

SMARTJET

LAGUNA WATER JET COMMISSIONING REQUIREMENTS:



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This document is to assist in the preparation for Commissioning your new Laguna SmartJet® for all table sizes.

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Receiving Your Machine:

We strongly suggest the use of a Rigger if you do not have experience in handling equipment such as this.

- **The machine will arrive on a flatbed Tractor Trailer. It should arrive fully covered with the trucker's tarp attached and shrink wrapped from the factory.**
- **Fully Inspect the shipment for damages to the crates or packaging and note it on the Bill of Lading. If there is severe damage, please take photos and contact your salesman if there is a concern in receiving the machine.**
- **The heaviest pallet is 5,000 . Make very certain your fork truck is sized to pick this weight up at the height of a flat bed. Capacity of a fork truck greatly diminishes as the distance from the floor increases.**
- **72" Extension forks are required to safely lift the machine from its pallet. Make sure to have a person watch the forks so they do not contact and damage the machine Feet.**



Machine Placement:

- **Remove all packaging and protective coatings upon receipt to fully inspect machine for any shipping damage. Take pictures and notify your salesman as soon as possible of if any Damage is found.**
- **When placing a machine keep in mind the extra space needed for the supporting equipment and space for servicing the machine and supporting devices. Footprint drawings below to assist in placement.**
- **Fully De-palletize and place into the assembly area.**
- **A Water source is needed near the machine for the cutting water and tank filling. See page,8 for details on water source.**
- **A Water Drain is required in the vicinity of the equipment.**
- **If space requirements mandate assembling the frame before we arrive onsite, please contact your service representative for assembly instructions.**

Ambient Environment

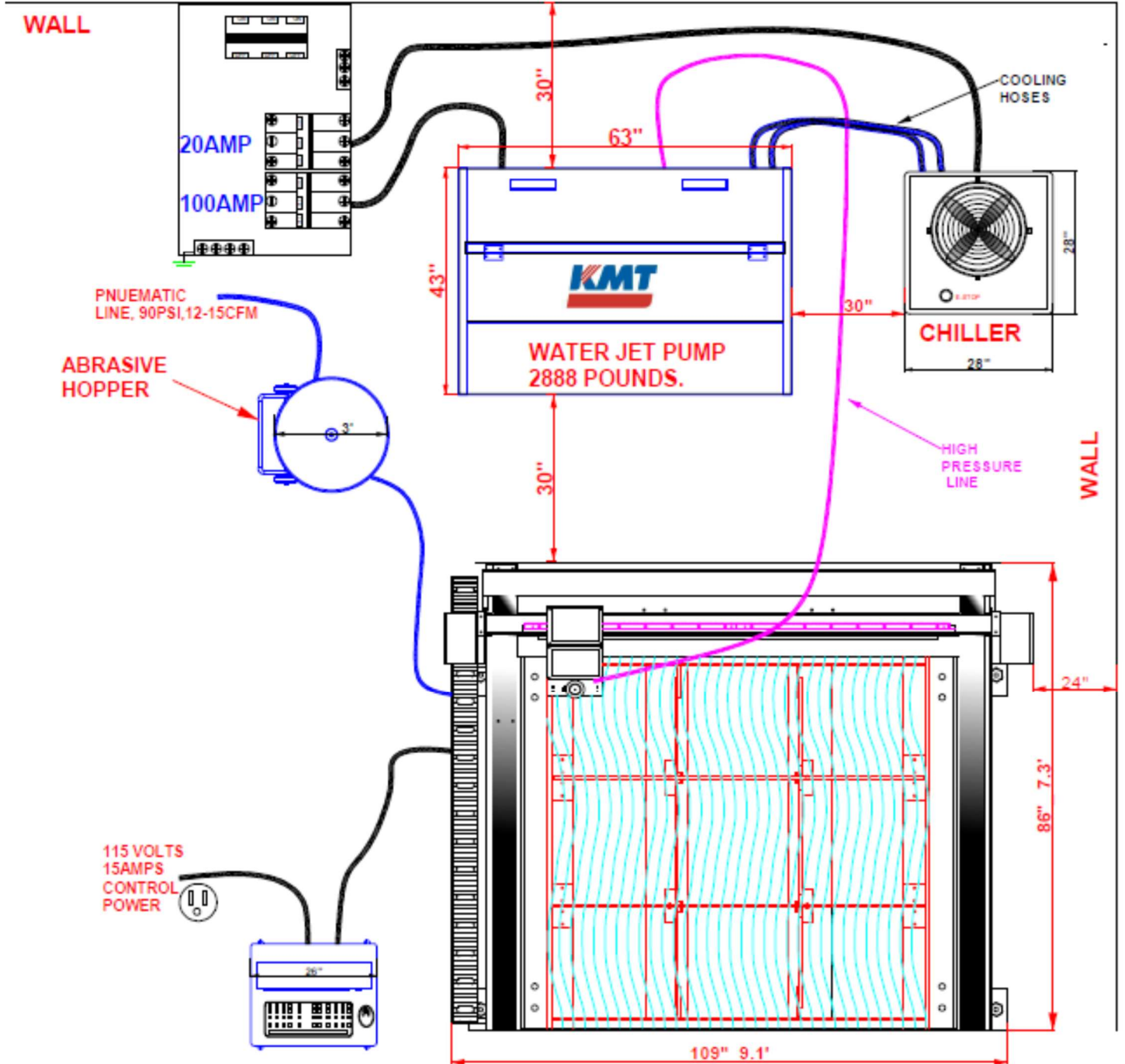
Installation location	Indoors
Air borne dust/contaminants	Minimal
Ambient temperature	
Minimum storage	36° F (2° C)
Minimum operating	40° F (5° C)
Maximum operating (oil-to-water cooling)	104° F (40° C)
Maximum operating (oil-to-air cooling)	86° F (30° C)
Maximum relative humidity*	95%

