Order Confirmation

1 Injection Molding Machine Type KM 2000/33000 MX
including additionals, special items and services

Hydraulic-mechanical 2-platen clamping system with 4 pressure pads and 4 locking devices on moving platen.

PV-closed loop control for the injection unit

MC6 control based on industrial PC with real-time Ethernet technology.
BluePower - weekly timer & eco assistant

Basic equipment:
- Electronic coding of the plasticiser (ZE 21.80)
- Data logging (logbook) (ZE 89.6702)
- Start-up circuit (ZE 89.70)
- Quality monitoring package (ZE 89.751)
- Cycle time analysis (ZE 89.76)
- Cycle recording on internal storage (ZE 89.765)
- Interface for connection of standard USB-keyboard (ZE 89.7991)
- Graph display of set and actual profiles (ZE 89.8039)
- Maintenance schedule (ZE 89.807)

Plasticising unit(s)

1 Thermoplast - Standard	
Plasticising size	33000
Screw diameter	175 mm
Nozzle radius	19.05 mm
Nozzle bore	12.7 mm

Additionals / special items for base machine and injection unit 1: SP33000

Pos. No.	Number	Description
02.50	1	Wedge type anti-vibration pads
02.5003	1	Shim plates, 1 set, for wedge type pads for machine levelling on uneven foundation
02.505	1	Horizontal stops for fixing the machine in longitudinal axis on the foundation, attached to the machine bed of the clamp unit
03.00	1	Oil drip tray beneath mold area between the machine bed support beams.
07.12	1	Electric screw motor: For independent plasticizing during mold opening and closing. For parallel plasticizing we recommend a shut-off nozzle. Note: Technical data not identical with the standard machine! (Instead of std. hydro-motor) (Not retrofittable) (Not possible with ZE 07.13, ZE 07.15, ZE 07.21 and ZE 07.22)
32.02	1	Cylindrical valve type shut-off nozzle HSVS, hydraulically operated, US design. Original machine equipment with hydraulical/electrical control. (Delivery instead of ZE 32.00)
40.511	1	Pneumatic valve 1 on moving platen non-op side for blow function (1 off 5/2 directional valve with 1 solenoid). Selectable control via stroke/time or time/time. Output air volume manually adjustable via 1 throttle valve.

Pos. No.	Number	Description
		Connection via hose plug connector. Output port 1/4“ for 10 mm hose outer diameter. (With ZE 40.511 fitted ZE 40.512 is not possible)
40.752	1	Maintenance unit for the treatment of oil free compressed air, consisting of: - shut-off valve (manual) with pressure relief - pressure adjustment valve (manual) incl. pressure gauge and air filter - pressure switch for electric monitoring -shut-off valve (electric) with pressure relief (Prerequisite for ZE 40.5xx, ZE 40.70, ZE 40.71, ZE 40.71xx, ZE 40.77, ZE 42.4x, ZE 49.05 and ZE 72.4xx)
45.65	1	Mold fixing platens according to SPI (fixed and moving platens) up to KM 1600 MX: threads 1"-8 UNC-2B from KM 2000 MX: threads 1 1/4"-7 UNC-2B - Centering ring on fixed platen 5" (127 mm) - Cover on moving platen with central diameter 30 mm
Addition to Pos. No. 45.65	1	Locating ring on Stationary Plate to be 6" = 152.4 mm
45.721	1	Mechanical robot interface according to EUROMAP 18 on fixed platen
50.30	1	Hydraulically actuated ejector plate including tapped holes and clearance holes in the moving platen for the ejector bolts (pattern according to SPI) up to KM 1600 MX: threads 1"-8 UNC-2B from KM 2000 MX: threads 1 1/4"-7 UNC-2B (Not retrofittable)
Addition to Pos. No. 50.30	1	Special ejector plate with extra tapped holes in the ejector and the MMP: - Additional tapped holes in ejector platen: 8x 1 1/4"-7 UNC-2B - Additional clearance holes in the

