THE Q-SERIES 2K

150-550 TON

MILACRON®

THE Q-SERIES 2K

TOGGLE DESIGN

- Improved speeds and reduced footprint with new toggle design
- Durable double toggle 5/pin design
- Rectangular platen designs accept a wide range of molds (see specification tables)
- New toggle design allows for consistent lower tonnage operations at 30% of maximum clamping force
- Auto lubrications to critical toggle components
- Grease free mold area

ADVANCED MOLD PROTECTION

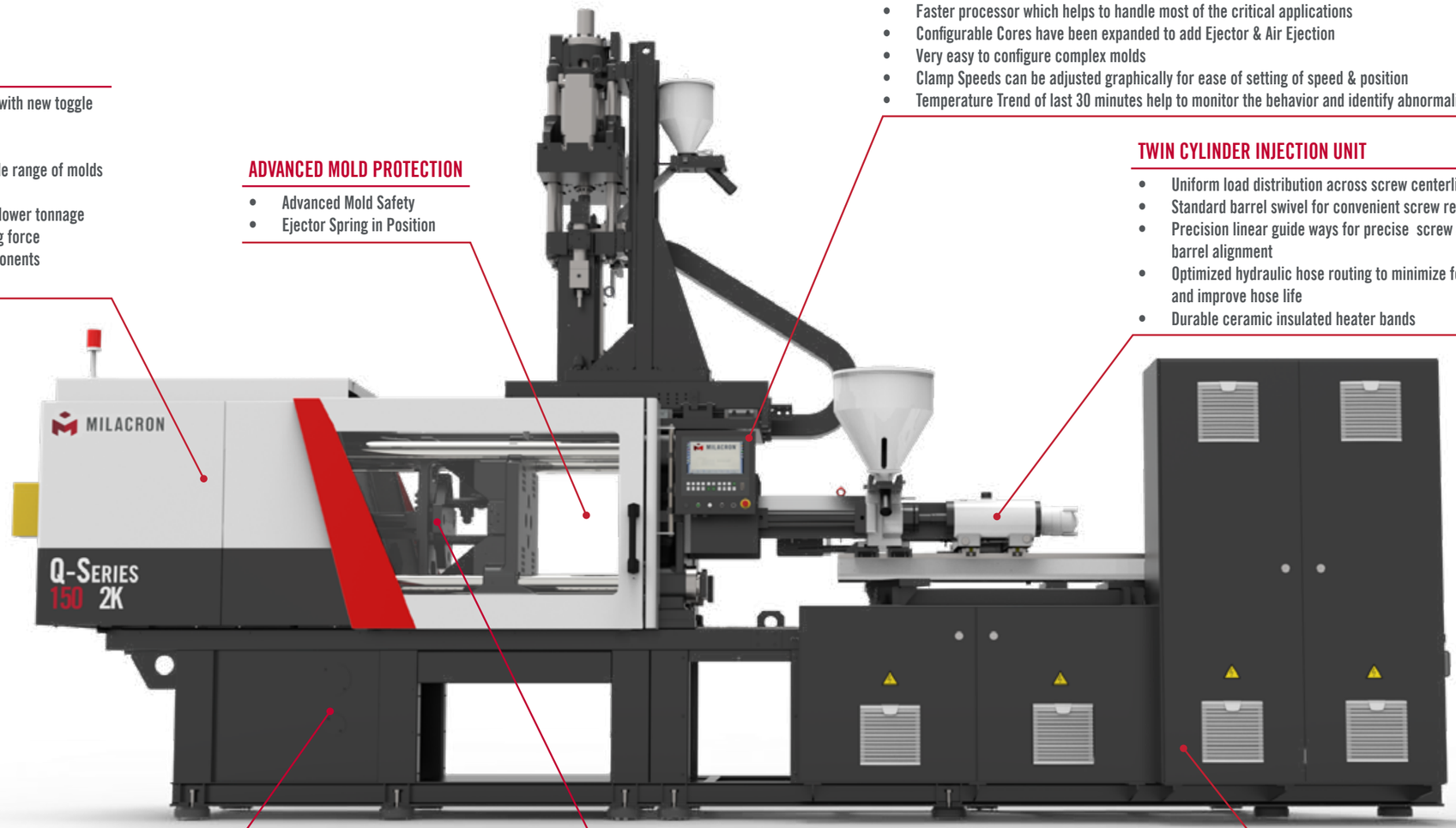
- Advanced Mold Safety
- Ejector Spring in Position

MOSAIC G3 CONTROL SYSTEM

- 15.6" FHD Multi Touch Capacitive Display
- Faster processor which helps to handle most of the critical applications
- Configurable Cores have been expanded to add Ejector & Air Ejection
- Very easy to configure complex molds
- Clamp Speeds can be adjusted graphically for ease of setting of speed & position
- Temperature Trend of last 30 minutes help to monitor the behavior and identify abnormalities

TWIN CYLINDER INJECTION UNIT

- Uniform load distribution across screw centerline
- Standard barrel swivel for convenient screw removal
- Precision linear guide ways for precise screw and barrel alignment
- Optimized hydraulic hose routing to minimize footprint and improve hose life
- Durable ceramic insulated heater bands



DIE HEIGHT MECHANISM

- Repeatable and accurate die height adjustments with use of a linear transducer
- Easy auto die height setup through the control screen
- Adjustable manual die height setup speeds
- Durable mechanical design ensures accurate clamp position is maintained during production

EJECTOR

- Improved ejector stroke and force from prior toggle designs
- SPI knockout pattern
- Programmable settings and pulsating eject functions

ENHANCED MOLD LIFE

The Rigid base and clamp design provides:

- Higher mold carrying capacity
- Enhanced parallelism and squarness

SERVO MOTOR & DRIVE

- Outstanding Energy Saving
- Faster Response towards Hydraulic System
- Excellent Shot Weight Consistency
- Reduced Noise Level

PROVIDING THE HIGHEST PERFORMANCE, PRECISION, AND FLEXIBILITY.

THE Q-SERIES 2K

INJECTION UNIT SPECIFICATIONS

IU	450	630	970	1540	2290	3470	4880
Q-Series 2K 150							
Q-Series 2K 180							
Q-Series 2K 230							
Q-Series 2K 280							
Q-Series 2K 350							
Q-Series 2K 450							
Q-Series 2K 550							

CLAMP SPECIFICATIONS

MODEL	TONNAGE	PLATEN SIZE (H X V)	TIE BAR SPACING (H X V)	MAX DAYLIGHT	MIN / MAX MOLD
	Metric Tons	mm	mm	mm	mm
Q-Series 2K 150	150	780 x 740	550 x 510	1060	200 / 600
Q-Series 2K 180	180	810 x 770	575 x 525	1100	200 / 600
Q-Series 2K 230	230	920 x 820	660 x 560	1260	200 / 710
Q-Series 2K 280	280	990 x 940	710 x 660	1400	250 / 750
Q-Series 2K 350	350	1120 x 1035	810 x 725	1520	300 / 800
Q-Series 2K 450	450	1245 x 1200	875 x 830	1670	350 / 820
Q-Series 2K 550	550	1330 x 1300	1,000 x 900	1820	400 / 900

APPLICATIONS

- *PERSONAL HYGIENE*
- *SHAVING RAZORS*
- *TOOLS*
- *CAPS & CLOSURES*
- *ELECTRICAL APPLIANCES*
- *CUPS*

NOTES

STANDARD FEATURES

CLAMP	
Moving Platen on LM Guides	●
Auto Lubrication	●
Grease Collection Trays below Toggle Area and Moving Platen	●
Auto Mold Height Adjustment	●
Mold Guard Safety Feature	●
Contactless Transducer for Clamp Position	●
Rear Door Handle	●
Clamp try again	●
Position Based Ramping for Accurate Position Switching, Precise Speed & Pressure Control	●
Proportional Speed Control with Operator Adjustable 5 Opening & 5 Closing Speeds	●
Jam Bar	○
T-Slot Platens	○
Part Drop Chute	○
Part Drop Detect	○
Extended Daylight	○
Electric Power Gate - Front	○

INJECTION	
Auto Screw Protection	●
Auto Lubrication on Secondary Injection Unit	●
Nozzle Contact Force by Pressure Switch for Main IU	●
Layin Hopper Magnet	●
Cold Slug Removal by Extruder / Injection	●
Bi-Metallic Barrel	○
Extra Heating Zone	○
Nozzel Shut off Valve	○
Horizontal Secondary IU	○

