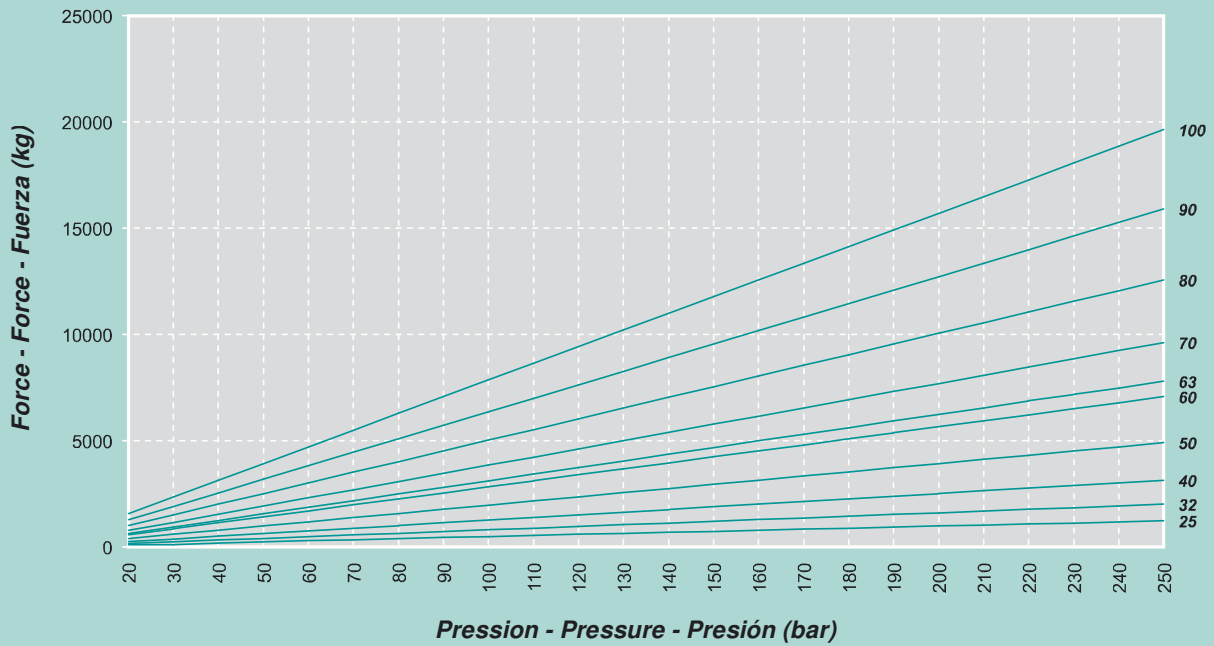
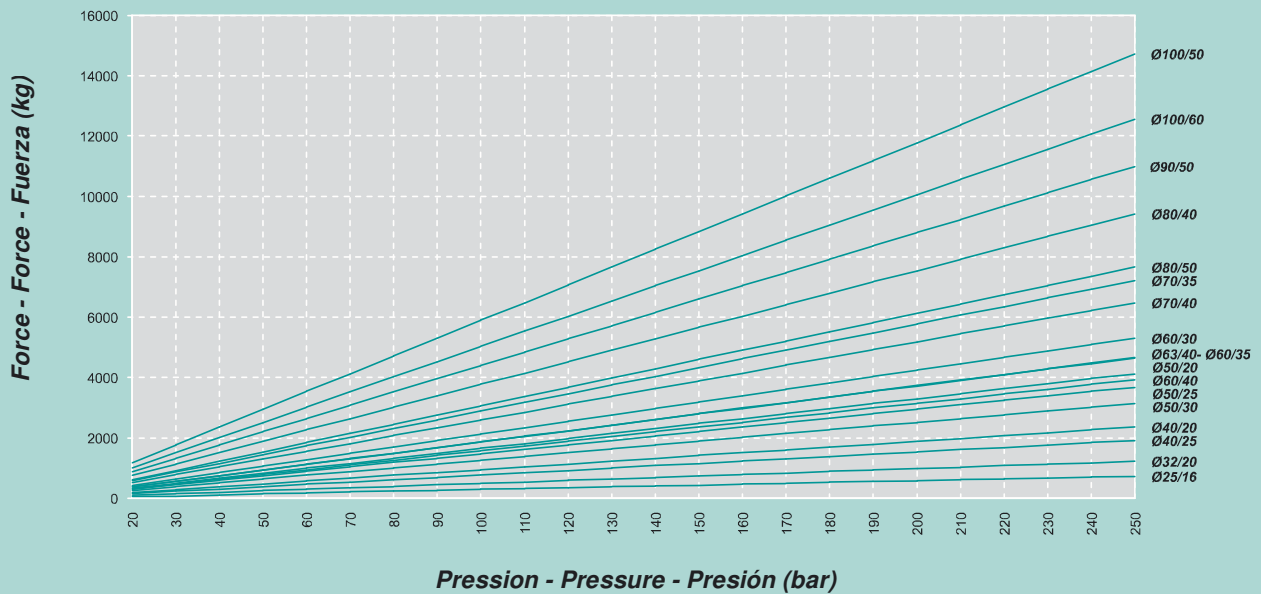
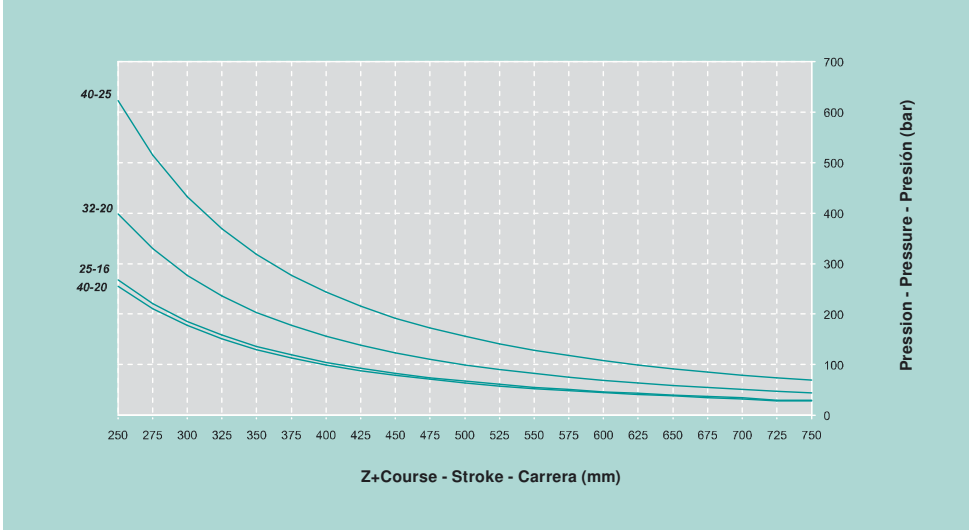


