

HIGH PRESSURE COOLANT "ON-DEMAND"

UltraFlex™



Introducing
a New Standard in
High Pressure Coolant



HIGH PRESSURE COOLANT "ON-DEMAND"

What can CoolJet's High Pressure Coolant do?

Typical Applications:

Drilling • Grooving • Parting Off • Boring • Pocket Machining
Cutting Exotic Materials (High Nickel Content, Hard Metals)
Achieving Fine Surface Finishes • Chip Control • High Metal Removal Requirements • Small Tooling Applications

What benefits can you expect from utilizing High Pressure Coolant?

Applying High Pressure Coolant generally yields benefits in several ways. For instance, if you are targeting to reduce process cycle time then you might be surprised to also find that your tool life was significantly extended after applying High Pressure Coolant. Here are some of the mainstream benefits of effectively applying High Pressure Coolant:

- Increased Throughput
- Improved Surface Finishes
- Reduced Process Cycle Times
- Improved Chip Control
- Longer Tool Life
- Reducing Number of Processes

How does High Pressure Coolant Work?

During metal cutting processes, significant heat is generated at the tool / workpiece interface, primarily from the effects of friction. Excessive friction and heat can be detrimental to the tool and the workpiece. Examples of this are:

Tool

- Premature tool failure due to wearing and thermal shock
- Chipping due to recutting chips from poor chip control

Workpiece

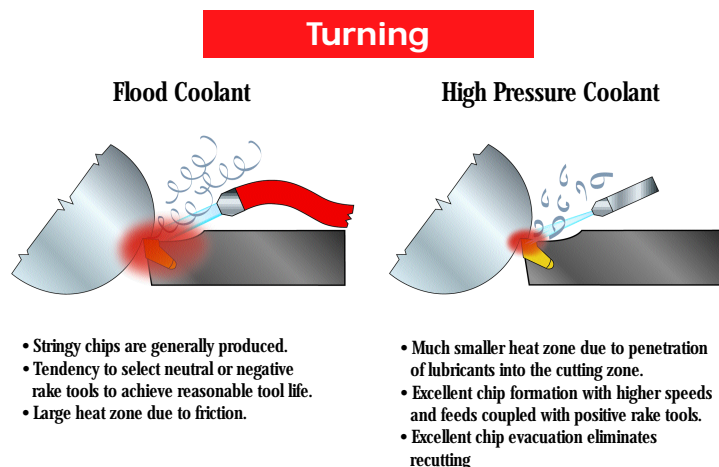
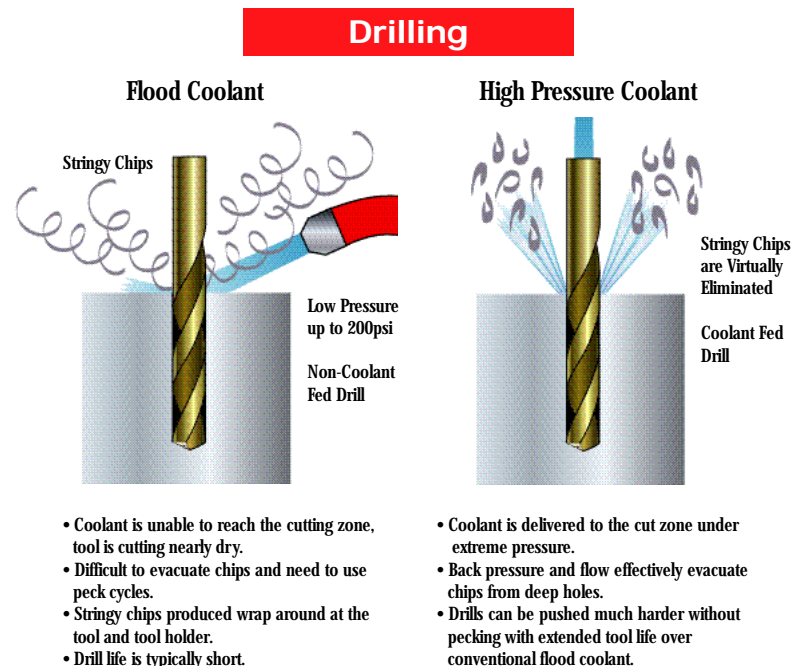
- Dimensional variations due to thermal growth from friction heat
- Work hardening of surface (may affect secondary operations)
- Degraded surface finishes from material tearing with reduced lubrication

Standard Flood Coolants

Typical Flood Coolants deliver relatively low pressures (up to 200psi) to the cutting zone. Cutting fluids tend to boil away or vaporize before penetrating the critical high temperature cutting area. Lubricants in the cutting fluid do not reach the friction zone.

