

Laser Mount

P/N 8955

About the Sherline Laser Mount

Customers can now use their milling machine for laser engraving with the addition of the laser mount to our accessory line. Some of the primary uses for the laser are cutting gasket material for custom gaskets, engraving part numbers on tools and devices, and engraving pictures and logos.

The Sherline laser mount is installed on the column saddle of Sherline CNC milling machines in place of the headstock, motor, and speed control. The mounting design is the same as the headstock. The laser mount is easily mounted or removed by tightening or loosening the 5/16 set screw located on the side of the laser mount. The same headstock key is used to align the laser mount parallel to the column saddle.

The laser mount can hold several different lasers using locating-pins and the two laser mount hold-downs. The laser is pressed against the locating-pins. Then, the hold-downs are installed, and wing nuts are used to secure the hold-downs that attach the laser to the mount.

Laser Mount Parts List

Use the parts list for assembling your Laser Mount (see Figure 1).

REF. NO.	PART NO.	DESCRIPTION	NO. REQ.
1	89550	Laser Mount Base	1
2	89551	Laser Mount Hold-Down	2
3	301444	Laser Mount Hold-Down Stud (1/4-20 x 3")	4
3	301464	Alternate Laser Mount Hold-Down Stud (1/4-20 x 4")* (not shown)	4
4	89553	1/8" x 5/8" Hardened Steel Dowel Pins	2
5	11416	1/8" x 1-1/4" Hardened Steel Dowel Pins	2
6	89554	1/4-20 UNC Wing Nuts	4
7	40540	5/16-18 x 3/4" Cone Point Set Screw (not shown)	1
8	40260	Precision Ground Head Key (not shown)	1

*NOTE: The Hold-Down Stud that comes with this kit is P/N 301444 (1/4-20 x 3"). If someone buys this mount kit and they need longer hold-down studs, we have P/N 301464 as an alternative (1/4-20 x 4").

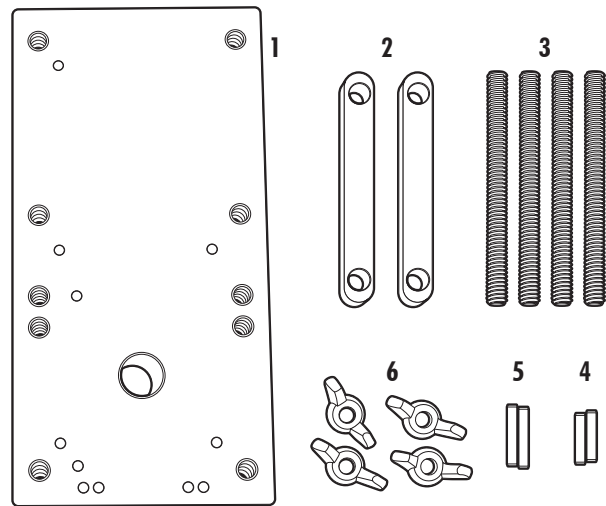


FIGURE 1—Parts list, #1-6 (parts 7 and 8 not shown).

Assembling the Laser Mount

1. There are several 1/8" "locating-pin holes" in the Laser Mount (see Figure 2). Two of the bottom holes and two of the side holes should work for most lasers in the size range that this mount was designed for. If you find that your laser needs different locating-pin holes, you can drill additional custom holes using your mill.

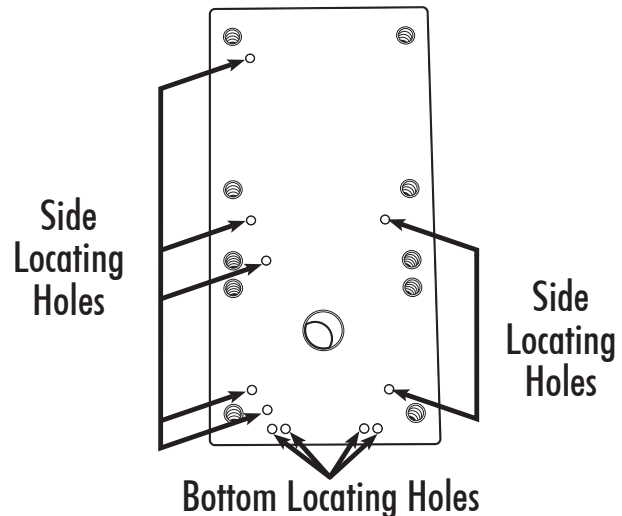


FIGURE 2—Locating pin holes.

- The Laser Mount comes with two, short locating-pins (P/N 89553) and two long locating-pins (P/N 11416). Insert the two, short locating-pins in two of the bottom holes (see Figure 3). These are the pins that the bottom of your laser will be located against. We will be using the two inner pin hole for the OPT Laser.