**Note:* When the relative humidity is above 50%, the oil in the reservoir should be checked frequently for water content.

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COMPACT, 5'x5'

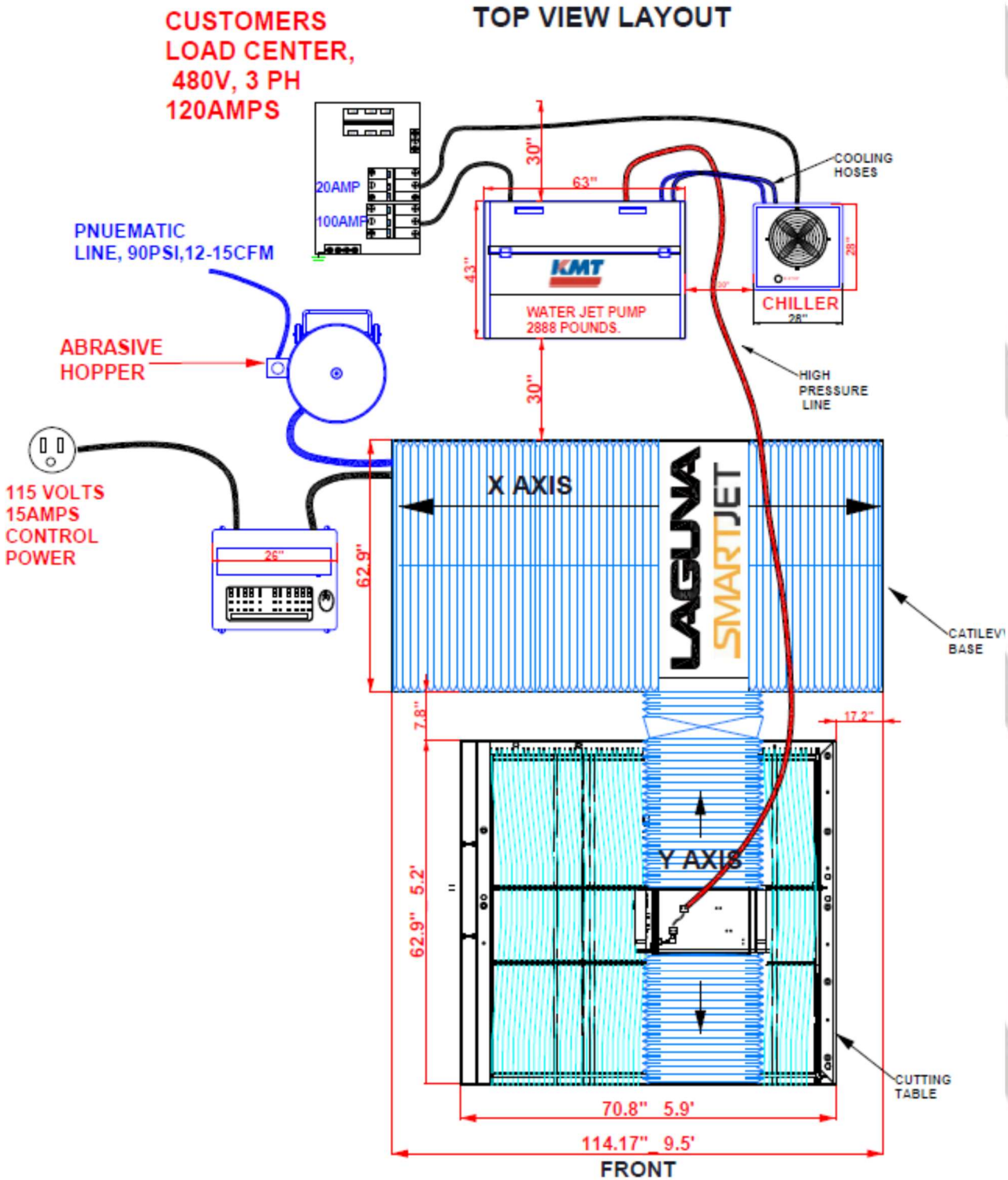
TOP VIEW LAYOUT



FRONT

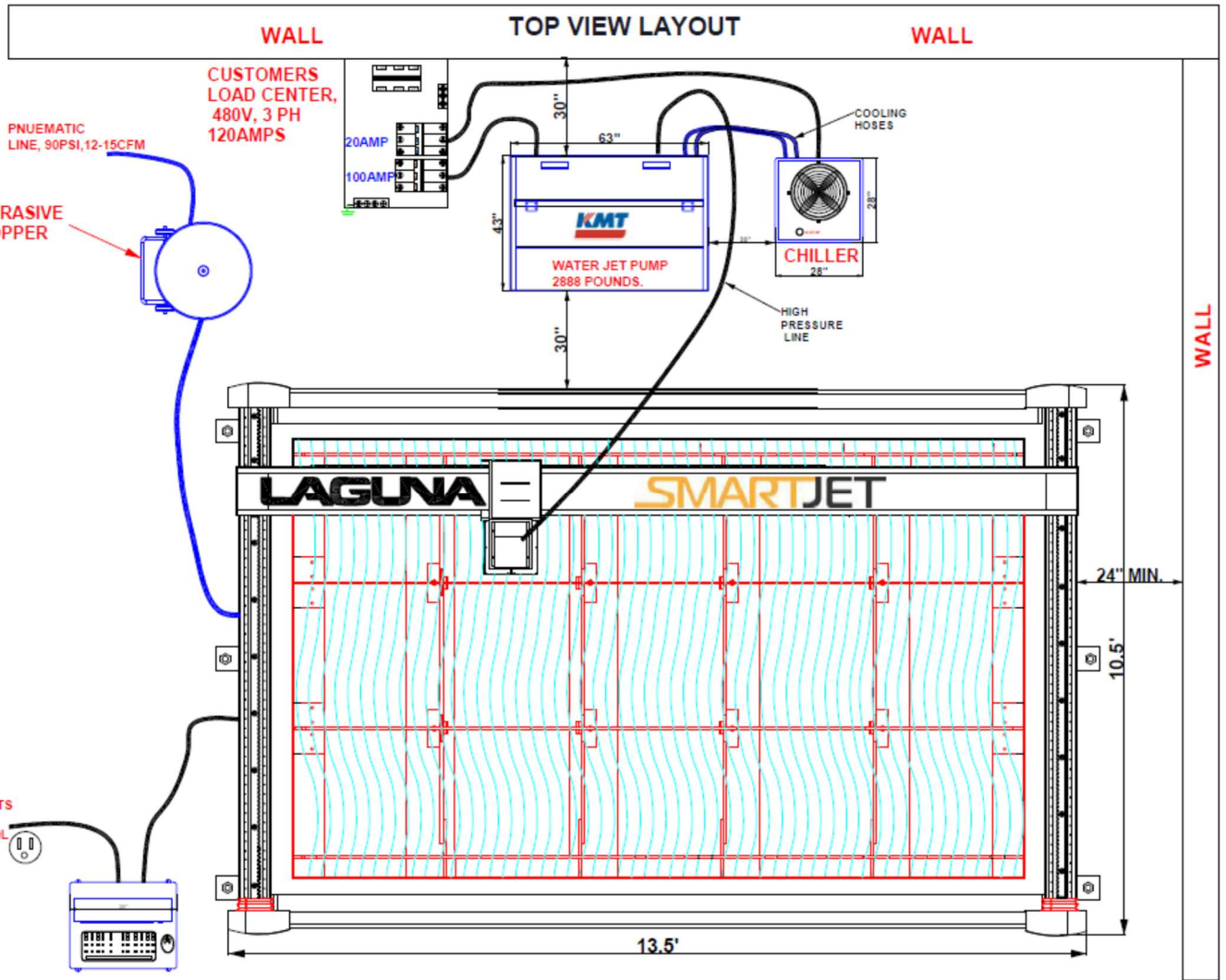
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4'x4' CANTILEVER:



