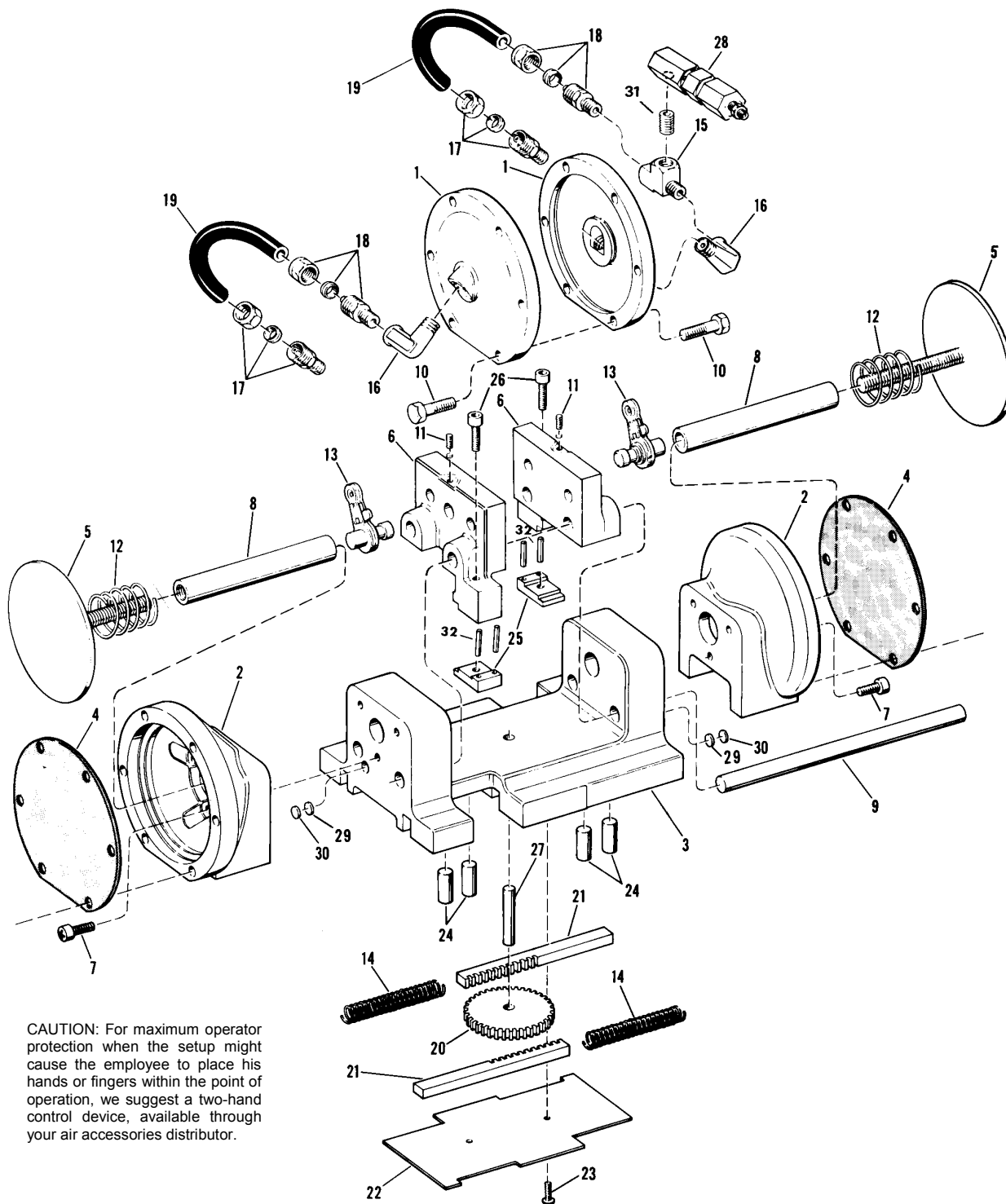


heinrich

# SELF-CENTERING VISE



**CAUTION:** For maximum operator protection when the setup might cause the employee to place his hands or fingers within the point of operation, we suggest a two-hand control device, available through your air accessories distributor.

**OPERATION:**

Connect one of the two identical hoses to the adapter on the vise and to the side fitting on the three-way valve, marked "OUT." Connect the other hose to the end adapter on the valve marked "IN" and to the air supply line.

Heinrich air units can be used safely on air supply lines with pressures up to 120 psi.

