From 15 kW and above | Gv. steel 8.8 strenght class ISO 898/1 | M10x40 | UNI 5739 | 4 |

[1] See constructions mechanical seal p. 303 *On request

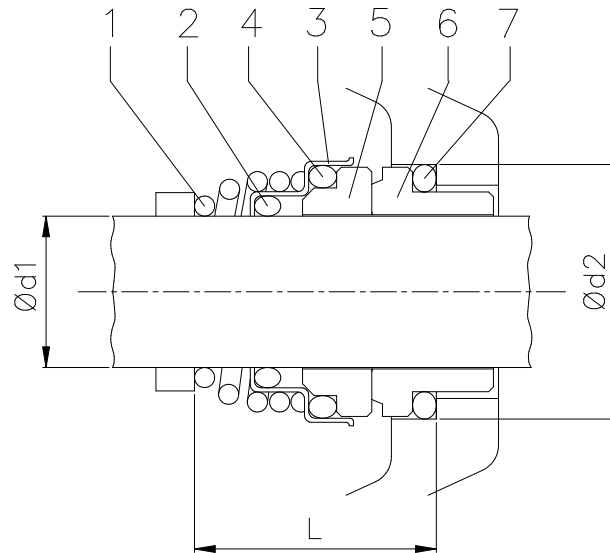
[2] FPM for H-HS-HW-HSW version
EPDM for E version

[3] On request

BEARINGS

| Pump type | Ball Bearing | |
|----------------|--------------|-----------|
| | Pump side | Fan side |
| MD 32-250/5.5 | 6306 2RS1 | 6206 2RS1 |
| MD 32-250/7.5 | | |
| MD 32-250/9.2 | 6308 2RS1 | 6208 2RS1 |
| MD 32-250/11 | | |
| MD 40-250/11 | 6308 2RS1 | 6208 2RS1 |
| MD 40-250/15 | 6309 2RS1 | 6309 2RS1 |
| MD 50-250/15 | 6309 2RS1 | 6309 2RS1 |
| MD 50-250/18,5 | | |
| MD 50-250/22 | | |

MECHANICAL SEAL



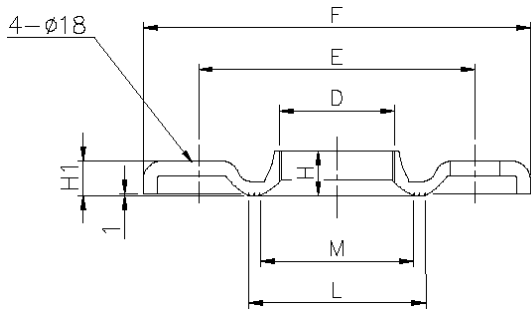
| Pump type | Dimensions mm | | |
|----------------|------------------|------------------|------|
| | $\varnothing d1$ | $\varnothing d2$ | L |
| MD 32-250/5.5 | 22 | 37 | 37,5 |
| MD 32-250/7.5 | | | |
| MD 32-250/9.2 | 30 | 45 | 42,5 |
| MD 32-250/11 | | | |
| MD 40-250/11 | 30 | 45 | 42,5 |
| MD 40-250/15 | | | |
| MD 50-250/15 | 30 | 45 | 42,5 |
| MD 50-250/18,5 | | | |
| MD 50-250/22 | | | |

| REF | PART NAME | Standard version (MD) | MATERIAL | | | | |
|-----|----------------------|-----------------------|--------------------|----------|---------------|-----------------|------------------|
| | | | (H) | (HS) | Optional (HW) | (E) | (HSW) |
| 1 | Self driving spring | AISI 316 | AISI 316 | AISI 316 | AISI 316 | AISI 316 | AISI 316 |
| 2 | O Ring | NBR | FPM | FPM | FPM | EPDM | FPM |
| 3 | Frame | AISI 304 | AISI 304/AISI 316* | AISI 316 | AISI 316 | AISI 304 | AISI 316 |
| 4 | O Ring | NBR | FPM | FPM | FPM | EPDM | FPM |
| 5 | Rotary seal ring | Ceramic | Ceramic | SiC | Tung. carbide | Ceramic | Tungsten carbide |
| 6 | Stationary seal ring | Carbon graphite | Carbon graphite | SiC | Tung. carbide | Carbon graphite | Tungsten carbide |
| 7 | O Ring | NBR | FPM | FPM | FPM | EPDM | FPM |