**FORCE DE POUSSEE - OUTPUT FORCE - FUERZA DE EMPUJE**



**FORCE DE TRACTION - INPUT FORCE - FUERZA DE TRACCION**

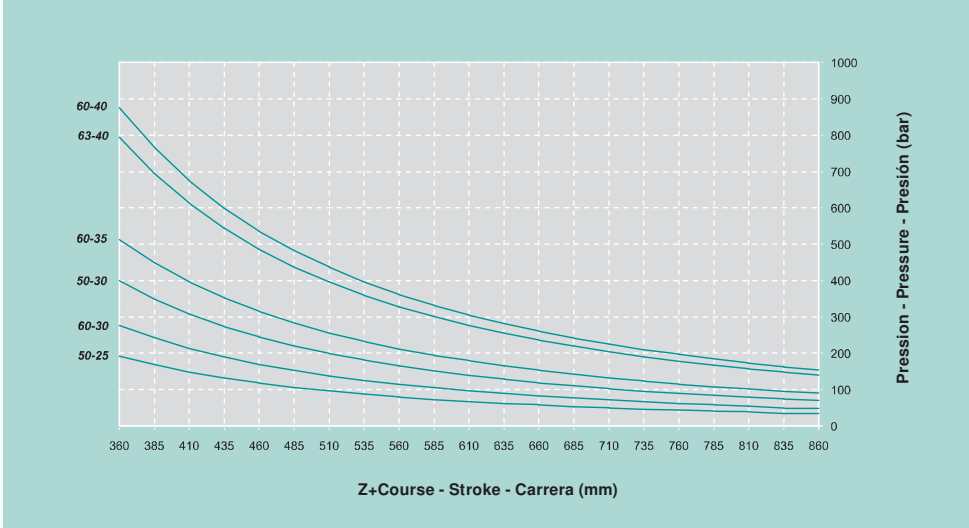




FLAMBAGE TIGE VERINS  
STANDARD TYPE HMO  
(Alésage 25-32-40 mm)

COMBINED COMPRESSIVE AND  
BENDING STRESS ON STANDARD  
CYLINDERS HMO TYPE  
(Bore 25-32-40 mm)