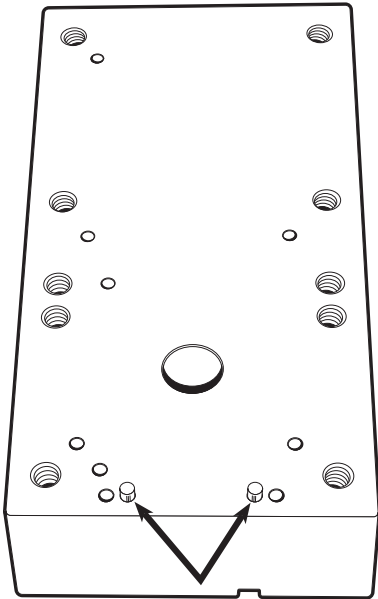


FIGURE 3—Short, bottom locating-pins (P/N 89553).

- Choose the two, side locating-pin holes that match your laser the best. For the OPT Laser, we will be using the two locating-pin holes on the right side. Insert the two longer pin in the side holes (see Figure 4).

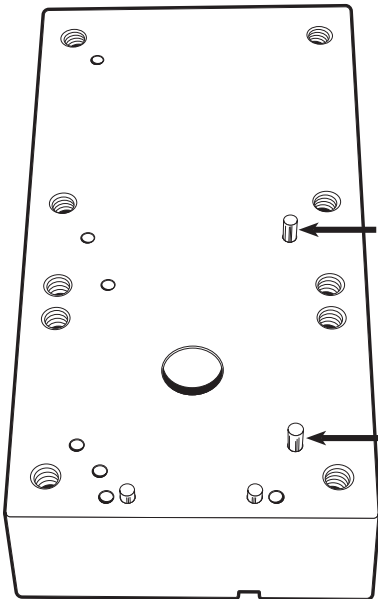


FIGURE 4—Long, side locating-pins (P/N 11416).

- Thread in the (4) laser mount hold-down studs (P/N 301444) into the stud holes that will secure the hold

downs (P/N 89551) over the best surface of your laser (see Figure 5). The hold downs will be tightened finger tight so they will not damage the laser. However, be sure that the hold downs do not interfere with air flow or electrical connections on the laser.

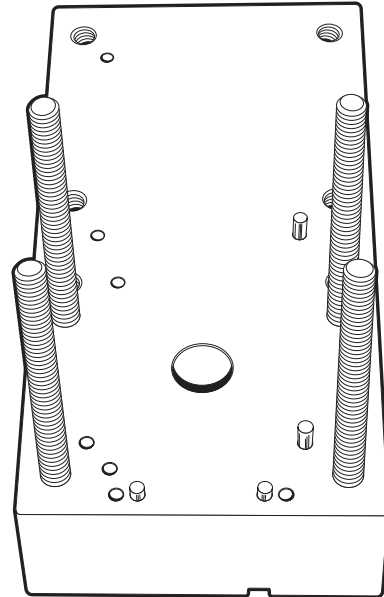


FIGURE 5—Laser mount hold-down studs.

- Place your laser on the front of the laser mount (see Figure 6). Push the laser against the bottom locating-pins and the side locating-pins. This will ensure that the laser is held square to the laser mount.

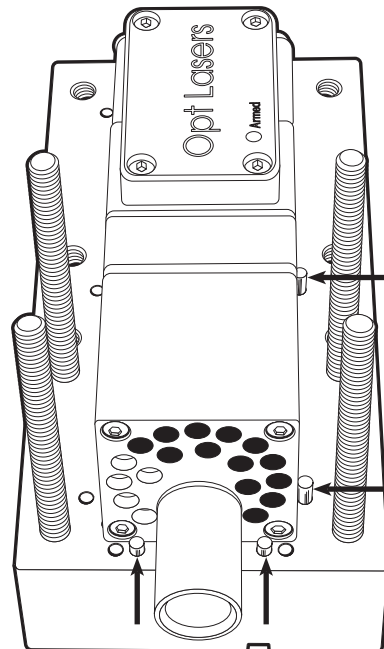


FIGURE 6—The arrows show the locating pins.

- Now place the hold downs (P/N 89551) on the hold-down studs.

