

New Barrels

SERVICES FOR PLASTICS, INC. IS COMMITTED to providing the plastic molding industry with quality products at the lowest prices and to extend personal, expedient customer service. We utilize our knowledge and hands-on molding experience to provide you with superior quality new and rebuilt barrels, screws and screw tip assemblies.

PRODUCT SELECTION

We have more than **1000** barrels and screws IN STOCK, which are available for same day shipping. We carry the most popular brands, as well as the hard-to-find ones.

If you need something other than the standard sizes, we can build it for you. We have thousands of prints for all major molding machines. And if we don't have your print, we can design from your product sample.

EXPERIENCE

Need assistance? SFP has been solving plastic molding problems for its customers for over 25 years. With over 150 years of hands-on molding experience, our engineering team provides all the technical support you need.

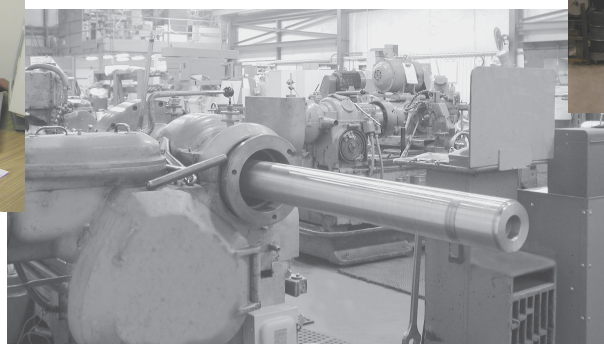


SPECIALTY SERVICES

In addition to building or reconditioning barrels and screws, we specialize in:

- Engineering & Troubleshooting
- Upsize / Downsize Conversions
- Thermoplastic / Thermoset Conversions
- Preventative Maintenance
- MRO Inventory Control.

**More Than
1,000
Barrels & Screws
IN STOCK!**



New Barrels...continued

DELIVERY

With our huge selection of barrels and screws, we will likely have what you need **IN STOCK**. If we have it in our inventory, we will ship it the same day. If we don't have what you need, we can build it for you in very little time. And when expediting is required, we can ship your new screw or barrel in just two weeks or less.

QUALITY CRAFTSMANSHIP

At Services For Plastics, Inc., we believe there's nothing more important than getting it right the first time! That's why our team of engineering experts does whatever it takes to design the best barrel or screw to match your application.

Once the design is complete, our barrels and screws are precision built to provide you with the highest level of quality and performance possible. Each barrel and screw is then quality inspected for dimensional accuracy, straightness, and surface finishing.

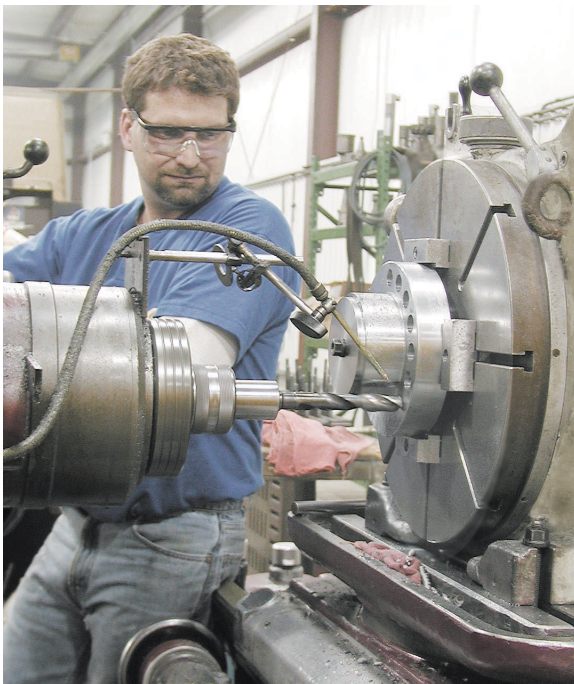


QUICK QUOTES

To save time when requesting a quotation, you can now request a quote on-line. Simply visit our website at www.servicesforplastics.com. Click "REQUEST A QUOTE." We'll expedite your request and have a price to you within 24 hours. It's convenient, quick and simple to use.

OUR GUARANTEE

We guarantee our barrels and screws to be free of defective materials and workmanship for 90 days (industry standard). Extended life warranties are available on some materials.



