Rugged Actuator: Key Interface Features

Easytork simplifies control valve assembly by designing a single actuator that can easily interface the widest variety of valves.

No Valve Stem Leakage – Direct Mounting In All Situations

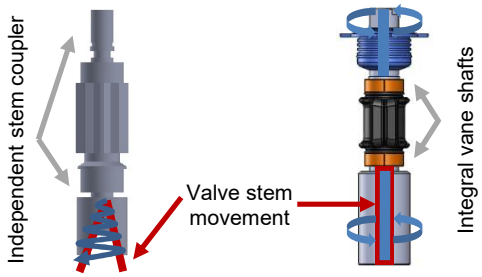
EVA's valve stem engagement is 100% concentric, guided and supported which prevents valve stem leakage and prolongs the cycle life in all direct mount configurations. Typically, the engagement between the valve stem and the actuator is a major contributor to stem side loading and valve stem leakage. This problem is magnified with a bracket and coupler and orientation of valve/actuator assembly during cycling.

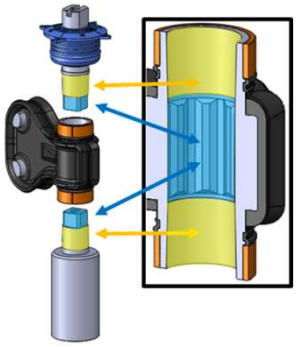
Patents: Integral Unit & Zero Eccentricity

China = 2785284, Taiwan = M445076, other countries pending

Other = >0% eccentric
Valve stem leakage

EVA = 0% eccentric
No valve stem leakage



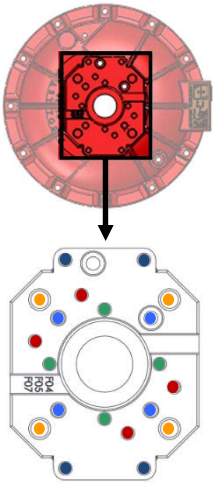


Taper: Contact, Guiding and Support Area in Yellow:
Torque transfer area. The EVA vane-shaft and lower and upper shafts use Morse Tapered principle similar to that of a drill press. Machined taper surface binds together with connect bolt to tighten and support the shafts from side load.

Precision Broach: Contact and Index Area in Blue:
Torque transfer area. The precision broach octagon shape hollow middle shaft allows the lower and upper shafts to be indexed at every 45° intervals.

Triple ISO Flange Pattern

Easytork has triple ISO mounting pad. Therefore, as long as the valve has ISO top works, it will fit directly to the EVA in most cases. The EVA's circular design offers 2 plus 1 ISO top work by turning the ISO mounting pad 45° without misaligning the valve and actuator. VDI / VDE3845 compatible even with a 45° shift.



Triple ISO flange on top and bottom body

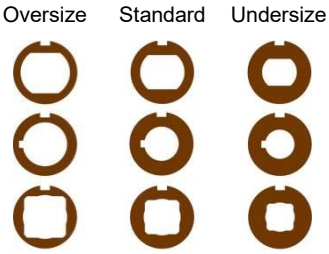
Model 0514 ISO Pattern

0° Shift
- F05
- F07
- VDI/VDE3845 (30 x 80)

45° Shift
- F04
- VDI/VDE3845 (25 x 50)

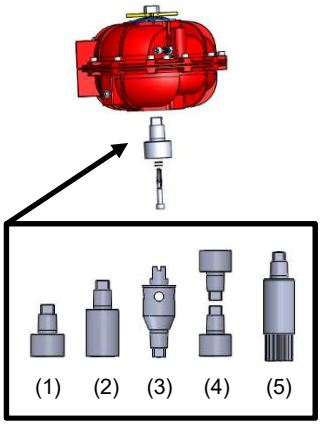
Direct Mount Drive Inserts

All actuators are fitted with adaptable drive inserts in order to accommodate different valve stem profiles. This enables valve stem to be an integral part of the actuator drive and eliminates the need for independent stem coupler for direct mount actuation. Drive insert is held in place by a s.s. circlip and has tight tolerance to prevent hysteresis and wear and tear.



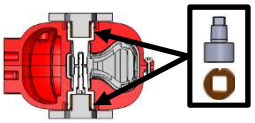
Direct Mount Shafts

Users can easily and quickly swap the upper / lower shaft for 1. direct mount shaft 2. semi-direct mount shaft 3. lockout & PST device 4. two valve operation 5. Other non-stock custom shapes such as damper drive.



