

MUT2200-Engineering

MUT2200EL sensors represent the state of the art of BERMAD production for water cycle and process applications. The new structure for the generation of the magnetic field and the innovative route of the signal generated by the electrodes, provide a sensor with an extremely wide measurement range:

EL= Extended Linearity

This new sensors series follows the successful tradition of the MUT2200EL, introducing a measurement range of more than 1:1000 without linearization software. These kinds of performances allow very accurate measures on a wide flowrate range and to count lower flow rates that, before, would have been reset because of the effect of the converters cut off. This flanged sensors series bases its operation on the Faraday Principle, by which a conductor crossing a magnetic field generates a potential perpendicularly orientated to the same field. In this case the flow tube made in stainless steel AISI 304 is equipped with carbon steel or stainless steel flanges, two coils are installed on the top and inferior part; the magnetic field, generated by the electric current crossing the coil, induces in the electrodes a difference in the potential proportional to the flow rate. With the aim of measuring such potential of very low values, the interior of the flow tube is electrically insulated, thus the process liquid is no longer in contact neither with the material of the flow tube nor with that of the flange. The converter used generates the current supplying the coil, acquires the electrodes difference of potential, process the signal to calculate the flowrate and administers the communication with the exterior. The entire sensor, when installed in the separate version, has a degree of protection IP68 suitable for a permanent immersion in water up to a depth of 1.5m thanks to a welded plate structure containing the coil and the electrodes.



The electromagnetic flowmeter designed for the toughest applications



Modbus

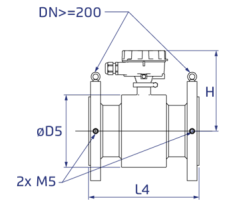
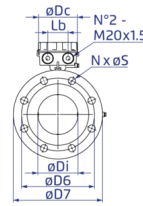


Sensor Specifications

| | | | | | | | |
|--|--|------------------|---------------------|------|---|---------|---------------|
| Flow tube material | AISI 304 (std), AISI 316 | | | | | | |
| Flanges material | Carbon steel painted (std), AISI 304, AISI 316 | | | | | | |
| Electrodes material | Electrodes material Hastelloy C (std), Hastelloy B, Titanium, Tantalio, Platinum | | | | | | |
| Internal lining and liquid temperature | <table border="0"> <tr> <td>Internal lining:</td> <td>Liquid temperature:</td> </tr> <tr> <td>PTFE</td> <td>Standard -40 /+130°C (up to +180° on request)</td> </tr> <tr> <td>Ebonite</td> <td>-40°C / +80°C</td> </tr> </table> | Internal lining: | Liquid temperature: | PTFE | Standard -40 /+130°C (up to +180° on request) | Ebonite | -40°C / +80°C |
| Internal lining: | Liquid temperature: | | | | | | |
| PTFE | Standard -40 /+130°C (up to +180° on request) | | | | | | |
| Ebonite | -40°C / +80°C | | | | | | |
| Available Sizes | ½"-100" ; DN15-2500 mm | | | | | | |
| Flange standards available | EN1092-1, ANSI 150, ANSI 300, ANSI 600, ANSI 900, DIN 2501, BS 4504, AS 2129 (TABLE D - E - F), AS 4087, ISO 7005-1, KS 10K | | | | | | |
| Protection Degree | IP68 1.5 m continuous immersion (EN 60529) | | | | | | |
| Electrical connections | Cable glands M20 x 1.5 + terminal block + sealing resin | | | | | | |

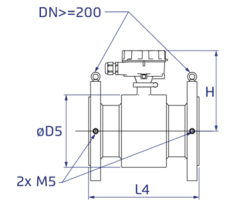
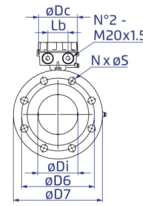