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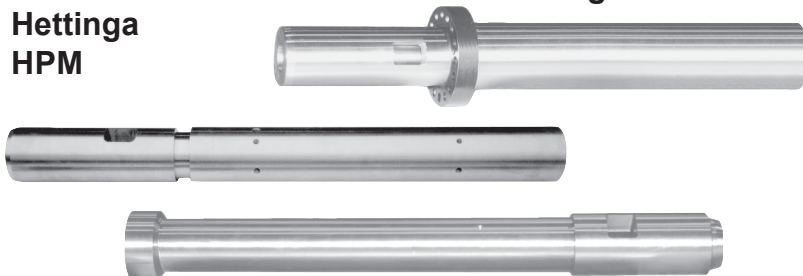


New Barrels - Injection

The following list represents a listing of the most popular brands we offer. We have thousands of prints on all of the major molding machines in North America. Call us today for a quote on your next barrel!

Injection Molding

Arburg	Hull	Nissei
Autojector	Husky	Nissin
Battenfeld	Illinois Precision	Pentaject
Beloit	Impco	Presma
Bernex	Jaco	Promax
Bipel	Johns	Pyramid
Boston Matthews	Jomar	Rabit
Boy	JSW	Reed Prentice
Bucher	Kawaguchi	Rutil
Chen Hsong	Kenplas	Sandretto
Chuan Lih Fa	Klockner Ferromatik	Seiko
Cincinnati	Klockner Windsor	Shinwa Seiki
Cincinnati ACT	Krauss-Maffei	Sodick
Cincinnati Roboshot	Kuasy	Stokes
Cincinnati Vista	Lester	Stork
Cincinnati Vista Sentry	Lombard	Stubbe
Demag	Maplan	Sumitomo
Desma	Martinand	Tien Fa
Dima	McNeil	TMC
Dong Shin	Meiki	Toshiba
Egan	Metalmec	Toyo
Engel	Mini-jector	Triulzi
Farrel	MIR	Trubor
Fellows	Mitsubishi	Trueblood
Ferromatik	Moslo	UBE
Fortune	Multiplas	Van Dorn
Fu Chun Shin	Nan Rong Mechanical	Van Dorn / Demag
Gloenco	Natco	Vistar
Gloucester	Negri Bossi	Wabash MPI
Gluco	Netstal	Welltec
Goldstar	New Britain	Whittman
Haitian	Newbury	Willert
Hemscheidt	Niigata	Windsor
Hettinga		YCI - Supermax
HPM		



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New Barrels - Blow Molding, Extrusion, Thermoset Injection

**Over 1,000
Barrels and Screws
IN STOCK!**



Blow Molding

Aoki
Araham
Baker Perkins
Battenfeld
Bekum
Cincinnati
Cullum
FHB
Fischer
Frontier
Gerosa
Graham Engineering
Hardig
Hayssen
Husky
Hycon
Impco
Jomar
Kautex
Krupp
Magic
Milacron
Moretti
Nissei
NRM
Parker
Rocheleau
Sidel
Sterling
Techne
Teng Chin
Uniloy

Extrusion

Akron	Deltaplast	Prism
Al-be	Dong Shin	Prodex
American Leistritz	Dorstner	Rainville
American Maplan	Egan	Reifenhauser
Baker Perkins (APV)	Eisenbeiss	Rocheleau
Barmag	Entwistle	Royle
Battenfeld	Farrel	Sacmi
Beloit	Flender	Sterling
Berlyn	Gatto	Theysohn
Bernex	Gloucester	Toshiba
Berstroff	Hansen	Trident
Betol	Hardig	Uniloy
Billion	HPM	Wayne
Boston Matthews	Ikegar	Welding Engineers
Brabender	Johnson	Welex
Brabor	JSW	Werner & Pflieder
Brampton	Killion	
Bucher	Krauss Maffei	
Century Extrusion	Leistritz	
Cincinnati Milacron	LMP Impianti	
Conair	LWB	
Coperion	Maplan American	
Cosomoplast	Maris	
Crowne	McNeil	
Custom	Merritt Davis	
Davis Standard	NRM	

Thermoset Injection

Bipel
Bucher
New Britain

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Heat-Treated Steel Barrels

D-2 Tool Steel

Our most popular D-2 Tool Steel sleeve has been very successful in most molding applications including moderate concentrations of glass or mineral filled materials. One of the most wear resistant of the conventional tool steels, it is alloyed with 12% chromium and 1% vanadium which form very hard carbides. This high percentage of chromium gives it mild corrosion resisting properties in the hardened condition. D-2 Tool Steel is thru-hardened to maximize its wear life.