When cutting fluids are pumped to pressures of 1000psi (70 bar) or more, and accurately directed to the cutting zone through an appropriate nozzle, the resultant jet stream of coolant is able to penetrate the high temperature cutting zone, delivering vital lubricants to the cut. Temperatures are dramatically decreased due to the reduced friction. This is very evident by observing the chips produced which are well formed and are generally not heat discolored.

High Pressure Coolant also effectively forces chips away from the cutting area especially in deep hole drilling or pocket machining.



CONNECTING TO YOUR MACHINE TOOL

Up to 2000 PSI / Up to 20 GPM

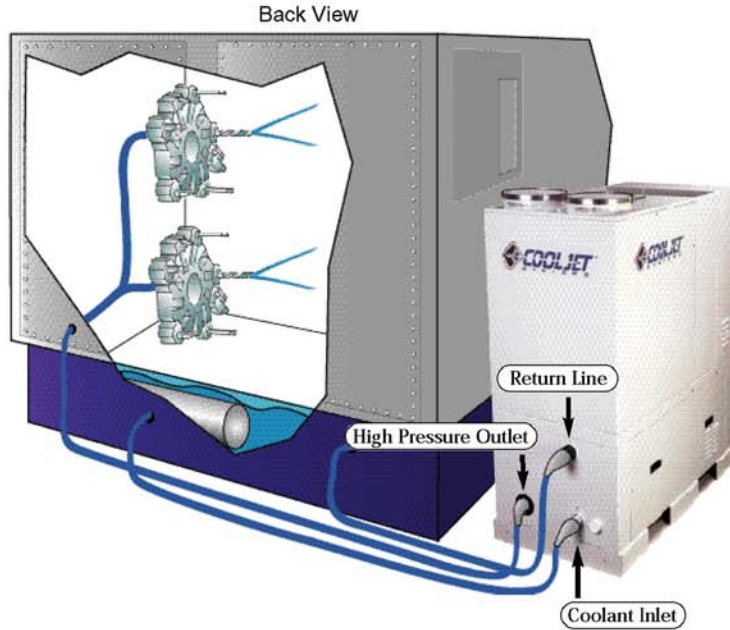
CoolJet's UltraFlex provides a high degree of Flexibility. Ideally suited to large size tooling and multi turret machines, the UltraFlex is capable of delivering both high and low pressure to each turret independently. The variable flow "Pump on Demand" feature assures that a constant pressure is maintained at tools in use.

Turning Centers

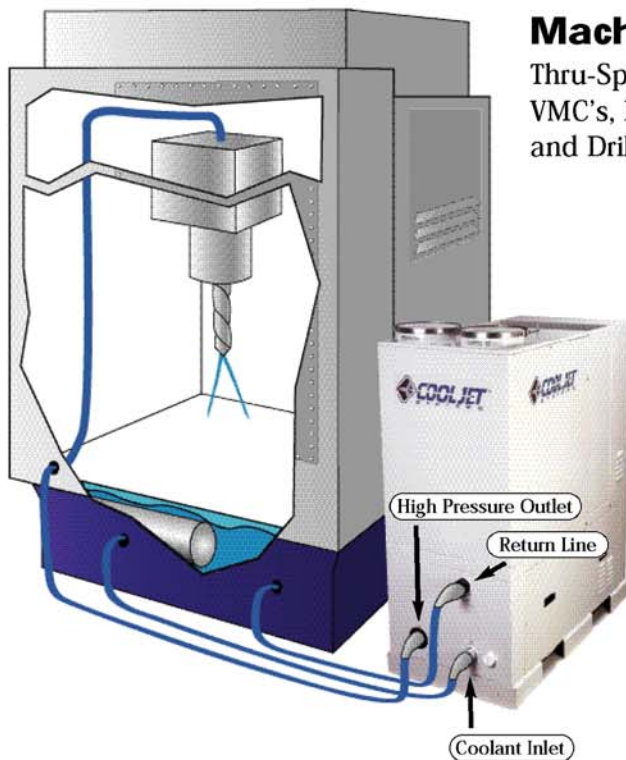
- Single Turret
- Multi Turret
- Platen/Gang Style
- Vertical Turning Centers

High and Low pressure coolant to both turrets independently

CoolJet also offers Custom Engineered High-Pressure Turret Inducers and Indexing Valves.