MUT2200EL PN 10 EN 1092-1



| Size | L4 (mm) | D5 (mm) | Di (mm) | D6 (mm) | D7 (mm) | N | H (mm) | Dc (mm) | Lb (mm) |
|---------------|--------------|---------|---------|---------|---------|----|--------|---------|---------|
| ½" ; DN12 | 200(+0/-3) | 84 | 11 | 65 | 95 | 4 | 156 | 96 | 50 |
| ¾" ; DN20 | 200(+0/-3) | 84 | 17 | 75 | 105 | 4 | 156 | 96 | 50 |
| 1" ; DN25 | 200(+0/-3) | 74 | 24 | 85 | 115 | 4 | 151 | 96 | 50 |
| 1¼" ; DN32 | 200(+0/-3) | 83 | 31 | 100 | 140 | 4 | 155 | 96 | 50 |
| 1½" ; DN40 | 200(+0/-3) | 88 | 37 | 110 | 150 | 4 | 158 | 96 | 50 |
| 2" ; DN50 | 200(+0/-3) | 102 | 47 | 125 | 165 | 4 | 165 | 96 | 50 |
| 2½" ; DN65 | 200(+0/-3) | 114 | 63 | 145 | 185 | 8 | 171 | 96 | 50 |
| 3" ; DN80 | 200(+0/-3) | 127 | 75 | 160 | 200 | 8 | 177 | 96 | 50 |
| 4" ; DN100 | 250(+0/-3) | 161 | 99 | 180 | 220 | 8 | 194 | 96 | 50 |
| 5" ; DN125 | 250(+0/-3) | 187 | 124 | 210 | 250 | 8 | 207 | 96 | 50 |
| 6" ; DN150 | 300(+0/-3) | 210 | 152 | 240 | 285 | 8 | 219 | 96 | 50 |
| 8" ; DN200 | 350(+0/-3) | 261 | 201 | 295 | 340 | 8 | 244 | 96 | 50 |
| 10" ; DN250 | 450(+0/-5) | 319 | 255 | 350 | 395 | 12 | 273 | 96 | 50 |
| 12" ; DN300 | 500(+0/-5) | 371 | 308 | 400 | 445 | 12 | 299 | 96 | 50 |
| 14" ; DN350 | 550(+0/-5) | 404 | 340 | 460 | 505 | 16 | 316 | 96 | 50 |
| 16" ; DN400 | 600(+0/-5) | 455 | 390 | 515 | 565 | 16 | 341 | 96 | 50 |
| 18" ; DN450 | 450(+0/-7) | 519 | 441 | 565 | 615 | 20 | 373 | 96 | 50 |
| 20" ; DN500 | 500(+0/-9) | 570 | 492 | 620 | 670 | 20 | 399 | 96 | 50 |
| 24" ; DN600 | 600(+0/-9) | 684 | 592 | 725 | 780 | 20 | 456 | 96 | 50 |
| 28" ; DN700 | 700(+0/-9) | 783 | 695 | 840 | 895 | 24 | 505 | 96 | 50 |
| 32" ; DN800 | 800(+0/-9) | 885 | 795 | 950 | 1015 | 24 | 556 | 96 | 50 |
| 36" ; DN900 | 900(+0/-15) | 996 | 896 | 1050 | 1115 | 28 | 612 | 96 | 50 |
| 40" ; DN1000 | 1000(+0/-15) | 1098 | 996 | 1160 | 1445 | 32 | 663 | 96 | 50 |
| 48" ; DN1200 | 1200(+0/-15) | 1312 | 1199 | 1380 | 1230 | 28 | 770 | 96 | 50 |
| 56" ; DN1400 | 1400(+0/-15) | 1512 | 1402 | 1590 | 1675 | 36 | 870 | 96 | 50 |
| 60" ; DN1500 | 1500(+0/-15) | 1612 | 1500 | 1700 | 1785 | 36 | 920 | 96 | 50 |
| 64" ; DN1600 | 1600(+0/-15) | 1712 | 1602 | 1820 | 1915 | 40 | 970 | 96 | 50 |
| 72" ; DN1800 | 1800(+0/-15) | 1922 | 1803 | 2020 | 2115 | 44 | 1075 | 96 | 50 |
| 80" ; DN2000 | 2000(+0/-15) | 2122 | 2004 | 2230 | 2325 | 48 | 1175 | 96 | 50 |
| 100" ; DN2500 | 2000(+0/-15) | 2644 | 2510 | 2750 | 2860 | 56 | 1420 | 97 | - |

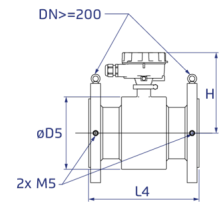
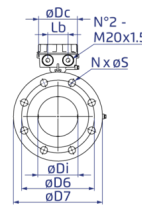
MUT2200EL PN 16 EN 1092-1



| Size | L4 (mm) | D5 (mm) | Di (mm) | D6 (mm) | D7 (mm) | N | H (mm) | Dc (mm) | Lb (mm) |
|--------------|--------------|---------|---------|---------|---------|----|--------|---------|---------|
| ½" ; DN12 | 200(+0/-3) | 84 | 11 | 65 | 95 | 4 | 156 | 96 | 50 |
| ¾" ; DN20 | 200(+0/-3) | 84 | 17 | 75 | 105 | 4 | 156 | 96 | 50 |
| 1" ; DN25 | 200(+0/-3) | 74 | 24 | 85 | 115 | 4 | 151 | 96 | 50 |
| 1¼" ; DN32 | 200(+0/-3) | 83 | 31 | 100 | 140 | 4 | 155 | 96 | 50 |
| 1½" ; DN40 | 200(+0/-3) | 88 | 37 | 110 | 150 | 4 | 158 | 96 | 50 |
| 2" ; DN50 | 200(+0/-3) | 102 | 47 | 125 | 165 | 4 | 165 | 96 | 50 |
| 2½" ; DN65 | 200(+0/-3) | 114 | 63 | 145 | 185 | 8 | 171 | 96 | 50 |
| 3" ; DN80 | 200(+0/-3) | 127 | 75 | 160 | 200 | 8 | 177 | 96 | 50 |
| 4" ; DN100 | 250(+0/-3) | 161 | 99 | 180 | 220 | 8 | 194 | 96 | 50 |
| 5" ; DN125 | 250(+0/-3) | 187 | 124 | 210 | 250 | 8 | 207 | 96 | 50 |
| 6" ; DN150 | 300(+0/-3) | 210 | 152 | 240 | 285 | 8 | 219 | 96 | 50 |
| 8" ; DN200 | 350(+0/-3) | 261 | 201 | 295 | 340 | 8 | 244 | 96 | 50 |
| 10" ; DN250 | 450(+0/-5) | 319 | 255 | 350 | 395 | 12 | 273 | 96 | 50 |
| 12" ; DN300 | 500(+0/-5) | 371 | 308 | 400 | 445 | 12 | 299 | 96 | 50 |
| 14" ; DN350 | 550(+0/-5) | 404 | 340 | 460 | 505 | 16 | 316 | 96 | 50 |
| 16" ; DN400 | 600(+0/-5) | 455 | 390 | 515 | 565 | 16 | 341 | 96 | 50 |
| 18" ; DN450 | 450(+0/-7) | 519 | 439 | 565 | 615 | 20 | 373 | 96 | 50 |
| 20" ; DN500 | 500(+0/-9) | 570 | 490 | 620 | 670 | 20 | 399 | 96 | 50 |
| 24" ; DN600 | 600(+0/-9) | 684 | 592 | 725 | 780 | 20 | 456 | 96 | 50 |
| 28" ; DN700 | 700(+0/-9) | 783 | 691 | 840 | 895 | 24 | 505 | 96 | 50 |
| 32" ; DN800 | 800(+0/-9) | 885 | 791 | 950 | 1015 | 24 | 556 | 96 | 50 |
| 36" ; DN900 | 900(+0/-15) | 996 | 890 | 1050 | 1115 | 28 | 612 | 96 | 50 |
| 40" ; DN1000 | 1000(+0/-15) | 1098 | 992 | 1160 | 1445 | 32 | 663 | 96 | 50 |
| 48" ; DN1200 | 1200(+0/-15) | 1312 | 1191 | 1380 | 1230 | 28 | 770 | 96 | 50 |
| 56" ; DN1400 | 1400(+0/-15) | 1512 | 1392 | 1590 | 1675 | 36 | 870 | 96 | 50 |
| 60" ; DN1500 | 1500(+0/-15) | 1612 | 1492 | 1700 | 1785 | 36 | 920 | 96 | 50 |
| 64" ; DN1600 | 1600(+0/-15) | 1712 | 1594 | 1820 | 1915 | 40 | 970 | 96 | 50 |
| 72" ; DN1800 | 1800(+0/-15) | 1922 | 1795 | 2020 | 2115 | 44 | 1075 | 96 | 50 |
| 80" ; DN2000 | 2000(+0/-15) | 2122 | 1994 | 2230 | 2325 | 48 | 1175 | 96 | 50 |



