

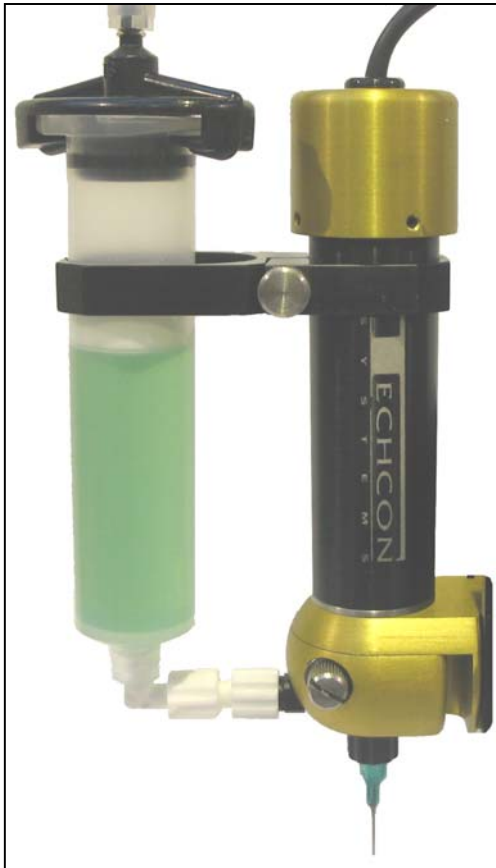


TS5000DMP, TS5000DMPL and TS5000DMP55 Disposable Material Path

Typical Application: COB Encap (Chip on board encapsulation)

Typical Application: Accurate epoxy resin deposition

Typical Application: Automotive grease in car electrical control unit contacts



OK International, the un-disputed leader in rotary valve technology, is pleased to offer the TS5000DMP Series rotary valve.

The patented Disposable Material Path (DMP) valve uses a disposable feed screw affording easy maintenance, more accurate and reliable dispensing. Made of Delrin[®], the disposable feed screw is designed for use with a complete range of materials, including UV.

The DMP valve has a hinged doorway that opens easily so the disposable feedscrew can be removed, disposed of, and replaced within seconds without removing the valve from the production system. This new disposable feedscrew overcomes many of the limitations of existing feedscrew technology. With standard rotary feedscrew valves, the feedscrew and valve housing wear will cause a gradual deterioration of dispense repeatability. By changing the disposable feedscrew regularly, dispensing precision integrity can be maintained using the TS5000DMP.

OK International's DMP valve is a self-contained dispensing valve, capable of depositing small accurate shots down to 0.020" diameter at rates of 5 or more per second. Fluids can be accurately dispensed in continuous beads in widths that range from 0.020" to 0.100" at rates up to 4 per second.

The TS5000DMP Series is offered with 3 door opening options:

TS5000DMP.....Right side door opening

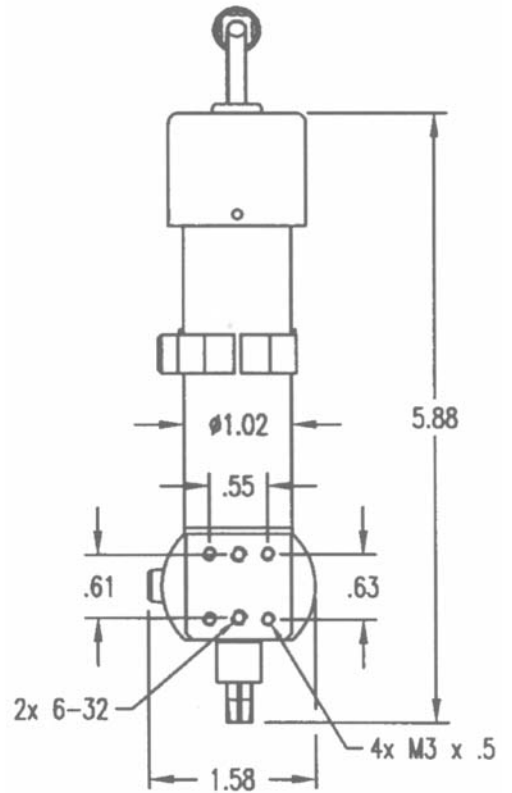
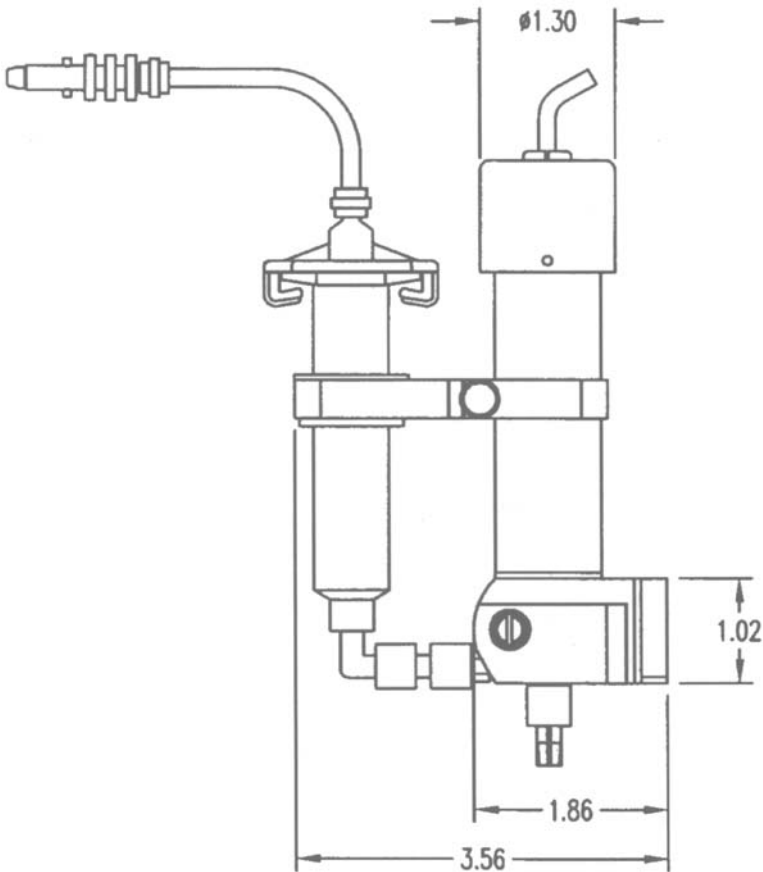
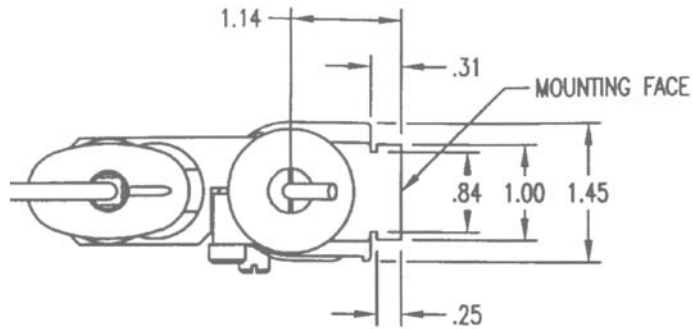
TS5000DMPL.....Left side door opening

