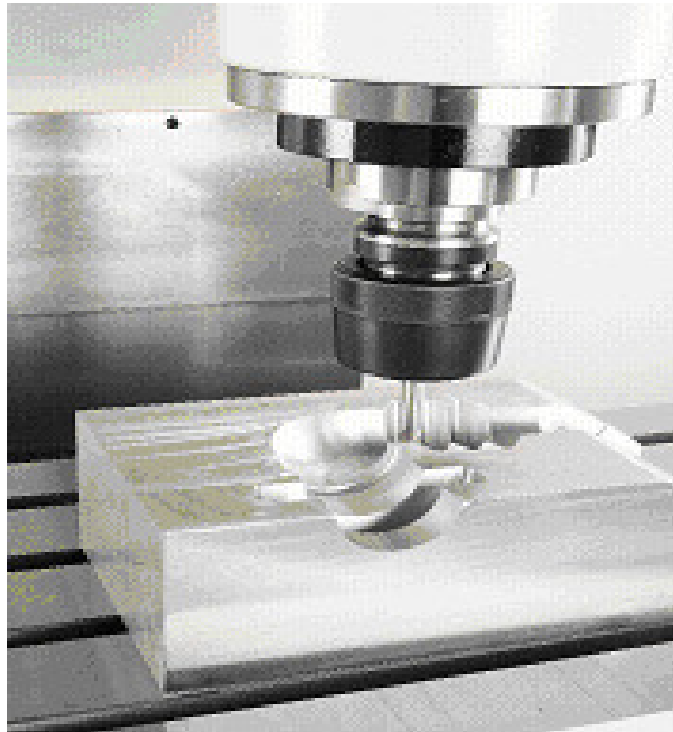




GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

GANESH VMC-1814 CNC MACHINING CENTER



***Save on Space, Not on Rigidity!
Rugged Box way Machine with a Small
Footprint***

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY
CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

GANESH VMC-1814 **Rugged Box Way Machining Center**



SMALL FOOTPRINT: 6' X 5.2', LARGE AXIS TRAVELS: 17.72" x 12.40" x 15.74"
POWERFUL FANUC OiM CONTROL WITH DATA SERVER & Ethernet Capability

Massive Cast Iron Box Way Construction -

The VMC-1814 comes standard with a heavy-duty casting and the box way design dampen vibration for superior machining capability for fine surface finishes and enhanced tool life providing you with substantial tooling cost savings.

The machine is constructed of all certified premium high-density Meehanite® castings. The wide spacing of the saddle box ways offers the optimal guide ratio for the slideways further enhancing the rugged design of the machine. The Ganesh VMC-1814 weighs nearly twice as much as most competitive machines in this class for added strength and rigidity for heavy-duty production.

Pre-Tensioned Double Anchored Balls Screws -

Premium quality ball screws are double anchored and pre-tensioned, and then 100% inspected to ensure maximum service life and the highest possible machining accuracy.

High Reliability Servo Motors and Drives –

The premium control features look ahead capability for high speed machining. Highly accurate Digital Servo motors feature the ability to tune spindle and the axis drives for perfect dynamic response for exceptional geometric accuracy. Graphic Display and Tool Life Management are just a few capabilities on this powerful full-featured CNC controller.

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

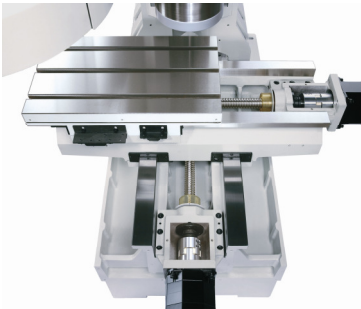
CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

STANDARD GANESH VMC-1814 MACHINE FEATURES:

Machine Construction:

- Fine grain and high density cast iron using the superior Meehanite process yields superior vibration dampening and improved surface finish and tool life
- Double anchored and pre-tensioned ballscrews in all 3-axes
- Built-in leveling ledge makes it easy to level machine low to the ground

Box ways:



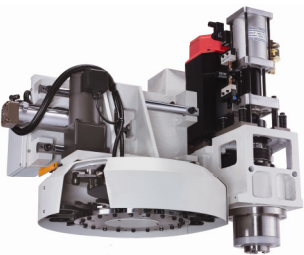
- *Turcite-B Coated way surfaces to minimize stick/slip*
- *Hardened and Ground wide Box Way saddle for heavy-duty cutting performance*
- *Hardened and Ground Square Box Ways on Vertical Column and Longitudinal axis*
- *Hardened and Ground Machine Table for enhanced wear resistance*

Spindle:



- *10-HP Peak Spindle Motor for superior metal removal capability*
- *Rigid tapping for high-speed precision tapping performance*
- *CAT-40 taper spindle for the tool rigidity needed for tough materials*
- *6-bearing thermal symmetrical dynamically balanced spindle*
- *60 - 8,000-RPM Spindle with 0.000040" maximum spindle runout – guaranteed!*

Automatic Tool Changer - ATC:



- *10-tool pocket carousel type tool changer*
- *6-second tool change with carousel*
- *Bi-directional shortest path tool indexing to decrease tool change time*

Machine Features:

- 4-th axis turnkey package option available
- T-slots ground to 0.625" to fit standard workholding nuts
- Automatic Metered Lubrication for slideways and ball screws
- Peripheral chip wash down in chip enclosure to minimize machine maintenance
- Water resistant halogen lamp is included
- Inspection Report on accuracy, Instruction Manual, Tools and Tool Box all included
- Large compliment of parts and accessories in stock to ensure continued operation

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

Auto Shut Off –

You can set up the auto shut off mode on the control which will automatically shut off once your long program is finished. This capability enhances your ability to let the machine run in a lights out mode.

Spindle Brake (in case of power failure) –

The Z-axis spindle motor comes with an automatic brake in case of a power failure. This will save expensive fixtures and tools by prohibiting the spindle from dropping in case of a sudden power failure.

Chip Wash –

The machine comes standard with a separate coolant pump for chip wash on all sides. This allows the machine to flush all the chips to the front of the tank simplifying machine maintenance.

Some additional production enhancing design features that provide operator convenience and productivity enhancement:

- Hinged side-panel doors allow the operator easy access to the work area.
- A separate Grundfos coolant pump is provided for chip wash-down
- The one-piece sliding coolant tank is mounted on rollers for easy cleaning access.
- Chips can be easily removed from the machine via a roller-mounted basket.
- Tramp way oil recovery system is provided to reduce coolant contamination
- A work-light with a swivel joint is provided so the operator can view critical work areas.
- A spindle load meter is located on the front of the control panel for easy viewing.
- Stainless steel doorsill guard is provided to keep the doorsill from being chipped.
- MPG (manual pulse generator) is provided with X1, X10, and X100 feedrate multipliers.
- A tri-color machine condition signal lamp displays the machine operating status.
- A heat exchanger unit for enhanced reliability cools the electronics cabinet.



Super Precision Spindle Bearings

The VMC-1814 advanced spindle design provides high axial thrust capacity while generating minimum heat buildup for superior accuracy & performance..

The P4 class high precision angular contact bearings provide for a standard spindle speed of 8,000 rpm.

A special labyrinth seal is designed into the nose of the spindle to prevent coolant or fine particle contamination during machining and ensures high spindle accuracy and a long & productive machine service life.



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

VMC-1814 Machine Technical Specifications

Working Area

Longitudinal travel (X-axis)	17.72" (450 mm)
Cross travel (Y-axis)	12.40" (315 mm)
Vertical travel (Z-axis)	15.74" (400 mm)
Work Cube (X x Y x Z travel = work envelope)	3,458 cubic inches

Milling Table

Table size (l x d)	20.87" x 12.60" (530 x 320 mm)
Maximum table load	616 Lbs (280 kg)
(Table load is higher if weight is evenly distributed)	
4 T-slots, width	.625" (16 mm)

Milling Spindle

Spindle Bearing	Angular-contact spindle bearing
Spindle transmission type	direct belt drive - torque increaser style
Spindle tool taper size	#40-Taper (BT or CAT style)
Spindle Center to Main Column	15.83" (402mm)
Distance spindle nose – table surface	4" – 19.37" (100 - 492 mm)

