

HIPRUN

POMPA VE CNC EKİPMANLARI

✓ Reduce Your Production Costs

✓ Be Faster Than Your Competitors

✓ Increase Your Cutting Tool Life

HP2 SERIES



Your Valuable Partner Which Will Push You Over The Top

In this production competition...



High Pressure Coolant Systems and Benefits

High Pressure System ; It's the process of transferring the high pressure coolant obtained by squeezing the liquid with various methods through appropriate connection equipment and adaptors to the needed points.

High Pressure Pumps ; Auxiliary systems for use in various manufacturing methods such as turning, milling, drilling and etc.

The Selection of the high pressure coolant units depends on the materials, the hole dimensions and the required surface accuracy.

The following table shows the appropriate Hiprun high pressure system models according to the material types.

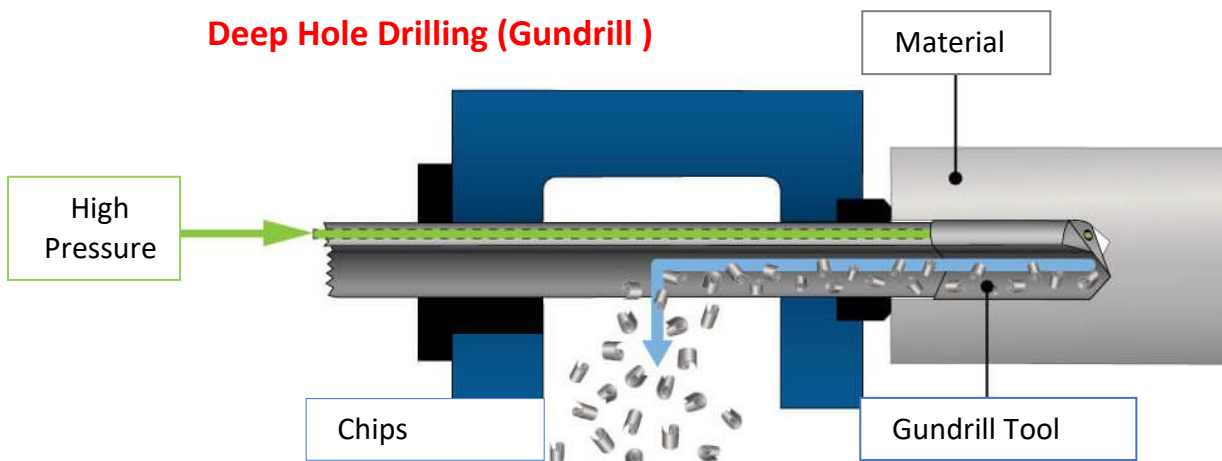
Optimum efficiency during machining is achieved by the recommended high pressure systems.

Pressure Range	Material	Recommended Product	Max. Pressure	Filtering
<80 bar	Brass - Machine Steel	HP2	300 bar	30 um
30-100 bar	Copper -Bronze	HP2-E	100 bar	40-60 um
50-150 bar	Aluminium – Stainless Steel	HP3	150 bar	60-80 um
> 100 bar	Hard Alloys and Titanium	HP3-E	2000 bar	10-20 um

As shown in the table above, most machining operations require to be cooled with a pressure of 50 – 70 Bar.

For aluminium and stainless steel materials; Easily machined with a pressure of 70 – 100 Bar.

In order to achieve high performance in deep hole drilling, a pressure of minimum 100 bar and above is required according to the hole diameters. The required pressure varies according to drill diameters and lengths.



Pump Types and Intended Use

High Pressure Pumps ; They are selected according to fields of usage and operating conditions. Especially the liquid and its density to be used in cooling have much importance to achieve the required pressure.

The following table shows the different pump types according to operating fields. By the reason of cutting oils and water-based emulsions are generally used for cooling, pump systems with proven performance are preferred with these oils.

