
MACHINE REQUIREMENT LIST

(ELECTRICAL, HYDRAULIC, LUBRICATION PNEUMATIC & LIFTING)

CAUTION!

It is important that the end user verifies actual transformer size, wire size, and local electrical code requirements before installing or supplying power to the machine.

The attached information is based on Mazak standard machine specification.

Technical Notes:

1. Items shown are for standard machines only. Please consult with the regional Mazak Technical Center, Service Center, or Mazak Engineering for information about machines with optional equipment (i.e. powerful coolant, air blast, large capacity tool magazine, multiple pallet changers, etc.).
2. Due to manufacturing and supplier specification changes, the main transformer may have a higher kVA rating than required by the standard machine. The wire sizes shown represent the wiring requirements for standard machines with a matching transformer.

NOTE:

Step-down or voltage regulating transformers are external (peripheral) to the machine tool and are considered the primary input line (source) for the machine. Local electrical code or practice may require a circuit breaker or other switching device for the isolation of electrical power when this type of transformer is used. In such cases, the machine tool end user is required to supply the necessary circuit breaker or switching device.

WARNING!

FAILURE TO COMPLY CAN RESULT IN PERSONAL INJURY AND DAMAGE TO THE MACHINE.

1 QT-Ez (Smooth Ez)

1-1 Power

Model Version	Size
QT-Ez 8/10	25.1 (25%ED) / 19.23 kVA (Short-duration rating/continuous rating)
QT-Ez 12	35.8 (25%ED) / 25.5 kVA (Short-duration rating/continuous rating)
QT-Ez 8/10 M/MY	25.6 (25%ED) / 19.8 kVA (Short-duration rating/continuous rating)
QT-Ez 12 M/MY	36.1 (25%ED) / 25.9 kVA (Short-duration rating/continuous rating)
QT-Ez 8/10 MSY	25.8 (25%ED) / 20.0 kVA (Short-duration rating/continuous rating)
QT-Ez 12 MSY	36.1 (25%ED) / 25.9 kVA (Short-duration rating/continuous rating)

1-2 Air

Air source requirements (Air consumption)

- Air pressure requirements 0.5 MPa (73 psi) to 0.99 MPa (143 psi)
- Air consumption

<Standard consumption>

Model	QT-Ez 8 /10	QT-Ez 12	QT-Ez 8/10/12M /MY	QT-Ez 8/10/12MSY
Regular consumption L/min (ft ³ /min) (ANR)	0	40 (1.41)	75 (2.65)	75 (2.65)
Max. consumption L/min (ft ³ /min) (ANR)	295 (10.45)	335 (11.83)	370 (13.07)	390 (13.77)

Note 1: Regular consumption is the regularly consuming air volume when the power is on. (Optional consumption is not included.)

Note 2: Max. consumption is the non-periodic (instant) maximum consumption during the machine operation. (Optional consumption is included.)

<Optional consumption>

	Consumption L/min (ft ³ /min) (ANR)	Operation time (s)
Turret air blow	275 (9.71)	Inter-M-code air blow on
Chuck jaw air blow	100 (3.53)	3 (Primary headstock unit)
Automatic parts catcher air purge	20 (0.71)	Constant blowing

Note : The maximum consumption above includes the consumption of the chuck jaw air blow of the secondary spindle because it is provided as standard.

1-3 Coolant

Item	Unit	Specifications
Coolant tank capacity Chip conveyor (Parallel/Subsequent)	L (ft ³)	200 (7.06)

In selection of coolant, confirm the following points with the coolant supplier:

1. Use water-soluble coolant liquid.

If oil-soluble coolant is used, coolant discharge rate drops and the coolant temperature excessively rises, and as a result, the machine becomes vulnerable to thermal deformation. Furthermore, oil-soluble coolant poses a risk of catching fire, and therefore its use requires measures to counter fire, such as the provision of an automatic fire extinguisher.

2. Consider lubricity, preservability and anti-foamability.
3. Confirm there is no adverse effect of coolant to human bodies.

Since water-soluble coolant may cause rashes to human bodies, good hygienic control must be directed to operators.

4. Confirm there is no hardening or inflating of rubber, resin and other chemical products.

Seals containing NBR (nitrile-butadiene rubber) as a main ingredient are used for this VCM Series. Some types of coolant contain an ingredient which may deteriorate NBR. Contact the coolant supplier and confirm no possibility of deteriorating NBR before using the selected coolant.

5. Confirm there is no problem of coolant mixture with recommended lubricant.

Rarely, coolant is discolored or solidified as a result of chemical reaction when it is mixed with lubricant.

