

HH Roberts



The standard R-8 head mounted on an old Bridgeport.

**Gearless / Diskless
Replacement Heads for
Bridgeport type mills, including
most Taiwan clones.**

4 1/2 Hp. to 6,000 rpm.

R-8, # 30 or # 40 tapers.

Only 3 moving parts in the top half:
- one belt and 2 pulleys.

Over 90% mechanical efficiency delivers
almost all the power to the cutter.

80 to 6,000 rpm. variable speed.

Fast reversal for tapping, even on single phase
power.

With the optional Cat-V 40 spindle you can use
your # 40 taper machining center
tooling on this head, on your Bridgeport type
mill.

The mechanical loss of a 3 Hp vari-disc drive
puts only about 2 Hp on the cutter. With this
simple efficient vector drive over 90% of the
motor power is delivered to the cutter. The # 40
taper drive dogs will not shear like the little set
screw that drives an R-8 collet. Carbide face
milling is a reality.

Now with American made Yas-
kawa spindle drives !

STOP

spending time and money rebuilding your heads every few years!



The controls are laid out to be instinctive for an experienced user. The forward / stop / reverse is on the left, The speed control is on the right. The speed knob is internally geared to allow easy setting of the speed. Speeds can be quickly and accurately set to within about 10 RPM.

These heads were originally developed for our own line of CNC machines. They are available for program controlled operation (10 Volt) without the manual controls.



The # 40 taper spindle with a Cat-40 face mill and the power draw bar.

This spindle has larger bearings than the R-8 spindle

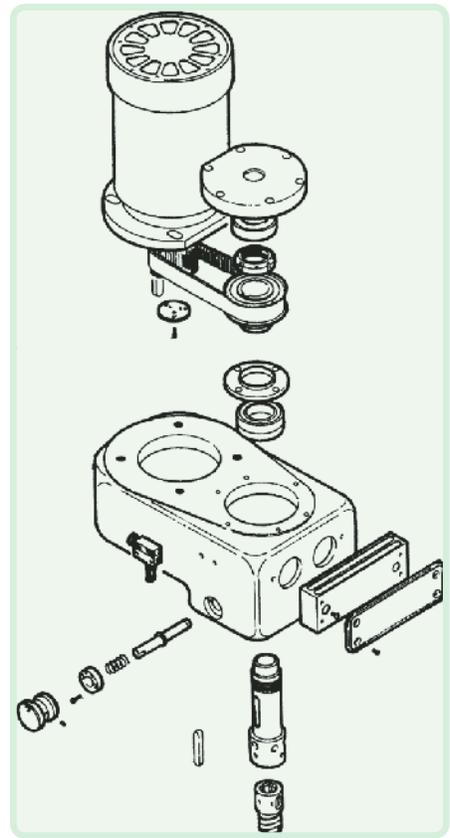
The head on the front cover has the standard R-8 spindle



A typical Cat-V-40 collet chuck with the pull stud removed and our drawbar adapter and drawbar fitted. The adapter is shown separately to the right.

What's in the box:

- complete new head with R-8, # 30, # 40 or Erikson spindle nose according to model.
- one draw bar
- new inverter motor rated for 7200 rpm. with cooling fan and built in brake resistor.
Output :
 - Continuous 3 Hp
 - 30 minutes 4 1/2 Hp
- Yaskawa American made drive with UL / CSA approved overload, under-volt and no-voltage protection.
- speed ranges: two selectable by shifting the belt on the motor pulley 75 - 6000 rpm. with full horsepower is available from 350 rpm., or 50 to 4000 for higher torque at slow speeds.
- mounted control box with :
 - forward / stop / reverse selector
 - large LED speed display
 - speed select thumbwheel, geared to allow precise speed setting to within 10 rpm.
- 3 speed geared quill feed, reversing.
- quill stop with single nut quick positioning setting.
- upper head housing is cast iron to add increased mass giving smoother operation. The motor is much heavier than a standard motor so the complete head is about double the weight.
- fully wired and ready to connect to your mains. You may wish to add a disconnect to the back of the machine to shut down at night or when not in service.
- It will run on 208 to 240 V, 3 phase power or 220/1/60 power without modification. It will not run on "wild leg" power without an isolating transformer.



It can't get much simpler than this.

- motor shaft and pulley
- belt
- spindle hub and spindle

That's about 85 fewer parts than a typical vari-disk type head.

It's so reliable that we guarantee the spindle drive mechanism for 3 years.



The optional # 40 taper spindle. # 30 and Erikson spindles can also be supplied.



The optional # 30 and Erikson-30 spindles have a 4 bearing

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Model	Nose	Drive Output	Standard Speeds	High Torque Speeds	Quill Diameter
4-GL-1	R-8	4 1/2 Hp	80 - 6,000 rpm	65 to 4,000 rpm	3 3/8"
4-GL-2	#30				
4-GL-4	Cat-V-40				
4-GL-5	BT-40				
4-GL-6	NMTBA-40				
The Heads below fit our current HH Roberts / Topwell mills. Fitting to old models or other builders machines may require modifications or adaptors.					
5-GL-1	NBTBA-40	7 1/2, 10 or 15 Hp	80 - 6,000 rpm	65 to 4,000 rpm	4.11"
5-GL-2	Cat-V-40				
5-GL-3	BT-40				

These heads require EITHER good balanced 3 wire plus ground 208-230/3/60 power OR 220/1/60. There is virtually no power loss on single phase.

Options:

- higher power spindle Yaskawa drive for faster stop/start and more torque.
- switch to mount on the rear of the machine to shut down the head. (The cooling fan runs continuously)
- CNC tooling adaptors. These replace the pull studs in your Cat or BT 30 or 40 tools to facilitate tool clamping with the 3/8" drawbar that fits through the spindle.
- power draw bars.

The vector drives deliver full Hp from about 325 rpm with the 6,000 RPM range. The vector drive is fully self contained within the head. The head has a continuous running cooling fan (like CNC spindle drives) The heads have standard quill feeds through 3 speed gear drive. Proven Reliability. We have used these heads for 5 years on our CNC machines and sold hundreds of replacements for other machines. The head drive can be controlled by most popular CNC systems.

Our products are continuously developing and specifications change frequently. It is suggested that you reconfirm any critical specifications at the time of order.

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