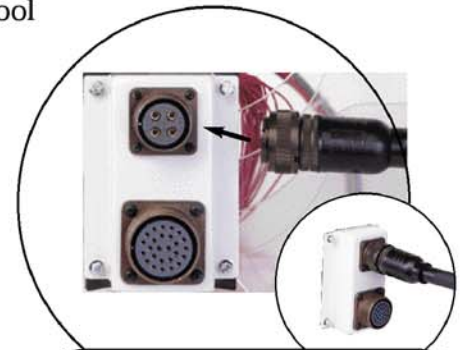


Back View



Machining Centers

Thru-Spindle or Thru-Tool VMC's, HMC's and Drill-Tap Centers

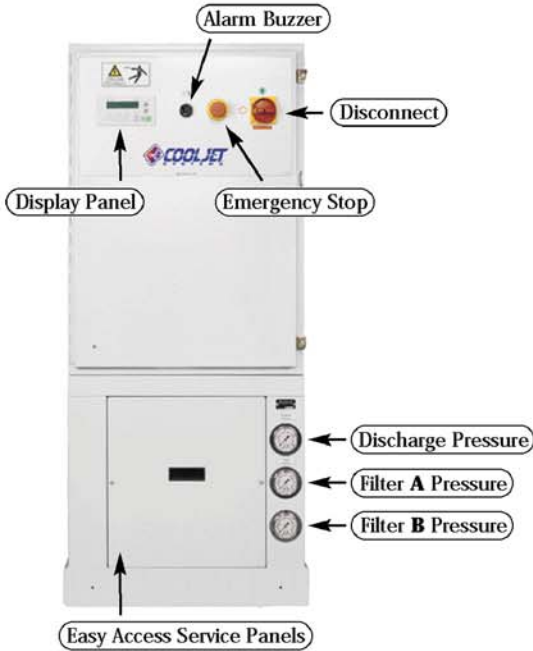


Exclusive from CoolJet
Plug & Pump™
Quick connect technology

Developed by CoolJet Systems, the **Plug & Pump™** interface allows rapid and intelligent connection to **Plug & Pump™** ready machine tools.

Order Now: **714-577-9262**

TECHNICAL DATA



SPECIFICATIONS:

Feature	Units	Standard	Optional
Maximum Discharge Pressure	Bar PSI	70 1000	up to 140 up to 2000
Maximum Discharge Flow	liters/min Gallons/min	57 15	up to 76 up to 20
Largest Motor Size	KW HP	7.5 10	
Voltage	VAC	208/230//208-230/460	
Frequency	Hz	60//50	
Full Load Current	Amps	33//17 Depends on Configuration	
Electrical Interface Connector		Amphenol MS3106-28-12P	Other Standards Available
Acoustic Noise	Db	69	
Discharge Fitting	JIC	-12 (37 deg)	
Inlet Fitting	NPT	1.5 inch	
Filter Unit	Number	2	
Filter Area (Total)	sq m sq feet	3.5 11.5	
Filter Rating	Micron	10(nom)	5, 25, 50
Dimensions	cm inch	122L x 63W x 150H 48L x 25W x 59H	
Weight (Dry)	Kg Lbs	537 1180	
Paint Color	Powder Coat	Ash Grey RAL 7035	

SYSTEM FEATURES

System Feature	Standard	Optional
Discharge Outlet	1	2 / 4
Low Pressure (Single Outlet)	X	●
Low Pressure (Dual Outlet)	X	●
Pulsation Dampening	●	X
Discharge Flow	Variable	(Standard)
Pressure Set Points	2	(Standard)
Transfer Pump	X	●
Filter Drain Valves	●	(Standard)
Emergency Stop	●	(Standard)
Operator Display	●	(Standard)
Fork Lift Access	●	(Standard)
Water or Oil Coolant	●	(Standard)
Duplex Filter	●	(Standard)

LEGEND

- Fitted
- X Not Fitted

Optional Accessories

- Hose Kits
- Discharge Fitting Adapters
- Wiring Harness and Connectors
- High Pressure Turret Valves
- Coolant Nozzles
- Mist Extractor

Design and specifications subject to change without notice.



2900-A Saturn St.,
Brea, CA 92821-6203
USA

Tel: **714-577-9262**
Fax: 714-577-9271
www.cooljet.com

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