



# 60... 420 EL-EXISS

## TECHNICAL DESCRIPTION ERGOTECH

**Demag** ergotech

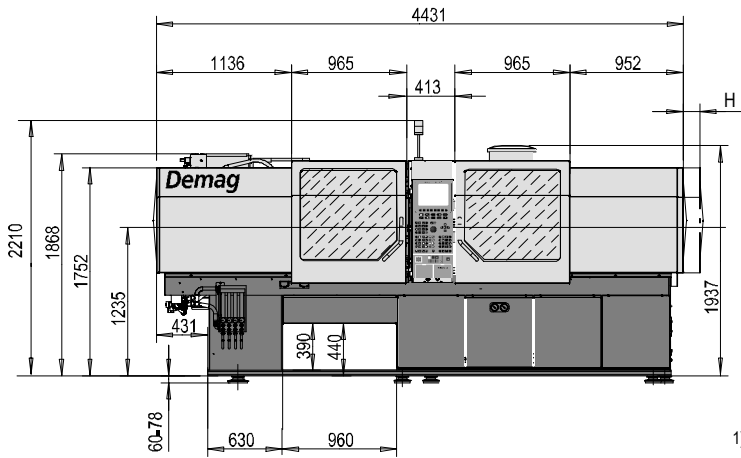
# Technical Data Ergotech 60/370 EL-EXIS S

| Demag Ergotech                                     | Ergotech 60/370 EL-EXIS S     |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
|--|-------------------------------|----------|----------|-------------------|-------------------------------|----------|-----------------------|-------------------|-------------------------------|----------|-----------------------|-----------------------|
| Model description                                  | Ergotech 60/370-120 EL-EXIS S |          |          |                   | Ergotech 60/370-200 EL-EXIS S |          |                       |                   | Ergotech 60/370-310 EL-EXIS S |          |                       |                       |
| International size description                     | 600-120                       |          |          |                   | 600-200                       |          |                       |                   | 600-310                       |          |                       |                       |
| <b>Clamping unit</b>                               | <b>60</b>                     |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Clamping force [kN]                                | 600                           |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Locking force [kN]                                 | 660                           |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Max. mould opening stroke [mm]                     | 350                           |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Min. mould height [mm]                             | 160                           |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Max./enlarged mould height [mm]                    | 360/460                       |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Overall size of platens/enlarged [mm]              | 710/810                       |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Mould platen (h x v) [mm]                          | 600 x 600                     |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Distance between tie bars (h x v) [mm]             | 370 x 370                     |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Ejection stroke [mm]                               | 100                           |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Ejection force [kN]                                | 34                            |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| Retraction force [kN]                              | 16                            |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| <b>Injection unit</b>                              | <b>120</b>                    |          |          | <b>200</b>        |                               |          |                       | <b>310</b>        |                               |          |                       |                       |
| Screw diameter [mm]                                | 22                            | 25       | 30       | 25                | 30                            | 35       | 30                    | 30                | 35                            | 40       | 30                    | 35                    |
| Screw geometry                                     | standard                      | standard | standard | standard          | standard                      | standard | special <sup>1)</sup> | standard          | standard                      | standard | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio  | 20                            | 20       | 20       | 20                | 20                            | 20       | 25                    | 20                | 20                            | 20       | 25                    | 25                    |
| Injection pressure (up to 400 °C) [bar]            | 2400                          | 2000     | 1390     | 2400              | 1990                          | 1460     | 1990                  | 2400              | 2024                          | 1550     | 2400                  | 2024                  |
| Cylinder head volume [cm <sup>3</sup> ]            | 42                            | 61       | 88       | 61                | 106                           | 144      | 106                   | 106               | 168                           | 220      | 106                   | 168                   |
| Max. shot weight (PS, PE*) [g]                     | 40                            | 60       | 80       | 60                | 100                           | 130      | 80*                   | 100               | 150                           | 200      | 80*                   | 120*                  |
| <b>Rate of injection</b>                           |                               |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| > with accumulator [cm <sup>3</sup> /s]            | 380                           | 490      | 710      | 490               | 710                           | 910      | 710                   | 710               | 910                           | 1130     | 710                   | 910                   |
| <b>Plasticising rate (PS, PE*) [g/s]</b>           | 6,8                           | 11,3     | 18,8     | 11,3              | 18,8                          | 25,5     | 15,8*                 | 18,8              | 25,5                          | 37,5     | 15,8*                 | 21,8*                 |
| Max. screw stroke [mm]                             | 110                           | 125      | 125      | 125               | 150                           | 150      | 150                   | 150               | 175                           | 175      | 150                   | 175                   |
| Max. distance of nozzle retraction [mm]            | 200                           |          |          | 200               |                               |          |                       | 250               |                               |          |                       |                       |
| Max. nozzle dipping depth (SVO) [mm]               | 20                            |          |          | 20                |                               |          |                       | 20                |                               |          |                       |                       |
| Nozzle sealing force [kN]                          | 60                            |          |          | 60                |                               |          |                       | 60                |                               |          |                       |                       |
| Hopper capacity [ltr.]                             | 35                            |          |          | 35                |                               |          |                       | 35                |                               |          |                       |                       |
| <b>General data</b>                                | <b>60/370-120</b>             |          |          | <b>60/370-200</b> |                               |          |                       | <b>60/370-310</b> |                               |          |                       |                       |
| Oil tank capacity [ltr.]                           | 105                           |          |          | 105               |                               |          |                       | 105               |                               |          |                       |                       |
| <b>Installed electrical rating</b>                 |                               |          |          |                   |                               |          |                       |                   |                               |          |                       |                       |
| > pump unit <sup>3)</sup> [kW]                     | 15                            |          |          | 15                |                               |          |                       | 15                |                               |          |                       |                       |
| > electric screw drive <sup>3)</sup> [≈ kW]        | 11,3                          |          |          | 11,3              |                               |          |                       | 18                |                               |          |                       |                       |
| > capacity clamp unit <sup>3)</sup> [≈ kW]         | 10,4                          |          |          | 10,4              |                               |          |                       | 10,4              |                               |          |                       |                       |
| > heating capacity of screw cylinder [≈ kW]        | 5,1                           | 5,7      | 8,3      | 5,7               | 8,3                           | 9,4      | 11,3                  | 8,3               | 9,4                           | 11,1     | 11,3                  | 13,0                  |
| > total capacity [≈ kW]                            | 41,8                          | 42,4     | 45,0     | 42,4              | 45,0                          | 46,1     | 48,0                  | 51,7              | 52,8                          | 54,5     | 54,7                  | 56,4                  |
| Dry cycles (EUROMAP 6) [s-mm]                      | 1,3 - 259                     |          |          | 1,3 - 259         |                               |          |                       | 1,3 - 259         |                               |          |                       |                       |
| Net weight (without oil) [≈ kg]                    | 5200                          |          |          | 5300              |                               |          |                       | 5400              |                               |          |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> [≈ m] | 4,6 x 1,4 x 2,2               |          |          | 4,6 x 1,4 x 2,2   |                               |          |                       | 4,6 x 1,4 x 2,2   |                               |          |                       |                       |
| Electric drive projection (H) <sup>5)</sup> [mm]   | 0/206                         | 0/206    | 0/206    | 0/70              | 0/70                          | 0/70     | 0/70                  | 0/70              | 0/70                          | 0/70     | 0/70                  | 0/70                  |

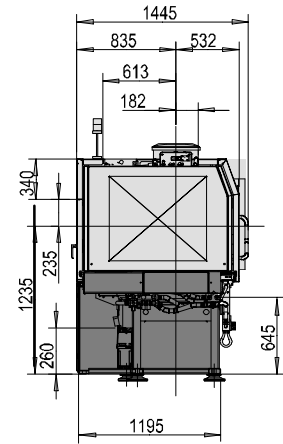
We reserve the right to make changes as a result of further technical advantages

- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

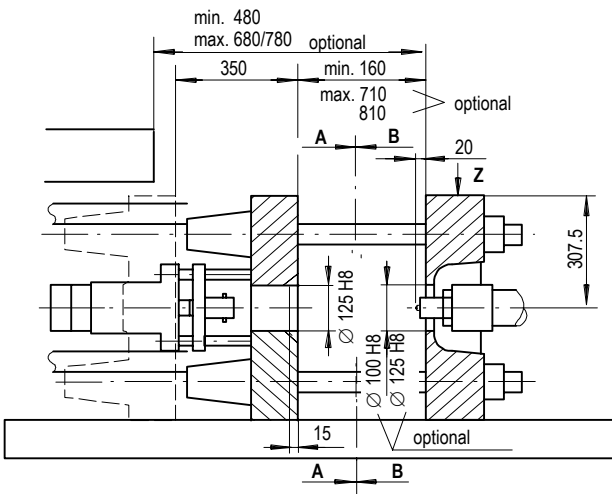
Machine dimensions Ergotech 60/370 EL-EXIS S