CPM®-10V Tool Steel

Crucible's CPM®-10V Tool Steel has proven itself for most difficult molding applications such as continuous use of glass, mineral, ceramic, calcium, & metal filled plastic materials. This extremely wear resistant tool steel is manufactured by the particle metal-lurgy process which makes it possible to alloy a high percentage (9.75%) of vanadium, which forms the hardest of the tool steel carbides.

CPM®-15V Tool Steel

Crucible's CPM®-15V Tool Steel is the newest in the family of high vanadium, highly abrasion resistant CPM® tool steels. It contains 50% more hard vanadium carbides (14.5%) in its microstructure than CPM®-10V, to provide even higher wear resistance. CPM®-15V is intended for applications requiring exceptional wear resistance and where CPM®-10V is successful, but even longer life is desired.

CPM®-420V Stainless Steel

Crucible's CPM®-420V is a new stainless steel tool steel best suited for corrosion resistant applications. CPM®-420V is a higher performance upgrade for CPM®-440V. Corrosion resistance is significantly better than CPM®-440V, and wear resistance is about 25-50% better, due to the higher vanadium carbide content of the CPM®-420V (9% vanadium vs. 5.5-6% in CPM®-440V).

Bi-Metallic Barrels

Standard Bi-metal

Our standard wear resistant bi-metallic inlay is a nickel-boron based iron with a high hardness, martensitic structure in cementite matrix. It has excellent abrasion resistance and a low friction coefficient (0.07) for prevention of screw galling. It provides a service life of at least four times that of nitrided barrels, and a hardness range of Rockwell C58-65 (70°F). Recommended for use when abrasive materials are being processed.

Super Wear Bi-metal

Our super wear-resistant bi-metallic inlay is a high tungsten-carbide content alloy with a matrix of a chromium-boron-nickel alloy. Tungsten carbide provides the primary wear resistance with the high chromium boride-content matrix alloy providing additional wear and corrosion resistance. Super Wear Bi-metal has a macro hardness of Rockwell C62-68; however, over 80% volume of this alloy is occupied by tungsten carbides and chromium borides which show a micro hardness of over DPH 4000 (over Rc 70). It is the highest wear and corrosion-resistant alloy available for bi-metallic barrels. Super Wear Bi-metal is recommended for use where extremely abrasive and moderately corrosive conditions are encountered, or in custom shops where a machine is used to process several different kinds of material.

Corrosion-Resistant Bi-metal

Our corrosion-resistant bi-metallic inlay is a cobalt-nickel based alloy with high chromium and boron content for excellent corrosion resistance against hydrochloric and other acids. It has a dual-phase microstructure with complex borides that provide excellent wear resistance: over 10 times the service life of nitrided barrels in severely corrosive atmospheres. It has a typical hardness range of Rockwell C50-55. Recommended for use where severe corrosive conditions are encountered.

Super Wear & Corrosion Resistant Bi-metal (with 5-Year Wear Warranty)

Our New Super Wear & Corrosion Resistant inlay material for bi-metallic cylinders offers the highest degree of wear and corrosion resistance. It is recommended for the toughest and most demanding injection and extrusion processes. The inlay is a solid spherical tungsten-carbide combined with a chromium-boron-nickel matrix. The spherical tungsten carbide provides outstanding primary wear resistance allowing for a micro hardness of over DPH 4000 (too hard for Rockwell C scale measurement.) The chromium boride, along with the high chrome content, further enhances wear and corrosion resistance. The high density of solid spherical carbides makes the new inlay material the best choice for longest-lasting performance.

Super Wear/Corrosion Resistant -lined bi-metallic barrels are warranted against excessive wear: For a period of 5 years from date sold, Durocast™ barrels will not wear more than .010" [0.25 mm] (total) on the bore diameter. Call us for details on our exclusive 5-year limited warranty offer.

Super Wear-Resistant Steel

Why do I need Super Wear-Resistant Tool Steel?

Typically, OEMs use General Purpose Steels for their injection units. Most molders, however, are using a variety of resins which can quickly wear out the general purpose steels. As a result, these barrels and screws are not designed or capable of handling any type of abrasive resins for more than a couple of months.

For this reason, Services For Plastics, Inc. recommends that when you order a new machine, you also order a SFP Replacement High Abrasion-Resistant Injection Unit and use the General Purpose OEM Unit as a backup. Having this spare unit on the shelf will help ensure minimized downtime for your machine.