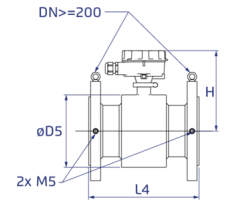
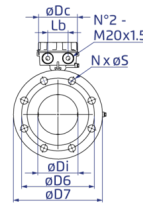
MUT2200EL PN 25 EN 1092-1



| Size | L4 (mm) | D5 (mm) | Di (mm) | D6 (mm) | D7 (mm) | N | H (mm) | Dc (mm) | Lb (mm) |
|--------------|--------------|---------|---------|---------|---------|----|--------|---------|---------|
| ½" ; DN12 | 200(+0/-3) | 84 | 11 | 65 | 95 | 4 | 156 | 96 | 50 |
| ¾" ; DN20 | 200(+0/-3) | 84 | 17 | 75 | 105 | 4 | 156 | 96 | 50 |
| 1" ; DN25 | 200(+0/-3) | 74 | 24 | 85 | 115 | 4 | 151 | 96 | 50 |
| 1¼" ; DN32 | 200(+0/-3) | 83 | 31 | 100 | 140 | 4 | 155 | 96 | 50 |
| 1½" ; DN40 | 200(+0/-3) | 88 | 37 | 110 | 150 | 4 | 158 | 96 | 50 |
| 2" ; DN50 | 200(+0/-3) | 102 | 47 | 125 | 165 | 4 | 165 | 96 | 50 |
| 2½" ; DN65 | 200(+0/-3) | 114 | 63 | 145 | 185 | 8 | 171 | 96 | 50 |
| 3" ; DN80 | 200(+0/-3) | 127 | 75 | 160 | 200 | 8 | 177 | 96 | 50 |
| 4" ; DN100 | 250(+0/-3) | 161 | 99 | 180 | 220 | 8 | 194 | 96 | 50 |
| 5" ; DN125 | 250(+0/-3) | 187 | 124 | 210 | 250 | 8 | 207 | 96 | 50 |
| 6" ; DN150 | 300(+0/-3) | 210 | 152 | 240 | 285 | 8 | 219 | 96 | 50 |
| 8" ; DN200 | 350(+0/-3) | 261 | 201 | 295 | 340 | 8 | 244 | 96 | 50 |
| 10" ; DN250 | 450(+0/-5) | 319 | 255 | 350 | 395 | 12 | 273 | 96 | 50 |
| 12" ; DN300 | 500(+0/-5) | 371 | 306 | 400 | 445 | 12 | 299 | 96 | 50 |
| 14" ; DN350 | 550(+0/-5) | 404 | 338 | 460 | 505 | 16 | 316 | 96 | 50 |
| 16" ; DN400 | 600(+0/-5) | 455 | 386 | 515 | 565 | 16 | 341 | 96 | 50 |
| 18" ; DN450 | 450(+0/-7) | 519 | 437 | 565 | 615 | 20 | 373 | 96 | 50 |
| 20" ; DN500 | 500(+0/-9) | 570 | 488 | 620 | 670 | 20 | 399 | 96 | 50 |
| 24" ; DN600 | 600(+0/-9) | 684 | 588 | 725 | 780 | 20 | 456 | 96 | 50 |
| 28" ; DN700 | 700(+0/-9) | 783 | 685 | 840 | 895 | 24 | 505 | 96 | 50 |
| 32" ; DN800 | 800(+0/-9) | 885 | 787 | 950 | 1015 | 24 | 556 | 96 | 50 |
| 36" ; DN900 | 900(+0/-15) | 996 | 884 | 1050 | 1115 | 28 | 612 | 96 | 50 |
| 40" ; DN1000 | 1000(+0/-15) | 1098 | 984 | 1210 | 1320 | 28 | 663 | 96 | 50 |
| 48" ; DN1200 | 1200(+0/-15) | 1312 | 1181 | - | - | - | 770 | 96 | 50 |
| 56" ; DN1400 | 1400(+0/-15) | 1512 | 1382 | - | - | - | 870 | 96 | 50 |
| 60" ; DN1500 | 1500(+0/-15) | 1612 | 1482 | - | - | - | 920 | 96 | 50 |
| 64" ; DN1600 | 1600(+0/-15) | 1712 | 1580 | - | - | - | 970 | 96 | 50 |
| 72" ; DN1800 | 1800(+0/-15) | 1922 | 1783 | - | - | - | 1075 | 96 | 50 |
| 80" ; DN2000 | 2000(+0/-15) | 2122 | 1978 | - | - | - | 1175 | 96 | 50 |

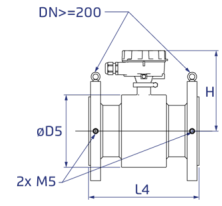
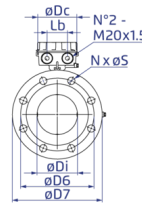