Pos. No.	Number	Description
		moving platen: 8x D=57mm [2.24"] at position: (±2/±8), (±8/±2) [inch] (±50.8/±203.2), (±203.2/±50.8) [mm] Using new MX Platen / Ejector design
54.35	1	Hydr. operated safety gate on operator's side
63.65	1	Internal oil filtration in the bypass of the cooling pump. Filter change only when machine is switched off.
64.50	1	Level sensor for oil drip tray monitoring
65.01	1	Increased oil cooler for water intake temperature of max. 36 °C with a min. delta-P = 2.0 bar between water inlet and outlet
65.15	1	NPT- connections for machine cooling water
65.551	1	Pressure gauge with hydraulic selector switch on operator side, for service purposes, displaying alternatively: - system pressure (pump pressure) - injection pressure / holding pressure - hydro motor pressure
71.01	1	Injection/compression sequence: Coining stroke and speed adjustable via VDU Function: - mold closing up to an adjustable compression stroke position max. 21 mm: KM 850 MX to KM 1000 MX max. 26 mm: KM 1150 MX to KM 1600 MX max. 36 mm: KM 2000 MX to KM 2300 MX max. 41 mm: KM 2700 MX to KM 3200 MX max. 51 mm: KM 4000 MX - injection - closing/compression stroke - holding pressure
72.31	1	Hydr. core pull system 1-fold

Pos. No.	Number	Description
		on moving platen (BWAP), non-op side. Speed and pressure adjustable via VDU. Socket pinout acc. to KM standard (up to core 2 acc. to EUROMAP 13 (HAN 16 A)). 4/3 directional valve with 2 solenoids and blocked center position, fitting sizes (internal thread): 1/2 inch from KM 850 to KM 1150 3/4 inch from KM 1300 to KM 4000 For prop. valve control (pressure and speed) for hydr. core pulls, separate for moving platen (BWAP) and fixed platen (FWAP) ZE 72.56 is required. (Only possible in connection with ZE 72.55, ZE 72.56 or ZE 72.57)
72.36	1	Hydr. core pull system 1-fold on fixed platen (FWAP), non-op side. Speed and pressure adjustable via VDU. Socket pinout acc. to KM standard (up to core 2 acc. to EUROMAP 13 (HAN 16 A)). 4/3 directional valve with 2 solenoids and blocked center position, fitting sizes (internal thread): 1/2 inch from KM 850 to KM 1150 3/4 inch from KM 1300 to KM 4000 For prop. valve control (pressure and speed) for hydr. core pulls, separate for moving platen (BWAP) and fixed platen (FWAP) ZE 72.56 is required. (Only possible in connection with ZE 72.55, ZE 72.56 or ZE 72.57)
72.55	1	Hydraulic ejector and hydraulic cores on moving platen as well as hydraulic cores on fixed platen are supplied in parallel by one common pump during opening and closing movement of the clamp unit. Core pulls and ejectors can be set into a defined operation state sequentially by pressure and quantity call.
72.61	1	Pressure maintaining function for hydr. core circuits via the hydr. system during opening and closing movements of the mold. Important: if pressure maintaining function is required during plasticizing (hydr. or electric screw drive) ZE 72.60 is required.

Pos. No.	Number	Description
89.07	1	Cold slug ejection
89.2001	1	Cooling fan for control cabinet
89.238	1	Grid type of the power supply: TN-C or TN-C-S or TN-S system (3 ph grids with separate neutral or neutral together with ground) (Not possible in connection with ZE 89.2381)
89.2471	1	Nominal Input Voltage 460 V / 60 Hz without neutral. Suitable for nominal voltage 480 V (acc. to ANSI C84.1-2006) For mold hotrunner heaters with 220 V / 230 V a separate transformer or an additional supply is required.
89.260	1	Separate connection for heaters and power circuit (6-pole main switch)
89.5310	1	1 additional temperature zone for nozzle heater 110 V, incl. transformer (Only possible with ZE 89.247x) (Not possible in connection with ZE 89.299)
89.59245	1	Electric interface acc. to EUROMAP 78 non-op side Option KM between IMM and integrated robot on non-op side with extension acc. to factory standard N0690 for signals to safety devices e.g. safety fences. In case safety signals for additional equipment are needed, they are the operator's/integrator's responsibility. This applies especially for changes done after the delivery of the IMM. The operator/integrator is responsible for the overall safety of the facility. (Prerequisite for IR series) (Not possible with ZE 89.59241)
89.6702	1	Data logging (logbook) for continuous recording and retrospective display (max. 20,000 events) of: - changes of machine parameters - Alarm messages / acknowledgements