EJECTOR	
Proportional Speed control through Pump (operator adjustable at control)	●
Knock-Out Bar for Multipoint Ejection	●
Pilot Operated Check Valve for Ejector	●
Pulsating Ejector Strokes upto 9 Pulses	●
2 Stage Programmable Forward & Retract Speeds	●
Intermediate Retract Set Point	●
Digital Readout Ejector Position	●
Pause Time between Ejector Forward Profile	●
Air Eject - Single & Double	○
Parallel Ejection - Ejector on Fly	○
Eject Retract Verification by Limit Switch	○
Hydraulic Core Pull - Single & Double Sequence	○

TEMPERATURE CONTROL	
Oil Temperature Control for Heat Exchanger	●
Feed Throat Temperature Control with Indication	●
PID Control Nozzle & Barrel	●
High / Low Temperature Alarms	●

CONTROLLER	
15.6" FHD Multi-Touch Capacitive Display	●
20 function keys with LEDs	●
Actual Injection Speed & Pressure Graph Display	●
30 Parameter monitoring for last 3000 cycles	●
500 Mold data storage	●
High / Low Limit Display for Each Adjustable Parameter	●
I/O diagnosis - Analog & Digital	●
Manual in PDF format for help	●
Overview Menu for Easy access of all axis parameters	●
Choice of Multiple Languages	●
Unit Selection (Metric or English)	●
Data Protection with four level of access	●
Graphical Representation of last 48 Hours Production	●
Daily Production Data of last 1 Year	●
Graphical Representation of Cycle Analysis	●
Energy Consumption analysis for each axis	●
Automatic Reporting of Process Data, Alarms, Change log (USB or Network location)	●
Change Log Menu:logs last 3000 Set Points Changes with Time/Date & User	●
3000 Alarms History with Date & Time Log	●
Process Mode:Functions with its Co-functions on a Single Key Press	●
Note Pad	●
Freely Programmable Smart Outputs & Inputs (total 3 inputs and outputs)	●
Freely Configurable Cores, Ejector & Air	●
4 User Configurable actual parameters for ease of monitoring for operator	●
Soft Keys for selection of Cores, Air & Mold Gates to operate in Set/Manual Mode	●
Favorite Page - Select 4 frequently used pages & operate from single page	●
Graphical display of Actual Zone Temperature of last 30 mins.	●
Favourite Page - Select 5 frequently used pages & operate from single page	●
Filtering of Alarm - Helps in quick analysis of specific alarm	●
Filtering & sort of Changelog - Helps in quick review / analysis of parameter changes	●
Configurable FlyOut area for viewing frequently used Monitoring Pages	●
No Page more than two click away	●
Auto shut down	●
Visual & Audible Alarm	●
Set point and actual values shown as absolute values	●
Pausibility check on values entered	●
Data saving in USB-Mold Data, Change log, Trend Data, Log book, Alarm History, Screen Shot	●
Shift wise Production Counter	●
Servo Motor / Drive diagnostic screen	●
Semi Auto Purge	●
Cold slug removal by extruder/ Injection	●
Intrusion Molding	●
Insert Molding	●
Freely Programmable Core pull Sequence	●
Energy meter on screen	●

● - Standard Feature ○ - Optional Feature

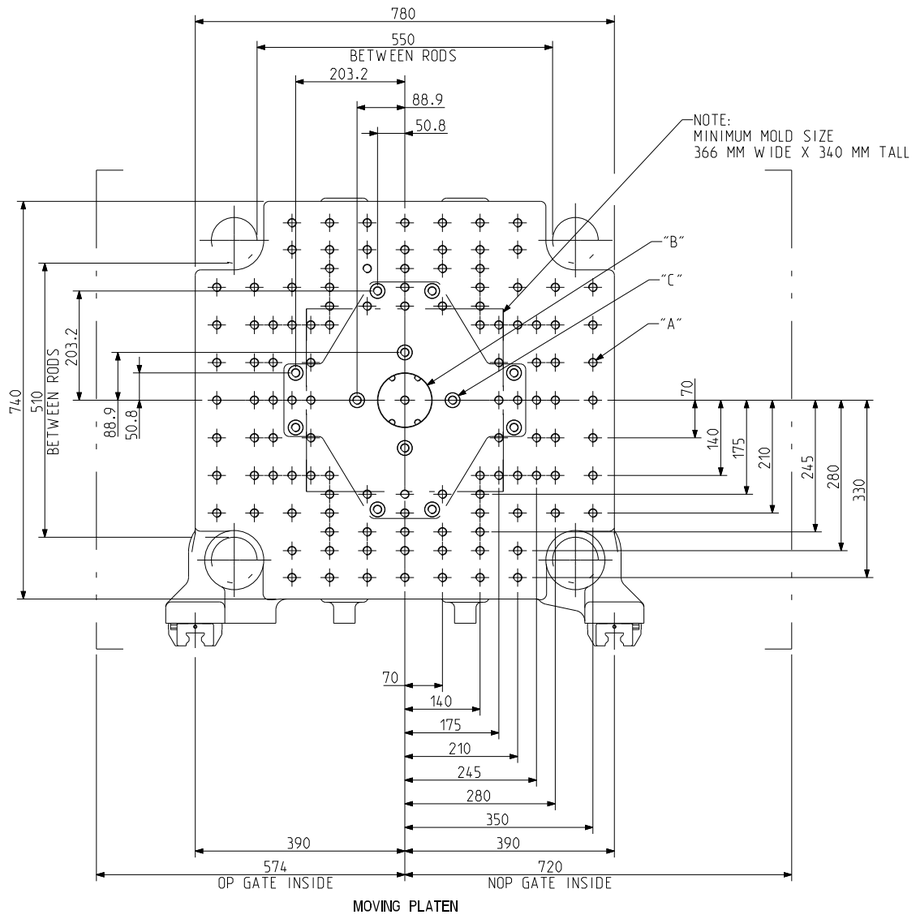
STANDARD FEATURES

ADDITIONAL FEATURES	
Levelling Pads	●
Surge Suppressor Device	●
Y Strainer in Heat Exchanger Inlet	●
Butter Fly Valve at Pump Suction Line	●
UV/OV Monitoring Relay-Voltage Monitor Relay	●
Filter Element IFR-2-06B-20-10B for Oil Filling	●
Hour Meter on Electrical Panel	●
Visual ON/OFF Indication with Z4 LED	●
Power On Push Button	●
Gauge Port for all Major Functions	●
Servo Motor Operated Gear Pump	●
Hydraulic Solenoid Valve Connector with ON/OFF LED Indicator	●
Water Manifold	○
Electrical Unscrewing	○
Hydraulic Unscrewing	○
Electric UPS for Control	○
Tubelight in Clamp Area	○
Dome Lamp 3-Tier, 4-Tier	○
Good / Defective Part Signal	○
Gas Assist Injection Interface	○
Latch & Blender Unit Interface	○
Integrated Hot Runner Controller	○
Mold Gate - Hydraulic / Pneumatic	○
Stand Alone Hot Runner Controller	○
Water Battery with Temperature Indicator	○
Robot Interface (SPI & Euromap -12 & -67)	○
Water Saver Valve for Mold / Pulse Cooling	○
Fully Enclosed Clamp Unit for Mold Dehumidifier	○
Extra Power Supply Outlets with Available Combination	○
Safety Interlock Between Hot Runner & Water Saver Valve through Flow Switch	○

● - Standard Feature ○ - Optional Feature

THE Q-SERIES 2K
TONNAGE: 150

Injection Unit 450, 630, 970
TECHNICAL SPECIFICATIONS



ALL DIMENSIONS ARE IN MM

A MOVING PLATEN: M16X32 DEEP (116) PLACES,
STATIONARY PLATEN: M16X32 DEEP (116) PLACES.

B MOVING PLATEN: Ø100(+0.035/-0.0) THRU BORE,
K/O BAR CENTRE HOLE M16x40 DEEP.
STATIONARY PLATEN:
Ø125(+0.04/-0.0) WITH LOCATING RING,
Ø160(+0.04/-0.0) x 10(+0.15/-0.0) DEEP, WITHOUT LOCATING RING.