SFP specializes in the design and manufacturing of High-Performance, Wear-Resistant Barrels, Screws, and Tip Assemblies. Services For Plastics combines premium raw materials and uniquely designed surface treatments to create components which are extremely abrasion/wear-resistant. By changing the molecular structures in the steel composition, SFP has developed the most wear-resistant, robust and corrosion-resistant components available in today's industry. This technology, combined with accurate designs from SFP's experienced engineering design team, provide exceptional wearability and performance for even the most abrasive applications.



Thermoplastic / Thermoset Conversions

Many molders are entering into new frontiers for their perspective businesses. Molders used to be categorized as either thermoplastic or thermoset molders. With today's changing economy and competitive markets, it is necessary for molders to become more flexible in order to meet the demands of their customers.

SFP's Engineering Design Team can help you meet these challenges. Our team of full-time design engineers are experts in both thermoplastic and thermoset injection unit design. Unlike our competition, our staff is known for their design manufacture capabilities and guaranteed performance. So don't settle for less. Expect expert solutions from a company you can trust... Services For Plastics.



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Produce A Better Product and Save Money!



Does Your Injection Unit Provide You with the Correct Amount of Plastic Material? This is a difficult question for any molder to answer. However the following examples will help you determine if a Downsize / Upsize Conversion from Services For Plastics, Inc. could save you time and money.

Rule #1: The standard “rule-of-thumb” for an injection unit utilization is between 30% - 70% of the total stroke distance. If you are using less than 30% of the stroke distance, your residence time for the plastic may be too long. In addition, if using more than 70%, you may have to plasticize at too high of a rate over shearing material which will prematurely wear out the injection unit components. Here are some examples of these problems.

Downsizing Problem:

Ever had the problem that regardless of what you try, there is still degradation in your plastic resin? You have carefully measured the injection unit for material hang-ups, and you have even taken off the heater bands and thermocouples and qualified them. Yet nothing seems to be wrong. However, someone brings it to your attention that of the 8 inches of stroke available, the process requires only 1 inch of stroke to fill the mold. All of the material that is stored in the injection unit is subject to the heat energy of the barrel, which is referred to as residence time. When a plastic material is subject to heat energy for too long a period of time, it will degrade. Once degraded, there is little hope that this defect will go unnoticed. Even if the part design is able to hide this degradation, the plastic material has still lost the properties for which the material was originally selected.



S.F.P. Solution:

The only true solution to this problem is to downsize the injection unit. S.F.P. is able to help processors by re-designing the injection unit of the molding machine to produce less output. By reducing the amount of plastic contained within the injection unit, we are able to significantly lower residence time and eliminate the effects of degradation due to overexposure to heat energy.

Downsizing Example:

Services For Plastics engineered a 30-ounce, 400-Ton Van Dorn press in which the molder was only utilizing 6 ounces of unfilled ABS resin. The customer complained of continuing degradation being found in the part, which was in turn rejected by their customer. After exhausting all options on how to process around the problem, they finally turned to SFP for a solution. Services For Plastics worked with the customer to calculate the maximum residence time to eliminate the degradation in the ABS resin. This time was determined to be 3 minutes and 45 seconds. From there the SFP design engineering team went to work on the downsize. In five weeks from the conception of this project, the molder installed the new downsized injection unit onto the press. After stabilizing the process, and documenting the new process parameters, the results were clear, no degraded material appeared in any of the shots. After six months of continuous monitoring by the customer, they reported that no degraded material had been found in the parts for this period.

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How can SFP save you time and money? Before the downsizing of this machine, the customer had been required to sort and scrap on four separate occasions a total of 62,000 pieces of product. Over the two years the project had been online, this results in charge-backs, sorting labor, and lost production exceeding \$125,000. With the small amount of cost associated with the downsizing of this injection unit, they not only eliminated all future costs or sorting defective parts due to injection unit degradation, they also decrease their total PPM to the customer which enable them to win out on a new contract from that customer.

**SFP Can Save Your Company
Time and Money!**



Upsizing Problem:

Nothing is worse than setting up a mold in your injection press to find out that you have enough tonnage to clamp the tool, but the machine cannot produce enough plastic to fill the mold.



SFP Solution:

Typically, the only solution for processors would be to move the mold to another press that could supply the proper tonnage or outsource the project. With SFP's design engineering team in your corner, we offer another option.

In most cases, molding machine injection units can be engineered to increase the volume of plastic that is injected for every shot. Typically, an engineered solution can expect to yield up to 15% additional shot weight without having to replace screw drive motors or injection cylinders.

Upsizing Example:

The 41-ounce, 500-Ton Cincinnati Milacron press does not have enough material to fill, pack and hold your eight-cavity mold and runner system that required 48 ounces. Generally, there are no other options than to put this mold into an even larger press even when the additional tonnage is not needed.