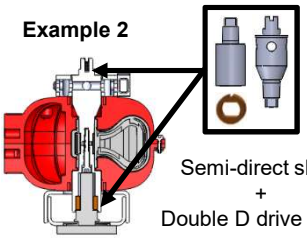
Direct Mounting Examples

Example 1



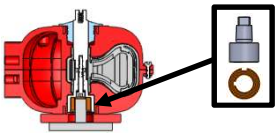
Two regular shafts
+
Two square drive Inserts

Example 2



Semi-direct shaft
+
Double D drive insert
+
PST / lockout unit
+
Bracket

Example 3



Regular shaft
+
Key insert
+
Plate

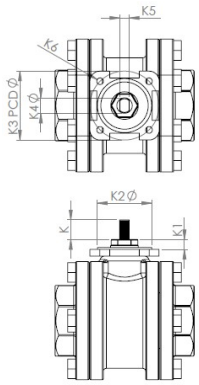
Easytork Mounting Bracket (“EMB”) and Fixture

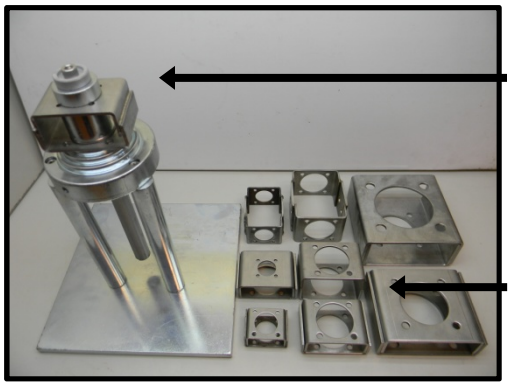
Easytork supplies EMB and Mounting Bracket Fixture (“MBF”). The EMB is a loose piece, kit-based, mounting bracket that can be easily and precisely conjoined to create a mounting bracket with the appropriate specifications including height and mounting patterns.

Users can quickly and precisely weld loose EMB parts into an integral bracket through the MBF. MBF has accurate centerlines to allow loose EMBs of various mounting patterns to be welded together at any desired height. The conjoined EMB has perfect alignment.

EMB and EVA’s extended lower shaft direct mount to the valve stem. This creates stability, stiffness and perfect alignment between actuator and valve stem in all mounting positions. This avoids fugitive emission of the stem packing or malfunctioning of the valve.

Multiple Selections and Possibilities



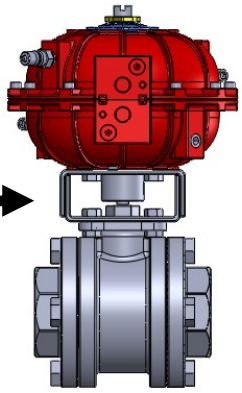


MBF

Used to weld together loose EMBs

EMB

Pic. shows loose and assembled brackets



Valve Topwork Dimensions

Customer to provide valve dimensions. Weld EMB height as needed.

Heavy Duty Construction

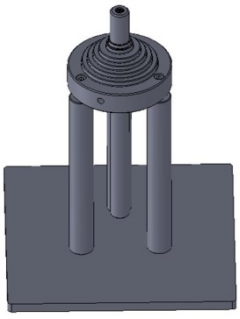
The EMB is supplied in SS304 material for rigid design and corrosion resistance.

Patents: Flexible Integral Mounting Bracket

Taiwan = M447445, other countries pending

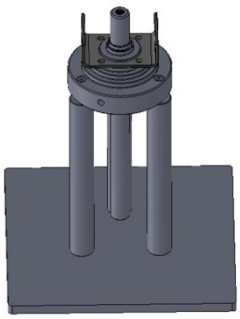
Bracket Assembly Method

Users can quickly and precisely weld loose EMBs into an integral bracket through the MBF.



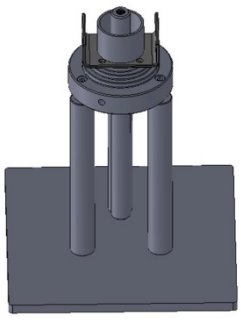
Step 1

MBF has F03S through F14XL center ring slots.



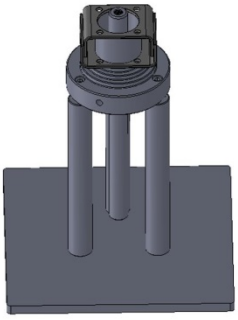
Step 2

Select required bottom bracket and place on center ring slot.



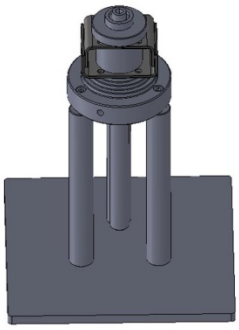
Step 3

Install proper height gauge to justify the bracket height.



Step 4

Select required top bracket.



Step 5

Install proper center ring fixture to top bracket and fasten the whole assembly before welding.