C Ø27 THRU, (12) HOLES IN MOVING PLATEN,
K/O BAR M16x40 DEEP (12) HOLES

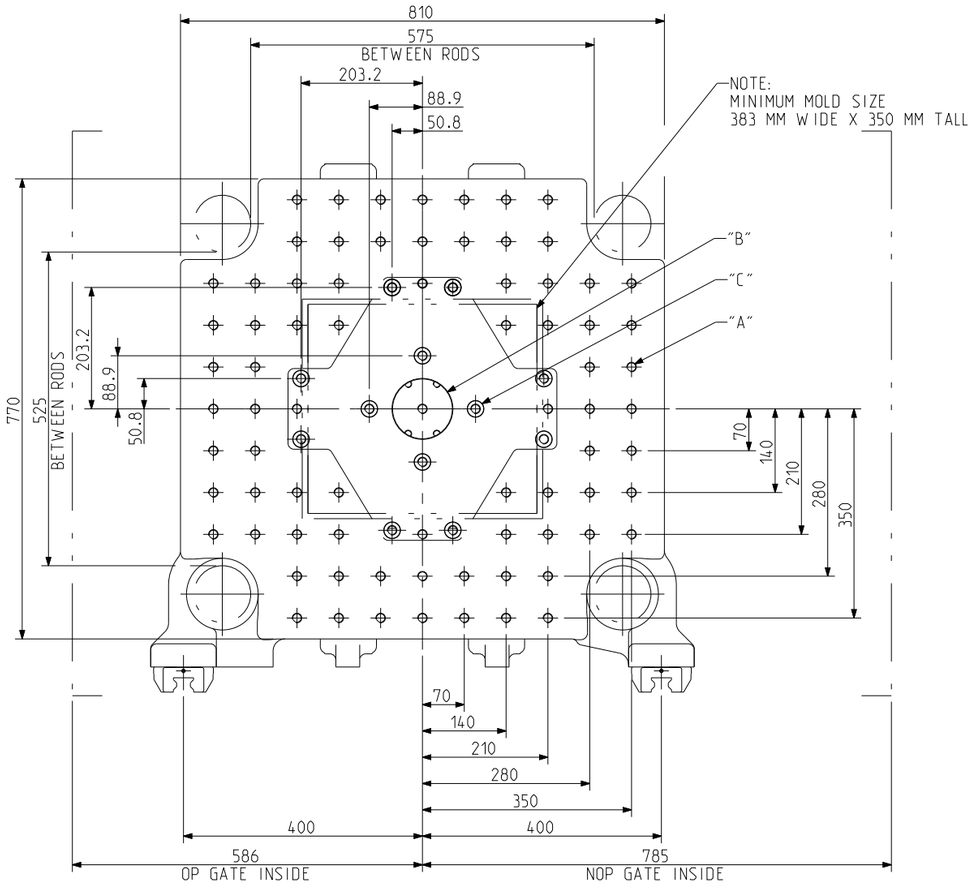
Q-SERIES 150 2K	UNIT	450			630			970			SEIU 120 V		
	METRIC	A'	A	B	A'	A	B	A'	A	B	A	B	C
INJECTION UNIT SPECIFICATIONS													
INJECTION CAPACITY MAX. (GPPS)	gm	165	215	272	239	303	374	363	448	646	29	56	81
THEORETICAL DISPLACEMENT	cc	173	226	286	251	318	393	382	471	679	31	59	85
INJECTION PRESSURE MAX.	bar	2443	1984	1568	2492	1969	1595	2249	2057	1428	2444	2016	1400
INJECTION RATE *	cc/sec	103	134	170	107	135	167	105	129	186	52	101	145
INJECTION SCREW STROKE	mm	180	180	180	200	200	200	240	240	240	120	120	120
SCREW DIAMETER	mm	35	40	45	40	45	50	45	50	60	18	25	30
SCREW L/D RATIO		25.7	22.5	20	25	22.2	20	26.7	24	20	20	20	20
SCREW SPEED	rpm	279	279	279	222	222	222	188	188	188	400	400	400
SCREW TORQUE @ 172 BAR	NM	876	876	876	1080	1080	1080	1305	1305	1305	175	175	175
PLASTICIZING RATE (GPPS) *	g/sec	13	17	24	14	19	25	16	21	34	3	7.6	12
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	17	23	31	18	25	33	21	28	43	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		4+1			4+1			4+1			3+1		
TOTAL HEAT CAPACITY	KW	11.3			15.7			16.9			4.6	6.7	7.9
CLAMP UNIT SPECIFICATIONS													
CLAMP FORCE	Ton	150			150			150					
OPENING FORCE	Ton	15			15			15					
CLAMP STROKE	mm	460			460			460					
MAXIMUM DAYIGHT	mm	1060			1060			1060					
MINIMUM MOULD HEIGHT	mm	200			200			200					
MAXIMUM MOULD HEIGHT	mm	600			600			600					
PLATEN SIZE (H X V)	mm	780 X 740			780 X 740			780 X 740					
DISTANCE BETWEEN TIE ROD	mm	550 X 510			550 X 510			550 X 510					
TIE ROD DIAMETER	mm	85			85			85					
EJECTOR STROKE	mm	175			175			175					
EJECTOR FORCE	Ton	5			5			5					
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	2300 (1100 / 1200)			2300 (1100 / 1200)			2300 (1100 / 1200)					
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	1.70 - 385			1.70 - 385			1.70 - 385					
GENERAL													
ELECTRIC MOTOR	kW	11.5			11.5			11.5			9.8 kW Servo		
TOTAL OIL CAPACITY	L	365									365		
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	50									50		
CONNECTED LOAD	kW	22.8			27.2			28.4			15.9	18	19.2
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT											
MACHINE DIMENSION (L X W X H)	m	7.1 X 1.8 X 3.8 (With 120IU)											
		7.1 X 1.8 X 4.3 (With 300IU)											
MACHINE WEIGHT	kg	6350			6500			6850			+ 1050		

* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE Q-SERIES 2K
TONNAGE: 180

Injection Unit 450, 630, 970
TECHNICAL SPECIFICATIONS



MOVING PLATEN

ALL DIMENSIONS ARE IN MM

A MOVING PLATEN: M16X32 (76) PLACES,
STATIONARY PLATEN: M16X32 DEEP (84) PLACES

B MOVING PLATEN: Ø100(+0.035/-0.0) THRU BORE,
K/0 BAR CENTRE HOLE M16X40 DEEP
STATIONARY PLATEN:
Ø125(+0.04/-0.0) WITH LOCATING RING,
Ø160(+0.04/-0.0) X 10(+0.15/-0.0) DEEP, WITHOUT LOCATING RING