Pos. No.	Number	Description
		- On/off of the machine control incl. date, time and current cycle as well asrecording of the password (standard) resp. chip card (prerequisite ZE 89.6712x) Analysis of the entries via export function on USB flash drive.
89.6781	1	Stabilized power supply unit (24 V) for machine control
89.70	1	Start-up circuit: switch over from start-up to production values for plasticizing stroke, injection pressure, holding pressure, back pressure, heating time, etc. depending on cycles.
89.751	1	Quality monitoring package: Process monitoring (actual cycle values and integrals) by setting of tolerances, actual value display and recording. Documentation printable.
89.76	1	Cycle time analysis: Display of the individual times and the total time of the last actual cycle and a selectable reference cycle. Graph display of the sequential and parallel times.
89.765	1	Cycle recording: Recording of actual process values for each cycle on an internal storage device. Export function to printer or data storage device in Excel compatible format.
89.7991	1	Interface for connection of a standard alphanumeric USB-keyboard for free text entry
89.80363	1	TFT color screen (21,5", pivot, glass surface) with multi touch screen functions for setting pages and machine operation. Set point entry and simultaneous operation of machine keys is possible. In addition to the machine keys individual machine movements can be carried out during set-up mode via the operating device SlideX. Haptic touch

Pos. No.	Number	Description
		like 2-finger zoom and swiping is included. Additional functions like extended actual value column, free configurable graphic machine programming via process diagram with system control. Free choice of favorites and extended MC6 system control via intelligent machine operation keyboard. Capacitive touch design. (Limited operation wearing gloves). Improved contrast and less sensitive to scratches and chemicals.
89.8039	1	Graph display of set and actual profiles for injection speed, injection pressure, holding pressure, back pressure and screw rpm.
89.807	1	Maintenance schedule: According to machine strain (working hours and cycle time) automatic cal-culation of maintenance intervals, signalled on VDU with alarm when due.
89.810	1	PV-closed loop control for injection speed, holding pressure and back pressure as well as switch over to holding pressure by hydraulic pressure.
89.8191	1	Additional language German for VDU (selectable on screen)
89.829	1	First language American - VDU American - operating manual American - machine plates American
89.9686	1	Ethernet router/bridge and firewall (Wall IE) for the connection of a central computer to the customer network via TCP/IP protocol. (EUROMAP interfaces 63 and 77)
89.9688	1	redBox, Hardware and software package for remote access by the KraussMaffei service hotline to the machine control system for fault diagnosis. Certificate as smartcard for a highly secure VPN connection, integrated

Pos. No.	Number	Description
		firewall.
89.96891	1	KraussMaffei smartCube High performance industrial PC with integrated OPC UA interface. Connectivity required for current and future digital lifecycle services.
89.9693	1	CIMI-Interface 1 for the monitoring of the injection process: Interface for the connection of an external computer system (e.g. KISTLER Dataflow), monitoring only of the injection process via selected process parameters. The external computer and software is not included in our scope of supply as well as the signals for mold cavity pressure, mold cavity wall temperature and melt temperature. These signals are optionally available against surcharge. (Not possible with ZE 89.523)
96.401	1	Machine painting, structural gloss paint - machine 1 color RAL 9002 grey white - clamp bed RAL 7037 grey - cladding RAL 9002 grey white and KM blue - safety doors RAL 9002 grey white
97.040	1	UVV for the USA: Safety standards acc to US regulations ANSI / SPI B151.1 resp. ANSI / SPI B151.29: Differing electrical safety regulations and country specific pressure accumulator acceptance test (Not possible together with ZE 97.00 or ZE 97.050)
100	1	BluePower - Servo pump drive Servo motor pump drive system for outstanding energy efficient operation of the machine, including a separate oil filter and oil cooling circuit integrated in the machine base.
		Requirement

