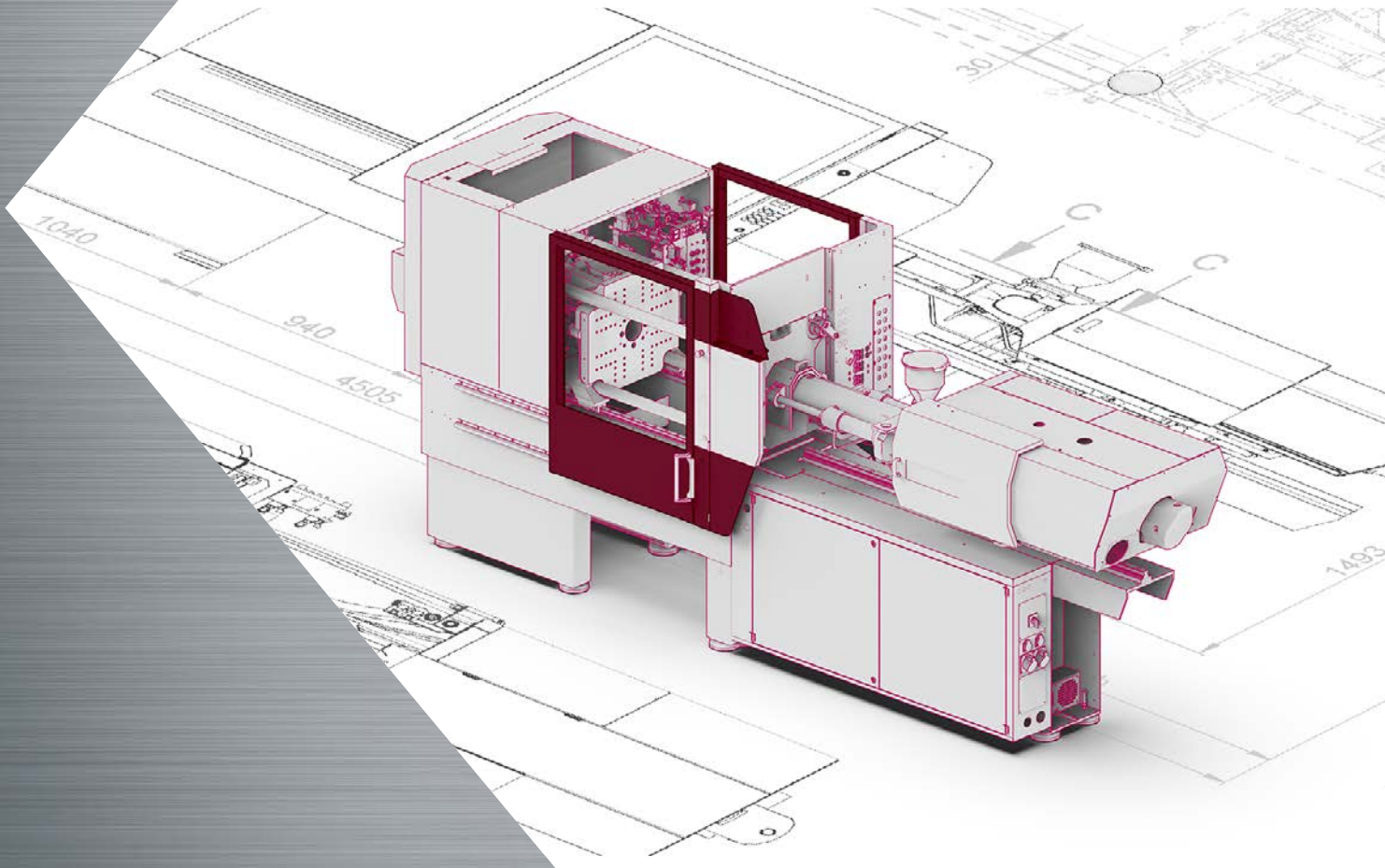
WITTMANN

EcoPower 55 – 550 t

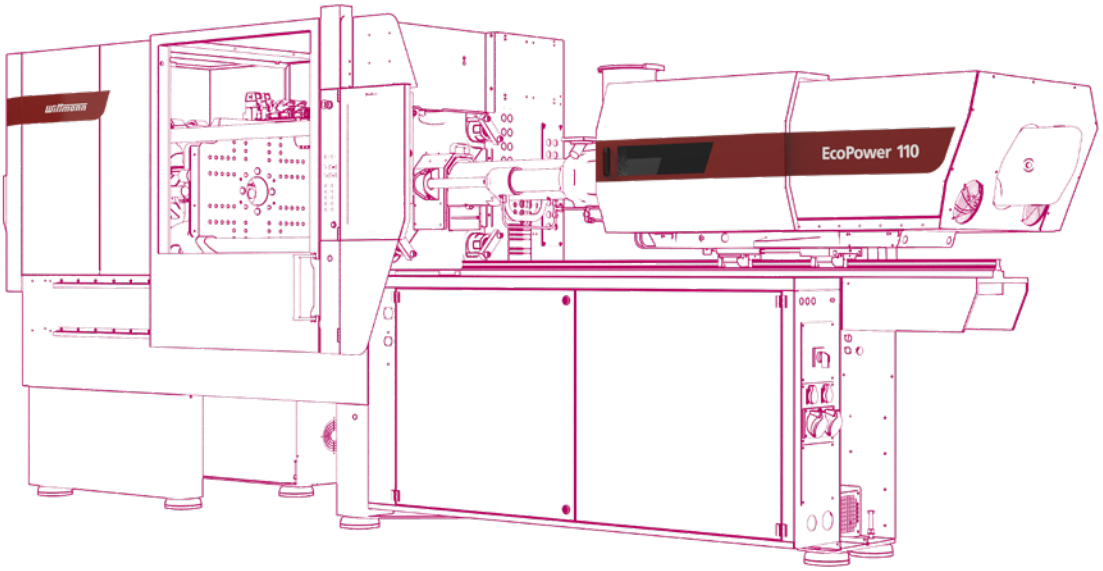
Precise, energy-efficient, dynamic



world of innovation

EcoPower
Technical data

The EcoPower is the ideal choice wherever precision, efficiency and cleanness are called for. Whether in medical technology, in the packaging industry or in high-precision molding of technical parts, the all-electric high-performance machine scores with high injection speeds, extremely precise regulation and high dynamism. Direct servo drives and utilization of deceleration energy reduce its energy consumption to a minimum. Thanks to its modular design, the EcoPower can be flexibly adapted to your specific production requirements.



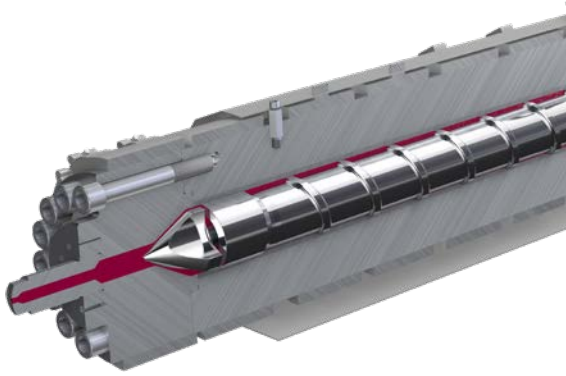
COMBINATIONS

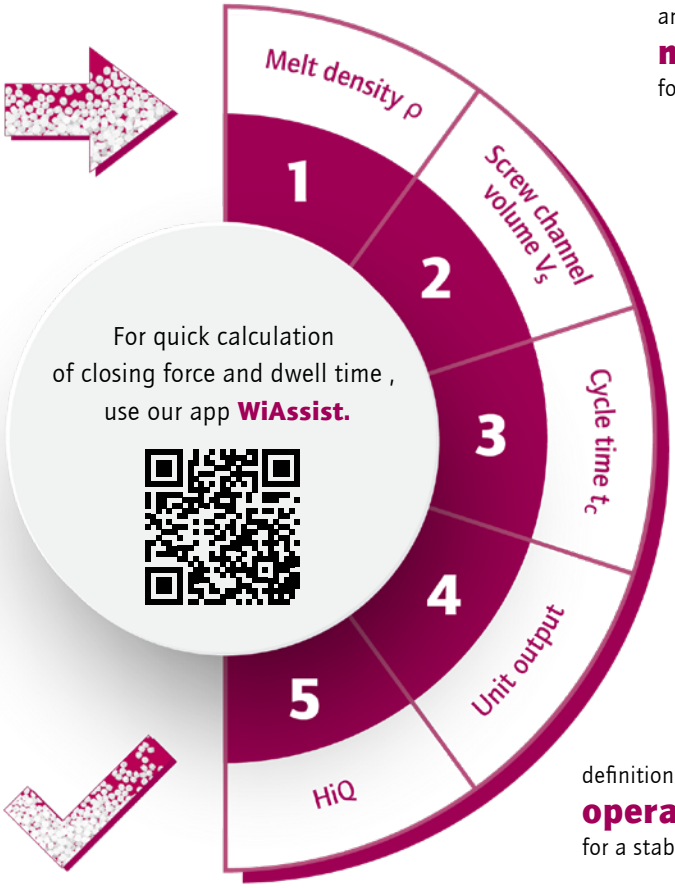
Clamping unit		Injection unit Screw ⌀ mm											
Clamping force	Dist. between tie bars	70	130	210	350	525	750	1000	1330	1670	2100	3300	5000
t	mm x mm	14 18 22	18 22 25 30	25 30 35	30 35 40	35 40 45	40 45 50	45 50 55	50 55 60	55 60 65	55 65 75	65 75 85	75 85 95
55	370 x 320	◆	◆	◆	◆								
90	470 x 420		◆	◆	◆	◆							
110	470 x 420			◆	◆	◆	◆						
160	570 x 520				◆	◆	◆	◆					
180	570 x 520					◆	◆	◆	◆				
240	670 x 620						◆	◆	◆	◆			
300	800 x 720						◆	◆	◆	◆			
400	870 x 820								◆	◆	◆	◆	
450	870 x 820								◆	◆	◆	◆	
500	970 x 920									◆	◆	◆	◆
550	970 x 920									◆	◆	◆	◆

From the right plasticizing unit to the optimum machine

The plasticizing system is the decisive factor for the stability of the injection molding process, the amount of throughput to be realized, the quality of the molded part and the length of service life for all machine components. The plasticizing unit and the application must be perfectly coordinated.

The experts at WITTMANN are happy to assist with





analysis of
material attributes
for a homogeneous melt

selection of
screw geometry
for maximum throughput

setting of
process parameters
for optimal efficiency and quality standards

input of
machine specifications
for maximum performance and a long service life of the machine

definition of
operating conditions
for a stable production process

selection of the right **machine size**

MATERIAL ATTRIBUTES

Material		ABS	EVA	HDPE	LDPE	PA	PA 11	PA 12	PBT	PC	PEEK	PET	PMMA	POM	PP	PS	PVC rigid	PVC flexible	SAN	TPU	TPV
Solid density	g/cm³	1.08	0.92	0.96	0.92	1.13	1.03	1.02	1.34	1.20	1.29	1.40	1.18	1.42	0.90	1.04	1.37	1.29	1.05	1.20	0.97
Melt density ρ	g/cm³	0.95	0.75	0.73	0.75	0.96	0.97	0.95	1.11	1.01	1.08	1.10	1.06	1.15	0.73	0.91	1.20	1.12	0.98	1.00	0.85

EcoPower 55

Clamping unit		EcoPower 55
Clamping force	kN	550
Distance between tie bars	mm x mm	370 x 320
Min. mold height	mm	150
Max. mold height	mm	350
Opening stroke/opening force	mm/kN	250/44
Max. daylight	mm	600
Ejector stroke hydr. | electr.	mm	100 | 100
Ejector force hydr. | electr.	kN	26.4 | 25
Dry cycle time[1)]	s – mm	1.1 – 224

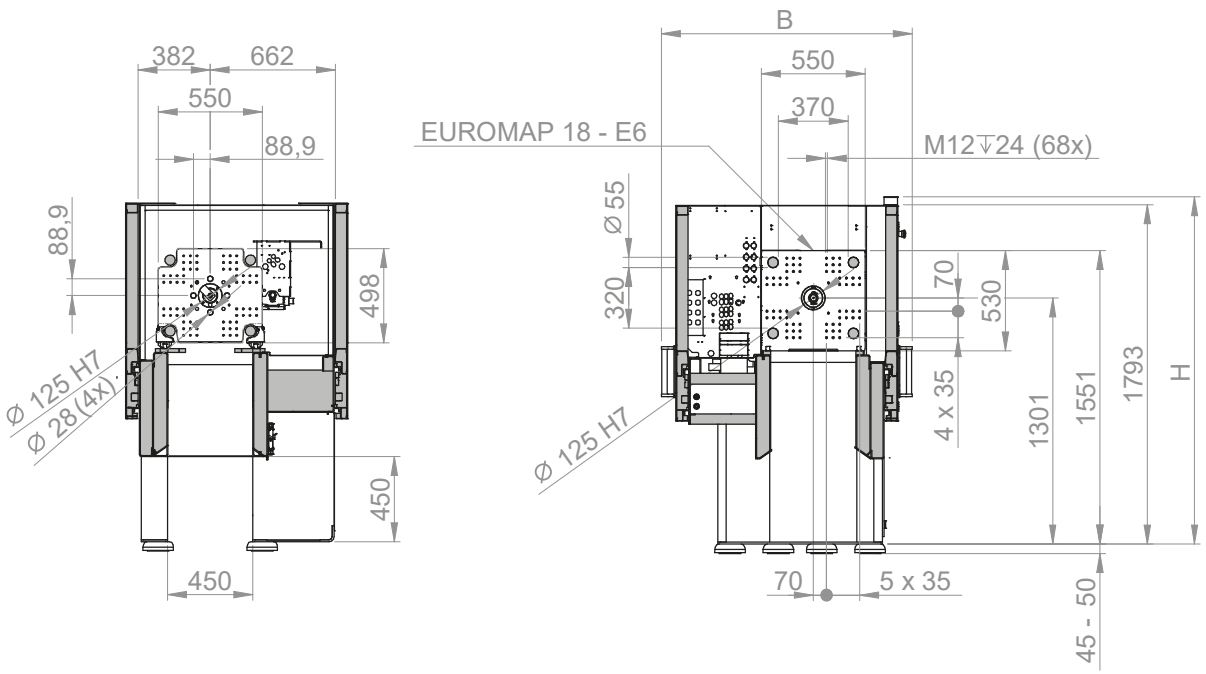
Injection unit		70			130				210			350		
Screw diameter	mm	14	18	22	18	22	25	30	25	30	35	30	35	40
Screw stroke	mm	70	90	90	90	110	125	125	125	150	150	150	175	175
Screw L/D ratio		20			20	20	22	22	22			22		
Theoretical shot volume	cm^3	10.8	22.9	34.2	22.9	41.8	61.4	88.4	61.4	106	144	106	168	220
Specific injection pressure	bar	3000	3000	2056	3000	2864	2218	1540	2940	2042	1500	2835	2083	1595
Max. screw speed	min^{-1}	600			475				400			350		
Max. plasticizing rate (HDPE)[2)]	g/s	2.1	6.1	8.8	4.8	7.0	13	18	11	16	24	14	21	34
Screw torque	Nm	65	120	150	120	150	250	250	340	400	400	500		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 250 | 47			30 | 250 | 47				30 | 250 | 86			30 | 250 | 86	
Injection rate into air	cm^3/s	61.6	102	152	50.9	76	98.2	141	98.2	141	192	141	192	251
Barrel heating power	kW	2.9	5.7	6.5	5.7	6.5	9.2	9.5	9.2	9.5	10.6	9.5	10.6	13.7
Heating zones barrel + nozzle		3 + 1			3 + 1				3 + 1			3 + 1		
Energy efficiency class[3)]		8+	7+	7+	7+	7+	6+	7+	6+	7+	8+	7+	8+	8+

