

JGS PRECISION

"The Reamer People" Cutting Tools and Accessories



Celebrating Over 40 Years
of Quality Tool Manufacturing

JGS, From the Beginning....

JGS Precision Tool Mfg, LLC started as Jim's Gun Shop in 1954 in the basement of my home by my Dad, Jim Cuthbert. Before starting the gun shop he learned gunsmithing in WWII while serving in the Navy.

I grew up working with my Dad in the sales and shipping side of the business. I married Ken Humbert in 1974. Ken is a journeyman machinist and worked along side of my Dad learning gunsmithing in the evenings and weekends. The custom manufacturing of reamers and tooling began in 1979 when my Dad and husband joined their talents and expanded the business. They knew not only how to manufacture the tooling but how use it as well. Ken has over 10 years of gunsmithing experience with the gun shop. Jim's Gun Shop was sold when the tooling side grew and we did not want to compete with our customers.

My dad set out to make only high quality tools he wanted to use. With modern technology and long term employees, the tool quality has continued to advance. We guarantee all of our dimensions to be to the tolerances we set.

To this day, JGS continues dad's high quality standards in all of our expansions in fabrication and automotive lines. Our job shop line is lead by Ken's brother David Humbert. Our Turbo/Fabrication line is lead by our son Lance Humbert. Today we are a small family owned business.

Thus "JGS", from the beginning, came from Jim's Gun Shop.

Thank you for sharing my story of a Dad and his family,

Becky Humbert
Chief Financial Officer

High Quality Chamber Reamers Available In High Speed Steel & Carbide



JGS LIVE PILOT CHAMBER REAMERS

Finish reamers are precisely ground to cut minimum chambers. These tools are manufactured to minimum chamber $+0.0005$. All tolerances are within SAAMI, CIP or JGS tools standards.

Semi-Finish reamers are manufactured $-0.0035/0.004$ under minimum chamber.

Roughers are manufactured $-0.0095/0.010$ under minimum chamber, on body shoulder & neck.

Resizers are manufactured $-0.0035/0.004$ on body and -0.012 on neck with no throat. Special resize neck diameters available upon request.

Options

(Must be requested at the time of order)

Oil grooves can be added to any of our high speed steel stocked 6mm and larger tools. On highspeed steel tools, we groove the screw head for oil flow.

Bushings are installed on our reamers in the nominal size for each caliber. If you need a different size to accommodate your bore, let us know.

**** All reamers are fully guaranteed to meet print dimensions and tolerances.
See warranty & return policy for more details.**

HEADSPACE GAUGES

Rimmed



Body



Shotgun



Go, no go and field gauges available for any caliber.
Custom gauge sets also available upon request.

BUSHINGS

Standard and oil grooved bushings interchange throughout our entire reamer and form tool line. Oil grooved bushings allow for coolant to be flushed through the barrel while chambering. Bushing adapters available to allow larger bushings to fit on smaller tooling when needed.

Standard Bushings

Oil Grooved Bushings



Bushing Sets

Set of 9 for one caliber would consist of one nominal size, four sizes above and below in increments of .0002

For example the 30 Cal set consists of:

.2988, .2990, .2992, .2994,
2996, .2998, .3000, .3002, .3004

Custom bushings are available upon request

BODY ROUGHING REAMERS

Body roughers (aka core drills) are stocked in live pilot but can also be special ordered in solid pilot. They are -.010 smaller on the body from minimum chamber, cutting shoulder angle down to bore. Manufactured in both spiral and straight flute.