Pos. No.	Number	Description
		- Sp 33000 MX - ZE 07.12 Not possible with: - PPPS01.10 to PPPS01.80 Note: Technical data not identical with the standard machine!
101	1	Min. mould height and max. daylight reduced by 200 mm: - Min. mould height 600 mm.(Standard: 800mm) - Max. mould height 1700 mm.(Standard) - Opening stroke 2800 mm. (Standard) - Max. daylight 3400 mm. (Standard: 3600mm) Max. mould weight on the MP are to be reduced!
102	1	Additional main disconnect switch: disconnect pump motor with lock out capability, heats and control stay on.
103	1	Like ZE 42.25 Electrical connection for drop out control by means of scales or light barrier (Harting - HAN10E connector) Expansion by 2 to a total of 3 Interfaces for drop out control. Selection function on MC6, which light barrier(s) should beactive. Mounting of the interfaces on Injection unit operator side near FFAP
-104	1	Eject control by 3 parallel infra-red photo cells. On screen selectable which photo cells to be used
105	1	"For operation without safety step protection: Installation of an acknowledgement system according to ANSI / EN201. Valid only for IMM

Pos. No.	Number	Description
		WITH Euromap 78 or Euromap 73: Button #1 in the clamp area Operating side Button #1.1 in the clamp area Opposite side Button #2 on the control panel Button#2.1 on the non-operator side Cycle start only with the following signal sequence: Button #1 or button #1.1 pressed (clamp area enabled) Button #2 or button #2.1 pressed (safety door is closed) Function of button #2 or button #2.1 can be through already existing control elements (standard acknowledgement or ""Close safety door"") can be taken over. Buttons #1.1 and #2.1 are only available when Euromap 78 or Euromap 73 in function. (IMM safety door must be closed). The mounting and evaluation of button #1.2, #2.2 is the responsibility of the automation manufacturer. Visibility into the clamp area must be ensured! The safety signal ""Safety area closed, locked and acknowledged"" via theEM interface to the IMM. Button ""Close Mold"" (cycle start)
106	1	Special Mould cooling: Main connection point (1x IN, 1x OUT) with 4" near fixed platen NOS. Hoses/ Pipes: Supply MP/NOS: 4x 2 inch (2 circuits) Supply MP/OS: 4x 2 inch (2 circuits) Supply FP/NOS: 2x 2 inch (1 circuits) Supply FP/OS: 2x 2inch (1 circuits) Moving plate/ NOS water connection ever circuit with 2 inlets and 2 outlets 1 ½"

Pos. No.	Number	Description
		Moving plate/ OS water connection ever circuit with 2 inlets and 2 outlets 1 ½" Fixed plate/ NOS water connection ever circuit with 2 inletsand 2 outlets 1 ½" Fixed plate/ OS water connection ever circuit with 2 inlets and 2 outlets 1 ½" All connection in each circuit (inlet and outlet) with manual ball-type stop valves and towards mold with 1 1/2" NPT male thread Air line connection with ball valves for blow out of water lines. For water temperatures 85°C max. Max. flow rate is 136 l/min (1½ inch piping) assumed the velocity of flow is 2 m/s Max. flow rate is 243 l/min (2 inch piping) assumed the velocity of flow is 2 m/s The customer gets the Water cooling-drawings for confirmation.
-111	1	Machine housing increase of width op-side 150mm due to water installation interfernce.
107	1	Cutout for conveyor belt in the short end of the machine guarding. Conveyor belt inside the oil drip tray of the clamp unit. Distance between conveyor belt and lower edge of the oil drip tray to be min. 50mm. Conveyor belt must be additionally increased between the machine bed and the guarding due to the cutout of the cross beam. The cutout in the guarding is designed to create a free area in the machine bed of min. 1400mm x 500mm (h x v). Details see ADOCS (without machine pads)