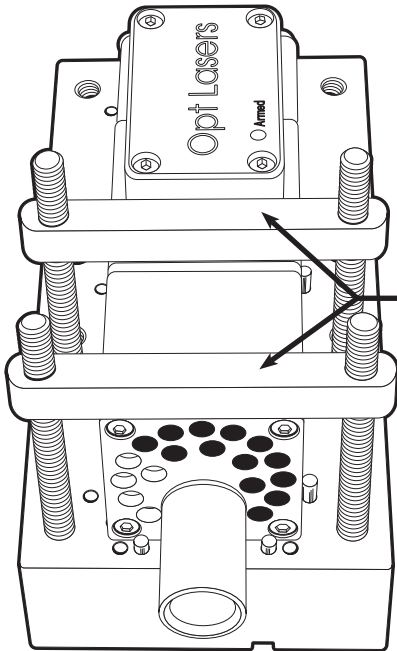


FIGURE 7—The hold-down clamps placed on the hold-down studs.

- Thread on the (4) wing nuts (P/N 89554) until they almost make contact with the top of the hold downs (see Figure 8).

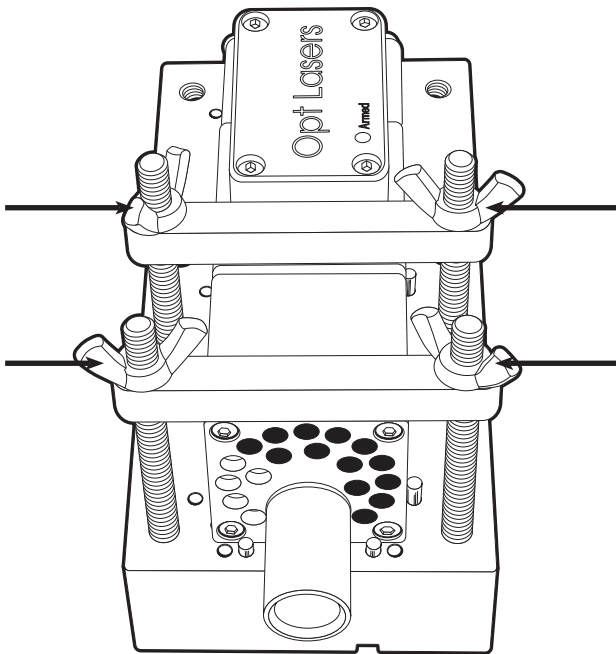


FIGURE 8—The wing nuts threaded onto the hold-down studs.

- With your finger, apply pressure to the center of the hold downs (see Figure 9). This will ensure that the hold downs are square to the laser body. Now, slowly tighten each wing nut (alternating from one to the other) so they are both exerting the same amount of pressure on the hold down. When you have even pressure on both wing nuts, tighten them a bit more (just enough to keep the laser from moving).

NOTE: There will not be any forces applied to the laser when it is in use. Therefore, you do not need excessive force on the hold downs to secure the laser in place.

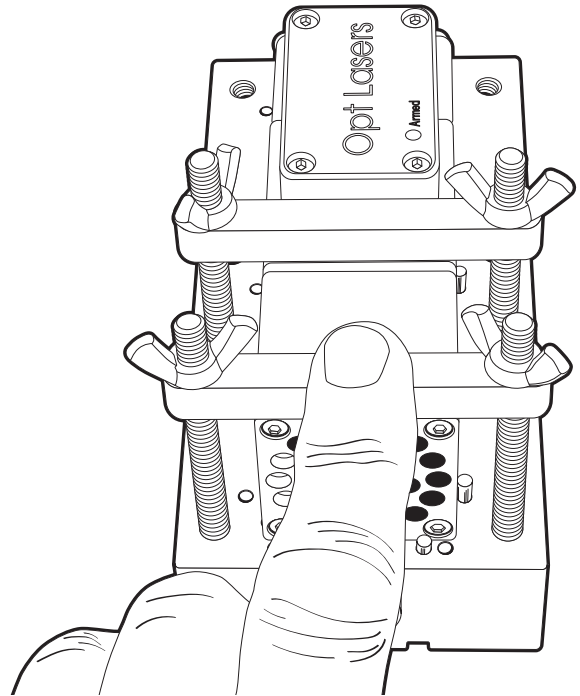


FIGURE 9—Use your finger to apply pressure to center of the hold-down clamps

Mounting the Laser Mount on the Mill

- Remove the headstock, motor, and speed control by loosening the set screw on the side of the headstock. Then pull the entire assembly forward to remove it from the pivot pin.
- Once the headstock is removed, clean the face of the column saddle so it is free of any chips. Replace the head key into the head key slot in the saddle.