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5'x10' TABLE CAPACITY:

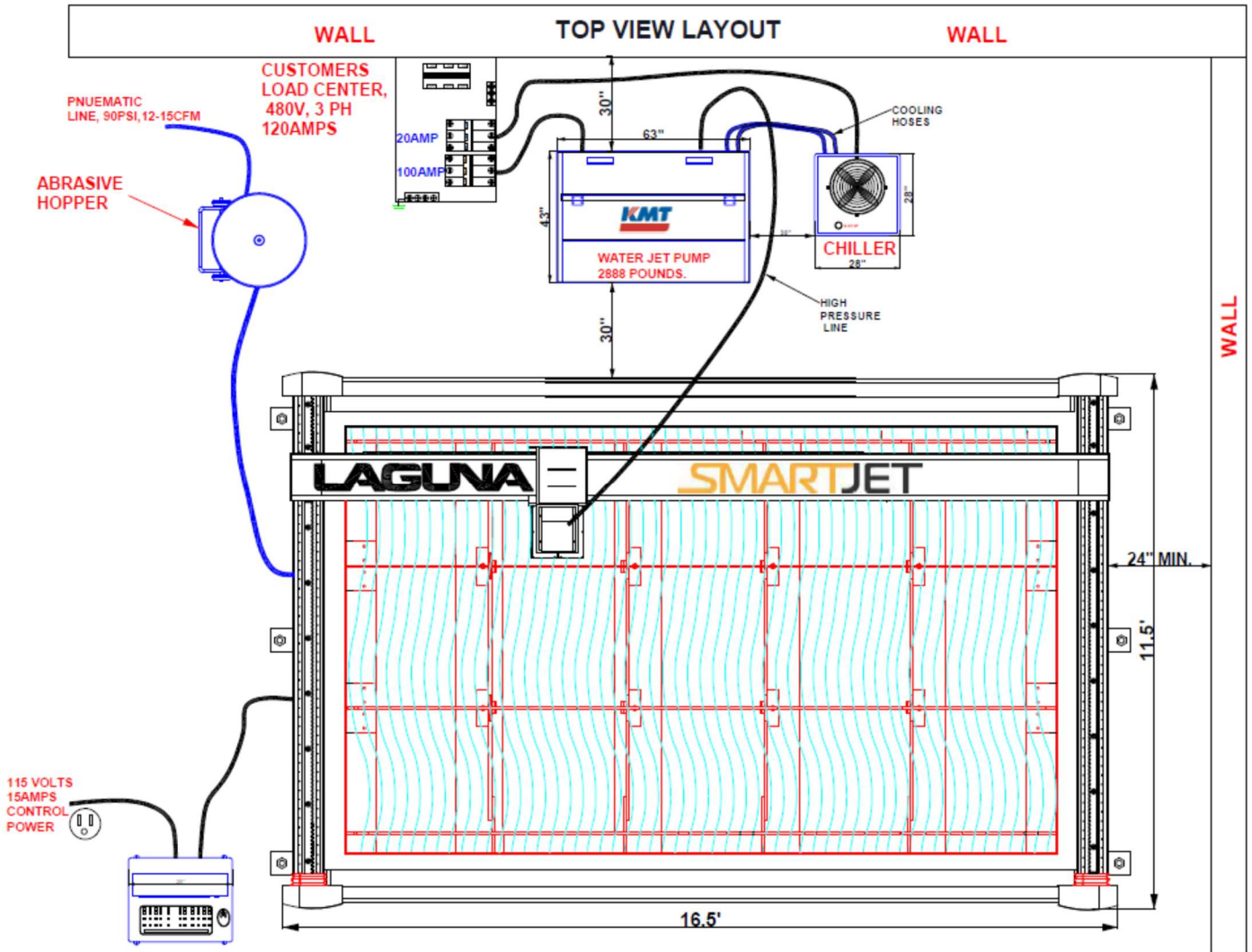


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6'x13' TABLE CAPACITY:

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FACILITY REQUIREMENTS:

FACILITY REQUIREMENTS				
ITEM	TYPE	DESCRIPTION	CAPACITY	INTERFACE TYPE
A	AIR	COMPRESSED AIR IN	85 PSI (5,86 BAR) TO 100 PSI (6,90 BAR), 1 SCFM	1/4" FNPT
B	WATER	CUTTING WATER IN	2 GPM (7,6 L/MIN) BETWEEN 45 AND 100 PSI (3,1 AND 6,9 BAR). BOOSTER PUMP REQUIRED IF PRESSURE BELOW 45 PSI (3,1 BAR)	1/2" FNPT
C	WATER	COOLING WATER IN	3 GPM @ 35 TO 100 PSI, 75° F MAX. (11 L/MIN @ 2,4 TO 6,9 BAR, 24°C)	1/2" FNPT
D	DRAIN	COOLING WATER OUT	3 GPM (11 L/MIN)	1/2" FNPT
E	DRAIN	BLEED DOWN WATER	1 GPM (3,8 L/MIN) INTERMITTENT	1/2" FNPT
F	HP	HIGH PRESSURE WATER OUT	1 GPM (3,8 L/MIN) AT 60,000 PSI (4138 BAR) CONTINUOUS OPERATION PRESSURE	GROMMET FOR 3/8" HP TUBE

ELECTRICAL REQUIREMENTS						
ITEM	TYPE	DESCRIPTION	VOLTAGE/FREQUENCY	PUMP FLA	MINIMUM CURRENT AMPACITY	INTERFACE TYPE
G	POWER	CUSTOMER POWER IN	400V/50 Hz (3-phase)	50 HP: 68A	80A	1.5 KNOCKOUT
			480V/60 Hz (3-phase)	50 HP: 59A		

PUMP SPECIFICATIONS	
OVERALL	60.2 X 42.2 X 48.2 IN (1528 X 1071 X 1225 MM)
WEIGHT	2060 LB (935 KG)
CLEARANCE	30 INCHES (760 MM) FROM ALL WALLS
OIL CAPACITY	45 GAL (170 L)



CHASE CHILLER: The Chiller requires 4 gallons of distilled water. Using any other type of water will damage the Chiller and void warranties of the Chiller and the KMT pump.

Cutting Water:

The quality of the inlet cutting water supply is one of the most important factors affecting component life and performance. The cutting water supply must meet the following standards to maximum high pressure component life. A sample must be sent to KMT prior to commissioning.

