CONVEYORS & FILTRATION

CHIP CONVEYORS | COOLANT FILTRATION | TURNKEY SYSTEMS

IIIIHENNIG

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pages 3-12

Automate chip removal and increase your productivity with conveyors that safely remove the waste from your processes. Our systems are built based on your requirements and can be custom engineered to manage any chip type and material scrap, parts, coolant, and coolant filtration.

FILTRATION

pages 13-16

Our Chip Disc Filtration (CDF) technology achieves high levels of filtration without two separate belts. Our patented disc design provides a direct coolant flow path into the coolant reservoir and can filter a wide variety of materials, both in water and oil based coolant, down to 25 microns nominal.

COOLANT TANKS & TURNKEY SYSTEMS

pages 17-22

Fully automate the waste removal in your facility with integrated coolant tanks and conveyor networks. For high-volume manufacturers, Hennig's integrated systems can automate the removal of chips on one or all of the machine tools in the shop. This system allows the user to spend more time manufacturing and less time sweeping and moving chips.

Our chip conveyors and disc filtration systems set the standard for removing chips and debris from machine coolant, improving the life of precision machines and the accuracy of output. They are supported worldwide with Hennig's global sales and support infrastructure, which includes manufacturing facilities and partnerships throughout the industrialized world, including:

Sermeto El (Europe)

Cobsen (South America)

Enomoto (Asia)

Together, Hennig, Sermeto, Cobsen, and Enomoto lead the industry in developing innovative new chip conveyor technologies, offering a complete range of chip conveyor solutions tailored to particular machine types, performance requirements, and work area considerations.

Our chip conveyors outperform expectations, even in the most demanding production environments, and they do it more efficiently and with less maintenance than other conveyor solutions.

See pages 23 - 25 for Quote Request forms.

CONVEYORS

TYPES

- ► HINGE BELT
- ► SCRAPER BELT
- MAGNETIC
- AUGER
- ▶ PUSH BAR
- ▶ BELT TYPE
- > SPECIAL APPLICATIONS

FEATURES

- ► OVERLOAD/JAM PROTECTION
- VARIABLE SPEED DRIVE

 1.1 m/min 3.3 m/min
- ▶ PAINT COLORS

 blue, white, grey, black (standard)

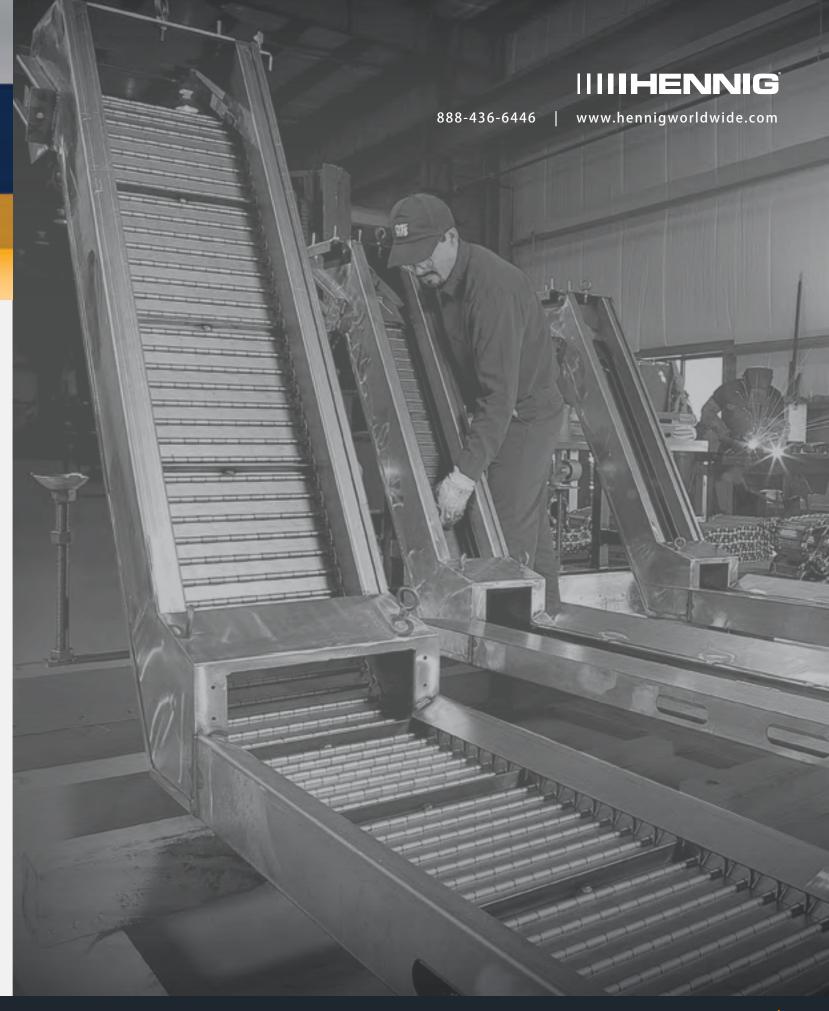
 custom colors as required
- ► INCLINE ANGLE