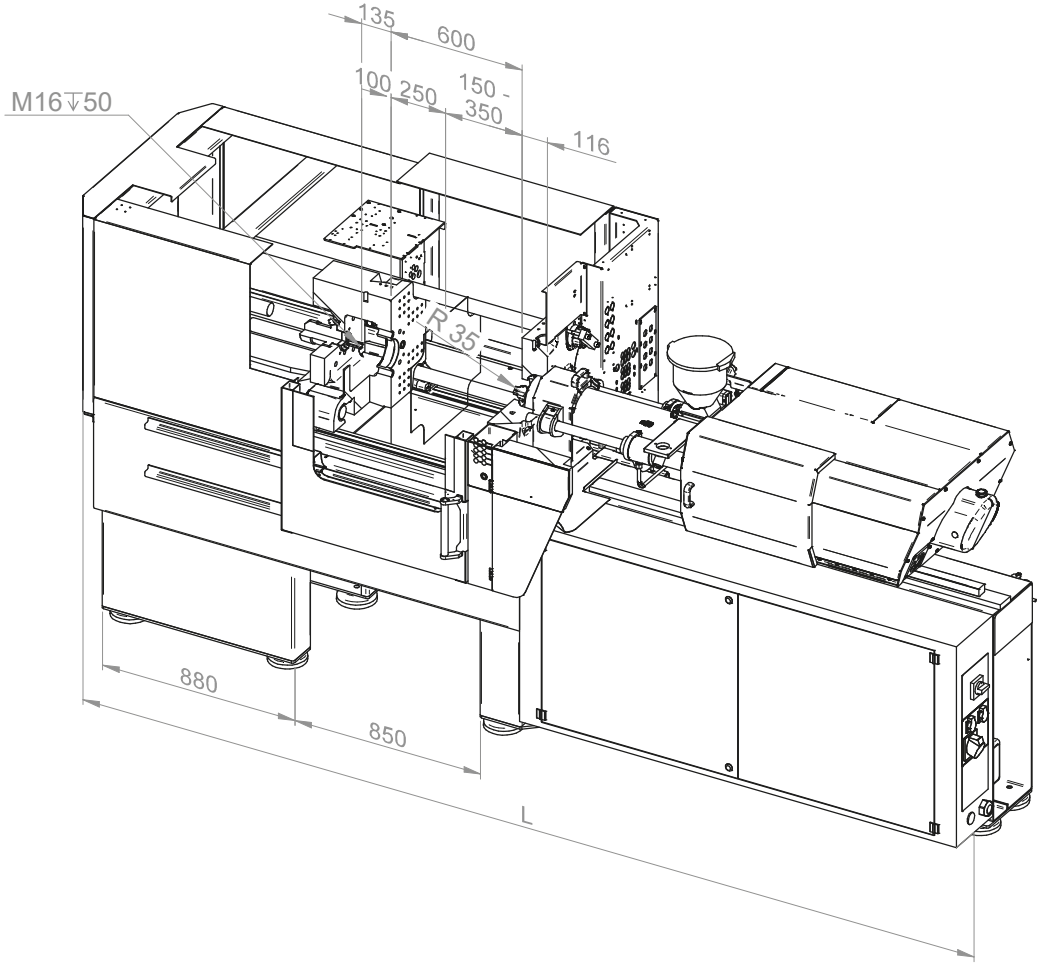
Drive, connection data					
Electrical power supply	kVA	11	14	17	20
Cooling water connection ⌀[4)]	mm	13	13	13	13
Cooling water flow rate[4)]	l/h	50 – 55	50 – 60	55 – 65	60 – 75
Emission sound pressure level[5)]	dB(A)	63	63	63	63

Weights, dimensions					
Net weight	kg	3200	3200	3200	3400
Length x width x height (L x B x H)[6)]	m	4.1 x 1.4 x 2	4.1 x 1.4 x 2	4.3 x 1.4 x 2	4.6 x 1.4 x 2
Max. mold weight[7)]	kg	600			
Min. mold dimension	mm x mm	246 x 196			

Control unit		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air, 25 °C water, HLP32, EM60, ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


382
662
550
88,9
88,9
498
Ø 125 H7
Ø 28 (4x)
450
450
B
550
370
EUROMAP 18 - E6
M12↧24 (68x)
Ø 55
320
70
530
4 x 35
1301
1551
1793
H
Ø 125 H7
70
5 x 35
45 - 50


135
600
100
250
150 -
350
116
M16↧50
R 35
880
850
L

EcoPower 90

Clamping unit		EcoPower 90
Clamping force	kN	900
Distance between tie bars	mm x mm	470 x 420
Min. mold height	mm	225
Max. mold height	mm	500
Opening stroke/opening force	mm/kN	400/88
Max. daylight	mm	900
Ejector stroke hydr. | electr.	mm	140 | 125
Ejector force hydr. | electr.	kN	26.4 | 25
Dry cycle time[1]	s – mm	1.2 – 294

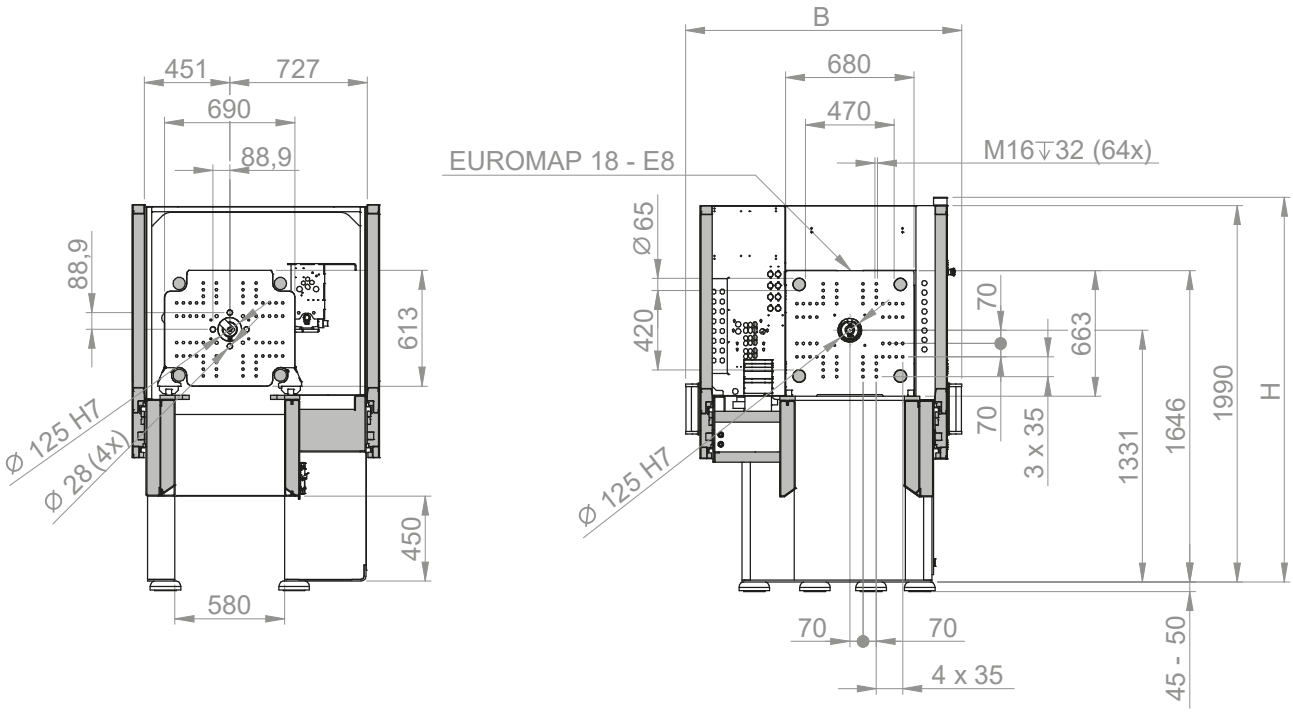
Injection unit		130				210			350			525		
Screw diameter	mm	18	22	25	30	25	30	35	30	35	40	35	40	45
Screw stroke	mm	90	110	125	125	125	150	150	150	175	175	175	200	200
Screw L/D ratio		20	20	22	22	22			22			22		
Theoretical shot volume	cm^3	22.9	41.8	61.4	88.4	61.4	106	144	106	168	220	168	251	318
Specific injection pressure	bar	3000	2864	2218	1540	2940	2042	1500	2835	2083	1595	2500	2100	1659
Max. screw speed	min^{-1}	475				400			350			325		
Max. plasticizing rate (HDPE)[2]	g/s	4.8	7.0	13	18	11	16	24	14	21	34	20	31	41
Screw torque	Nm	120	150	250	250	340	400	400	500			700		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 250 | 47				30 | 250 | 86			30 | 250 | 86			30 | 300 | 86		
Injection rate into air	cm^3/s	50.9	76	98.2	141	98.2	141	192	141	192	251	192	251	318
Barrel heating power	kW	5.7	6.5	9.2	9.5	9.2	9.5	10.6	9.5	10.6	13.7	10.6	13.7	16.7
Heating zones barrel + nozzle		3 + 1				3 + 1			3 + 1			3 + 1		
Energy efficiency class[3]		6+	6+	6+	7+	6+	7+	7+	7+	7+	8+	7+	8+	8+

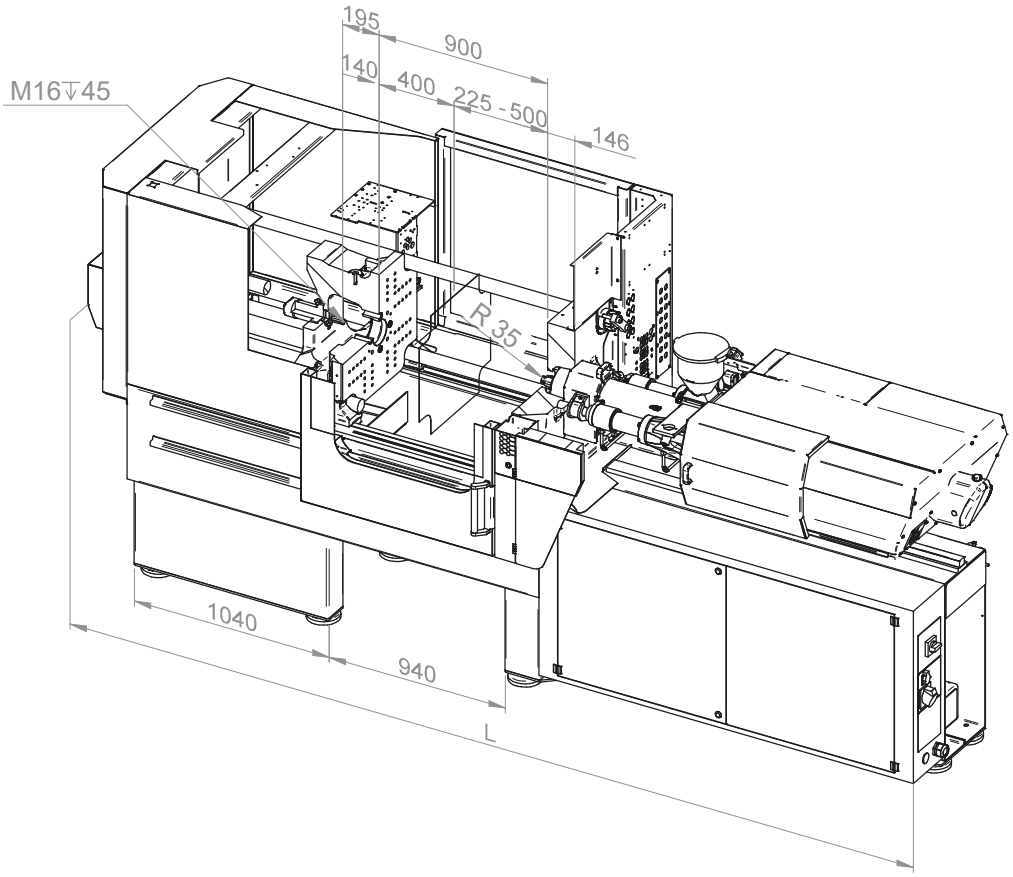
Drive, connection data					
Electrical power supply	kVA	14	17	20	23
Cooling water connection ⌀[4]	mm	13	13	13	13
Cooling water flow rate[4]	l/h	55 – 60	60 – 70	65 – 75	70 – 85
Emission sound pressure level[5]	dB(A)	63	63	63	63

Weights, dimensions					
Net weight	kg	4600	4600	4800	4800
Length x width x height (L x B x H)[6]	m	4.5 x 1.5 x 2.1	4.6 x 1.5 x 2.1	5.0 x 1.5 x 2.1	5.1 x 1.5 x 2.1
Max. mold weight[7]	kg	1000			
Min. mold dimension	mm x mm	296 x 246			

Control unit		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air, 25 °C water, HLP32, EM60, ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


451
727
690
88,9
88,9
613
450
580
Ø 125 H7
Ø 28 (4x)
B
680
470
EUROMAP 18 - E8
M16↧32 (64x)
Ø 65
420
70
663
70
3 x 35
1331
1646
1990
H
Ø 125 H7
70
70
4 x 35
45 - 50


195
900
140
400
225 - 500
146
M16↧45
R 35
1040
940
L

EcoPower 110

Clamping unit		EcoPower 110
Clamping force	kN	1100
Distance between tie bars	mm x mm	470 x 420
Min. mold height	mm	225
Max. mold height	mm	500
Opening stroke/opening force	mm/kN	400/88
Max. daylight	mm	900
Ejector stroke hydr. | electr.	mm	140 | 125
Ejector force hydr. | electr.	kN	26.4 | 25
Dry cycle time[1]	s – mm	1.2 – 294