Your water sample will be evaluated in accordance with the quality requirement below. Water treatment requirement can be determined based on the outcome of the water analysis.

General Properties		NEO 30/50	PRO 50
Temperature		41-84° F (5-29° C)	41-84° F (5-29° C)
Clarity		Clear	Clear
Color		Colorless	Colorless
Odor		None present	None present
Electrical conductivity		100–550 µS/cm	100–400 µS/cm
pH		7-8.5	7-8.5
Total Dissolved Solids (TDS)		70-380 mg/l	70-280 mg/l
Anions			
Chloride	Cl	0-150 mg/l	0-100 mg/l
Silica	SiO ₂	0-15 mg/l	0-8 mg/l
Sulfate	SO ₄	0-50 mg/l	0-25 mg/l
Carbonate			
m - Alkalinity	CaCO ₃	0-320 mg/l	0-320 mg/l
Hardness		0-40 mg/l (0-2.3° dh)	0-30 mg/l (0-1.7° dh)
Cations			
Calcium	Ca	0-30 mg/l	0-25 mg/l
Iron	Fe	0-0.2 mg/l	0-0.1 mg/l
Magnesium	Mg	0-5 mg/l	0-1 mg/l
Manganese	Mn	0-0.1 mg/l	0-0.05 mg/l
Sodium	Na	0-150 mg/l	0-110 mg/l
Dissolved Gases			
Carbon Dioxide	CO ₂	0-20 mg/l	0-10 mg/l
Free Chloride	Cl ₂	0-0.2 mg/l	0-0.1 mg/l
Oxygen	O ₂	0-2 mg/l	0-1 mg/l

To activate the product warranty, KMT must receive a cutting water sample 15 days after equipment installation at the latest. The pump unit has been supplied with a 0.5 liter container and user instructions. If the container is lost, please contact order.spares@kmtwaterjet.com to receive water sample kit 7219012539.

Example of a poor water sample shown below:



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Water Quality Test Results

Prepared for:

On Behalf of: Laguna Tools

Date Sampled:

Our Reference: 15-AZ013010

Phone:

Fax:

CATEGORY	MINIMUM QUALITY	BETTER QUALITY	BEST QUALITY	SAMPLE	SAMPLE QUALITY
ALKALINITY (MG/L)	50	25	10	26.50	MINIMUM
CALCIUM (MG/L)	25	5	0.5	7.00	MINIMUM
CHLORIDE (AS Cl) (MG/L)	100	15	1	2.70	BETTER
FREE CHLORINE (MG/L)	1	1	0.05	0.61	BETTER
IRON (AS Fe) (MG/L)	0.2	0.1	0.01	0.24	SUBSTANDARD
MAGNESIUM (AS Mg) (MG/L)	0.5	0.1	0.1	4.70	SUBSTANDARD
MANGANESE (AS Mn) (MG/L)	0.1	0.1	0.1	<0.1	BEST
NITRATE (MG/L)	25	25	10	2.00	BEST
pH (SU)	6.5-8.5	6.5-8.5	6.5-8.5	7.40	OK
SILICA (MG/L)	15	10	1	7.80	BETTER
SODIUM (MG/L)	50	10	1	26.00	MINIMUM
SULFATE (MG/L)	25	25	1	27.00	SUBSTANDARD
TDS (PPM) *	200	100	35	649.00	SUBSTANDARD
HARDNESS (AS CaCO3) (MG/L)	25	10	1	36.80	SUBSTANDARD
TURBIDITY (NTU)	5	5	1	0.98	BEST

* NOTE: Do not reduce TDS beyond 35 or the water will be too aggressive.

Poor Water Quality will require using a Reverse Osmosis system designed for a KMT water jet system, ask your salesman for additional details.

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COMPRESSED AIR SPECIFICATIONS:

The following table provides specifications for each ISO air quality classification. KMT recommends adherence to Quality Class 4.

A minimum sized compressor would be 3-5 hp, 30 – 80 Gallon tank for running just the machine. A refrigerated dryer to separate water with a 5-10 micron filter is the best way to produce clean dry air, Example shown below.