 60° / 45° (standard)

 custom angles as required
- ▶ LOW PROFILE DESIGN

OPTIONS

- ► REMOTE VFD OR CONTROL BOX 1.6m/min, 2.2 m/min, 3.0 m/min
- ► OVERHEAD TORQUE LIMITER
- ► CUSTOM COOLANT TANKS
- ► CUSTOM COOLANT FILTRATION
- ► CUSTOM PAINT COLORS
- ► CUSTOM INCLINE ANGLE
- ► CUSTOM CHUTES
- ► HEAVY-DUTY HARDENED RAILS AND CURVES
- ► WEARING PLATE / BOTTOM FRAME
- ► ON-SITE INSTALLATION
- ▶ CASTERS



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HINGE (link, chain)

A proven conveyor solution for a variety of materials, chip types, and chip loads. Hinge belts, the most common conveyor type, can be modified to handle more troublesome waste like tough scrap and heavy parts.

APPLICATIONS

- ► CHIP MATERIAL aluminum, brass, steel
- ► CHIP TYPE bushy, stringy, broken
- ► CHIP LOAD light, heavy, mixed
- ▶ OTHER heavy duty scrap or remnants

LIMITATIONS

- swarf
- ▶ fines
- cast iron

OPTIONS

- ▶ CLEATS serrated, flat, u-shape, custom
- ► INTEGRATED COOLANT TANK
- ► COOLANT FILTRATION

- ► HINGE KIT service / replacement parts (see pages 13 -14)

▶ BELT DESIGN plain, perforated, dimpled, combo **BELT PITCHES " (MM)** 1.5 (38.1), 2.5 (63.0), 4.0 (101.6), 6.0 (152.4) ► HEAVY-DUTY IMPACT PLATES for heavy scrap or parts ► TOP HAT COVER for bundled chips And some some some some some

SCRAPER (drag, flight)

An ideal solution for fine chips and swarf, the scraper belt moves in reverse, collecting and dragging chips up the incline to the discharge end. Standard scraper paddles can be customized with wipers to the application.

APPLICATIONS

- ▶ CHIP MATERIAL aluminum, brass, steel, cast iron, plastic
- ▶ CHIP TYPE fines, swarf, small, broken
- ► CHIP LOAD light, heavy, mixed

LIMITATIONS

- bushy chips
- > stringy chips
- mixed chips

OPTIONS

- ▶ PADDLES standard or custom angle
- WIPERS
- ► INTEGRATED COOLANT TANK
- ► COOLANT FILTRATION
- ▶ SOLID DRUM MAGNET for floating, ferrous chips when using coolant
- ► WEARING PLATE

with hardened rails and curves / bottom frame



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MAGNETIC

The magnetic conveyor plays a very specific role in chip management - it's intended for ferrous material applications which produce small chips and fines.

APPLICATIONS

- ► CHIP MATERIAL ferrous material (cast iron, steel)
- ▶ CHIP TYPE fines, swarf, sludge, small and broken
- ► CHIP LOAD light, medium
- ▶ OTHER small parts (screws, bolts, stamping, scraps, etc.)