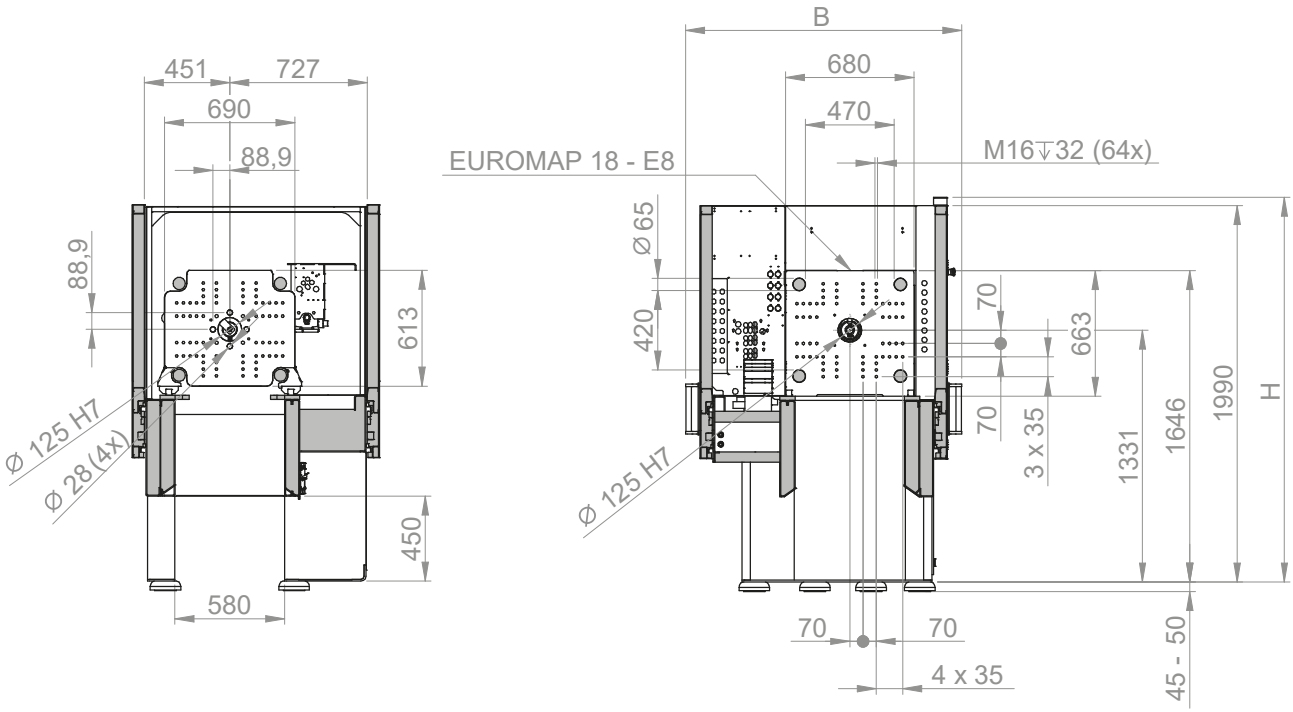
Injection unit		210			350			525			750		
Screw diameter	mm	25	30	35	30	35	40	35	40	45	40	45	50
Screw stroke	mm	125	150	150	150	175	175	175	200	200	200	225	225
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	61.4	106	144	106	168	220	168	251	318	251	358	442
Specific injection pressure	bar	2940	2042	1500	2835	2083	1595	2500	2100	1659	2500	2116	1714
Max. screw speed	min^{-1}	400			350			325			325		
Max. plasticizing rate (HDPE)[2]	g/s	11	16	24	14	21	34	20	31	41	31	41	49
Screw torque	Nm	340	400	400	500			700			900		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 250 | 86			30 | 250 | 86			30 | 300 | 86			30 | 350 | 86	
Injection rate into air	cm^3/s	98.2	141	192	141	192	251	192	251	318	251	318	393
Barrel heating power	kW	9.2	9.5	10.6	9.5	10.6	13.7	10.6	13.7	16.7	13.7	16.7	22.1
Heating zones barrel + nozzle		3 + 1			3 + 1			3 + 1			3 + 1	3 + 1	4 + 1
Energy efficiency class[3]		6+	7+	7+	7+	7+	8+	7+	8+	8+	7+	8+	8+

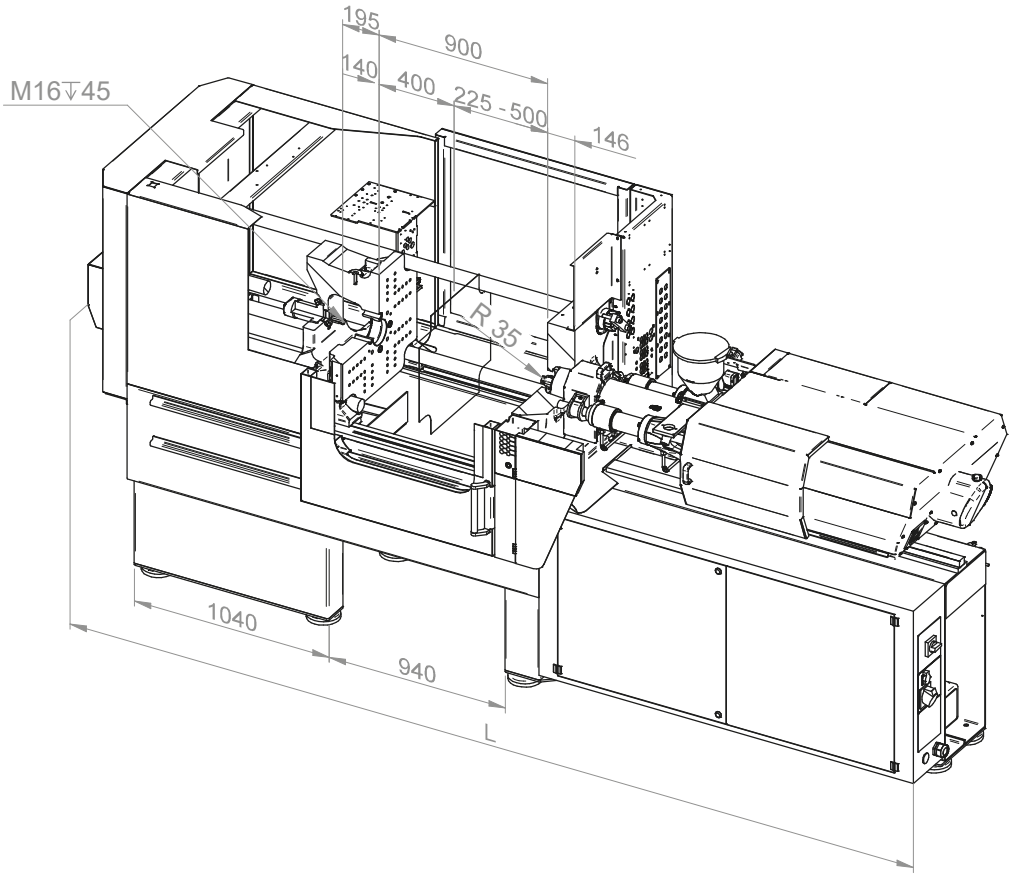
Drive. connection data					
Electrical power supply	kVA	17	20	23	29
Cooling water connection ⌀[4]	mm	13	13	13	13
Cooling water flow rate[4]	l/h	60 – 70	65 – 75	70 – 85	85 – 105
Emission sound pressure level[5]	dB(A)	63	63	63	63

Weights. dimensions					
Net weight	kg	4600	4800	4800	5200
Length x width x height (L x B x H)[6]	m	4.7 x 1.5 x 2.1	5 x 1.5 x 2.1	5.1 x 1.5 x 2.1	5.7 x 1.5 x 2.1
Max. mold weight[7]	kg	1000			
Min. mold dimension	mm x mm	296 x 296			

Control unit		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air. 25 °C water. HLP32. EM60. ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


451
727
690
88,9
88,9
613
450
580
Ø 125 H7
Ø 28 (4x)
B
680
470
EUROMAP 18 - E8
M16↧32 (64x)
Ø 65
420
70
663
70
3 x 35
1331
1646
1990
H
Ø 125 H7
70
70
4 x 35
45 - 50


195
900
140
400
225 - 500
146
M16↧45
R 35
1040
940
L

EcoPower 160

Clamping unit		EcoPower 160
Clamping force	kN	1600
Distance between tie bars	mm x mm	570 x 520
Min. mold height	mm	250
Max. mold height	mm	600
Opening stroke/opening force	mm/kN	500/144
Max. daylight	mm	1100
Ejector stroke hydr. | electr.	mm	180 | 160
Ejector force hydr. | electr.	kN	41.2 | 40
Dry cycle time[1]	s – mm	1.4 – 364

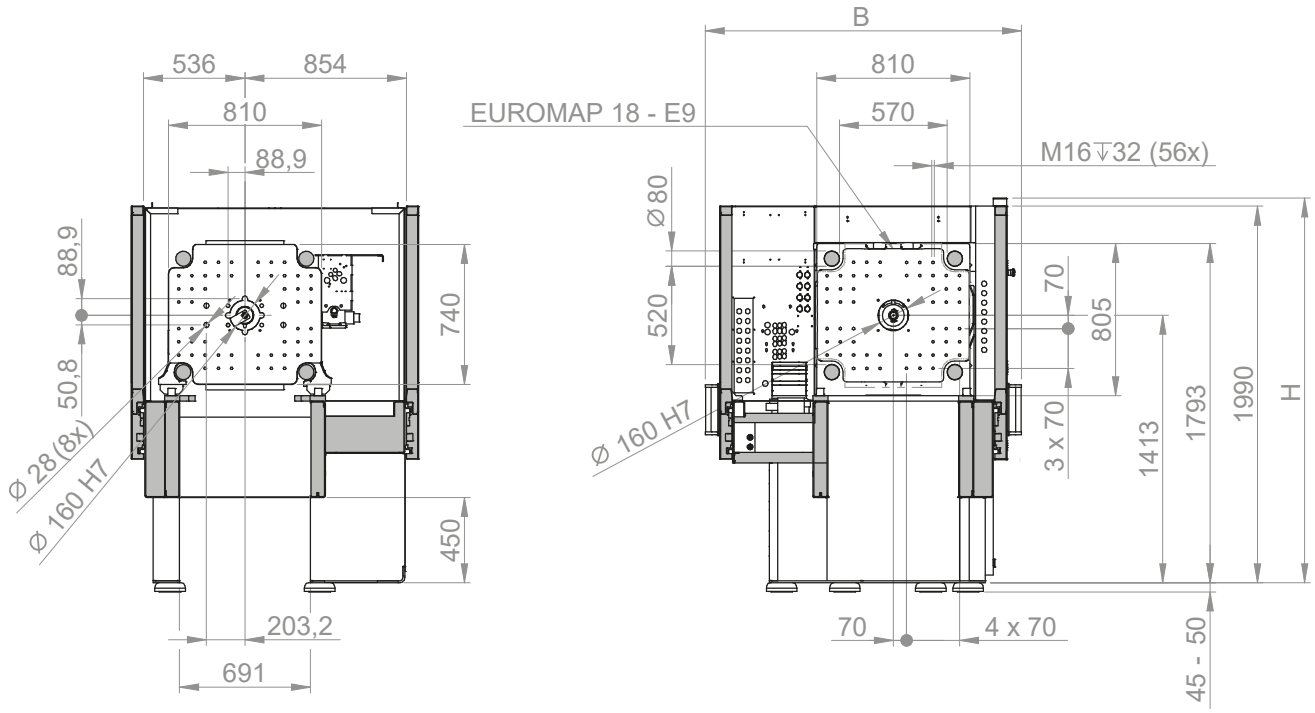
Injection unit		350			525			750			1000		
Screw diameter	mm	30	35	40	35	40	45	40	45	50	45	50	55
Screw stroke	mm	150	175	175	175	200	200	200	225	225	225	250	250
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	106	168	220	168	251	318	251	358	442	358	491	594
Specific injection pressure	bar	2835	2083	1595	2500	2100	1659	2500	2116	1714	2490	2016	1666
Max. screw speed	min^{-1}	350			325			325			300		
Max. plasticizing rate (HDPE)[2]	g/s	14	21	34	20	31	41	31	41	49	38	45	56
Screw torque	Nm	500			700			900			1200		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 300 | 86			30 | 300 | 86			30 | 350 | 86			30 | 400 | 100	
Injection rate into air	cm^3/s	141	192	251	192	251	318	251	318	393	318	393	475
Barrel heating power	kW	9.5	10.6	13.7	10.6	13.7	16.7	13.7	16.7	22.1	16.7	22.1	22.6
Heating zones barrel + nozzle		3 + 1			3 + 1			3 + 1	3 + 1	4 + 1	3 + 1	4 + 1	4 + 1
Energy efficiency class[3]		6+	7+	8+	7+	7+	8+	7+	8+	8+	8+	8+	9+