Services For Plastics can take your existing injection unit and rebuild it to oversize specifications that will increase the shot size to produce slightly over 48 ounces in every shot. **Quality, Service and Experience. This is the Services For Plastics, Inc. Advantage!**

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quickQUOTE

www.servicesforplastics.com

**Get A Quote in
24 Hours or Less**

Barrel Reconditioning



Reconditioning Services:

In most cases, barrels can be resleeved at a considerable cost savings over replacement. Most standard resleeving can be estimated over the telephone; however, phone estimates are not firm until an inspection has been completed. Standard resleeving consists of measuring the barrel, determining length of sleeve necessary to return to OEM specifications, machining out the old liner, resleeving with the desired material, tapping all threads, and polishing. You will be contacted with a firm price, and **no work will be performed without your approval**. *There is NO CHARGE for inspection*. Depending on your application, your barrel can be resleeved with one of the following liners:

D-2 Tool Steel

Our most popular D-2 Tool Steel sleeve has been very successful in most molding applications including moderate concentrations of glass or mineral filled materials. One of the most wear resistant of the conventional tool steels, it is alloyed with 12% chromium and 1% vanadium which form very hard carbides. This high percentage of chromium gives it mild corrosion resisting properties in the hardened condition. D-2 Tool Steel is thru-hardened to maximize its wear life.

CPM®-10V Tool Steel

Crucible's CPM®-10V Tool Steel has proven itself for most difficult molding applications such as continuous use of glass, mineral, ceramic, calcium, & metal filled plastic materials. This extremely wear resistant tool steel is manufactured by the particle metallurgy process which makes it possible to alloy a high percentage (9.75%) of vanadium, which forms the hardest of the tool steel carbides.

CPM®-15V Tool Steel

Crucible's CPM®-15V Tool Steel is the newest in the family of high vanadium, highly abrasion resistant CPM® tool steels. It contains 50% more hard vanadium carbides (14.5%) in its microstructure than CPM®-10V, to provide even higher wear resistance. CPM®-15V is intended for applications requiring exceptional wear resistance and where CPM®-10V is successful, but even longer life is desired.

CPM®-420V Stainless Steel

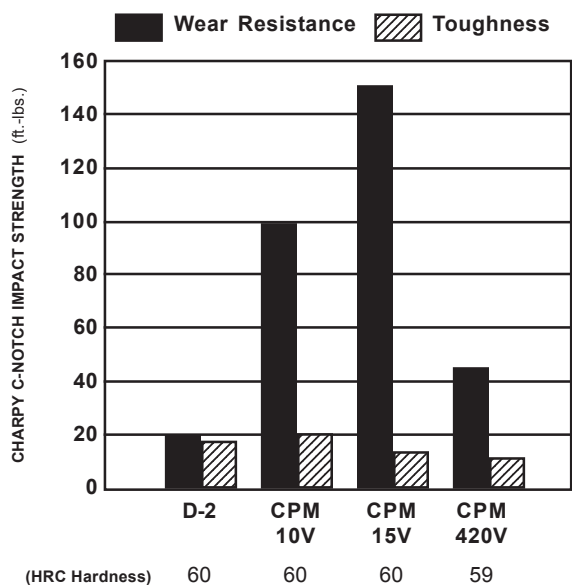
Crucible's CPM®-420V is a new stainless steel tool steel best suited for corrosion resistant applications. CPM®-420V is a higher performance upgrade for CPM®-440V. Corrosion resistance is significantly better than CPM®-440V, and wear resistance is about 25-50% better, due to the higher vanadium carbide content of the CPM®-420V (9% vanadium vs. 5.5-6% in CPM®-440V).

Other Services:

- We also repair bolt holes, threads, keyways, feed holes and ports.
- We specialize in super wear-resistant tool steel barrels, downsize/upsized conversions, and thermoplastic/thermoset conversions.
- We remove screws locked in barrels for a nominal fee. (A MSDS on the material being used when the machine seized MUST be supplied!)

See page 139 for additional information on sending parts to SFP for repair.