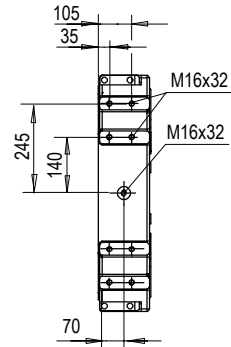
1) valid for injection unit 120



Platen dimensions Ergotech 60/370 EL-EXIS S

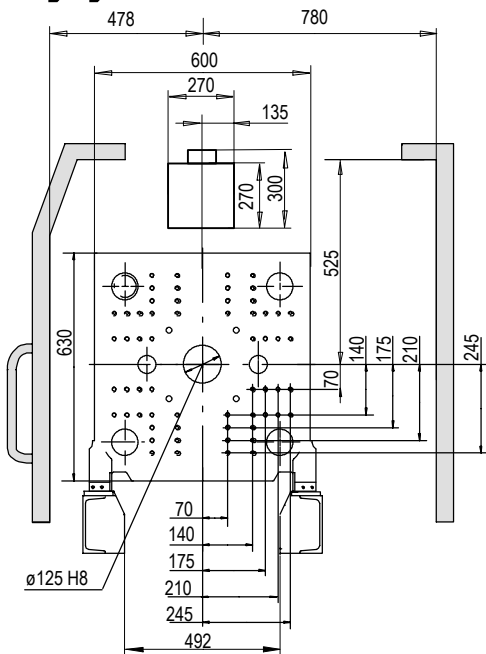


Z Hole pattern for robot/sprue picker on fixed platen



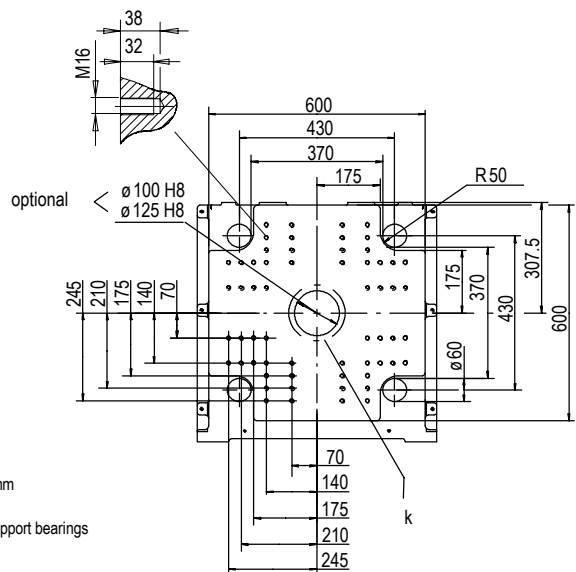
Moving platen

B - B



Fixed platen

A - A



Hole pattern according EUROMAP

k = minimum permissible mould  $\varnothing$  215 mm

Max. permissible mould weight 700 kg,

max. 450 kg of it on the moving platen support bearings

$\oplus$  bore diameter  $\varnothing$  27 through holes

# Technical Data Ergotech 100/420 EL-EXIS S

| Demag Ergotech                               |                      | Ergotech 100/420 EL-EXIS S     |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
|--|----------------------|--------------------------------|----------|--------------------|-----------------------|----------|--------------------------------|--------------------|-----------------------|-----------------------|----------|--------------------------------|--------------------|-----------------------|-----------------------|--|
| Model description                            |                      | Ergotech 100/420-200 EL-EXIS S |          |                    |                       |          | Ergotech 100/420-310 EL-EXIS S |                    |                       |                       |          | Ergotech 100/420-430 EL-EXIS S |                    |                       |                       |  |
| International size description               |                      | 1000-200                       |          |                    |                       |          | 1000-310                       |                    |                       |                       |          | 1000-430                       |                    |                       |                       |  |
| Clamping unit                                |                      | 100/420                        |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Clamping force                               | [kN]                 | 1000                           |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Locking force                                | [kN]                 | 1100                           |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Max. mould opening stroke                    | [mm]                 | 380                            |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Min. mould height                            | [mm]                 | 200                            |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Max./enlarged mould height                   | [mm]                 | 430 / 495                      |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Overall size of platens/enlarged             | [mm]                 | 810 / 875                      |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Mould platen (h x v)                         | [mm]                 | 600 x 600                      |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Distance between tie bars (h x v)            | [mm]                 | 420 x 420                      |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Ejection stroke                              | [mm]                 | 140                            |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Ejection force                               | [kN]                 | 59                             |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Retraction force                             | [kN]                 | 29                             |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| Injection unit                               |                      | 200                            |          |                    |                       |          | 310                            |                    |                       |                       |          | 430                            |                    |                       |                       |  |
| Screw diameter                               | [mm]                 | 25                             | 30       | 35                 | 30                    | 30       | 35                             | 40                 | 30                    | 35                    | 35       | 40                             | 45                 | 35                    | 40                    |  |
| Screw geometry                               |                      | standard                       | standard | standard           | special <sup>1)</sup> | standard | standard                       | standard           | special <sup>1)</sup> | special <sup>1)</sup> | standard | standard                       | standard           | special <sup>1)</sup> | special <sup>1)</sup> |  |
| L/D ratio                                    |                      | 20                             | 20       | 20                 | 25                    | 20       | 20                             | 20                 | 25                    | 25                    | 20       | 20                             | 20                 | 25                    | 25                    |  |
| Injection pressure (up to 400 °C)            | [bar]                | 2400                           | 1990     | 1460               | 1990                  | 2400     | 2024                           | 1550               | 2400                  | 2024                  | 2400     | 2020                           | 1600               | 2400                  | 2020                  |  |
| Cylinder head volume                         | [cm <sup>3</sup> ]   | 61                             | 106      | 144                | 106                   | 106      | 168                            | 220                | 106                   | 168                   | 168      | 231                            | 293                | 168                   | 231                   |  |
| Max. shot weight (PS, PE*)                   | [g]                  | 60                             | 100      | 130                | 80*                   | 100      | 150                            | 200                | 80*                   | 120*                  | 150      | 210                            | 260                | 120*                  | 160*                  |  |
| Rate of injection                            |                      |                                |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| > with accumulator                           | [cm <sup>3</sup> /s] | 490                            | 710      | 910                | 710                   | 710      | 910                            | 1130               | 710                   | 910                   | 910      | 1130                           | 1350               | 910                   | 1130                  |  |
| Plasticising rate (PS, PE*)                  | [g/s]                | 11,3                           | 18,8     | 25,5 <sup>2)</sup> | 15,8*                 | 18,8     | 25,5                           | 37,5 <sup>2)</sup> | 15,8*                 | 21,8*                 | 25,5     | 37,5                           | 47,3 <sup>2)</sup> | 21,8*                 | 32,3*                 |  |
| Max. screw stroke                            | [mm]                 | 125                            | 150      | 150                | 150                   | 150      | 175                            | 175                | 150                   | 175                   | 175      | 184                            | 184                | 175                   | 184                   |  |
| Max. distance of nozzle retraction           | [mm]                 | 200                            |          |                    |                       | 250      |                                |                    |                       |                       | 300      |                                |                    |                       |                       |  |
| Max. nozzle dipping depth (SVO)              | [mm]                 | 20                             |          |                    |                       | 20       |                                |                    |                       |                       | 20       |                                |                    |                       |                       |  |
| Nozzle sealing force                         | [kN]                 | 60                             |          |                    |                       | 60       |                                |                    |                       |                       | 60       |                                |                    |                       |                       |  |
| Hopper capacity                              | [ltr.]               | 35                             |          |                    |                       | 35       |                                |                    |                       |                       | 35       |                                |                    |                       |                       |  |
| General data                                 |                      | 100/420-200                    |          |                    |                       |          | 100/420-310                    |                    |                       |                       |          | 100/420-430                    |                    |                       |                       |  |
| Oil tank capacity                            | [ltr.]               | 105                            |          |                    |                       |          | 105                            |                    |                       |                       |          | 105                            |                    |                       |                       |  |
| Installed electrical rating                  |                      |                                |          |                    |                       |          |                                |                    |                       |                       |          |                                |                    |                       |                       |  |
| > pump unit <sup>3)</sup>                    | [kW]                 | 15                             |          |                    |                       |          | 15                             |                    |                       |                       |          | 15                             |                    |                       |                       |  |
| > electric screw drive <sup>3)</sup>         | [≈ kW]               | 11,3                           |          |                    |                       |          | 18                             |                    |                       |                       |          | 25,1                           |                    |                       |                       |  |
| > capacity clamp unit <sup>3)</sup>          | [≈ kW]               | 12                             |          |                    |                       |          | 12                             |                    |                       |                       |          | 12                             |                    |                       |                       |  |
| > heating capacity of screw cylinder         | [≈ kW]               | 5,7                            | 8,3      | 9,4                | 11,3                  | 8,3      | 9,4                            | 11,1               | 11,3                  | 13,0                  | 9,4      | 11,1                           | 11,3               | 13,0                  | 14,0                  |  |
| > total capacity                             | [≈ kW]               | 44,0                           | 46,6     | 47,7               | 49,6                  | 53,3     | 54,4                           | 56,1               | 56,3                  | 58,0                  | 61,5     | 63,2                           | 63,4               | 65,1                  | 66,1                  |  |
| Dry cycles (EUROMAP 6)                       | [s-mm]               | 1,5 - 294                      |          |                    |                       |          | 1,5 - 294                      |                    |                       |                       |          | 1,5 - 294                      |                    |                       |                       |  |
| Net weight (without oil)                     | [≈ kg]               | 5800                           |          |                    |                       |          | 5900                           |                    |                       |                       |          | 6000                           |                    |                       |                       |  |
| Machine dimensions (l x w x h) <sup>4)</sup> | [≈ m]                | 4,8 x 1,4 x 1,9                |          |                    |                       |          | 4,8 x 1,4 x 1,9                |                    |                       |                       |          | 4,8 x 1,4 x 1,9                |                    |                       |                       |  |
| Electric drive projection (H) <sup>5)</sup>  | [mm]                 | 0/0                            | 0/0      | 0/0                | 0/0                   | 0/0      | 0/0                            | 0/0                | 0/0                   | 0/0                   | 0/0      | 0/0                            | 0/0                | 0/0                   | 0/0                   |  |

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- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
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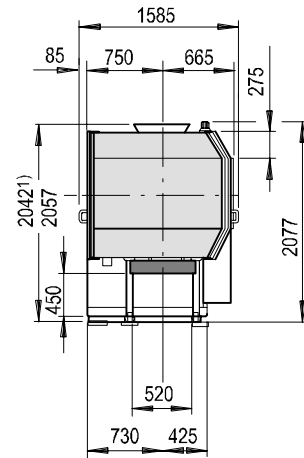
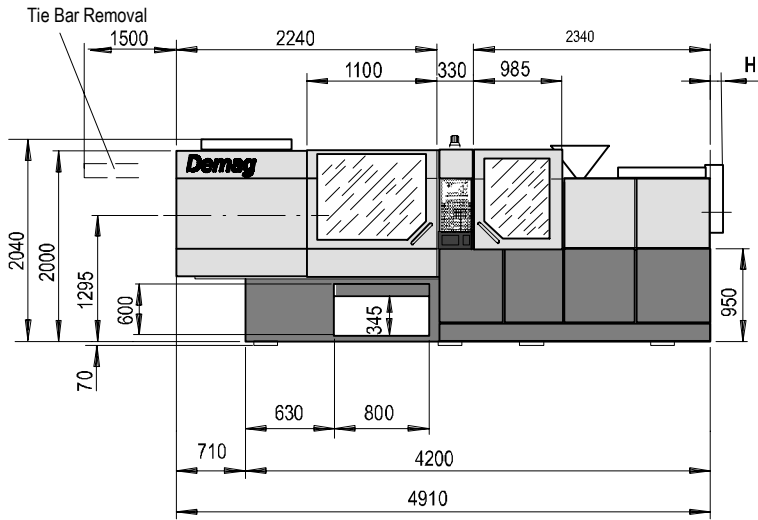
# Technical Data Ergotech 125/475 EL-EXIS S

| Demag Ergotech                                     | Ergotech 125/475 EL-EXIS S     |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
|--|--------------------------------|----------|----------|-----------------------|-----------------------|--------------------------------|----------|----------|-----------------------|-----------------------|--------------------------------|----------|----------|-----------------------|-----------------------|
| Model description                                  | Ergotech 125/475-320 EL-EXIS S |          |          |                       |                       | Ergotech 125/475-440 EL-EXIS S |          |          |                       |                       | Ergotech 125/475-610 EL-EXIS S |          |          |                       |                       |
| International size description                     | 1250-320                       |          |          |                       |                       | 1250-440                       |          |          |                       |                       | 1250-610                       |          |          |                       |                       |
| <b>Clamping unit</b>                               | <b>125</b>                     |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Clamping force [kN]                                | 1250                           |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Locking force [kN]                                 | 1375                           |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Max. mould opening stroke [mm]                     | 450                            |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Min. mould height [mm]                             | 230                            |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Max./enlarged mould height [mm]                    | 460/560                        |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Overall size of platens/enlarged [mm]              | 910/1010                       |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Mould platen (h x v) [mm]                          | 690 x 660                      |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Distance between tie bars (h x v) [mm]             | 475 x 450                      |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Ejection stroke [mm]                               | 140                            |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Ejection force [kN]                                | 59                             |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| Retraction force [kN]                              | 29                             |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| <b>Injection unit</b>                              | <b>320</b>                     |          |          |                       |                       | <b>440</b>                     |          |          |                       |                       | <b>610</b>                     |          |          |                       |                       |
| Screw diameter [mm]                                | 30                             | 35       | 40       | 30                    | 35                    | 35                             | 40       | 45       | 35                    | 40                    | 40                             | 45       | 50       | 40                    | 45                    |
| Screw geometry                                     | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio  | 20                             | 20       | 20       | 25                    | 25                    | 20                             | 20       | 20       | 25                    | 25                    | 20                             | 20       | 20       | 25                    | 25                    |
| Injection pressure (up to 400 °C) [bar]            | 2420                           | 1877     | 1437     | 2420                  | 1877                  | 2423                           | 1855     | 1466     | 2423                  | 1855                  | 2418                           | 1973     | 1598     | 2418                  | 1973                  |
| Cylinder head volume [cm <sup>3</sup> ]            | 124                            | 168      | 220      | 124                   | 168                   | 177                            | 231      | 293      | 177                   | 231                   | 255                            | 323      | 399      | 255                   | 323                   |
| Max. shot weight (PS, PE*) [g]                     | 110                            | 150      | 200      | 90*                   | 120*                  | 160                            | 210      | 260      | 130*                  | 160*                  | 230                            | 290      | 360      | 180*                  | 230*                  |
| <b>Rate of injection</b>                           |                                |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| > with accumulator [cm <sup>3</sup> /s]            | 710                            | 910      | 1130     | 710                   | 910                   | 910                            | 1130     | 1350     | 910                   | 1130                  | 1130                           | 1350     | 1570     | 1130                  | 1350                  |
| <b>Plasticising rate (PS, PE*) [g/s]</b>           | 23                             | 32       | 32       | 20*                   | 27*                   | 34                             | 44       | 40       | 29*                   | 38*                   | 41                             | 52       | 57       | 37*                   | 47*                   |
| Max. screw stroke [mm]                             | 175                            |          |          |                       |                       | 184                            |          |          |                       |                       | 203                            |          |          |                       |                       |
| Max. distance of nozzle retraction [mm]            | 350                            |          |          |                       |                       | 350                            |          |          |                       |                       | 350                            |          |          |                       |                       |
| Max. nozzle dipping depth (SVO) [mm]               | 20                             |          |          |                       |                       | 20                             |          |          |                       |                       | 20                             |          |          |                       |                       |
| Nozzle sealing force [kN]                          | 80                             |          |          |                       |                       | 80                             |          |          |                       |                       | 80                             |          |          |                       |                       |
| Hopper capacity [ltr.]                             | 70                             |          |          |                       |                       | 70                             |          |          |                       |                       | 70                             |          |          |                       |                       |
| <b>General data</b>                                | <b>125/475-320</b>             |          |          |                       |                       | <b>125/475-440</b>             |          |          |                       |                       | <b>125/475-610</b>             |          |          |                       |                       |
| Oil tank capacity [ltr.]                           | 400                            |          |          |                       |                       | 400                            |          |          |                       |                       | 400                            |          |          |                       |                       |
| <b>Installed electrical rating</b>                 |                                |          |          |                       |                       |                                |          |          |                       |                       |                                |          |          |                       |                       |
| > pump unit <sup>3)</sup> [kW]                     | 15                             |          |          |                       |                       | 15                             |          |          |                       |                       | 15                             |          |          |                       |                       |
| > electric screw drive <sup>3)</sup> [≈ kW]        | 15                             |          |          |                       |                       | 22                             |          |          |                       |                       | 27                             |          |          |                       |                       |
| > capacity clamp unit <sup>3)</sup> [≈ kW]         | 22                             |          |          |                       |                       | 22                             |          |          |                       |                       | 22                             |          |          |                       |                       |
| > heating capacity of screw cylinder [≈ kW]        | 8                              | 8        | 12       | 12                    | 13                    | 8                              | 12       | 13       | 13                    | 16                    | 12                             | 13       | 15       | 16                    | 19                    |
| > total capacity [≈ kW]                            | 60                             | 60       | 64       | 64                    | 65                    | 67                             | 71       | 72       | 72                    | 75                    | 76                             | 77       | 79       | 80                    | 83                    |
| Dry cycles (EUROMAP 6) [s-mm]                      | 1,48 - 392                     |          |          |                       |                       | 1,48 - 392                     |          |          |                       |                       | 1,48 - 392                     |          |          |                       |                       |
| Net weight (without oil) [≈ kg]                    | 6550                           |          |          |                       |                       | 6850                           |          |          |                       |                       | 6850                           |          |          |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> [≈ m] | 4,9 x 1,6 x 2,1                |          |          |                       |                       | 4,9 x 1,6 x 2,1                |          |          |                       |                       | 4,9 x 1,6 x 2,1                |          |          |                       |                       |
| Electric drive projection (H) <sup>5)</sup> [mm]   | 0/0                            | 0/0      | 0/64     | 0/0                   | 0/116                 | 0/0                            | 0/122    | 0/278    | 0/174                 | 0/322                 | 0/143                          | 0/299    | 108/458  | 0/343                 | 174/524               |

We reserve the right to make changes as a result of further technical advantages

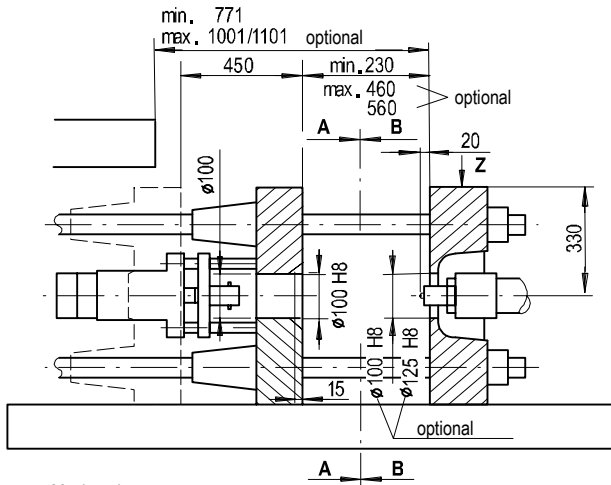
- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

Machine dimensions Ergotech 125/475 EL-EXIS S



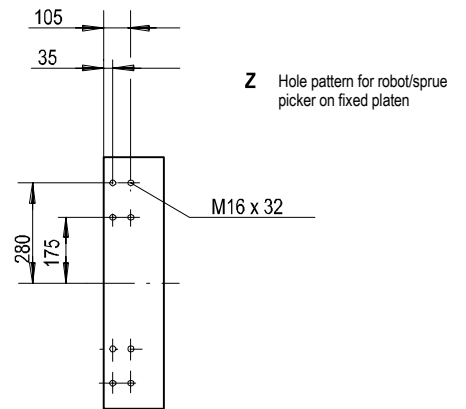
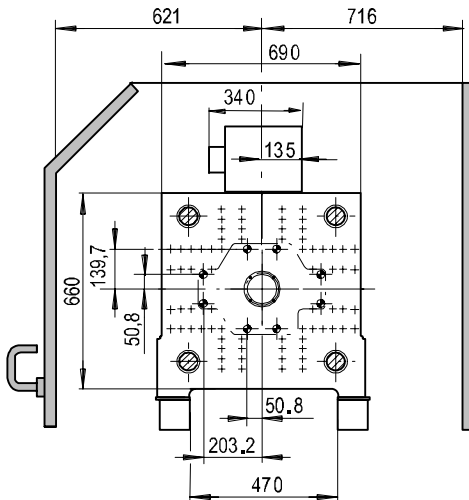
1) valid for injection unit 320