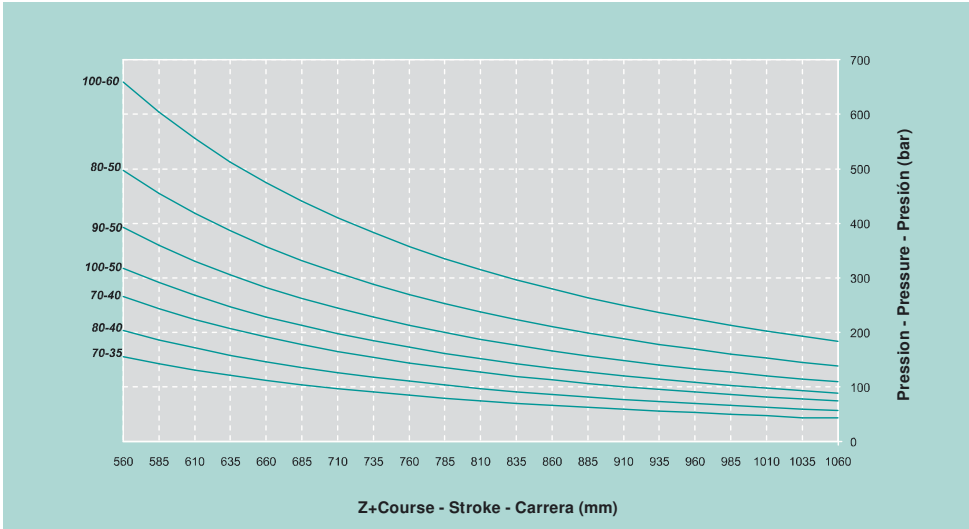
CARGA DE PICO CILINDROS  
ESTANDAR TIPO HMO  
(dia. Interior 25-32-40 mm)



FLAMBAGE TIGE VERINS  
STANDARD TYPE HMO  
(Alésage 50-60-63 mm)

COMBINED COMPRESSIVE AND  
BENDING STRESS ON STANDARD  
CYLINDERS HMO  
TYPE (Bore 50-60-63

CARGA DE PICO CILINDROS  
ESTANDAR TIPO HMO  
(dia. Interior 50-60-63 mm)

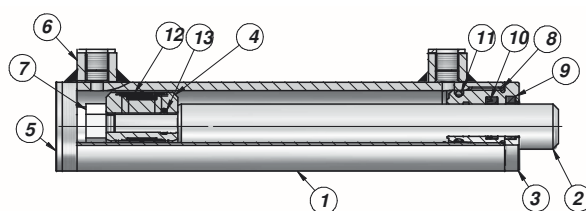


FLAMBAGE TIGE VERINS  
STANDARD TYPE HMO  
(Alésage 70-80-90-100 mm)

COMBINED COMPRESSIVE AND  
BENDING STRESS ON STANDARD  
CYLINDERS HMO TYPE  
(Bore 70-80-90-100 mm)

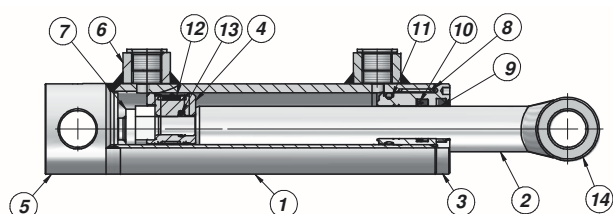
CARGA DE PICO CILINDROS  
ESTANDAR TIPO HMO  
(dia. Interior 70-80-90-100 mm)

TYPE "HMO" - "HMOLM"



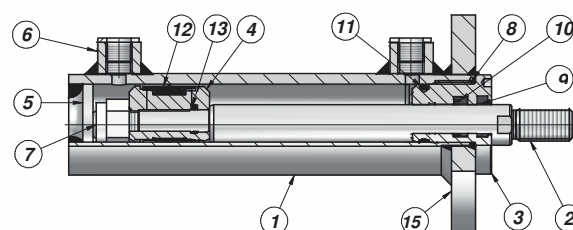
"HMO" Pression Maxi - Max. Pressure - Presión Máxima: 210 Bar  
"HMOLM" Pression Maxi - Max. Pressure - Presión Máxima: 180 Bar

TYPE "HFR2S"



"HFR2S" Pression Maxi - Max. Pressure - Presión Máxima: 210 Bar

TYPE "HMF"

