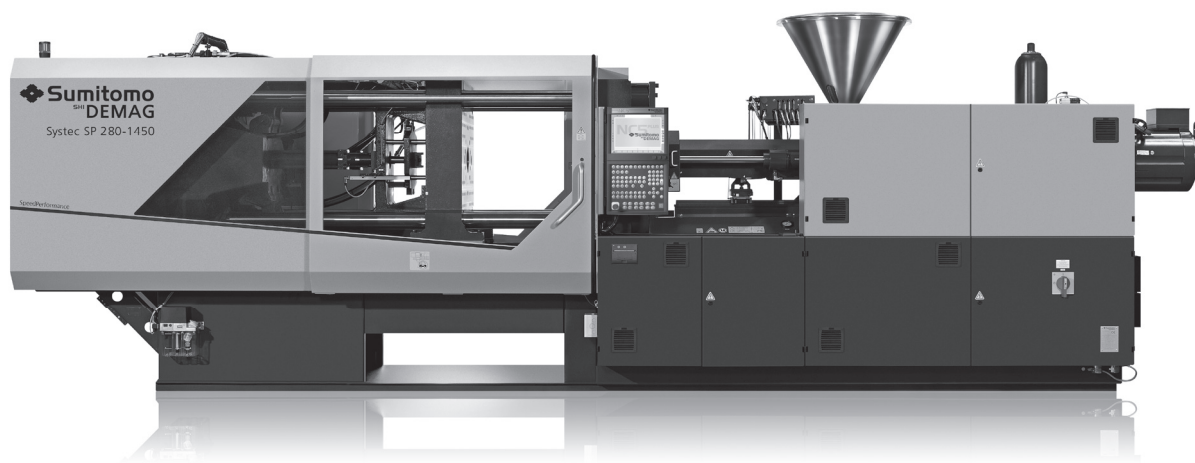


# Systemc SP highly dynamic

Technical description



# Technical Data Systec SP 160/520

## Sumitomo (SHI) Demag

|                                |  |
|--------------------------------|--|
| Model description              |  |
| International size description |  |

## Clamp Unit

|                                    |       |
|------------------------------------|-------|
| Clamp force / Locking force        | [Ton] |
| Clamp stroke, max.                 | [in]  |
| Mold height, min.                  | [in]  |
| Mold height, max. (std./opt.)      | [in]  |
| Open Daylight, max. (std./enl.)    | [in]  |
| Platen size (h x v)                | [in]  |
| Distance between tie bars (h x v)  | [in]  |
| Min. permissible mold diameter (k) | [in]  |
| Max mould weight / mov./ fixed     | [kg]  |
| Ejection stroke                    | [in]  |
| Ejection force / Retraction force  | [Ton] |

## Injection unit

|  |                    |
|--|--------------------|
| Screw diameter                         | [mm]               |
| Screw geometry                         |                    |
| L/D ratio                              |                    |
| Spec. injection pressure (up to 400°C) | [psi]              |
| Cylinder head volume, max.             | [in <sup>3</sup> ] |
| Max. shot weight (PS, PE*)             | [oz]               |

## Max. rate of injection <sup>2)</sup>

|                    |                      |
|--------------------|----------------------|
| > with accumulator | [in <sup>3</sup> /s] |
|--------------------|----------------------|

## Plasticizing rate (PS)

|                                    |         |
|------------------------------------|---------|
| > electric screw drive (PS/PE*)    | [~oz/s] |
| Max. screw stroke                  | [in]    |
| Max. distance of nozzle retraction | [in]    |
| Max. nozzle dipping depth (SVO)    | [in]    |
| Nozzle contact force               | [Ton]   |
| Number of heating zones            |         |
| Hopper capacity, optional          | [lb]    |

## General data

|                   |       |
|-------------------|-------|
| Oil tank capacity | [gal] |
|-------------------|-------|

## Installed electrical rating

|  |          |
|--|----------|
| > pump                                 | [~kW]    |
| > electric screw drive                 | [~kW]    |
| > Barrel heating capacity              | [~kW]    |
| > total capacity                       | [~kW]    |
| Dry cycle time (Euromap 6)             | [sec-in] |
| Dry cycles with unlocking time         | [sec-in] |
| Net weight (without oil) <sup>3)</sup> | [~Ton]   |
| Transport dimensions (l x w x h)       | [~ft]    |
| Electric drive projection (h)          | [in]     |

| Systec SP 160/520 |  |  |  |             |  |  |  |             |  |  |  |
|-------------------|--|--|--|-------------|--|--|--|-------------|--|--|--|
| 160/520-430       |  |  |  | 160/520-600 |  |  |  | 160/520-840 |  |  |  |
| 1600-430          |  |  |  | 1600-600    |  |  |  | 1600-840    |  |  |  |

| 160/520        |  |  |  |  |  |  |  |  |  |  |  |
|----------------|--|--|--|--|--|--|--|--|--|--|--|
| 179.81/197.79  |  |  |  |  |  |  |  |  |  |  |  |
| 19.69          |  |  |  |  |  |  |  |  |  |  |  |
| 10.83          |  |  |  |  |  |  |  |  |  |  |  |
| 23.03/26.97    |  |  |  |  |  |  |  |  |  |  |  |
| 42.72/46.65    |  |  |  |  |  |  |  |  |  |  |  |
| 30.31x30.31    |  |  |  |  |  |  |  |  |  |  |  |
| 20.47x20.47    |  |  |  |  |  |  |  |  |  |  |  |
| 11.81          |  |  |  |  |  |  |  |  |  |  |  |
| 2200/1300/1700 |  |  |  |  |  |  |  |  |  |  |  |
| 6.3            |  |  |  |  |  |  |  |  |  |  |  |
| 5.17/2.47      |  |  |  |  |  |  |  |  |  |  |  |

| 430       |            |                       |                       | 600        |            |                       |                       | 840        |            |                       |                       |
|-----------|------------|-----------------------|-----------------------|------------|------------|-----------------------|-----------------------|------------|------------|-----------------------|-----------------------|
| 35        | 40         | 35                    | 40                    | 40         | 45         | 40                    | 45                    | 45         | 50         | 45                    | 50                    |
| standard  | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard   | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard   | standard   | special <sup>1)</sup> | special <sup>1)</sup> |
| 20        | 20         | 25                    | 25                    | 20         | 20         | 25                    | 25                    | 20         | 20         | 25                    | 25                    |
| 38290     | 29370      | 38348                 | 29370                 | 35070      | 27760      | 35215                 | 27760                 | 34838      | 28224      | 34838                 | 28224                 |
| 10.8      | 14.1       | 10.8                  | 14.1                  | 15.6       | 19.7       | 15.6                  | 19.7                  | 21.8       | 27         | 21.8                  | 27                    |
| 5.7       | 7.4        | 4.5*                  | 6*                    | 8.2        | 10.4       | 6.6*                  | 8.3*                  | 11.5       | 14.2       | 9.2*                  | 11.4*                 |
| 35.8      | 46.8       | 35.8                  | 46.8                  | 46.8       | 59.2       | 46.8                  | 59.2                  | 53.4       | 61.1       | 53.4                  | 61.1                  |
| 1.3/1.13* | 1.55/1.34* | 1.3/1.13*             | 1.55/1.34*            | 1.69/1.48* | 1.83/1.66* | 1.69/1.48*            | 1.83/1.66*            | 1.87/1.69* | 2.12/1.76* | 1.87/1.69*            | 2.12/1.76*            |
| 7.24      |            |                       |                       | 7.99       |            |                       |                       | 8.86       |            |                       |                       |
| 15.75     | 15.75      | 15.75                 | 15.75                 | 15.75      | 15.75      | 15.75                 | 15.75                 | 36.02      | 30         |                       |                       |
| 0.79      | 0.79       | 0.79                  | 0.79                  | 0.79       | 0.79       | 0.79                  | 0.79                  | 0.79       | 0.79       | 0.79                  | 0.79                  |
| 8.99      |            |                       |                       | 8.99       |            |                       |                       | 12.36      |            |                       |                       |
| 4         | 4          | 4                     | 4                     | 4          | 4          | 4                     | 5                     | 5          | 5          | 5                     | 5                     |
| 77        |            |                       |                       | 110        |            |                       |                       | 154        |            |                       |                       |

| 160/520-430     |         |         |         | 160/520-600     |        |      |      | 160/520-840     |             |             |             |
|-----------------|---------|---------|---------|-----------------|--------|------|------|-----------------|-------------|-------------|-------------|
| 106             |         |         |         | 106             |        |      |      | 106             |             |             |             |
| 36              |         |         |         |                 |        |      |      |                 |             |             |             |
| 27.0            |         |         |         | 26.7            |        |      |      | 31.5            |             |             |             |
| 9.4             | 11.1    | 13.0    | 13.9    | 11.1            | 11.3   | 13.9 | 15.7 | 13.0            | 14.8        | 15.7        | 22.3        |
| 72.4            | 74.1    | 76.0    | 76.9    | 73.8            | 74.0   | 76.6 | 78.4 | 80.5            | 82.3        | 83.2        | 89.8        |
| 1.3-13.78       |         |         |         |                 |        |      |      |                 |             |             |             |
| 1.5-13.78       |         |         |         |                 |        |      |      |                 |             |             |             |
| 8.27            |         |         |         | 8.38            |        |      |      | 8.65            |             |             |             |
| 18.37x5.25x6.89 |         |         |         | 18.37x5.25x6.89 |        |      |      | 18.37x5.25x6.89 |             |             |             |
| [0]/[0]         | [0]/[0] | [0]/[0] | [0]/[0] | [0]/[0]         | 0/0.16 |      |      | 15.98/52.01     | 22.01/52.01 | 24.84/52.01 | 32.52/52.01 |

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications.

Plasticising rate depends on processing conditions and material employed.

Electrical power supply refers to the standard configuration of the machine.

These parameters are based on a mains voltage 400 V. A deviating mains voltage will affect the machine parameters.

1) Shear and mixing unit

2) Rate of injection based on the standard plasticizing unit

3) The net weight of the machine may vary depending on equipment



# Technical Data Systec SP 210/580

| Sumitomo (SHI) Demag                        |                      |
|---|----------------------|
| Model description                           |                      |
| International size description              |                      |
| Clamp Unit                                  |                      |
| Clamp force / Locking force                 | [Ton]                |
| Clamp stroke, max.                          | [in]                 |
| Mold height, min.                           | [in]                 |
| Mold height, max. (std./opt.)               | [in]                 |
| Open Daylight, max. (std./enl.)             | [in]                 |
| Platen size (h x v)                         | [in]                 |
| Distance between tie bars (h x v)           | [in]                 |
| Min. permissible mold diameter (k)          | [in]                 |
| Max mould weight / mov./ fixed              | [kg]                 |
| Ejection stroke                             | [in]                 |
| Ejection force / Retraction force           | [Ton]                |
| Injection unit                              |                      |
| Screw diameter                              | [mm]                 |
| Screw geometry                              |                      |
| L/D ratio                                   |                      |
| Spec. injection pressure (up to 400°C)      | [psi]                |
| Cylinder head volume, max.                  | [in <sup>3</sup> ]   |
| Max. shot weight (PS, PE*)                  | [oz]                 |
| <b>Max. rate of injection <sup>2)</sup></b> |                      |
| > with accumulator                          | [in <sup>3</sup> /s] |
| Plasticizing rate (PS)                      |                      |
| > electric screw drive (PS/PE*)             | [~oz/s]              |
| Max. screw stroke                           | [in]                 |
| Max. distance of nozzle retraction          | [in]                 |
| Max. nozzle dipping depth (SVO)             | [in]                 |
| Nozzle contact force                        | [Ton]                |
| Number of heating zones                     |                      |
| Hopper capacity, optional                   | [lb]                 |
| General data                                |                      |
| Oil tank capacity                           | [gal]                |
| Installed electrical rating                 |                      |
| > pump                                      | [~kW]                |
| > electric screw drive                      | [~kW]                |
| > Barrel heating capacity                   | [~kW]                |
| > total capacity                            | [~kW]                |
| Dry cycle time (Euromap 6)                  | [sec-in]             |
| Dry cycles with unlocking time              | [sec-in]             |
| Net weight (without oil) <sup>3)</sup>      | [~Ton]               |
| Transport dimensions (l x w x h)            | [~ft]                |
| Electric drive projection (h)               | [in]                 |