Platen dimensions Ergotech 125/475 EL-EXIS S



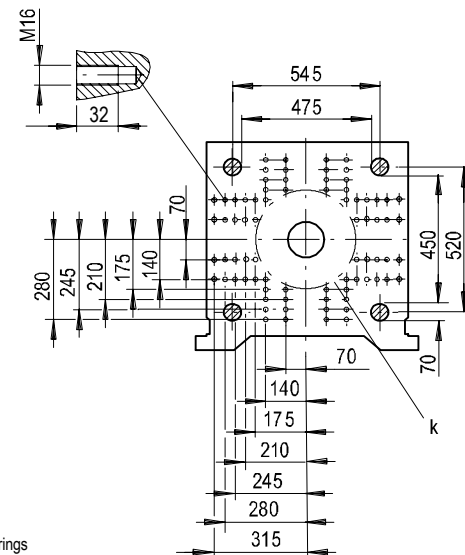
Moving platen

B - B



Fixed platen

A - A



Hole pattern according EUROMAP  
 k = minimum permissible mould  $\varnothing$  285 mm  
 Max. permissible mould weight 1100 kg,  
 max. 730 kg of it on the moving platen support bearings  
 $\varnothing$  bore diameter  $\varnothing$  27 through holes

# Technical Data Ergotech 150/500 EL-EXIS S

| Demag Ergotech                               | Ergotech 150/500 EL-EXIS S     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  | Ergotech 150/500-440 EL-EXIS S |  |  |  |  | Ergotech 150/500-610 EL-EXIS S   |  |  |  |  | Ergotech 150/500-840 EL-EXIS S   |  |  |  |  |  |  |  |  |  |
|  | 1500-440                       |  |  |  |  | 1500-610   |  |  |  |  | 1500-840   |  |  |  |  |  |  |  |  |  |
| Model description                            |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| International size description               |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Clamping unit                                | 150                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Clamping force                               | [kN]                           |  |  |  |  | 1500   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Locking force                                | [kN]                           |  |  |  |  | 1650   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Max. mould opening stroke                    | [mm]                           |  |  |  |  | 500  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Min. mould height                            | [mm]                           |  |  |  |  | 250  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Max./enlarged mould height                   | [mm]                           |  |  |  |  | 560/660  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Overall size of platens/enlarged             | [mm]                           |  |  |  |  | 1060/1160  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mould platen (h x v)                         | [mm]                           |  |  |  |  | 750 x 750  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distance between tie bars (h x v)            | [mm]                           |  |  |  |  | 500 x 500  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ejection stroke                              | [mm]                           |  |  |  |  | 160  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ejection force                               | [kN]                           |  |  |  |  | 59   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Retraction force                             | [kN]                           |  |  |  |  | 29   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Injection unit                               | 440                            |  |  |  |  | 610  |  |  |  |  | 840  |  |  |  |  |  |  |  |  |  |
| Screw diameter                               | [mm]                           |  |  |  |  | 35 40 45 35 40   |  |  |  |  | 40 45 50 40 45   |  |  |  |  | 45 50 60 45 50   |  |  |  |  |
| Screw geometry                               |                                |  |  |  |  | standard standard standard special <sup>1)</sup> special <sup>1)</sup> |  |  |  |  | standard standard standard special <sup>1)</sup> special <sup>1)</sup> |  |  |  |  | standard standard standard special <sup>1)</sup> special <sup>1)</sup> |  |  |  |  |
| L/D ratio                                    |                                |  |  |  |  | 20 20 20 25 25   |  |  |  |  | 20 20 20 25 25   |  |  |  |  | 20 20 20 25 25   |  |  |  |  |
| Injection pressure (up to 400 °C)            | [bar]                          |  |  |  |  | 2423 1855 1466 2423 1855   |  |  |  |  | 2418 1973 1598 2418 1973   |  |  |  |  | 2402 1946 1351 2402 1946   |  |  |  |  |
| Cylinder head volume                         | [cm <sup>3</sup> ]             |  |  |  |  | 177 231 293 177 231  |  |  |  |  | 255 323 399 255 323  |  |  |  |  | 358 442 636 358 442  |  |  |  |  |
| Max. shot weight (PS, PE*)                   | [g]                            |  |  |  |  | 160 210 260 130* 160*  |  |  |  |  | 230 290 360 180* 230*  |  |  |  |  | 320 400 570 250* 310*  |  |  |  |  |
| Rate of injection                            |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| > with accumulator                           | [cm <sup>3</sup> /s]           |  |  |  |  | 910 1130 1350 910 1130   |  |  |  |  | 1130 1350 1570 1130 1350   |  |  |  |  | 1350 1570 1970 1350 1570   |  |  |  |  |
| Plasticising rate (PS, PE*)                  | [g/s]                          |  |  |  |  | 34 44 40 29* 38*   |  |  |  |  | 41 52 57 37* 47*   |  |  |  |  | 42 60 67 38* 50*   |  |  |  |  |
| Max. screw stroke                            | [mm]                           |  |  |  |  | 184  |  |  |  |  | 203  |  |  |  |  | 225  |  |  |  |  |
| Max. distance of nozzle retraction           | [mm]                           |  |  |  |  | 350  |  |  |  |  | 350  |  |  |  |  | 350  |  |  |  |  |
| Max. nozzle dipping depth (SVO)              | [mm]                           |  |  |  |  | 20   |  |  |  |  | 20   |  |  |  |  | 20   |  |  |  |  |
| Nozzle sealing force                         | [kN]                           |  |  |  |  | 80   |  |  |  |  | 80   |  |  |  |  | 80   |  |  |  |  |
| Hopper capacity                              | [ltr.]                         |  |  |  |  | 70   |  |  |  |  | 70   |  |  |  |  | 70   |  |  |  |  |
| General data                                 | 150/500-440                    |  |  |  |  | 150/500-610  |  |  |  |  | 150/500-840  |  |  |  |  |  |  |  |  |  |
| Oil tank capacity                            | [ltr.]                         |  |  |  |  | 400  |  |  |  |  | 400  |  |  |  |  | 400  |  |  |  |  |
| Installed electrical rating                  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| > pump unit <sup>3)</sup>                    | [kW]                           |  |  |  |  | 15   |  |  |  |  | 15   |  |  |  |  | 15   |  |  |  |  |
| > electric screw drive <sup>3)</sup>         | [≈ kW]                         |  |  |  |  | 22   |  |  |  |  | 27   |  |  |  |  | 32   |  |  |  |  |
| > capacity clamp unit <sup>3)</sup>          | [≈ kW]                         |  |  |  |  | 22   |  |  |  |  | 22   |  |  |  |  | 22   |  |  |  |  |
| > heating capacity of screw cylinder         | [≈ kW]                         |  |  |  |  | 8 12 13 13 16  |  |  |  |  | 12 13 15 16 19   |  |  |  |  | 13 15 23 19 22   |  |  |  |  |
| > total capacity                             | [≈ kW]                         |  |  |  |  | 67 71 72 72 75   |  |  |  |  | 76 77 79 80 83   |  |  |  |  | 82 84 92 88 91   |  |  |  |  |
| Dry cycles (EUROMAP 6)                       | [s-mm]                         |  |  |  |  | 1,62 - 350   |  |  |  |  | 1,62 - 350   |  |  |  |  | 1,62 - 350   |  |  |  |  |
| Net weight (without oil)                     | [≈ kg]                         |  |  |  |  | 7900   |  |  |  |  | 7900   |  |  |  |  | 8200   |  |  |  |  |
| Machine dimensions (l x w x h) <sup>4)</sup> | [≈ m]                          |  |  |  |  | 5,2 x 1,7 x 2,1  |  |  |  |  | 5,2 x 1,7 x 2,1  |  |  |  |  | 5,2 x 1,7 x 2,1  |  |  |  |  |
| Electric drive projection (H) <sup>5)</sup>  | [mm]                           |  |  |  |  | 0/0 0/122 0/278 0/174 0/322  |  |  |  |  | 0/143 0/299 108/458 0/343 174/524                                      |  |  |  |  | 101/451 260/610 551/901 326/676 510/860                                |  |  |  |  |

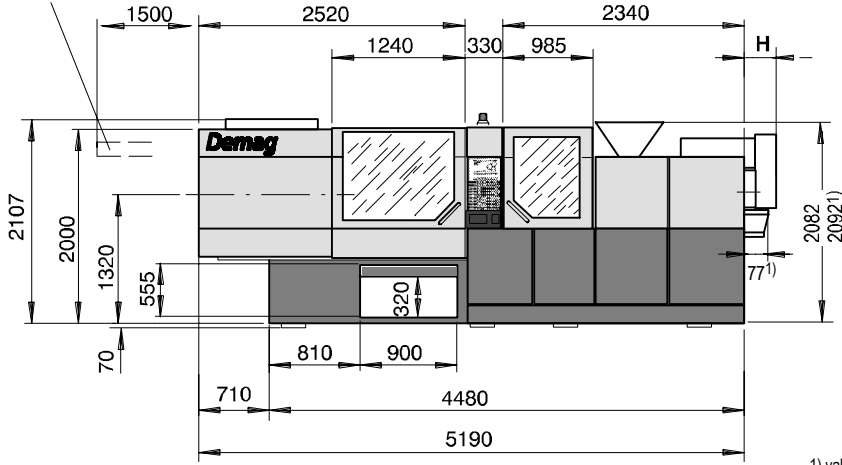
We reserve the right to make changes as a result of further technical advantages

- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

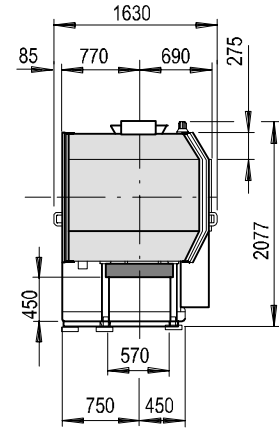


**Machine dimensions Ergotech 150/500 EL-EXIS S**

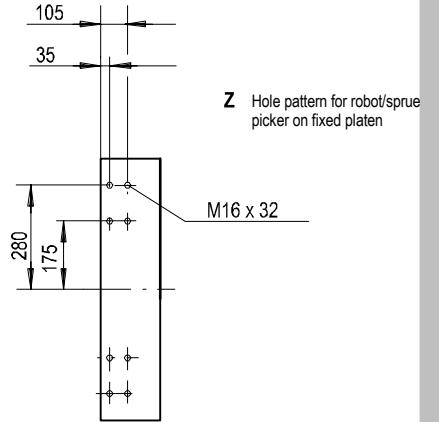
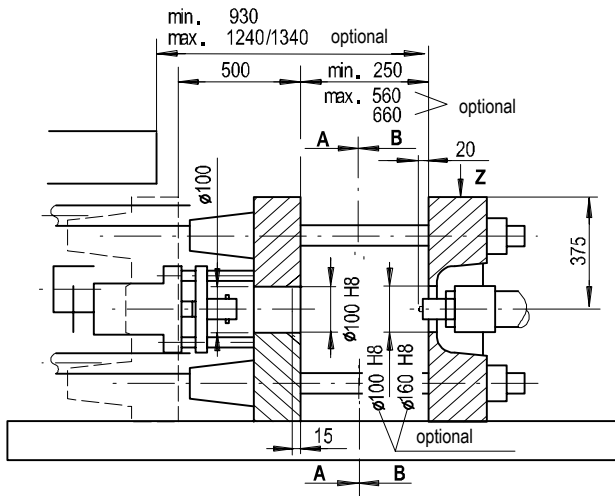
Tie Bar Removal



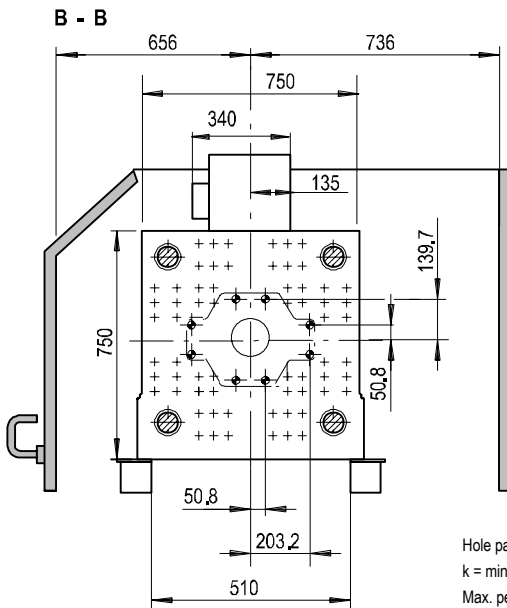
1) valid for injection unit 840



**Platen dimensions Ergotech 150/500 EL-EXIS S**

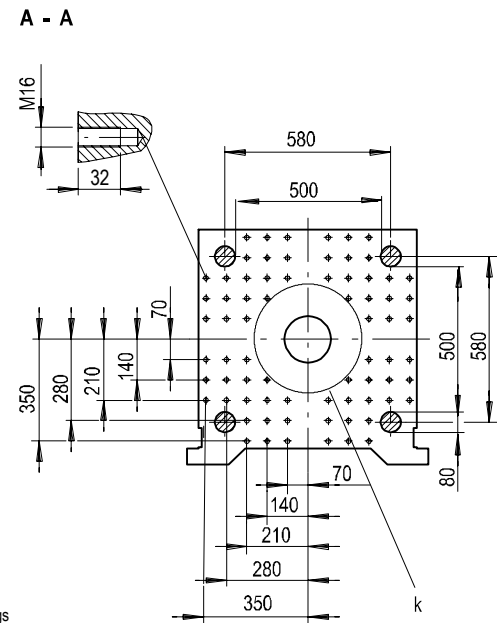


Moving platen



Hole pattern according EUROMAP  
 k = minimum permissible mould  $\varnothing$  300 mm  
 Max. permissible mould weight 1700 kg,  
 max. 1150 kg of it on the moving platen support bearings  
 $\varnothing$  bore diameter  $\varnothing$  27 through holes