LIMITATIONS

- > cannot be used with non-ferrous material
- ▶ heavy chips, scraps, or large parts can damage the sheet metal belt



BELT TYPE

The universal transport solution for applications without any liquids. The belt conveyor allows the transport of parts and scraps in metal, plastic, and cardboard up to 15 kg / linear meter. It is suitable to solve extraction problems (pressure forming parts, punching scraps and trimmings) or level change. The conveyor transport belt is oil and grease resistant.

APPLICATIONS

- ► CHIP MATERIAL any
- ► CHIP TYPE punch scraps, trim pieces
- ► CHIP LOAD light, medium
- ▶ OTHER part removal

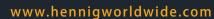
LIMITATIONS

- ▶ fines
- small, broken
- heavy parts and scrap

OPTIONS

- ▶ PVC OR PUR BELT up to 80°c
- ▶ CUSTOM BELT FOR HIGH TEMPERATURES over 80°c
- ▶ WITH OR WITHOUT CLEATS
- ▶ OIL/GREASE RESISTANT BELTS
- ► INTEGRATED DRIVE MECHANISM
- ▶ WIPERS





AUGER (screw)

Ideal for limited space applications, the auger system can installed in the machine tool or directly into the floor.

The addition of a mobile (transfer) conveyor can be used to roll around the shop and assist with chip removal from high production auger fed systems. The mobile (transfer) conveyor allows for larger chip bins/drums and features an adjustable receiving chute which can be positioned for front, side, or rear discharge.

APPLICATIONS

- ► CHIP MATERIAL aluminum, brass, steel, cast iron
- ► CHIP TYPE fines, swarf, small and broken
- ► CHIP LOAD light, heavy, mixed
- ▶ OTHER wet or dry applications

LIMITATIONS

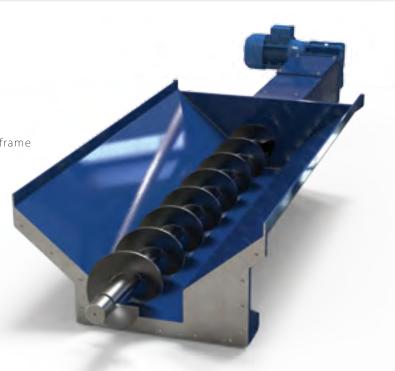
- parts and large scraps
- bushy chips from turning

OPTIONS

- ▶ TORQUE LIMITER
- ▶ INSTALLATION in auger or directly in machine frame
- **SCREW** with or without shaft
- ► MOBILE (TRANSFER) CONVEYOR

 Assists high production chip removal.

 Available with adjustable chip chute for front, side, or rear discharge.



PUSH-PULL BAR (ram, bar)

Used to transport all types of swarf in big quantities, the push-bar system can be installed under or above the floor to suit your application.

APPLICATIONS

- ► CHIP MATERIAL any
- ► CHIP TYPE any
- ▶ CHIP LOAD mixed, heavy

LIMITATIONS

▶ parts or scrap cannot be bigger than the shoe dimensions

OPTIONS

- PREFILTRATION GRID

 for coolant discharge
- ► WEARING PLATE

 with hardened bottom frame



SPECIAL APPLICATIONS

Unique work environments. Specialized machine configurations. Varying chip volumes. These are just a few of the special requirements that indicate the need for a custom chip conveyor solution.

Hennig engineers can create modified or special solutions to meet the needs of virtually any application including dust and gas removal during dry machining.