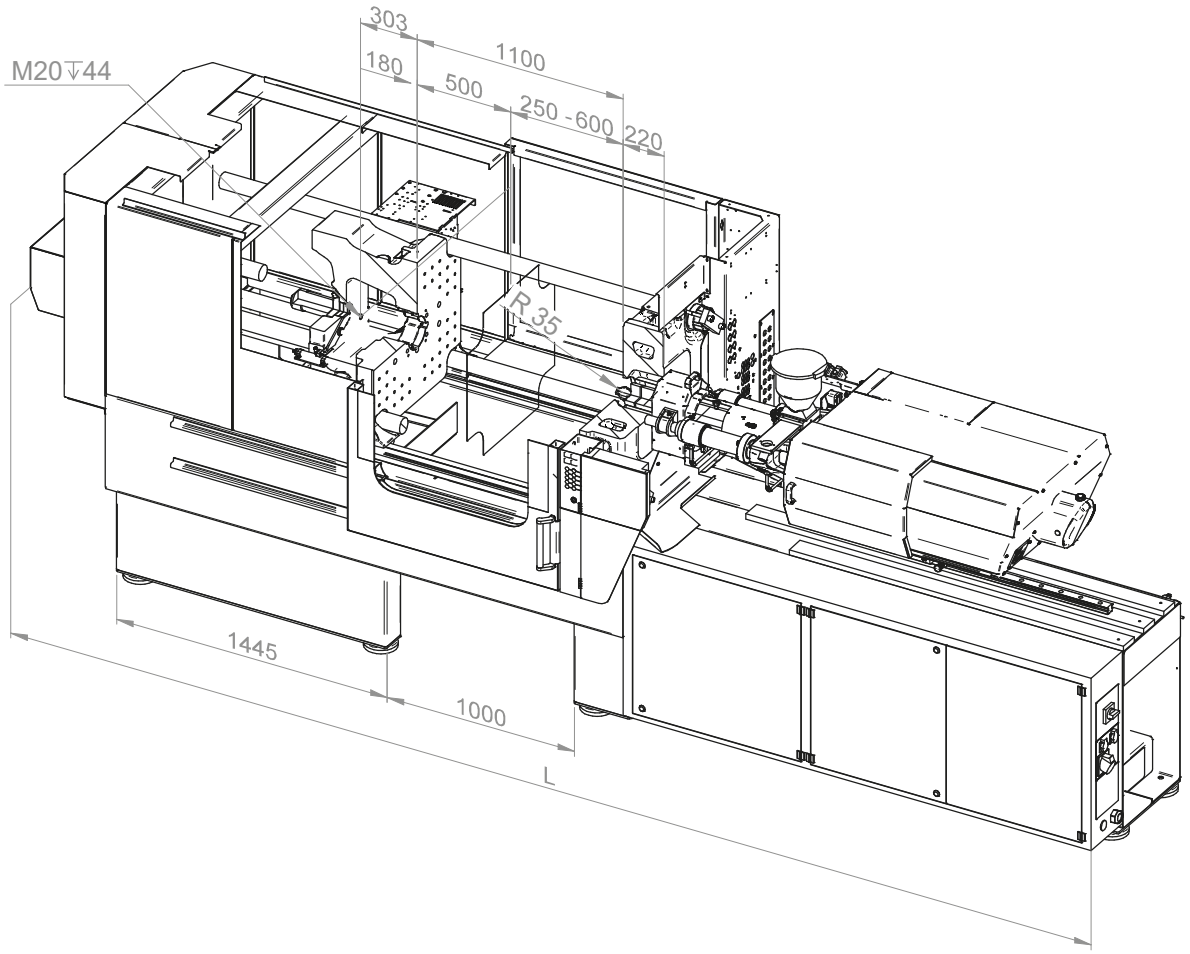
Drive. connection data					
Electrical power supply	kVA	21	24	29	37
Cooling water connection ⌀[4]	mm	13	13	13	13
Cooling water flow rate[4]	l/h	70 – 80	75 – 90	85 – 105	90 – 110
Emission sound pressure level[5]	dB(A)	64	64	64	64

Weights. dimensions					
Net weight	kg	6800	6800	7200	7200
Length x width x height (L x B x H)[6]	m	5.8 x 1.6 x 2.1	5.9 x 1.6 x 2.1	6.3 x 1.6 x 2.1	6.5 x 1.6 x 2.1
Max. mold weight[7]	kg	1800			
Min. mold dimension	mm x mm	346 x 296			

Control unit		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air. 25 °C water. HLP32. EM60. ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


536
854
810
88,9
88,9
50,8
Ø 28 (8x)
Ø 160 H7
740
450
203,2
691
B
810
EUROMAP 18 - E9
570
M16↧32 (56x)
Ø 80
520
70
805
3 x 70
1413
1793
1990
H
Ø 160 H7
70
4 x 70
45 - 50


303
180
1100
500
250 - 600
220
M20↧44
R 35
1445
1000
L

EcoPower 180

Clamping unit		EcoPower 180
Clamping force	kN	1800
Distance between tie bars	mm x mm	570 x 520
Min. mold height	mm	250
Max. mold height	mm	600
Opening stroke/opening force	mm/kN	500/144
Max. daylight	mm	1100
Ejector stroke hydr. | electr.	mm	180 | 160
Ejector force hydr. | electr.	kN	41.2 | 40
Dry cycle time[1]	s – mm	1.4 – 364

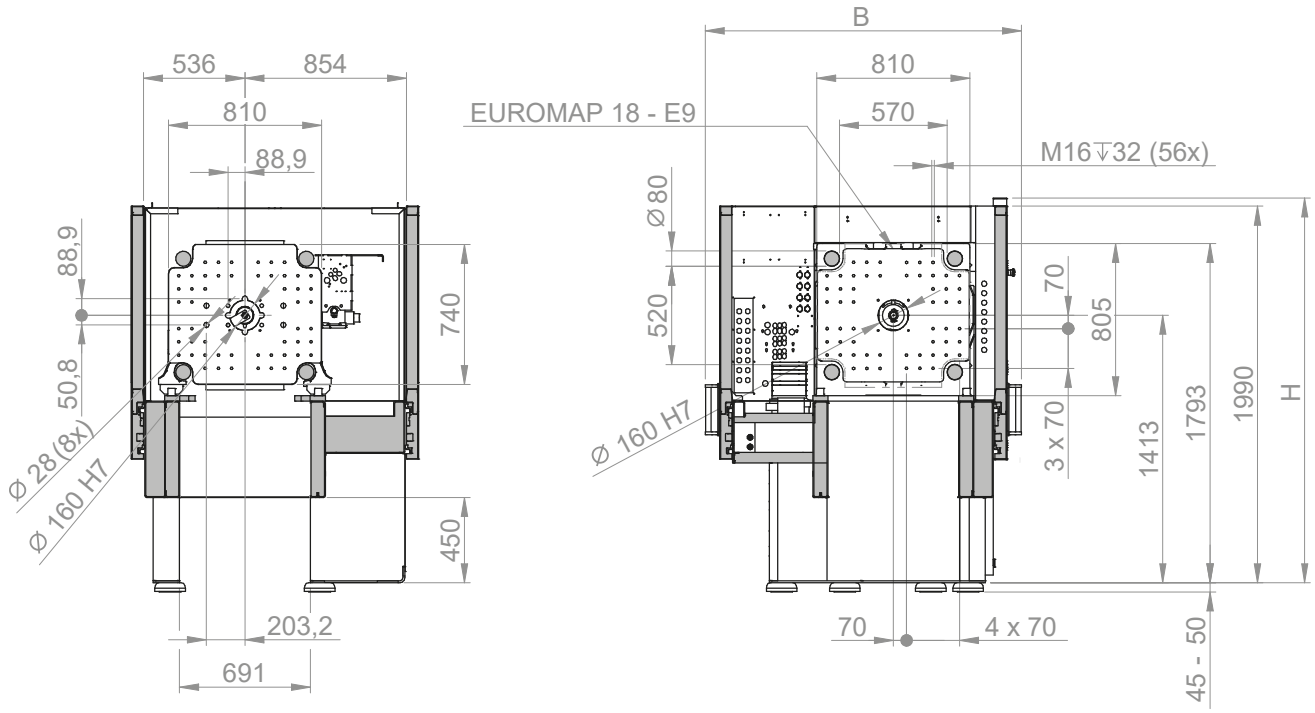
Injection unit		525			750			1000			1330		
Screw diameter	mm	35	40	45	40	45	50	45	50	55	50	55	60
Screw stroke	mm	175	200	200	200	225	225	225	250	250	250	275	275
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	168	251	318	251	358	442	358	491	594	491	653	778
Specific injection pressure	bar	2500	2100	1659	2500	2116	1714	2490	2016	1666	2470	2041	1715
Max. screw speed	min^{-1}	325			325			300			300		
Max. plasticizing rate (HDPE)[2]	g/s	20	31	41	31	41	49	38	45	56	45	56	59
Screw torque	Nm	700			900			1200			1500		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 300 | 86			30 | 350 | 86			30 | 400 | 100			30 | 400 | 100		
Injection rate into air	cm^3/s	192	251	318	251	318	393	318	393	475	344	416	495
Barrel heating power	kW	10.6	13.7	16.7	13.7	16.7	22.1	16.7	22.1	22.6	22.1	22.6	23.6
Heating zones barrel + nozzle		3 + 1			3 + 1	3 + 1	4 + 1	3 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1
Energy efficiency class[3]		7+	7+	8+	7+	8+	8+	8+	8+	9+	8+	9+	9+

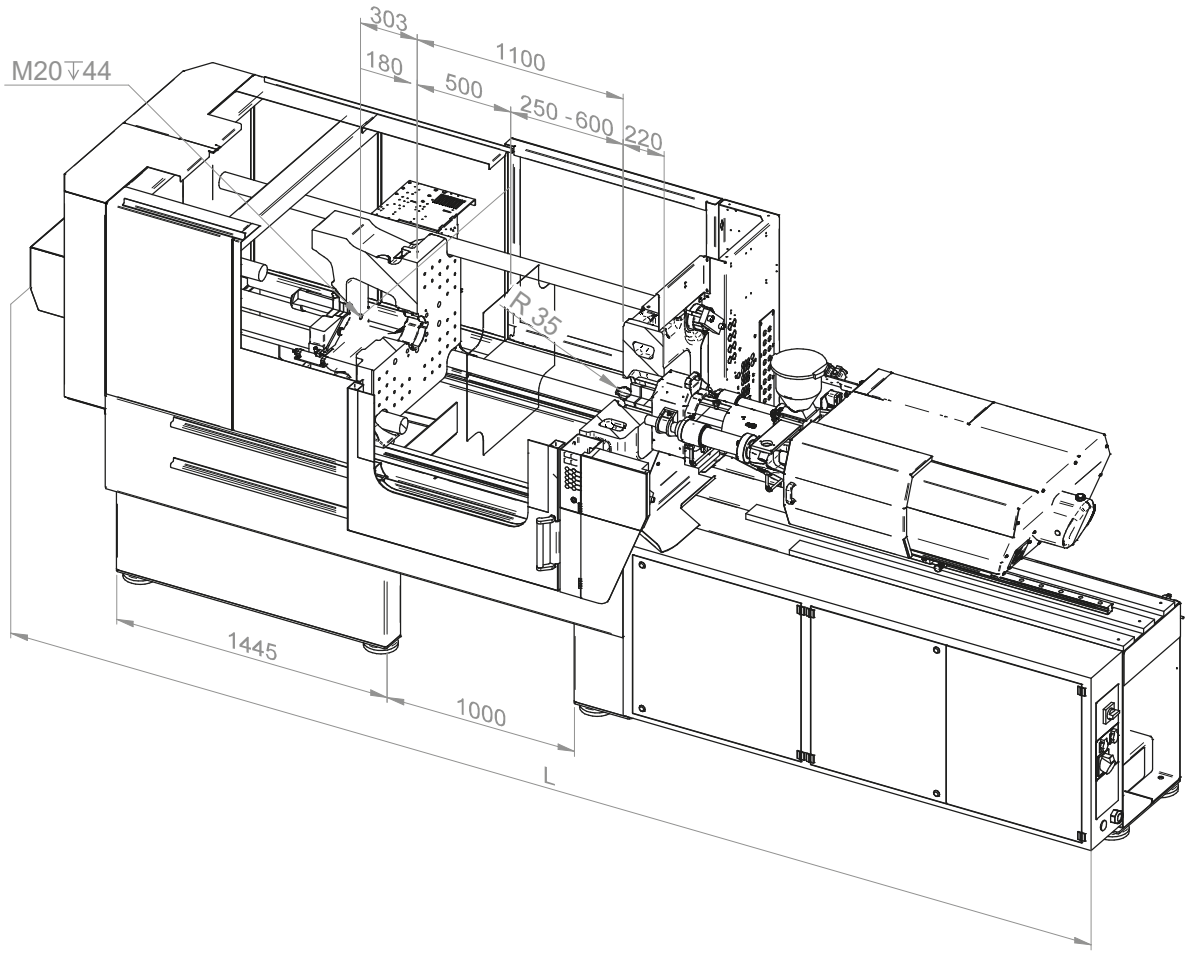
Drive. connection data					
Electrical power supply	kVA	24	29	37	44
Cooling water connection ⌀[4]	mm	13	13	13	13
Cooling water flow rate[4]	l/h	75 – 90	85 – 105	90 – 110	100 – 140
Emission sound pressure level[5]	dB(A)	64	64	64	64

Weights. dimensions					
Net weight	kg	6800	7200	7200	8800
Length x width x height (L x B x H)[6]	m	5.9 x 1.6 x 2.1	6.3 x 1.6 x 2.1	6.5 x 1.6 x 2.1	7 x 1.6 x 2.1
Max. mold weight[7]	kg	1800			
Min. mold dimension	mm x mm	346 x 346			

Control unit		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air. 25 °C water. HLP32. EM60. ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


536
854
810
88,9
88,9
50,8
Ø 28 (8x)
Ø 160 H7
740
450
203,2
691
B
810
EUROMAP 18 - E9
570
M16↧32 (56x)
Ø 80
520
70
805
3 x 70
1413
1793
1990
H
Ø 160 H7
70
4 x 70
45 - 50


303
180
1100
500
250 - 600
220
M20↧44
R 35
1445
1000
L

EcoPower 240

Clamping unit		EcoPower 240
Clamping force	kN	2400
Distance between tie bars	mm x mm	670 x 620
Min. mold height	mm	275
Max. mold height	mm	650
Opening stroke/opening force	mm/kN	550/192
Max. daylight	mm	1200
Ejector stroke hydr. | electr.	mm	180 | 180
Ejector force hydr. | electr.	kN	60 | 60
Dry cycle time[1]	s – mm	1.6 – 434