Fixed platen



# Technical Data Ergotech 200/560 EL-EXIS S

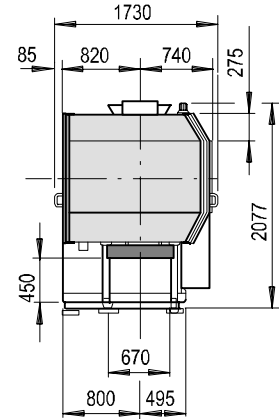
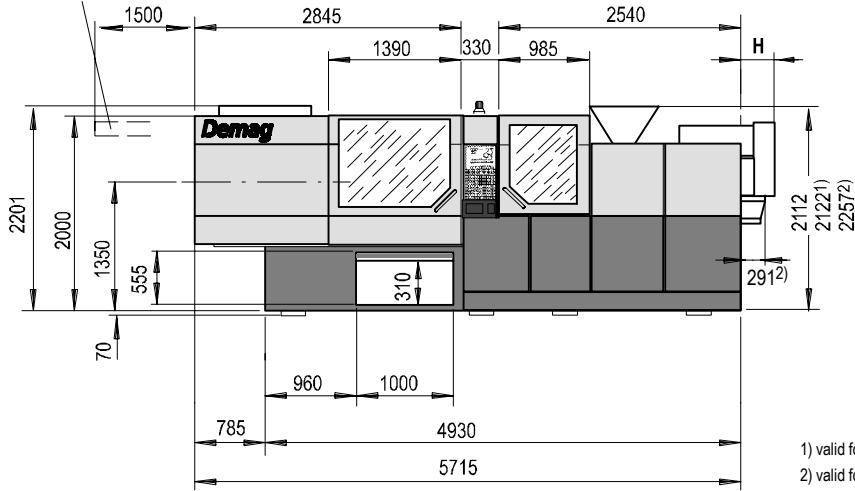
| Demag Ergotech                                     | Ergotech 200/560 EL-EXIS S     |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
|--|--------------------------------|----------|----------|-----------------------|-----------------------|--------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|----------|-----------------------|-----------------------|
| Model description                                  | Ergotech 200/560-610 EL-EXIS S |          |          |                       |                       | Ergotech 200/560-840 EL-EXIS S |          |          |                       |                       | Ergotech 200/560-1450 EL-EXIS S |          |          |                       |                       |
| International size description                     | 2000-610                       |          |          |                       |                       | 2000-840                       |          |          |                       |                       | 2000-1450                       |          |          |                       |                       |
| <b>Clamping unit</b>                               | <b>200</b>                     |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Clamping force [kN]                                | 2000                           |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Locking force [kN]                                 | 2200                           |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Max. mould opening stroke [mm]                     | 575                            |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Min. mould height [mm]                             | 310                            |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Max./enlarged mould height [mm]                    | 660/760                        |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Overall size of platens/enlarged [mm]              | 1235/1335                      |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Mould platen (h x v) [mm]                          | 830 x 830                      |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Distance between tie bars (h x v) [mm]             | 560 x 560                      |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Ejection stroke [mm]                               | 180                            |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Ejection force [kN]                                | 69                             |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| Retraction force [kN]                              | 31                             |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| <b>Injection unit</b>                              | <b>610</b>                     |          |          |                       |                       | <b>840</b>                     |          |          |                       |                       | <b>1450</b>                     |          |          |                       |                       |
| Screw diameter [mm]                                | 40                             | 45       | 50       | 40                    | 45                    | 45                             | 50       | 60       | 45                    | 50                    | 50                              | 60       | 70       | 50                    | 60                    |
| Screw geometry                                     | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio  | 20                             | 20       | 20       | 25                    | 25                    | 20                             | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20       | 25                    | 25                    |
| Injection pressure (up to 400 °C) [bar]            | 2418                           | 1973     | 1598     | 2418                  | 1973                  | 2402                           | 1946     | 1351     | 2402                  | 1946                  | 2426                            | 1905     | 1400     | 2426                  | 1905                  |
| Cylinder head volume [cm <sup>3</sup> ]            | 255                            | 323      | 399      | 255                   | 323                   | 358                            | 442      | 636      | 358                   | 442                   | 530                             | 763      | 1039     | 530                   | 763                   |
| Max. shot weight (PS, PE*) [g]                     | 230                            | 290      | 360      | 180*                  | 230*                  | 320                            | 400      | 570      | 250*                  | 310*                  | 480                             | 690      | 940      | 380*                  | 540*                  |
| <b>Rate of injection</b>                           |                                |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| > with accumulator [cm <sup>3</sup> /s]            | 1130                           | 1350     | 1570     | 1130                  | 1350                  | 1350                           | 1570     | 1970     | 1350                  | 1570                  | 1570                            | 1970     | 2290     | 1570                  | 1970                  |
| <b>Plasticising rate (PS, PE*) [g/s]</b>           | 41                             | 52       | 57       | 37*                   | 47*                   | 42                             | 60       | 67       | 38*                   | 50*                   | 49                              | 76       | 78       | 41*                   | 68*                   |
| Max. screw stroke [mm]                             | 203                            |          |          |                       |                       | 225                            |          |          |                       |                       | 270                             |          |          |                       |                       |
| Max. distance of nozzle retraction [mm]            | 400                            |          |          |                       |                       | 400                            |          |          |                       |                       | 400                             |          |          |                       |                       |
| Max. nozzle dipping depth (SVO) [mm]               | 20                             |          |          |                       |                       | 20                             |          |          |                       |                       | 20                              |          |          |                       |                       |
| Nozzle sealing force [kN]                          | 80                             |          |          |                       |                       | 80                             |          |          |                       |                       | 110                             |          |          |                       |                       |
| Hopper capacity [ltr.]                             | 70                             |          |          |                       |                       | 70                             |          |          |                       |                       | 110                             |          |          |                       |                       |
| <b>General data</b>                                | <b>200/560- 610</b>            |          |          |                       |                       | <b>200/560- 840</b>            |          |          |                       |                       | <b>200/560-1450</b>             |          |          |                       |                       |
| Oil tank capacity [ltr.]                           | 500                            |          |          |                       |                       | 500                            |          |          |                       |                       | 500                             |          |          |                       |                       |
| <b>Installed electrical rating</b>                 |                                |          |          |                       |                       |                                |          |          |                       |                       |                                 |          |          |                       |                       |
| > pump unit <sup>3)</sup> [kW]                     | 15                             |          |          |                       |                       | 15                             |          |          |                       |                       | 22                              |          |          |                       |                       |
| > electric screw drive <sup>3)</sup> [≈ kW]        | 27                             |          |          |                       |                       | 32                             |          |          |                       |                       | 37                              |          |          |                       |                       |
| > capacity clamp unit <sup>3)</sup> [≈ kW]         | 32                             |          |          |                       |                       | 32                             |          |          |                       |                       | 32                              |          |          |                       |                       |
| > heating capacity of screw cylinder [≈ kW]        | 12                             | 13       | 15       | 16                    | 19                    | 13                             | 15       | 23       | 19                    | 22                    | 15                              | 23       | 27       | 22                    | 31                    |
| > total capacity [≈ kW]                            | 86                             | 87       | 89       | 90                    | 93                    | 92                             | 94       | 102      | 98                    | 101                   | 106                             | 114      | 118      | 113                   | 122                   |
| Dry cycles (EUROMAP 6) [s-mm]                      | 1,8 - 392                      |          |          |                       |                       | 1,8 - 392                      |          |          |                       |                       | 1,8 - 392                       |          |          |                       |                       |
| Net weight (without oil) [≈ kg]                    | 10650                          |          |          |                       |                       | 10950                          |          |          |                       |                       | 11450                           |          |          |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> [≈ m] | 5,7 x 1,7 x 2,2                |          |          |                       |                       | 5,7 x 1,7 x 2,2                |          |          |                       |                       | 5,7 x 1,7 x 2,2                 |          |          |                       |                       |
| Electric drive projection (H) <sup>5)</sup> [mm]   | 0/0                            | 0/149    | 0/308    | 0/393                 | 0/374                 | 101/501                        | 260/660  | 551/951  | 326/726               | 510/910               | 402/802                         | 693/1093 | 997/1397 | 852/1052              | 993/1393              |

We reserve the right to make changes as a result of further technical advantages

- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

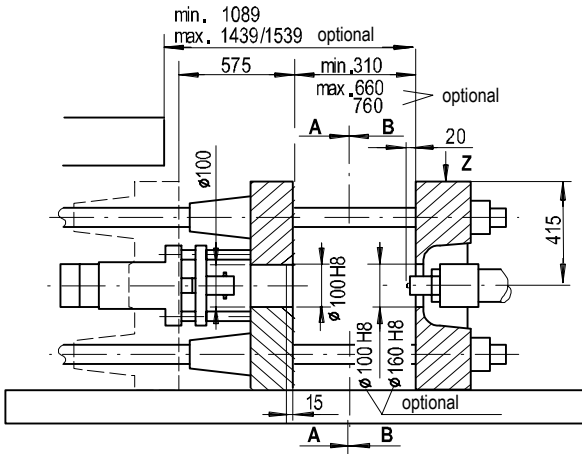
**Machine dimensions Ergotech 200/560 EL-EXIS S**

Tie Bar Removal



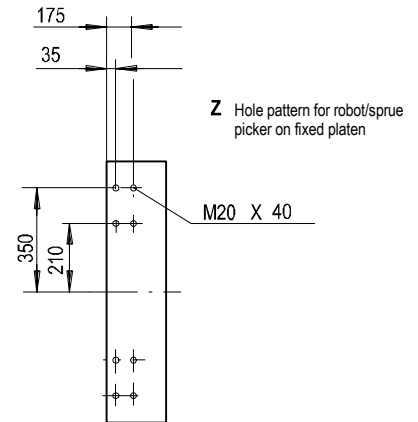
- 1) valid for injection unit 840
- 2) valid for injection unit 1450

**Platen dimensions Ergotech 200/560 EL-EXIS S**



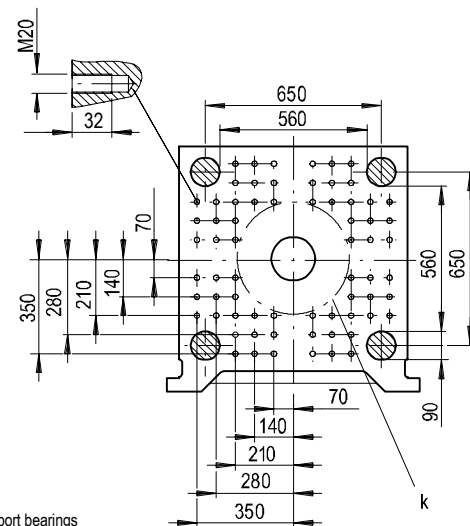
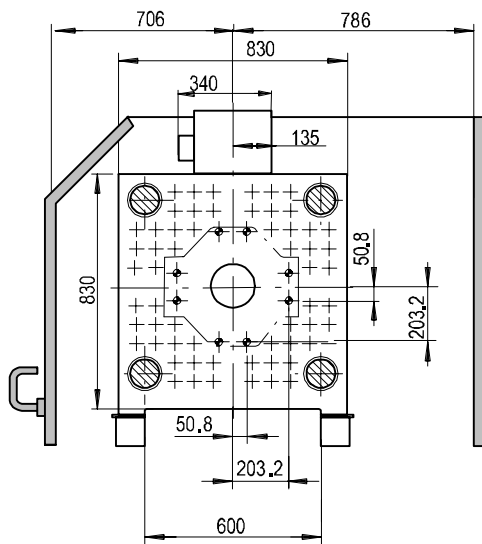
Moving platen

**B - B**



Fixed platen

**A - A**



Hole pattern according EUROMAP  
 k = minimum permissible mould  $\varnothing$  350 mm  
 Max. permissible mould weight 2500 kg,  
 max. 1700 kg of it on the moving platen support bearings  
 $\varnothing$  bore diameter  $\varnothing$  27 through holes

# Technical Data Ergotech 250/630 EL-EXIS S

| Demag Ergotech                                     | Ergotech 250/630 EL-EXIS S     |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
|--|--------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|-----------|-----------------------|-----------------------|
| Model description                                  | Ergotech 250/630-840 EL-EXIS S |          |          |                       |                       | Ergotech 250/630-1450 EL-EXIS S |          |          |                       |                       | Ergotech 250/630-2300 EL-EXIS S |          |           |                       |                       |
| International size description                     |                                |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| <b>Clamping unit</b>                               | <b>250</b>                     |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Clamping force [kN]                                | 2500                           |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Locking force [kN]                                 | 2750                           |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max. mould opening stroke [mm]                     | 675                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Min. mould height [mm]                             | 330                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max./enlarged mould height [mm]                    | 710/830                        |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Overall size of platens/enlarged [mm]              | 1385/1505                      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Mould platen (h x v) [mm]                          | 950 x 950                      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Distance between tie bars (h x v) [mm]             | 630 x 630                      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection stroke [mm]                               | 200                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection force [kN]                                | 69                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Retraction force [kN]                              | 31                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| <b>Injection unit</b>                              | <b>840</b>                     |          |          |                       |                       | <b>1450</b>                     |          |          |                       |                       | <b>2300</b>                     |          |           |                       |                       |
| Screw diameter [mm]                                | 45                             | 50       | 60       | 45                    | 50                    | 50                              | 60       | 70       | 50                    | 60                    | 60                              | 70       | 80        | 60                    | 70                    |
| Screw geometry                                     | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard  | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio  | 20                             | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20        | 25                    | 25                    |
| Injection pressure (up to 400 °C) [bar]            | 2402                           | 1946     | 1351     | 2402                  | 1946                  | 2426                            | 1905     | 1400     | 2426                  | 1905                  | 2420                            | 1877     | 1437      | 2420                  | 1877                  |
| Cylinder head volume [cm <sup>3</sup> ]            | 358                            | 442      | 636      | 358                   | 442                   | 530                             | 763      | 1039     | 530                   | 763                   | 891                             | 1212     | 1583      | 891                   | 1212                  |
| Max. shot weight (PS, PE*) [g]                     | 320                            | 400      | 570      | 250*                  | 310*                  | 480                             | 690      | 940      | 380*                  | 540*                  | 800                             | 1090     | 1430      | 630*                  | 860*                  |
| <b>Rate of injection</b>                           |                                |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > with accumulator [cm <sup>3</sup> /s]            | 1350                           | 1570     | 1970     | 1350                  | 1570                  | 1570                            | 1970     | 2290     | 1570                  | 1970                  | 1970                            | 2290     | 2480      | 1970                  | 2290                  |
| <b>Plasticising rate (PS, PE*) [g/s]</b>           | 42                             | 60       | 67       | 38*                   | 50*                   | 49                              | 76       | 78       | 41*                   | 68*                   | 61                              | 87       | 87        | 55*                   | 79*                   |
| Max. screw stroke [mm]                             |                                |          |          |                       |                       | 270                             |          |          |                       |                       | 315                             |          |           |                       |                       |
| Max. distance of nozzle retraction [mm]            |                                |          |          |                       |                       | 440                             |          |          |                       |                       | 440                             |          |           |                       |                       |
| Max. nozzle dipping depth (SVO) [mm]               | 20                             |          |          |                       |                       | 20                              |          |          |                       |                       | 20                              |          |           |                       |                       |
| Nozzle sealing force [kN]                          | 80                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| Hopper capacity [ltr.]                             | 70                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| <b>General data</b>                                | <b>250/630-840</b>             |          |          |                       |                       | <b>250/630-1450</b>             |          |          |                       |                       | <b>250/630-2300</b>             |          |           |                       |                       |
| Oil tank capacity [ltr.]                           | 700                            |          |          |                       |                       | 700                             |          |          |                       |                       | 700                             |          |           |                       |                       |
| <b>Installed electrical rating</b>                 |                                |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > pump unit <sup>3)</sup> [kW]                     | 22                             |          |          |                       |                       | 22                              |          |          |                       |                       | 22                              |          |           |                       |                       |
| > electric screw drive <sup>3)</sup> [≈ kW]        | 32                             |          |          |                       |                       | 37                              |          |          |                       |                       | 46                              |          |           |                       |                       |
| > capacity clamp unit <sup>3)</sup> [≈ kW]         | 32                             |          |          |                       |                       | 32                              |          |          |                       |                       | 32                              |          |           |                       |                       |
| > heating capacity of screw cylinder [≈ kW]        | 13                             | 15       | 23       | 19                    | 22                    | 15                              | 23       | 27       | 22                    | 31                    | 23                              | 27       | 31        | 31                    | 37                    |
| > total capacity [≈ kW]                            | 99                             | 101      | 109      | 105                   | 108                   | 106                             | 114      | 118      | 113                   | 122                   | 123                             | 127      | 131       | 131                   | 137                   |
| Dry cycles (EUROMAP 6) [s-mm]                      | 2,03 - 441                     |          |          |                       |                       | 2,03 - 441                      |          |          |                       |                       | 2,03 - 441                      |          |           |                       |                       |
| Net weight (without oil) [≈ kg]                    | 13700                          |          |          |                       |                       | 14200                           |          |          |                       |                       | 14900                           |          |           |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> [≈ m] | 6,5 x 1,9 x 2,3                |          |          |                       |                       | 6,5 x 1,9 x 2,3                 |          |          |                       |                       | 6,5 x 1,9 x 2,3                 |          |           |                       |                       |
| Electric drive projection (H) <sup>5)</sup> [mm]   | 0/171                          | 0/330    | 181/621  | 0/396                 | 140/580               | 32/472                          | 323/763  | 627/1067 | 852/1092              | 623/1063              | 454/894                         | 758/1198 | 1064/1504 | 712/1152              | 1108/1548             |

