



## Needle Valve TS5440 Series

The TS5440 Series Microshot Needle Valve is a normally closed needle and seat dispensing valve, which is designed to dispense low - medium viscosity fluids.

With a zero dead volume seat design, the TS5440 Series can dispense very precise deposits over a wide range of deposit sizes, down to a fraction of a micro litre.

An internal spring return makes the valve fully adaptable with Techcon Systems controllers. A short opening stroke provides extremely fast, positive shut-off and the external stroke control adjustment allows the operator to fine tune deposit sizes. Air pressure through the air inlet port retracts the needle assembly from the seat (tip cannula) allowing fluid to flow from the valve fluid inlet to the Luer outlet. Relieving the input air pressure allows the spring to return the needle back to its position, to close the material path, ready for the next dispensing cycle. The TS5440 Series compact design allows for mounting flexibility and integration into automated applications.

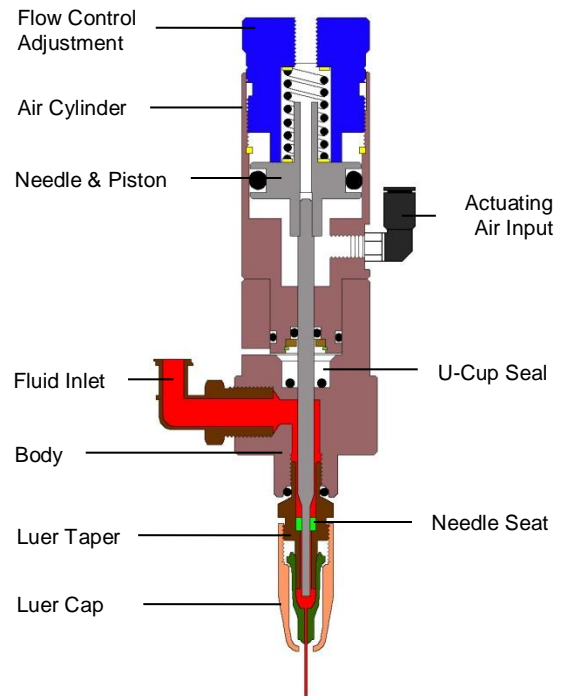
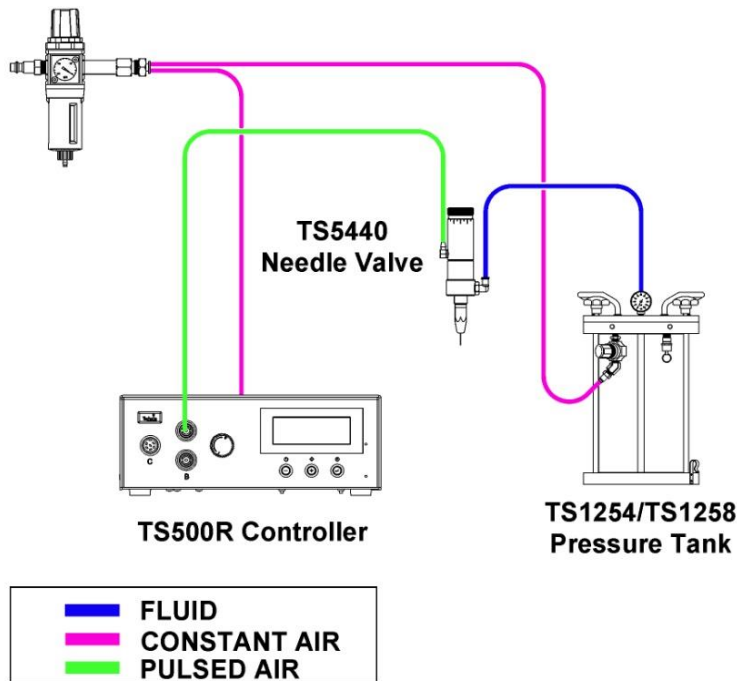
### Key Features & Benefits

- Zero “dead volume”
- Low maintenance design
- Fixed body and air cylinder position
- Luer taper and cap for easy tip integration

### Typical Applications

- Applying UV adhesive in medical device manufacturing
- Dispensing micro dots of lubrication in automotive switches
- Dispensing micro dots of adhesives in electronic assembly process

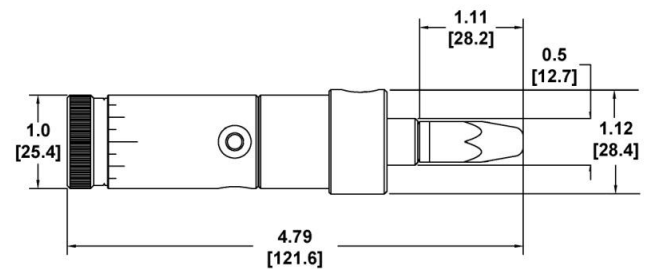
## TYPICAL SETUP



## SPECIFICATIONS & PART NUMBERS

|                      | <b>TS5440</b>              | <b>TS5440-SS</b>              |
|----------------------|----------------------------|-------------------------------|
| Size (Imperial):     | 4.79" Length x 1.12"       | 4.79" Length x 1.12"          |
| Size (Metric):       | 121.6mm x 28.4mm           | 121.6mm x 28.4mm              |
| Weight:              | 0.47 lb (215g)             | 0.6 lb (274g)                 |
| Fluid Inlet Port:    | 1/8" NPT female            | 1/8" NPT female               |
| Fluid Outlet Port:   | Luer taper and cap         | Luer taper and cap            |
| Aux Air Inlet Port:  | 10-32 UNF female           | 10-32 UNF female              |
| Activation Pressure: | 70 psi (4.8bar) Min.       | 70 psi (4.8bar) Min.          |
| Max Fluid Pressure:  | 100 psi (6.9bar)           | 100 psi (6.9bar)              |
| Operating:           | 400+ cycles/min.           | 400+ cycles/min.              |
| Mounting Port:       | 10-32 UNF female           | 10-32 UNF female              |
| Viscosity Range:     | 1 - 100 000cps             | 1 - 100 000cps                |
| Wetted Parts:        | 303 SS, Teflon®, Aluminum, | 303 SS, Teflon®, Delrin®, EPR |

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Dimensions are in inches [mm]

The valve is shipped with the following items:

- Mounting bracket kit
- Valve air hose
- Luer lock fluid line
- Fluid inlet fittings - 1/4" compression and Luer lock type
- Dispensing tip selection pack

## ACCESSORIES

- **Fluid reservoirs:** The valve can be fed from the TS1254 or TS1258 Pressure Tank, or from any size syringe barrel or cartridge.
- **Dispensing Tips:** Precision TT Series dispensing tips, from 14 - 27 gauge, are recommended for this valve type. For the complete dispensing tip offering please visit [www.techconsystems.com](http://www.techconsystems.com)

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