| Systec SP 210/580 |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
|-------------------|------------|-----------------------|-----------------------|-----------------|-------------|-----------------------|-----------------------|-----------------|------------|-----------------------|-----------------------|
| 210/580-600       |            |                       |                       | 210/580-840     |             |                       |                       | 210/580-1450    |            |                       |                       |
| 2100-600          |            |                       |                       | 2100-840        |             |                       |                       | 2100-1450       |            |                       |                       |
| 210/580           |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 236/259.6         |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 22.64             |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 13.39             |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 27.17/31.1        |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 49.8/53.74        |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 33.86x33.86       |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 22.83x22.83       |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 13.78             |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 3300/2000/2500    |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 7.09              |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 8.54/4.16         |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 600               |            |                       | 840                   |                 |             |                       | 1450                  |                 |            |                       |                       |
| 40                | 45         | 40                    | 45                    | 45              | 50          | 45                    | 50                    | 50              | 60         | 50                    | 60                    |
| standard          | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard        | standard    | special <sup>1)</sup> | special <sup>1)</sup> | standard        | standard   | special <sup>1)</sup> | special <sup>1)</sup> |
| 20                | 20         | 25                    | 25                    | 20              | 20          | 25                    | 25                    | 20              | 20         | 25                    | 25                    |
| 35070             | 27760      | 35215                 | 27760                 | 34838           | 28224       | 34838                 | 28224                 | 35186           | 27630      | 35172                 | 27630                 |
| 15.6              | 14.2       | 15.6                  | 19.7                  | 21.8            | 27          | 21.8                  | 27                    | 32.3            | 46.6       | 32.3                  | 46.6                  |
| 8.2               | 10.4       | 6.6*                  | 8.3*                  | 11.5            | 14.2        | 9.2*                  | 11.4*                 | 17              | 24.5       | 13.6*                 | 19.6*                 |
| 46.8              | 59.2       | 46.8                  | 59.2                  | 53.4            | 61.1        | 53.4                  | 61.1                  | 61.1            | 77.6       | 61.1                  | 77.6                  |
| 1.69/1.48*        | 1.83/1.66* | 1.69/1.48*            | 1.83/1.66*            | 1.87/1.69*      | 2.12/1.76*  | 1.87/1.69*            | 2.12/1.76*            | 2.26/1.87*      | 2.68/2.29* | 2.26/1.87*            | 2.68/2.4*             |
| 7.99              | 7.99       | 7.99                  | 7.99                  | 8.86            | 8.86        | 8.86                  | 8.86                  | 10.63           | 10.63      | 10.63                 | 10.63                 |
| 36.02             | 30         | 27.17                 | 19.49                 | 36.02           | 30          | 27.17                 | 19.49                 | 43.31           | 31.61      | 27.17                 | 19.49                 |
| 0.79              | 0.79       | 0.79                  | 0.79                  | 0.79            | 0.79        | 0.79                  | 0.79                  | 0.79            | 0.79       | 0.79                  | 0.79                  |
|                   | 8.99       |                       |                       | 12.36           |             |                       |                       | 12.36           |            |                       |                       |
| 4                 | 4          | 4                     | 4                     | 5               | 5           | 5                     | 5                     | 5               | 5          | 5                     | 5                     |
|                   | 110        |                       |                       | 154             |             |                       |                       | 243             |            |                       |                       |
| 210/580-600       |            |                       |                       | 210/580-840     |             |                       |                       | 210/580-1450    |            |                       |                       |
| 106               |            |                       |                       | 106             |             |                       |                       | 106             |            |                       |                       |
| 51                |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 26.7              |            |                       |                       | 31.5            |             |                       |                       | 34.5            |            |                       |                       |
| 11.1              | 11.3       | 13.9                  | 15.7                  | 13.0            | 14.8        | 15.7                  | 22.3                  | 14.8            | 23.1       | 18.3                  | 27.9                  |
| 88.8              | 89.0       | 91.6                  | 93.4                  | 95.5            | 97.3        | 98.2                  | 104.8                 | 100.3           | 108.6      | 103.8                 | 113.4                 |
| 1.4-15.98         |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 1.6-15.98         |            |                       |                       |                 |             |                       |                       |                 |            |                       |                       |
| 10.14             |            |                       |                       | 10.47           |             |                       |                       | 10.69           |            |                       |                       |
| 19.69x5.58x6.89   |            |                       |                       | 19.69x5.58x6.89 |             |                       |                       | 19.69x5.58x6.89 |            |                       |                       |
| [0]/[0]           | [0]/[0]    |                       |                       | 8.11/44.53      | 14.13/44.53 | 16.97/44.53           | 24.61/44.53           | 21.81/65.12     | 33.5/65.12 | 33.5/65.12            | 45.2/65.12            |

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications.

Plasticising rate depends on processing conditions and material employed.

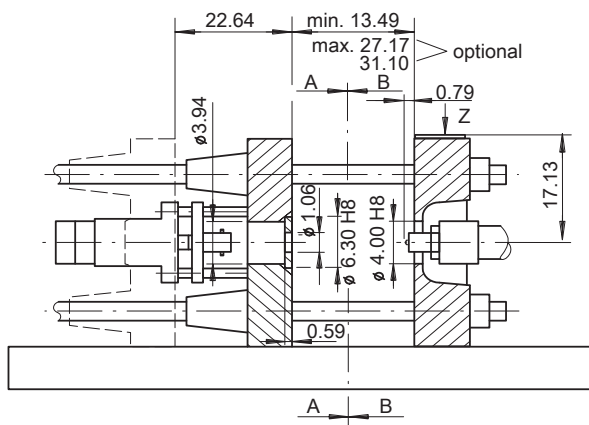
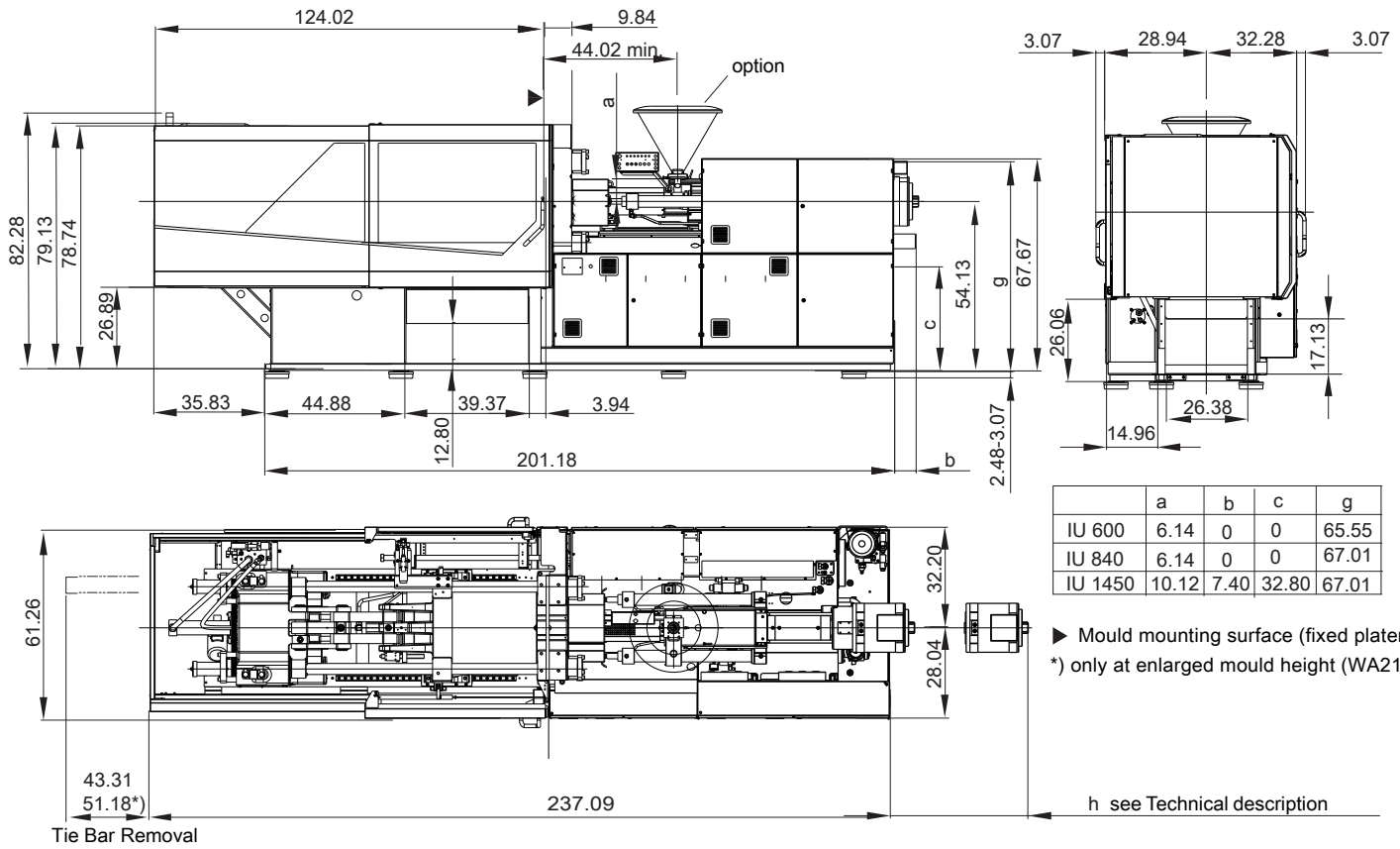
Electrical power supply refers to the standard configuration of the machine.

These parameters are based on a mains voltage 400 V. A deviating mains voltage will affect the machine parameters.

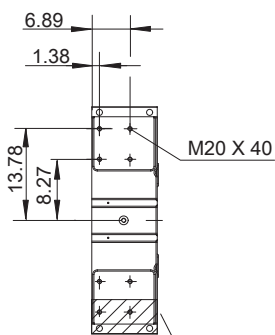
1) Shear and mixing unit

2) Rate of injection based on the standard plasticizing unit

3) The net weight of the machine may vary depending on equipment

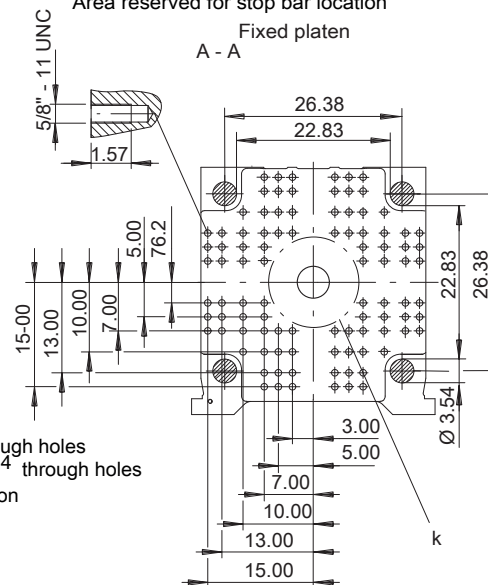
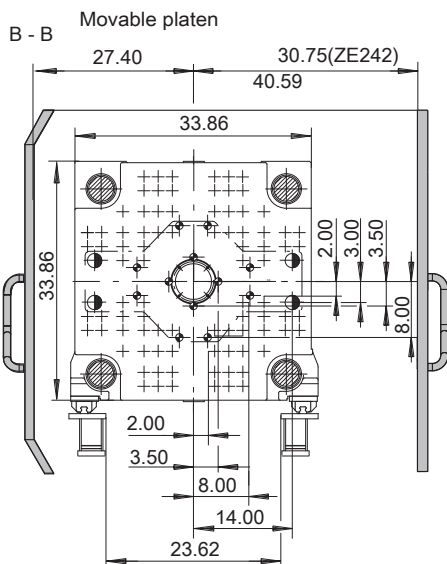