* Only for $\varnothing 30$

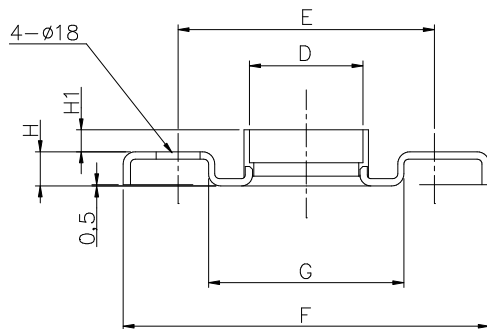
FITTINGS

ZINKED STEEL COUNTER FLANGE (STANDARD)



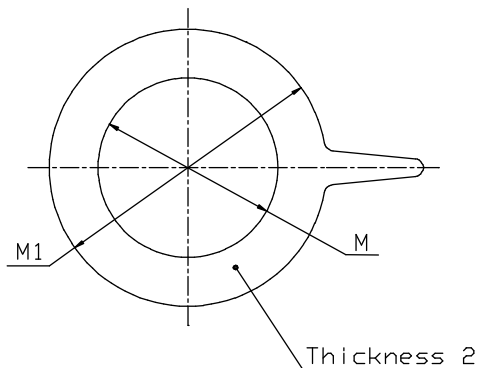
| DIN | D | E | F | H | H1 | L | M |
|-----|---------|-----|-----|------|------|-----|----|
| 32 | G 1 1/4 | 100 | 140 | 15 | 11.5 | 67 | 50 |
| 40 | G 1 1/2 | 110 | 150 | 17.5 | 11.5 | 72 | 58 |
| 50 | G 2 | 125 | 165 | 19 | 15 | 89 | 70 |
| 65 | G 2 1/2 | 145 | 185 | 23 | 14 | 104 | 88 |

AISI 304-AISI 316L COUNTER FLANGE (ON REQUEST)



| DIN | D | E | F | G | H | H1 |
|-----|---------|-----|-----|-----|----|------|
| 32 | G 1 1/4 | 100 | 140 | 76 | 14 | 15.5 |
| 40 | G 1 1/2 | 110 | 150 | 81 | 14 | 15.5 |
| 50 | G 2 | 125 | 165 | 96 | 16 | 18 |
| 65 | G 2 1/2 | 145 | 185 | 116 | 16 | 24 |