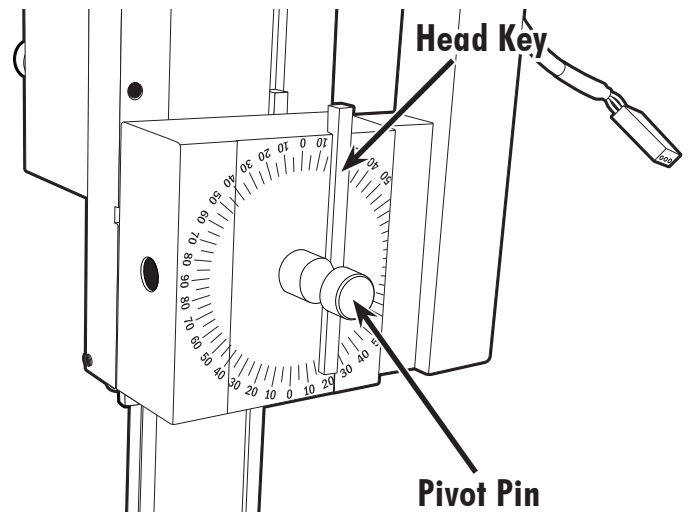


FIGURE 10—The headstock, motor, and speed control removed from the column saddle.

- With the laser either mounted or unmounted to the laser mount, hold the laser mount with the pivot pin hole and head key slot orientated towards the column saddle (see Figure 11).

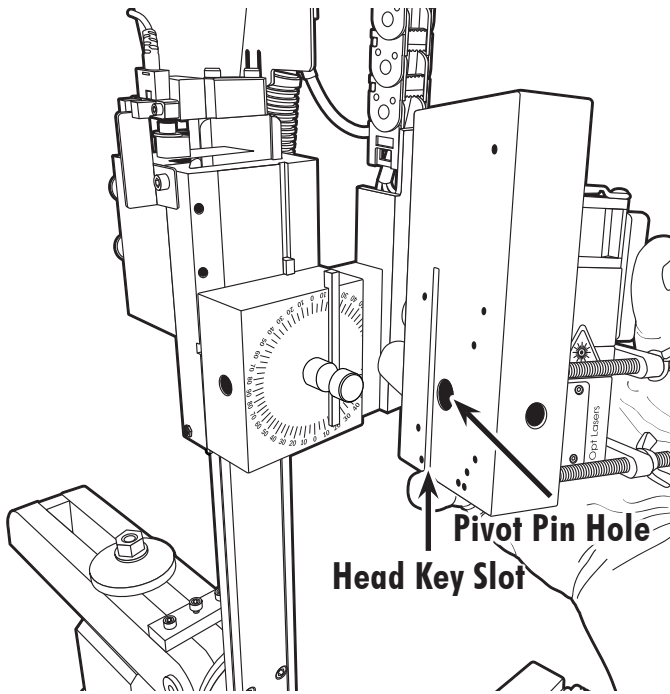


FIGURE 11—Align the head key slot and pivot pin hole on the back of the laser mount to the head key and the pivot pin on the column saddle.

4. Place the pivot pin into the 1/2" hole on the laser mount. Then slowly push the laser mount onto the pivot pin and onto the head key. The laser mount should push on until it is flush with the face of the column saddle. Once the laser mount is flush with the face of the column saddle, tighten the set screw on the side of the laser mount (see Figure 12). When the set screw makes contact with the pivot pin, it will pull the laser mount down securely against the face of the column saddle and lock it in place.

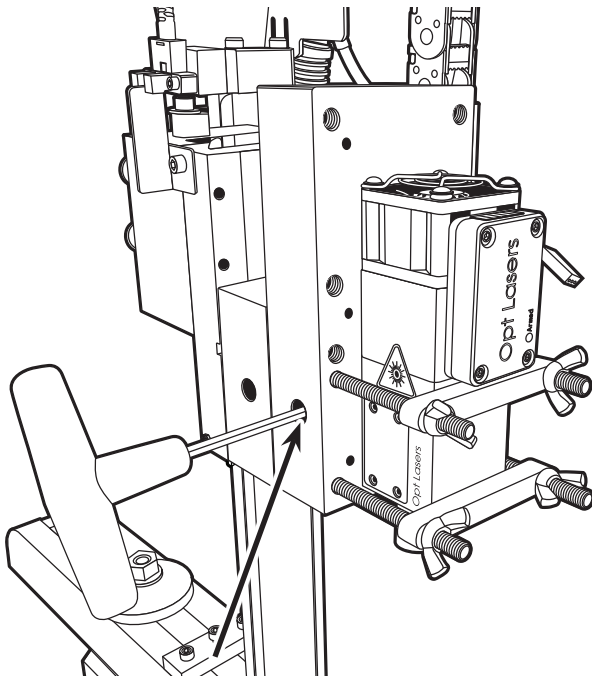


FIGURE 12—The arrow points to the access hole for the laser mount set screw.