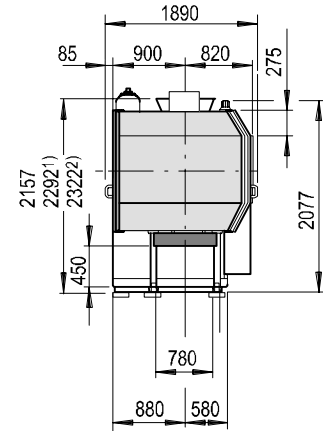
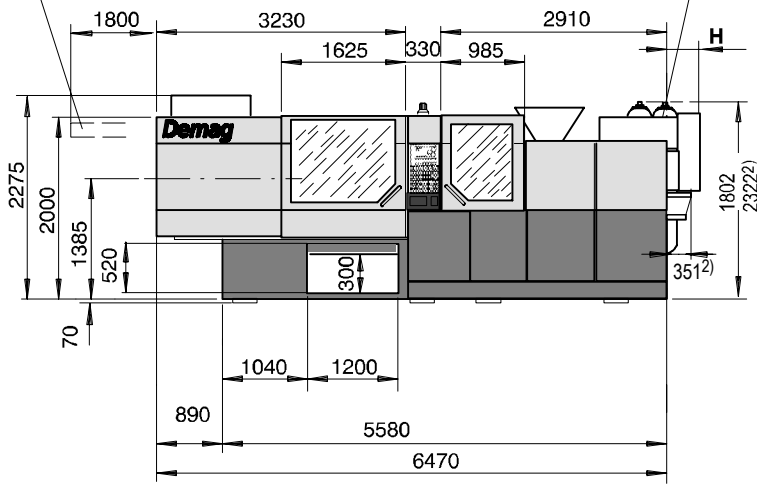
We reserve the right to make changes as a result of further technical advantages

- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

**Machine dimensions Ergotech 250/630 EL-EXIS S**

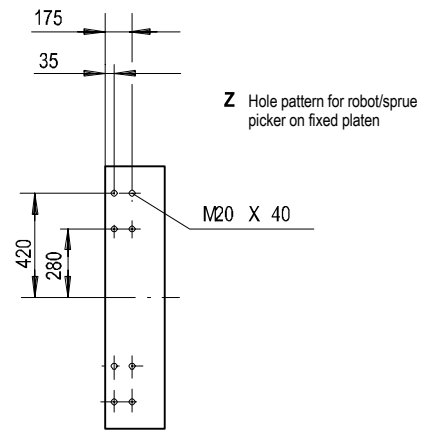
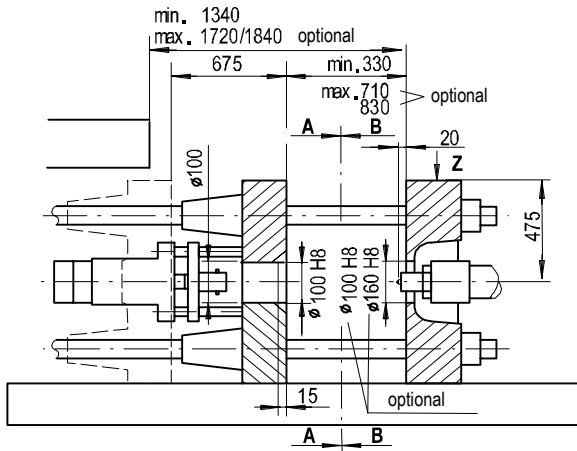
Tie Bar Removal

only EE 1450 and EE 2300



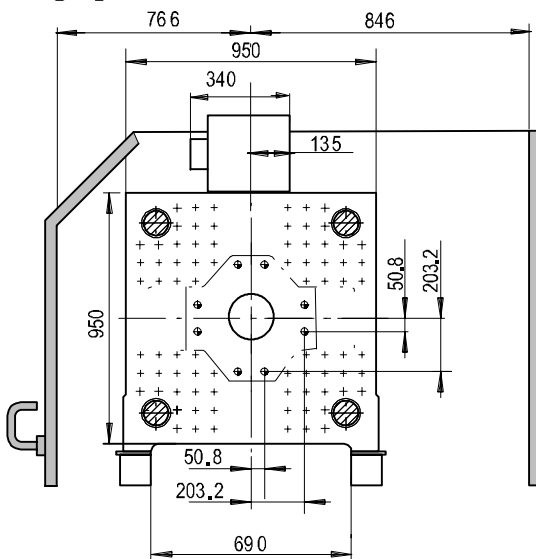
- 1) valid for injection unit 1450
- 2) valid for injection unit 2300

**Platen dimensions Ergotech 250/630 EL-EXIS S**



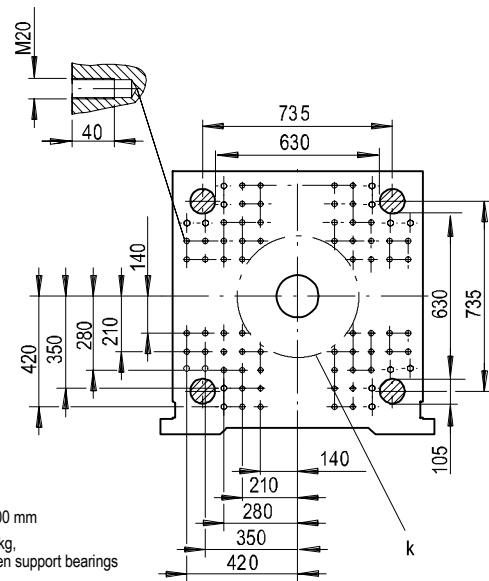
Moving platen

**B - B**



Fixed platen

**A - A**



Hole pattern according EUROMAP

k = minimum permissible mould  $\varnothing$  400 mm

Max. permissible mould weight 3300 kg,  
max. 2200 kg of it on the moving platen support bearings

⊕ bore diameter  $\varnothing$  27 through holes

# Technical Data Ergotech 300/720 EL-EXIS S

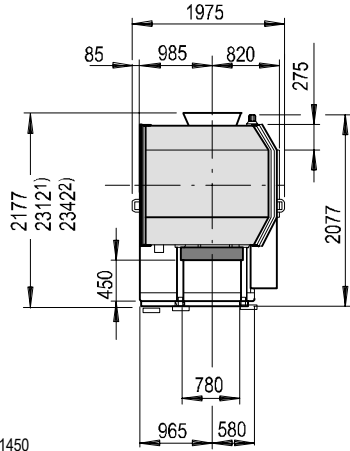
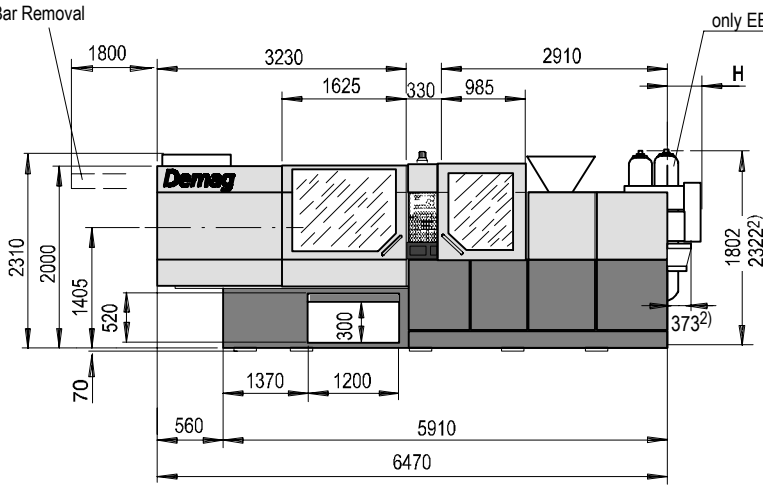
| Demag Ergotech                               |                      | Ergotech 300/720 EL-EXIS S     |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
|--|----------------------|--------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|-----------|-----------------------|-----------------------|
| Model description                            |                      | Ergotech 300/720-840 EL-EXIS S |          |          |                       |                       | Ergotech 300/720-1450 EL-EXIS S |          |          |                       |                       | Ergotech 300/720-2300 EL-EXIS S |          |           |                       |                       |
| International size description               |                      | 3000-840                       |          |          |                       |                       | 3000-1450                       |          |          |                       |                       | 3000-2300                       |          |           |                       |                       |
| Clamping unit                                |                      | 300                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Clamping force                               | [kN]                 | 3000                           |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Locking force                                | [kN]                 | 3300                           |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max. mould opening stroke                    | [mm]                 | 675                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Min. mould height                            | [mm]                 | 330                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max./enlarged mould height                   | [mm]                 | 710/830                        |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Overall size of platens/enlarged             | [mm]                 | 1385/1505                      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Mould platen (h x v)                         | [mm]                 | 1040 x 950                     |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Distance between tie bars (h x v)            | [mm]                 | 720 x 650                      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection stroke                              | [mm]                 | 200                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection force                               | [kN]                 | 69                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Retraction force                             | [kN]                 | 31                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Injection unit                               |                      | 840                            |          |          |                       |                       | 1450                            |          |          |                       |                       | 2300                            |          |           |                       |                       |
| Screw diameter                               | [mm]                 | 45                             | 50       | 60       | 45                    | 50                    | 50                              | 60       | 70       | 50                    | 60                    | 60                              | 70       | 80        | 60                    | 70                    |
| Screw geometry                               |                      | standard                       | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard  | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio                                    |                      | 20                             | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20        | 25                    | 25                    |
| Injection pressure (up to 400 °C)            | [bar]                | 2402                           | 1946     | 1351     | 2402                  | 1946                  | 2426                            | 1905     | 1400     | 2426                  | 1905                  | 2420                            | 1877     | 1437      | 2420                  | 1877                  |
| Cylinder head volume                         | [cm <sup>3</sup> ]   | 358                            | 442      | 636      | 358                   | 442                   | 530                             | 763      | 1039     | 530                   | 763                   | 891                             | 1212     | 1583      | 891                   | 1212                  |
| Max. shot weight (PS, PE*)                   | [g]                  | 320                            | 400      | 570      | 250*                  | 310*                  | 480                             | 690      | 940      | 380*                  | 540*                  | 800                             | 1090     | 1430      | 630*                  | 860*                  |
| Rate of injection                            |                      |                                |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > with accumulator                           | [cm <sup>3</sup> /s] | 1350                           | 1570     | 1970     | 1350                  | 1570                  | 1570                            | 1970     | 2290     | 1570                  | 1970                  | 1970                            | 2290     | 2480      | 1970                  | 2290                  |
| <b>Plasticising rate (PS, PE*)</b>           | [g/s]                | 42                             | 60       | 67       | 38*                   | 50*                   | 49                              | 76       | 78       | 41*                   | 68*                   | 61                              | 87       | 87        | 55*                   | 79*                   |
| Max. screw stroke                            | [mm]                 |                                |          |          |                       |                       | 270                             |          |          |                       |                       | 315                             |          |           |                       |                       |
| Max. distance of nozzle retraction           | [mm]                 |                                |          |          |                       |                       | 470                             |          |          |                       |                       | 470                             |          |           |                       |                       |
| Max. nozzle dipping depth (SVO)              | [mm]                 | 20                             |          |          |                       |                       | 20                              |          |          |                       |                       | 20                              |          |           |                       |                       |
| Nozzle sealing force                         | [kN]                 | 80                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| Hopper capacity                              | [ltr.]               | 70                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| General data                                 |                      | 300/720-840                    |          |          |                       |                       | 300/720-1450                    |          |          |                       |                       | 300/720-2300                    |          |           |                       |                       |
| Oil tank capacity                            | [ltr.]               | 700                            |          |          |                       |                       | 700                             |          |          |                       |                       | 700                             |          |           |                       |                       |
| Installed electrical rating                  |                      |                                |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > pump unit <sup>3)</sup>                    | [kW]                 | 22                             |          |          |                       |                       | 22                              |          |          |                       |                       | 22                              |          |           |                       |                       |
| > electric screw drive <sup>3)</sup>         | [≈ kW]               | 32                             |          |          |                       |                       | 37                              |          |          |                       |                       | 46                              |          |           |                       |                       |
| > capacity clamp unit <sup>3)</sup>          | [≈ kW]               | 37                             |          |          |                       |                       | 37                              |          |          |                       |                       | 37                              |          |           |                       |                       |
| > heating capacity of screw cylinder         | [≈ kW]               | 13                             | 15       | 23       | 19                    | 22                    | 15                              | 23       | 27       | 22                    | 31                    | 23                              | 27       | 31        | 31                    | 37                    |
| > total capacity                             | [≈ kW]               | 104                            | 106      | 114      | 110                   | 113                   | 111                             | 119      | 123      | 118                   | 127                   | 128                             | 132      | 136       | 136                   | 142                   |
| Dry cycles (EUROMAP 6)                       | [s-mm]               | 2,22-441                       |          |          |                       |                       | 2,22-441                        |          |          |                       |                       | 2,22-441                        |          |           |                       |                       |
| Net weight (without oil)                     | [≈ kg]               | 15200                          |          |          |                       |                       | 15700                           |          |          |                       |                       | 16400                           |          |           |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> | [≈ m]                | 6,5 x 2,0 x 2,3                |          |          |                       |                       | 6,5 x 2,0 x 2,3                 |          |          |                       |                       | 6,5 x 2,0 x 2,3                 |          |           |                       |                       |
| Electric drive projection (H) <sup>5)</sup>  | [mm]                 | 0/201                          | 0/360    | 181/651  | 0/426                 | 140/610               | 454/894                         | 758/1198 | 627/1097 | 852/1122              | 623/1093              | 454/924                         | 758/1228 | 1064/1534 | 712/1182              | 1108/1578             |