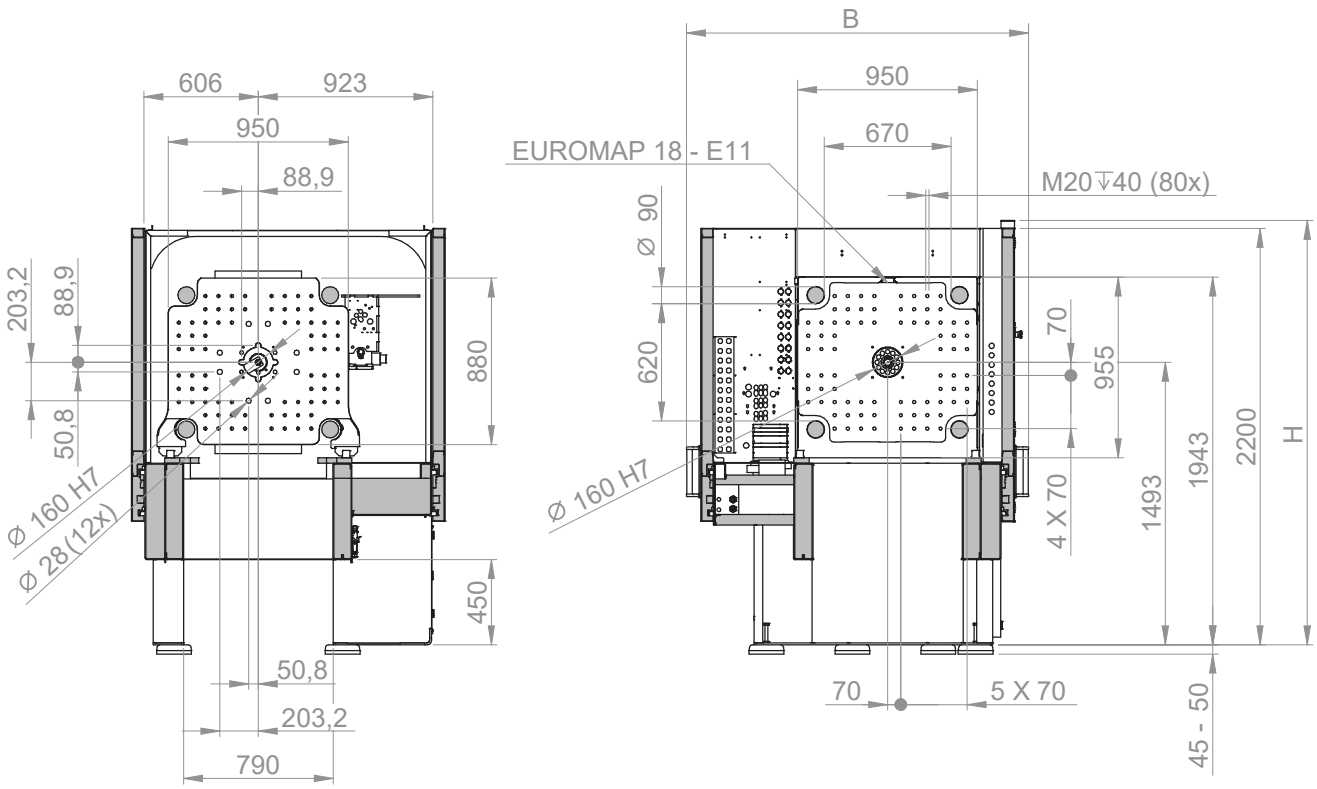
Injection unit		750			1000			1330			1670		
Screw diameter	mm	40	45	50	45	50	55	50	55	60	50	60	65
Screw stroke	mm	200	225	225	225	250	250	250	275	275	275	300	300
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	251	358	442	358	491	594	491	653	778	653	848	995
Specific injection pressure	bar	2500	2116	1714	2490	2016	1666	2470	2041	1715	2343	1969	1678
Max. screw speed	min^{-1}	325			300			300			275		
Max. plasticizing rate (HDPE)[2]	g/s	31	41	49	38	45	56	45	56	59	51	54	61
Screw torque	Nm	900			1200			1500			1900		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 350 | 86			30 | 400 | 100			30 | 400 | 100			30 | 500 | 100		
Injection rate into air	cm^3/s	251	318	393	318	393	475	344	416	495	357	425	499
Barrel heating power	kW	13.7	16.7	22.1	16.7	22.1	22.6	22.1	22.6	23.6	22.6	23.6	24.2
Heating zones barrel + nozzle		3 + 1	3 + 1	4 + 1	3 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1
Energy efficiency class[3]		7+	7+	8+	8+	8+	8+	8+	8+	9+	8+	9+	9+

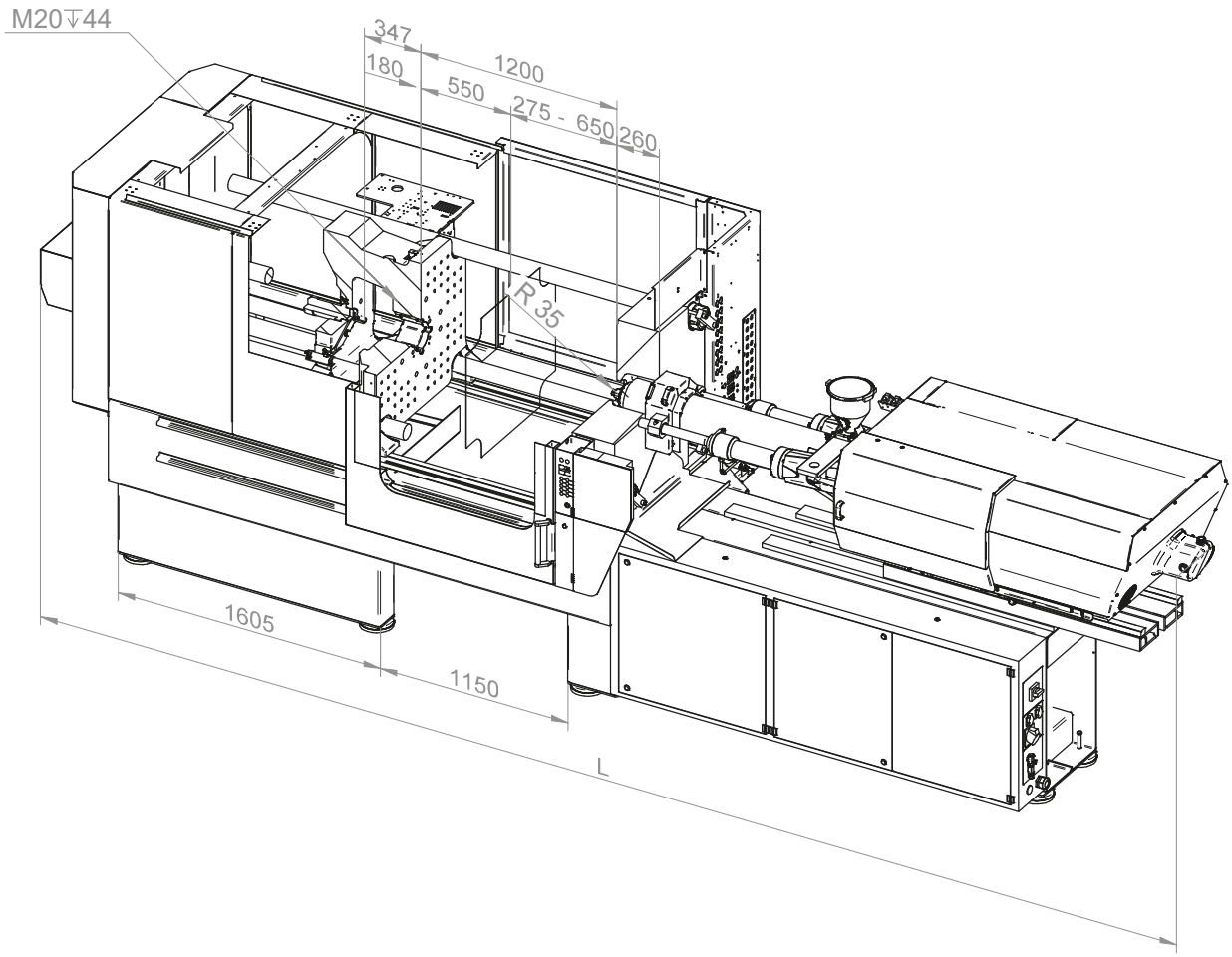
Drive. connection data					
Electrical power supply	kVA	30	38	44	52
Cooling water connection ⌀[4]	mm	13	13	13	13
Cooling water flow rate[4]	l/h	90 – 110	90 – 120	100 – 140	140 – 170
Emission sound pressure level[5]	dB(A)	64	64	64	64

Weights. dimensions					
Net weight	kg	9700	9700	11300	11300
Length x width x height (L x B x H)[6]	m	6.7 x 1.8 x 2.4	6.9 x 1.8 x 2.4	7.4 x 1.8 x 2.4	7.6 x 1.8 x 2.4
Max. mold weight[7]	kg	2400			
Min. mold dimension	mm x mm	396 x 396			

Control uni		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air. 25 °C water. HLP32. EM60. ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


606
923
950
88,9
203,2
88,9
50,8
880
450
Ø 160 H7
Ø 28 (12x)
50,8
203,2
790
B
950
670
EUROMAP 18 - E11
M20↧40 (80x)
Ø 90
620
70
955
1493
1943
2200
H
4 X 70
Ø 160 H7
70
5 X 70
45 - 50


M20↧44
347
180
550
1200
275 - 650
260
R 35
1605
1150
L

EcoPower 300

Clamping unit		EcoPower 300
Clamping force	kN	3000
Distance between tie bars	mm x mm	800 x 720
Min. mold height	mm	300
Max. mold height	mm	700
Opening stroke/opening force	mm/kN	625/240
Max. daylight	mm	1325
Ejector stroke hydr. | electr.	mm	200 | 180
Ejector force hydr. | electr.	kN	60 | 60
Dry cycle time[1)]	s – mm	1.8 – 504

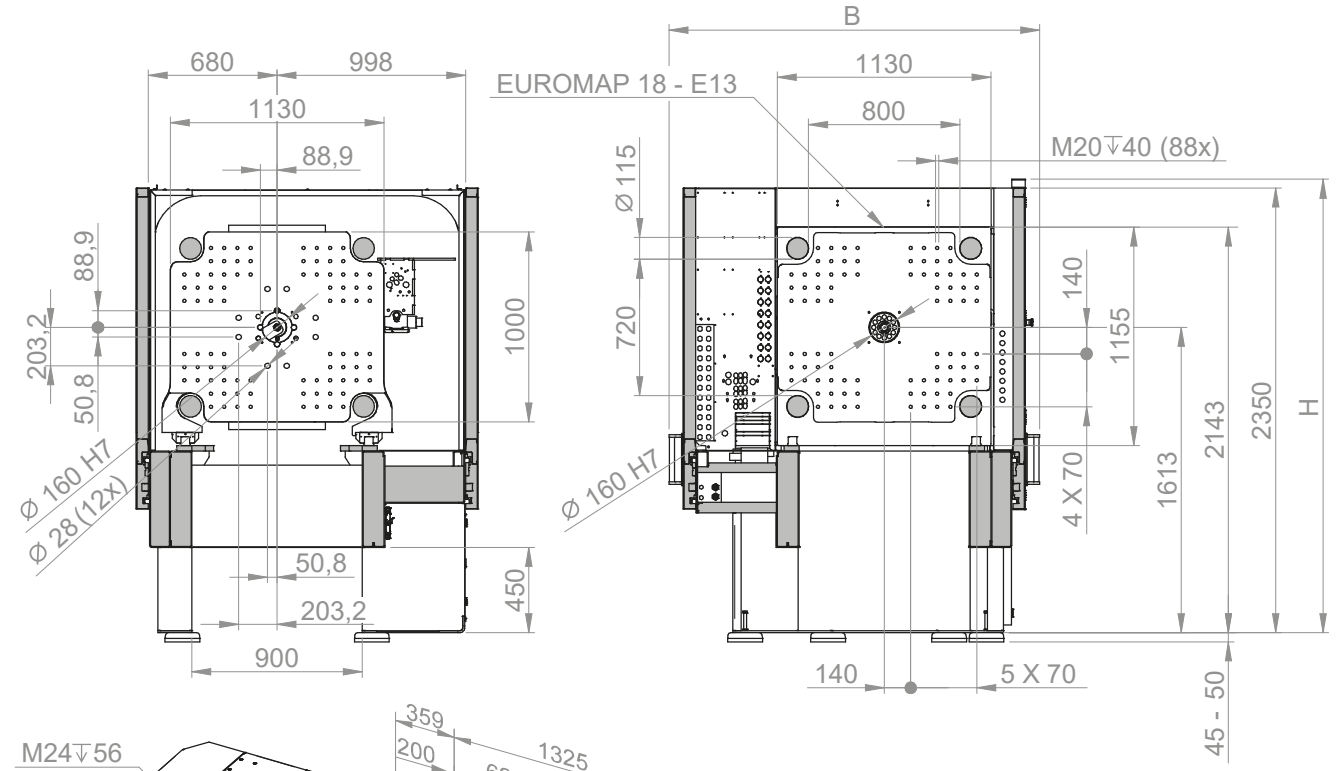
Injection unit		750			1000			1330			1670		
Screw diameter	mm	40	45	50	45	50	55	50	55	60	55	60	65
Screw stroke	mm	200	225	225	225	250	250	250	275	275	275	300	300
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	251	358	442	358	491	594	491	653	778	653	848	995
Specific injection pressure	bar	2500	2116	1714	2490	2016	1666	2470	2041	1715	2343	1969	1678
Max. screw speed	min^{-1}	325			300			300			275		
Max. plasticizing rate (HDPE)[2)]	g/s	31	41	49	38	45	56	45	56	59	51	54	61
Screw torque	Nm	900			1200			1500			1900		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 350 | 86			30 | 400 | 100			30 | 400 | 100			30 | 500 | 100		
Injection rate into air	cm^3/s	251	318	393	318	393	475	344	416	495	357	425	499
Barrel heating power	kW	13.7	16.7	22.1	16.7	22.1	22.6	22.1	22.6	23.6	22.6	23.6	27
Heating zones barrel + nozzle		3 + 1	3 + 1	4 + 1	3 + 1	4 + 1	4 + 1	3 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1
Energy efficiency class[3)]		6+	7+	8+	7+	8+	8+	8+	8+	9+	8+	9+	9+

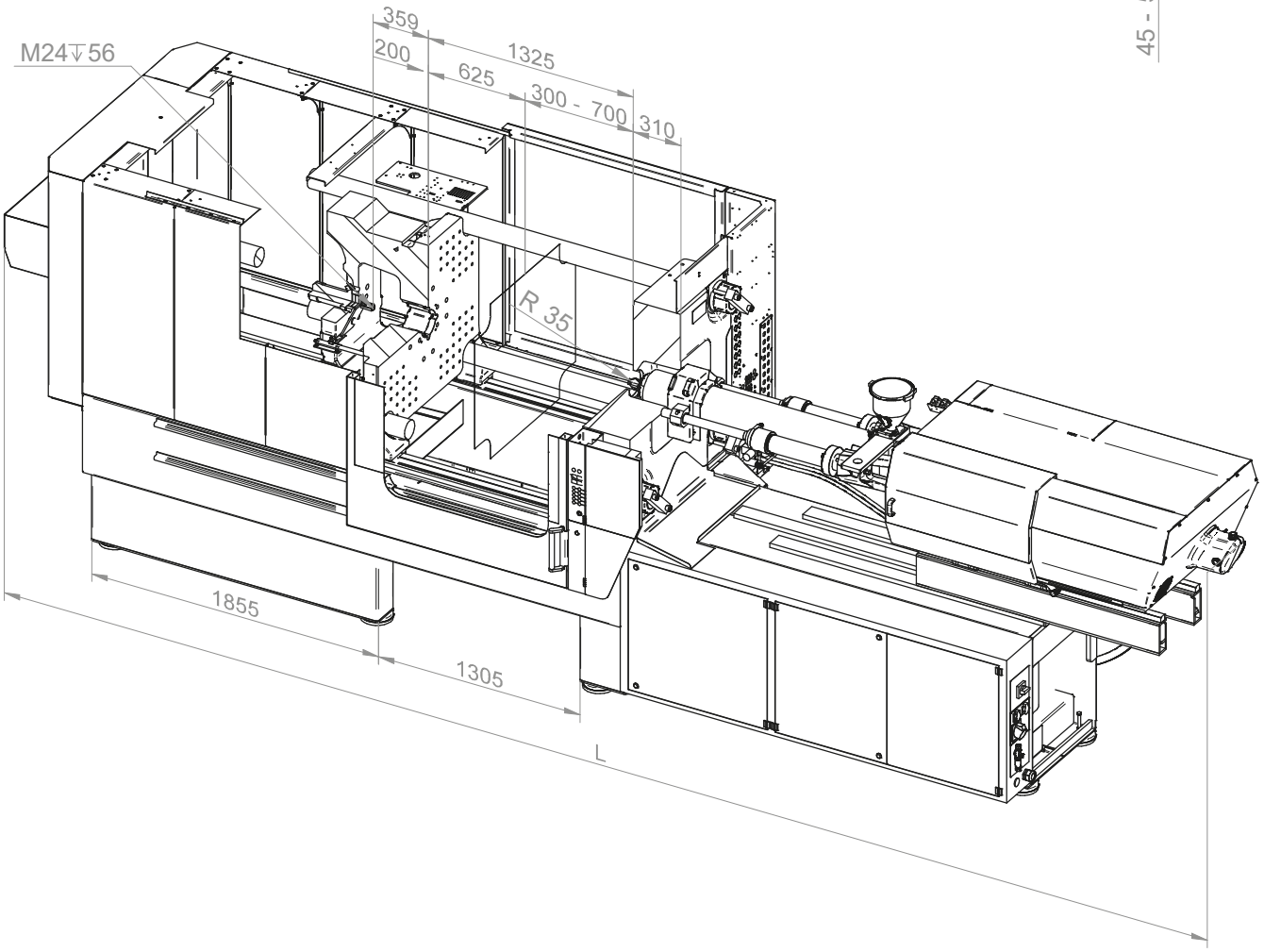
Drive. connection data					
Electrical power supply	kVA	30	38	44	52
Cooling water connection ⌀[4)]	mm	13	13	13	13
Cooling water flow rate[4)]	l/h	90 – 110	90 – 120	100 – 140	140 – 170
Emission sound pressure level[5)]	dB(A)	64	64	64	64

