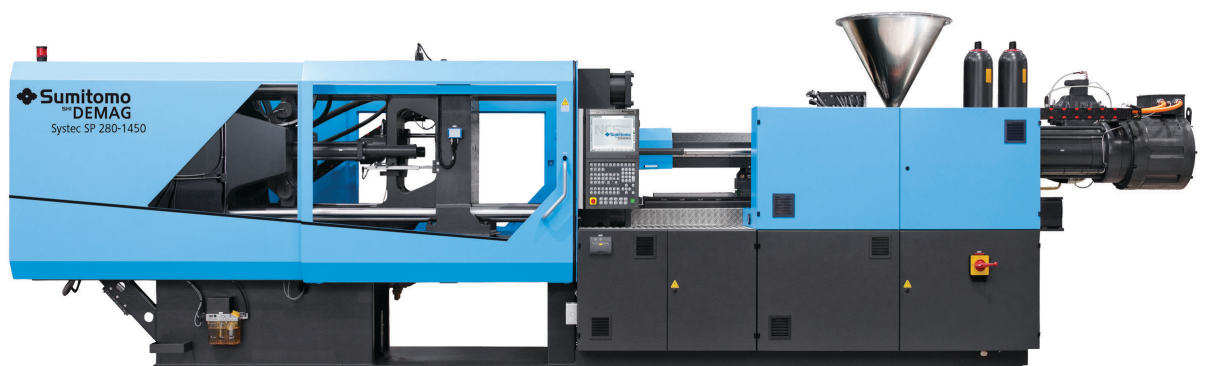


## SYSTEC SP High-Speed Hybrid Series

Detailed Specifications  
ENGLISH UNITS



# Technical Data Systec SP 160/520

Sumitomo (SHI) Demag		Systec SP 160/520											
Model description		160/520-430				160/520-600				160/520-840			
International size description		1600-430				1600-600				1600-840			
<b>Clamp Unit</b>		<b>160/520</b>											
Clamp force / Locking force	[Ton]	179.81/197.79											
Clamp stroke, max.	[in]	19.69											
Mold height, min.	[in]	10.83											
Mold height, max. (std./opt.)	[in]	23.03/26.97											
Open Daylight, max. (std./enl.)	[in]	42.72/46.65											
Platen size (h x v)	[in]	30.31x30.31											
Distance between tie bars (h x v)	[in]	20.47x20.47											
Min. permissible mold diameter (k)	[in]	11.81											
Max mould weight / mov./ fixed	[kg]	2200/1300/1700											
Ejection stroke	[in]	6.3											
Ejection force / Retraction force	[Ton]	5.17/2.47											
<b>Injection unit</b>		<b>430</b>				<b>600</b>				<b>840</b>			
Screw diameter	[mm]	35	40	35	40	40	45	40	45	45	50	45	50
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]	38290	29370	38348	29370	35070	27760	35215	27760	34838	28224	34838	28224
Cylinder head volume, max.	[in <sup>3</sup> ]	10.8	14.1	10.8	14.1	15.6	19.7	15.6	19.7	21.8	27	21.8	27
Max. shot weight (PS, PE*)	[oz]	5.7	7.4	4.5*	6*	8.2	10.4	6.6*	8.3*	11.5	14.2	9.2*	11.4*
<b>Max. rate of injection <sup>2)</sup></b>													
> with accumulator	[in <sup>3</sup> /s]	35.8	46.8	35.8	46.8	46.8	59.2	46.8	59.2	53.4	61.1	53.4	61.1
<b>Plasticizing rate (PS)</b>													
> electric screw drive (PS/PE*)	[~oz/s]	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*
Max. screw stroke	[in]	7.24				7.99				8.86			
Max. distance of nozzle retraction	[in]	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.75	36.02	30		
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
Nozzle contact force	[Ton]	8.99				8.99				12.36			
Number of heating zones		4	4	4	4	4	4	4	5	5	5	5	5
Hopper capacity, optional	[lb]	77				110				154			
<b>General data</b>		<b>160/520-430</b>				<b>160/520-600</b>				<b>160/520-840</b>			
Oil tank capacity	[gal]	106				106				106			
<b>Installed electrical rating</b>													
> pump	[~kW]	36											
> electric screw drive	[~kW]	27.0				26.7				31.5			
> Barrel heating capacity	[~kW]	9.4	11.1	13.0	13.9	11.1	11.3	13.9	15.7	13.0	14.8	15.7	22.3
> total capacity	[~kW]	72.4	74.1	76.0	76.9	73.8	74.0	76.6	78.4	80.5	82.3	83.2	89.8
Dry cycle time (Euromap 6)	[sec-in]	1.3-13.78											
Dry cycles with unlocking time	[sec-in]	1.5-13.78											
Net weight (without oil) <sup>3)</sup>	[~Ton]	8.27				8.38				8.65			
Transport dimensions (l x w x h)	[~ft]	18.37x5.25x6.89				18.37x5.25x6.89				18.37x5.25x6.89			
Electric drive projection (h)	[in]	[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		Systec SP 210/580											
Model description		210/580-600				210/580-840				210/580-1450			
International size description		2100-600				2100-840				2100-1450			
<b>Clamp Unit</b>		<b>210/580</b>											
Clamp force / Locking force	[Ton]	236/259.6											
Clamp stroke, max.	[in]	22.64											
Mold height, min.	[in]	13.39											
Mold height, max. (std./opt.)	[in]	27.17/31.1											
Open Daylight, max. (std./enl.)	[in]	49.8/53.74											
Platen size (h x v)	[in]	33.86x33.86											
Distance between tie bars (h x v)	[in]	22.83x22.83											
Min. permissible mold diameter (k)	[in]	13.78											
Max mould weight / mov./ fixed	[kg]	3300/2000/2500											
Ejection stroke	[in]	7.09											
Ejection force / Retraction force	[Ton]	8.54/4.16											
<b>Injection unit</b>		<b>600</b>				<b>840</b>				<b>1450</b>			
Screw diameter	[mm]	40	45	40	45	45	50	45	50	50	60	50	60
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]	35070	27760	35215	27760	34838	28224	34838	28224	35186	27630	35172	27630
Cylinder head volume, max.	[in <sup>3</sup> ]	15.6	14.2	15.6	19.7	21.8	27	21.8	27	32.3	46.6	32.3	46.6
Max. shot weight (PS, PE*)	[oz]	8.2	10.4	6.6*	8.3*	11.5	14.2	9.2*	11.4*	17	24.5	13.6*	19.6*
<b>Max. rate of injection <sup>2)</sup></b>													
> with accumulator	[in <sup>3</sup> /s]	46.8	59.2	46.8	59.2	53.4	61.1	53.4	61.1	61.1	77.6	61.1	77.6
<b>Plasticizing rate (PS)</b>													
> electric screw drive (PS/PE*)	[~oz/s]	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*
Max. screw stroke	[in]	7.99	7.99	7.99	7.99	8.86	8.86	8.86	8.86	10.63	10.63	10.63	10.63
Max. distance of nozzle retraction	[in]	36.02	30	27.17	19.49	36.02	30	27.17	19.49	43.31	31.61	27.17	19.49
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
Nozzle contact force	[Ton]	8.99				12.36				12.36			
Number of heating zones		4	4	4	4	5	5	5	5	5	5	5	5
Hopper capacity, optional	[lb]	110				154				243			
<b>General data</b>		<b>210/580-600</b>				<b>210/580-840</b>				<b>210/580-1450</b>			
Oil tank capacity	[gal]	106				106				106			
<b>Installed electrical rating</b>													
> pump	[~kW]	51											
> electric screw drive	[~kW]	26.7				31.5				34.5			
> Barrel heating capacity	[~kW]	11.1	11.3	13.9	15.7	13.0	14.8	15.7	22.3	14.8	23.1	18.3	27.9
> total capacity	[~kW]	88.8	89.0	91.6	93.4	95.5	97.3	98.2	104.8	100.3	108.6	103.8	113.4
Dry cycle time (Euromap 6)	[sec-in]	1.4-15.98											
Dry cycles with unlocking time	[sec-in]	1.6-15.98											
Net weight (without oil) <sup>3)</sup>	[~Ton]	10.14				10.47				10.69			
Transport dimensions (l x w x h)	[~ft]	19.69x5.58x6.89				19.69x5.58x6.89				19.69x5.58x6.89			
Electric drive projection (h)	[in]	[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