C Ø27 THRU, (12) HOLES IN MOVING PLATEN
K/O BAR M16X40 THRU (12) HOLES

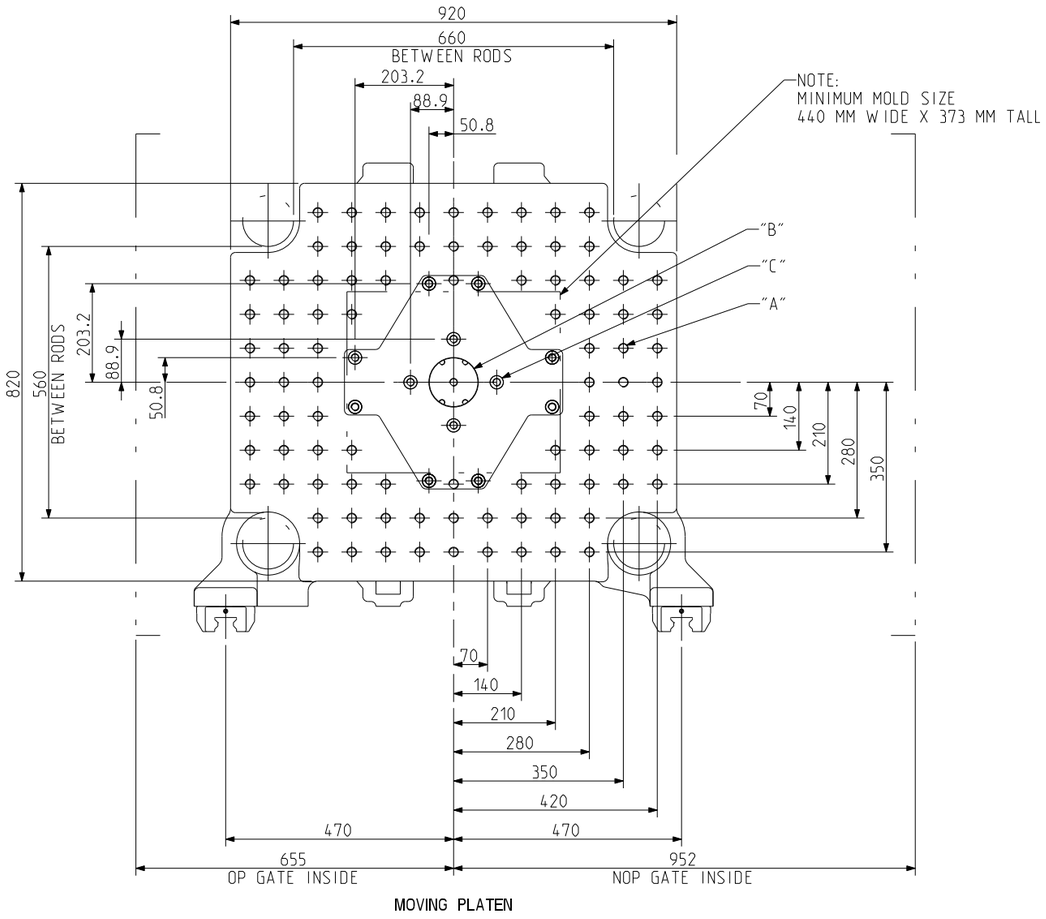
Q-SERIES 180 2K	UNIT	450			630			970			SEIU 120 V		
	METRIC	A'	A	B	A'	A	B	A'	A	B	A	B	C
INJECTION UNIT SPECIFICATIONS													
INJECTION CAPACITY MAX. (GPPS)	gm	165	215	272	239	303	374	363	448	646	29	56	81
THEORETICAL DISPLACEMENT	cc	173	226	286	251	318	393	382	471	679	31	59	85
INJECTION PRESSURE MAX.	bar	2443	1984	1568	2492	1969	1595	2249	2057	1428	2444	2016	1400
INJECTION RATE *	cc/sec	103	134	170	107	135	167	105	129	186	52	101	145
INJECTION SCREW STROKE	mm	180	180	180	200	200	200	240	240	240	120	120	120
SCREW DIAMETER	mm	35	40	45	40	45	50	45	50	60	18	25	30
SCREW L/D RATIO		25.7	22.5	20	25	22.2	20	26.7	24	20	20	20	20
SCREW SPEED	rpm	279	279	279	222	222	222	188	188	188	400	400	400
SCREW TORQUE @ 172 BAR	NM	876	876	876	1080	1080	1080	1305	1305	1305	175	175	175
PLASTICIZING RATE (GPPS) *	g/sec	13	17	24	14	19	25	16	21	34	3	7.6	12
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	17	23	31	18	25	33	21	28	43	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		4+1			4+1			4+1			3+1		
TOTAL HEAT CAPACITY	KW	11.3			15.7			16.9			4.6	6.7	7.9
CLAMP UNIT SPECIFICATIONS													
CLAMP FORCE	Ton	180			180			180					
OPENING FORCE	Ton	18			18			18					
CLAMP STROKE	mm	500			500			500					
MAXIMUM DAYIGHT	mm	1100			1100			1100					
MINIMUM MOULD HEIGHT	mm	200			200			200					
MAXIMUM MOULD HEIGHT	mm	600			600			600					
PLATEN SIZE (H X V)	mm	810 x 770			810 x 770			810 x 770					
DISTANCE BETWEEN TIE ROD	mm	575 x 525			575 x 525			575 x 525					
TIE ROD DIAMETER	mm	95			95			95					
EJECTOR STROKE	mm	175			175			175					
EJECTOR FORCE	Ton	5			5			5					
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	2500 (1200 / 1300)			2500 (1200 / 1300)			2500 (1200 / 1300)					
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	1.85 - 402			1.85 - 402			1.85 - 402					
GENERAL													
ELECTRIC MOTOR	kW	11.5			11.5			11.5			9.8 kW Servo		
TOTAL OIL CAPACITY	L	365									365		
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	50									50		
CONNECTED LOAD	kW	22.8			27.2			28.4			15.9	18	19.2
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT											
MACHINE DIMENSION (L X W X H)	m	7.52 X 1.85 X 3.8 (With 120IU)											
		7.52 X 1.85 X 4.3 (With 300IU)											
MACHINE WEIGHT	kg	7250			7500			7850			+ 1050		

* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE Q-SERIES 2K
TONNAGE: 230

Injection Unit 630, 970, 1540
TECHNICAL SPECIFICATIONS



MOVING PLATEN

ALL DIMENSIONS ARE IN MM

A MOVING PLATEN: M20X45 (92) PLACES,
STATIONARY PLATEN: M20X45 DEEP (96) PLACES

B MOVING PLATEN: Ø100(+0.035/-0.0) THRU BORE,
K/0 BAR CENTRE HOLE M16X40 DEEP
STATIONARY PLATEN:
Ø125(+0.04/-0.0) WITH LOCATING RING,
Ø160(+0.04/-0.0) X 10(+0.15/-0.0) DEEP, WITHOUT LOCATING RING

C Ø27 THRU, (12) HOLES IN MOVING PLATEN
K/O BAR M16X40 THRU (12) HOLES

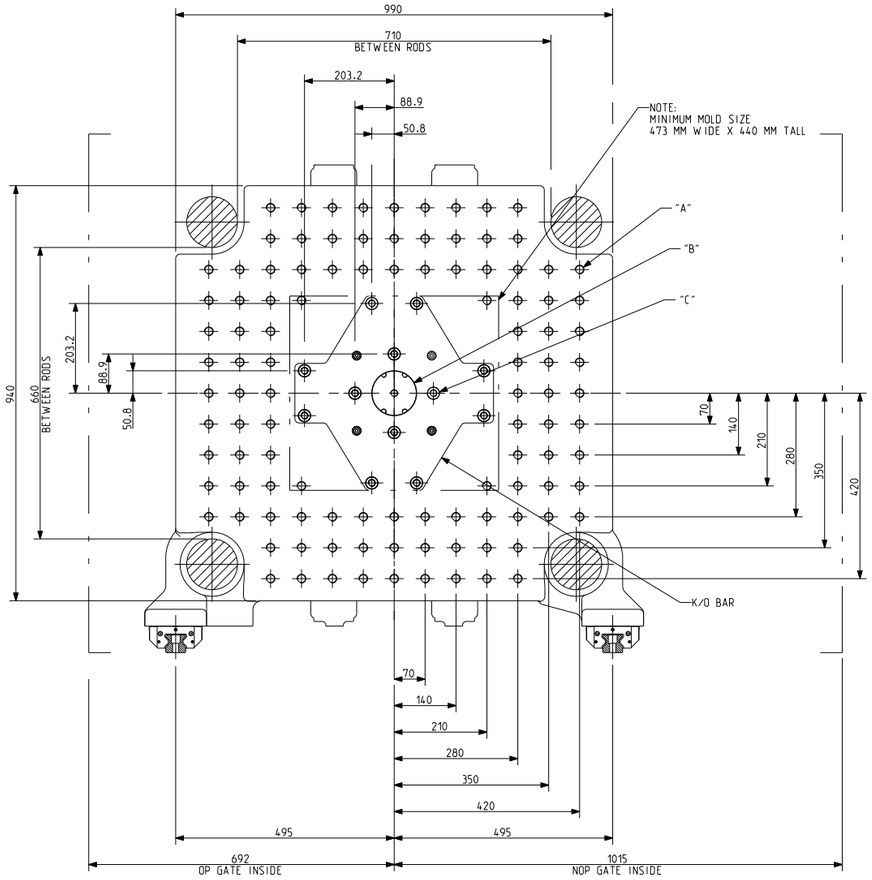
Q-SERIES 230 2K	UNIT	630			970			1540			SEIU 120 V		
	METRIC	A'	A	B	A'	A	B	A'	A	B	A	B	C
INJECTION UNIT SPECIFICATIONS													
INJECTION CAPACITY MAX. (GPPS)	gm	239	303	374	363	448	646	523	753	1025	29	56	81
THEORETICAL DISPLACEMENT	cc	251	318	393	382	471	679	550	792	1078	31	59	85
INJECTION PRESSURE MAX.	bar	2492	1969	1595	2249	2057	1428	2236	1941	1426	2444	2016	1400
INJECTION RATE *	cc/sec	167	211	261	164	202	291	149	214	291	52	101	145
INJECTION SCREW STROKE	mm	200	200	200	240	240	240	280	280	280	120	120	120
SCREW DIAMETER	mm	40	45	50	45	50	60	50	60	70	18	25	30
SCREW L/D RATIO		25	22.2	20	26.7	24	20	28	23.3	20	20	20	20
SCREW SPEED	rpm	305	305	305	293	293	293	180	180	180	400	400	400
SCREW TORQUE @ 172 BAR	NM	1080	1080	1080	1305	1305	1305	2126	2126	2126	175	175	175
PLASTICIZING RATE (GPPS) *	g/sec	19	26	35	25	33	53	20	33	50	3	7.6	12
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	25	34	46	33	44	68	27	41	66	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		4+1			4+1			5+1			3+1		
TOTAL HEAT CAPACITY	KW	15.7			16.9			24.9			4.6	6.7	7.9
CLAMP UNIT SPECIFICATIONS													
CLAMP FORCE	Ton	230			230			230					
OPENING FORCE	Ton	23			23			23					
CLAMP STROKE	mm	550			550			550					
MAXIMUM DAYIGHT	mm	1260			1260			1260					
MINIMUM MOULD HEIGHT	mm	200			200			200					
MAXIMUM MOULD HEIGHT	mm	710			710			710					
PLATEN SIZE (H X V)	mm	920 x 820			920 x 820			920 x 820					
DISTANCE BETWEEN TIE ROD	mm	660 x 560			660 x 560			660 x 560					
TIE ROD DIAMETER	mm	105			105			105					
EJECTOR STROKE	mm	200			200			200					
EJECTOR FORCE	Ton	6.5			6.5			6.5					
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	3200 (1500 / 1700)			3200 (1500 / 1700)			3200 (1500 / 1700)					
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	1.95 - 462			1.95 - 462			1.95 - 462					
GENERAL													
ELECTRIC MOTOR	kW	13.6									9.8 kW Servo		
TOTAL OIL CAPACITY	L	530									530		
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	75									75		
CONNECTED LOAD	kW	29.3			30.5			38.5			15.9	18	19.2
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT											
MACHINE DIMENSION (L X W X H)	m	8.5 X 2.1 X 3.8 (With 120IU)											
		8.5 X 2.1 X 4.3 (With 300IU)											
MACHINE WEIGHT	kg	9100			9500			10250			+ 1150		

* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE Q-SERIES 2K
TONNAGE: 280

Injection Unit 970,1540, 2290
TECHNICAL SPECIFICATIONS



MOVING PLATEN

ALL DIMENSIONS ARE IN MM

A M20X45 (108) PLACES ON BOTH PLATEN

B MOVING PLATEN: Ø100(+0.035/-0.0) THRU BORE,
K/0 BAR CENTRE HOLE M16X40 THRU
STATIONARY PLATEN:
Ø125(+0.04/-0.0) WITH LOCATING RING,
Ø160(+0.04/-0.0) x 10(+0.15/-0.0) DEEP, WITHOUT LOCATING RING

C Ø27 THRU, (12) HOLES IN MOVING PLATEN
K/O BAR M16X40 THRU (12) HOLES

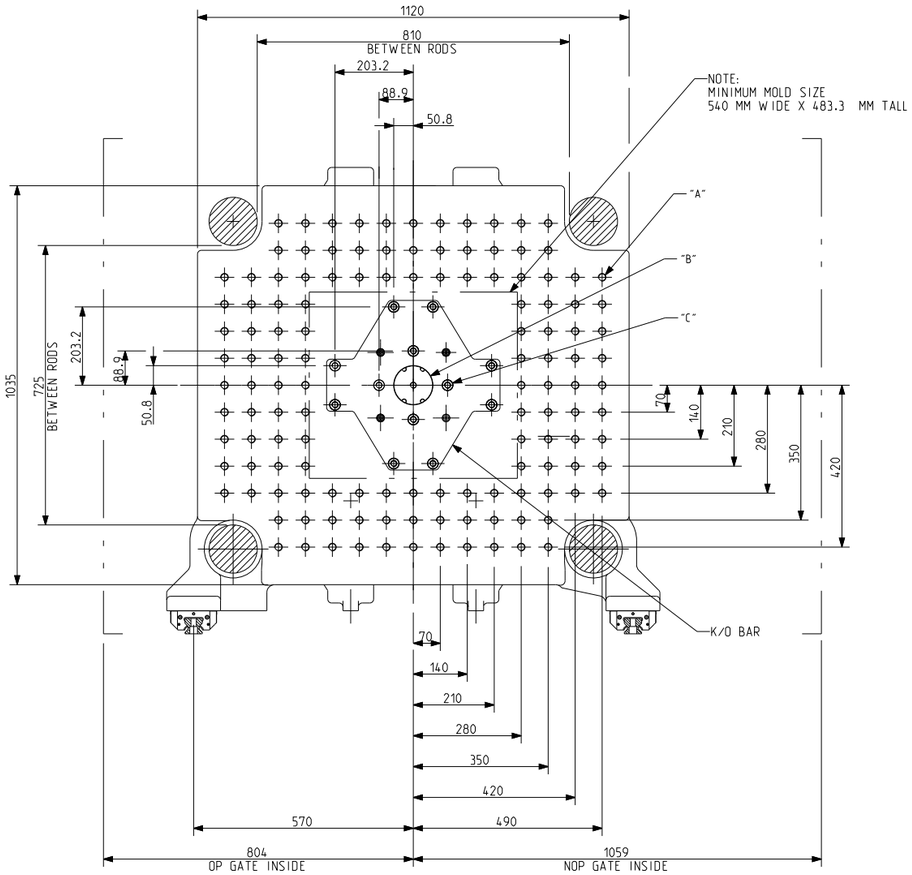
Q-SERIES 280 2K	UNIT	970			1540			2290			SEIU 120 V			SEIU 300 V		
	METRIC	A'	A	B	A'	A	B	A'	A	B	A	B	C	A	B	C
INJECTION UNIT SPECIFICATIONS																
INJECTION CAPACITY MAX. (GPPS)	gm	363	448	646	523	753	1025	861	1172	1530	29	56	81	108	146	191
THEORETICAL DISPLACEMENT	cc	382	471	679	550	792	1078	905	1232	1608	31	59	85	113	154	201
INJECTION PRESSURE MAX.	bar	2249	2057	1428	2236	1941	1426	2238	1856	1421	2444	2016	1400	2500	1943	1488
INJECTION RATE *	cc/sec	164	202	291	149	214	291	270	367	480	52	101	145	117	159	208
INJECTION SCREW STROKE	mm	240	240	240	280	280	280	320	320	320	120	120	120	160	160	160
SCREW DIAMETER	mm	45	50	60	50	60	70	60	70	80	18	25	30	30	35	40
SCREW L/D RATIO		26.7	24	20	28	23.3	20	26.7	22.9	20	20	20	20	22	22.9	20
SCREW SPEED	rpm	293	293	293	180	180	180	187	187	187	400	400	400	400	400	400
SCREW TORQUE @ 172 BAR	NM	1305	1305	1305	2126	2126	2126	3347	3347	3347	175	175	175	350	350	350
PLASTICIZING RATE (GPPS) *	g/sec	25	33	53	20	33	50	34	53	73	3	7.6	12	12	18	25
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	33	44	68	27	41	66	43	69	93	-	-	-	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		4+1			5+1			5+1			3+1			4+1		
TOTAL HEAT CAPACITY	KW	16.9			24.9			39.6			4.6	6.7	7.9	9.2	11.2	11.2
CLAMP UNIT SPECIFICATIONS																
CLAMP FORCE	Ton	280			280			280								
OPENING FORCE	Ton	28			28			28								
CLAMP STROKE	mm	650			650			650								
MAXIMUM DAYIGHT	mm	1400			1400			1400								
MINIMUM MOULD HEIGHT	mm	250			250			250								
MAXIMUM MOULD HEIGHT	mm	750			750			750								
PLATEN SIZE (H X V)	mm	990 x 940			990 x 940			990 x 940								
DISTANCE BETWEEN TIE ROD	mm	710 x 660			710 x 660			710 x 660								
TIE ROD DIAMETER	mm	115			115			115								
EJECTOR STROKE	mm	200			200			200								
EJECTOR FORCE	Ton	6.5			6.5			6.5								
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	4400 (1900 / 2500)			4400 (1900 / 2500)			4400 (1900 / 2500)								
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	2.15 - 497			2.15 - 497			2.15 - 497								
GENERAL																
ELECTRIC MOTOR	kW	13.6			13.6			25.1			9.8 kW Servo			15.2 kW Servo		
TOTAL OIL CAPACITY	L	630									630					
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	75									75					
CONNECTED LOAD	kW	30.5			38.5			64.7			15.9	18	19.2	25.9	27.9	27.9
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT														
MACHINE DIMENSION (L X W X H)	m	9.2 X 2.2 X 4.1 (With 120 IU)														
		9.2 X 2.2 X 4.58 (With 300 IU)														
MACHINE WEIGHT	kg	11500			12500			14600			+ 1250			+ 1450		

* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE Q-SERIES 2K
TONNAGE: 350

Injection Unit 1540, 2290, 3470
TECHNICAL SPECIFICATIONS



MOVING PLATEN

ALL DIMENSIONS ARE IN MM

A M20X45 (130) PLACES ON BOTH PLATEN

B MOVING PLATEN: Ø100(+0.035/-0.0) THRU BORE,
K/0 BAR CENTRE HOLE M16X40 THRU
STATIONARY PLATEN:
Ø160(+0.040/-0.0) WITH LOCATING RING,
Ø200(+0.046/-0.0) x 10(+0.15/-0.0) DEEP, WITHOUT LOCATING RING

C Ø27 THRU, (12) HOLES IN MOVING PLATEN
K/O BAR M16X40 THRU (12) HOLES

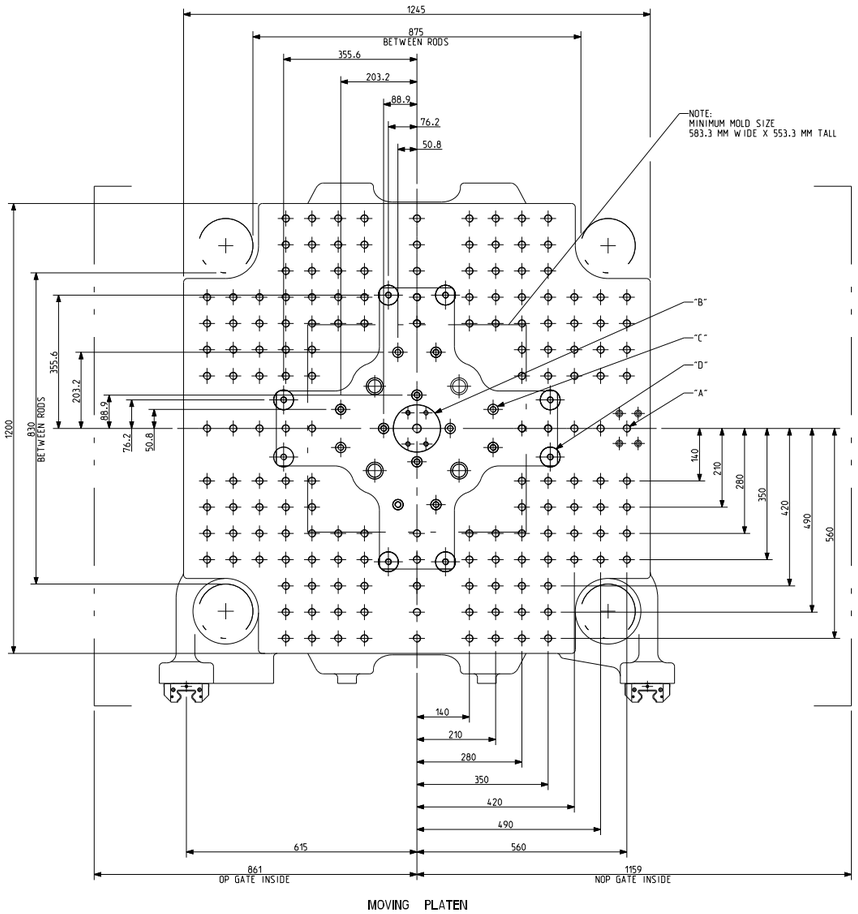
Q-SERIES 350 2K	UNIT	1540			2290			3470			SEIU 120 V			SEIU 300 V		
	METRIC	A'	A	B	A'	A	B	A'	A	B	A	B	C	A	B	C
INJECTION UNIT SPECIFICATIONS																
INJECTION CAPACITY MAX. (GPPS)	gm	523	753	1025	861	1172	1530	1318	1722	2179	29	56	81	108	146	191
THEORETICAL DISPLACEMENT	cc	550	792	1078	905	1232	1608	1385	1810	2290	31	59	85	113	154	201
INJECTION PRESSURE MAX.	bar	2236	1941	1426	2238	1856	1421	2289	1917	1515	2444	2016	1400	2500	1943	1488
INJECTION RATE *	cc/sec	244	351	478	270	367	480	272	356	450	52	101	145	117	159	208
INJECTION SCREW STROKE	mm	280	280	280	320	320	320	360	360	360	120	120	120	160	160	160
SCREW DIAMETER	mm	50	60	70	60	70	80	70	80	90	18	25	30	30	35	40
SCREW L/D RATIO		28	23.3	20	26.7	22.9	20	25.7	22.5	20	20	20	20	22	22.9	20
SCREW SPEED	rpm	295	295	273	187	187	187	142	142	142	400	400	400	400	400	400
SCREW TORQUE @ 172 BAR	NM	2126	2126	2126	3347	3347	3347	4424	4424	4424	175	175	175	350	350	350
PLASTICIZING RATE (GPPS) *	g/sec	34	54	77	34	53	73	40	55	73	3	7.6	12	12	18	25
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	44	68	100	43	69	93	52	70	94	-	-	-	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		5+1			5+1			5+1			3+1			4+1		
TOTAL HEAT CAPACITY	KW	24.9			39.6			57.9			4.6	6.7	7.9	9.2	11.2	11.2
CLAMP UNIT SPECIFICATIONS																
CLAMP FORCE	Ton	350			350			350								
OPENING FORCE	Ton	35			35			35								
CLAMP STROKE	mm	720			720			720								
MAXIMUM DAYIGHT	mm	1520			1520			1520								
MINIMUM MOULD HEIGHT	mm	300			300			300								
MAXIMUM MOULD HEIGHT	mm	800			800			800								
PLATEN SIZE (H X V)	mm	1120 x 1035			1120 x 1035			1120 x 1035								
DISTANCE BETWEEN TIE ROD	mm	810 x 725			810 x 725			810 x 725								
TIE ROD DIAMETER	mm	125			125			125								
EJECTOR STROKE	mm	250			250			250								
EJECTOR FORCE	Ton	7.5			7.5			7.5								
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	6000 (2700 / 3300)			6000 (2700 / 3300)			6000 (2700 / 3300)								
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	2.40 - 567			2.40 - 567			2.40 - 567								
GENERAL																
ELECTRIC MOTOR	kW	25.1									9.8 kW Servo			15.2 kW Servo		
TOTAL OIL CAPACITY	L	650									650			650		
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	100									100			100		
CONNECTED LOAD	kW	50			64.7			83			15.9	18	19.2	25.9	27.9	27.9
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT														
MACHINE DIMENSION (L X W X H)	m	10.2 X 2.3 X 4.1 (With 120 IU)														
		10.2 X 2.3 X 4.58 (With 300 IU)														
MACHINE WEIGHT	kg	14600			16800			18290			+ 1250			+ 1450		

* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE Q-SERIES 2K
TONNAGE: 450

Injection Unit 1540, 2290, 3470
TECHNICAL SPECIFICATIONS



ALL DIMENSIONS ARE IN MM

A M20X45 (164) PLACES ON BOTH PLATEN

B MOVING PLATEN: Ø125(+0.04/-0.0) THRU BORE,
K/0 BAR CENTRE HOLE M24X43 THRU
STATIONARY PLATEN:
Ø160(+0.040/-0.0) WITH LOCATING RING,
Ø200(+0.046/-0.0) x 10(+0.15/-0.0) DEEP, WITHOUT LOCATING RING