Weights. dimensions					
Net weight	kg	12500	12500	14100	14100
Length x width x height (L x B x H)[6)]	m	7.2 x 1.9 x 2.4	7.5 x 1.9 x 2.4	7.9 x 1.9 x 2.4	8.2 x 1.9 x 2.4
Max. mold weight[7)]	kg	3000			
Min. mold dimension	mm x mm	446 x 446			

Control unit		
Unilog		B8X

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air. 25 °C water. HLP32. EM60. ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


680
998
1130
88,9
88,9
203,2
50,8
Ø 160 H7
Ø 28 (12x)
1000
50,8
203,2
900
450
B
1130
EUROMAP 18 - E13
800
M20↧40 (88x)
Ø 115
720
140
1155
4 X 70
1613
2143
2350
H
Ø 160 H7
140
5 X 70
45 - 50


M24↧56
359
200
625
1325
300 - 700
310
R 35
1855
1305
L

EcoPower 400/450

Clamping unit		EcoPower 400	EcoPower 450
Clamping force	kN	4000	4500
Distance between tie bars	mm x mm	870 x 820	
Min. mold height	mm	350	
Max. mold height	mm	850	
Opening stroke/opening force	mm/kN	750/360	
Max. daylight	mm	1600	
Ejector stroke hydr. | electr.	mm	220 | 180	
Ejector force hydr. | electr.	kN	110 | 100	
Dry cycle time[1]	s – mm	1.9 – 574	

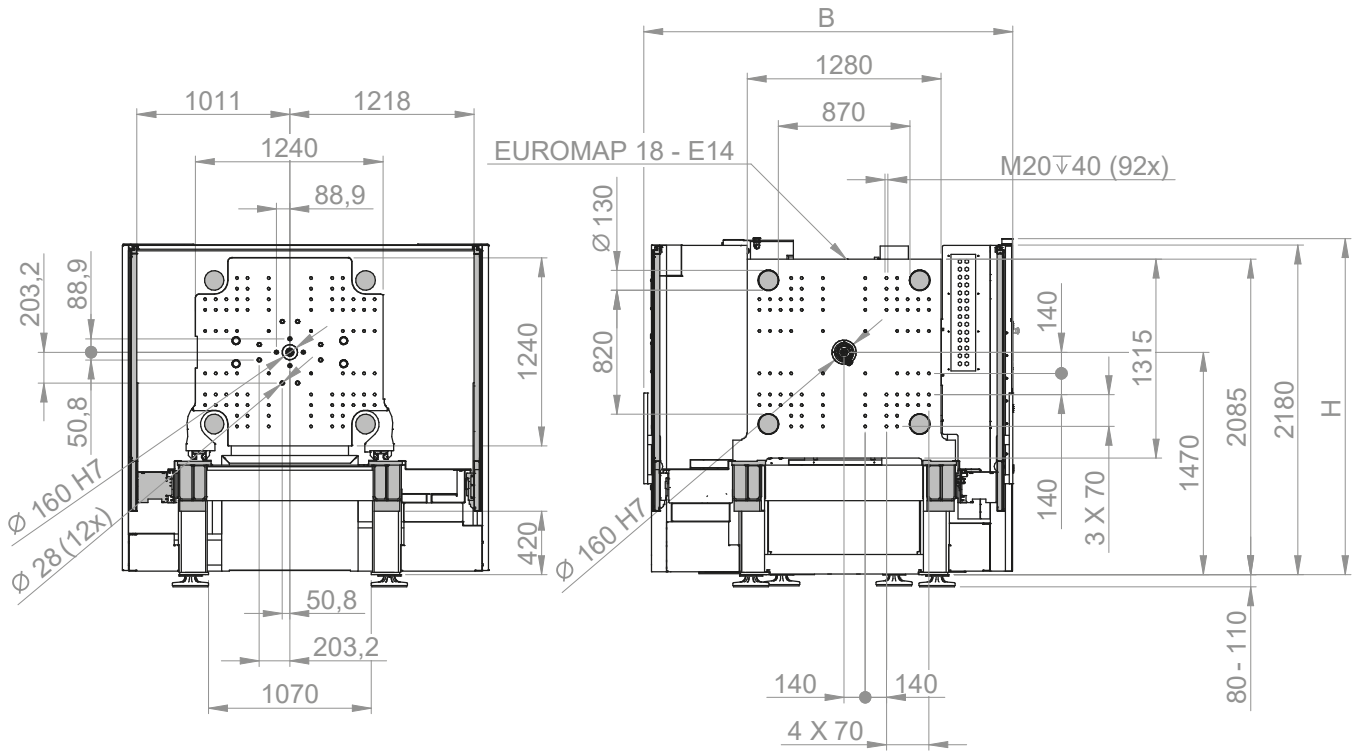
Injection unit		1330			1670			2100			3300		
Screw diameter	mm	50	55	60	55	60	65	55	65	75	65	75	85
Screw stroke	mm	250	275	275	275	300	300	275	320	320	325	375	375
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	491	653	778	653	848	995	653	1062	1414	1078	1657	2128
Specific injection pressure	bar	2470	2041	1715	2343	1969	1678	2500	1959	1471	2500	2037	1586
Max. screw speed	min^{-1}	300			275			275			200		
Max. plasticizing rate (HDPE)[2]	g/s	45	56	59	51	54	61	51	76	116	56	85	118
Screw torque	Nm	1500			1900			2300			3200		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 400 | 80			30 | 500 | 100			30 | 500 | 100			30 | 700 | 129		
Injection rate into air	cm^3/s	344	416	495	357	425	499	356	498	663	448	596	766
Barrel heating power	kW	22.1	22.6	23.6	22.6	23.6	27	22.6	26.4	32.7	26.4	32.7	37.3
Heating zones barrel + nozzle		3 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	5 + 1	5 + 1	5 + 1
Energy efficiency class[3]		8+	8+	9+	8+	9+	9+	7+	8+	8+	8+	8+	8+

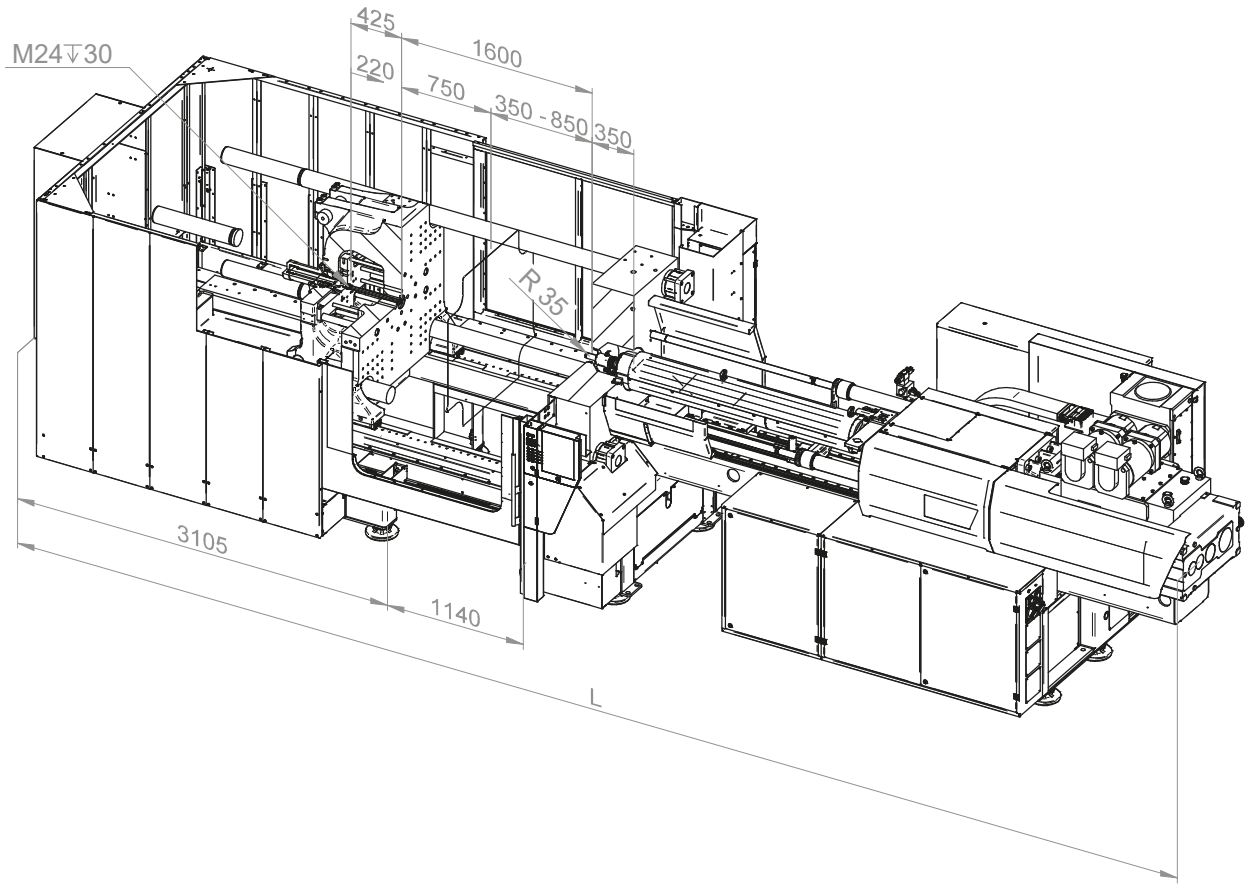
Drive, connection data					
Electrical power supply	kVA	93	98	102	107
Cooling water connection ⌀[4]	mm	25	25	25	25
Cooling water flow rate[4]	l/h	120 – 150	160 – 190	180 – 270	220 – 330
Emission sound pressure level[5]	dB(A)	67	67	67	67

Weights, dimensions					
Net weight clamping unit	kg	22000			
Net weight injection unit	kg	5500	6500	8000	10000
Length x width x height (L x B x H)[6]	m	8.6 x 2.5 x 2.4	8.9 x 2.5 x 2.4	9.9 x 2.5 x 2.4	11 x 2.5 x 2.4
Max. mold weight[7]	kg	5000			
Min. mold dimension	mm x mm	496 x 496			

Control unit		
Unilog		B8

1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air, 25 °C water, HLP32, EM60, ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


B
1280
870
1011
1218
1240
88,9
EUROMAP 18 - E14
M20↧40 (92x)
Ø 130
820
203,2
88,9
50,8
Ø 160 H7
Ø 28 (12x)
1240
420
50,8
203,2
1070
Ø 160 H7
140
1315
1470
2085
2180
H
140
3 X 70
80 - 110
140
140
4 X 70


M24↧30
425
1600
220
750
350 - 850
350
R 35
3105
1140
L

EcoPower 500/550

Clamping unit		EcoPower 500	EcoPower 550
Clamping force	kN	5000	5500
Distance between tie bars	mm x mm	970 x 920	
Min. mold height	mm	400	
Max. mold height	mm	950	
Opening stroke/opening force	mm/kN	900/440	
Max. daylight	mm	1850	
Ejector stroke hydr. | electr.	mm	220 | 180	
Ejector force hydr. | electr.	kN	110 | 100	
Dry cycle time[1]	s – mm	2.1 – 665	