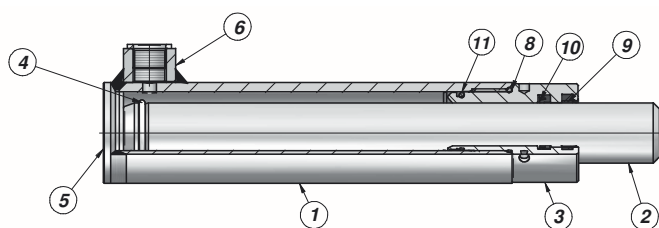


"HMF" Pression Maxi - Max. Pressure - Presión Máxima: 210 Bar

|    |                                                    |                                                                                                      |
|----|----------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1  | TUBE GLACE<br>POLISHED TUBE - TUBO LUCIDO          | ACIER - STEEL - ACERO:<br>St 52.3 DIN 2393 ISO H9                                                    |
| 2  | TIGE CHROME<br>CHROMED ROD - BARRACROMADA          | ACIER - STEEL - ACERO: UNI C45 - SAE 1045<br>CHROME - CHROME - CROMO: 25 Micron ±5                   |
| 3  | TETE DE GUIDAGE<br>HEAD-BUSH - CABEZA GUIA         | FONTE - HYDRAULICCAST IRON - HIERRO FUNDIDO:<br>UNI 5007-G25                                         |
| 4  | PISTON                                             | ACIER - STEEL - ACERO:<br>9SMn28                                                                     |
| 5  | FOND - END-PLUG - FONDO                            | ACIER - STEEL - ACERO:<br>S355J0 (Fe510C) - S355JR(A105)                                             |
| 6  | BOSSAGE TARAUDE<br>THREADED PORT - MANGUITOROSCADO | ACIER - STEEL - ACERO:<br>9SMn28                                                                     |
| 7  | ECROU DE BLOCAGE PISTON<br>LOCKNUT - TUERCA        | ACIER - STEEL - ACERO:<br>UNI 7473 - 7474                                                            |
| 8  | JOINT - SEAL - JUNTA<br>O-RING                     | NBR 70 SHORE                                                                                         |
| 9  | JOINT - SEAL - JUNTA<br>"GHK"                      | POLYURETHANE - POLYURETHANE - POLIURETANO                                                            |
| 10 | JOINT - SEAL - JUNTA<br>"TSE-TTS-TTI/L"            | "TSE": NBR+TISSU - NBR+FABRIC - NBR+TEJIDO<br>"TTS-TTI/L": POLYURETHANE - POLYURETHANE - POLIURETANO |
| 11 | JOINT - SEAL - JUNTA<br>O-RING                     | NBR 70 SHORE                                                                                         |
| 12 | JOINT - SEAL - JUNTA<br>"TPM"                      | NBR+POM+POLYESTER - NBR+POM+POLYESTER - NBR+POLIÉSTER                                                |
| 13 | JOINT - SEAL - JUNTA<br>O-RING                     | NBR 70 SHORE                                                                                         |
| 14 | DOUILLE - BUSH - CASQUILLO PARA SOLDAR             | ACIER - STEEL - ACERO:<br>S355J0 (Fe510C)                                                            |
| 15 | BRIDE - FLANGE - BRIDA                             | ACIER - STEEL - ACERO:<br>S355J0 (Fe510C)                                                            |

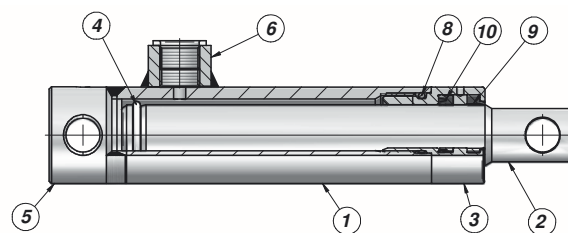
Vitesse Maxi - Top Speed - Velocidad de pico: max 0,5 m/s  
Température C° - Temperature C° - Temperatura C°: -25°C - +80°C

TYPE "HTO"



"HTO" Pression Maxi - Max. Pressure - Presión Máxima: 210 Bar

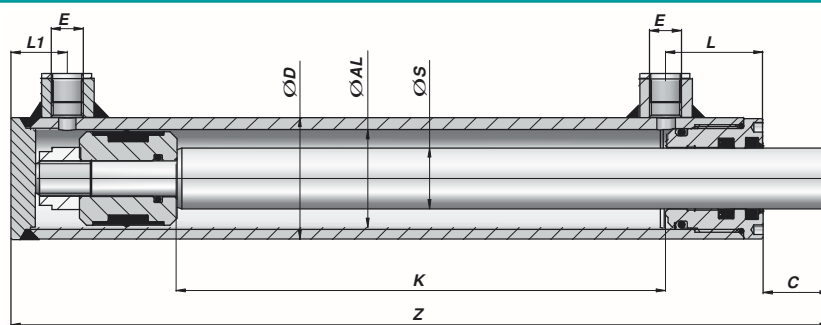
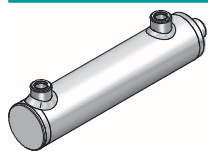
TYPE "HFRT"