Spindle Drive

A.C. brushless motor	Electronic 2-speed torque range <i>Vector-Drive</i>
Power	10-hp Peak, 7.5-hp (60% duty-cycle)
Programmable speed range (stepless)	60-8000 rpm

Axis Feed Drives

	AC digital servo drives
Resolution	0 .0001" (0.003mm)
Rapid traverse feedrate	787"/min (20m/min)
Cutting feedrate	0.04 - 394"/min (0.01-10m/min)
Ballscrew mounting	double-anchored ballscrews
Positioning repeatability	±0.0001" (0.0025mm)
Positioning accuracy	±0.0002" (0.005mm)

Tool System

	Features automatic shortest path bi-directional tool changer
Tool magazine type	Carousel type
Number of tool stations	10-tool pockets
Tool taper type	CT #40 or BT #40
Max. Tool diameter	Ø3.9" (Ø 100mm)
Max.tool weight	15 lbs. (7 KG)
Tool change time	6-seconds

Lubrication System

Guide ways	fully automatic central oil lubrication with low level monitoring
Spindle bearings	lifetime grease lubrication

Air Service Requirements

Air pressure required	Air Pressure switch confirms safe air pressure
Air hose connection	90 psi @ 5-scfm
Air blast output	Ø 1/2" (12mm)
	M07 controlled air blast nozzle located at spindle

Program Communication Devices

32 MB flash memory
Ethernet Capability, RS-232 port

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011



**Advanced Preview Machining
with Look Ahead Capability for
accurate mold making
applications**



**Largest Work Envelope in the Mini Mill Market Segment!
Takes up only 6' x 5.2' of floor space!**

GANESH VMC-1814 3-Axis With FANUC CNC CONTROL

THESE BASIC ACCESSORIES COMES STANDARD WITH OUR MACHINE

Look-Ahead (Contour Programming)
Chip Air Blast by M-Code
Chip Wash Down Coolant System
Remote Operator MPG Hand wheel
Rigid Tapping
Machine Work Light
Ethernet and Flash Card Capability
Machine Condition Signal Lamp

Machine Warranty

2-year Control control warranty and one-year machine warranty

Machine Options

400-CCMMP
400-MMEXW

Chip conveyor or Chip Auger and chip cart
Second-year machine and control warranty



400-DSC Built in Dust Collector (Ideal for Jewelry and Electrodes)
Takes dust or jewelry chips and delivers it a convenient box

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

Machine Productivity Enhancement Options

400-RNPRB	Renishaw® TS-27 Tool Offset Probe (includes interface, & software) For tool length & tool diameter offsets, and broken tool detection <i>Increases your productivity with quicker setups</i>
400-RNPRT	Renishaw® OP-700 Optical Part Probe (includes interface, & software) <i>Use it for digitizing and tracing complicated parts. Eases setups</i>
400-SCMMP	Programmable coolant nozzle with sweep control feature <i>Increases your tool life by having the coolant pointed in the correct direction</i>
400-M1614FL	Midaco® manual front loading pallet shuttle system w/ 2 - 16" x 14" pallets <i>Eliminate part-handling time. Allow your machine to make you more Money by increasing your machining time and minimizing loading time.</i>



NEED AUTOMATION?

**PALLET CHANGERS AND ROBOT OPTIONS AVAILABLE
CALL OUR APPLICATIONS DEPARTMENT FOR DETAILS**

ROTARY OPTIONS

400-RNC115C	5C Indexer, M-Code Servo Control, 0.001° increment, 110mm center height (Also available in 2, 3, and 4 indexer units for high volume production)
-------------	---



400-4ASMW	4 th axis 5C indexer (True 4 th axis with 0.001° resolution for milling while in radial motion) <i>An inexpensive rotary axis capability.</i>
-----------	--

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

4th AXIS (6" Rotary Table with Chuck & Tailstock)

Expand your machine capability by another dimension. Our 4-axis CNC can eliminate 2-setups by allowing you to machine 3-sides in one setup. It also allows you to handle complicated parts that require 4-axis simultaneous machining.