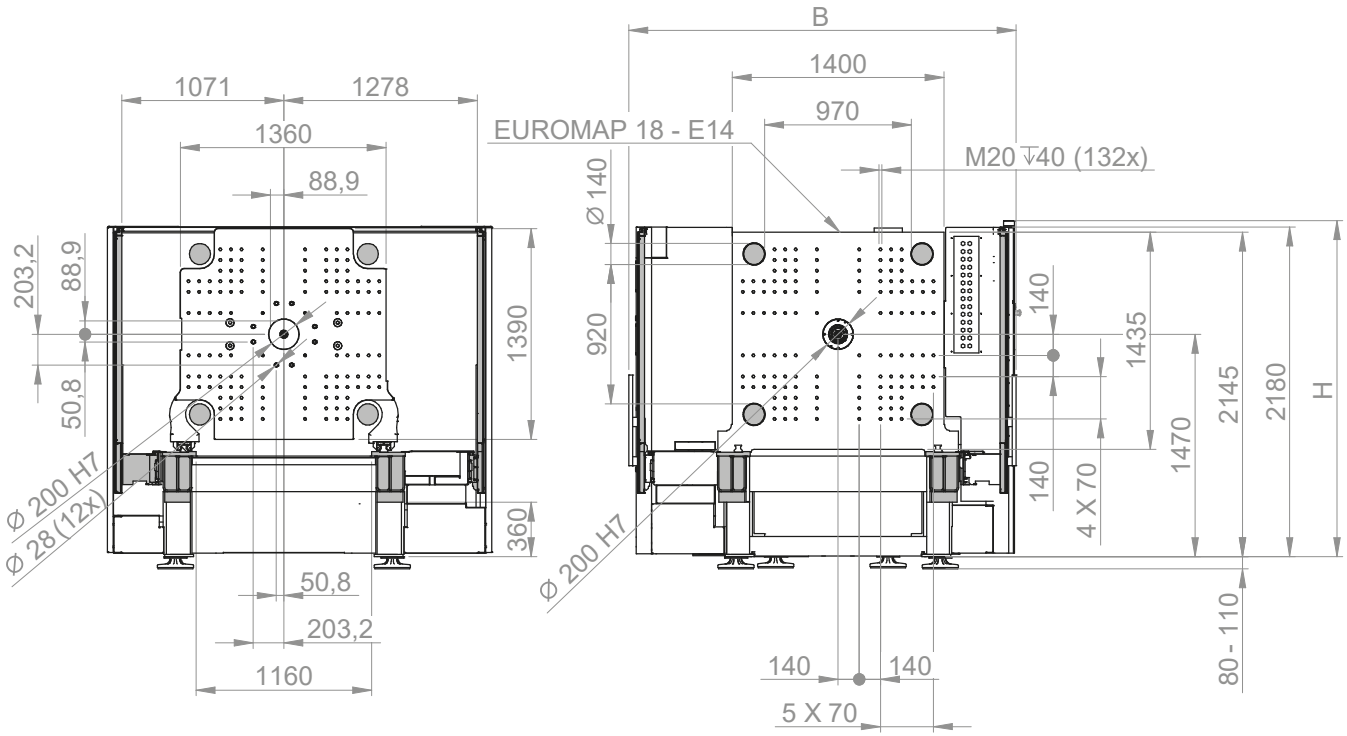
Injection unit		1670			2100			3300			5000		
Screw diameter	mm	55	60	65	55	65	75	65	75	85	75	85	95
Screw stroke	mm	275	300	300	275	320	320	325	375	375	375	425	425
Screw L/D ratio		22			22			22			22		
Theoretical shot volume	cm^3	653	848	995	653	1062	1414	1078	1657	2128	1657	2412	3012
Specific injection pressure	bar	2343	1969	1678	2500	1959	1471	2500	2037	1586	2500	2110	1689
Max. screw speed	min^{-1}	275			275			200			200		
Max. plasticizing rate (HDPE)[2]	g/s	51	54	61	51	76	116	56	85	118	82	116	149
Screw torque	Nm	1900			2300			3200			5000		
Nozzle insertion depth | stroke | force	mm | mm | kN	30 | 500 | 100			30 | 500 | 100			30 | 700 | 129			30 | 700 | 129		
Injection rate into air	cm^3/s	357	425	499	356	498	663	448	596	766	486	624	780
Barrel heating power	kW	22.6	23.6	27	22.6	26.4	32.7	26.4	32.7	37.3	32.7	37.3	41.9
Heating zones barrel + nozzle		4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	4 + 1	5 + 1	5 + 1	5 + 1	5 + 1	5 + 1	5 + 1
Energy efficiency class[3]		8+	9+	9+	7+	8+	8+	8+	8+	8+	9+	9+	9+

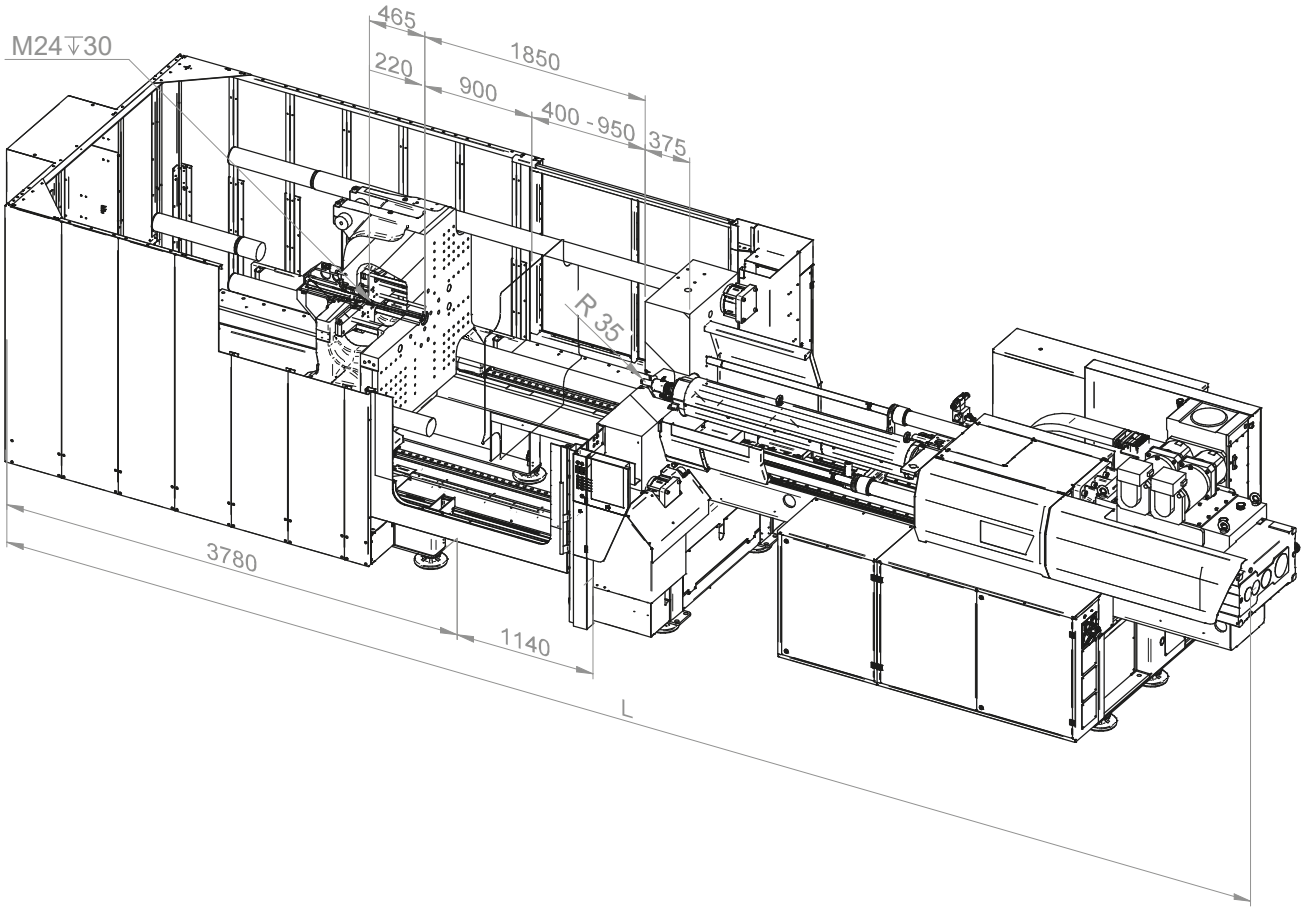
Drive, connection data					
Electrical power supply	kVA	98	102	107	136
Cooling water connection ⌀[4]	mm	25	25	25	25
Cooling water flow rate[4]	l/h	180 – 250	200 – 290	230 – 340	240 – 460
Emission sound pressure level[5]	dB(A)	67	67	67	67

Weights, dimensions					
Net weight clamping unit	kg	30000			
Net weight injection unit	kg	6500	8000	10000	14000
Length x width x height (L x B x H)[6]	m	9.7 x 2.6 x 2.4	10.6 x 2.6 x 2.4	11.2 x 2.6 x 2.4	12.4 x 2.6 x 2.4
Max. mold weight[7]	kg	7000			
Min. mold dimension	mm x mm	596 x 596			

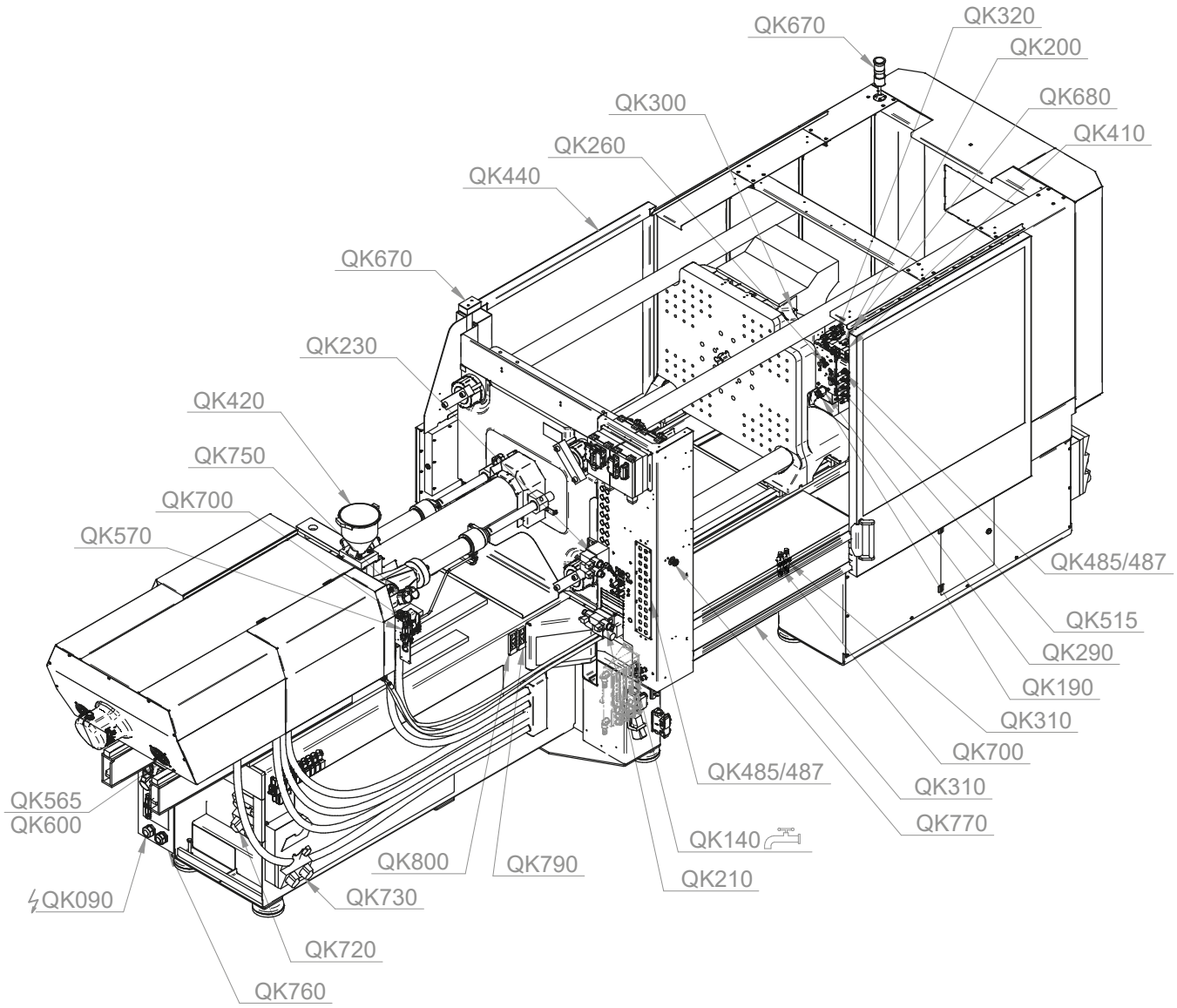
Control unit		
Unilog		B8

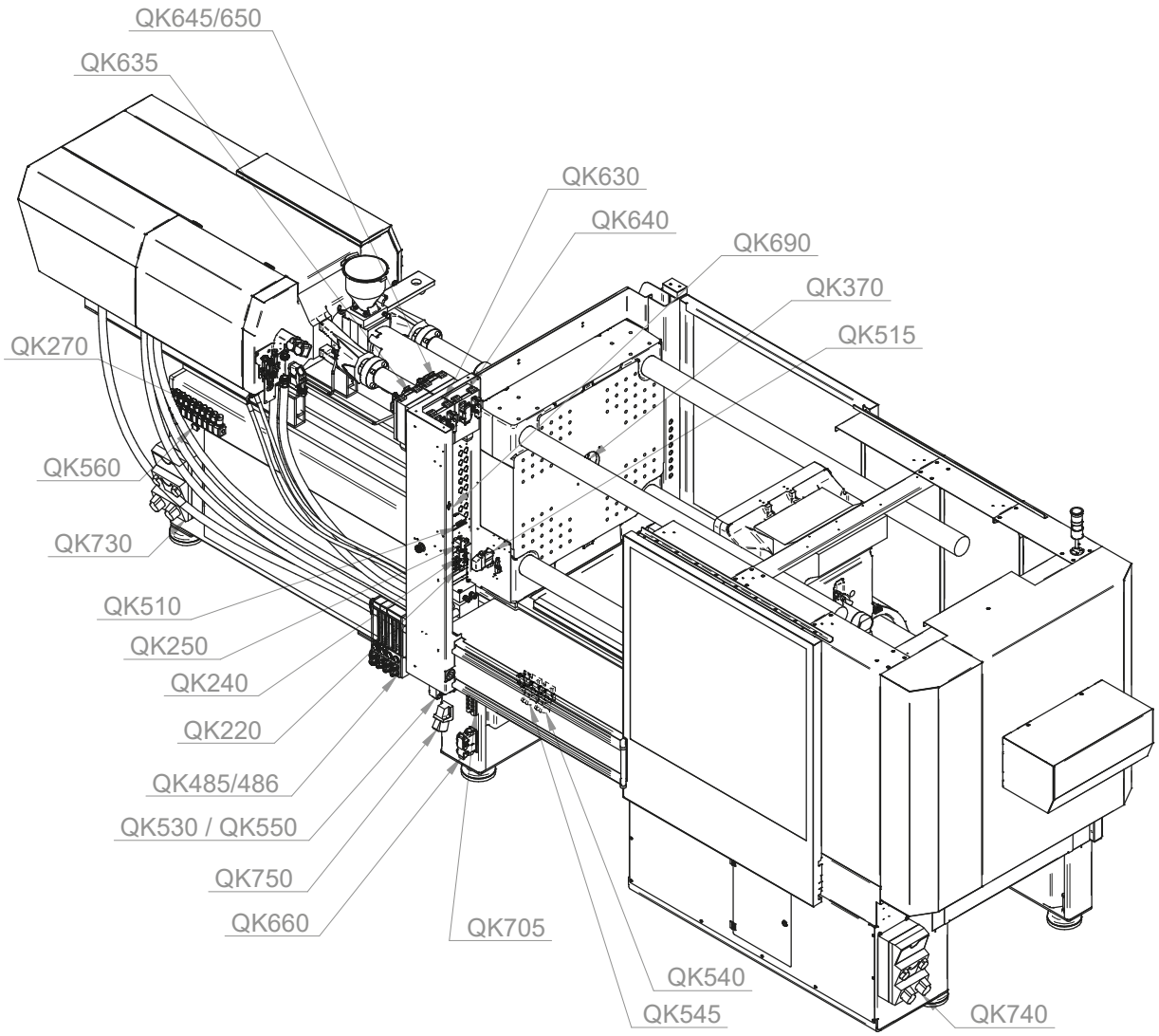
1) theoretical according to EUROMAP 6 2) according to WITTMANN Norm 3) calculated according to Euromap 60.1 (Cycle I)
4) cooling water for machine cooling and feeding (23 °C air, 25 °C water, HLP32, EM60, ⌀)
5) according to EN ISO 20430:2020 annex I 6) length with medium screw diameter in rearmost operating position 7) max. ½ on fixed platen || max. ⅔ on moving platen