Spiral Flute



Straight Flute



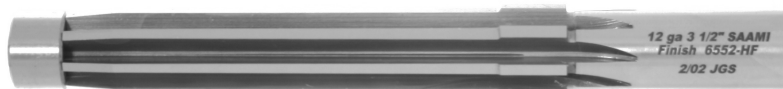
OTHER CUSTOM TOOLS

(may require backorder-contact us for more info)

- Throaters
- Neck and Throaters
- Rifle Indicator Rods Available in 4" length
- Gunsmithing Taps
- T-Handle

SHOTGUN TOOLING

Finish Chamber



Piloted with integral rim-counterbores to cut an entire chamber form

Available in 410, 28, 20, 16, and 12 gauge

WILDCAT DEVELOPMENT

JGS will be happy to provide assistance in the development of your wildcat design. You submit dimensions, or, a better option is to provide us with a sample round with your chose bullet seated in a case where you want it to touch the lands. We will then draw a print based on the sample and send to you for final approval.

You can submit dimensions or, the preferred option, send a seated bullet with the choice of your bullet/brass combination. This allows us to accurately measure where you want the bullet to touch the lands, and your freebore and neck dimensions. Within 2 to 3 business days you can expect to receive a print based on your sample to be emailed for revisions and/or final approval.

Blank Rimless Print Example

| REVISIONS | | | |
|-----------|-------------|------|----------|
| LTR | DESCRIPTION | DATE | APPROVED |
| | | | |
| | | | |

DIAMETERS

PILOT LENGTH

PILOT SIZE

CALIBER

BORE SIZE

GROOVE SIZE

BASIC BRASS

RESIZE N.D.

| | | | | | |
|---|---------|---|------------------|-----------------------|---|
| DESIGNER | LENGTHS | JGS CDDS BAY, OR USA 97420 | SIZE A | DWN. DATE 03/13/18 | RIMLESS OR REBATED RIFLE MINIMUM CHAMBER |
| NAME <input type="text"/> | | | SCALE NONE | PRINT # | |
| PHONE (<input type="text"/>) <input type="text"/> | | | | | |

BORE REAMERS



OPTIONS AVAILABLE

(Must be requested at the time of order)

Oil Grooves (fluting through shanks for oil flow)
High Speed Steel or Carbide
Pull or Push Style
Straight or Tapered Shank

TAPERED SHANK BORE REAMERS

This type of shank allows you to install the reamers by tapered shank mount. The rods are reamed by our tapered reamer, then press fitted within .150-.200 short of the shoulder or stop position. This gives a .0015 to .0020 press fit. This results in a very good alignment and allows the reamer to be mounted into a rod without using silver solder and no heat.

Press fitting advantages

Cut down on tail whipping
Not having to straighten after installation
Ability to install tools at your facility rather than receive them pre-installed
Tapered reamers to ream your rods are currently offered in a variety of sizes

Avoids silver solder problems

Over heating when silver soldering can cause premature tool breakage and warping
Without silver solder you will have better oil flow and alignment creating better finish
Makes it easier to protect the center on the shank end allowing for resharpening or re-sizing without problems
Less lap time on the bores if you lap your bores

Removing Methods

1. Inserting a rod and driving the reamer out
2. Using hard downward pressure and warming the tube to cause the reamer to release

History of Press fitting

This method has been used by major manufacturers for over 100 years
We currently have several customers that are reaming 30 cal barrels at 6" per minute and more with no problems

FORM TOOLING

96 Deg Counterbore



Designed to cut the feed cone in 1903 Springfield, 1917 Enfield & pre '64 Model 70 Win

Available in four sizes: #0 (17/20 cal), #1 (22 to 6mm), #2 (25 to 7mm), #3 (30 to 45)

130 Deg Counterbore



Designed to cut the feed cone for 705 Rem bolt replacement with angular heads

Available in four sizes: #0 (17/20 cal), #1 (22 to 6mm), #2 (25 to 7mm), #3 (30 to 45)

705 Counterbore



A real time saver for the precise craftsman

Available in four sizes: #0 (17/20 cal), #1 (22 to 6mm), #2 (25 to 7mm), #3 (30 to 45)

Muzzle Crown



A good crown can be generated parallel to the axis of the barrel
Available with radius or 158 deg. (11 deg. dish)

Available in five sizes: #0 (17/20 cal), #1 (22 to 6mm), #2 (25 to 7mm), #3 (30), #4 (35 to 45)

Center Reamer



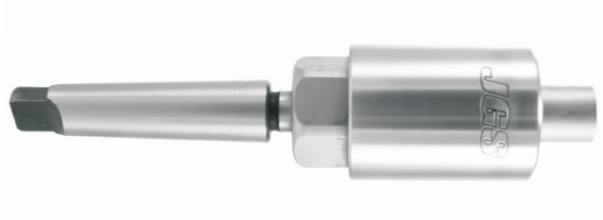
Used to establish a center in barrel blanks from the rotary pilot inserted into the bore so that the barrel can be centered properly and turned concentric with the bore.