MUT2200EL PN 40 EN 1092-1



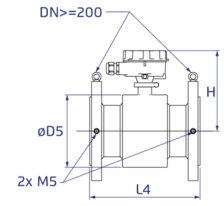
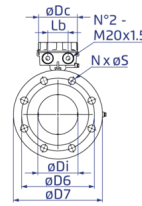
| Size | L4 (mm) | D5 (mm) | Di (mm) | D6 (mm) | D7 (mm) | N | H (mm) | Dc (mm) | Lb (mm) |
|--------------|--------------|---------|---------|---------|---------|----|--------|---------|---------|
| ½" ; DN12 | 200(+0/-3) | 84 | 11 | 65 | 95 | 4 | 156 | 96 | 50 |
| ¾" ; DN20 | 200(+0/-3) | 84 | 17 | 75 | 105 | 4 | 156 | 96 | 50 |
| 1" ; DN25 | 200(+0/-3) | 74 | 24 | 85 | 115 | 4 | 151 | 96 | 50 |
| 1¼" ; DN32 | 200(+0/-3) | 83 | 31 | 100 | 140 | 4 | 155 | 96 | 50 |
| 1½" ; DN40 | 200(+0/-3) | 88 | 37 | 110 | 150 | 4 | 158 | 96 | 50 |
| 2" ; DN50 | 200(+0/-3) | 102 | 47 | 125 | 165 | 4 | 165 | 96 | 50 |
| 2½" ; DN65 | 200(+0/-3) | 114 | 63 | 145 | 185 | 8 | 171 | 96 | 50 |
| 3" ; DN80 | 200(+0/-3) | 127 | 75 | 160 | 200 | 8 | 177 | 96 | 50 |
| 4" ; DN100 | 250(+0/-3) | 161 | 99 | 190 | 235 | 8 | 194 | 96 | 50 |
| 5" ; DN125 | 250(+0/-3) | 187 | 124 | 220 | 270 | 8 | 207 | 96 | 50 |
| 6" ; DN150 | 300(+0/-3) | 210 | 152 | 250 | 300 | 8 | 219 | 96 | 50 |
| 8" ; DN200 | 350(+0/-3) | 261 | 195 | 320 | 375 | 12 | 244 | 96 | 50 |
| 10" ; DN250 | 450(+0/-5) | 319 | 249 | 385 | 450 | 12 | 273 | 96 | 50 |
| 12" ; DN300 | 500(+0/-5) | 371 | 302 | 450 | 515 | 16 | 299 | 96 | 50 |
| 14" ; DN350 | 550(+0/-5) | 404 | 334 | 510 | 580 | 16 | 316 | 96 | 50 |
| 16" ; DN400 | 600(+0/-5) | 455 | 382 | 585 | 660 | 16 | 341 | 96 | 50 |
| 18" ; DN450 | 450(+0/-7) | 519 | 431 | 610 | 685 | 20 | 373 | 96 | 50 |
| 20" ; DN500 | 500(+0/-9) | 570 | 480 | 670 | 755 | 20 | 399 | 96 | 50 |
| 24" ; DN600 | 600(+0/-9) | 684 | 578 | 795 | 890 | 20 | 456 | 96 | 50 |
| 28" ; DN700 | 700(+0/-9) | 783 | 677 | - | - | - | 505 | 96 | 50 |
| 32" ; DN800 | 800(+0/-9) | 885 | 775 | - | - | - | 556 | 96 | 50 |
| 36" ; DN900 | 900(+0/-15) | 996 | 872 | - | - | - | 612 | 96 | 50 |
| 40" ; DN1000 | 1000(+0/-15) | 1098 | 970 | - | - | - | 663 | 96 | 50 |
| 48" ; DN1200 | 1200(+0/-15) | 1312 | 1165 | - | - | - | 770 | 96 | 50 |
| 56" ; DN1400 | 1400(+0/-15) | 1512 | 1364 | - | - | - | 870 | 96 | 50 |
| 60" ; DN1500 | 1500(+0/-15) | 1612 | 1462 | - | - | - | 920 | 96 | 50 |
| 64" ; DN1600 | 1600(+0/-15) | 1712 | 1560 | - | - | - | 970 | 96 | 50 |
| 72" ; DN1800 | 1800(+0/-15) | 1922 | 1759 | - | - | - | 1075 | 96 | 50 |
| 80" ; DN2000 | 2000(+0/-15) | 2122 | 1954 | - | - | - | 1175 | 96 | 50 |