Steel Comparison Chart



Steel Hardness Chart

CORE	R _c	CASE	R _N
H-13 HT	44-46	NITRIDED	90 (61-63 Rc)
9-V HT	54-56	NITRIDED	90 (61-63 Rc)
420V	54-56		
17-4 PH SS	28-30		
D-2 HT	54-59	NITRIDED	90-93 (61-63 Rc)
CPM-10V HT	58-62		
CPM-15V HT	58-62		

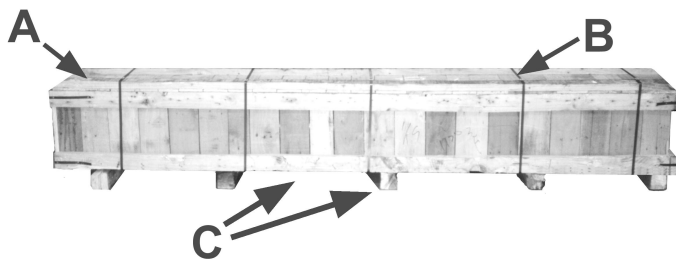
Incoming Freight Policy

Important Notes:

- To help prevent loss during shipping, please attach a copy of your packing slip to the part itself, as well as the outside of the box.
- SFP will hold parts sent in for inspection for a maximum period of six (6) months, after which the parts will be scrapped at our warehouse (unless prior arrangements have been made).
- Parts to be returned to you will be shipped freight collect.
- All incoming parts for rebuilding, repairs, etc. must be shipped to SFP **"Freight Prepaid"** in a strong, reusable container (see examples below). The Bill-of-Lading should be marked: MACHINERY PARTS, STEEL, CLASS 85, FREIGHT PREPAID. Smaller items weighing 70 pounds or less should be shipped via UPS Prepaid. In the event that items are received "Freight Collect", our Receiving Department must obtain approval prior to accepting the shipment. If the shipment is accepted, you will be billed for the freight plus a \$35.00 Processing Fee. SFP reserves the right to refuse the shipment. Terms for Freight Charges: Net 10 Days. A copy of the original freight bill will be sent with the invoice.
- If parts are received in a non-reusable container, SFP will build a crate to return the repaired parts, and the customer will be billed for the cost of the crate.

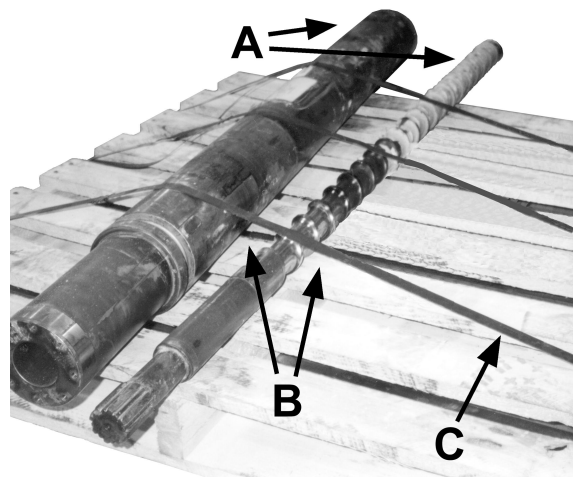
Examples of Packaging

Preferred



- A. Strong, reusable wood crate.
- B. Double secured with nails and banding.
- C. Built for moving with a fork truck.

Not Advised



- A. Parts hanging unsupported over edge of skid; potential damage.
- B. No supports to prevent parts from rolling into each other; potential damage.
- C. Banding not strong enough to hold parts immobile; potential loss of parts.

Barrel Resleeving Price List

D-2 Tool Steel

Our most popular D-2 Tool Steel sleeve has been very successful in most molding applications including moderate concentrations of glass or mineral filled materials. It is one of the most wear resistant of the conventional tool steels. Alloyed with 12% chromium and 1% vanadium which form very hard carbides. This high percentage of chromium gives it mild corrosion resisting properties in the hardened condition. D-2 Tool Steel is thru-hardened to maximize its wear life.



NOTE: Due to the fluctuation in steel prices, the following prices are for reference only. For current pricing, please call us for a quote.

D-2 BARREL RESLEEVE PRICE LIST

BARREL INSIDE DIAMETER	LENGTH OF SLEEVE																D-2 TOOL STEEL					
	5"	10"	15"	20"	25"	30"	35"	40"	45"	50"	55"	60"	65"	70"	75"	80"	85"					
.700-1.260" 18-31mm	<h1>Call for Pricing</h1> <h1>800-627-1033</h1>																					
1.261-1.760" 32-44mm																						
1.761-2.010" 45-51mm																						
2.011-2.260" 52-57mm																						
2.261-2.510" 58-63mm																						
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4.016-4.260" 103-107mm																						
4.261-4.510" 108-115mm																						
4.511-4.760" 116-121mm																						
4.761-5.015" 122-127mm																						
5.016-5.320" 128-135mm																						

Add 7% for nitriding of D-2 sleeves.