"HFRT" Pression Maxi - Max. Pressure - Presión Máxima: 210 Bar

|    |                                                                          |                                                                                                                                 |
|----|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1  | TUBE GLACE<br>POLISHED TUBE - TUBO LUCIDO                                | ACIER - STEEL - ACERO:<br>St 52.3 DIN 2393 ISO H9                                                                               |
| 2  | TIGE CHROMEE<br>CHROMED ROD - BARRACROMADA                               | ACIER - STEEL - ACERO: UNI C45 - SAE 1045<br>CHROME - CHROME - CROMO: 25 Micron ±5                                              |
| 3  | TETE DE GUIDAGE<br>HEAD-BUSH - CABEZA GUIA<br>TYPE - TYPE - TIPO: "HTO"  | FONTE - HYDRAULICCAST IRON - HIERRO FUNDIDO:<br>UNI 5007-G25                                                                    |
| 3  | TETE DE GUIDAGE<br>HEAD-BUSH - CABEZA GUIA<br>TYPE - TYPE - TIPO: "HFRT" | ACIER 9SMn28 AVEC TRAITEMENT "NI-TEMPER"<br>STEEL 9SMn28 WITH "NI-TEMPER" TREATMENT<br>ACERO 9SMn28 CON TRATAMIENTO "NI-TEMPER" |
| 4  | JONC D'ARRETTIGE - STOP RING - ANILLO DE BLOQUEO                         | ACIER - STEEL - ACERO:                                                                                                          |
| 5  | FOND - END-PLUG - FONDO                                                  | ACIER - STEEL - ACERO:<br>S355J0 (Fe510C) - S355JR (A105)                                                                       |
| 6  | BOSSAGE TARAUDE<br>THREADED PORT - MANGUITO ROSCADO                      | ACIER - STEEL - ACERO:<br>9SMn28                                                                                                |
| 8  | JOINT - SEAL - JUNTA<br>TIPO - TYPE - TYP: "HTO"<br>O-RING               | NBR 70 SHORE                                                                                                                    |
| 8  | JOINT - SEAL - JUNTA<br>TIPO - TYPE - TYP: "HFRT"<br>O-RING              | NBR 90 SHORE                                                                                                                    |
| 9  | JOINT - SEAL - JUNTA<br>"GHK"                                            | POLYURETHANE - POLYURETHANE - POLIURETANO                                                                                       |
| 10 | JOINT - SEAL - JUNTA<br>"TSE-TTS-TTI/L"                                  | "TSE": NBR+TISSU - NBR+FABRIC - NBR+TEJIDO<br>"TTS-TTI/L": POLYURETHANE - POLYURETHANE - POLIURETANO                            |
| 11 | JOINT - SEAL - JUNTA<br>O-RING                                           | NBR 70 SHORE                                                                                                                    |

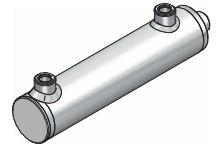
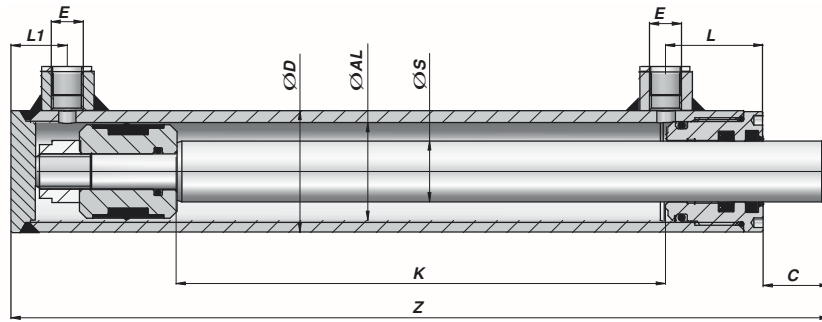
Vitesse Maxi - Top Speed - Velocidad de pico: max 0,5 m/s  
Température C° - Temperature C° - Temperatura C°: -25°C - +80°C