MUT2200EL ANSI 150



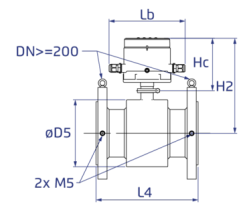
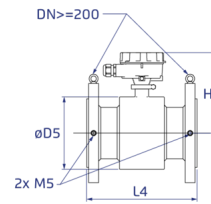
| Size | L4 (mm) | D5 (mm) | Di (mm) | D6 (mm) | D7 (mm) | N | H (mm) | Dc (mm) | Lb (mm) |
|--------------|--------------|---------|---------|---------|---------|----|--------|---------|---------|
| ½" ; DN12 | 200(+0/-3) | 84 | 11.3 | 60.3 | 90 | 4 | 156 | 96 | 50 |
| ¾" ; DN20 | 200(+0/-3) | 84 | 17 | 69.9 | 100 | 4 | 156 | 96 | 50 |
| 1" ; DN25 | 200(+0/-3) | 74 | 23.7 | 79.4 | 110 | 4 | 151 | 96 | 50 |
| 1¼" ; DN32 | 200(+0/-3) | 83 | 31.4 | 88.9 | 115 | 4 | 155 | 96 | 50 |
| 1½" ; DN40 | 200(+0/-3) | 88 | 37.3 | 98.4 | 125 | 4 | 158 | 96 | 50 |
| 2" ; DN50 | 200(+0/-3) | 102 | 47.3 | 120.7 | 150 | 4 | 165 | 96 | 50 |
| 2½" ; DN65 | 200(+0/-3) | 114 | 63 | 139.7 | 180 | 4 | 171 | 96 | 50 |
| 3" ; DN80 | 200(+0/-3) | 127 | 75 | 152.4 | 190 | 4 | 177 | 96 | 50 |
| 4" ; DN100 | 250(+0/-3) | 161 | 97.3 | 190.5 | 230 | 8 | 194 | 96 | 50 |
| 5" ; DN125 | 250(+0/-3) | 187 | 121.7 | 216 | 225 | 8 | 207 | 96 | 50 |
| 6" ; DN150 | 300(+0/-3) | 210 | 148.3 | 241.3 | 280 | 8 | 219 | 96 | 50 |
| 8" ; DN200 | 350(+0/-3) | 261 | 195 | 298.5 | 345 | 8 | 244 | 96 | 50 |
| 10" ; DN250 | 450(+0/-5) | 319 | 245 | 362 | 405 | 12 | 273 | 96 | 50 |
| 12" ; DN300 | 500(+0/-5) | 371 | 308 | 431.8 | 485 | 12 | 299 | 96 | 50 |
| 14" ; DN350 | 550(+0/-5) | 404 | 337.6 | 476.3 | 535 | 12 | 316 | 96 | 50 |
| 16" ; DN400 | 600(+0/-5) | 455 | 386.4 | 539.8 | 595 | 16 | 341 | 96 | 50 |
| 18" ; DN450 | 450(+0/-7) | 519 | 437.2 | 557.9 | 635 | 16 | 373 | 96 | 50 |
| 20" ; DN500 | 500(+0/-9) | 570 | 488 | 635 | 700 | 20 | 399 | 96 | 50 |
| 24" ; DN600 | 600(+0/-9) | 684 | 587.6 | 749.3 | 815 | 20 | 456 | 96 | 50 |
| 28" ; DN700 | 700(+0/-9) | 783 | 687.2 | 863.6 | 927.1 | 28 | 505 | 96 | 50 |
| 32" ; DN800 | 800(+0/-9) | 885 | 786.8 | 977.9 | 1060.4 | 28 | 556 | 96 | 50 |
| 36" ; DN900 | 900(+0/-15) | 996 | 888.4 | 1085.9 | 1168.4 | 28 | 612 | 96 | 50 |
| 40" ; DN1000 | 1000(+0/-15) | 1098 | 988 | 1200 | 1290 | 36 | 663 | 96 | 50 |
| 48" ; DN1200 | 1200(+0/-15) | 1312 | 1187.2 | 1422.4 | 1511.1 | 44 | 770 | 96 | 50 |
| 56" ; DN1400 | 1400(+0/-15) | 1512 | 1386.4 | - | - | - | 870 | 96 | 50 |
| 60" ; DN1500 | 1500(+0/-15) | 1612 | 1484 | 1700 | 1785 | 36 | 920 | 96 | 50 |
| 64" ; DN1600 | 1600(+0/-15) | 1712 | 1585.6 | - | - | - | 970 | 96 | 50 |
| 72" ; DN1800 | 1800(+0/-15) | 1922 | 1786.8 | - | - | - | 1075 | 96 | 50 |
| 80" ; DN2000 | 2000(+0/-15) | 2122 | 1986 | - | - | - | 1175 | 96 | 50 |

MUT2200EL ANSI 300



| Size | L4 (mm) | D5 (mm) | Di (mm) | D6 (mm) | D7 (mm) | N | H (mm) | Dc (mm) | Lb (mm) |
|--------------|--------------|---------|---------|---------|---------|----|--------|---------|---------|
| ½" ; DN12 | 200(+0/-3) | 84 | 11.3 | 66.7 | 95 | 4 | 156 | 96 | 50 |
| ¾" ; DN20 | 200(+0/-3) | 84 | 17 | 82.6 | 115 | 4 | 156 | 96 | 50 |
| 1" ; DN25 | 200(+0/-3) | 74 | 23.7 | 88.9 | 125 | 4 | 151 | 96 | 50 |
| 1¼" ; DN32 | 200(+0/-3) | 83 | 31.4 | 98.4 | 135 | 4 | 155 | 96 | 50 |
| 1½" ; DN40 | 200(+0/-3) | 88 | 37.3 | 114.3 | 155 | 4 | 158 | 96 | 50 |
| 2" ; DN50 | 200(+0/-3) | 102 | 47.3 | 127 | 165 | 8 | 165 | 96 | 50 |
| 2½" ; DN65 | 200(+0/-3) | 114 | 63 | 149.2 | 190 | 8 | 171 | 96 | 50 |
| 3" ; DN80 | 200(+0/-3) | 127 | 75 | 168.3 | 210 | 8 | 177 | 96 | 50 |
| 4" ; DN100 | 250(+0/-3) | 161 | 99.3 | 200 | 255 | 8 | 194 | 96 | 50 |
| 5" ; DN125 | 250(+0/-3) | 187 | 121.7 | 235 | 280 | 8 | 207 | 96 | 50 |
| 6" ; DN150 | 300(+0/-3) | 210 | 150.3 | 270 | 320 | 12 | 219 | 96 | 50 |
| 8" ; DN200 | 350(+0/-3) | 261 | 195 | 330.2 | 380 | 12 | 244 | 96 | 50 |
| 10" ; DN250 | 450(+0/-5) | 319 | 249 | 387.4 | 445 | 16 | 273 | 96 | 50 |
| 12" ; DN300 | 500(+0/-5) | 371 | 300 | 450.8 | 520 | 16 | 299 | 96 | 50 |
| 14" ; DN350 | 550(+0/-5) | 404 | 329.6 | 514.4 | 585 | 20 | 316 | 96 | 50 |
| 16" ; DN400 | 600(+0/-5) | 455 | 378.4 | 571.5 | 650 | 20 | 341 | 96 | 50 |
| 18" ; DN450 | 450(+0/-7) | 519 | 427.2 | 628.6 | 710 | 24 | 373 | 96 | 50 |
| 20" ; DN500 | 500(+0/-9) | 570 | 476 | 685.8 | 775 | 24 | 399 | 96 | 50 |
| 24" ; DN600 | 600(+0/-9) | 684 | 571.6 | 812.8 | 915 | 24 | 456 | 96 | 50 |
| 28" ; DN700 | 700(+0/-9) | 783 | 671.2 | - | - | - | 505 | 96 | 50 |
| 32" ; DN800 | 800(+0/-9) | 885 | 766.8 | - | - | - | 556 | 96 | 50 |
| 36" ; DN900 | 900(+0/-15) | 996 | 864.4 | - | - | - | 612 | 96 | 50 |
| 40" ; DN1000 | 1000(+0/-15) | 1098 | 962 | - | - | - | 663 | 96 | 50 |
| 48" ; DN1200 | 1200(+0/-15) | 1312 | 1159.5 | - | - | - | 770 | 96 | 50 |
| 56" ; DN1400 | 1400(+0/-15) | 1512 | 1352.4 | - | - | - | 870 | 96 | 50 |
| 60" ; DN1500 | 1500(+0/-15) | 1612 | 1450 | - | - | - | 920 | 96 | 50 |
| 64" ; DN1600 | 1600(+0/-15) | 1712 | 1547.6 | - | - | - | 970 | 96 | 50 |
| 72" ; DN1800 | 1800(+0/-15) | 1922 | 1746.8 | - | - | - | 1075 | 96 | 50 |
| 80" ; DN2000 | 2000(+0/-15) | 2122 | 1938 | - | - | - | 1175 | 96 | 50 |