Maximum Capacity: 20" O.D. x 153" O.A.L.

Barrel Resleeving Price List...continued

Easy Instructions:

1. Ship all repair parts FREIGHT PREPAID in a strong, reusable container. Mark your Bill of Lading with the correct weight and "**Steel Machinery Parts, Class 85**". (NOTE: Freight companies will overcharge you if you don't complete the Bill of Lading accurately and completely.) Ship smaller barrels under 70# via UPS.
2. Upon complete inspection, you will be phoned with a firm cost of repair. A written quotation will be faxed and/or mailed.
3. After your approval to proceed, your barrel will be resleeved and returned to you in your original container. (Please note that delivery times will vary. Consult SFP for current lead times.)



D-2 BARREL RESLEEVEING PRICE LIST...continued

BARREL INSIDE DIAMETER	LENGTH OF SLEEVE										D-2 TOOL STEEL	MATERIAL FEED PORTS	VENT PORTS	PRESSURE PORTS	STRAIGHT- ENING
	90"	95"	100"	105"	110"	115"	120"	125"	130"	135"					
.700-1.260" 18-31mm	<h1>Call for Pricing</h1> <h1>800-627-1033</h1>														
1.261-1.760" 32-44mm															
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4.511-4.760" 116-121mm															
4.761-5.015" 122-127mm															
5.016-5.320" 128-135mm															

Add 7% for nitriding of D-2 sleeves.

Maximum Capacity: 20" O.D. x 153" O.A.L.

Barrel Resleeving Price List...continued

CPM®-10V Tool Steel

Our CPM®-10V Tool Steel has proved itself for most difficult molding applications such as continuous use of glass, mineral, ceramic, calcium, and metal filled plastic materials. This extremely wear resistant tool steel is manufactured by the particle metallurgy process which makes it possible to alloy a high percentage (9.75%) of vanadium, which forms the hardest of the tool steel carbides.



NOTE: Due to the fluctuation in steel prices, the following prices are for reference only. For current pricing, please call us for a quote.

CPM®-10V BARREL RESLEEVE PRICE LIST

BARREL INSIDE DIAMETER	LENGTH OF SLEEVE									CPM-10V TOOL STEEL							
	5"	10"	15"	20"	25"	30"	35"	40"	45"	50"	55"	60"	65"	70"	75"	80"	85"
.700-1.260" 18-31mm	<h1>Call for Pricing</h1> <h1>800-627-1033</h1>																
1.261-1.760" 32-44mm																	
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4.511-4.760" 116-121mm																	
4.761-5.015" 122-127mm																	
5.016-5.320" 128-135mm																	

Add 7% for nitriding of CPM®-10V sleeves.

Maximum Capacity: 20" O.D. x 153" O.A.L.



Barrel Resleeving Price List...continued

Easy Instructions:

1. Ship all repair parts FREIGHT PREPAID in a strong, reusable container. Mark your Bill of Lading with the correct weight and "**Steel Machinery Parts, Class 85**". (NOTE: Freight companies will overcharge you if you don't complete the Bill of Lading accurately and completely.) Ship smaller barrels under 70# via UPS.
2. Upon complete inspection, you will be phoned with a firm cost of repair. A written quotation will be faxed and/or mailed.
3. After your approval to proceed, your barrel will be resleeved and returned to you in your original container. (Please note that delivery times will vary. Consult SFP for current lead times.)



CPM®-10V BARREL RESLEEVE PRICE LIST...continued

BARREL INSIDE DIAMETER	LENGTH OF SLEEVE					CPM-10V TOOL STEEL					MATERIAL FEED PORTS	VENT PORTS	PRESSURE PORTS	STRAIGHT- ENING	
	90"	95"	100"	105"	110"	115"	120"	125"	130"	135"					
.700-1.260" 18-31mm	<h1>Call for Pricing</h1> <h1>800-627-1033</h1>														
1.261-1.760" 32-44mm															
1.761-2.010" 45-51mm															
2.011-2.260" 52-57mm															
2.261-2.510" 58-63mm															
2.511-2.760" 64-70mm															
2.761-3.010" 71-76mm															
3.011-3.260" 77-83mm															
3.261-3.510" 84-88mm															
3.511-3.760" 89-95mm															
3.761-4.015" 96-102mm															
4.016-4.260" 103-107mm															
4.261-4.510" 108-115mm															
4.511-4.760" 116-121mm															
4.761-5.015" 122-127mm															
5.016-5.320" 128-135mm															

Add 7% for nitriding of CPM®-10V sleeves.