(% 8 Minimum oil)

<u>Pump Type</u>	<u>Features</u>	<u>Efficiency Rate</u>	<u>Max. Pressure</u>	<u>Filtering</u>
Piston Pump	Performance pump for especially high pressure coolant..	70 - 95 %	300 bar	30 um
	High efficiency. Inclined to contamination. Requires good filtration			
Gear Pump	Performance pump. Operates faster under high pressure and continuous load. High efficiency. Inclined to contamination. Requires good filtration.	70 - 90 %	100 bar	40 - 60 um
Screwed Pump	Pump is not inclined to contamination, nevertheless they have low efficiency.	50 - 85 %	150 bar	60 - 80 um
	Ideal up to 80 bar. Requires high running power in case of high pressure			
Plunger Pump	Piston pump principle for very high pressure. Low efficiency.	60 - 85 %	2000 bar	10 - 20 um
	Requires very high running power and very good filtration.			

The pumps shown in the table are fixed pumps. This means that the constant flow rate is provided by them. However, flow at constant pressure can cause problems with process safety and efficiency.

Example: A pump with a capacity of 14 lt/min. takes 14 liters per minute from the cooling tank and delivers the cooling oil directly to the edge of tool . However, if 3 lt /min. of pressure is required in the machining process, the remaining 11 lt/min. is returned to the tank.

Problem:

The temperature of the oil returned to the tank will cause the coolant to heat up. Due to the increase in temperature, dimensional problems can be experienced.

New HP2 Series

HP2 High Pressure Unit

It is presented to you at competitive prices with its design and performance as one of the building blocks that generate production with the slogan of Maximum Efficiency – Minimum Cost.



Interchangeable Filtering

Two steel filters with two-way operation, targeted for high efficiency in design, prevent production downtime or stop. Easy to clean steel filter prevents extra costs. Mobile HP2 Series can be easily transported anywhere in the workshop thanks to its wheels.