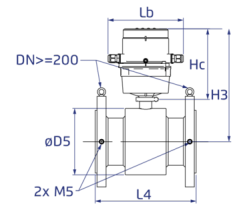
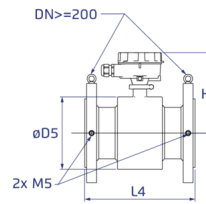
MUT2200EL-MC406



| Size | H (mm) | H2 (mm) |
|--------------|--------|---------|
| ½" ; DN12 | 156 | 190 |
| ¾" ; DN20 | 156 | 190 |
| 1" ; DN25 | 151 | 185 |
| 1¼" ; DN32 | 155 | 190 |
| 1½" ; DN40 | 158 | 192 |
| 2" ; DN50 | 165 | 199 |
| 2½" ; DN65 | 171 | 205 |
| 3" ; DN80 | 177 | 212 |
| 4" ; DN100 | 194 | 229 |
| 5" ; DN125 | 207 | 242 |
| 6" ; DN150 | 219 | 253 |
| 8" ; DN200 | 244 | 279 |
| 10" ; DN250 | 273 | 308 |
| 12" ; DN300 | 299 | 334 |
| 14" ; DN350 | 316 | 350 |
| 16" ; DN400 | 341 | 376 |
| 18" ; DN450 | 373 | 408 |
| 20" ; DN500 | 399 | 433 |
| 24" ; DN600 | 456 | 490 |
| 28" ; DN700 | 505 | 540 |
| 32" ; DN800 | 556 | 591 |
| 36" ; DN900 | 612 | 646 |
| 40" ; DN1000 | 663 | 697 |
| 48" ; DN1200 | 770 | 804 |
| 56" ; DN1400 | 870 | 904 |
| 60" ; DN1500 | 920 | 954 |
| 64" ; DN1600 | 970 | 1004 |
| 72" ; DN1800 | 1075 | 1109 |
| 80" ; DN2000 | 1175 | 1209 |

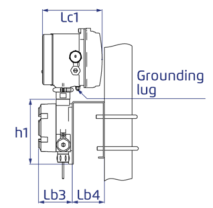
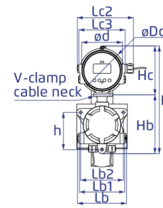


MUT2200EL-MC406 GSM



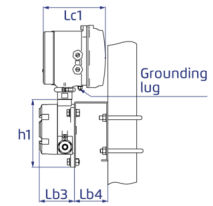
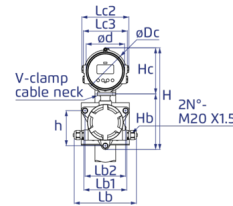
| Size | H (mm) | H3 (mm) |
|--------------|--------|---------|
| ½" ; DN12 | 156 | 236 |
| ¾" ; DN20 | 156 | 236 |
| 1" ; DN25 | 151 | 231 |
| 1¼" ; DN32 | 155 | 236 |
| 1½" ; DN40 | 158 | 238 |
| 2" ; DN50 | 165 | 245 |
| 2½" ; DN65 | 171 | 251 |
| 3" ; DN80 | 177 | 258 |
| 4" ; DN100 | 194 | 275 |
| 5" ; DN125 | 207 | 288 |
| 6" ; DN150 | 219 | 299 |
| 8" ; DN200 | 244 | 325 |
| 10" ; DN250 | 273 | 354 |
| 12" ; DN300 | 299 | 380 |
| 14" ; DN350 | 316 | 396 |
| 16" ; DN400 | 341 | 422 |
| 18" ; DN450 | 373 | 454 |
| 20" ; DN500 | 399 | 479 |
| 24" ; DN600 | 456 | 536 |
| 28" ; DN700 | 505 | 586 |
| 32" ; DN800 | 556 | 637 |
| 36" ; DN900 | 612 | 692 |
| 40" ; DN1000 | 663 | 743 |
| 48" ; DN1200 | 770 | 850 |
| 56" ; DN1400 | 870 | 950 |
| 60" ; DN1500 | 920 | 1000 |
| 64" ; DN1600 | 970 | 1050 |
| 72" ; DN1800 | 1075 | 1155 |
| 80" ; DN2000 | 1175 | 1255 |