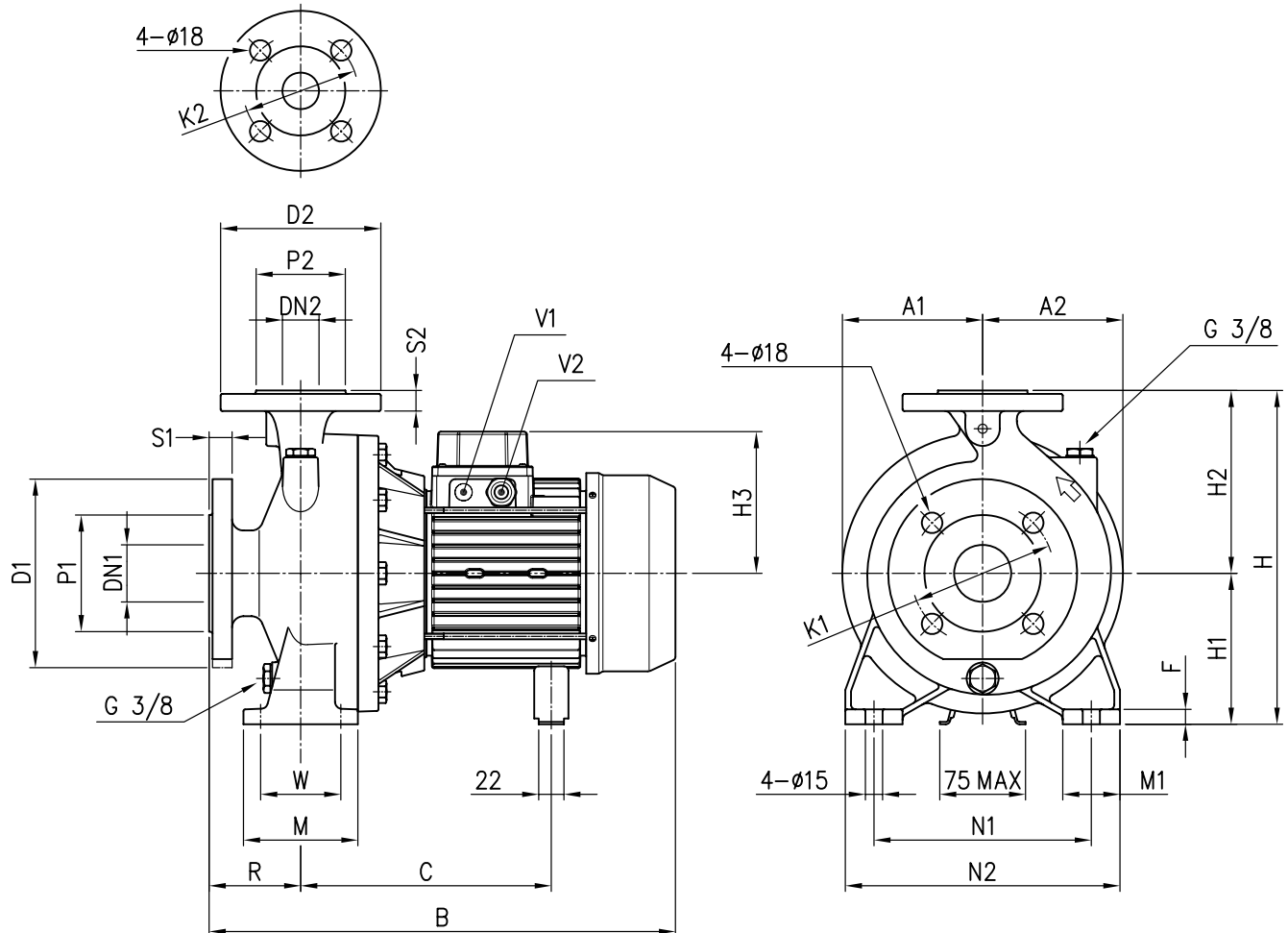
GASKET



| DIN | M | M1 |
|-----|----|-----|
| 32 | 38 | 82 |
| 40 | 50 | 93 |
| 50 | 60 | 107 |
| 65 | 80 | 125 |

Material : EPDM version for standard
 FPM version for hot water maximum 110°C

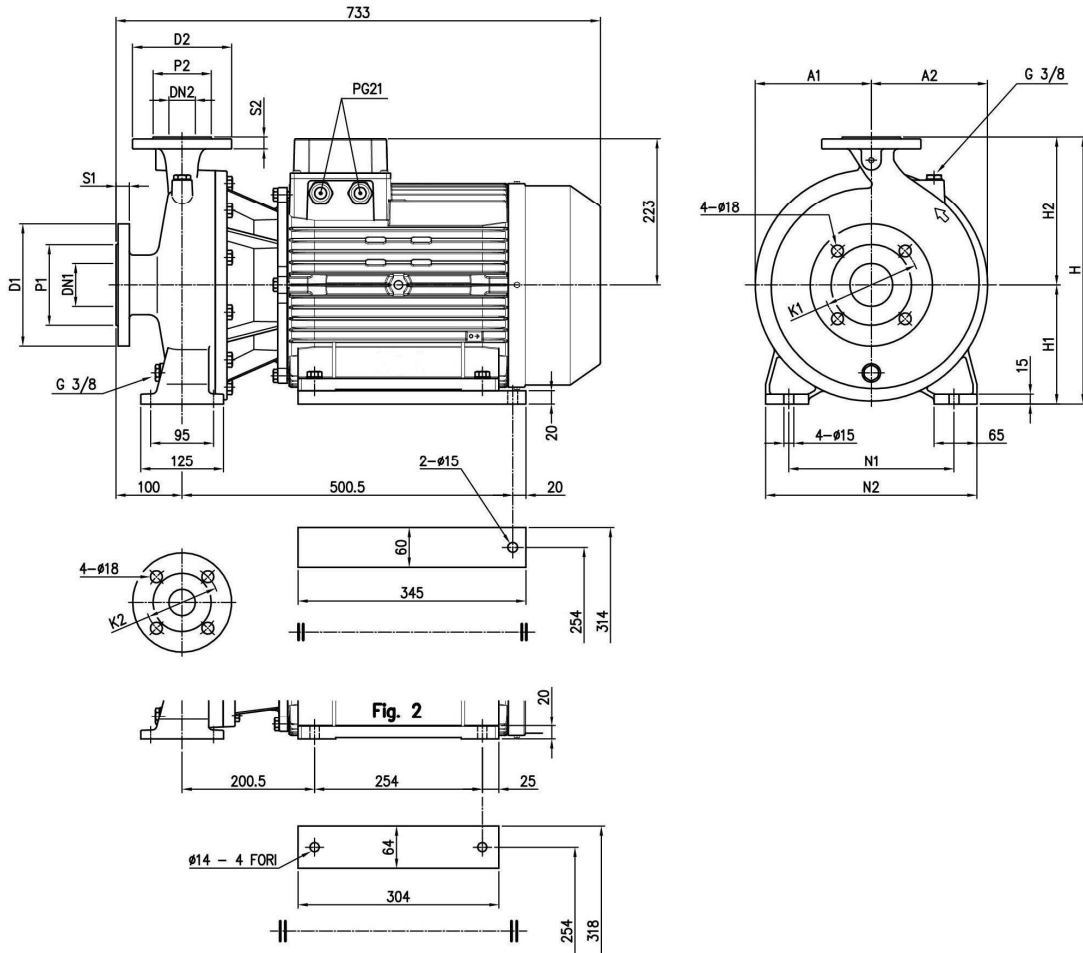
PUMP MD 32-250 / 40-250



| Model | Dimensions (mm) | | | | | | | | | | | | | | | | | | | | Weight [kgf] | | | | | | | | | |
|---------------|-----------------|------|------|------|----|-------|------|------|------|----|-----|-----|-----|-----|-----|----|-----|----|-----|-----|--------------|-----|-------|-----|-----|----|---------|-------|------|-------|
| | Ø DN1 | Ø P1 | Ø K1 | Ø D1 | S1 | Ø DN2 | Ø P2 | Ø K2 | Ø D2 | S2 | H | H1 | H2 | H3 | R | W | M | M1 | N1 | N2 | A1 | A2 | B (*) | C | F | V1 | V2 | (*) | | |