OUR HP2 MODELS

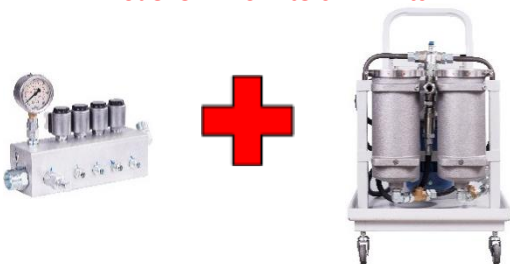
HP2 Model A : One Filter + One Exits



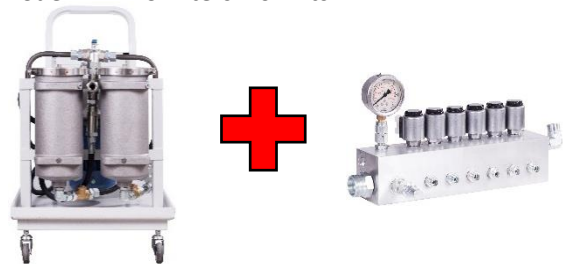
HP2 Model B : Two Filters + Two Exits



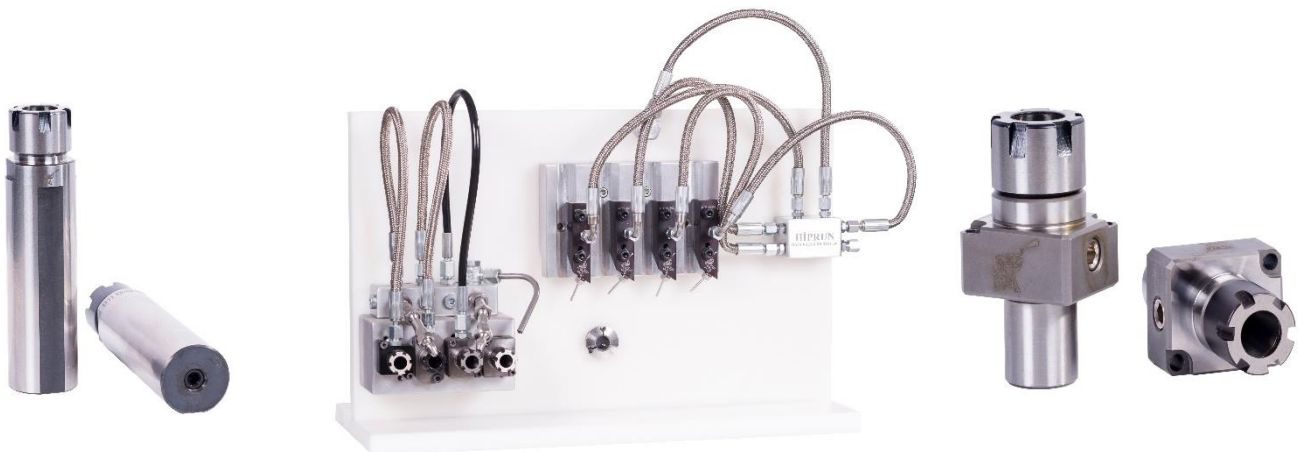
HP2 Model C : Two Filters + 4 Exits



HP2 Model D : Two Filters + 6 Exits



TECHNICAL SPECIFICATIONS	EQUIPMENTS
Pressure Range	30 – 80 Bar
Pump	9 lt/min
	12 lt/min
	18 lt/min
	24 lt/min
	27 lt/min
Motor	2,2 kw
	3 kw
	4 kw
	5,5 kw
Filtering	Single 150 μ Steel Filtering
	Double 150 μ Steel Filtering
Number of Exit	One Exits
	Two Exits
	Four Exits
	Six Exits (Opt.)
	Eight Exits (Opt.)
Control	Automatic Control
	PLC Control
Pressure Monitoring	Manometer
M Code /ON-OFF	Communication between Lathe – Unit
Safety Valfe	Alarm line between Lathe – Unit
Design	Mobile Wheel Design – Scratched Paint
Energy	380-400V/50-60 Hz
Dimensions (L x W x H)	1000 x 700 x 950 mm

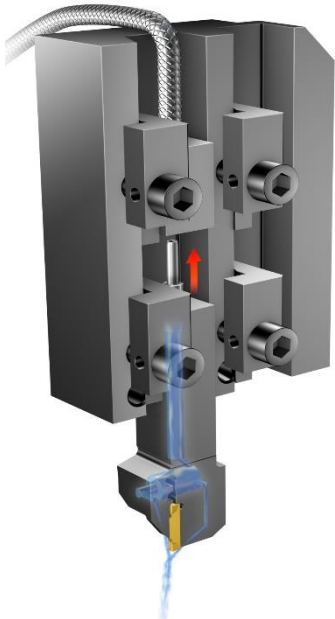


Hiprun High Pressure Coolant Equipments

HP2-A	HP2-B	HP2-C	HP2-D
√	√	√	√
√			
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		√	√
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HP2 Series Advantages of Use:

- Keeping chips under control or breaking easily
- Increase in tool life
- More accurate surfaces and faster production
- Performance increase in drilling and deep drilling processes
(Velocity and Accuracy)



Let's try to explain the benefits that Hiprun provides you with an example...

	HP2 MODEL B (70 BAR)	STANDART COOLING
	<i>Sandvik Coromant</i>	<i>Standart 15 Bar</i>
Tool Holder	QS-RF123T061010BHP	Same Holder with internal cooling feature
Cutting Insert	N123T3-0150-0000-GS	Same Cutting Insert
Dia. Mm (inch)	6.5 mm	6.5 mm
Material	Stainless steel AISI 303	Stainless steel AISI 303
V m/min.	71	71
f mm/Rpm	0.04	0.02

Number of Produced Parts : 500 Pieces 250 Pieces

%100 INCREASE IN PRODUCTION

As a result **HP2 High Pressure System**; Helps you to overcome the problems you will experience in production and helps you to produce precise and fast production without any problems. In addition, you can control the length of chips and control your production with HP2 Series.



Machining With 30 Bar Pressure

Machining With 70 Bar Pressure

Machining With 120 Bar Pressure

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