APPLICATIONS

- ► CHIP MATERIAL any
- ► CHIP TYPE any
- ► CHIP LOAD any
- ▶ OTHER dust, gas, laser machines



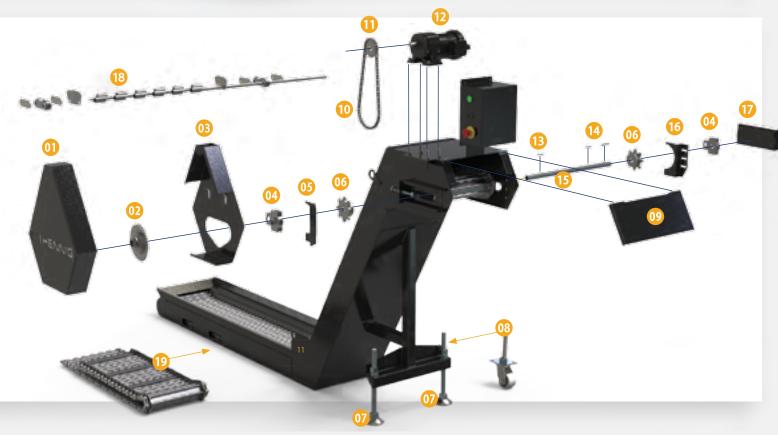
SERVICE & SPARE PARTS

When your conveyor needs service or repair, we have parts in stock to get your conveyor up and running, and also the skilled personnel to repair or replace the damaged or worn parts.

Conveyor belts, drive motors, and other parts can get damaged, worn, or just get old. Before investing in an entirely new system, check with us to see if your existing system can be repaired.

- 1 FRONT CHAIN GUARD
- 2 TORQUE LIMITER ASSEMBLY
- 3 LH INNER GUARD
- 4 TAKE UP BEARING
- 5 INSIDE CHAIN GUARD
- 6 BELT SPROCKET
- 7 ADJUSTABLE SUPPORTS
- 8 CASTER OPTION
- 9 FLIP LID
- 10 DRIVE CHAIN

- 11 GEAR MOTOR SPROCKET
- 12 GEAR MOTOR
- 13 TORQUE LIMITER KEY
- 14 BELT SPROCKET KEY
- 15 DRIVE SHAFT
- 16 RH INNER GUARD
- 17 BEARING COVER
- 18 HINGE PLATE KIT
- 19 WHOLE BELT REPLACEMENT



FILTRATION

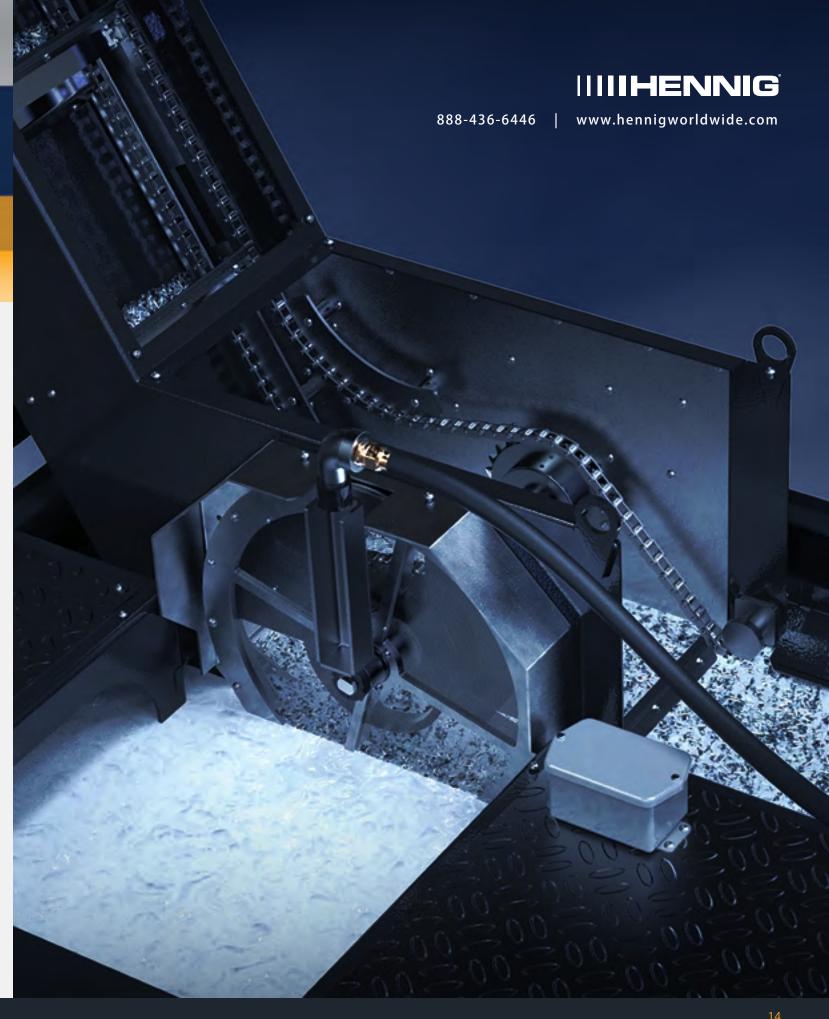
COOLANT MANAGEMENT. SIMPLIFIED.