Pos. No.	Number	Description
		The step on safety grids are removable and a double acknowledge system for operation without safety grid is required (see subitem) Removable safety panels at the cutout of the guarding shall be provided. Attention! Safety panels must be adapted by the customer to the applicable rules and must be remounted.
108	1	FP+MP new optimized mold platen design
109	1	MX - redesign machine safety housing relocation access door. Customer has requested to keep original design of access door location on operator side.
110	1	Preparation of 2D (dwg format) drawings of IMM for customer building lay-out Preliminary Foundation / Platen 2D drawings.
113	1	Machine preparation for retrofitting a tie bar retraction system on the operator side for a completely pulled tie bar (ZE59.201/G01) consisting of: - Preparation of the fixed plate including guide bushing - Position of the drive cylinders of the clamping unit is switched (OS bottom; NOS top) - Hydraulic blocks for controlling the tie bar retraction system - Piping interface to "Motor and clamping elements" Not included: - Carrier incl. spindle, hydromotor and support - Column head for tie bar retraction system - Clamping elements - Electrical preparation - Software Preparation

Pos. No.	Number	Description
		Prerequisite for retrofitting the tie bar retraction system: - Free space at the Interfaces on the fixed plate - Free space at the Interfaceto hall floor - No platforms/periphery/supply lines or other interfering contours in the area of the HZV Note: The dimensions of the machine may increase due to the tie bar retraction system

Additionals / special items for plasticising unit 1: SP33000

Pos. No.	Number	Description
21.10	1	Technically executed just like a HPS-B plasticising unit
21.80	1	Electronic coding of the plasticizer. For automatic identification of the technical data and of the max operating parameters: screw diameter, temperature, inj.-pressure, screw rpm, plasticizing torque.

Additionals / special items for robot:

Pos. No.	Number	Description
R31.1071	1	KraussMaffei Linear Robot LRX 1000 load < 100 kg (gripper + drive + parts) discharge on non-op side Axes: strip stroke (X-axis) - 2000 mm, servo motor vertical stroke (Y-axis) with engine brake - 1500/1500 mm, Telescopic, servo motor transverse stroke (Z-axis) - 5000 mm, servo motor - Incl. support leg wrist axis (C-axis for discharge) - 0 - 90°, pneumatic - torque = 240 Nm position measuring with absolute encoder Not included in delivery: - control - mounting bracket - transport rack - safety package - safety guard for robot - interface for conveyor belt connection - conveyor belt
Addition to Pos. No. R31.1071	1	Important notices regarding the IMM: Min. mould height and max. daylight reduced by 200 mm: - Min. mould height 600 mm.(Standard: 800mm) - Max. mould height 1700 mm.(Standard) - Opening stroke 2800 mm. (Standard) - Max. daylight 3400 mm. (Standard: 3600mm) Max. mould weight on the MP are to be reduced! Cutout for conveyor belt in the short end of the machine guarding. Conveyor belt inside the oil drip tray of the clamp unit. Distance between conveyor belt and lower edge of the oil drip tray to be min. 50mm. Conveyor belt must be additionally increased between the machine bed and the guarding due to the cutout of the cross beam. The cutout in the guarding is designed to create a free area in the machine bed of min. 1400mm x 500mm (h x v).