Z Hole pattern for periphery on movable and fixed platen



Area reserved for stop bar location

Fixed platen



Hole pattern according SPI

- ♣ bore diameter  $\varnothing 1.06$  through holes
- ♣ bore diameter  $\varnothing 2.05^{+0.04}$  through holes
- k see Technical Description

# Technical Data Systec SP 280/630

| Sumitomo (SHI) Demag                        |                      | Systec SP 280/630 |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
|---|----------------------|-------------------|------------|-----------------------|-----------------------|-----------------|-------------|-----------------------|-----------------------|-----------------|-------------|-----------------------|-----------------------|
| Model description                           |                      | 280/630-840       |            |                       |                       | 280/630-1450    |             |                       |                       | 280/630-2300    |             |                       |                       |
| International size description              |                      | 2800-840          |            |                       |                       | 2800-1450       |             |                       |                       | 2800-2300       |             |                       |                       |
| Clamp Unit                                  |                      | 280/630           |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Clamp force / Locking force                 | [Ton]                | 314.66/346.13     |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Clamp stroke, max.                          | [in]                 | 26.57             |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Mold height, min.                           | [in]                 | 12.99             |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Mold height, max. (std./opt.)               | [in]                 | 27.95/32.68       |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Open Daylight, max. (std./enl.)             | [in]                 | 54.53/59.25       |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Platen size (h x v)                         | [in]                 | 36.61x36.61       |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Distance between tie bars (h x v)           | [in]                 | 24.8x24.8         |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Min. permissible mold diameter (k)          | [in]                 | 15.75             |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Max mould weight / mov./ fixed              | [kg]                 | 4300/2500/3300    |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Ejection stroke                             | [in]                 | 7.87              |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Ejection force / Retraction force           | [Ton]                | 8.54/4.16         |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Injection unit                              |                      | 840               |            |                       |                       | 1450            |             |                       |                       | 2300            |             |                       |                       |
| Screw diameter                              | [mm]                 | 45                | 50         | 45                    | 50                    | 50              | 60          | 50                    | 60                    | 60              | 70          | 60                    | 70                    |
| Screw geometry                              |                      | standard          | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard        | standard    | special <sup>1)</sup> | special <sup>1)</sup> | standard        | standard    | special <sup>1)</sup> | special <sup>1)</sup> |
| L/D ratio                                   |                      | 20                | 20         | 25                    | 25                    | 20              | 20          | 25                    | 25                    | 20              | 20          | 25                    | 25                    |
| Spec. injection pressure (up to 400°C)      | [psi]                | 34838             | 28224      | 34838                 | 28224                 | 35186           | 27630       | 35172                 | 27630                 | 38058           | 27224       | 35172                 | 27224                 |
| Cylinder head volume, max.                  | [in <sup>3</sup> ]   | 21.8              | 27         | 21.8                  | 27                    | 32.3            | 46.6        | 32.3                  | 46.6                  | 54.4            | 74          | 54.4                  | 74                    |
| Max. shot weight (PS, PE*)                  | [oz]                 | 11.5              | 14.2       | 9.2*                  | 11.4*                 | 17              | 24.5        | 13.6*                 | 19.6*                 | 28.6            | 38.9        | 22.9*                 | 31.2*                 |
| <b>Max. rate of injection <sup>2)</sup></b> |                      |                   |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| > with accumulator                          | [in <sup>3</sup> /s] | 53.4              | 61.1       | 53.4                  | 61.1                  | 61.1            | 77.6        | 61.1                  | 77.6                  | 77.6            | 89.2        | 77.6                  | 89.2                  |
| Plasticizing rate (PS)                      |                      |                   |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| > electric screw drive (PS/PE*)             | [~oz/s]              | 1.87/1.69*        | 2.12/1.76* | 1.87/1.69*            | 2.12/1.76*            | 2.26/1.87*      | 2.68/2.29*  | 2.26/1.87*            | 2.68/2.4*             | 2.96/2.54*      | 3.07/2.61*  | 2.96/2.65*            | 3.07/2.79*            |
| Max. screw stroke                           | [in]                 | 8.86              |            |                       |                       | 10.63           |             |                       |                       | 12.4            |             |                       |                       |
| Max. nozzle dipping depth (SVO)             | [in]                 | 0.79              | 0.79       | 0.79                  | 0.79                  | 0.79            | 0.79        | 0.79                  | 0.79                  | 0.79            | 0.79        | 0.79                  | 0.79                  |
| Max. distance of nozzle retraction          | [in]                 | 43.31             | 31.61      | 27.17                 | 19.49                 | 43.31           | 31.61       | 27.17                 | 19.49                 | 43.31           | 31.61       | 27.17                 | 19.49                 |
| Nozzle contact force                        | [Ton]                | 12.36             |            |                       |                       | 12.36           |             |                       |                       | 12.36           |             |                       |                       |
| Number of heating zones                     |                      | 5                 | 5          | 5                     | 5                     | 5               | 5           | 5                     | 5                     | 5               | 5           | 5                     | 5                     |
| Hopper capacity, optional                   | [lb]                 | 154               |            |                       |                       | 243             |             |                       |                       | 243             |             |                       |                       |
| General data                                |                      | 280/630-840       |            |                       |                       | 280/630-1450    |             |                       |                       | 280/630-2300    |             |                       |                       |
| Oil tank capacity                           | [gal]                | 145               |            |                       |                       | 145             |             |                       |                       | 145             |             |                       |                       |
| Installed electrical rating                 |                      |                   |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| > pump                                      | [~kW]                | 51                |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| > electric screw drive                      | [~kW]                | 31.5              |            |                       |                       | 34.5            |             |                       |                       | 48.0            |             |                       |                       |
| > Barrel heating capacity                   | [~kW]                | 13.0              | 14.8       | 15.7                  | 22.3                  | 14.8            | 23.1        | 18.3                  | 27.9                  | 23.1            | 27.0        | 27.9                  | 32.2                  |
| > total capacity                            | [~kW]                | 95.5              | 97.3       | 98.2                  | 104.8                 | 100.3           | 108.6       | 103.8                 | 113.4                 | 122.1           | 126.0       | 126.9                 | 131.2                 |
| Dry cycle time (Euromap 6)                  | [sec-in]             | 1.65-17.36        |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Dry cycles with unlocking time              | [sec-in]             | 1.95-17.36        |            |                       |                       |                 |             |                       |                       |                 |             |                       |                       |
| Net weight (without oil) <sup>3)</sup>      | [~Ton]               | 14.55             |            |                       |                       | 14.55           |             |                       |                       | 15.43           |             |                       |                       |
| Transport dimensions (l x w x h)            | [~ft]                | 21.65x6.23x6.89   |            |                       |                       | 21.65x6.23x6.89 |             |                       |                       | 22.97x6.23x6.89 |             |                       |                       |
| Electric drive projection (h)               | [in]                 | 0/29.57           | 0/29.57    | 2.4/29.57             | 10.08/29.57           | 7.17/50.55      | 18.94/49.96 | 17.64/50.55           | 30.75/50.55           | 21.14/66.61     | 33.11/66.61 | 32.95/66.61           | 46.89/66.61           |

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications. Plasticising rate depends on processing conditions and material employed.

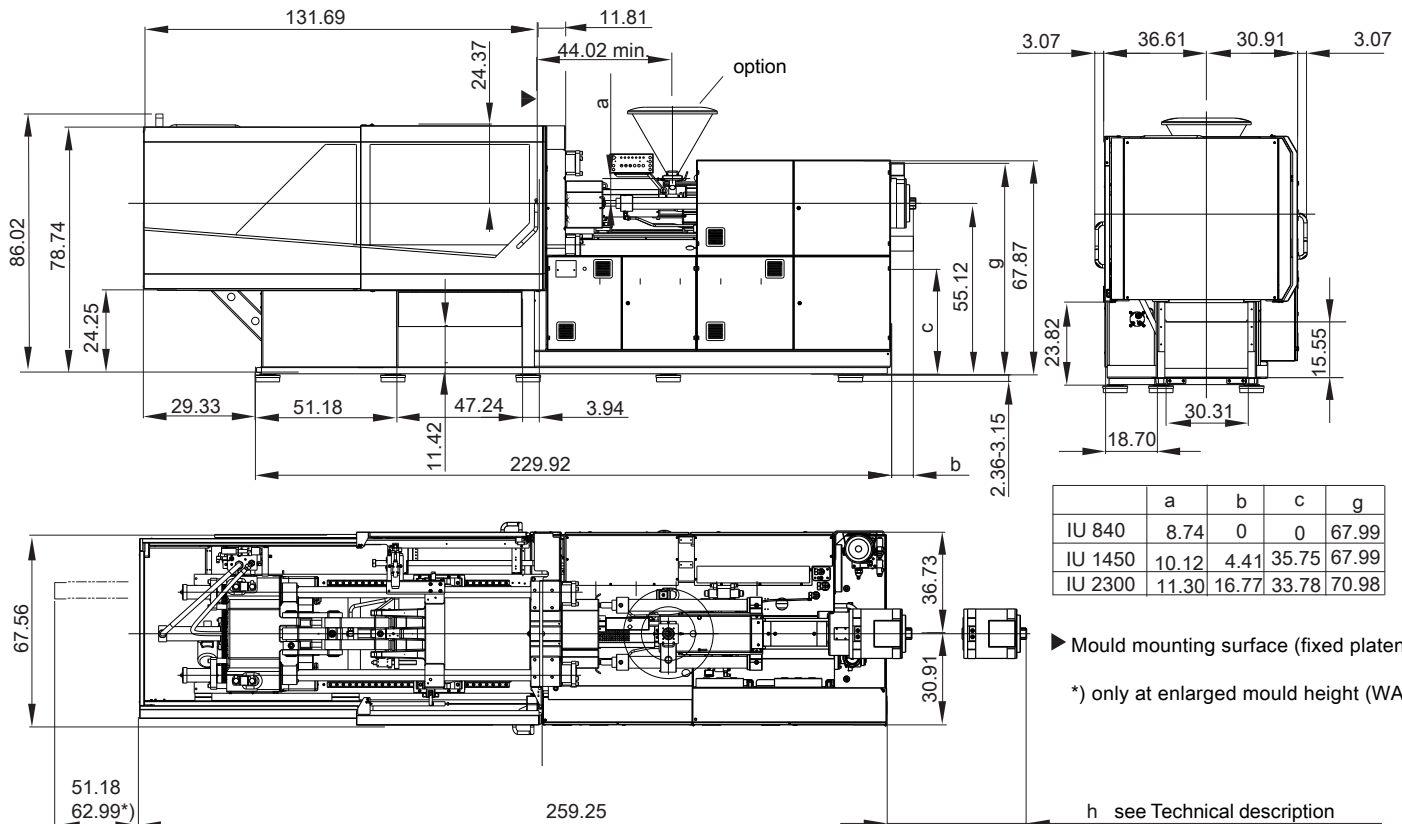
Electrical power supply refers to the standard configuration of the machine.

These parameters are based on a mains voltage 400 V. A deviating mains voltage will affect the machine parameters.