The range of holding power can be controlled by installing an Air Regulator between the air supply line and the four-way valve. While all operating parts are protected from oils, coolants, chips, etc., the (Cont. on next page)

## ... single-acting cylinders

### MODEL 2200

Index No.	Part Name	Part Number	Price
1	Cylinder Head (2 required)	33-1	\$36.30
2	Cylinder Body (2 required)	33-2	48.40
3	Body Casting (Note 1)	2200-3	--
4	Diaphragm (2 required)	33-4	16.70
5	Piston Head, with Adjusting Screw (2 required)	33-5	30.49
6	Jaw Casting (2 required) --	2200-7	92.26
7	5/16-18 x 3/4 Screw (6 required)	33-8	0.87
8	Center Bar Nut (2 required)	33-13	24.68
9	Guide Bar (2 required)	44-14	13.61
10	5/16-18 x 7/8 Screw (12 required)	33-17	0.94
11	1/4-28 x 5/8" Screw, with locking slug (2 required)	33-18	2.61
12	Cylinder Spring (2 required)	33-24	21.78
13	Ratchet Assembly (2 required)	33-25	24.68
14	Spring (2 required)	2200-28	10.16
15	Tee	2200-32	18.88
16	Elbow (2 required)	2200-33	4.72
17	1/8" Fitting for Hose (2 required)	2200-34	15.54
18	1/4" Fitting for Hose (2 required)	2200-35	13.79
19	Flexible Hose -- 7" (2 required)	2200-37	13.07
20	Gear	2200-21	116.16
21	Rack (2 required)	2200-40	42.11
22	Cover Plate	2200-23	18.88
23	1/4-20 x 1/2 Screws (2 required)	2200-42	0.87
24	Rack Stops (4 required)	2200-43	2.03
25	Rack Locking Plate (2 required)	2200-44	24.68
26	5/16-18 x 2-1/4 Screw (2 required)	2200-45	1.60
27	Gear Pin	2200-20	4.36
28	Quick Exhaust Valve	37	--
29	Poppet (2 required)	34-4	1.45
30	Brass Slug (2 required)	34-6	0.87
30	1/4" Close Nipple	2200-36	3.63
32	Rack Rollpin (4 required)	4CL-6	1.02

**Note 1:** Price not shown, as replacement body castings are not available.

Recommended spare parts to be retained in stock at all times to support each unit in service: (Index (4) Diaphragm).

### WHEN ORDERING PARTS, INDICATE PART NUMBER, MODEL NUMBER AND PRICE.

(Cont. from prev. page) **air cylinder and controls could be damaged by foreign matter in the air line. This can be prevented by using an Air Filter, between the air supply and the air regulator and/or control valve. A Combination Filter-Regulator may be used in place of the separate filter and regulator.**

To set up vise for operation, follow these instructions:

1. SHUT OFF AIR PRESSURE.
2. Loosen two set screws (11) on top of each movable jaw (6) and two socket cap screws (26). Allow just a slight amount of tension on the ratchet plug; then the ratchets will move freely to adjust the jaws to the desired opening. Allow minimum clearance to insert and remove part piece.
3. **Tighten two set screws (11) and two socket cap screws (26).**
4. Place workpiece in vise AS CLOSE AS POSSIBLE TO CENTER OF JAWS: apply air pressure; move **entire vise** to center work- piece.
5. Clamp vise to the work table. For maximum accuracy, clamp the vise to the table, at the **center** of the vise.

#### MAINTENANCE:

All operating parts, particularly the gear and rack mechanism in

the base should be kept free of foreign matter. Periodic greasing of operating parts is recommended.

Disassemble each air cylinder as follows: First, shut off the air supply; clamp the movable jaws tightly together with a C-Clamp (and do not remove until the cylinder head is securely replaced); then remove the six screws and cylinder head (1). Care should be taken in removal of the piston head with adjusting screw (5) because of the tension on the cylinder spring (12).

To remove ratchet (13) from the center bar nut (8), remove piston head with adjusting screw (5), insert 3/8" dia. x 2" long pin in center bar nut (8). Thread piston (5) into center bar nut (8) until ratchet is forced off from its press fit in the center bar nut. To remove ratchet (13) from jaw (6), remove set screw (11) from jaw (6), and tap or drill out slug (11).

Clean and check each part for wear or damage. Replacement parts are available for immediate shipment from factory stock, or you may order through your local Heinrich distributor.

After replacing diaphragm and cylinder head, screws should be evenly and firmly tightened.