Maximum Capacity: 20" O.D. x 153" O.A.L.

Barrel Resleeving Price List...continued



CPM®-15V Tool Steel

Crucible's CPM®-15V Tool Steel is the newest in the family of high vanadium, highly abrasion resistant CPM® tool steels. It contains 50% more hard vanadium carbides (14.5%) in its microstructure than CPM®-10V, to provide even higher wear resistance. CPM®-15V is intended for applications requiring exceptional wear resistance and where CPM®-10V is successful, but even longer life is desired.

CPM®-420V Stainless Steel

Crucible's CPM®-420V is a new stainless steel tool steel best suited for corrosion resistant applications. CPM®-420V is a higher performance upgrade for CPM®-440V. Corrosion resistance is significantly better than CPM®-440V, and wear resistance is about 25-50% better, due to the higher vanadium carbide content of the CPM®-420V (9% vanadium vs. 5.5-6% in CPM®-440V).

NOTE: Due to the fluctuation in steel prices, the following prices are for reference only. For current pricing, please call us for a quote.

CPM®-15V & CPM®-420V BARREL RESLEEVE PRICE LIST

BARREL INSIDE DIAMETER	LENGTH OF SLEEVE									CPM-15V TOOL STEEL							
	5"	10"	15"	20"	25"	30"	35"	40"	45"	50"	55"	60"	65"	70"	75"	80"	85"
.700-1.260" 18-31mm	<h1>Call for Pricing</h1> <h1>800-627-1033</h1>																
1.261-1.760" 32-44mm																	
1.761-2.010" 45-51mm																	
2.011-2.260" 52-57mm																	
2.261-2.510" 58-63mm																	
2.511-2.760" 64-70mm																	
2.761-3.010" 71-76mm																	
3.011-3.260" 77-83mm																	
3.261-3.510" 84-88mm																	
3.511-3.760" 89-95mm																	
3.761-4.015" 96-102mm																	

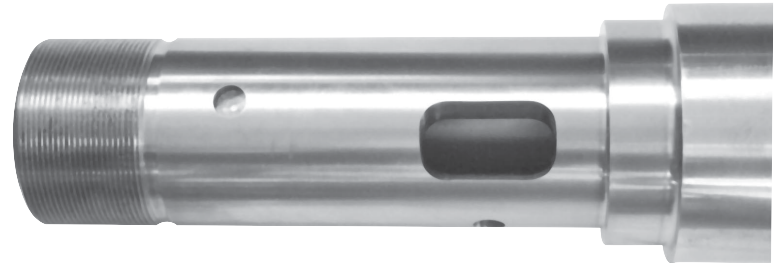
Add 7% for nitriding of CPM®-15V sleeves.

Maximum Capacity: 20" O.D. x 153" O.A.L.

Barrel Resleeving Price List...continued

Easy Instructions:

1. Ship all repair parts FREIGHT PREPAID in a strong, reusable container. Mark your Bill of Lading with the correct weight and "**Steel Machinery Parts, Class 85**". (NOTE: Freight companies will overcharge you if you don't complete the Bill of Lading accurately and completely.) Ship smaller barrels under 70# via UPS.
2. Upon complete inspection, you will be phoned with a firm cost of repair. A written quotation will be faxed and/or mailed.
3. After your approval to proceed, your barrel will be resleeved and returned to you in your original container. (Please note that delivery times will vary. Consult SFP for current lead times.)



CPM®-15V & CPM®-420V BARREL RESLEEVE PRICE LIST...continued

BARREL INSIDE DIAMETER	LENGTH OF SLEEVE										MATERIAL FEED PORTS	VENT PORTS	PRESSURE PORTS	STRAIGHT- ENING
	90"	95"	100"	105"	110"	115"	120"	125"	130"	135"				
.700-1.260" 18-31mm	<h1>Call for Pricing 800-627-1033</h1>													
1.261-1.760" 32-44mm														
1.761-2.010" 45-51mm														
2.011-2.260" 52-57mm														
2.261-2.510" 58-63mm														
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2.761-3.010" 71-76mm														
3.011-3.260" 77-83mm														
3.261-3.510" 84-88mm														
3.511-3.760" 89-95mm														
3.761-4.015" 96-102mm														

Add 7% for nitriding of CPM®-15V sleeves.

Maximum Capacity: 20" O.D. x 153" O.A.L.