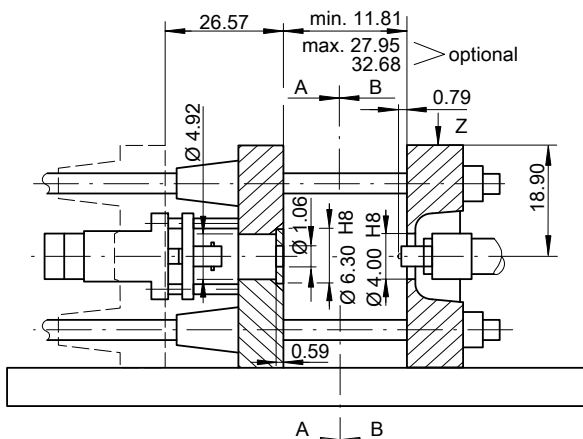
1) Shear and mixing unit

2) Rate of injection based on the standard plasticizing unit

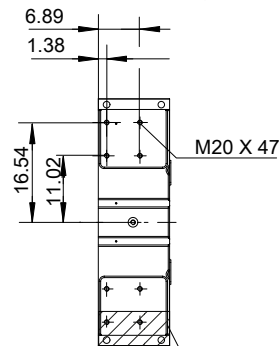
3) The net weight of the machine may vary depending on equipment



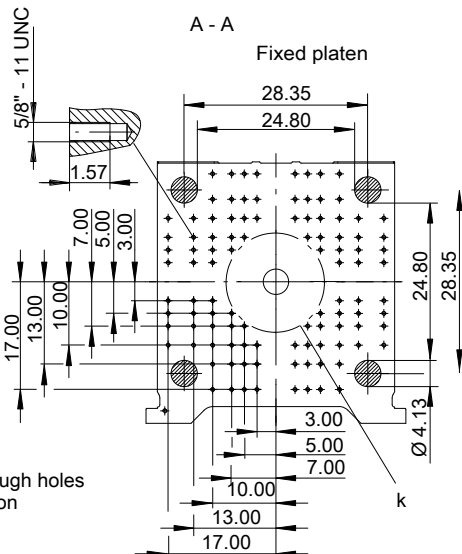
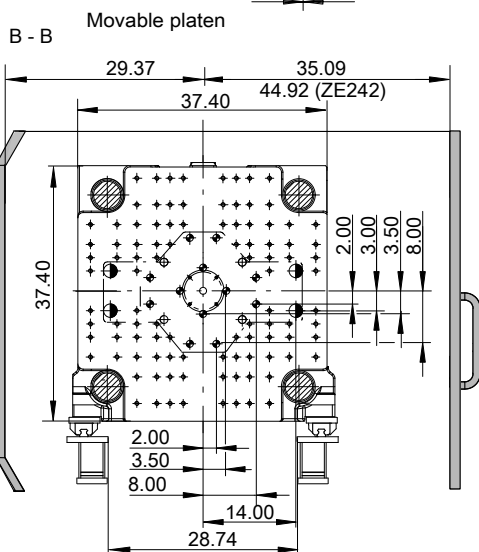
Tie Bar Removal



Z Hole pattern for periphery on movable and fixed platen



Area reserved for stop bar location



Hole pattern according SPI  
 ⌀ bore diameter Ø 1.06 through holes  
 k see Technical Description

# Technical Data Systec SP 350/720

## Sumitomo (SHI) Demag

|                                |  |
|--------------------------------|--|
| Model description              |  |
| International size description |  |

## Clamp Unit

|                                    |       |
|------------------------------------|-------|
| Clamp force / Locking force        | [Ton] |
| Clamp stroke, max.                 | [in]  |
| Mold height, min.                  | [in]  |
| Mold height, max. (std./opt.)      | [in]  |
| Open Daylight, max. (std./enl.)    | [in]  |
| Platen size (h x v)                | [in]  |
| Distance between tie bars (h x v)  | [in]  |
| Min. permissible mold diameter (k) | [in]  |
| Max mould weight / mov./ fixed     | [kg]  |
| Ejection stroke                    | [in]  |
| Ejection force / Retraction force  | [Ton] |

## Injection unit

|  |                    |
|--|--------------------|
| Screw diameter                         | [mm]               |
| Screw geometry                         |                    |
| L/D ratio                              |                    |
| Spec. injection pressure (up to 400°C) | [psi]              |
| Cylinder head volume, max.             | [in <sup>3</sup> ] |
| Max. shot weight (PS, PE*)             | [oz]               |

## Max. rate of injection <sup>2)</sup>

|                    |                      |
|--------------------|----------------------|
| > with accumulator | [in <sup>3</sup> /s] |
|--------------------|----------------------|

## Plasticizing rate (PS)

|                                    |         |
|------------------------------------|---------|
| > electric screw drive (PS/PE*)    | [~oz/s] |
| Max. screw stroke                  | [in]    |
| Max. distance of nozzle retraction | [in]    |
| Max. nozzle dipping depth (SVO)    | [in]    |
| Nozzle contact force               | [Ton]   |
| Number of heating zones            |         |
| Hopper capacity, optional          | [lb]    |

## General data

|                   |       |
|-------------------|-------|
| Oil tank capacity | [gal] |
|-------------------|-------|

## Installed electrical rating

|  |          |
|--|----------|
| > pump                                 | [~kW]    |
| > electric screw drive                 | [~kW]    |
| > Barrel heating capacity              | [~kW]    |
| > total capacity                       | [~kW]    |
| Dry cycle time (Euromap 6)             | [sec-in] |
| Dry cycles with unlocking time         | [sec-in] |
| Net weight (without oil) <sup>3)</sup> | [~Ton]   |
| Transport dimensions (l x w x h)       | [~ft]    |
| Electric drive projection (h)          | [in]     |

## Systec SP 350/720-840

|             |              |              |
|-------------|--------------|--------------|
| 350/720-840 | 350/720-1450 | 350/720-2300 |
| 3500-840    | 3500-1450    | 3500-2300    |

## 350/720

|                |  |  |  |  |  |  |  |  |  |  |  |
|----------------|--|--|--|--|--|--|--|--|--|--|--|
| 393.33/432.66  |  |  |  |  |  |  |  |  |  |  |  |
| 28.74          |  |  |  |  |  |  |  |  |  |  |  |
| 13.78          |  |  |  |  |  |  |  |  |  |  |  |
| 29.33/37.4     |  |  |  |  |  |  |  |  |  |  |  |
| 58.07/66.14    |  |  |  |  |  |  |  |  |  |  |  |
| 40.94x41.73    |  |  |  |  |  |  |  |  |  |  |  |
| 28.35x28.35    |  |  |  |  |  |  |  |  |  |  |  |
| 15.75          |  |  |  |  |  |  |  |  |  |  |  |
| 4700/2650/3600 |  |  |  |  |  |  |  |  |  |  |  |
| 7.87           |  |  |  |  |  |  |  |  |  |  |  |
| 8.54/4.16      |  |  |  |  |  |  |  |  |  |  |  |

## 840 1450 2300

| 840        |            |                       |                       | 1450       |            |                       |                       | 2300       |            |                       |                       |
|------------|------------|-----------------------|-----------------------|------------|------------|-----------------------|-----------------------|------------|------------|-----------------------|-----------------------|
| 45         | 50         | 45                    | 50                    | 50         | 60         | 50                    | 60                    | 60         | 70         | 60                    | 70                    |
| standard   | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard   | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard   | standard   | special <sup>1)</sup> | special <sup>1)</sup> |
| 20         | 20         | 25                    | 25                    | 20         | 20         | 25                    | 25                    | 20         | 20         | 25                    | 25                    |
| 34838      | 28224      | 34838                 | 28224                 | 35186      | 27630      | 35172                 | 27630                 | 35186      | 27224      | 35172                 | 27224                 |
| 21.8       | 27         | 21.8                  | 27                    | 32.3       | 46.6       | 32.3                  | 46.6                  | 54.4       | 74         | 54.4                  | 74                    |
| 11.5       | 14.2       | 9.2*                  | 11.4*                 | 17         | 24.5       | 13.6*                 | 19.6*                 | 28.6       | 38.9       | 22.9*                 | 31.2*                 |
| 53.4       | 61.1       | 53.4                  | 61.1                  | 61.1       | 77.6       | 61.1                  | 77.6                  | 77.6       | 89.2       | 77.6                  | 89.2                  |
| 1.87/1.69* | 2.12/1.76* | 1.87/1.69*            | 2.12/1.76*            | 2.26/1.87* | 2.68/2.29* | 2.26/1.87*            | 2.68/2.4*             | 2.96/2.54* | 3.07/2.61* | 2.96/2.65*            | 3.07/2.79*            |
| 8.86       |            |                       |                       | 10.63      |            |                       |                       | 12.4       |            |                       |                       |
| 36.34      | 30.28      | 27.48                 | 19.8                  | 46.65      | 35         | 36.18                 | 23.19                 | 45.47      | 33.5       | 33.66                 | 19.72                 |
| 0.79       | 0.79       | 0.79                  | 0.79                  | 0.79       | 0.79       | 0.79                  | 0.79                  | 0.79       | 0.79       | 0.79                  | 0.79                  |
| 12.36      |            |                       |                       | 12.36      |            |                       |                       | 12.36      |            |                       |                       |
| 5          | 5          | 5                     | 5                     | 5          | 5          | 5                     | 5                     | 5          | 5          | 5                     | 5                     |
| 154        |            |                       |                       | 243        |            |                       |                       | 243        |            |                       |                       |

## 350/720-840 350/750-1450 350/750-2300

|                 |         |           |             |                |            |            |            |                 |             |             |             |
|-----------------|---------|-----------|-------------|----------------|------------|------------|------------|-----------------|-------------|-------------|-------------|
| 350/720-840     |         |           |             | 350/750-1450   |            |            |            | 350/750-2300    |             |             |             |
| 145             |         |           |             | 145            |            |            |            | 145             |             |             |             |
| 59              |         |           |             |                |            |            |            |                 |             |             |             |
| 31.5            |         |           |             | 34.5           |            |            |            | 48.0            |             |             |             |
| 13.0            | 14.8    | 15.7      | 22.3        | 14.8           | 23.1       | 18.3       | 27.9       | 23.1            | 27.0        | 27.9        | 32.2        |
| 103.5           | 105.3   | 106.2     | 112.8       | 108.3          | 116.6      | 111.8      | 121.4      | 130.1           | 134.0       | 134.9       | 139.2       |
| 1.85-19.84      |         |           |             |                |            |            |            |                 |             |             |             |
| 2.15-19.84      |         |           |             |                |            |            |            |                 |             |             |             |
| 17.08           |         |           |             | 17.64          |            |            |            | 17.91           |             |             |             |
| 22.97x6.56x7.55 |         |           |             | 23.3x6.56x7.55 |            |            |            | 24.28x6.56x7.55 |             |             |             |
| 0/29.57         | 0/29.57 | 2.4/29.57 | 10.04/29.57 | 7.24/53.9      | 18.94/53.9 | 17.72/53.9 | 30.75/53.9 | 21.14/66.61     | 33.11/66.61 | 32.95/66.61 | 46.89/66.61 |

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications.

Plasticising rate depends on processing conditions and material employed.

Electrical power supply refers to the standard configuration of the machine.