TS5000DMP55.....Front door opening



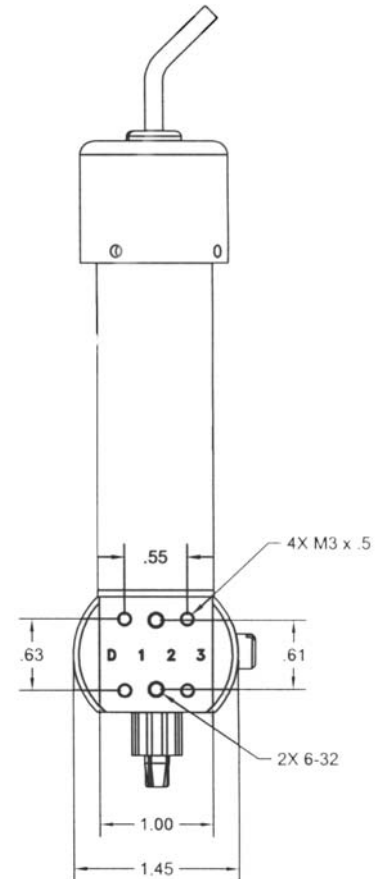
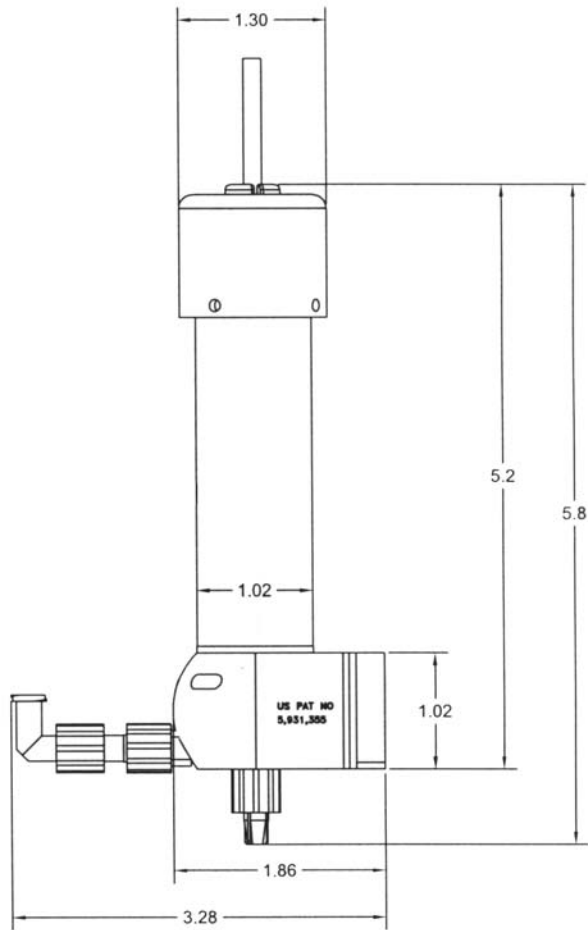
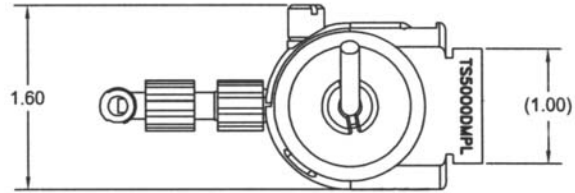
For ease of installation, please refer to the dimensional drawings below.
All dimensions are in Inches and are for reference only.