MC406 Military connectors



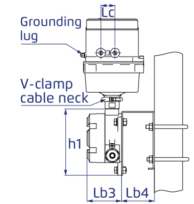
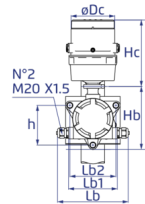
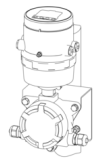
| H (mm) | Hc (mm) | Lc1 (mm) | Lc2 (mm) | Lc3 (mm) | Dc (mm) | d (mm) | Hb (mm) | Lb (mm) | Lb1 (mm) | Lb2 (mm) | Lb3 (mm) | Lb4 (mm) | h (mm) | h1 (mm) | Weight (Kg) |
|--------|---------|----------|----------|----------|---------|--------|---------|---------|----------|----------|----------|----------|--------|---------|-------------|
| 296 | 134 | 130 | 155 | 128 | 123 | 112 | 161.5 | 136 | 125 | 118 | 73.5 | 70 | 102 | 141 | 0.6 |

MC406 Standard Separate



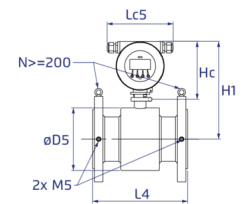
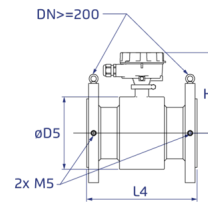
| H (mm) | Hc (mm) | Lc1 (mm) | Lc2 (mm) | Lc3 (mm) | Dc (mm) | d (mm) | Hb (mm) | Lb (mm) | Lb1 (mm) | Lb2 (mm) | Lb3 (mm) | Lb4 (mm) | h (mm) | h1 (mm) | Weight (Kg) |
|--------|---------|----------|----------|----------|---------|--------|---------|---------|----------|----------|----------|----------|--------|---------|-------------|
| 296 | 134 | 130 | 128 | 137 | 123 | 112 | 161.5 | 181 | 125 | 118 | 73.5 | 70 | 102 | 141 | 0.6 |

MC406 Separate with GSM



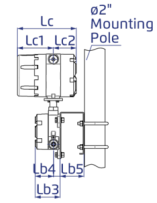
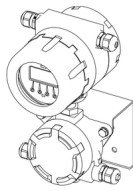
| H (mm) | Hc (mm) | Lc (mm) | Dc (mm) | Hb (mm) | Lb (mm) | Lb1 (mm) | Lb2 (mm) | Lb3 (mm) | Lb4 (mm) | h (mm) | h1 (mm) | Weight (Kg) |
|--------|---------|---------|---------|---------|---------|----------|----------|----------|----------|--------|---------|-------------|
| 332 | 170.5 | 30 | 112 | 161.5 | 181 | 125 | 118 | 73.5 | 70 | 102 | 141 | 0.9 |

MUT2200EL-MC608



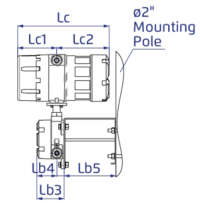
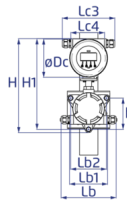
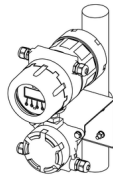
| Size | H (mm) | H1 (mm) | Hc (mm) | Lc5 (mm) |
|--------------|--------|---------|---------|----------|
| ½" ; DN12 | 156 | 195 | 150 | 171 |
| ¾" ; DN20 | 156 | 195 | 150 | 171 |
| 1" ; DN25 | 151 | 190 | 150 | 171 |
| 1¼" ; DN32 | 155 | 195 | 150 | 171 |
| 1½" ; DN40 | 158 | 197 | 150 | 171 |
| 2" ; DN50 | 165 | 204 | 150 | 171 |
| 2½" ; DN65 | 171 | 210 | 150 | 171 |
| 3" ; DN80 | 177 | 217 | 150 | 171 |
| 4" ; DN100 | 194 | 234 | 150 | 171 |
| 5" ; DN125 | 207 | 247 | 150 | 171 |
| 6" ; DN150 | 219 | 258 | 150 | 171 |
| 8" ; DN200 | 244 | 284 | 150 | 171 |
| 10" ; DN250 | 273 | 313 | 150 | 171 |
| 12" ; DN300 | 299 | 339 | 150 | 171 |
| 14" ; DN350 | 316 | 355 | 150 | 171 |
| 16" ; DN400 | 341 | 381 | 150 | 171 |
| 18" ; DN450 | 373 | 413 | 150 | 171 |
| 20" ; DN500 | 399 | 438 | 150 | 171 |
| 24" ; DN600 | 456 | 495 | 150 | 171 |
| 28" ; DN700 | 505 | 545 | 150 | 171 |
| 32" ; DN800 | 556 | 596 | 150 | 171 |
| 36" ; DN900 | 612 | 651 | 150 | 171 |
| 40" ; DN1000 | 663 | 702 | 150 | 171 |
| 48" ; DN1200 | 770 | 809 | 150 | 171 |
| 56" ; DN1400 | 870 | 909 | 150 | 171 |
| 60" ; DN1500 | 920 | 959 | 150 | 171 |
| 64" ; DN1600 | 970 | 1009 | 150 | 171 |
| 72" ; DN1800 | 1075 | 1114 | 150 | 171 |
| 80" ; DN2000 | 1175 | 1214 | 150 | 171 |

MC608A



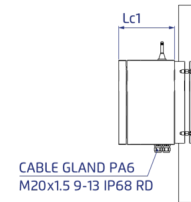
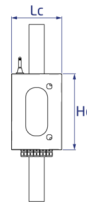
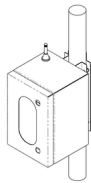
| H (mm) | H1 (mm) | Lc (mm) | Lc1 (mm) | Lc2 (mm) | Lc3 (mm) | Lc4 (mm) | Dc (mm) | Lb (mm) | Lb1 (mm) | Lb2 (mm) | Lb3 (mm) | Lb4 (mm) | Lb5 (mm) | h (mm) |
|--------|---------|---------|----------|----------|----------|----------|---------|---------|----------|----------|----------|----------|----------|--------|
| 307 | 296 | 173 | 105.5 | 67.5 | 173 | 111 | 125 | 181 | 125 | 118 | 74 | 54 | 70 | 102 |