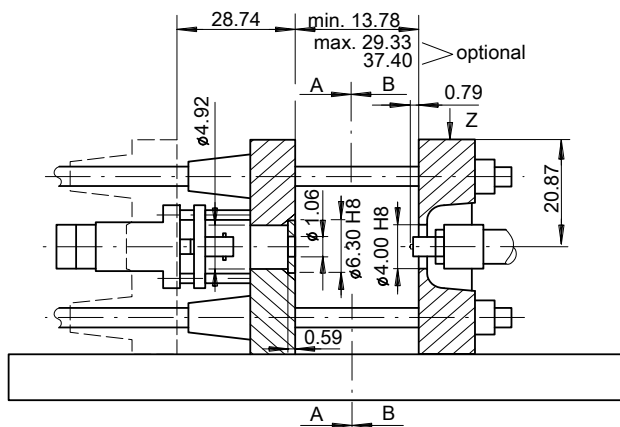
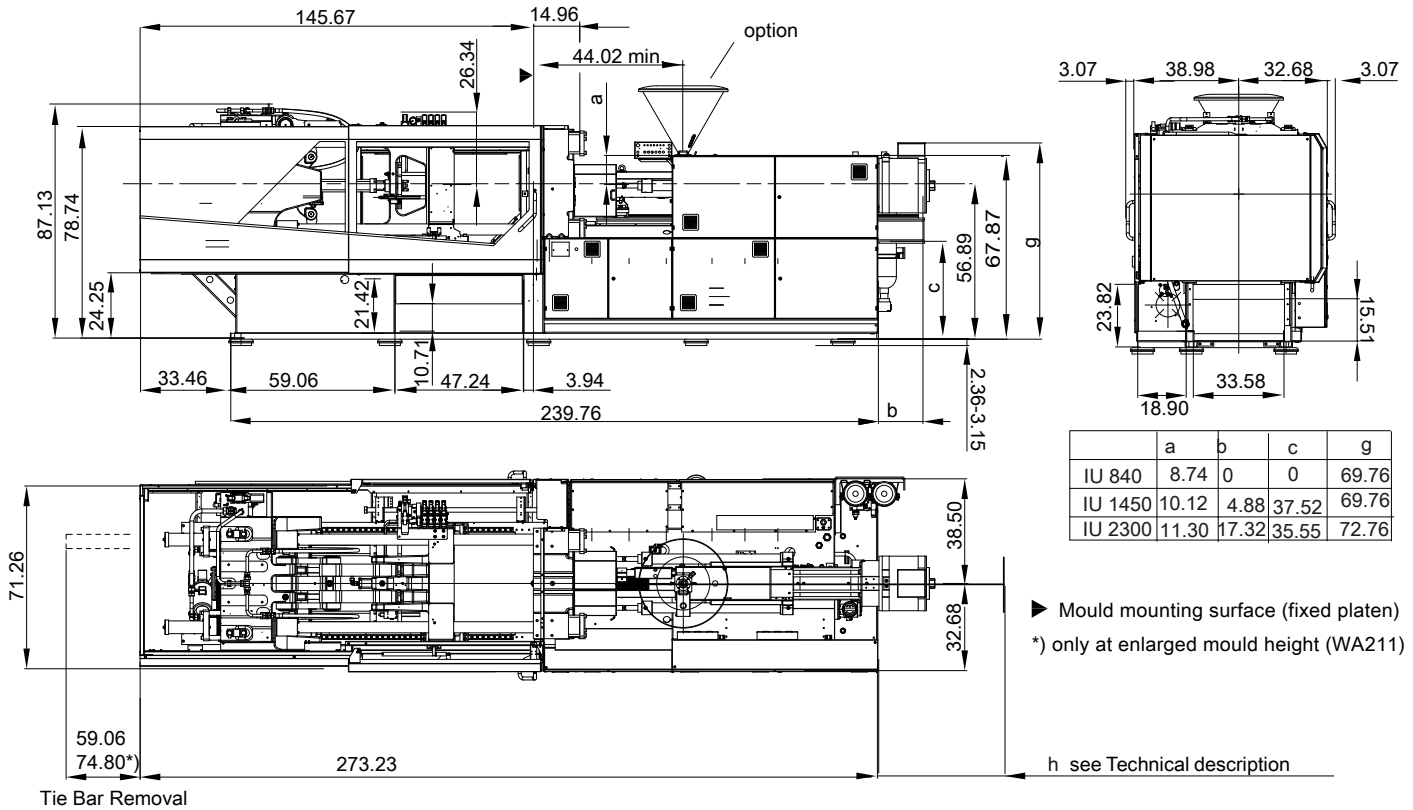
These parameters are based on a mains voltage 400 V. A deviating mains voltage will affect the machine parameters.

1) Shear and mixing unit

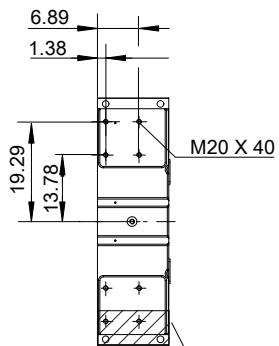
2) Rate of injection based on the standard plasticizing unit

3) The net weight of the machine may vary depending on equipment

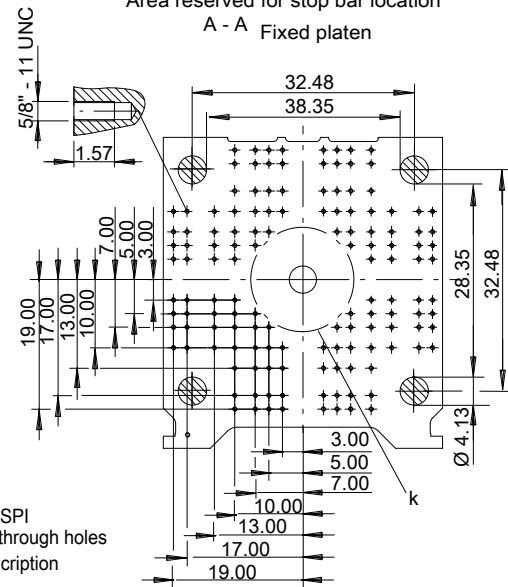
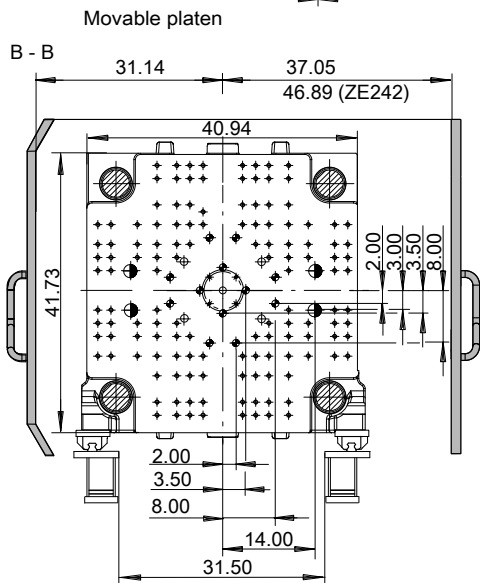




Z Hole pattern for periphery on movable and fixed platen



Area reserved for stop bar location  
A - A Fixed platen



Hole pattern according SPI  
♦ bore diameter  $\phi 1.06$  through holes  
k see Technical Description

# Technical Data Systec SP 420/820

| Sumitomo (SHI) Demag                   |                      |
|--|----------------------|
| Model description                      |                      |
| International size description         |                      |
| Clamp Unit                             |                      |
| Clamp force / Locking force            | [Ton]                |
| Clamp stroke, max.                     | [in]                 |
| Mold height, min.                      | [in]                 |
| Mold height, max. (std./opt.)          | [in]                 |
| Open Daylight, max. (std./enl.)        | [in]                 |
| Platen size (h x v)                    | [in]                 |
| Distance between tie bars (h x v)      | [in]                 |
| Min. permissible mold diameter (k)     | [in]                 |
| Max mould weight / mov./ fixed         | [kg]                 |
| Ejection stroke                        | [in]                 |
| Ejection force / Retraction force      | [Ton]                |
| Injection unit                         |                      |
| Screw diameter                         | [mm]                 |
| Screw geometry                         |                      |
| L/D ratio                              |                      |
| Spec. injection pressure (up to 400°C) | [psi]                |
| Cylinder head volume, max.             | [in <sup>3</sup> ]   |
| Max. shot weight (PS, PE*)             | [oz]                 |
| Max. rate of injection <sup>2)</sup>   |                      |
| > with accumulator                     | [in <sup>3</sup> /s] |
| Plasticizing rate (PS)                 |                      |
| > electric screw drive (PS/PE*)        | [~oz/s]              |
| Max. screw stroke                      | [in]                 |
| Max. distance of nozzle retraction     | [in]                 |
| Max. nozzle dipping depth (SVO)        | [in]                 |
| Nozzle contact force                   | [Ton]                |
| Number of heating zones                |                      |
| General data                           |                      |
| Oil tank capacity                      | [gal]                |
| Installed electrical rating            |                      |
| > pump                                 | [~kW]                |
| > electric screw drive                 | [~kW]                |
| > Barrel heating capacity              | [~kW]                |
| > total capacity                       | [~kW]                |
| Dry cycle time (Euromap 6)             | [sec-in]             |
| Dry cycles with unlocking time         | [sec-in]             |
| Net weight (without oil) <sup>3)</sup> | [~Ton]               |
| Transport dimensions (l x w x h)       | [~ft]                |
| Electric drive projection (h)          | [in]                 |

| Systec SP 420/820 |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
|-------------------|------------|-----------------------|-----------------------|-----------------|------------|-----------------------|-----------------------|-----------------|-------------|-----------------------|-----------------------|
| 420/820-1450      |            |                       |                       | 420/820-2300    |            |                       |                       | 420/820-3300    |             |                       |                       |
| 4200-1450         |            |                       |                       | 4200-2300       |            |                       |                       | 4200-3300       |             |                       |                       |
| 420/820           |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 472/519.2         |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 30.31             |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 14.96             |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 32.48/41.34       |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 62.8/71.65        |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 47.24x47.24       |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 32.28x32.28       |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 16.54             |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 6600/3800/5100    |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 9.06              |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 14.38/6.29        |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 1450              |            |                       | 2300                  |                 |            |                       | 3300                  |                 |             |                       |                       |
| 50                | 60         | 50                    | 60                    | 60              | 70         | 60                    | 70                    | 70              | 80          | 70                    | 80                    |
| standard          | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard        | standard   | special <sup>1)</sup> | special <sup>1)</sup> | standard        | standard    | special <sup>1)</sup> | special <sup>1)</sup> |
| 20                | 20         | 25                    | 25                    | 20              | 20         | 25                    | 25                    | 23              | 20          | 25                    | 24                    |
| 35186             | 27630      | 35172                 | 27630                 | 35186           | 27224      | 35172                 | 27224                 | 35143           | 26905       | 30458                 | 26905                 |
| 32.3              | 46.6       | 32.3                  | 46.6                  | 54.4            | 74         | 54.4                  | 74                    | 83.1            | 108.6       | 83.1                  | 108.6                 |
| 17                | 24.5       | 13.6*                 | 19.6*                 | 28.6            | 38.9       | 22.9*                 | 31.2*                 | 43.7            | 57.1        | 35.1*                 | 45.8*                 |
| 61.1              | 77.6       | 61.1                  | 77.6                  | 77.6            | 89.2       | 77.6                  | 89.2                  | 89.2            | 98.1        | 89.2                  | 98.1                  |
| 2.26/1.87*        | 2.68/2.29* | 2.26/1.87*            | 2.68/2.4*             | 2.96/2.54*      | 3.07/2.61* | 2.96/2.65*            | 3.07/2.79*            | 3.7/3.35*       | 4.55/4.06*  | 3.7/3.35*             | 4.55/4.06*            |
| 10.63             |            |                       |                       | 12.4            |            |                       |                       | 13.94           |             |                       |                       |
| 47.44             | 35.79      | 36.97                 | 23.98                 | 45.47           | 33.5       | 33.66                 | 19.72                 | 38.58           | 38.58       | -                     | -                     |
| 0.79              | 0.79       | 0.79                  | 0.79                  | 0.79            | 0.79       | 0.79                  | 0.79                  | 0.79            | 0.79        | 0.79                  | 0.79                  |
| 12.36             |            |                       |                       | 12.36           |            |                       |                       | 12.36           |             |                       |                       |
| 5                 | 5          | 5                     | 5                     | 5               | 5          | 5                     | 5                     | 5               | 5           | 5                     | 6                     |
| 420/820-1450      |            |                       |                       | 420/820-2300    |            |                       |                       | 420/820-3300    |             |                       |                       |
| 145               |            |                       |                       | 145             |            |                       |                       | 145             |             |                       |                       |
| 59                |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 34.5              |            |                       |                       | 48.0            |            |                       |                       | 76.0            |             |                       |                       |
| 14.8              | 23.1       | 18.3                  | 27.9                  | 23.1            | 27.0       | 27.9                  | 32.2                  | 30.6            | 30.6        | 32.2                  | 42.6                  |
| 108.3             | 116.6      | 111.8                 | 121.4                 | 130.1           | 134.0      | 134.9                 | 139.2                 | 165.6           | 165.6       | 167.2                 | 177.6                 |
| 2.25-22.6         |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 2.6-22.6          |            |                       |                       |                 |            |                       |                       |                 |             |                       |                       |
| 23.26             |            |                       |                       | 23.7            |            |                       |                       | 27.45           |             |                       |                       |
| 26.25x7.22x7.87   |            |                       |                       | 26.25x7.22x7.87 |            |                       |                       | 29.86x7.22x7.87 |             |                       |                       |
| 0/25.35           | 0/25.35    | 0/25.35               | 1.42/25.35            | 0/37.28         | 3.78/37.28 | 3.62/37.28            | 17.56/37.28           | 37.99/76.57     | 37.64/76.57 | 51.77/76.57           | 64.21/76.57           |

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications.

Plasticising rate depends on processing conditions and material employed.

Electrical power supply refers to the standard configuration of the machine.