TS5000DMP Dimensions

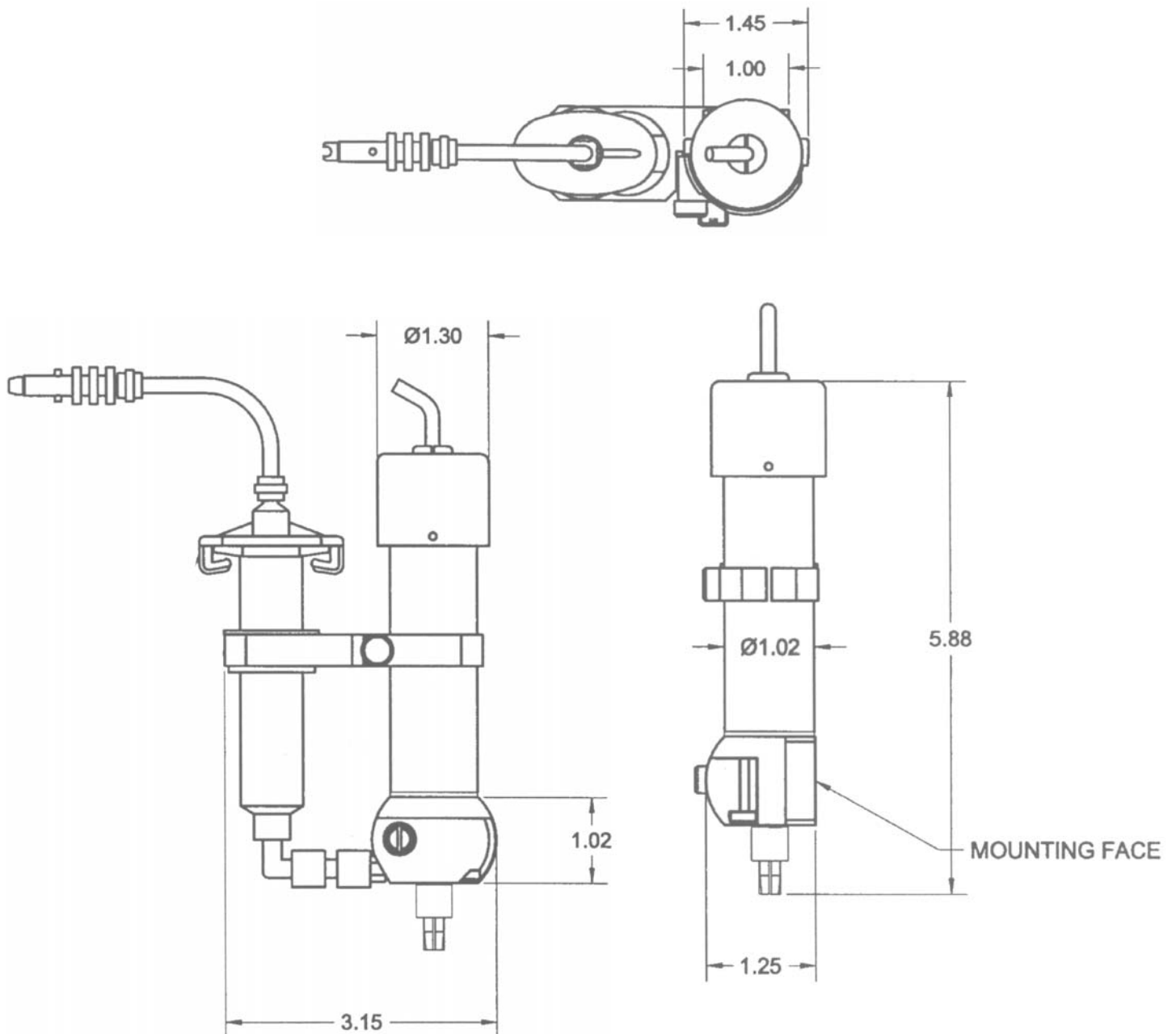




TS5000DMPL Dimensions



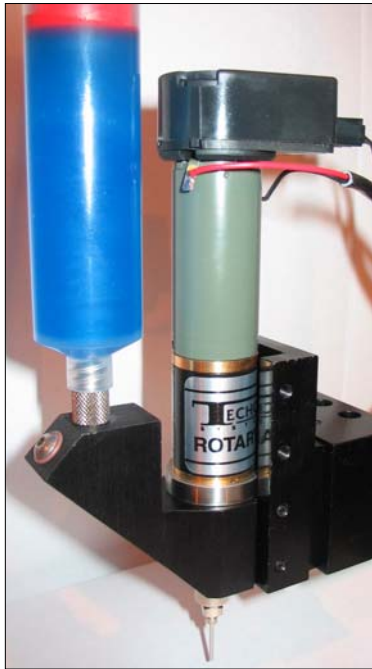
TS5000DMP55 Dimensions





TS5004H-116, TS5004H-116-15 and TS5004H-116-135 Encoder Valves

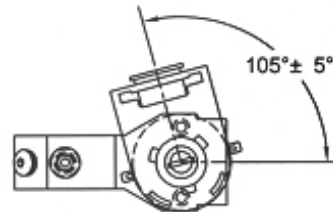
Typical Application: COB Encap (Chip on board encapsulation)



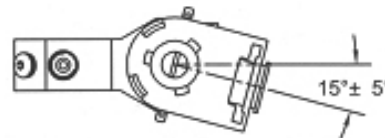
OK International, the un-disputed leader in rotary valve technology, is pleased to offer the TS5004H-116 Series encoder valves. The encoder valves deliver even greater repeatable accuracy than the non-encoded type. The operation of the valve is the same as the standard rotary valve but the encoder type feeds back any variations in motor speed via the “counts per turn” sensor. The encoder control unit (not an OK International product) then increases the supply, until the correct “counts per turn” is achieved. This feed back method will keep the valve running repeatable for a much longer period of time. Speed, and therefore, accuracy will not differ from +/- 0.5% of the original set value.

The TS5004H-116 is available with 3 different encoder positions. These options are available as machine builders are limited with space as the encoder could interfere with the motion. For this we offer the following:

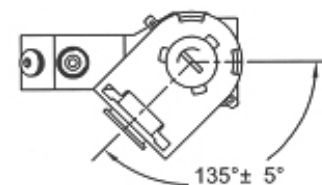
TS5004H-116.....105° encoder position



TS5004H-116-15....15° encoder position

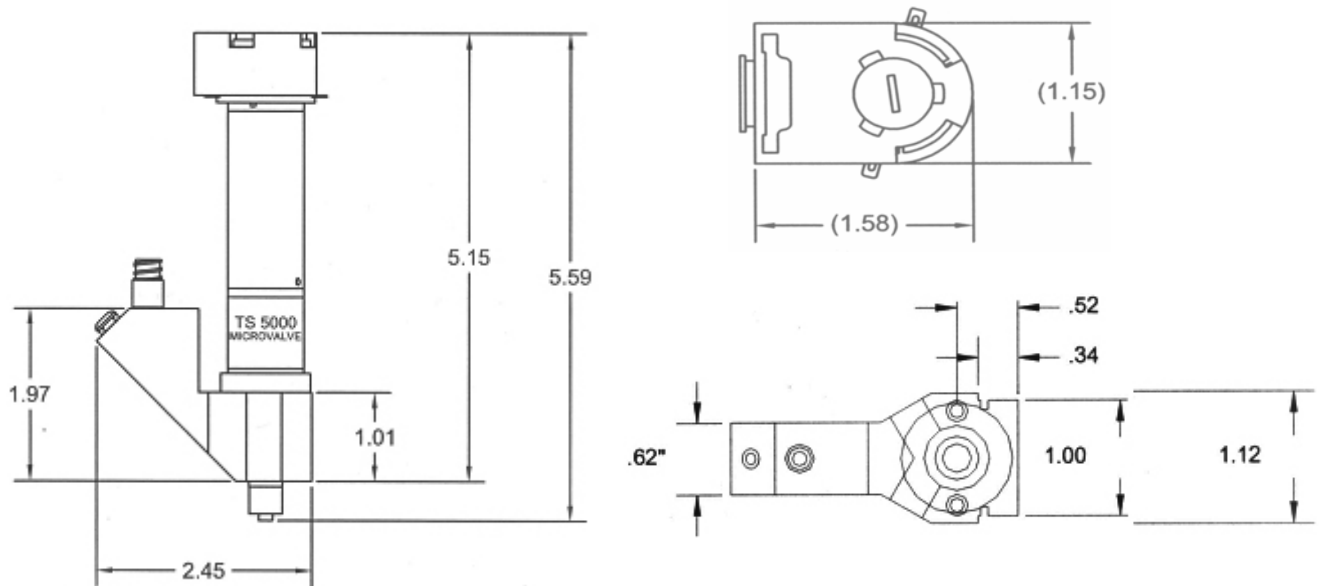


TS5004H-116-135....135° encoder position





For ease of installation, please refer to the dimensional drawings below.
All dimensions are in Inches and are for reference only.



Technical specifications:

Motor power rating:	6 Watt
Motor voltage range:	4 - 24VDC
No load speed @ 24VDC:	400 RPM
Feed screw:	8-pitch standard output
Feed screw material:	Heat-treated tool steel
Valve body material:	Anodized aluminum
Body bore/feed screw insert:	Stainless steel
Encoder type:	Digital, 500 counts per turn
Feed screw seal:	Viton O-ring

Wetted parts:

- Anodized aluminum,
- Stainless steel
- Viton
- Nickel coated brass.

Typical Application: COB Encap
(Chip on board encapsulation)