M250

| Code<br>Code<br>Código          | K    | Z    | kg    | E<br>BSP   | L    | L1   | C     | Code<br>Code<br>Código          | K    | Z    | kg    |
|---------------------------------|------|------|-------|------------|------|------|-------|---------------------------------|------|------|-------|
| <b>ØD 35    ØAL 25    ØS 16</b> |      |      |       |            |      |      |       |                                 |      |      |       |
| HM0025160050                    | 50   | 135  | 0,70  | 1/4"       | 33   | 15   | 17    |                                 |      |      |       |
| HM0025160100                    | 100  | 185  | 0,95  |            |      |      |       |                                 |      |      |       |
| HM0025160150                    | 150  | 235  | 1,25  |            |      |      |       |                                 |      |      |       |
| HM0025160200                    | 200  | 285  | 1,50  |            |      |      |       |                                 |      |      |       |
| <b>ØD 42    ØAL 32    ØS 20</b> |      |      |       |            |      |      |       |                                 |      |      |       |
| HM0032200050                    | 50   | 155  | 1,30  | 1/4"       | 33   | 20   | 16    |                                 |      |      |       |
| HM0032200100                    | 100  | 205  | 1,60  |            |      |      |       |                                 |      |      |       |
| HM0032200150                    | 150  | 255  | 1,95  |            |      |      |       |                                 |      |      |       |
| HM0032200200                    | 200  | 305  | 2,30  |            |      |      |       |                                 |      |      |       |
| HM0032200250                    | 250  | 355  | 2,70  |            |      |      |       |                                 |      |      |       |
| HM0032200300                    | 300  | 405  | 3,00  |            |      |      |       |                                 |      |      |       |
| HM0032200400                    | 400  | 505  | 3,70  |            |      |      |       |                                 |      |      |       |
| HM0032200500                    | 500  | 605  | 4,40  |            |      |      |       |                                 |      |      |       |
| <b>ØD 50    ØAL 40    ØS 20</b> |      |      |       |            |      |      |       | <b>ØD 50    ØAL 40    ØS 25</b> |      |      |       |
| HM01200100                      | 100  | 230  | 2,27  | 1/4"       | 40   | 23   | 22    | HM01250100                      | 100  | 230  | 2,50  |
| HM01200150                      | 150  | 280  | 2,67  |            |      |      |       | HM01250150                      | 150  | 280  | 2,95  |
| HM01200200                      | 200  | 330  | 3,05  |            |      |      |       | HM01250200                      | 200  | 330  | 3,39  |
| HM01200250                      | 250  | 380  | 3,45  |            |      |      |       | HM01250250                      | 250  | 380  | 3,85  |
| HM01200300                      | 300  | 430  | 3,85  |            |      |      |       | HM01250300                      | 300  | 430  | 4,32  |
| HM01200350                      | 350  | 480  | 4,27  |            |      |      |       | HM01250350                      | 350  | 480  | 4,79  |
| HM01200400                      | 400  | 530  | 4,65  |            |      |      |       | HM01250400                      | 400  | 530  | 5,26  |
| HM01200450                      | 450  | 580  | 5,08  |            |      |      |       | HM01250450                      | 450  | 580  | 5,72  |
| HM01200500                      | 500  | 630  | 5,49  |            |      |      |       | HM01250500                      | 500  | 630  | 6,20  |
|                                 |      |      |       |            |      |      |       | HM01250550                      | 550  | 680  | 6,60  |
|                                 |      |      |       | HM01250600 | 600  | 730  | 7,13  |                                 |      |      |       |
| <b>ØD 60    ØAL 50    ØS 25</b> |      |      |       |            |      |      |       | <b>ØD 60    ØAL 50    ØS 30</b> |      |      |       |
| HM02250100                      | 100  | 240  | 3,29  | 3/8"       | 43   | 26   | 22    | HM02300150                      | 150  | 290  | 4,11  |
| HM02250150                      | 150  | 290  | 3,83  |            |      |      |       | HM02300200                      | 200  | 340  | 4,74  |
| HM02250200                      | 200  | 340  | 4,34  |            |      |      |       | HM02300250                      | 250  | 390  | 5,35  |
| HM02250250                      | 250  | 390  | 4,85  |            |      |      |       | HM02300300                      | 300  | 440  | 5,97  |
| HM02250300                      | 300  | 440  | 5,35  |            |      |      |       | HM02300350                      | 350  | 490  | 6,55  |
| HM02250350                      | 350  | 490  | 5,94  |            |      |      |       | HM02300400                      | 400  | 540  | 7,20  |
| HM02250400                      | 400  | 540  | 6,40  |            |      |      |       | HM02300450                      | 450  | 590  | 7,80  |
| HM02250450                      | 450  | 590  | 7,30  |            |      |      |       | HM02300500                      | 500  | 640  | 8,42  |
| HM02250500                      | 500  | 640  | 7,43  |            |      |      |       | HM02300550                      | 550  | 690  | 9,04  |
| HM02250550                      | 550  | 690  | 8,06  |            |      |      |       | HM02300600                      | 600  | 740  | 9,64  |
| HM02250600                      | 600  | 740  | 8,46  |            |      |      |       | HM02300700                      | 700  | 840  | 10,85 |
|                                 |      |      |       |            |      |      |       | HM02300800                      | 800  | 940  | 12,10 |
|                                 |      |      |       | HM02301000 | 1000 | 1140 | 14,57 |                                 |      |      |       |
| HM02250800                      | 800  | 940  | 10,71 |            |      |      |       |                                 |      |      |       |
| HM02251000                      | 1000 | 1140 | 12,87 |            |      |      |       |                                 |      |      |       |
| <b>ØD 70    ØAL 60    ØS 30</b> |      |      |       |            |      |      |       | <b>ØD 70    ØAL 60    ØS 35</b> |      |      |       |
| HM03300100                      | 100  | 260  | 4,82  | 3/8"       | 50   | 30   | 23    | HM03350100                      | 100  | 260  | 5,07  |
| HM03300150                      | 150  | 310  | 5,55  |            |      |      |       | HM03350150                      | 150  | 310  | 5,85  |
| HM03300200                      | 200  | 360  | 6,20  |            |      |      |       | HM03350200                      | 200  | 360  | 6,60  |
| HM03300250                      | 250  | 410  | 6,87  |            |      |      |       | HM03350250                      | 250  | 410  | 7,40  |
| HM03300300                      | 300  | 460  | 7,55  |            |      |      |       | HM03350300                      | 300  | 460  | 8,15  |
| HM03300350                      | 350  | 510  | 8,20  |            |      |      |       | HM03350350                      | 350  | 510  | 8,94  |
| HM03300400                      | 400  | 560  | 8,90  |            |      |      |       | HM03350400                      | 400  | 560  | 9,72  |
| HM03300450                      | 450  | 610  | 9,53  |            |      |      |       | HM03350450                      | 450  | 610  | 10,47 |
| HM03300500                      | 500  | 660  | 10,25 |            |      |      |       | HM03350500                      | 500  | 660  | 11,25 |
| HM03300550                      | 550  | 710  | 10,86 |            |      |      |       | HM03350550                      | 550  | 710  | 12,00 |
| HM03300600                      | 600  | 760  | 11,60 |            |      |      |       | HM03350600                      | 600  | 760  | 12,81 |
| HM03300800                      | 800  | 960  | 14,26 |            |      |      |       | HM03350800                      | 800  | 960  | 15,87 |
| HM03301000                      | 1000 | 1160 | 17,00 |            |      |      |       | HM03351000                      | 1000 | 1160 | 18,93 |