Pos. No.	Number	Description
R31.1401	1	Mechanical interface according to EUROMAP 18.
R31.1405	1	Mounting bracket for assembly of the robot to the IMM including fixing bolts.
R31.1501	1	Transport rack for robot of the LRX series.
R31.2713	1	C-wrist axis for LRX 1000 (rotation around Z-axis) 0 and + 90° pneumatic operation torque = 240 Nm
R31.2901	1	Central lubrication fully automatic. Lubrication depending on operational performance of the main axes. Lubrication monitoring via press key. Lubricant monitoring (filling level) via level switch. Including initial filling of lubricant.
R31.2931	1	Lubricant for central lubrication
R31.3002	1	Safety package for guarding fence: according to DIN EN ISO 10218-1 switch, acknowledge button, door contact, safety (panic) unlock, emergency stop button Note: If ordered without safety guard ZE R31.3101 or ZE R31.3111 components only will be delivered.
R31.3010	1	Preparation of control for connection of a safety package according to ZE R31.300x including connection cables with plug-ins (HAN 25 D) for connection of a safety package.
R31.35112	4	Pneumatic valve for compressed air circuit (5/2 directional valve with one solenoid, monostable)
Addition to Pos. No. R31.35112	1	1x Surcharge standard pneumatic valve as 5/3 directional valve, center position opened:

Pos. No.	Number	Description
		Overall 4 pneumatic valves, executed as: 3 of 4 monostable 1 of 4 as 5/3 directional valve, center position opened [SO.0506]
R31.36512	4	Venturi circuit for vacuum. Vacuum display with adjustable limit value. (Not possible in connection with ZE R31.3607, ZE R31.3613 or ZE R31.3651x)
R31.4001	1	Fully integrated control: IMM with function keys: START, STOP, AUTOMATIC, ROBOT ON, BASIC POSITION, FAST-SLOW Electric safety interface between robot and IMM: Emergency stop and safety door protection in 2-channel version. Power supply via plug-in connection on KM IMM. (Only possible with a KM IMM)
R31.4011	1	Handheld - plastic housing - 10.1" color display with touch screen - emergency stop button - accept switch, 3-stage - key switch - USB-socket - 20 m connection cable - operation language according to language on IMM
R31.4031	1	Software module KraussMaffei programming assistant "WizardX" for easy generation of a basic program (pick&place): - Interactive, graphic programming and configuration - Graphically guided teaching process - Expert mode for individual processing and extension of the basic program
R31.4101	1	Early start "robot moving in" during mold opening before reaching the position "mold open". Note:

Pos. No.	Number	Description
		KraussMaffei is not liable for any possible damages on mold, personnel, robot or IMM resulting from incorrect settings and/or incorrect operation. Function is only activated in connection with ZE 89.5915 on KM IMM. (Only possible in connection with ZE R31.4001)
R31.4111	1	Work zone monitoring (tie bar protection) of IMM with 40 adjustable protection areas within the main axes
R31.4223	2	Interface for connection of additional devices. - 8 digital inputs (24V DC) - 8 digital outputs (24V DC, potential-free) - connection cable with plug-in connector and mating plug Connection of safety signals (emergency stop, safety door protection) is not possible.
R31.4224	1	Interface for connection of additional devices incl. safety signal - 8 digital inputs (24V DC) - 8 digital outputs (24V DC, potential-free) - connection cable with plug-in connector and mating plug. Suitable for safety signals e.g. 2-channel emergency stop 2-channel safety door protection. Not suitable for communication of automation systems with individual safety analysis.
R31.5001	1	Control cabinet preparation for connection of conveyor belt. Interface signals: - activation belt cycle (belt on/off) - belt electric 1 - belt electric 2 Signal connection with plug-in connector Type: HAN 25 D Delivery including motor protection and motor safety switch for belt integrated in the control cabinet of the robot.

Pos. No.	Number	Description
		Power connection with plug-in connector Type: HAN 6 E
R31.5202	1	Electric 1 and 2 for conveyor belt Electric 1: "conveyor empty" button light barrier with adjustable bracket incl. reflector (belt full) Electric 2: Monitoring "discharge position open" (Only possible in connection with ZE R31.5101 to ZE R31.51xx) (Not possible in connection with ZE R31.5201)
R31.6007	1	Gripper quick change unit "SWE 250" (without pneumatic quick couplings) fixed part (on robot side), for gripper weight up to 80 kg max., with latch dead weight approx. 7 kg (gripper base plate is not included)
R31.6107	1	Gripper base plate, loose part for "SWE 250" with latch
Addition to Pos. No. R31.6107	1	For the demolding EOAT with sprue separation
R31.7001	1	CE-conformity declaration / declaration of incorporation For integrated robots KraussMaffei declars the CE-conformity of the facility (IMM and robot) provided all necessary components (safety devices) are included in the scope of supply. Attention: For LRX-devices in stand alone edition as well as integrated devices which do not contain the necessary safety components a declaration of incorporation will be provided.
R31.7101	1	USA edition Robot control cabinet and interfaces with cables according to UL and labeled individually.
R31.8801	1	Painting of X-axis RAL 9002 grey white