MC608B/R



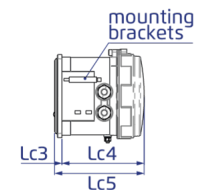
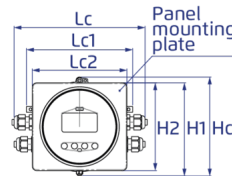
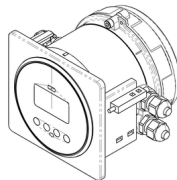
| H (mm) | H1 (mm) | Lc (mm) | Lc1 (mm) | Lc2 (mm) | Lc3 (mm) | Lc4 (mm) | Dc (mm) | Lb (mm) | Lb1 (mm) | Lb2 (mm) | Lb3 (mm) | Lb4 (mm) | Lb5 (mm) | h (mm) |
|--------|---------|---------|----------|----------|----------|----------|---------|---------|----------|----------|----------|----------|----------|--------|
| 307 | 296 | 247 | 105.5 | 141.5 | 173 | 111 | 125 | 181 | 125 | 118 | 74 | 54 | 150 | 102 |

MC608I



| Hc (mm) | Lc (mm) | Lc1 (mm) |
|---------|---------|----------|
| 300 | 200 | 200 |

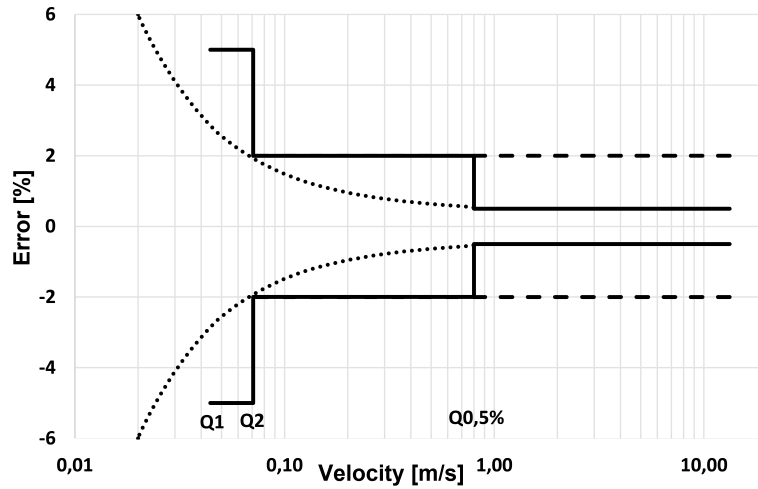
MC608P



| H1 (mm) | H2 (mm) | Hc (mm) | Lc (mm) | Lc1 (mm) | Lc2 (mm) | Lc3 (mm) | Lc4 (mm) | Lc5 (mm) |
|---------|---------|---------|---------|----------|----------|----------|----------|----------|
| 127.5 | 120 | 135.5 | 180 | 146 | 130 | 10.5 | 119.5 | 130 |

Measuring Accuracy

Each flowmeter is standard wet calibrated under reference conditions by direct volume comparison. The performance of the flowmeter is defined and documented in an individual calibration certificate. Accuracy 0.2% +/- 2mm/s (0.2% +/- 1mm/s on request)



Flow Rate

| Size Q @ (m ³ /h) | DN25 1" | DN32 1¼" | DN40 1½" | DN50 2" | DN65 2½" | DN80 3" | DN100 4" | DN125 5" | DN150 6" | DN200 8" | DN250 10" | DN300 12" | DN350 14" | DN400 16" | DN450 18" |
|---------------------------------|------------|-------------|-------------|------------|-------------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Q1 Minimum Flow | 0.08 | 0.08 | 0.128 | 0.2 | 0.32 | 0.504 | 0.8 | 1.280 | 2 | 3.2 | 5.04 | 8 | 12.8 | 12.8 | 25 |
| Q2 Transitional Flow | 0.128 | 0.128 | 0.205 | 0.32 | 0.512 | 0.806 | 1.28 | 2.048 | 3.2 | 5.12 | 8.064 | 12.8 | 20.48 | 20.48 | 40 |
| Q3 Permanent Flow | 10 | 10 | 16 | 25 | 40 | 63 | 100 | 160 | 250 | 400 | 630 | 1000 | 1600 | 1600 | 2500 |
| Q4 Maximum Flow (Short Time) | 12.5 | 12.5 | 20 | 31.25 | 50 | 78.75 | 125 | 200 | 312.5 | 500 | 787.5 | 1250 | 2000 | 2000 | 3125 |

| Size Q @ (m ³ /h) | DN500 20" | DN600 24" | DN700 28" | DN800 32" | DN900 36" | DN1000 40" | DN1200 48" | DN1400 56" | DN1500 60" | DN1600 64" | DN1800 72" | DN2000 80" | DN2500 100" |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Q1 Minimum Flow | 25 | 50 | 50 | 100 | 100 | 200 | 320 | 500 | 800 | 1260 | 2000 | 3200 | 4000 |
| Q2 Transitional Flow | 40 | 80 | 80 | 160 | 160 | 320 | 512 | 800 | 1280 | 2016 | 3200 | 5120 | 6400 |
| Q3 Permanent Flow | 2500 | 4000 | 4000 | 6300 | 6300 | 10000 | 16000 | 25000 | 40000 | 63000 | 100000 | 160000 | 160000 |
| Q4 Maximum Flow (Short Time) | 3125 | 5000 | 5000 | 7875 | 7875 | 12500 | 20000 | 31250 | 50000 | 78750 | 125000 | 200000 | 200000 |

Installation Recommendations

- The water meter can be installed in any orientation without interfering with metrological performance.
- The arrow on water meter body must be in the same direction with the flow.
- Prior to installation, flush the line to remove debris.
- The water meter must be filled with water to operate.