M250



| Code<br>Code<br>Código      | K    | Z    | kg    | E<br>BSP                    | L    | L1   | C     | Code<br>Code<br>Código | K    | Z    | kg    |  |  |  |  |
|-----------------------------|------|------|-------|-----------------------------|------|------|-------|------------------------|------|------|-------|--|--|--|--|
| <b>ØD 70 ØAL 60 ØS 40</b>   |      |      |       | <b>ØD 73 ØAL 63 ØS 40</b>   |      |      |       |                        |      |      |       |  |  |  |  |
| HM03400200                  | 200  | 360  | 7,25  | 3/8"                        | 50   | 30   | 23    | HM0063400200           | 200  | 360  | 7,60  |  |  |  |  |
| HM03400250                  | 250  | 410  | 8,14  |                             |      |      |       | HM0063400250           | 250  | 410  | 8,50  |  |  |  |  |
| HM03400300                  | 300  | 460  | 9,03  |                             |      |      |       | HM0063400300           | 300  | 460  | 9,40  |  |  |  |  |
| HM03400350                  | 350  | 510  | 9,90  |                             |      |      |       | HM0063400350           | 350  | 510  | 10,30 |  |  |  |  |
| HM03400400                  | 400  | 560  | 10,79 |                             |      |      |       | HM0063400400           | 400  | 560  | 11,20 |  |  |  |  |
| HM03400450                  | 450  | 610  | 11,64 |                             |      |      |       | HM0063400450           | 450  | 610  | 12,10 |  |  |  |  |
| HM03400500                  | 500  | 660  | 12,52 |                             |      |      |       | HM0063400500           | 500  | 660  | 13,00 |  |  |  |  |
| HM03400550                  | 550  | 710  | 13,45 |                             |      |      |       | HM0063400550           | 550  | 710  | 13,90 |  |  |  |  |
| HM03400600                  | 600  | 760  | 14,30 |                             |      |      |       | HM0063400600           | 600  | 760  | 14,80 |  |  |  |  |
| HM03400800                  | 800  | 960  | 17,82 |                             |      |      |       | HM0063400800           | 800  | 960  | 18,50 |  |  |  |  |
| HM03401000                  | 1000 | 1160 | 21,40 | HM0063401000                | 1000 | 1160 | 22,10 |                        |      |      |       |  |  |  |  |
| <b>ØD 80 ØAL 70 ØS 35</b>   |      |      |       | <b>ØD 80 ØAL 70 ØS 40</b>   |      |      |       |                        |      |      |       |  |  |  |  |
| HM04350100                  | 100  | 260  | 6,09  | 3/8"                        | 50   | 33   | 23    |                        |      |      |       |  |  |  |  |
| HM04350150                  | 150  | 310  | 6,95  |                             |      |      |       |                        |      |      |       |  |  |  |  |
| HM04350200                  | 200  | 360  | 7,74  |                             |      |      |       | HM04400200             | 200  | 360  | 8,28  |  |  |  |  |
| HM04350250                  | 250  | 410  | 8,60  |                             |      |      |       | HM04400250             | 250  | 410  | 9,26  |  |  |  |  |
| HM04350300                  | 300  | 460  | 9,40  |                             |      |      |       | HM04400300             | 300  | 460  | 10,24 |  |  |  |  |
| HM04350350                  | 350  | 510  | 10,26 |                             |      |      |       | HM04400350             | 350  | 510  | 11,20 |  |  |  |  |
| HM04350400                  | 400  | 560  | 11,00 |                             |      |      |       | HM04400400             | 400  | 560  | 12,80 |  |  |  |  |
| HM04350450                  | 450  | 610  | 11,88 |                             |      |      |       | HM04400450             | 450  | 610  | 13,11 |  |  |  |  |
| HM04350500                  | 500  | 660  | 12,60 |                             |      |      |       | HM04400500             | 500  | 660  | 14,01 |  |  |  |  |
| HM04350550                  | 550  | 710  | 13,66 |                             |      |      |       | HM04400550             | 550  | 710  | 15,10 |  |  |  |  |
| HM04350600                  | 600  | 760  | 14,20 | HM04400600                  | 600  | 760  | 15,99 |                        |      |      |       |  |  |  |  |
| HM04350800                  | 800  | 960  | 17,56 | HM04400800                  | 800  | 960  | 19,73 |                        |      |      |       |  |  |  |  |