C Ø27 THRU, (12) HOLES IN MOVING PLATEN
K/O BAR M16X40 THRU (20) HOLES

D Ø52.4 THRU (8) HOLES

Q-SERIES 450 2K	UNIT	1540			2290			3470			SEIU 120 V			SEIU 300 V		
	METRIC	A'	A	B	A'	A	B	A'	A	B	A	B	C	A	B	C
INJECTION UNIT SPECIFICATIONS																
INJECTION CAPACITY MAX. (GPPS)	gm	523	753	1025	861	1172	1530	1318	1722	2179	29	56	81	108	146	191
THEORETICAL DISPLACEMENT	cc	550	792	1078	905	1232	1608	1385	1810	2290	31	59	85	113	154	201
INJECTION PRESSURE MAX.	bar	2236	1941	1426	2238	1856	1421	2289	1917	1515	2444	2016	1400	2500	1943	1488
INJECTION RATE *	cc/sec	244	351	478	270	367	480	272	356	450	52	101	145	117	159	208
INJECTION SCREW STROKE	mm	280	280	280	320	320	320	360	360	360	120	120	120	160	160	160
SCREW DIAMETER	mm	50	60	70	60	70	80	70	80	90	18	25	30	30	35	40
SCREW L/D RATIO		28	23.3	20	26.7	22.9	20	25.7	22.5	20	20	20	20	22	22.9	20
SCREW SPEED	rpm	295	295	273	187	187	187	142	142	142	400	400	400	400	400	400
SCREW TORQUE @ 172 BAR	NM	2126	2126	2126	3347	3347	3347	4424	4424	4424	175	175	175	350	350	350
PLASTICIZING RATE (GPPS) *	g/sec	34	54	77	34	53	73	40	55	73	3	7.6	12	12	18	25
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	44	68	100	43	69	93	52	70	94	-	-	-	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		5+1			5+1			5+1			3+1			4+1		
TOTAL HEAT CAPACITY	KW	24.9			39.6			57.9			4.6	6.7	7.9	9.2	11.2	11.2
CLAMP UNIT SPECIFICATIONS																
CLAMP FORCE	Ton	450			450			450								
OPENING FORCE	Ton	45			45			45								
CLAMP STROKE	mm	850			850			850								
MAXIMUM DAYIGHT	mm	1670			1670			1670								
MINIMUM MOULD HEIGHT	mm	350			350			350								
MAXIMUM MOULD HEIGHT	mm	820			820			820								
PLATEN SIZE (H X V)	mm	1245 x 1200			1245 x 1200			1245 x 1200								
DISTANCE BETWEEN TIE ROD	mm	875 x 830			875 x 830			875 x 830								
TIE ROD DIAMETER	mm	145			145			145								
EJECTOR STROKE	mm	250			250			250								
EJECTOR FORCE	Ton	12			12			12								
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	8000 (4000 / 4000)			8000 (4000 / 4000)			8000 (4000 / 4000)								
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	2.95 - 612			2.95 - 612			2.95 - 612								
GENERAL																
ELECTRIC MOTOR	kW	25.1									9.8 kW Servo			15.2 kW Servo		
TOTAL OIL CAPACITY	L	815									815					
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	100									100					
CONNECTED LOAD	kW	50			64.7			83			15.9	18	19.2	25.9	27.9	27.9
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT														
MACHINE DIMENSION (L X W X H)	m	10.6 X 2.4 X 4.1 (With 120 IU)														
		10.6 X 2.4 X 4.58 (With 300 IU)														
MACHINE WEIGHT	kg	19900			22000			23500			+ 1350			+ 1550		

* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

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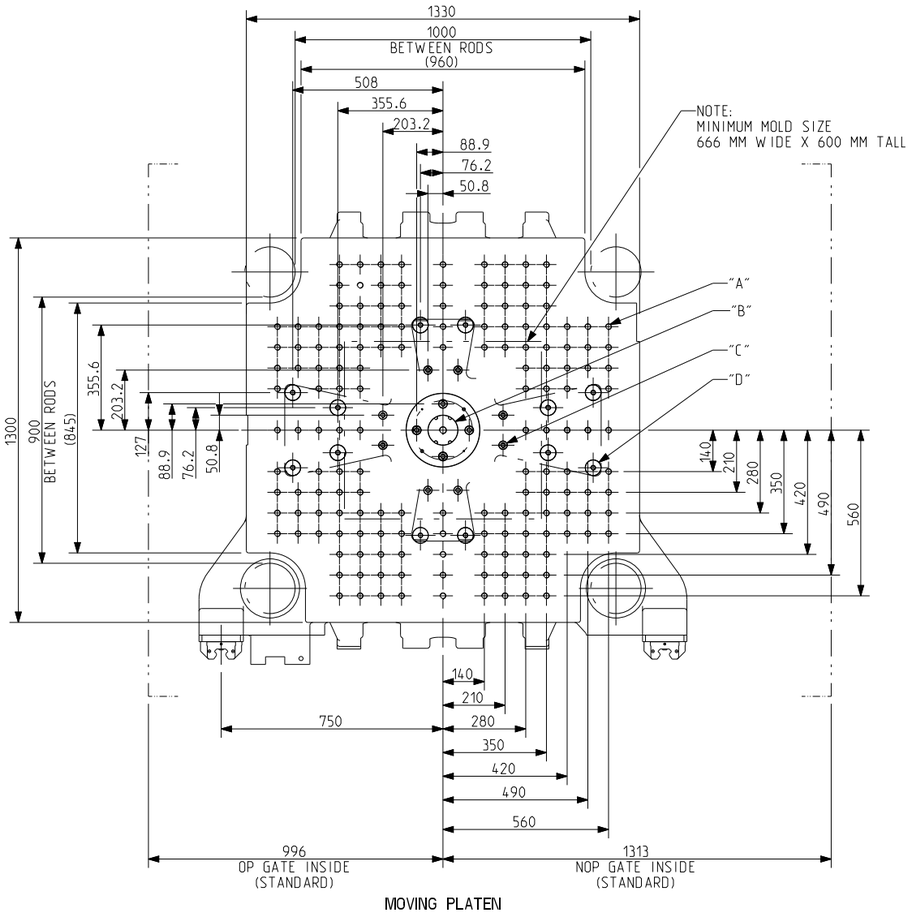
THE Q-SERIES 2K
TONNAGE: 550

Injection Unit 2290, 3470, 4880
TECHNICAL SPECIFICATIONS



MOVING PLATEN

ALL DIMENSIONS ARE IN MM

A MOVING PLATEN: M20X50 (160) PLACES,
STATIONARY PLATEN: M20X50 DEEP (164) PLACES

B MOVING PLATEN:
Ø100(+0.035/-0.0) WITH LOCATING RING
Ø250(+0.046/-0.0) X 20.07(+0.08/-0.0) DEEP, WITHOUT LOCATING RING
K/0 BAR CENTRE HOLE M24X60 DEEP
STATIONARY PLATEN:
Ø160(+0.040/-0.0) WITH LOCATING RING,
Ø250(+0.046/-0.0) X 20.07(+0.08/-0.0) DEEP, WITHOUT LOCATING RING

C (12X) Ø27 THRU HOLES
K/O BAR HOLES: (12X) M16 THRU

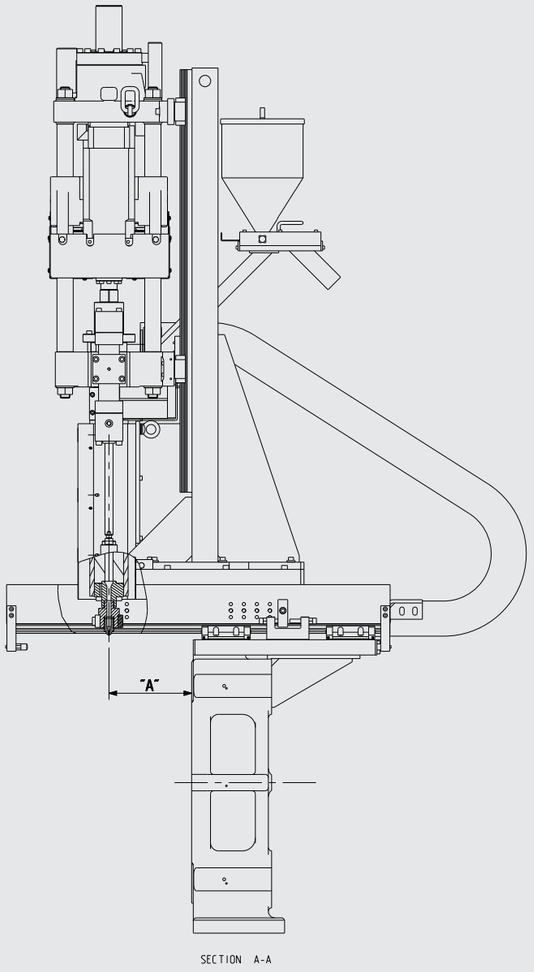
D (12X) Ø52.4 THRU HOLES
K/O BAR HOLES: (12X) M16 THRU