We reserve the right to make changes as a result of further technical advantages

- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machinebase
- 5) at nozzle contact/retraction

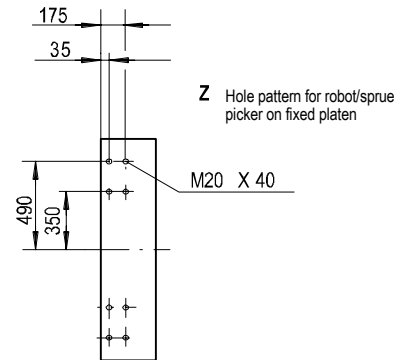
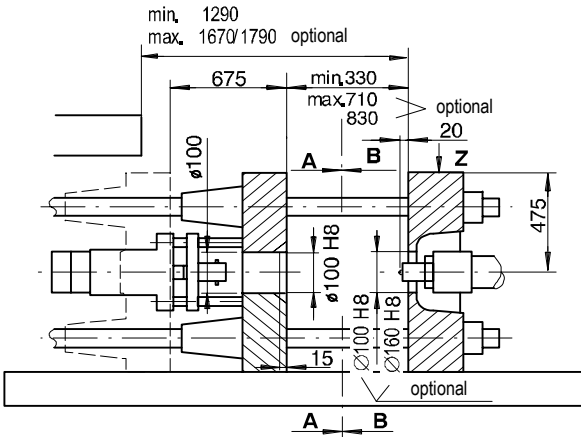
**Machine dimensions Ergotech 300/720 EL-EXIS S**

Tie Bar Removal



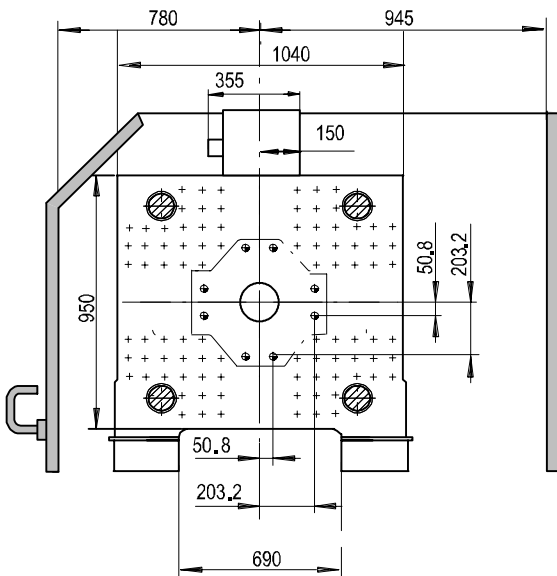
1) valid for injection unit 1450  
2) valid for injection unit 2300

**Platen dimensions Ergotech 300/720 EL-EXIS S**



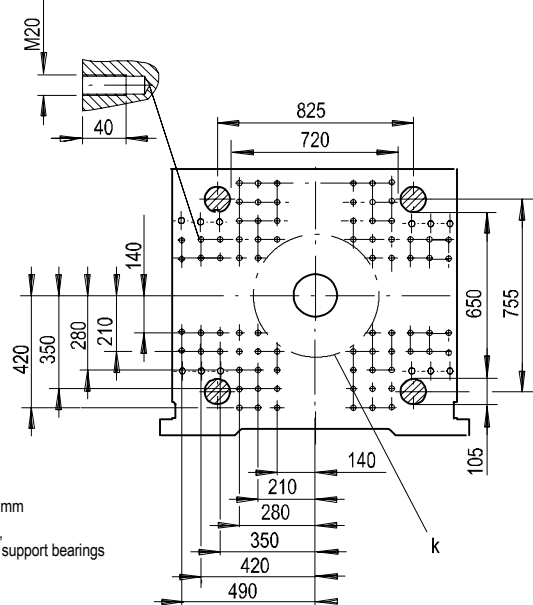
Moving platen

**B - B**



Fixed platen

**A - A**



Hole pattern according EUROMAP  
k = minimum permissible mould  $\varnothing$  400 mm  
Max. permissible mould weight 3600 kg,  
max. 2400 kg of it on the moving platen support bearings  
⊕ bore diameter  $\varnothing$  27 through holes

# Technical Data Ergotech 350/810 EL-EXIS S

| Demag Ergotech                               |                      | Ergotech 350/810 EL-EXIS S      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
|--|----------------------|---------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|-----------|-----------------------|-----------------------|
| Model description                            |                      | Ergotech 350/810-1450 EL-EXIS S |          |          |                       |                       | Ergotech 350/810-2300 EL-EXIS S |          |          |                       |                       | Ergotech 350/810-3300 EL-EXIS S |          |           |                       |                       |
| International size description               |                      | 3500-1450                       |          |          |                       |                       | 3500-2300                       |          |          |                       |                       | 3500-3300                       |          |           |                       |                       |
| Clamping unit                                |                      | 350                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Clamping force                               | [kN]                 | 3500                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Locking force                                | [kN]                 | 3850                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max. mould opening stroke                    | [mm]                 | 710                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Min. mould height                            | [mm]                 | 380                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max./enlarged mould height                   | [mm]                 | 820/940                         |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Overall size of platens/enlarged             | [mm]                 | 1530/1650                       |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Mould platen (h x v)                         | [mm]                 | 1200 x 1100                     |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Distance between tie bars (h x v)            | [mm]                 | 810 x 710                       |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection stroke                              | [mm]                 | 230                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection force                               | [kN]                 | 96                              |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Retraction force                             | [kN]                 | 41                              |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Injection unit                               |                      | 1450                            |          |          |                       |                       | 2300                            |          |          |                       |                       | 3300                            |          |           |                       |                       |
| Screw diameter                               | [mm]                 | 50                              | 60       | 70       | 50                    | 60                    | 60                              | 70       | 80       | 60                    | 70                    | 70                              | 80       | 95        | 70                    | 80                    |
| Screw geometry                               |                      | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard  | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio                                    |                      | 20                              | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20       | 25                    | 25                    | 23                              | 20       | 20        | 23                    | 24                    |
| Injection pressure (up to 400 °C)            | [bar]                | 2426                            | 1905     | 1400     | 2426                  | 1905                  | 2420                            | 1877     | 1437     | 2420                  | 1877                  | 2423                            | 1855     | 1316      | 2423                  | 1855                  |
| Cylinder head volume                         | [cm <sup>3</sup> ]   | 530                             | 763      | 1039     | 530                   | 763                   | 891                             | 1212     | 1583     | 891                   | 1212                  | 1362                            | 1779     | 2509      | 1362                  | 1779                  |
| Max. shot weight (PS, PE*)                   | [g]                  | 480                             | 690      | 940      | 380*                  | 540*                  | 800                             | 1090     | 1430     | 630*                  | 860*                  | 1230                            | 1600     | 2260      | 970*                  | 1260*                 |
| Rate of injection                            |                      |                                 |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > with accumulator                           | [cm <sup>3</sup> /s] | 1570                            | 1970     | 2290     | 1570                  | 1970                  | 1970                            | 2290     | 2480     | 1970                  | 2290                  | 2290                            | 2480     | 3060      | 2290                  | 2480                  |
| Plasticising rate (PS, PE*)                  | [g/s]                | 49                              | 76       | 78       | 41*                   | 68*                   | 61                              | 87       | 87       | 55*                   | 79*                   | 71                              | 100      | 109       | 64*                   | 89*                   |
| Max. screw stroke                            | [mm]                 | 270                             |          |          |                       |                       | 315                             |          |          |                       |                       | 354                             |          |           |                       |                       |
| Max. distance of nozzle retraction           | [mm]                 | 620                             |          |          |                       |                       | 620                             |          |          |                       |                       | 620                             |          |           |                       |                       |
| Max. nozzle dipping depth (SVO)              | [mm]                 | 20                              |          |          |                       |                       | 20                              |          |          |                       |                       | 20                              |          |           |                       |                       |
| Nozzle sealing force                         | [kN]                 | 110                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| Hopper capacity                              | [ltr.]               | 110                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| General data                                 |                      | 350/810-1450                    |          |          |                       |                       | 350/810-2300                    |          |          |                       |                       | 350/810-3300                    |          |           |                       |                       |
| Oil tank capacity                            | [ltr.]               | 730                             |          |          |                       |                       | 730                             |          |          |                       |                       | 730                             |          |           |                       |                       |
| Installed electrical rating                  |                      |                                 |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > pump unit <sup>3)</sup>                    | [kW]                 | 22                              |          |          |                       |                       | 22                              |          |          |                       |                       | 30                              |          |           |                       |                       |
| > electric screw drive <sup>3)</sup>         | [≈ kW]               | 37                              |          |          |                       |                       | 46                              |          |          |                       |                       | 52                              |          |           |                       |                       |
| > capacity clamp unit <sup>3)</sup>          | [≈ kW]               | 47                              |          |          |                       |                       | 47                              |          |          |                       |                       | 47                              |          |           |                       |                       |
| > heating capacity of screw cylinder         | [≈ kW]               | 15                              | 23       | 27       | 22                    | 31                    | 23                              | 27       | 31       | 31                    | 37                    | 31                              | 31       | 43        | 31                    | 43                    |
| > total capacity <sup>3)</sup>               | [≈ kW]               | 121                             | 129      | 133      | 128                   | 137                   | 138                             | 142      | 146      | 146                   | 152                   | 160                             | 160      | 172       | 160                   | 172                   |
| Dry cycles (EUROMAP 6)                       | [s-mm]               | 2,44-574                        |          |          |                       |                       | 2,44-574                        |          |          |                       |                       | 2,44-574                        |          |           |                       |                       |
| Net weight (without oil)                     | [≈ kg]               | 20700                           |          |          |                       |                       | 21000                           |          |          |                       |                       | 22000                           |          |           |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> | [≈ m]                | 7,8 x 2,2 x 2,6                 |          |          |                       |                       | 7,8 x 2,2 x 2,6                 |          |          |                       |                       | 7,8 x 2,2 x 2,6                 |          |           |                       |                       |
| Electric drive projection (H) <sup>5)</sup>  | [mm]                 | 0/0                             | 0/168    | 0/472    | 0/127                 | 0/468                 | 0/299                           | 0/603    | 289/909  | 0/599                 | 333/953               | 702/1322                        | 702/1322 | 1069/1689 | 702/1322              | 1069/1689             |

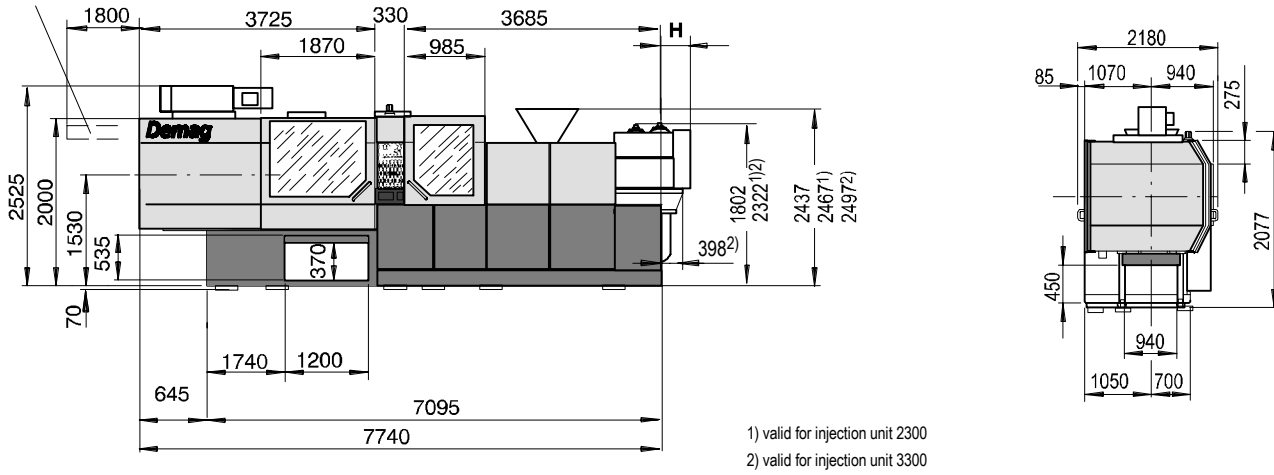
We reserve the right to make changes as a result of further technical advantages

- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

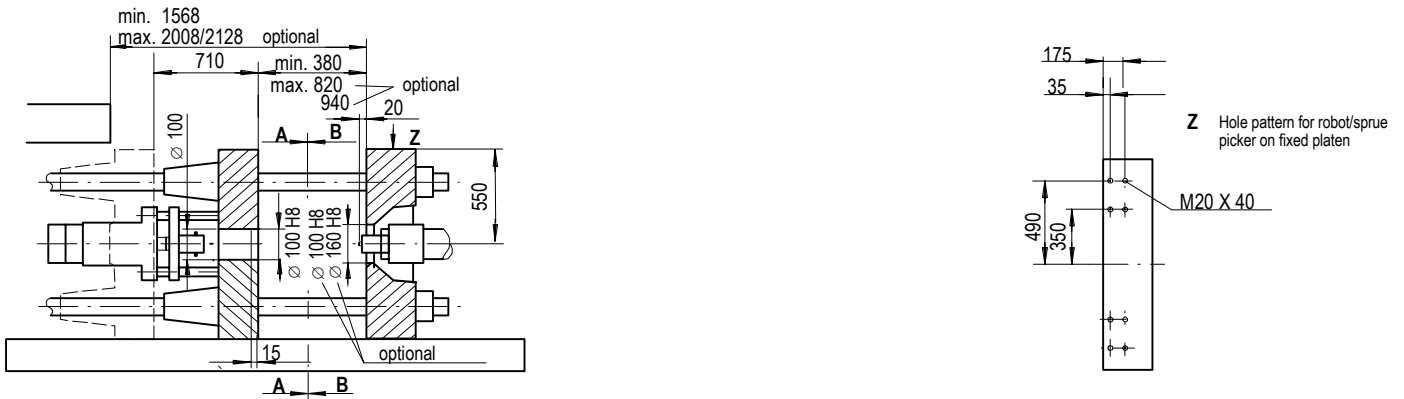


**Machine dimensions Ergotech 350/810 EL-EXIS S**

Tie Bar Removal

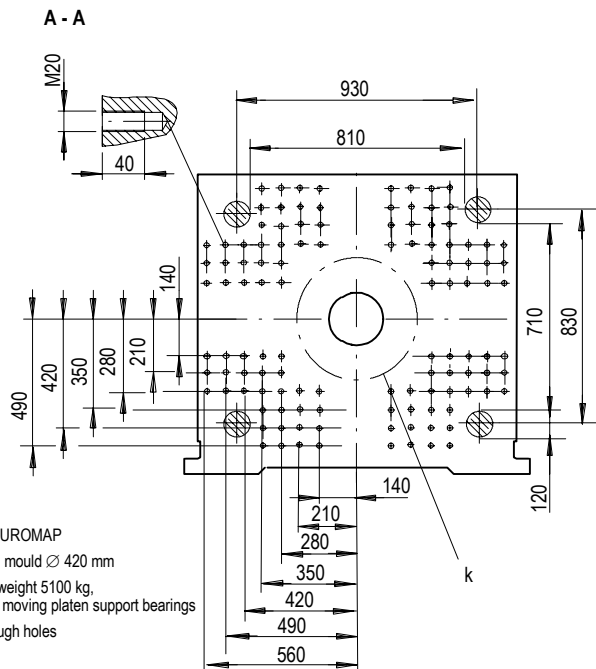
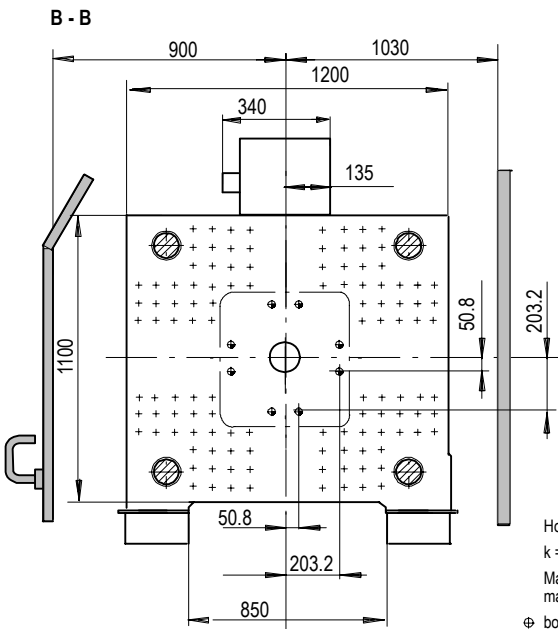


**Platen dimensions Ergotech 350/810 EL-EXIS S**



Fixed platen

Moving platen



Hole pattern according EUROMAP  
 k = minimum permissible mould  $\varnothing$  420 mm  
 Max. permissible mould weight 5100 kg,  
 max. 3400 kg of it on the moving platen support bearings  
 $\varnothing$  bore diameter  $\varnothing$  27 through holes

# Technical Data Ergotech 420/810 EL-EXIS S

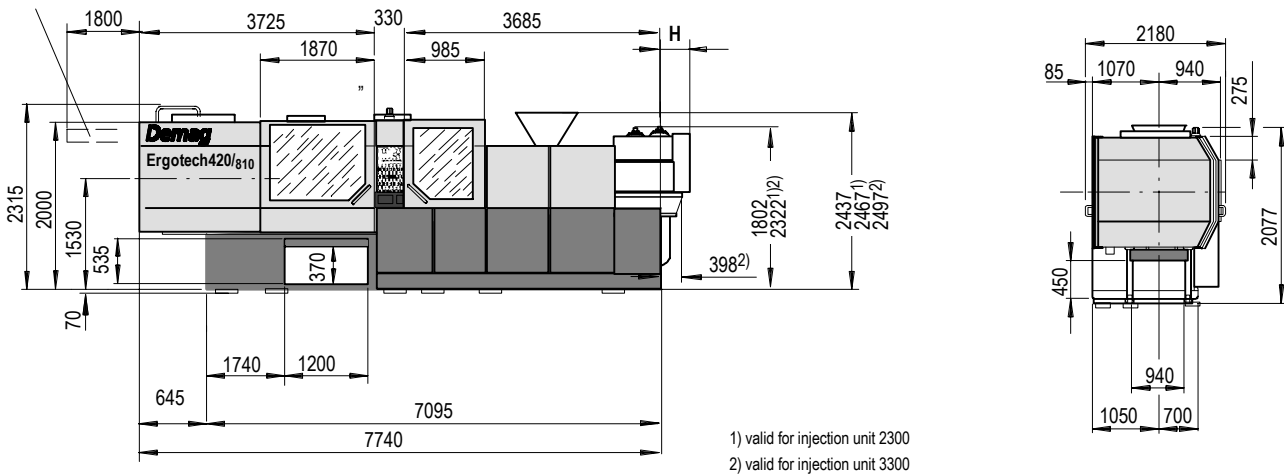
| Demag Ergotech                                     | Ergotech 420/810 EL-EXIS S      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
|--|---------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|----------|-----------------------|-----------------------|---------------------------------|----------|-----------|-----------------------|-----------------------|
| Model description                                  | Ergotech 420/810-1450 EL-EXIS S |          |          |                       |                       | Ergotech 420/810-2300 EL-EXIS S |          |          |                       |                       | Ergotech 420/810-3300 EL-EXIS S |          |           |                       |                       |
| International size description                     | 4200-1450                       |          |          |                       |                       | 4200-2300                       |          |          |                       |                       | 4200-3300                       |          |           |                       |                       |
| <b>Clamping unit</b>                               | <b>420</b>                      |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Clamping force [kN]                                | 4200                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Locking force [kN]                                 | 4620                            |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max. mould opening stroke [mm]                     | 710                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Min. mould height [mm]                             | 380                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Max./enlarged mould height [mm]                    | 820/940                         |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Overall size of platens/enlarged [mm]              | 1530/1650                       |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Mould platen (h x v) [mm]                          | 1200 x 1100                     |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Distance between tie bars (h x v) [mm]             | 810 x 710                       |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection stroke [mm]                               | 230                             |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Ejection force [kN]                                | 96                              |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Retraction force [kN]                              | 41                              |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| <b>Injection unit</b>                              | <b>1450</b>                     |          |          |                       |                       | <b>2300</b>                     |          |          |                       |                       | <b>3300</b>                     |          |           |                       |                       |
| Screw diameter [mm]                                | 50                              | 60       | 70       | 50                    | 60                    | 60                              | 70       | 80       | 60                    | 70                    | 70                              | 80       | 95        | 70                    | 80                    |
| Screw geometry                                     | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard | special <sup>1)</sup> | special <sup>1)</sup> | standard                        | standard | standard  | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio  | 20                              | 20       | 20       | 25                    | 25                    | 20                              | 20       | 20       | 25                    | 25                    | 23                              | 20       | 20        | 23                    | 24                    |
| Injection pressure (up to 400 °C) [bar]            | 2426                            | 1905     | 1400     | 2426                  | 1905                  | 2420                            | 1877     | 1437     | 2420                  | 1877                  | 2423                            | 1855     | 1316      | 2423                  | 1855                  |
| Cylinder head volume [cm <sup>3</sup> ]            | 530                             | 763      | 1039     | 530                   | 763                   | 891                             | 1212     | 1583     | 891                   | 1212                  | 1362                            | 1779     | 2509      | 1362                  | 1779                  |
| Max. shot weight (PS, PE*) [g]                     | 480                             | 690      | 940      | 380*                  | 540*                  | 800                             | 1090     | 1430     | 630*                  | 860*                  | 1230                            | 1600     | 2260      | 970*                  | 1260*                 |
| <b>Rate of injection</b>                           |                                 |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > with accumulator [cm <sup>3</sup> /s]            | 1570                            | 1970     | 2290     | 1570                  | 1970                  | 1970                            | 2290     | 2480     | 1970                  | 2290                  | 2290                            | 2480     | 3060      | 2290                  | 2480                  |
| <b>Plasticising rate (PS, PE*) [g/s]</b>           | 49                              | 76       | 78       | 41*                   | 68*                   | 61                              | 87       | 87       | 55*                   | 79*                   | 71                              | 100      | 109       | 64*                   | 89*                   |
| Max. screw stroke [mm]                             | 270                             |          |          |                       |                       | 315                             |          |          |                       |                       | 354                             |          |           |                       |                       |
| Max. distance of nozzle retraction [mm]            | 620                             |          |          |                       |                       | 620                             |          |          |                       |                       | 620                             |          |           |                       |                       |
| Max. nozzle dipping depth (SVO) [mm]               | 20                              |          |          |                       |                       | 20                              |          |          |                       |                       | 20                              |          |           |                       |                       |
| Nozzle sealing force [kN]                          | 110                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| Hopper capacity [ltr.]                             | 110                             |          |          |                       |                       | 110                             |          |          |                       |                       | 110                             |          |           |                       |                       |
| <b>General data</b>                                | <b>420/810-1450</b>             |          |          |                       |                       | <b>420/810-2300</b>             |          |          |                       |                       | <b>420/810-3300</b>             |          |           |                       |                       |
| Oil tank capacity [ltr.]                           | 730                             |          |          |                       |                       | 730                             |          |          |                       |                       | 730                             |          |           |                       |                       |
| <b>Installed electrical rating</b>                 |                                 |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| > pump unit <sup>3)</sup> [kW]                     | 22                              |          |          |                       |                       | 22                              |          |          |                       |                       | 30                              |          |           |                       |                       |
| > electric screw drive <sup>3)</sup> [≈ kW]        | 37                              |          |          |                       |                       | 46                              |          |          |                       |                       | 52                              |          |           |                       |                       |
| > capacity clamp unit <sup>3)</sup> [≈ kW]         | 47                              |          |          |                       |                       | 47                              |          |          |                       |                       | 47                              |          |           |                       |                       |
| > heating capacity of screw cylinder [≈ kW]        | 15                              | 23       | 27       | 22                    | 31                    | 23                              | 27       | 31       | 31                    | 37                    | 31                              | 31       | 43        | 31                    | 43                    |
| > total capacity <sup>3)</sup> [≈ kW]              | 121                             | 129      | 133      | 128                   | 137                   | 138                             | 142      | 146      | 146                   | 152                   | 160                             | 160      | 172       | 160                   | 172                   |
| Dry cycles (EUROMAP 6) [s-mm]                      |                                 |          |          |                       |                       |                                 |          |          |                       |                       |                                 |          |           |                       |                       |
| Net weight (without oil) [≈ kg]                    | 20700                           |          |          |                       |                       | 21000                           |          |          |                       |                       | 22000                           |          |           |                       |                       |
| Machine dimensions (l x w x h) <sup>4)</sup> [≈ m] | 7,8 x 2,2 x 2,6                 |          |          |                       |                       | 7,8 x 2,2 x 2,6                 |          |          |                       |                       | 7,8 x 2,2 x 2,6                 |          |           |                       |                       |
| Electric drive projection (H) <sup>5)</sup> [mm]   | 0/0                             | 0/168    | 0/472    | 0/127                 | 0/468                 | 0/299                           | 0/603    | 289/909  | 0/599                 | 333/953               | 702/1322                        | 702/1322 | 1069/1689 | 702/1322              | 1069/1689             |

We reserve the right to make changes as a result of further technical advantages

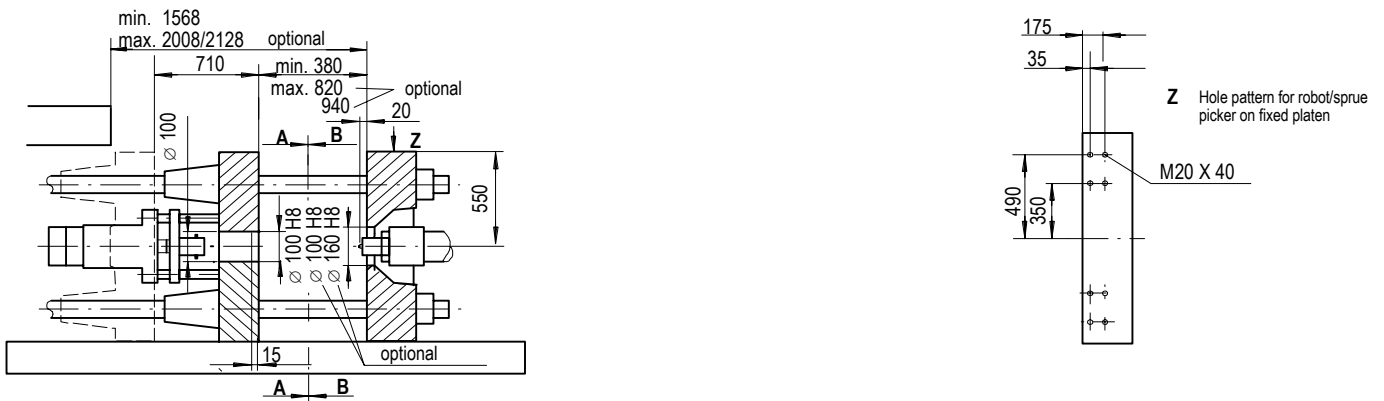
- 1) homogenisation screw
- 2) at maximum torque
- 3) parallel movement of all axis possible
- 4) without extension of the drive over the machine base
- 5) at nozzle contact/retraction

**Machine dimensions Ergotech 420/810 EL-EXIS S**

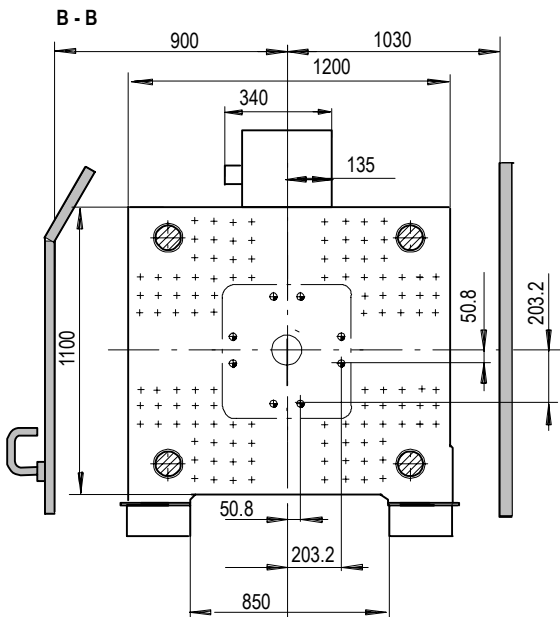
Tie Bar Removal



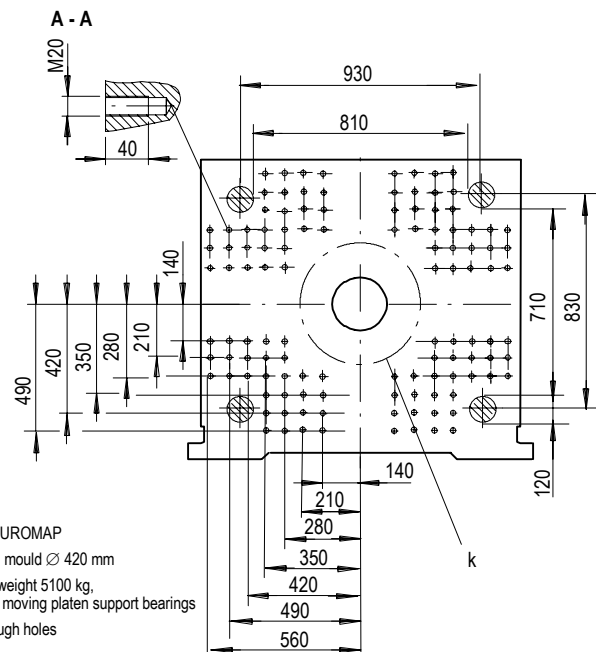
**Platen dimensions Ergotech 420/810 EL-EXIS S**