1-4 Lubricant

Working Fluids and Lubricants to Be Prepared by Customers

No.	Part name	Lubrication point	Q'ty	Recommended oil	Remarks	Refer to
1	Oil filler port	Hydraulic unit	20 L (1220.47 in ³)	<ul style="list-style-type: none"> • MOBIL DTE 24 • SHELL TELLUS S2 M 32 • HYPIN AWS 32 (CASTROL) 	Exchange oil every 6 months, then clean the strainer. Replace the line filter element every 6 months.	11-1
2	Level gauge					
3	Strainer					
4	Drain plug					
5	Line filter					
6	Level gauge	Turret oil bath	1.3 L (79.33 in ³)	• MOBIL SHC629 (VG150)	Exchange oil every year.	—
7	Oil filler port					
8	Drain plug					
9	Tank	Headstock cooling unit (QT-Ez12 series only)	5.0 L (305.12 in ³)	<ul style="list-style-type: none"> • DISTILLED WATER ORION EXCHANGE WATER 50% • ETHYLENE CHEMICAL LONG LIFE COOLANT YZ* 50% • MACHINE TOOL LONG LIFE COOLANT (ETHYLENE CHEMICAL) 	Exchange coolant every 2 years. Follow the procedure outlined in the Maintenance Manual.	6-1-7
10	Oil filler port					
11	Grease supply nipple	Chuck	1 to 2 mL (0.06 to 0.12 in ³)	• KLUEBERPASTE ME 31-52 (KLUEBER LUBRICATION)	Every day	—
12	Oil filler port	Ball screw & slideway Milling head Steady rest (Oil lubrication unit)	1.8 L (500U) (109.84 in ³) 3.0L (1000U) (183.07 in ³)	<ul style="list-style-type: none"> • MOBIL VACTRA OIL No. 2 • SHELL TONNA S3 M 68 • MAGNAGLIDE D 68 (CASTROL) 	Automatic lubrication. Supply occasionally. Clean the filter every year.	13-1
13	Level gauge					
14	Suction filter					

Note 1: ETHYLENE CHEMICAL LONG LIFE COOLANT YZ is a special brand for Yamazaki Mazak.

Note 2: The replacement period is determined on the basis of eight hours operation a day. Delayed replacement or use of any product other than recommended oil may damage the machine.

1-5 Rigging

Procedure to lift the machine

The lifting should generally be left to our servicemen. If you undertake the job, take sufficient safety measures and proceed with great care referring to the recommended lifting diagram below.

- (1) Place wire ropes on the bed hooks (4 places) of the machine. Use a crane supporting 6 t (13228 lbs) or heavier loads.
- (2) Place the wire ropes on the crane hook.

Place wood blocks or pads between the machine and wire ropes so that the machine will not be damaged.

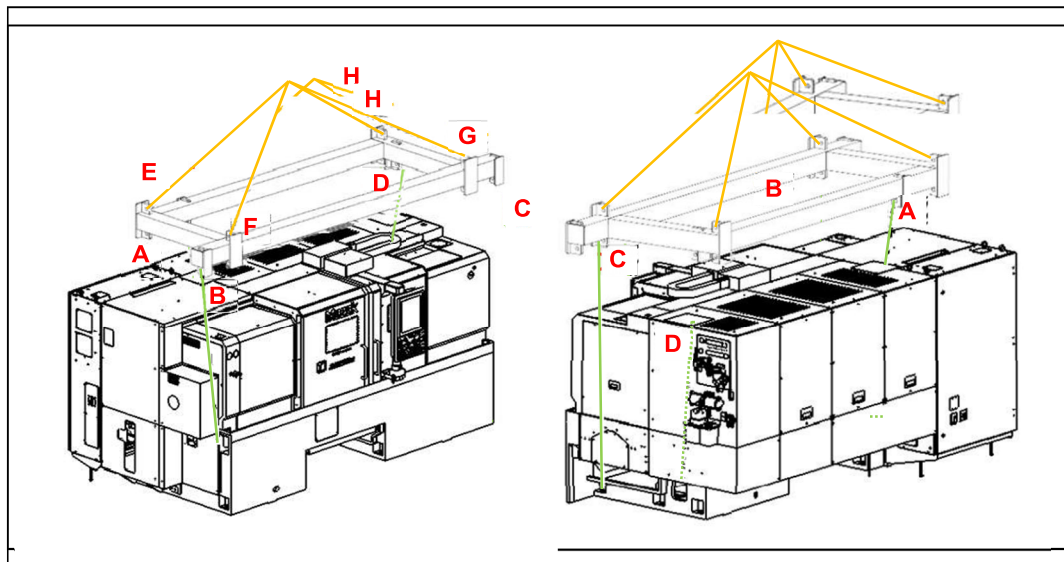


Fig. 6-4 Lifting the machine

- (3) Raise the arm of the crane to such an extent that the wire ropes become taut, and make sure that the ropes are firmly hooked on the machine body and at the chain block. If the ropes are not correctly hooked, slacken and rehook them.
- (4) After checking that the wire ropes are correctly hooked, operate the crane to lift the machine.