The patented Chip Disc Filtration (CDF) technology achieves high levels of filtration without two separate belts. Our patented disc design provides a direct coolant flow path into the coolant reservoir and can filter a wide variety of materials, both in water and oil based coolant, down to 25 microns nominal.

This affordable, versatile approach to chip removal is Hennig designed and patent protected. It is the most simple approach to coolant filtration in the market today. The Hennig CDF system is simple by design, and can be used with a scraper type belt or a hinge belt.

CAST IRON FILTRATION. MADE EASY.

For the notoriously difficult cast iron applications, the addition of a solid rotating magnetic drum can be incorporated for efficient removal of floating chips, fines and sludge.





CHIP DISC FILTRATION (CDF)

ONE BELT SYSTEM FOR ALL CHIP TYPES

Unlike many nylon mesh drum systems, CDF technology does not need two belt systems to handle stringy chips, and can be used with hinge or scraper belts.

CONTINUOUS SELF-CLEANING OPERATION

Continuous spray filters coolant against the stainless steel media, removing fines & chips.

No outside source such as air or steam is used.

OPTIONS

- ► BELT TYPE
 hinge or scraper belt
- ► STAINLESS STEEL FILTER DISC SIZE 12", 16"
- ► SINGLE OR MULTIPLE FILTER DISCS depending on coolant flow rate
- SOLID ROTATING MAGNETIC DRUM for collecting cast iron sludge/swarf

FEATURES

- 1 MAIN FLOOD COOLANT PUMPS
- 2 HIGH PRESSURE PUMP 300 1000 PSI
- 3 BACKWASH CDF PUMP
- 4 DISC ACCESS COVER PANELS
- 5 COOLANT TANK
- 6 CONTROL BOX
- 7 LOW INLET HEIGHT
- 8 BAG FILTER

PATENTED DISC FILTRATION DESIGN

Hennig's innovative design provides a direct coolant flow path into the coolant tank reservoir, and filters a wide variety of materials both in water and oil based coolants.

STAINLESS STEEL MEDIA

Handles momentary or continuous heavy chip loads from 25-120 microns nominal, which can be a problem with nylon mesh, drum filters.



HOW IT WORKS

1 COARSE CHIP REMOVAL

WITH HINGE OR SCRAPER BELT

The belt (hinge or scraper) collects larger chips and particles for discharge into the chip hopper. Removing coarse chips before they reach disc filter keeps them from bundling and jamming the system, which fosters extremely efficient fine particle filtration.

2 FINE PARTICLE FILTRATION

FILTERING COOLANT

Small particles that escape the belt naturally migrate with the coolant flow to the rotating disc filter. There, particles down to 25 microns are collected and the cleaned coolant flows back into your tank.

REMOVING PARTICLES

The collected particles rotate with the disc filter and are lifted out of the coolant, towards the backwash spray. There, the particles are blasted onto the belt with a backwash spray and removed along with the coarse chips.

2 CAST IRON MICRO-FILTRATION

COLLECTING & DISCARDING CAST IRON FINES

The addition of a solid rotating magnetic drum allows for cast iron fines to be collected and removed from the coolant.