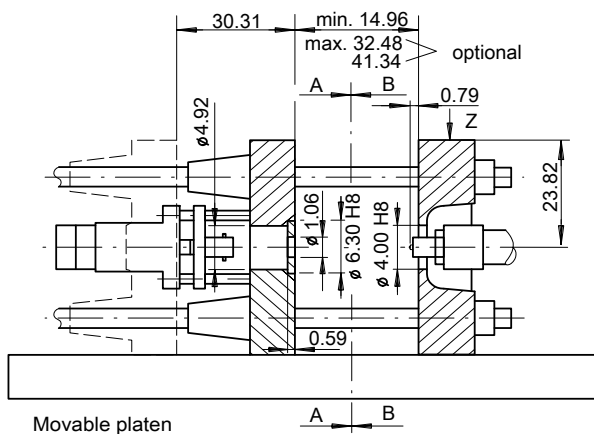
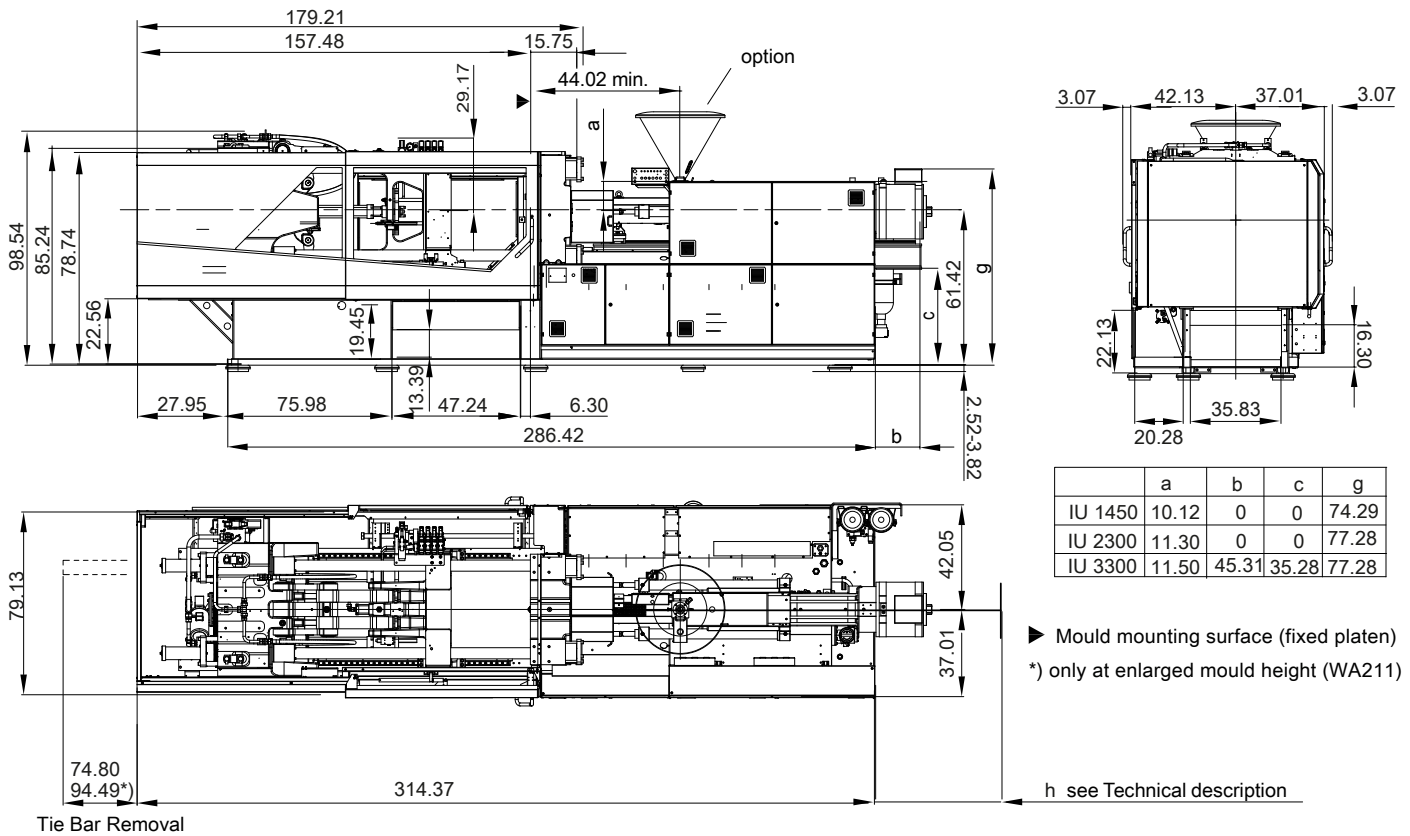
These parameters are based on a mains voltage 400 V. A deviating mains voltage will affect the machine parameters.

1) Shear and mixing unit

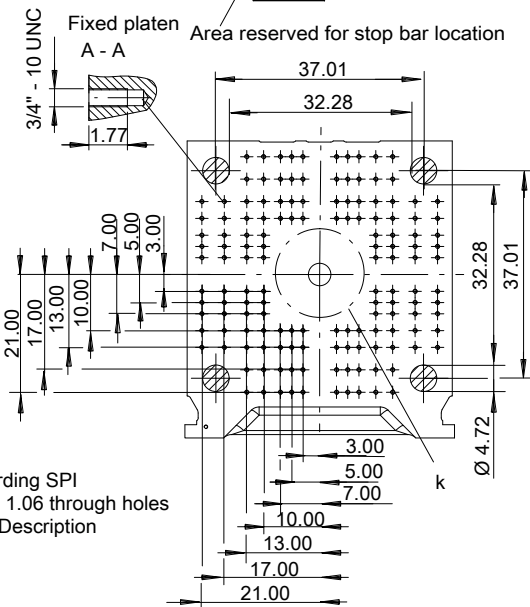
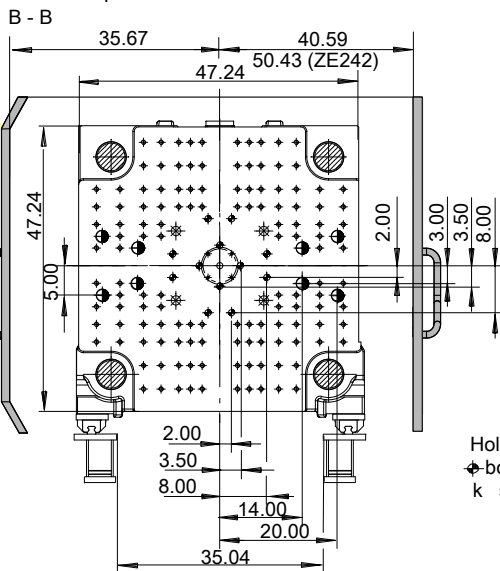
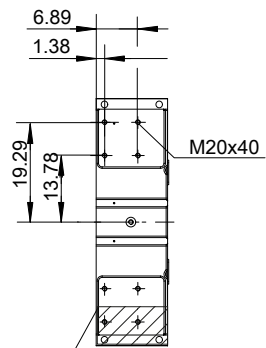
2) Rate of injection based on the standard plasticizing unit

3) The net weight of the machine may vary depending on equipment

Machine dimensions (l x w x h) Systec SP 420/820

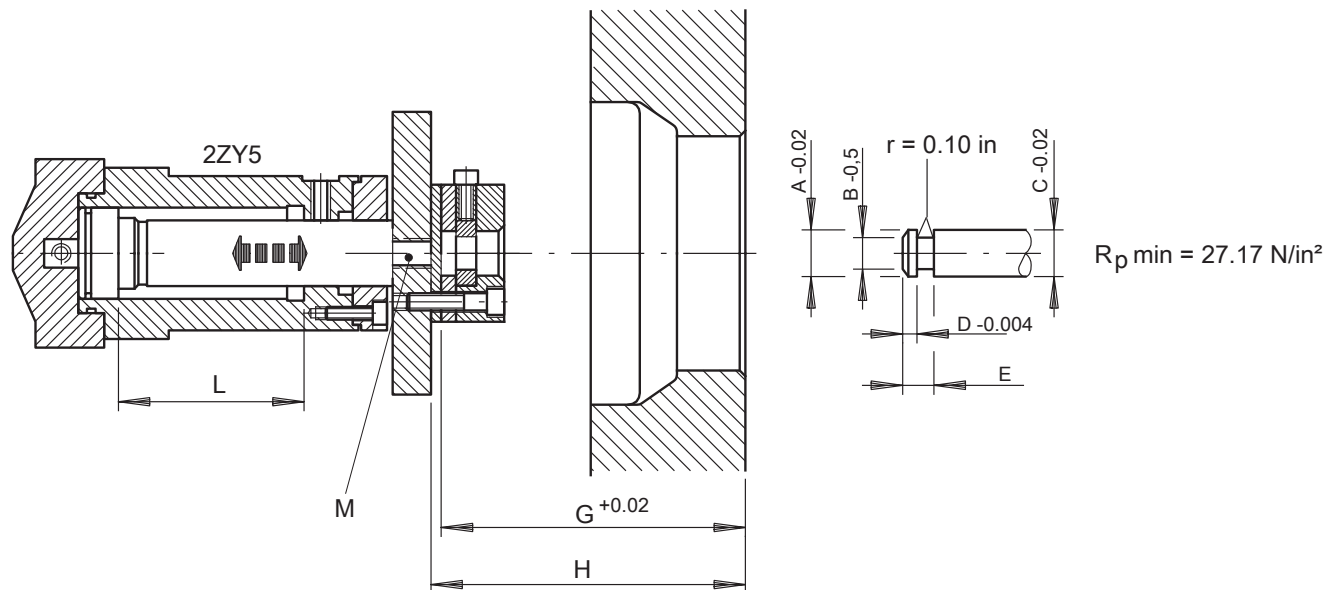


Z Hole pattern for periphery on movable and fixed platen



Hole pattern according SPI  
◆ bore diameter Ø 1.06 through holes  
k see Technical Description

## Ejector - dimensioned diagram Systec SP

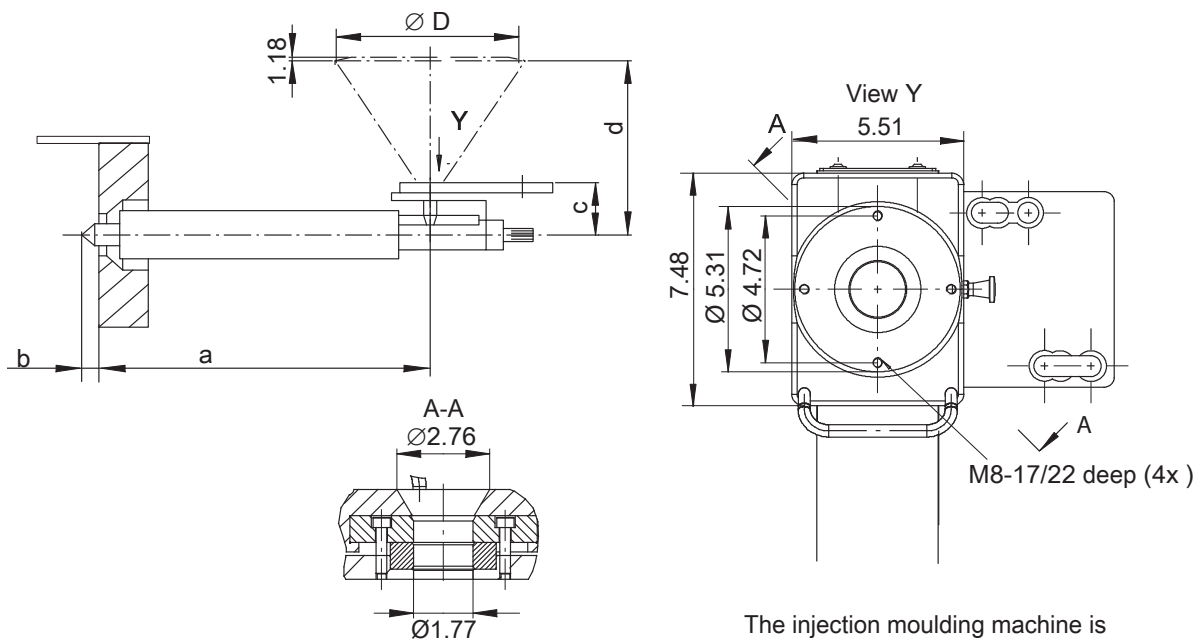


### Ejector - connecting dimensions

| Machine type   | Dimensions ( in ) |      |      |      |      |       |       |      |          |
|----------------|-------------------|------|------|------|------|-------|-------|------|----------|
|                | A                 | B    | C    | D    | E    | G     | H     | L    | M        |
| Systec 160/520 | 0.96              | 0.55 | 0.96 | 0.31 | 0.79 | 11.89 | 12.20 | 6.30 | M16 - 30 |
| Systec 210/580 | 1.75              | 1.02 | 1.75 | 0.37 | 1.02 | 14.17 | 14.57 | 7.09 | M20 - 35 |
| Systec 280/630 | 1.75              | 1.02 | 1.75 | 0.37 | 1.02 | 17.13 | 17.52 | 7.87 | M20 - 35 |
| Systec 350/720 | 1.75              | 1.02 | 1.75 | 0.37 | 1.02 | 19.09 | 19.49 | 7.87 | M20 - 35 |
| Systec 420/820 | 1.75              | 1.02 | 1.75 | 0.35 | 1.02 | 21.34 | 21.73 | 9.06 | M24 - 50 |