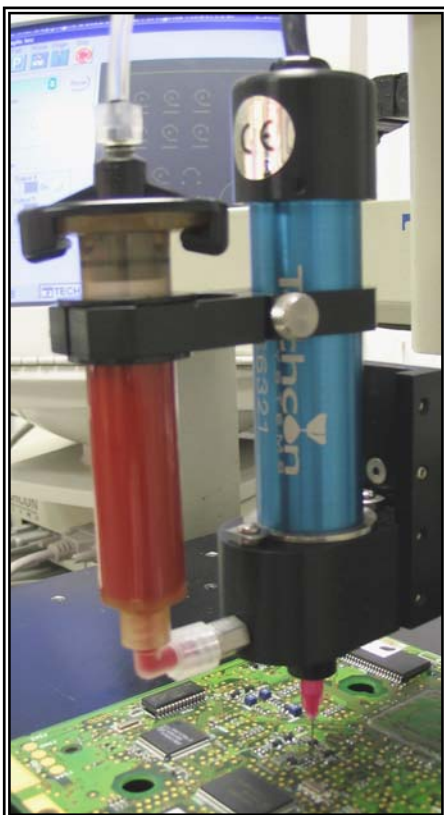
Application notes

- 💧 OK International recommends controlling the motor and encoder using Maxon Motor control cards: **250521** or **EPOS 24/5** depending on the application. Contact *Technical Services for more information.
- 💧 >15 million motor life cycles before degradation.
- 💧 It is recommended that OK Internationals TS-SS (all metal) needles be used with rotary valves.
- 💧 Always use OK Internationals Torque wrench when fitting TS-SS needles, so as not to over tighten them – part number 5000-000-080.
- 💧 Always ensure the rotary valve has been properly purged and primed each time the barrel/syringe is changed.
- 💧 Only apply enough pressure to move the fluid to the feed screw. Do not increase fluid pressure to achieve more output.
- 💧 Fits all manufactures of syringe with a Luer lock thread, i.e. 3cc, 5cc, 10cc 30cc and 55cc.
- 💧 The rotary valve motor can be “reversed” to create a fluid “Snuff-back” for clean cut off.
- 💧 Less sensitive to fluid pressure fluctuation.
- 💧 Cleaning kit available – 5000-013-000.
- 💧 Application service available to determine material compatibility, valve comparison, drop weight comparison, etc. OK International encourages this free of charge service to be used.
- 💧 Maximum environmental temperature a rotary valve assembly should work in is 80°C.
- 💧 Rotary valve mounting bracket, sample TS-SS needle kit and cleaning kit supplied as standard with this valve.
- 💧 OK Internationals TS5100 rotary valve controller will not operate the encoder.
- 💧 UV cure adhesives/epoxies are not suitable with anodized aluminum.



TS6000 (formerly DV-6000 Series) Rotary Valves

Typical Application: SMA (Surface Mount Adhesive) dispensing
Typical Application: PCBA Glob Top (Encapsulation)



OK International, the un-disputed leader in rotary valve technology, is pleased to offer the TS6000 Series rotary valve.

With 8 configurations of bodies/feed screws, this valve is well suited to many dispensing applications. The TS6000 Series offers a “bullet point” tip to each feedscrew which reduces “dead volume” in the dispense tip.

The TS6000 valve has a semi disposable Feedpath, to ease with cleaning.

Fitted with a “U-Seal” the TS6000 is especially suited to low viscosity (30,000cps) & filled materials.

Each configuration has a colour coded motor sleeve for easy recognition.

Techcon Systems TS6000 valve is a self-contained dispensing valve, capable of depositing small accurate shots down to 0.020” diameter at rates of 5 or more per second. Fluids can be accurately dispensed in continuous beads in widths that range from 0.020” to 0.100” at rates up to 4 per second.

TS6000 “bullet tip”



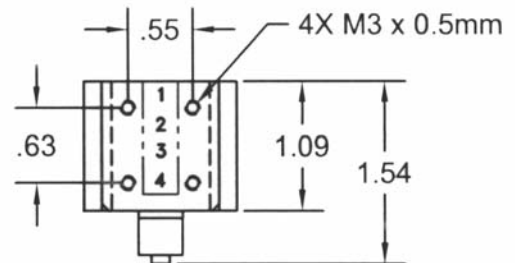
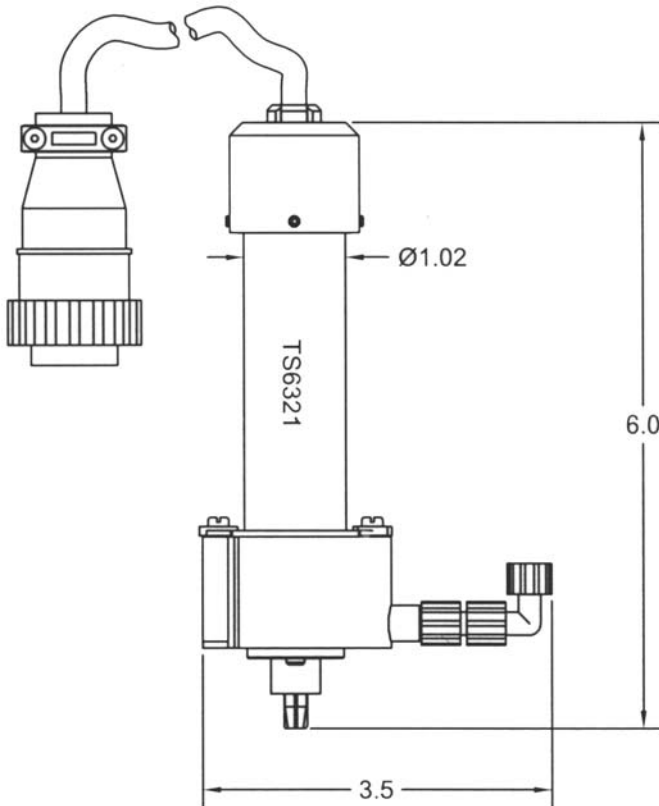
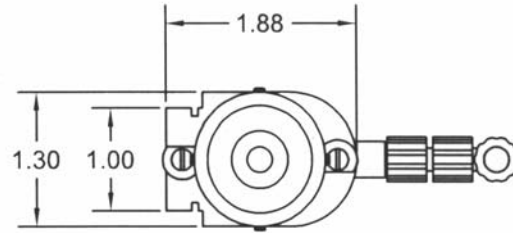
Conventional rotary valve





For ease of installation, please refer to the dimensional drawings below.
All dimensions are in Inches and are for reference only.