When enough particles have collected on the magnetic drum to form a heavy sludge, the sludge drops onto the dry conveyor incline and is discarded along with the coarse chips and particles that have been collected on the disc filter into the chip hopper.







COOLANT TANKS &

TURNKEY SYSTEMS

Fully automate the waste removal and coolant recycling in your facility with fully integrated Hennig chip management and coolant systems. Leverage our experience to design your complete chip and coolant solution from start to finish.

For high-volume manufacturers, Hennig's integrated systems can automate the removal of chips on one or all of the machine tools in the shop. This system allows the user to spend more time manufacturing and less time sweeping and moving chips.



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COOLANT TANKS

CUSTOM ENGINEERED. MADE TO ORDER.

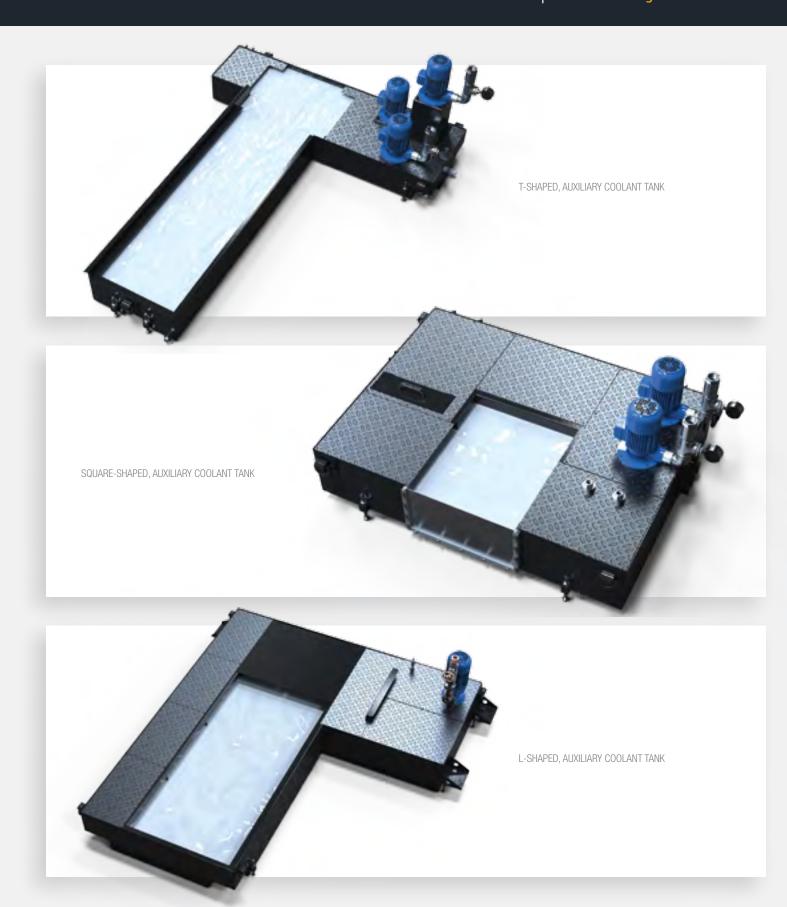
Using integrated or auxiliary tanks, coolant is quickly cleaned and recycled during the machining process, resulting in fewer interruptions and less downtime.

Our tanks are made from heavy gauge steel to provide leak-free service in harsh shop environments. Removable cover plates allow easy access to the tank's interior for quick, easy maintenance. Liquid level sight gages are a standard feature, and baffles, chip baskets, and removable screens can also be added.

OPTIONS

- ► AUXILIARY OR INTEGRATED TANKS
- ► REMOVABLE COVER PLATES
- ► LIQUID LEVEL GAGES
- ▶ BAFFLES / CHIP BASKETS / SCREENS
- ► CARTRIDGE AND/OR CYCLONIC FILTERS
- ► FLOAT SWITCHES
- ▶ OIL SKIMMERS
- ► COOLANT PUMPS
- ► CUSTOM G / MIN OR PSI REQUIREMENTS
- ► INTEGRATED CONTROLS FOR PUMP / FILTER AUTOMATION





TURNKEY SYSTEMS

If your conveyor system requires integration in the machine controls or automation beyond our standard control system, we can build a tailor-made solution that does the job. If your looking to further process your chips for shredding or recycling, we can integrate any of the technology required.