Coupling zone of ejector rods not hardened

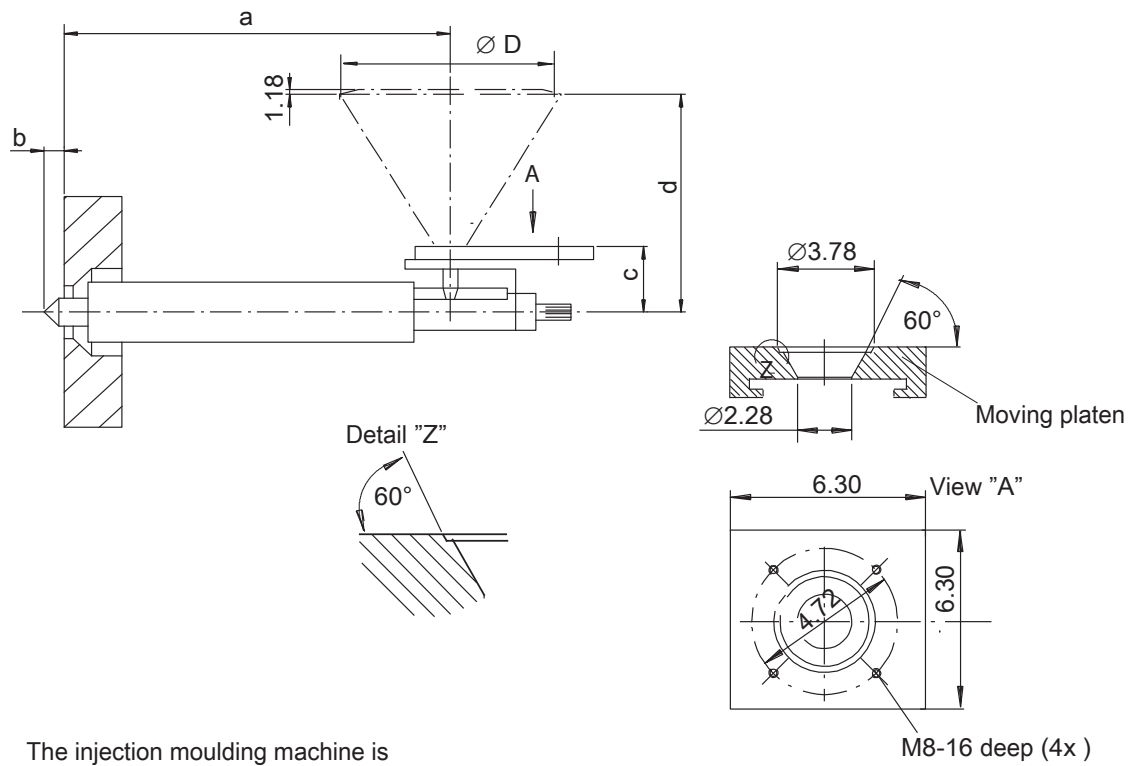
## Connection dimensions for material conveyor Systec SP IU 430...600



### Systec SP160 - 350

| Injection unit | Screw diameter [mm] | Dimension a [in] with SVO |      | Dimension[in] |       |       |
|----------------|---------------------|---------------------------|------|---------------|-------|-------|
|                |                     | a                         | b    | c             | d     | D     |
| IU 430         | 35                  | 34.68                     | 0.79 | 6.14          | 26.65 | 15.43 |
|                | 40                  | 38.98                     | 0.79 |               |       |       |
| IU 600         | 40                  | 38.98                     | 0.79 | 6.14          | 32.56 | 15.55 |
|                | 45                  | 44.02                     | 0.79 |               |       |       |

## Connection dimensions for material conveyor Systec SP IU 840...3300 (up to Systec 420/820)



The injection moulding machine is shown with ZE 320, material hopper

| Injection unit | Screw diameter [mm] | Dimension a [in] with SVO |                |      | Dimension [in] |       |       |
|----------------|---------------------|---------------------------|----------------|------|----------------|-------|-------|
|                |                     | Standard barrel           | Special barrel | b    | c              | d     | D     |
|                |                     | a                         | a              |      |                |       |       |
| IU 840         | 45                  | 44.02                     | -              | 0.79 | 8.74           | 29.21 | 28.46 |
|                | 50                  | 48.98                     | 58.62          | 0.79 |                |       |       |
| IU 1450        | 50                  | 48.98                     | -              | 0.79 | 10.12          | 34.53 | 32.48 |
|                | 60                  | 58.07                     | 69.68          | 0.79 |                |       |       |
| IU 2300        | 60                  | 58.07                     | -              | 0.79 | 11.30          | 35.71 | 32.48 |
|                | 70                  | 67.68                     | 81.26          | 0.79 |                |       |       |
| IU 3300        | 70                  | 77.76                     | -              | 0.79 | 11.50          | 34.33 | 32.48 |
|                | 80                  | 77.76                     | 90.83          | 0.79 |                |       |       |

## Equipment Systec SP 1.600...4.200 kN

| Clamping unit   | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| 1 - Short-lengtht units with fully hydraulic clamping system with two clamp cylinders and a volume multiplier for fast machine cycles and low energy consumption  | -   | -           | -   |
| 2 - Short-lengtht 5-point double toggle clamping unit   | ●   | ●           | ●   |
| 22 - Ejector coupling to DPG  | ●   | ●           | ●   |
| 24 - Tie bars of clamping unit chromed  | ●   | ●           | ●   |
| 27 - Upper tiebar on non-operator side retractable  | -   | -           | -   |
| 41 - Central ejector with multi-stroke and stroke, pressure/force and speed programmable  | ●   | ●           | ●   |
| 43 - Short/long stroke ejector  | ●   | ●           | ●   |
| 47 - Two-stage adjustable clamp force   | -   | -           | -   |
| 94 - Five-stagedmould clamping- and four-staged mould-opening sequence  | ●   | ●           | ●   |
| 204 - Mould mounting dimensions in accordance to Euromap, without side ejector plate  | ●   | ●           | ●   |
| 205 - Mould mounting dimensions in accordance to Euromap, with side ejector plate   | ○   | ○           | ○   |
| 207 - Mould mounting dimensions similar to SPI  | ○   | ○           | ○   |
| 208 - Mould mounting dimensions U (universal; similar to Euromap, additionaly two through-holes) with side ejector plate <sup>1)</sup>  | -   | -           | -   |
| 2091 - Mould mounting dimensions similar to JIS   | ○   | ○           | ○   |
| 210 - Standard mould height   | ●   | ●           | ●   |
| 211 - Extended mould height   | ○   | ○           | ○   |
| 215 - Mould and ejector movements only when safety gate closed  | ●   | ●           | ●   |
| 2171 - Operating when safety gate is open on non-operator side  | ○   | ○           | ○   |
| 218 - Ejector pressure and speed programmable for serial operation with mould movement  | -   | -           | -   |
| 219 - Ejector power and speed programmable for simultaneous operation with mould movement, including positioning control  | ●   | ●           | ●   |
| 224ff - 1-2 pneumatik 5/2 directional valves, mounted to moving or fixed platen and freely programmable   | ○   | ○           | ○   |
| 228 - Central service unit for pneumatic valves   | ○   | ○           | ○   |
| 229ff - Core puller with 1-4 circuits over proportional or on-/off- valve on mov. platen; Q-independent programmable; with unlockable check-valves against core-moving; incl. Manual pressure relief for core-puller 1-4 circuits over one common valve | ○   | ○           | ○   |
| 237 - Additional ports for 2 core pullers on fixed mould platen   | ○   | ○           | ○   |
| 240 - Automatic safety gate on operator side  | ○   | ○           | ○   |
| 242 - Cover widened on non-operator side  | ○   | ○           | ○   |
| 243 - Blow through for mould cooling lines; manual  | ○   | ○           | ○   |
| 249 - Cooling water controller 4 circuits with temperature gauge  | ○   | ○           | ○   |
| 250 - Cooling water controller 8 circuits with temperature gauge  | ○   | ○           | ○   |
| 244 - Cooling water controller 12 circuits with temperature gauge   | ○   | ○           | ○   |
| 252 - Shut-off mould cooling, time programmable   | ●   | ●           | ●   |
| 282+283 - Pneumatical core puller 1 or 2-circuit via b/w valve on the movable platen including tubing   | ○   | ○           | ○   |
| 261 - Automatic mould height adjustment   | ○   | ○           | ○   |
| 18 - Moving platen supported by linear guides on machine base   | ●   | ●           | ●   |
| 264 - Manual clamping mechanism for tiebar retraction   | ○   | ○           | ○   |

| Clamping unit   | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| 265 - Automatic tiebar retraction, upper tiebar on non-operator side            | ○   | ○           | ○   |
| 266ff - Hot runner control (number of zones depending on machine size, max. 32) | ○   | ○           | ○   |
| 275 - Hydraulic control for hot runner nozzles                                  | ○   | ○           | ○   |
| 280 - Automatic central oil lubrication for toggle                              | ●   | ●           | ●   |
| 290 - Clamp force control with indication                                       | ●   | ●           | ●   |
| 293 - ActiveQ: Active mould safety via sensor with mould movement               | ●   | ●           | ●   |
| 295 - Additional manual adjustable control button mould-open-position           | ○   | ○           | ○   |
| 299 - Central grease lubrication manual   | ●   | ●           | ●   |

| Injection unit  | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| Barrel adaptable for 3 injection units  | -   | -           | -   |
| 92 - Regulated parameter for injection speed, pressure, ram pressure and screw speed programmable via profile         | ●   | ●           | ●   |
| 300 - Injection unit horizontal   | ●   | ●           | ●   |
| 302ff - Injection unit horizontal or vertical in seperating level or in backpack-position                             | -   | -           | -   |
| 310 - Hydraulic screw motor for high screw speeds (rpm) (motorI)  | -   | -           | -   |
| 311 - Hydraulic screw motor for high torque (Motor II)  | -   | -           | -   |
| 313 - Electrical screw motor, frequency-controlled  | ●   | ●           | ●   |
| 320 - Hopper for setup of an automatic filling system   | ○   | ○           | ○   |
| 322 - Hopper shutoff with emptying capability (with drill pattern for material conveyor)                              | -   | -           | -   |
| 341 - Temperature of funnel-zone-cooling regulated; maximum temperature 90°C +9°C tolerance                           | ●   | ●           | ●   |
| 350 - Holding pressure switchover depending on hydraulic pressure with maximum value recording and pressure recording | ●   | ●           | ●   |
| 352ff - Holding pressure switchover depending on cavity pressure with pressure recording for 1, 2, 4 pressure taker   | ○   | ○           | ○   |
| 357 - Holding pressure switchover over extern exit  | ○   | ○           | ○   |
| 355 - Back pressure programmable over screw-back stroke, polygon over 6 stabilisation points                          | ●   | ●           | ●   |
| 361 - fast injection with accumulator; programmable   | ●   | ●           | ●   |
| 365 - Injection with regular pump, p+v regulated (closed loop)  | -   | -           | -   |
| 131 - Injection, holding pressure and back pressure regulated over servo valve  | -   | -           | -   |
| 370 - Melt temperature measuring (only for open nozzles)  | ○   | ○           | ○   |
| 380 - Nozzle sealing force with closed mould, programmable  | ●   | ●           | ●   |
| 385 - Nozzle system residual pressure with open mould, programmable   | ●   | ●           | ●   |
| 386 - Nozzle movement parallel to closing movement  | ●   | ●           | ●   |
| 388 - Screw position-controlled high speed  | ●   | ●           | ●   |
| 390 - Full guarding on injection unit operator side   | -   | -           | -   |

| Electronics   | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| 110 - Supply voltage 400 V+/-10 %/ 50 Hz; 3 Ph + N + PE | ●   | ●           | ●   |
| 111-117 - Specific national supply voltage              | ○   | ○           | ○   |