Fixed platen



Moving platen



Hole pattern according EUROMAP  
 k = minimum permissible mould  $\varnothing$  420 mm  
 Max. permissible mould weight 5100 kg,  
 max. 3400 kg of it on the moving platen support bearings  
 $\varnothing$  bore diameter  $\varnothing$  27 through holes

# Equipment Ergotech 60...420 EL-EXIS S

| Clamping unit   |   |
|---|---|
| > Compact 5-point twin toggle with Compact units with fully hydraulic clamping system with two clamp cylinders and a volume multiplier for fast machine cycles and low energy consumption | ● |
| > Clamping unit with AC servo-drive and hydrostatic transmission for dynamic acceleration   | ● |
| > Moving platen supported by roller bearings on machine base  | ● |
| > Clamp force adjustable on Ergocontrol panel, with actual value display  | ● |
| > Clamp force control with display  | ● |
| > Sensitive mould protection using high-resolution force transducer   | ● |
| > Mould mounting dimensions in accordance to Euromap, without side ejector plate  | ● |
| > Mould mounting dimensions in accordance to Euromap standard, with side ejector plate  | ○ |
| > Mould mounting dimensions similar to DIN  | ○ |
| > Mould mounting dimensions similar to SPI  | ○ |
| > Reduced centering diameter on fixed platen with DIN or EUROMAP  | ○ |
| > Automatic central oil lubrication for toggle  | ● |
| > Chromed tie-bars; upper tiebar on non-operator side retractable   | ● |
| > Manual clamping mechanism for tiebar retraction   | ● |
| > Automatic tiebar retraction, upper tiebar on operator side (from 1.250 kN)  | ○ |
| > Extended mould height   | ○ |
| > Automatic mould height adjustment   | ○ |
| > Hydraulic central ejector with multi-stroke and mechanical quick coupling   | ● |
| > Short/long stroke ejector   | ● |
| > Programmable ejector stroke, pressure and speed   | ● |
| > Ejector pressure and speed programmable for simultaneous operation with mould movement, including positioning control   | ● |
| > Mould and ejector movements only when safety gate closed  | ● |
| > Stroke measuring system (ultrasonic) via CAN-Bus for injection operation and movement of the injection unit, clamp- and ejector movement  | ● |
| > Sequence matrix for free programming of ejectors and core pullers (simultaneous to mould movement)  | ● |
| > Flexible sequence of the clamp unit with or without multiple movement of the ejector and core pullers   | ○ |
| > Core puller with 1, 2 or 4 circuits, independent speed (simultaneous with mould movement) set via sequence matrix   | ○ |
| > Additional ports for 2 core pullers on fixed mould platen (from 1.250 kN)   | ○ |
| > Manual pressure relief for 1, 2 or 4 core pullers   | ○ |

| Clamping unit   |   |
|---|---|
| > 1 or 2 pneumatic 5/2 directional valves, mounted to moving platen and freely programmable | ○ |
| > 1 or 2 pneumatic 5/2 directional valves, mounted to fixed platen and freely programmable  | ○ |
| > 4-way cooling water volume controller   | ● |
| > 4 additional cooling water volume controllers   | ○ |
| > 8 additional cooling water flow controllers   | ○ |
| > Time-programmable switch-off of mould cooling   | ● |
| > Blow-through for mould cooling lines  | ○ |
| > Unscrewing module with positioning function   | ○ |
| > Unscrewing module without positioning function  | ○ |
| > Chute for small parts (up to 1.000 kN)  | ○ |
| > Automatic safety gate on operator side (from 1.250 kN)                                    | ○ |
| > Safety gate prepared for handling device  | ● |

| Injection unit  |   |
|---|---|
| > Barrels for up to 3 injection units, L/D ratio 20:1 for all diameters   | ● |
| > Barrel for high performance applications, L/D ratio 25:1  | ○ |
| > Barrels with barrier screw, L/D ratio 25:1  | ○ |
| > Wear and corrosion resistant universal thermoplastic screw, nitrided barrel   | ● |
| > Special screws for processing various materials, with screws and non-return valves in wear and corrosion resistant or heavy duty design (powder metal)  | ○ |
| > Barrel with bi-metallic lining  | ○ |
| > Open nozzle with M 40x3 thread; M 60x3 from 30 mm screw diameter  | ● |
| > Open nozzle with M 24x1,5 connection thread, incl. adapter  | ○ |
| > Extended open nozzle  | ○ |
| > Pneumatic shut off nozzle incl. control   | ○ |
| > Needle shut off nozzle  | ○ |
| > Melt temperature measuring (only for open nozzles)  | ○ |
| > Controlled barrel heating zones (ceramic heaters), number dependent on injection unit, and one controlled nozzle heating zone.  | ● |
| > Each temperature control circuit with setpoint deviation control and thermocouple break protection; barrel operating temperatures up to 450°C, with pressure limitation above 400°C (from injection unit 3300 up to 400 °C) | ● |
| > Central connector for barrel heaters and thermocouples  | ● |
| > Integrated hot runner control, 1 to 16 zones  | ○ |
| > Hydraulic control for hot runner nozzles  | ○ |
| > Pneumatic hot runner shut off control   | ○ |
| > Frequency controlled electric screw drive with AC servo motor   | ● |

● Basic equipment

○ Additional price

We reserve the right to make changes as a result of further technical advances

| Injection unit   |                                  |
|--|----------------------------------|
| > Stainless steel hopper   | <input type="radio"/>            |
| > Drilled for hopper loader  | <input checked="" type="radio"/> |
| > Closed-loop control for throat temperature   | <input checked="" type="radio"/> |
| > Barrel quick change with central plugs for heaters and thermocouples, and automatic barrel recognition                       | <input checked="" type="radio"/> |
| > Programmable profiles for closed-loop control of injection speed, holding pressure, back pressure and screw speed parameters | <input checked="" type="radio"/> |
| > Injection, holding pressure and back-pressure regulated by servovalve; regulated screw speed                                 | <input checked="" type="radio"/> |
| > Accumulator for fast injection cycles and movement of injection unit, cores and ejector                                      | <input checked="" type="radio"/> |
| > Back pressure programmable in six stages of screw stroke   | <input checked="" type="radio"/> |
| > Switch-over to follow-up pressure by hydraulic pressure, with acquisition of maximum value and pressure recording            | <input checked="" type="radio"/> |
| > Switch-over to holding pressure by cavity pressure, with pressure recording for 1 or 2 pressure transducers                  | <input type="radio"/>            |
| > Programmable nozzle contact pressure   | <input checked="" type="radio"/> |
| > Residual nozzle sealing force programmable   | <input checked="" type="radio"/> |
| > Two-stage injection unit movement  | <input checked="" type="radio"/> |
| > Injection unit movement parallel to mould movement   | <input checked="" type="radio"/> |

| Hydraulics  |                                  |
|---|----------------------------------|
| > Separate circuits for oil and mould cooling                             | <input type="radio"/>            |
| > Closed-loop oil temperature control with display                        | <input checked="" type="radio"/> |
| > Oil cooler with increased cooling capacity (from 1.250 kN)              | <input type="radio"/>            |
| > Pre-heating circuit for hydraulic oil                                   | <input checked="" type="radio"/> |
| > Automatic two stage control and display of oil filter contamination     | <input checked="" type="radio"/> |
| > Ports for external oil cleaning during production (bypass filtration)   | <input checked="" type="radio"/> |
| > Additional integrated oil cleaning unit for microfine bypass filtration | <input checked="" type="radio"/> |

| Electronics   |                                  |
|---|----------------------------------|
| > Operator-friendly NC4 microprocessor-based Ergocontrol with large LCD colour monitor, alphanumeric keyboard, and disk drive option for data downloads | <input checked="" type="radio"/> |
| > Setpoint entry switch-over to physical values (bar, ccm, mm/s)  | <input checked="" type="radio"/> |
| > Fault log with trouble shooting hints   | <input checked="" type="radio"/> |
| > Quality control with reject parts recognition   | <input checked="" type="radio"/> |
| > Integrated disk drive for software downloads and saving machine and ancillary settings  | <input checked="" type="radio"/> |
| > Universal printer port  | <input checked="" type="radio"/> |
| > Printer program for external printer for automatic printout of error log, alarms, messages and changes  | <input type="radio"/>            |
| > Integrated printer including driver software  | <input type="radio"/>            |
| > Smart card reader for controlled access   | <input checked="" type="radio"/> |
| > Additional Ergocontrol operating language   | <input checked="" type="radio"/> |

| Functions  |                                  |
|--|----------------------------------|
| > Process data acquisition with 100% monitoring and statistics with graphics for of process parameters   | <input checked="" type="radio"/> |
| > Integrated Statistical Process Control (SPC) with display of process control charts  | <input type="radio"/>            |
| > Saving of statistical data in ASCII format on disk   | <input type="radio"/>            |
| > Integrated production data acquisition   | <input type="radio"/>            |
| > Change log   | <input type="radio"/>            |
| > Help disk for operator support   | <input type="radio"/>            |
| > Additional operating language on disk  | <input type="radio"/>            |
| > Mould stroke dependent injection start; nozzle contact pressure remains over the whole cycle   | <input type="radio"/>            |
| > Three-stage start-up program   | <input type="radio"/>            |
| > On/off program with one purging cycle  | <input type="radio"/>            |
| > 1, 2, 3, 5, or 6 freely programmable inputs/outputs  | <input type="radio"/>            |
| > Ergostart:integrated basic setting program   | <input checked="" type="radio"/> |
| > Ergosupport: program for faster fault recognition on basic setting / process optimisation and for extended monitoring of process sequence and deviations | <input type="radio"/>            |
| > Mould-dependent machine optimisation   | <input type="radio"/>            |
| > Econ 2000 energy consumption metering with graphic display   | <input type="radio"/>            |

| Interfaces  |                                  |
|---|----------------------------------|
| > VGA interface and interface for AT keyboard (MF-II standard)                            | <input type="radio"/>            |
| > Interface for mould protection (ejector with LS)  | <input checked="" type="radio"/> |
| > Interfaces for ejector limit switch in mould, side action with LS and product detection | <input type="radio"/>            |
| > CAN-Bus interface for temperature controllers (2 circuits), Demag-specific signal       | <input type="radio"/>            |
| > Mould temperature display with monitoring for 1 or 2 circuits                           | <input type="radio"/>            |
| > Interface with three-point controllers for 2 temperature controllers                    | <input type="radio"/>            |
| > Interface with three-point controllers for 4 temperature controllers                    | <input type="radio"/>            |
| > 20 mA interface (TTY-V24) for up to 6 units integrated temperature controllers          | <input type="radio"/>            |
| > Additional 2 point temperature control for nozzle, 1 circuit                            | <input type="radio"/>            |
| > Socket for second nozzle heater band  | <input type="radio"/>            |
| > Drilled for handling device to VDMA 24466   | <input checked="" type="radio"/> |
| > 32-pin handling interface to Euromap 12 (VDMA)  | <input type="radio"/>            |
| > Data interface for three signals: drycycling, automatic, and semi-automatic operation   | <input type="radio"/>            |
| > Data interface for main computer systems to EUROMAP 63                                  | <input type="radio"/>            |
| > Ergolink modem interface  | <input checked="" type="radio"/> |
| > Portable Ergolink modem   | <input type="radio"/>            |

| Automation   |   |
|--|---|
| > Quality reject feature in chute, either for two or three directions (up to 3,000 kN) | ○ |
| > 4, 8 or 12 quick connectors for mould cooling (up to 1,000 kN)                       | ○ |
| > Integrated temperature controllers (2 circuits)                                      | ○ |
| > Integrated handling device with separate control cabinet                             | ○ |
| > Ergorob sprue picker with integrated control   | ○ |
| > Interface and control for gas injection process, 1 to 4 circuits integrated          | ○ |

| General   |   |
|---|---|
| > Separate power supply for both drive and heating  | ● |
| > Single-phase 230V/50Hz/10A socket in specific national version  | ● |
| > Set of sockets in separate cabinet on non-operator side, switched through main isolator and switch-off matrix, 2x 16A three-phase IEC/EE and 2x 10A AC shockproof plugs in specific national versions | ○ |
| > Supply voltage 400V, 3/N/PE, 50 Hz  | ● |
| > Specific national supply voltage  | ○ |
| > Full guarding on injection unit operator side   | ● |
| > "Supply voltage I/O" switch   | ○ |
| > Basic equipment to European safety standard (EN 201)  | ● |
| > Basic equipment in compliance with national safety standards  | ○ |
| > Fault indication by flashing lamp   | ● |
| > Fault indication by acoustic alarm  | ○ |
| > Freely assignable output for fault indication   | ● |
| > Anti-vibration mounts   | ● |
| > Two-colour paint: machine in RAL 7016 dark grey, guarding in RAL 7035 light grey, 571C MD light blue or RAL 6011 green  | ● |

Practical values of melt correction factor for use in calculation of shot weight for some common plastics

| Material      | Melt correction factor |
|---------------|------------------------|
| HD-PE         | 0,75                   |
| LD-PE         | 0,73                   |
| PP            | 0,73                   |
| PS            | 0,91                   |
| SB            | 0,91                   |
| ABS           | 0,91                   |
| SAN           | 0,91                   |
| PA            | 0,93                   |
| PA 6 +30 % GF | 1,14                   |
| PC            | 0,97                   |
| PC / ABS      | 0,94                   |
| PMMA          | 0,97                   |
| POM           | 1,15                   |
| PET           | 1,08                   |
| PBT           | 1,08                   |
| CA            | 1,03                   |
| CAB           | 0,98                   |
| PVC-w         | 1,05                   |
| PVC-h         | 1,15                   |

shot weight = melt correction factor x swept volume

The melt correction factor takes into account the change in volume at process temperature and also includes a factor for the flow characteristics of the shut off device on the end of the screw

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