Table 10-1
Air Quality Classifications, ISO 8573-1:2010

ISO Quality Class	Maximum Particle Size (microns)	Maximum Pressure Dew Point (water @ 100 psi)	Maximum Oil Content (Mg/m ³)
1	0.1	-94° F (-70° C)	0.01
2	1	-40° F (-40° C)	0.1
3	5	-4° F (-20° C)	1
4	15	+38° F (+3° C)	5
5	40	+45° F (+7° C)	25
6	--	+50° F (+10° C)	--

Pneumatic Control Valve

Regulated air pressure	85-100 psi (5.9-6.9 bar)
Maximum flow rate	1.0 cfm (0.028) m ³ /min



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Thank you for your Laguna Tools purchase.

IMPORTANT: For set-up/training to be efficient and cost effective, we require several items to be completed **PRIOR** to our technician's arrival.

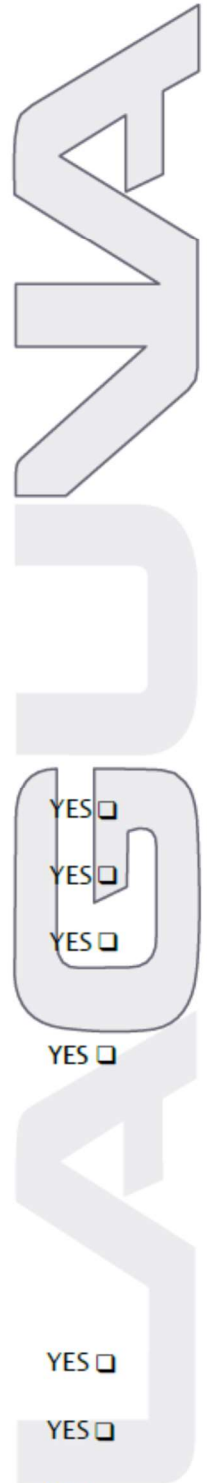
Please read carefully. Should you have any questions please feel free to call our Customer Service at **1-800- 332-4094** or contact your sales representative.

Customer Name: _____ Date of Sale: _____

Order# _____ Sale's Executive: _____

You must complete the following steps before the set-up/training can be scheduled. Please check all the boxes as the action is completed.

1. Removed all protective coating and packaging. Inspect machine for **ANY** damage. YES
2. Do you have all components that were placed in your order? YES
3. Is the machine in the desired location? (Technician may not be able to move your machine.) YES
4. Does your building/shop have appropriate electrical voltage and amperage per machine(s)? YES
*Electricians and service staff are welcome to contact our Customer Service if they have any questions.
 - If 220-volt powered machine, the range is 208-240V
 - If 480-volt powered machine, the range is 440-480V
5. The machine(s) are leveled with the leveling feet installed. (if applicable) YES
6. Do you have an adequate supply of materials for testing and training? YES
7. Has the person to be trained learn how to use software? YES



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Should a technician representing Laguna Tools arrive to your location and not be able to complete set-up/training due to lack of preparedness or inoperable equipment per the above and/or beyond Laguna Tools control any expenses incurred will be passed on to you. Additionally, if you must cancel your scheduled set-up/training for any reason, it must be at least **5 full business days** prior to scheduled date or you will be subject to a 25% (of install price) cancellation fee.

If any of the checkpoints cannot be marked "Yes", the customer will cover all expenses incurred during set up and training on the proper use of the machine(s) including but not limited to: airfare, rental car, hotel, parking and/or toll fees per diem, plus \$115.50 per hour.

The above points have been read and understood, and the undersigned will be responsible for any delay and agrees to reimburse Laguna Tools for any additional expenses incurred. This form must be signed and delivered to Laguna Tools prior to any scheduling. Please be aware that scheduled dates may be up to **THREE WEEKS** out from the time your paperwork is returned.

I am an authorized signer/agent on behalf of the abovementioned customer. Initial

Name: (print): _____

Title: _____

Company: _____

Phone: _____

Signature: _____