| HM04351000                  | 1000 | 1160 | 21,26 | HM04401000                  | 1000 | 1160 | 23,51 |                        |      |      |       |  |  |  |  |
| <b>ØD 92 ØAL 80 ØS 40</b>   |      |      |       | <b>ØD 92 ØAL 80 ØS 50</b>   |      |      |       |                        |      |      |       |  |  |  |  |
| HM05400200                  | 200  | 380  | 11,08 | 1/2"                        | 60   | 35   | 25    | HM05500200             | 200  | 380  | 12,35 |  |  |  |  |
| HM05400250                  | 250  | 430  | 12,22 |                             |      |      |       | HM05500250             | 250  | 430  | 13,73 |  |  |  |  |
| HM05400300                  | 300  | 480  | 13,35 |                             |      |      |       | HM05500300             | 300  | 480  | 15,15 |  |  |  |  |
| HM05400400                  | 400  | 580  | 15,56 |                             |      |      |       | HM05500400             | 400  | 580  | 17,95 |  |  |  |  |
| HM05400500                  | 500  | 680  | 17,77 |                             |      |      |       | HM05500500             | 500  | 680  | 20,71 |  |  |  |  |
| HM05400600                  | 600  | 780  | 19,98 |                             |      |      |       | HM05500600             | 600  | 780  | 24,00 |  |  |  |  |
| HM05400800                  | 800  | 980  | 24,50 |                             |      |      |       | HM05500800             | 800  | 980  | 29,50 |  |  |  |  |
| HM05401000                  | 1000 | 1180 | 28,92 |                             |      |      |       | HM05501000             | 1000 | 1180 | 35,00 |  |  |  |  |
| <b>ØD 105 ØAL 90 ØS 50</b>  |      |      |       |                             |      |      |       |                        |      |      |       |  |  |  |  |
| NEW! HM0090500300           | 300  | 486  | 19,30 |                             |      |      |       | 1/2"                   | 60   | 40   | 23    |  |  |  |  |
| NEW! HM0090500400           | 400  | 586  | 22,64 |                             |      |      |       |                        |      |      |       |  |  |  |  |
| NEW! HM0090500500           | 500  | 686  | 25,97 |                             |      |      |       |                        |      |      |       |  |  |  |  |
| NEW! HM0090500600           | 600  | 786  | 29,30 |                             |      |      |       |                        |      |      |       |  |  |  |  |
| NEW! HM0090500800           | 800  | 986  | 35,97 |                             |      |      |       |                        |      |      |       |  |  |  |  |
| NEW! HM0090501000           | 1000 | 1186 | 42,64 |                             |      |      |       |                        |      |      |       |  |  |  |  |
| <b>ØD 115 ØAL 100 ØS 50</b> |      |      |       | <b>ØD 115 ØAL 100 ØS 60</b> |      |      |       |                        |      |      |       |  |  |  |  |
| HM06500200                  | 200  | 410  | 19,50 | 1/2"                        | 82   | 38   | 25    |                        |      |      |       |  |  |  |  |
| HM06500250                  | 250  | 460  | 21,50 |                             |      |      |       |                        |      |      |       |  |  |  |  |
| HM06500300                  | 300  | 510  | 23,00 |                             |      |      |       | HM06600300             | 300  | 510  | 25,50 |  |  |  |  |
| HM06500400                  | 400  | 610  | 26,50 |                             |      |      |       | HM06600400             | 400  | 610  | 29,50 |  |  |  |  |
| HM06500500                  | 500  | 710  | 30,00 |                             |      |      |       | HM06600500             | 500  | 710  | 33,50 |  |  |  |  |
| HM06500600                  | 600  | 810  | 33,50 |                             |      |      |       | HM06600600             | 600  | 810  | 37,50 |  |  |  |  |
| HM06500800                  | 800  | 1010 | 40,50 |                             |      |      |       | HM06600800             | 800  | 1010 | 46,00 |  |  |  |  |
| HM06501000                  | 1000 | 1210 | 47,50 |                             |      |      |       | HM06601000             | 1000 | 1210 | 54,50 |  |  |  |  |

MATERIEL - MATERIAL:

TUBE - TUBE - TUBO: ACIER - STEEL - ACERO St 52.3 DIN 2393 ISO H9

TIGE - ROD - VASTAGO: ACIER - STEEL - ACERO UNI C45 SAE 1045 - CHROME - CHROME - CROMO: 25 MICRON ±5