Pos. No.	Number	Description
R31.8821	1	Painting of Y-axis RAL 9002 grey white
R31.8831	1	Painting of Z-axis RAL 9002 grey white
300	1	External extension robot controls, for control of peripheral units, consisting of: 64 Digital inputs 64 Digital outputs [SO.0402] To be used for: - Wooden Skids Stacker - Wrapping Machine - Spare
301	1	2x Preparation of control for connection of a safety light curtain including connection cables with plug-ins (HAN 25 D).
302	1	Demolding EOAT with sprue separation for article "Air Conditioned Pad", 1-cavity mold for up to 7x different 1-cavity molds, consisting of: - Aluminum base frame - Suction cups - Sprue grippers and sprue cutters - Pneumatic / electrical components - Sensors - Mounting material Important: The customer is responsible for sending sample parts of ALL 7 possible "Air Conditioned Pad" articles directly to our German facility. Important: It is assumed that all 7x possible molded parts are sufficiently similar so that they can be removed from the IMM with the same demolding EOAT. It is also assumed that the position of the sprues for all 7x possible molded parts will be sufficiently similar to enable sprue separation with the same

Pos. No.	Number	Description

demolding EOAT.
If this does not apply, then 7x different article-specific demolding EOAT with sprue separation will be quoted!

Note:
The sprues of the molded part will be cut and deposited through a chute going to a box provided by the customer outside the protective housing.

General Technical Information:

Except when confirmed otherwise, the following supply requirements and environmental conditions do apply to KM molding machines and KM robots. For any variances special equipment must be agreed on.

Documentations

- 1 set of the short version of the instruction manual in a binder
- 1 USB with the full version of the instruction manual and the complete technical documentation (spare parts – packaging lists, drawings, etc,.)

The short version contains all information which is needed for commissioning and which is stipulated. Detailed information for operation of the machine is only included on the USB.

Machine specific documentation/software: (http://www.kraussmaffei.com/documentation)
Key: EWXHI.

Electric

Nominal Input Voltage (V)	460 Volt
Frequency (Hz)	60 Hz
Phases	3
Neutral	N
Socket type	A & B - UL 498/NEMA 5-15 R, 110V /15A, CSA C22.2 Nr.:42

Pneumatics

Pneumatic cascades, core pulls, blow and movement valves have at a max. pressure of 7 bar a flow of about 900l/min.

In case safety guards are omitted the machine or facility may only be operated after it has been determined that the machine or facility complies with the local regulations.
The operator is responsible for the correct set-up of the safety guards.

KM Molding Machine:

Cooling water supply for cooling system

Unless stated differently in the quotation, the oil coolers for the injection molding machine are laid out for cooling water supply at the inlet of max. 31°C and pressure at the connection point of 4-6 bar.

For the functional testing of machines and devices with hydraulic drive systems in the factory, hydraulic oil type Shell Tellus S3 M46 will be used in-house at KraussMaffei.

The hydraulic oil is not included in the scope of supply.
Hydraulic accumulators are supplied with a pressureless nitrogen bubble due to hazardous materials regulations.
For operating fluid specifications, please refer to the respective operating instructions.

Environmental conditions for hydraulic molding machines

min. / max. temperature +5°C to +40°C
min. / max. humidity 0% to 80% r.F.
max. absolute humidity 23,5 g/kg (in dry)

Environmental conditions for electric molding machines:

min. / max. temperature +15°C to +40°C

min. / max. humidity 0% to 80% r.F.
max. absolute humidity 23,5 g/kg (in dry)