B
1400
970
1071
1278
1360
88,9
EUROMAP 18 - E14
M20 ↧40 (132x)
Ø 140
920
203,2
88,9
50,8
1390
360
Ø 200 H7
Ø 28 (12x)
50,8
203,2
1160
140
1435
2145
2180
H
1470
4 X 70
140
Ø 200 H7
140
140
5 X 70
80 - 110


M24 ↧30
465
220
1850
900
400 - 950
375
R 35
3780
1140
L

EcoPower
Standard and Options




QK645/650
QK635
QK630
QK640
QK690
QK370
QK515
QK270
QK560
QK730
QK510
QK250
QK240
QK220
QK485/486
QK530 / QK550
QK750
QK660
QK705
QK540
QK545
QK740

		55 – 300 t	400 – 550 t
Base machine			
QK080	Regional package, country-specific	◇	◇
QK090	Voltage 230/400 V/3p+N-TN/TT, 50 Hz	◆	◆
QK090	Special voltage	◇	◇
QK110	Standard paint finish	◆	◆
QK110	Special paint finish	◇	◇
QK130	Test run with HLP32 hydraulic oil, not filled	◆	
QK130	HLP32 hydraulic oil, filled	◆	◆
QK130	Central grease lubrication toggle lever, mold height adjustment, and clamping plate support		◆
QK130	Central oil lubrication toggle lever, installation height, and closing plate manual grease lubrication	◆	
QK140	Air-cooled drive	◆	
QK140	Air- and water-cooled drive		◆
QK140	Water-cooled drive	◇	◇
QK140	Feed zone with open water cooling	◆	
QK140	Feed zone with closed water cooling		◆
QK140	Temperature-controlled feed zone	◆	◆
QK150	Basic frame in one piece	◆	
QK150	Split base frame		◆
QK150	Parts disposal in 3 directions	◆	◆
QK150	Support for center plate / heavy molds	◇	◇
QK160	Mold height / opening stroke in special execution	◇	◇
QK160	Automatic mold height adjustment	◆	◆
QK165	5-point double toggle lever with servo-electric, encapsulated direct drive	◆	◆
QK165	Linear guides for moving plate support	◆	◆
QK165	Linear guides for crosshead		◆
QK310	Cover on reject chute in accordance with EN ISO 20430	◆	◆
QK310	Interface for discharge flap	◆	
QK310	Sprue separation	◇	
QK310	Part funnel	◇	
QK310	Photoelectric failure protection	◇	
QK310	Good / bad part separation	◇	
QK840	Leveling elements	◆	◆
QK840	Machine body elevation	◇	◇
QK860	Printed operating instructions, digital user manual	◆	◆
QK865	Declaration of conformity and CE marking	◆	◆
Hydraulics / Pneumatics			
QK170	Direct servo drive for injection, metering, and clamping axes	◆	◆
QK170	Hydraulic drive via speed-controlled servo motor and constant pump	◆	◆
QK175	Hydraulic oil cooler, temperature control, and level monitoring	◇	◆
QK175	Hydraulic oil fine filter with electric contamination indicator	◆	◆
QK175	Coarse filter in the cooling system feed line	◇	
QK175	Connections on the oil tank for oil maintenance	◇	
QK190/210	Hydraulic core pulls	◇	◇
QK200/220	Pneumatic core pulls	◇	◇
QK230	Hydraulic manifolds for mold shut-off nozzles	◇	◇
QK240	Pneumatic manifolds for mold shut-off nozzles	◇	◇
QK250/260	Air valves	◇	◇
QK270	Compressed air maintenance unit	◇	◇
Clamping unit			
QK280	Clamping plates with standard hole pattern (EUROMAP 2)	◆	◆
QK280	Clamping plates with special hole pattern (SPI, JIS, T-slots)	◇	
QK280	Clamping plates with special hole pattern (SPI, JIS)		◇
QK280	Clamping plates with cooling channels	◇	
QK280	Fixing holes for robot (EUROMAP 18)	◆	◆
QK290	Hydraulic ejector	◆	◆
QK290	Hydraulic ejector with P/Q valve	◇	◇
QK290	Hydraulic ejector with twin check valve	◇	◇
QK290	Servo-electric ejector	◇	◇
QK290	Unscrewing device instead of ejector	◇	◇
QK300	Ejector cross according to EUROMAP / SPI / JIS	◇	◇
QK300	Ejector coupling, mechanical or pneumatic	◇	◇
QK320	Ejector plate safety device	◇	◇
QK330	Mechanical approach safety device	◇	◇
Injection unit			
QK333	Screw drive servo-electric, parallel	◆	◆
QK336	Nozzle system pressure defined	◆	◆
QK336	Servo-electric injection, parallel to high-pressure build-up	◆	◆
QK337	Screw cylinder can be swiveled	◆	
QK337	Screw cylinder removal upwards		◆
QK337	Non-contact position measuring system	◆	◆
QK338	L/D = 22 (L/D = 20 for D = 14 – 22 mm)	◆	◆
QK338	L/D ratio increased	◇	◇
QK340	AK plasticizing unit with Unimelt screw	◆	
QK340	AK+ plasticizing unit with Unimelt screw	◇	◆
QK340	AK+ plasticizing unit with barrier / mixing screw	◇	◇
QK340	AK++ plasticizing unit with Unimelt screw	◇	◇
QK340	AKCN plasticizing unit with Optimelt screw	◇	◇
QK340	Cellmould plasticizing unit	◇	◇
QK340	LIM, MIM, CIM plasticizing unit	◇	
QK340	Feed grooves in the screw cylinder	◇	◇
QK340	Melt pressure sensor, melt temperature sensor	◇	
QK340	Heater bands up to max. 350 °C	◆	◆
QK340	Heater bands up to max. 450 °C	◇	◇
QK340	Ring check valve, 3-piece	◆	◆
QK340	Ball check valve		◇
QK340	Check valve, special execution	◇	◇
QK350	Screw cylinder insulation of the feed zone	◆	
QK350	Screw cylinder insulation		◇
QK370	Open nozzle R35, one-piece		◆
QK370	Open nozzle R35, split	◆	
QK370	Needle type shut-off nozzle, pneumatically actuated	◇	◇
QK370	Needle type shut-off nozzle, spring-operated	◇	◇
QK370	Cross-bolt shut-off nozzle, pneumatically operated	◇	◇
QK370	Open nozzle in special execution	◇	◇
QK400	Splash guard and screw cylinder covering with limit switch	◆	
QK400	Splash guard and screw cylinder covering with transponder switch		◆
QK410	Interface for vacuum pump	◇	◇
QK410	Vacuum package including vacuum pump	◇	◇
QK420	6-liter material hopper with shut-off slide plate	◆	◆
QK420	30-liter material hopper with shut-off slide plate	◇	◇
QK420	Sliding mechanism without material hopper	◇	◇
QK420	Magnet in material hopper	◇	◇
QK625	Ceramic heating bands with sum plug, nozzle heating band separately pluggable	◆	
QK625	Pluggable ceramic heating bands		◆
Safety gate			
QK430	Maintenance door on injection side bolted		◆ [1]
QK430	Maintenance door on injection side, moveable with limit switch protection	◆	◆ [2]
QK440	Safety gate in standard execution	◆	◆
QK440	Operator protection door with electrical monitoring in accordance with CE on front and rear	◆	◆
QK440	Safety gate open at the top	◆	◆
QK440	Internal safety gate with rear belt conveyor	◇	
QK440	Safety gate raised	◇	◇
QK440	Safety gate lowered	◇	◇
QK440	Safety gate widened	◇	◇
QK440	Maintenance-free protective safety gate locking via electromagnet	◆	◆
QK450	Safety gate on operating and non-operating side manually operated	◆	◆
QK450	Electrically operated safety gate on the operator side		◇
QK450	Manual removal (ejector movement with open safety gate on the operator side)	◇	◇

		55 – 300 t	400 – 550 t
Electrics			
QK515	Interface for temperature monitoring zone	◇	◇
QK530	Interface for robot	◇	◇
QK540	Interface for conveyor belt	◇	◇
QK545	Interface for granulator	◇	◇
QK550	Interface for Airmould	◇	◇
QK560	Interface for TCU	◇	◇
QK565	Interface for dryer	◇	◇
QK570	Interface for dosing unit	◇	◇
QK590	Interface for mold monitoring	◇	◇
QK600	Interface for production data acquisition (PDA)	◇	◇
QK610	Interface for RJG eDart	◇	◇
QK620	Nozzle control point 230 V	◆	◆
QK630-655	Temperature control zones for hot runner	◇	◇
QK660	EUROMAP 78 interface (danger boundary zone)	◇	◇
QK670	AmbiLED status display	◆	◆
QK670	Signal lamp with/without acoustic element	◇	◇
QK680	Interface for ejector center plate	◇	◇
QK690	Interface for brushing device	◇	
QK700	Interface for potential-free contacts	◇	◇
QK705	Wittmann 4.0 BASIS integration package	◆	◆
QK705	Wittmann 4.0 integration packages	◇	◇
QK720-759	Socket combinations	◇	◇
QK760	Control cabinet circulation fan (for max. 30 °C)	◆	◆
QK760	Control cabinet air conditioner	◇	◇
QK760	Additional fans in the control cabinet (for max. 40 °C)	◇	◇
QK770	Emergency stop switch button in control console	◆	◆
QK770	Emergency stop switch button on rear of machine	◇	◆
QK775	Ethernet interface in the control cabinet	◆	◆
QK775	USB port on control unit	◆	◆
Control system			
QK510	Mold cavity pressure switch-over	◇	◇
QK520	BNC sockets for injection molding process analysis	◇	◇
QK665	Mold coding	◇	◇
QK710	Start-up reject program	◆	◆
QK710	Application programming system (APS)	◆	◆
QK710	Display of control cabinet temperature	◆	◆
QK710	Display of screw circumferential speed	◆	◆
QK710	Ejection of cold slug	◇	◇
QK710	Ejection program with open mold	◆	◆
QK710	Ejection 3 profile points	◆	◆
QK710	Automatic screen dimming	◆	◆
QK710	Basic packages	◆	◆
QK710	Expert packages	◇	◇
QK710	Monitoring packages	◆	◆
QK710	HiQ packages	◇	◇
QK710	Internal data storage, via USB connection or network	◆	◆
QK710	Dosing and injection integral monitoring	◆	◆
QK710	Screw speed / back pressure 6 profile points	◆	◆
QK710	Nozzle movement 3 profile points	◆	◆
QK710	Input of physical units – bar, ccm, mm/s, etc.	◆	◆
QK710	Injection / holding pressure 10 profile points	◆	◆
QK710	Energy consumption display for drives and screw cylinder heating	◆	◆
QK710	Energy consumption analysis	◆	◆
QK710	Freely configurable status bars	◆	◆
QK710	Sensor breakage monitoring	◆	◆
QK710	Hardcopy function	◆	◆
QK710	Actual time monitoring	◆	◆
QK710	Compression relief before and/or after dosing	◆	◆
QK710	Linear interpolation of holding pressure setpoints	◆	◆
QK710	Logbook with filter option	◆	◆
QK710	Maximum temperature monitoring	◆	◆
QK710	Holding pressure switchover (distance-, time-, and pressure-dependent)	◆	◆
QK710	MASTER / SLAVE holding pressure switchover	◆	◆

		55 – 300 t	400 – 550 t
QK710	Notepad function	◆	◆
QK710	Online unit switching	◆	◆
QK710	Online language switching	◆	◆
QK710	Physical product-related units	◆	◆
QK710	QuickSetup – assistance program for initial setup	◆	◆
QK710	Closing / opening 5 profile points	◆	◆
QK710	Closing force adjustable for closing and opening movements	◆	◆
QK710	Closing force monitoring including screen display	◆	◆
QK710	Screw start-up protection	◆	◆
QK710	Self-learning temperature controller	◆	◆
QK710	SmartEdit – sequence editor	◆	◆
QK710	Software operating hours / shot counter	◆	◆
QK710	Adjustable injection pressure limitation	◆	◆
QK710	Injection stamping and ventilation programs	◇	◇
QK710	Fault notification via e-mail	◆	◆
QK710	Piece counter with good / bad part evaluation	◆	◆
QK710	Tandem mold, multiple data sets	◇	◇
QK710	User page	◆	◆
QK710	Zeroing of positions	◆	◆
QK710	Mold protection program	◆	◆
QK710	Weekly timer	◆	◆
QK710	Cycle start with safety gate closure	◇	◇
QK710	Cycle time analysis	◆	◆
QK710	Cylinder temperature – bar chart, temperature reduction	◆	◆
QK710	Special programs according to customer specifications	◇	◇
QK780	Unilog B8 control		◆
QK780	Unilog B8X control	◆	
QK780	Control panel with selectable haptic buttons, RFID access authorization system	◆	◆
QK790/800	Input output cards	◇	◇
QK790	2 outputs, freely programmable	◆	
Cooling and conditioning			
QK485/86	Machine cooling via T-piece in the water inlet	◇	
QK485/86	Cooling water flow controller with/without blow-off valve	◇	
QK460/461			◇
QK485/86	Shut-off valve for cooling water flow controller	◇	
QK470/471			◇
QK485/86	Backwashable filter with flow monitoring	◇	
QK480			◇
QK485/86	Cooling water distributor block on nozzle / clamping plate	◇	
QK490/500			◇
QK487	WFC 120 integrated	◇	
QK490/500	Flowcon plus integrated		◇
Additional equipment			
QK815	Adapter base for robot	◇	◇
QK830	Tool kit	◇	◇
QK850	Mold area light	◇	◇
QK880	Electromagnetic or hydraulic mold clamping systems	◇	◇
QK940	Web service	◇	◇
QK950	Remote control	◇	◇
QK990-993	Integration packages auxiliaries & mold	◇	◇

1) Injection unit 2100 / 5000 2) Injection unit 1330/3300

Only the QK numbers shown in black are marked in the layout.

◆ Standard ◇ Option

Notes

» We develop **technologies that meet the demands of today and tomorrow,** saving materials and energy while protecting the climate. Across the entire injection molding process, from material handling to inline recycling.
We live molding. «

(Dr. Werner Wittmann)

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Technical data EcoPower | Article number: BPK0000090 | (English) | 2025/09 | Subject to change. | Printed in Austria.