Includes 4th axis Wiring Preparation & VRNC-125 4th - Axis CNC rotary table with the following features:

- Worktable diameter 4.92".....125mm
- Center height 4.33" 110mm
- Ø center bore Ø 25mm H7
- work load capacity 165 lbs ... 75 kg
- minimum input increment0.001°
- rapid table rotational speed 44 rpm
- speed reduction ratio 1:90
- high-precision cross roller bearing support

Tooling & Workholding



100-KD675	KURT® D-675 AngLock vise (6" x 7.5")
100-KD688	KURT® D-688 AngLock vise (6" x 8.8")
100-DL430	KURT® DL-430 DoubleLock vise (2-clamping stations 4" x 3")

400-SC40P	Basic Start-Up Tooling Package
400-SC40D	Includes 2 CAT40ER16, 2CAT40ER32, 6 – CAT-40 Holders, 10 Retention Knobs
400-VAL2K	Deluxe Start-Up Tooling Package
400-MMSRK	Basic Start up set plus ER16 collets, ER32 Collets, ER16 Wrench, ER32 Wrench
	Sandvick Tooling Certificate
	Spare Retention Knobs



**CALL US FOR PACKAGES WITH
20,000 & 30,000 RPM CAT-40 HOLDERS**

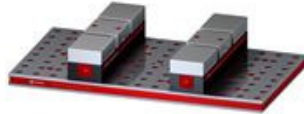
Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