Q-SERIES 550 2K	UNIT	2290			3470			4880		SEIU 120 V			SEIU 300 V		
	METRIC	A'	A	B	A'	A	B	A	B	A	B	C	A	B	C
INJECTION UNIT SPECIFICATIONS															
INJECTION CAPACITY MAX. (GPPS)	gm	861	1172	1530	1318	1722	2179	2421	2989	29	56	81	108	146	191
THEORETICAL DISPLACEMENT	cc	905	1232	1608	1385	1810	2290	2545	3142	31	59	85	113	154	201
INJECTION PRESSURE MAX.	bar	2238	1856	1421	2289	1917	1515	1896	1538	2444	2016	1400	2500	1943	1488
INJECTION RATE *	cc/sec	329	448	585	332	434	549	434	535	52	101	145	117	159	208
INJECTION SCREW STROKE	mm	320	320	320	360	360	360	400	400	120	120	120	160	160	160
SCREW DIAMETER	mm	60	70	80	70	80	90	90	100	18	25	30	30	35	40
SCREW L/D RATIO		26.7	22.9	20	25.7	22.5	20	22.2	20	20	20	20	22	22.9	20
SCREW SPEED	rpm	229	229	229	173	173	173	136	136	400	400	400	400	400	400
SCREW TORQUE @ 172 BAR	NM	3347	3347	3347	4424	4424	4424	5613	5613	175	175	175	350	350	350
PLASTICIZING RATE (GPPS) *	g/sec	42	64	88	48	67	89	71	92	3	7.6	12	12	18	25
PLASTICIZING RATE (GPPS BARRIER) *	g/sec	53	84	113	63	86	114	90	115	-	-	-	-	-	-
NO.OF PYROMETERS (BARREL+NOZZLE)		5+1			5+1			6+1		3+1			4+1		
TOTAL HEAT CAPACITY	KW	39.6			57.9			53.8		4.6	6.7	7.9	9.2	11.2	11.2
CLAMP UNIT SPECIFICATIONS															
CLAMP FORCE	Ton	550			550			550							
OPENING FORCE	Ton	55			55			55							
CLAMP STROKE	mm	920			920			920							
MAXIMUM DAYIGHT	mm	1820			1820			1820							
MINIMUM MOULD HEIGHT	mm	400			400			400							
MAXIMUM MOULD HEIGHT	mm	900			900			900							
PLATEN SIZE (H X V)	mm	1330 x 1300			1330 x 1300			1330 x 1300							
DISTANCE BETWEEN TIE ROD	mm	1000 x 900			1000 x 900			1000 x 900							
TIE ROD DIAMETER	mm	170			170			170							
EJECTOR STROKE	mm	250			250			250							
EJECTOR FORCE	Ton	12			12			12							
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	9650 (4150 / 5500)			9650 (4150 / 5500)			9650 (4150 / 5500)							
DRY CYCLE TIME (EUROMAP 6) ***	sec-mm	3.20 - 700			3.20 - 700			3.20 - 700							
GENERAL															
ELECTRIC MOTOR	kW	27.2								9.8 kW Servo			15.2 kW Servo		
TOTAL OIL CAPACITY	L	815								815					
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	100								100					
CONNECTED LOAD	kW	66.8			85.1			81.0		15.9	18	19.2	25.9	27.9	27.9
TOTAL CONNECTED LOAD	kW	CONNECTED LOAD MAIN UNIT + CONNECTED LOAD SECONDARY UNIT													
MACHINE DIMENSION (L X W X H)	m	10.6 X 3.0 X 4.4 (With 120 IU)													
		10.6 X 3.0 X 4.9 (With 300 IU)													
MACHINE WEIGHT	kg	30750			32750			33150		+ 1350			+ 1550		

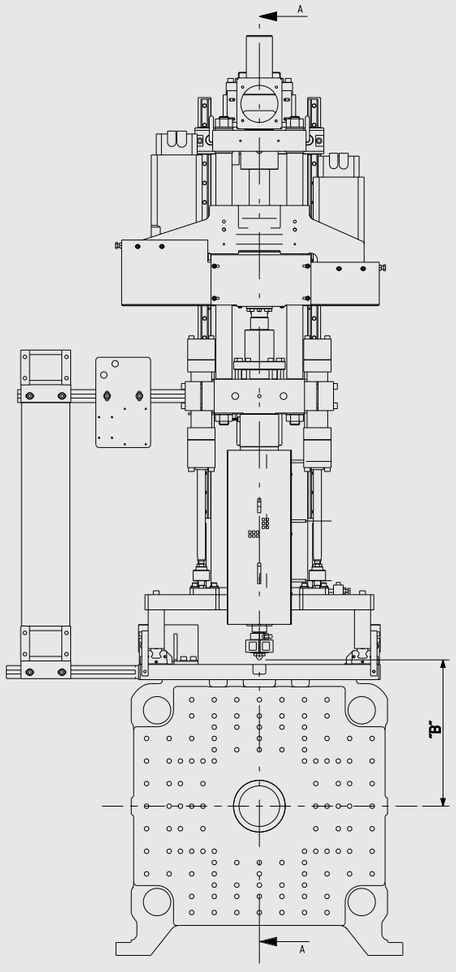
* WITH OPEN NOZZLE
***BREAKAWAY AND TONNAGE DECOMPRESSION TIMES ARE NOT INCLUDED IN DRY CYCLE TIME

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

VERTICAL IU LAYOUT & DIMENSIONS



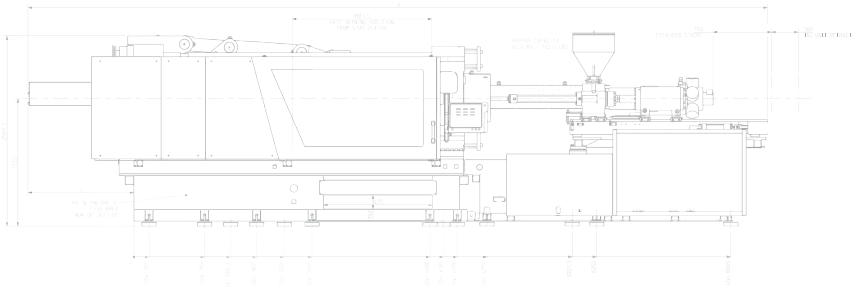
Fixed Platen



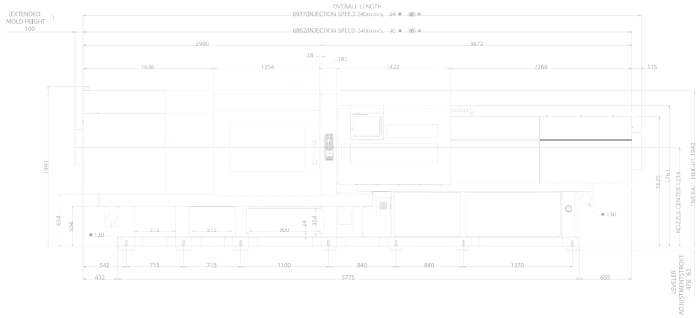
Fixed Platen

Machine Model	IU 120				IU 300			
	Dimension "A"		Dimension "B"		Dimension "A"		Dimension "B"	
	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)
Q-SERIES 150 2K	90	250	204	454	-	-	-	-
Q-SERIES 180 2K	90	250	226	476	-	-	-	-
Q-SERIES 230 2K	90	250	256	506	90	250	340	590
Q-SERIES 280 2K	90	250	324	574	90	250	407	657
Q-SERIES 350 2K	90	250	371	621	90	250	455	705
Q-SERIES 450 2K	90	250	459	709	90	250	542	792
Q-SERIES 550 2K	90	250	519	769	90	250	650	900

NOTES



All specifications reflect average values based on typical machine layouts. Actual figures will vary depending on final machine configuration. Performance specifications are based on theoretical data. Photograph may show attachments or accessories, which may not be part of the standard scope of supply. Due to continual improvements, specifications & some components are subject to change without notice.



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KOLKATA	+91-33-4601 7768
MUMBAI	+91-22-4005 5459/65
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