● Basic equipment

1) valid for CU through 120

○ Additional price

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications.

| Electronics  | 160 | 210 ... 350 | 420 |
|--|-----|-------------|-----|
| 120 - Joint power supply for drive and heating   | -   | -           | -   |
| 121 - Separate power supply for both drive and heating   | ●   | ●           | ●   |
| 160 - Single-phase 230 V/50 Hz/ 10 A socket in specific national version, defeatable over main switch  | ●   | ●           | ●   |
| 1601 - Socket CEE 3Ph/400V/16A, defeatable over main switch  | ○   | ○           | ○   |
| 1602 - Socket CEE 3Ph/400V/32A, defeatable over main switch  | -   | ○           | ○   |
| 161 - Socket combination integrated, country-specific, defeatable over main switch and shut-down program   | ○   | ○           | ○   |
| 186 - Digital and wearfree stroke measuring system ultrasonic, respectively high-resolution rotary sensors for injection and injection unit movement, clamp and ejector movement | ○   | ○           | ○   |
| 4921 - Integrated measuring of energy consumption and the costs per piece  | -   | -           | -   |

| Functions  | 160 | 210 ... 350 | 420 |
|--|-----|-------------|-----|
| 420 - Process data entry (PDE) with 100 % monitoring and statistics with graphics for of process parameters  | ●   | ●           | ●   |
| 421 - Extended intern saving option for PDE-data, mould-records and journal entry  | ○   | ○           | ○   |
| 422 - Overlay of parameters of consecutive cycles in multiple graphs on one screen for a convenient evaluation of the process stability                      | ●   | ●           | ●   |
| 424 - Pallet control; uses 2 separate to ordering programmable input/output  | ○   | ○           | ○   |
| 425 - Storing program for extern storage of statistic data   | ●   | ●           | ●   |
| 427 - Temperatur reduction over switchpoint with timing in manual mode activatable   | ●   | ●           | ●   |
| 428 - Dry cycle without heat via program switch  | ●   | ●           | ●   |
| 429 - Preselection part counter for startup reject parts after every break of automatic-mode   | ●   | ●           | ●   |
| 430 - Start up program in 3 stages; including back pressure  | ○   | ○           | ○   |
| 440 - Switch-on program / switch-off program with purging  | ●   | ●           | ●   |
| 442 - switch-on program / switch-off program without purging   | -   | -           | -   |
| 443 - switch-on program / switch-off program with ontime purging   | -   | -           | -   |
| 445 - Flexible movement sequence for the injection unit without/with multiple movements from ejector and core pullers  | ●   | ●           | ●   |
| 446 - Flexible movement of the injection unit  | ●   | ●           | ●   |
| 460 - Printer program with automatic printing of error message log (alarms, messages and change log)   | ○   | ○           | ○   |
| 461 - Change reason; on-screen display   | ●   | ●           | ●   |
| 462 - Event journal  | ○   | ○           | ○   |
| 471 - factory data capture integrated in machine control   | ○   | ○           | ○   |
| 480 - Help function; integrated control indication over control  | ●   | ●           | ●   |
| 481 - Additional operating language  | ○   | ○           | ○   |
| 485 - Ergostart, integrated basic setting Program  | -   | -           | -   |
| 486 - Ergosupport: program for faster fault recognition on basic setting/process optimisation and for extended monitoring of process sequence and deviations | ○   | ○           | ○   |

| Functions   | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| 488 - Service page  | ●   | ●           | ●   |
| 489 - Analysis of cycle time  | ●   | ●           | ●   |
| 493 - Two freely programmable sides   | ●   | ●           | ●   |
| 494 - Additional two freely programmable sides  | ○   | ○           | ○   |
| 495 - Integration of extern user interfaces in operator panel with VNC-client (Active Remote) | ○   | ○           | ○   |

| Interfaces  | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| 450 - Inputs / outputs freely programmable; 3 inputs and 3 outputs                            | ○   | ○           | ○   |
| 454 - Inputs / outputs freely programmable; 6 inputs and 6 outputs                            | ○   | ○           | ○   |
| 510 - Socket for second nozzle heater band  | ○   | ○           | ○   |
| 523 - 50-pin handling device interface conf. to Euromap 67 (VDMA)                             | ○   | ○           | ○   |
| 529 - Interface for handling device, version Asia   | -   | -           | -   |
| 528 - Adapter cable for Euromap 67 (50-pole) to Euromap 12 (32-pole) and SPI AN-116 (32-pole) | ○   | ○           | ○   |
| 532 - Additional controller nozzle 1 circuit  | ○   | ○           | ○   |
| 540 - Interfaces for ejector limit switch in mould, side action with LS and product detection | ○   | ○           | ○   |
| 541 - Interface for mould protection (ejector plate safety)                                   | ●   | ●           | ●   |
| 542 - Interface for component ejection monitoring   | ○   | ○           | ○   |
| 544 - Interface for mould safety, side core safety mechanism                                  | ●   | ●           | ●   |
| 546 - Interface for screw-back unit   | ○   | ○           | ○   |
| 555 - Interface for mould temperature indication, 2 circuit                                   | ○   | ○           | ○   |
| 552 - CAN-Bus interface for temperature controllers (2 or 4 circuits), Demag-specific signal  | ○   | ○           | ○   |
| 556 - 20 mA interface (TTY-V24) for up to 6 units integrated temperature controllers          | ○   | ○           | ○   |
| 562 - Interface machine status  | ○   | ○           | ○   |
| 563 - Data interface for main computer systems to Euromap 63 and SPI AN-142                   | ○   | ○           | ○   |
| 571 - WCS - DPG World Connect; Remote maintenance and control of the machine                  | ●   | ●           | ●   |

| General   | 160 | 210 ... 350 | 420 |
|---|-----|-------------|-----|
| 10 - Injection moulding machine with CE-declaration of conformity (without periphery and automation), safety devices according to EN201 USA: machine and safety devices according to ANSI | ●   | ●           | ●   |
| 14 - Oil pre-heating  | ●   | ●           | ●   |
| 13 - Oil temperatur regulated with temperatur indicator   | ●   | ●           | ●   |
| 15 - Ports for external oil cleaning  | ●   | ●           | ●   |
| 17 - Two staged filter control  | ●   | ●           | ●   |
| 23 - Clamp force adjustable at Ergocontrol control, including indication of actual valve  | ●   | ●           | ●   |
| 50 - Interface for handling device, mechanical according to VDMA 24466/Euromap 18   | ●   | ●           | ●   |
| 52 - Fault indication: free allocable output  | -   | -           | -   |
| 67 - DPG-Interface mechanic (drilling pattern) for material conveyer  | ●   | ●           | ●   |
| 71 - USB-Device   | ●   | ●           | ●   |
| 80 - Interface for extern printer (hardcopy)  | ●   | ●           | ●   |
| 95 - Machine setup modus (reduced speed)  | ●   | ●           | ●   |

● Basic equipment

1) valid for CU through 120

○ Additional price

The shown specifications reflect the state at the time of printing. We reserve the right to modify specifications.



| General  | 160 | 210 ... 350 | 420 |
|--|-----|-------------|-----|
| 96 - Alarm management (alarms + indications)                                     | ●   | ●           | ●   |
| 97 - Setpoint entry switch-over to physical values (bar, cm <sup>3</sup> , mm/s) | ●   | ●           | ●   |
| 98 - Process control   | ●   | ●           | ●   |
| 105 - Pump driving input I   | -   | -           | -   |
| 106 - Pump driving input II, increased   | ●   | ●           | ●   |
| 109 - Pump combination for parallel movement CU                                  | -   | -           | -   |
| 122 - Increase of machine bed of 100 mm  | ○   | ○           | ○   |
| 123 - Kill switch on operator side   | ●   | ●           | ●   |
| 126 - Data display colored   | ●   | ●           | ●   |
| 135 - Oil cooling (cooling water supply up to 25°C)                              | -   | -           | -   |
| 136 - Oil cooling unit with increased cooling capacity                           | ●   | ●           | ●   |
| 137 - Integrated oil cleaning unit for microfibre bypass filtration              | ●   | ●           | ●   |
| 138 - Water supply for mould - and machine-cooling together                      | ○   | ○           | ○   |
| 139 - Water supply for mould- and machine-cooling separated                      | ●   | ●           | ●   |
| 170 - Fault indication by flashing lamp  | ●   | ●           | ●   |
| 171 - Fault indication by acoustic alarm   | ○   | ○           | ○   |
| 180 - Anti-vibration mounts  | ●   | ●           | ●   |
| 705 - QS-switch with control; 2 directions                                       | ○   | ○           | -   |
| 742 - Connection of the mould cooling up to the clamping plates                  | ○   | ○           | ○   |
| 790 - Integrated printer including driver software                               | ○   | ○           | ○   |
| 802 - ErgoCheck: Documentation of machine operative readiness                    | ○   | ○           | ○   |
| 870 - PC-program for visualisation mould records                                 | ○   | ○           | ○   |
| 1092 - Speed-controlled energy saving pump (activeDrive)                         | ●   | ●           | ●   |

| Plastification   | 160 | 210 ... 350 | 420 |
|--|-----|-------------|-----|
| 60 - Cylinder change manual  | ●   | ●           | ●   |
| 61 - Central connector for cylinder heating and thermo sensor  | ●   | ●           | ●   |
| 68 - Operating range of screw cylinder up to 400°C   | ●   | ●           | ●   |
| 65 - 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 (with bi-metal lining barrel) | ●   | ●           | ●   |
| 66 - Fast cylinder change with main plugs für heating and thermo indicator and with automatic cylinder detection   | ●   | ●           | ●   |
| 601 - Energy-saving thermal insulation of the plasticizing   | ○   | ○           | ○   |
| 610 - Wear and corrosion resistant universal thermoplastic screw, nitrided barrel{\Operating range of screw cylinder up to 400°C}  | ●   | ●           | ●   |
| 611ff - High-performance plastication unit; customised   | ○   | ○           | ○   |
| 640 - Flow back barrier (RSP), three-part ring-version   | ●   | ●           | ●   |
| 642 - Flow back barrier (RSP), ball-version  | ○   | ○           | ○   |
| 650 - Open nozzle  | ●   | ●           | ●   |
| 665 - Pneumatic shut off nozzle incl. control  | ○   | ○           | ○   |

All data and information in this prospectus have been compiled with great care. However, we are unable to guarantee its correctness. Furthermore we indicate that individual illustrations and information may deviate from the actual delivery condition of the machine.

## Notes



A series of horizontal lines for writing notes, consisting of 26 evenly spaced lines.

## Notes



A series of horizontal lines for writing notes, consisting of 25 evenly spaced lines.

| 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 faktor x swept volume   |                        |
| The melt correction faktor 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. |                        |

Certified according to VDA 6.4



Sumitomo (SHI) Demag Plastics Machinery GmbH  
 info-dpde@dpg.com  
 www.sumitomo-shi-demag.eu

All data and information provided in this brochure has been compiled and checked with due care and diligence. We believe the contents of this brochure to be accurate, but cannot guarantee its accuracy. The description in this brochure may differ from the machine's actual condition upon delivery.