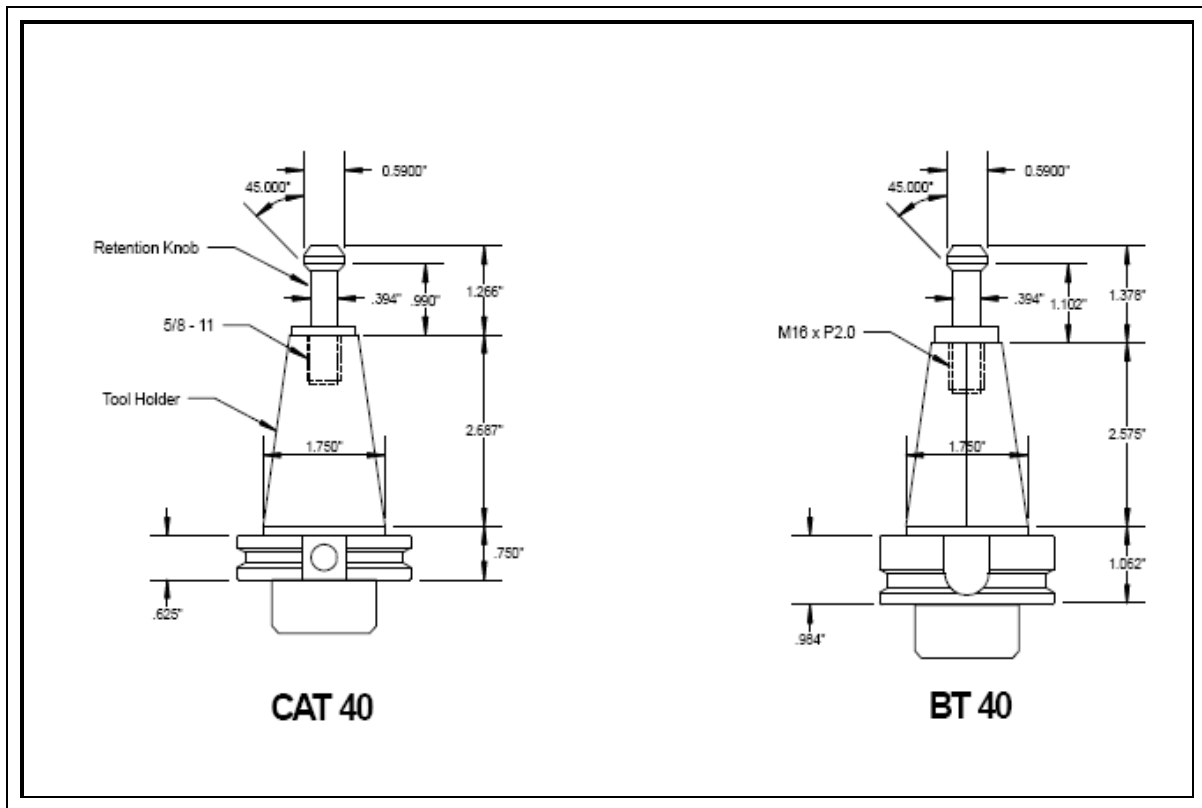


CHICK 4-STATION WORK HOLDING
(Recommended with 4th axis work)
TURN YOUR VERTICAL INTO A HORIZONTAL

CUSTOMIZED FIXTURES – P.O.R.



TECNARA RITE ANGLE ATTACHMENTS
Price on Request



Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

Training & Travel Package

Training: Ganesh Machinery Offers 3-day in-house training for all Production CNC machines. The intense training includes programming, machine setup, Maintenance for your new machine. There is no charge for the training program for all new customers.	
Travel Package For Training at Ganesh: Includes Air fare, 3 nights hotel shuttle (back & forth to Ganesh), and lunch during training	\$1,495.00
On-Site Training: \$975 per day plus expenses	
Warranty: 1-year Full Parts and Labor Warranty. Your local authorized Ganesh Machinery servicing dealer provides warranty labor.	
Local Service: Your authorized dealer offers local installation, service & training included in price of machine.	
F.O.B: Machines ship F.O.B. Ganesh Machinery, Chatsworth, CA 91311	
Payment Terms: 20% down Payment with Purchase Order, Balance due upon receipt, Net 30 days upon approved credit, Leases with \$1.00 buyback upon approved credit	
Delivery Schedule: Stock to 8-weeks delivery. Subject to prior sale.	

Note: TUV & UL ELECTRICALS AVAILABLE FOR AN ADDITIONAL CHARGE

Note: Special financing options available on your approved credit.
Prices and specifications subject to change without prior notice.

Note: Ganesh 30-day satisfaction Guarantee based on normal usage. Does not cover freight, rigging, or installation costs. Machine crashes or abuses are not covered under the Ganesh satisfaction guarantee.

Note: Purchase is governed by the Ganesh Machinery terms and conditions of sale.

SERVING INDUSTRY SINCE 1985



IN-HOUSE TRAINING CENTER



4000 SQ. FT SHOWROOM DEMO READY



STOCKED SPARE PARTS

Ganesh Machinery, Inc. - 20869 Plummer St. Chatsworth, CA 91311

Phone 818-349-9166 | Toll Free 888-542-6374 (US only) | FAX 818-349-7286 | www.ganeshmachinery.com



GANESH MACHINERY

CELEBRATING 26 YEARS IN BUSINESS – 1985 TO 2011

TERMS & CONDITIONS OF SALE

General

Products and service furnished by us are sold only on the terms and conditions stated herein. Notwithstanding any terms or conditions on Customer's orders, our performance of any contract is expressly made conditional on Customer's agreement to these terms and conditions of sale. All contracts for the sale of products shall be construed under and governed by the laws of the State of California. All orders shall be subject to our acceptance.

Prices & Specifications

All published prices and specifications are subject to change without notice. Unless otherwise specified in writing, all quotations are firm and expire thirty days after date thereof. Unless otherwise stated, all prices, published or quoted, shall be exclusive of transportation, insurance and taxes.

Transportation & Acceptance

We reserve the right to select the means of transportation and routing when Customer's instructions are deemed unsuitable. Risk of loss and/or damage shall pass to Customer upon delivery of the products to the transportation company at the FOB point. Title shall pass to the Customer when products are delivered to the transportation company at the FOB point. All products must be inspected upon receipt and claims should be filed with the transportation company when there is evidence of shipping damage, either concealed or external. The furnishing of a product to the Customer shall constitute acceptance of that product by the Customer unless notice of defect or nonconformity is received by us within ten-days of receipt of the product at Customer's designated receiving address. We may repair or, at our option, replace defective or nonconforming parts after receipt of notice of defect or nonconformity.