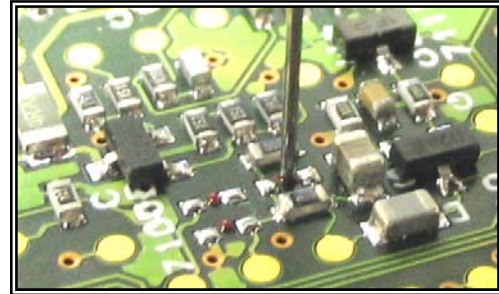
TS6000 Dimensions





Technical specifications:

Motor power rating:	6 Watt
Motor voltage range:	4 - 24VDC
No load speed @ 24VDC:	400 RPM
Feed screw pitch:	8 STD, 8 hi output & 16 shallow
Feed screw material:	Stainless steel, Carbide or Delrin®
Valve body material:	Stainless steel or Delrin®
Body bore/feed screw insert:	Stainless steel or Delrin®
Encoder type (optional):	Digital, 500 counts per turn
Seal:	Teflon with expander spring



Wetted parts: (Dependent of actual configuration)

- Anodized aluminum,
- Carbide
- Stainless steel
- Teflon® (seal)
- Delrin®

TS6000 configuration table

<u>Model Number</u>	<u>DV Equivalent</u>	<u>Sleeve Colour</u>	<u>RPM</u>	<u>Feedscrew Pitch</u>	<u>Feedscrew Material</u>	<u>Feedscrew Output</u>	<u>Body Material</u>	<u>Bore Materail</u>	<u>Seal Type</u>
TS6221	DV-6221	Gold	400	8 Pitch	HTS	Standard	Aluminum	SS	Teflon® U, SS
TS6222	DV-6222	Gray	400	16 Pitch	HTS	Low	Aluminum	SS	Teflon® U, SS
TS6422	DV-6422	Green	400	16 Pitch	See below	Low	Aluminum	SS	Teflon® U, SS
TS6231	DV-6231	Red	400	8 Pitch	HTS	High	Aluminum	SS	Teflon® U, SS
TS6121	DV-6121	Black	400	8 Pitch	Delrin®	Standard	Delrin®	Delrin®	Teflon® U, SS
TS6321	DV-6321	Blue	400	8 Pitch	Carbide	Standard	Aluminum	SS	Teflon® U, SS
TS6322	DV-6322	Violet	400	16 Pitch	Carbide	Low	Aluminum	SS	Teflon® U, SS
TS6331	DV-6331	Yellow	400	8 Pitch	Carbide	High	Aluminum	SS	Teflon® U, SS

DV-6422 feedscrew: A2 tool steel W/Rc60 hardness



Application notes

- 💧 Colour coded motor sleeve for easy reference to exact configuration/equivalent type
- 💧 Suitable with nearly all fluid types including UV
- 💧 >15 million motor life cycles before degradation
- 💧 It is recommended that OK Internationals TS-SS (all metal) or TE Series needles be used with the TS6000 rotary valves.
- 💧 Always ensure the rotary valve has been properly purged and primed each time the barrel/syringe is changed
- 💧 Only apply enough pressure to move the fluid to the feed screw. Do not increase fluid pressure to achieve more output.
- 💧 Fits most syringes with a Leur lock thread, i.e. 3cc, 5cc, 10cc 30cc and 55cc
- 💧 Fits cartridges i.e. 2.5oz, 6oz, etc
- 💧 The TS6000 rotary valve motor can be “reversed” to create a fluid “Snuff-back” for clean cut off
- 💧 Less sensitive to fluid pressure fluctuation.
- 💧 Application service available to determine materail compatibility, valve comparison, drop weight comparison, etc. OK International encourages this free of charge service to be used
- 💧 Maximum environment temperature of the TS6000 rotary valve is 80°C