| MD 32-250/5.5 | 50 | 102 | 125 | 165 | 20 | 32 | 78 | 100 | 140 | 18 | 405 | 180 | 225 | 150 | 100 | 95 | 125 | 65 | 250 | 320 | 176 | 176 | 539 | 539 | 275 | 15 | PG 13.5 | PG 16 | 74,2 | 74,2 |
| MD 32-250/7.5 | 50 | 102 | 125 | 165 | 20 | 32 | 78 | 100 | 140 | 18 | 405 | 180 | 225 | 150 | 100 | 95 | 125 | 65 | 250 | 320 | 176 | 176 | 537 | 557 | 275 | 15 | PG 13.5 | PG 16 | 74,6 | 77,7 |
| MD 32-250/9.2 | 50 | 102 | 125 | 165 | 20 | 32 | 78 | 100 | 140 | 18 | 405 | 180 | 225 | 178 | 100 | 95 | 125 | 65 | 250 | 320 | 176 | 176 | 589 | 589 | 354 | 15 | PG 13.5 | PG 21 | 94,5 | 94,5 |
| MD 32-250/11 | 50 | 102 | 125 | 165 | 20 | 32 | 78 | 100 | 140 | 18 | 405 | 180 | 225 | 178 | 100 | 95 | 125 | 65 | 250 | 320 | 176 | 176 | 589 | 589 | 354 | 15 | PG 13.5 | PG 21 | 95 | 97,4 |
| MD 40-250/11 | 65 | 122 | 145 | 185 | 20 | 40 | 88 | 110 | 150 | 18 | 405 | 180 | 225 | 178 | 100 | 95 | 125 | 65 | 250 | 320 | 176 | 176 | 589 | 589 | 354 | 15 | PG 13.5 | PG 21 | 98 | 100,4 |