Machine weight of QT-Ez 8/M/MY/MSY 500U

Items	QT-Ez 8	QT-Ez 8M	QT-Ez 8MY	QT-Ez 8MSY
Machine	5100 kg (11240 lbs)	5200 kg (11460 lbs)	5400 kg (11910 lbs)	5500 kg (12130 lbs)
Coolant tank	140 kg (310 lbs)			
Chip conveyor	260 kg (570 lbs)			

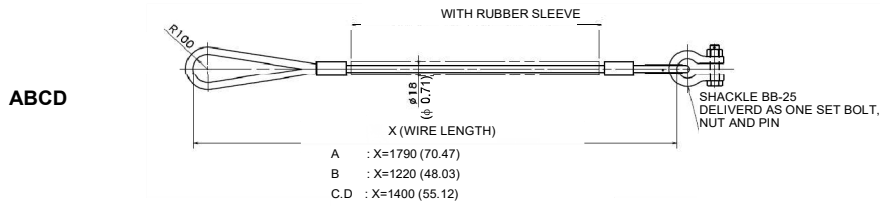
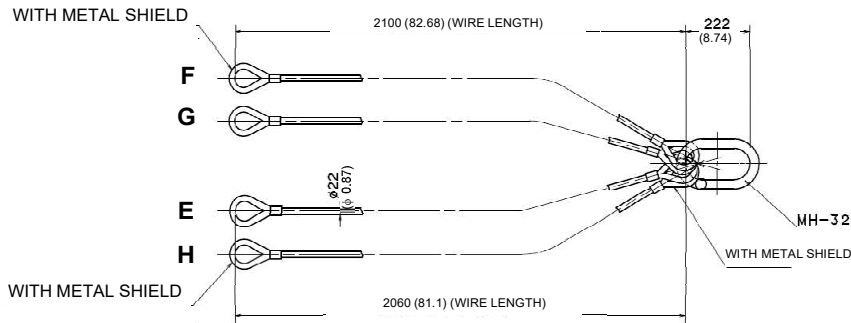
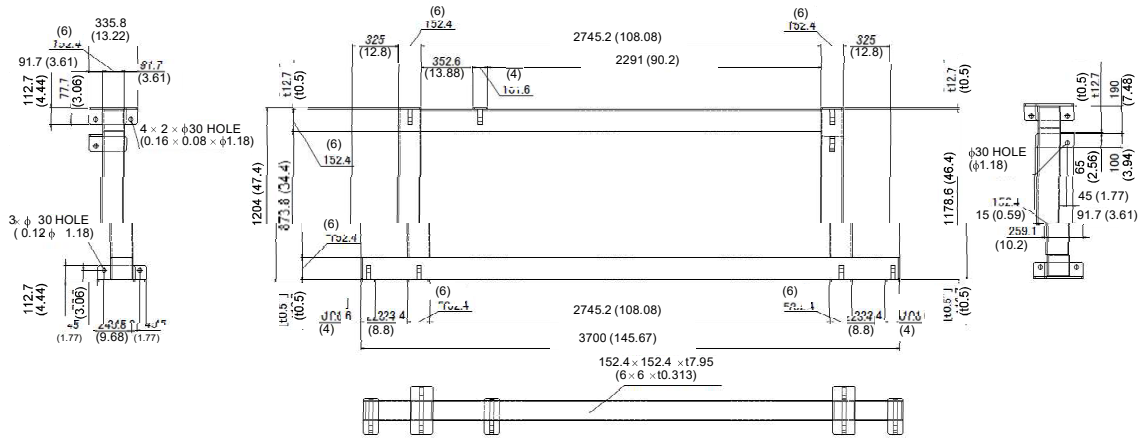
Machine weight of QT-Ez 10/M/MY/MSY 500U

Items	QT-Ez 10	QT-Ez 10M	QT-Ez 10MY	QT-Ez 10MSY
Machine	5130 kg (11310 lbs)	5220 kg (11510 lbs)	5420 kg (11950 lbs)	5560 kg (12260 lbs)
Coolant tank	140 kg (310 lbs)			
Chip conveyor	260 kg (580 lbs)			

Machine weight of QT-Ez 12/M/MS/MY/MSY 500U

Items	QT-Ez 12	QT-Ez 12M	QT-Ez 12MY	QT-Ez 12MSY
Machine	5160 kg (11380 lbs)	5250 kg (11580 lbs)	5450 kg (12020 lbs)	5590 kg (12330 lbs)
Coolant tank	140 kg (310 lbs)			
Chip conveyor	260 kg (580 lbs)			

Note : The figures indicated on the machine plate shall be applied if different from the manual.



Unit: mm (in)

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