Available in five sizes: #0 17/20 cal, #1 (22 to 6mm),
#2 (25 to 7mm), #3 (30 to 45), #4 (50 cal.)

FLOATING REAMER HOLDERS

The small floating reamer holder accommodates reamers with 7/16" diameter shanks. The rear of the holder has a female 33 Jacobs to use "off-the-shelf" shanks just as the Jacobs chucks use. To adapt to your lathe, we stock #1-#4 J33 Morris Tapers. Please tell us what size you need when ordering (no charge with a reamer holder purchase). Straight arbors are also available in sizes: 1/2", 5/8", 3/4" and 1".

2" SMALL HOLDER



SMALL HOLDER W/CHUCK (adjustable from 1/16" to 1/2")



7/16" and 1/2" shank adapter option available to replace the use of the chuck.

LARGE HOLDER

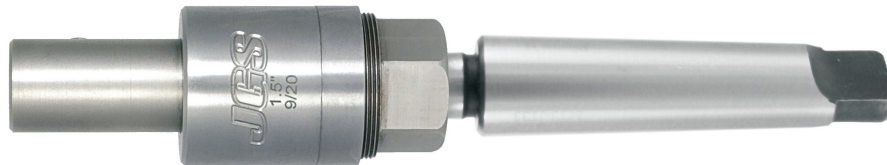
The large holder is used to chamber 50 BMG, shotgun and larger calibers. It comes standard with #3 Morris Taper installed and accepts 3/4" shank tools. Other shank options and oil through passage available upon request.



1-1/2" FLOATING REAMER HOLDER

The new designs were developed to meet customer demands for a smaller design and give more clearance to work better in CNC Machines. The new innovative drive shaft eliminates 'push out' when it comes under tool load, unlike the side plates and ball bearings in previous floating reamer holders. The seal area was redesigned to allow more free floating. It has two thrust bearings, front and back, to create a better alignment to hold the reamer in horizontal alignment with the spindle. The outside housing and lock ring design to allow for easier adjustments. Standard runout from center is .020

1-1/2" Holder



Accommodates reamers with 7/16" diameter shanks, has female 33 Jacobs on the rear and comes with your choice of #1-#4 J33 Morse Tapers.

1-1/2" Holder with option of 1/2" or 3/4" Built-in Arbor



Accommodate reamers with 7/16" diameter shanks

TERMS & CONDITIONS



TERMS OF SALE:

- *Any variation from standard dimensions is considered a special
- *International orders processed upon receipt of payment (US\$) or credit card
- *Returns are subject to our inspection and approval prior to credit
- *Special orders are not returnable
- *All tooling supplied is manufactured to highest industry standards. No claim to service or tool life is specified or implied
- *All sales FOB our plant
- *All sales must be paid in full prior to shipment unless on established open account or credit card. **NEW** accounts can be sent COD or paid by credit card.
- ***Net 30 (open account status) established upon approved credit application**

RECONDITIONING SERVICES

Reconditioning service for our reamers is offered for our customer's convenience. Slightly dull reamers can be hand stoned by our quality control department, usually for a minimum charge. If a reamer is found to be beyond this minimum service, but still usable, we offer a full sharpening service.

WARRANTY & RETURN POLICY

All JGS tools are fully guaranteed for craftsmanship and accuracy.

90 day limit on returns

No returns on custom tooling that meet print dimensions and tolerances

OVERTIME RATES

Call for expedite service rates and availability

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