(*) Only for IE3 Motors

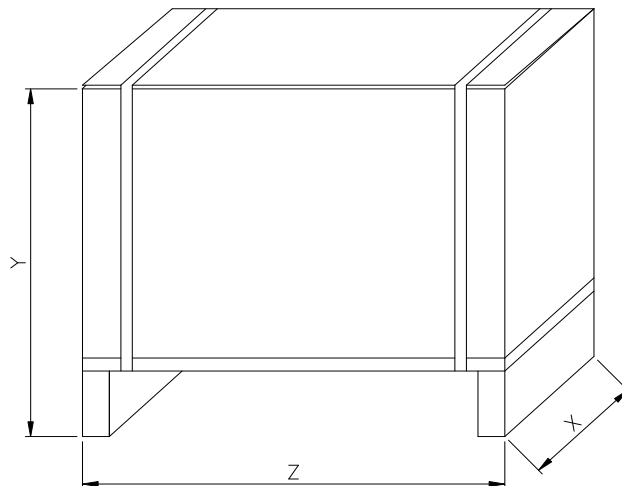
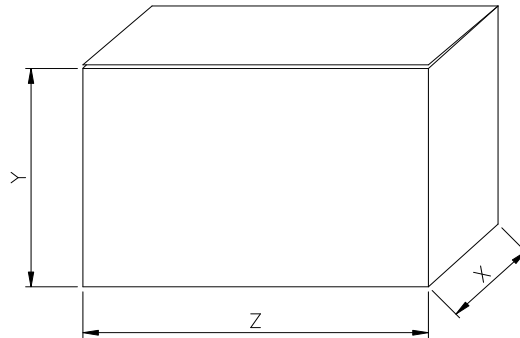
PUMP MD 40-250 / 50-250



| Model | Dimensions [mm] | | | | | | | | | | | | | | | | | Weight [kgf] | |
|----------------|-----------------|------|------|------|----|-------|------|------|------|----|-----|-----|-----|-----|-----|-----|-----|--------------|-------|
| | ∅ DN1 | ∅ P1 | ∅ K1 | ∅ D1 | S1 | ∅ DN2 | ∅ P2 | ∅ K2 | ∅ D2 | S2 | H | H1 | H2 | N1 | N2 | A1 | A2 | (*) | (*) |
| MD 40-250/15 | 65 | 122 | 145 | 185 | 20 | 40 | 88 | 110 | 150 | 18 | 405 | 180 | 225 | 250 | 320 | 176 | 176 | 102 | 105,1 |
| MD 50-250/15 | 65 | 122 | 145 | 185 | 20 | 50 | 102 | 125 | 165 | 20 | 405 | 180 | 225 | 250 | 320 | 176 | 176 | 103 | 106,1 |
| MD 50-250/18.5 | 65 | 122 | 145 | 185 | 20 | 50 | 102 | 125 | 165 | 20 | 405 | 180 | 225 | 250 | 320 | 176 | 176 | 130 | 136,3 |
| MD 50-250/22 | 65 | 122 | 145 | 185 | 20 | 50 | 102 | 125 | 165 | 20 | 405 | 180 | 225 | 250 | 320 | 176 | 176 | 155 | 161,1 |

(*) Only for IE3 Motors

PACKING



| Pump type | Packing [mm] | | | Weight [kgf] |
|----------------|--------------|-----|-----|--------------|
| | X | Y | Z | |
| MD 32-250/5.5 | 375 | 560 | 585 | 80 |
| MD 32-250/7.5 | 375 | 560 | 585 | 83 |
| MD 32-250/9.2 | 375 | 560 | 585 | 102 |
| MD 32-250/11 | 375 | 560 | 585 | 106 |
| MD 40-250/11 | 375 | 560 | 685 | 113 |
| MD 40-250/15 | 375 | 615 | 865 | 116 |
| MD 50-250/15 | 375 | 615 | 865 | 114 |
| MD 50-250/18.5 | 375 | 615 | 865 | 146 |
| MD 50-250/22 | 375 | 615 | 865 | 168 |