# Technical Data Systec SP 280/630

## 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]
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### Plasticizing rate (PS)

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

## General data

Oil tank capacity	[gal]
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### 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 280/630

280/630-840	280/630-1450	280/630-2300
2800-840	2800-1450	2800-2300

## 280/630

314.66/346.13
26.57
12.99
27.95/32.68
54.53/59.25
36.61x36.61
24.8x24.8
15.75
4300/2500/3300
7.87
8.54/4.16

## 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	38058	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*

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

> with accumulator	[in <sup>3</sup> /s]
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### Plasticizing rate (PS)

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

## 280/630-840 280/630-1450 280/630-2300

145	145	145
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### 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]

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 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]
<b>Max. rate of injection <sup>2)</sup></b>	
> with accumulator	[in <sup>3</sup> /s]
<b>Plastizing rate (PS)</b>	
> 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

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.  
 Plastizing 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 plastizing unit  
 3) The net weight of the machine may vary depending on equipment

# 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]

<b>Max. rate of injection <sup>2)</sup></b>	
> with accumulator	[in <sup>3</sup> /s]

## Plastizising 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]
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## 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

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

420/820-1450	420/820-2300	420/820-3300
145	145	145

## 420/820-2300

59											
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34.5				48.0				76.0			
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14.8	23.1	18.3	27.9	23.1	27.0	27.9	32.2	30.6	30.6	32.2	42.6
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108.3	116.6	111.8	121.4	130.1	134.0	134.9	139.2	165.6	165.6	167.2	177.6
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2.25-22.6											
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2.6-22.6											
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23.26				23.7				27.45			
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26.25x7.22x7.87				26.25x7.22x7.87				29.86x7.22x7.87			
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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
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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

# 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, additionally 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 - Pneumactical 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 - WC5 - 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 value	●	●	●
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: Dokumentation 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.

Practical values of the melt correction factor for use in the 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.	

Certified according to VDA 6.4

NOTE: Specifications subject to change without notice.



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