We have a long history serving the machine tool industry but we've made plenty of specialized conveyors that move finished parts, machined remnants, scrap materials, and other items beyond metal chips. We'll help you integrate all of the technology and controls you need to take chips and coolant management to a higher standard.

The last little little and a second

APPLICATIONS

- ► CHIP MATERIAL any
- ► CHIP TYPE any
- ► CHIP LOAD light, heavy, mixed
- ▶ OTHER high volume chip makers

OPTIONS

- ▶ CHIPS SHREDDER
- ► SWARF CENTRIFUGE
- SWIVELING CHUTES
 manual or automated
- ► CHIPS COMPACTOR



TURNKEY, INTEGRATED CONVEYOR NETWORKS

Right: An integrated conveyor network designed and manufactured by Seremto. Smaller conveyors from the machining centers discharge onto the main exit conveyor for efficient chip removal from multiple machines.

Bottom Left: Adjustable chip chutes can be positioned at multiple discharge angles.

Bottom Right: Conveyors move chips from multiple machining centers onto one integrated conveyor for easy and efficient chip removal.







QUOTE REQUEST CONVEYORS

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QUOTE REQUEST CDF

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FRONT VIEW

ase complete this form and email to info@hennig-inc.com or fax to 815-636-1988

			Name					
			E-mail					
			Phone	Fax	Date//			
2 EXISTING O	ONVEYO	R (If you have the conveyo	r part number, disregard	sections 3 and 4 below)				
Brand ☐ Hennig ☐ Enomoto ☐ Sermeto ☐ Cobsen			Part # Serial #					
Other								
3 MACHINE I	NFORMA	TION						
Make				Available Refere	nces Photos Drawings			
• •	_	Available Powe		·				
·	-	eel Stainless Steel Bras						
•		m Cast Aluminum Oth		•	-			
					,			
O CONVEYOR	о тесный	CALDATA						
CONVEYOR	KIECHNI	CAL DATA						
Intake Length	L1	mm	Mot	or Location 🗌 Left 🔲 Rig	ht			
Max Length	L	mm	Pow	er Requirements V	Ph Hz			
Discharge Height	Н	mm	Con	trol Box 🗌 Yes 🗌 No				
Max Width	W	mm		Standard (fwd,	rev, e-stop) \square Variable Speed			
Angle (45°, 60°)	Α	deg.		☐ Auto/Manual S	elector Switch			
Width of Chip Chute	W1	mm		☐ Electrical Plug	(if yes, please specify below)			
Height of Chip Chute	H1	mm						
Belt Width	В	mm	Con	trol Box Location \Box Top Fi	ront 🗌 Top Left 🔲 Top Right			
Foot Location (choose	one) 🗌 B 🔲 C	mm		☐ Left Si	de 🗌 Right Side 🗌 Stand Alone			
Casters ☐ Yes ☐ No								
Paint (texture powder of	coated)							
Coolant Tank Required	☐ Yes ☐ No							
Coolant Flow Rate	gal	/min (total machine)			Left Side Right S			
Coolant Slots Left	🗌 Right 🔲 Bot	h 🗌 None						
Conveyor Speed (m/mi			_					
Overload Protection	Current Senso	r 🗌 Mech. Torque Limiter	/					
	Other	None						
Installed Location O								
□In	side Pit 🗌 Ins	ide Tank						
← —B— →				H — H — H — H — H — H — H — H — H — H —				
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			Title				
			E-mail				
			Phone	Fax	Date//		
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	nomoto \square Sermeto \square (or part number, disregard sections 3 and 4 below) Part #Serial #				
Other							
	NFORMATION	Madal		Aveilable Defere	ness Dhatas Drawins		
	on Dvilling Toppin				nces Photos Drawing		
• •	ng 🗌 Drilling 🔲 Tapping	_		•	in³/min		
	•			110 24 VDC Other_			
Chip Material			ass/Copper Kind of Chips				
case ii	on/	condition _ othe			g 243y		
ntake Length Max Length	L1r	nm	Installed Location On Floor Inside Machine In side Pit Inside Tank				
•							
Discharge Height Max Width	Hr		Motor Location □ Left □ Right Power Requirements V Ph Hz				
	Wr			Control Box	Pn HZ		
Angle (45°, 60°) Width of Chip Chute	A c	_	(rev, e-stop)		
Height of Chip Chute	H1r			☐ Auto/Manual S			
Belt Width	Br				(if yes, please specify below)		
	one) 🗌 B 🔲 C			Electrical Flag	(ii yes, piease specify below)		
Casters	one,		(Control Box Location ☐ Top F	ront 🗆 Top Left 🗀 Top Rig		
	coated)			•	de 🗌 Right Side 🗌 Stand Alc		
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Coolant Type Wate	_	,			Left Side Righ		
	ssu Other						
	 5-30 micron 🔲 35-40 m	nicron					
<u> </u>)-45 micron 🔲 Other _						
Conveyor Speed (m/mi	n) 🗌 2.2 🔲 1.6 🔲 Othe	er					
Overload Protection	Current Sensor	h. Torque Limiter	/	/ //			
	Other						
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_							
₩ ₩ ₩	120.0mm MIN †		A (60° ST	D)			