MOTOR DATA

| Pump type | Power | | Efficiency | Efficiency (% load) | | | Input [kW] | Full load current | | Locked rotor current | |
|----------------|-------|------|------------|---------------------|------|------|---------------|-------------------|-------|----------------------|-------|
| | [kW] | [HP] | | h % | | | | [A] | | [A] | |
| | | | | 50% | 75% | 100% | | 400 V | 690 V | 400 V | 690 V |
| MD 32-250/5.5 | 5.5 | 7.5 | IE2 | 82.9 | 86.0 | 87.4 | 6.29 | 10.4 | 6.0 | 116 | 67 |
| MD 32-250/5.5 | 5.5 | 7.5 | IE3 | 89.2 | 90.6 | 90.4 | 6.09 | 10.6 | 6.1 | 115.3 | 67 |
| MD 32-250/7.5 | 7.5 | 10 | IE2 | 86.1 | 88.2 | 88.8 | 8.45 | 13.7 | 7.9 | 140.0 | 81 |
| MD 32-250/7.5 | 7.5 | 10 | IE3 | 89.0 | 90.7 | 90.8 | 8.26 | 13.6 | 7.9 | 144 | 83 |
| MD 32-250/9.2 | 9.2 | 12.5 | IE2 | 88.6 | 90.0 | 89.9 | 10.23 | 16.8 | 9.7 | 166 | 96 |
| MD 32-250/9.2 | 9.2 | 12.5 | IE3 | 90.1 | 90.8 | 90.9 | 10.12 | 17.2 | 10.0 | 166 | 96 |
| MD 32-250/11 | 11 | 15 | IE2 | 88.9 | 90.3 | 90.2 | 12.20 | 21.9 | 12.7 | 186 | 108 |
| MD 32-250/11 | 11 | 15 | IE3 | 90.4 | 91.2 | 91.8 | 11.98 | 21.3 | 12.3 | 184 | 107 |
| MD 40-250/11 | 11 | 15 | IE2 | 88.9 | 90.3 | 90.2 | 12.20 | 21.9 | 12.7 | 186 | 108 |
| MD 40-250/11 | 11 | 15 | IE3 | 90.4 | 91.2 | 91.8 | 11.98 | 21.3 | 12.3 | 184 | 107 |
| MD 40-250/15 | 15 | 20 | IE2 | 89.3 | 91.0 | 91.1 | 18.00 | 30.0 | 17.3 | 246 | 143 |
| MD 40-250/15 | 15 | 20 | IE3 | 91.2 | 92.0 | 91.9 | 16.32 | 27.7 | 17.3 | 225 | 130 |
| MD 50-250/15 | 15 | 20 | IE2 | 89.3 | 91.0 | 91.1 | 18.00 | 30.0 | 17.3 | 246 | 143 |
| MD 50-250/15 | 15 | 20 | IE3 | 91.2 | 92.0 | 91.9 | 16.32 | 27.7 | 17.3 | 225 | 130 |
| MD 50-250/18.5 | 18.5 | 25 | IE2 | 89.8 | 91.2 | 91.7 | 20.17 | 36.3 | 21.0 | 325 | 188 |
| MD 50-250/18.5 | 18.5 | 25 | IE3 | 91.6 | 93.0 | 92.6 | 19.98 | 35.0 | 20.3 | 328 | 190 |
| MD 50-250/22 | 22 | 30 | IE2 | 89.9 | 91.9 | 92.4 | 23.80 | 40.8 | 23.6 | 383 | 222 |
| MD 50-250/22 | 22 | 30 | IE3 | 92.0 | 93.1 | 93.2 | 23.58 | 39.7 | 23.6 | 391 | 227 |

NOISE DATA

| Pump type | Power | | L _{PA} - dB(A) * |
|----------------|-------|------|---------------------------|
| | [kW] | [HP] | |
| MD 32-250/5.5 | 5,5 | 7,5 | 75 |
| MD 32-250/7.5 | 7,5 | 10 | |
| MD 32-250/9.2 | 9,2 | 12,5 | 80 |
| MD 32-250/11 | 11 | 15 | |
| MD 40-250/11 | 11 | 15 | 80 |
| MD 40-250/15 | 15 | 20 | 83-82 |
| MD 50-250/15 | 15 | 20 | 83-82 |
| MD 50-250/18,5 | 18,5 | 25 | |
| MD 50-250/22 | 22 | 30 | |

*Mean value of several measures at 1m distance around the pump.
Tolerance ± 2.5 dB.