Performance

We shall not be liable in any way because of any delay in performance hereunder due to unforeseen circumstance or to causes beyond our control such as, but not limited to, strike, lockout, riot, war, fire, act of God, accident, and subcontractor or supplier delays. We reserve the right to substitute suitable products, when in our opinion such substitution is necessary due to such circumstance or causes. No order may be terminated by Customer except by mutual agreement in writing. Machines are not designed to conform to UL or OSHA Standards. It is the customer's responsibility to verify the electrical standards in their county.

Warranty & Liability for Machine Sales

Our machines, including accessories and spare parts purchased and/or included with the machine sale, are guaranteed to be free from defects in workmanship for twelve months after date of purchase, unless specified otherwise- This warranty is effective only if the necessary information is provided, serial number of machine and nature of defect, and any part claimed defective is returned prepaid to us. No such return will be accepted unless we are first notified of the part to be returned. Upon its proper return to us, we shall repair or replace, at our option, the defective part. This warranty applies only if the products have been operated in accordance with normal procedure, and if no unauthorized repairs have been attempted. This warranty is expressly in lieu of and excludes all other express or implied warranties including, but not limited to, warranties of merchantability and fitness for particular purpose, use or application and all other obligations or liabilities on our part. The remedy of repair or replacement, as provided herein, shall be the buyer's exclusive remedy and will satisfy all our liabilities whether based upon contract, negligence, or otherwise. In no event shall we be liable for incidental, consequential or special damages. Liability to third parties for bodily injury including death relating to our performance or products delivered hereunder shall be determined in accordance with applicable law and shall not exceed the payment, if any, received by us for the product or service furnished.

Warranty & Liability for Accessory & Spare Part Sales

Accessories and spare parts purchased after a machine sale and/or out of the machine warranty period are guaranteed to be free from defects in workmanship for 90-days after date of purchase, unless specified otherwise. This warranty is effective only if the necessary information is provided; original date of purchase and nature of defect, and any part claimed defective is returned prepaid to us. No such return will be accepted unless we are first notified of the part to be returned. Upon its proper return to us, we shall repair or replace, at our option, the defective part. This warranty applies only if the products have been operated in accordance with normal procedure, and if no unauthorized repairs have been attempted. This warranty is expressly in lieu of and excludes all other express or implied warranties including, but not limited to, warranties of merchantability and fitness for particular purpose, use or application and all other obligations or liabilities on our part. The remedy of repair or replacement, as provided herein, shall be the buyer's exclusive remedy and will satisfy all our liabilities whether based upon contract, negligence, or otherwise. In no event shall we be liable for incidental, consequential or special damages. Liability to third parties for bodily injury including death relating to our performance or products delivered hereunder shall be determined in accordance with applicable law and shall not exceed the payment, if any, received by us for the product or service furnished.

Indemnity and Hold Harmless

Customer agrees to indemnify and hold Seller harmless for any and all claims or demands or liability, whether of not Seller has yet to become liable thereon, for any potential, threatened or actual liability, costs, or expenses, arising out of or relating to the sale or use of the equipment which is subject of this sale.

Terms of Payment

All payments for products released and shipped on approved credit accounts shall be due in full thirty days from date of invoice therefore Past Due balances shall be subject to a service charge of 1-1/2% per month. Partial shipments will be billed as made and payments therefore are subject to the above terms. We may cancel or delay delivery of products in the event Customer fails to make prompt payment therefore or in the event of arrearage in Customer's account with us.

Disputes

All disputes under any contract concerning products not otherwise resolved between Customer and we shall be resolved in a court of competent jurisdiction of Los Angeles, California.

Attorneys Fees

Should any legal action or arbitration be brought for the enforcement of this Agreement or any term hereof, or due to any alleged dispute, breach, default or misrepresentation in connection with any provisions herein contained, the prevailing party shall be entitled to its reasonable attorneys' fees, expert witness fees and other costs and expenses, as well as recoverable court costs, incurred in any such action or proceeding and any action to enforce a judgment (including bankruptcy representation) and any appeal, in addition to such other relief, as may be granted by the court.