LEFT SIDE PROFILE VIEW

INLET CROSS SECTION

QUOTE REQUEST COOLANT TANK

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HEIGHT (ALL TANK SHAPES)

Please complete this form and email to info@hennig-inc.com or fax to 815-636-1988



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	Name _			
	Title			
				 Date//
	Priorie _		rax	Date//
2 MACHINE INFORMATION				
Make Model			Available Reference	es 🗌 Photos 🗌 Drawin
Type □ Lathe □ Milling □ Drilling □ Tapping □ Other			Chip Volume	
3 COOLANT TANK TECHNICAL DATA				
Tank Shape ☐ Square/Rectangular ☐ L Shape ☐ T Shape		Float Switch	☐ High Level	☐ Low Level ☐ Non-
☐ Other		Oil Skimmer	☐ Yes ☐ No	
Tank Size Lmm		Coolant Capac	ity	gallons
L1mm		Coolant Flow F	Rate	gal/min (total machir
L2mm		Additional Op	tions	
Wmm				
W1mm				
Hmm				
Tank Mounting □ On Floor □ In Pit □ Other □ In Page 1 In Page 2 In Page 2		Λ -l -li±i l l f -		
Tank Options ☐ Casters ☐ Leveling Bolts ☐ Inspection Cover ☐ Removable Screen(s) ☐ Other		Additional init	ormation	
Paint (texture powder coated)				
Pump 1				
• Flow Rate Pressure Voltage				
Pump 2 None Model				
• Flow Rate Pressure Voltage				
Pump 3				
• Flow Rate Pressure Voltage				
Filter 🗌 Single Canister Bag 🔲 Dual Canister Bag 🔲 Cyclonic				
Required Filtration Level microns				
SQUARE/RECTANGLE	L SHAPE			T SHAPE
l W			w	
			1	
			 W1	

For over 50 years, Hennig Worldwide has been defining Excellence in Machine Protection, creating regional jobs, serving their local communities, and supporting the global needs of machine tool customers.

Specializing in chip management, machine protection, and facility safety, Hennig products optimize production and keep your shop floor clean and safe.

MACHINE PROTECTION

Telescopic Steel Covers

Bellow Covers

Aprons & Roll Ups

Modular Face Shields

Wiper Systems

Machine Enclosures

CHIP SOLUTIONS

Chip Conveyors
Chip Disc Filtration (CDF)
Coolant Tanks
Turnkey Chip Systems
Conveyor Networks

FACILITY SAFETY

Walk-On Pit Covers
Scissor Lift Bellows
Rooftop Systems
Platforms and Enclosures
Guarding and Fencing
Special Fabrications



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