# 35 Series

## Model 35-51 Miniature Applicators

vanSco Gluing Systems
A Valco Cincinnati Company

### Change-up, quick and easy.

vanSco's 35-51 Series Miniature Applicators offer quick and easy solutions to simplify a number of industry requirements. This compact and advanced design is proven to optimize production without a lot of downtime.

### vanSco's 35-51 Miniature Applicators features:

**Speed**
A diaphragm suspended actuating lever arm and construction is used to eliminate friction for fast, repeatable action. It can be used in low to very high speed applications.

**Durability**
A hardened valve needle and seat are used for extended valve life. A solid brass body with stainless-steel, nylon, UHMWPE, and Teflon® parts stand up better against rugged use. It is capable of 100 million cycles before replacement of internal parts.

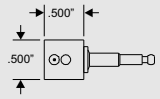
**Low Maintenance**
A sealed tip reduces the possibility of adhesive drying in the valve. All component parts are easily accessible by removing two plugs and four screws.

**Compact Design**
A small package is used for easy installation and simple mounting in small spaces.

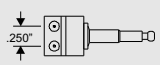
**Unique Design**
A unique diaphragm seal suspends the actuating lever, reducing friction created during actuation.

**Applicator Variety**
Three types of Applicator Valves are available. See the back page for more information.

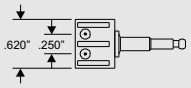
### How to order:



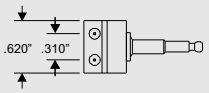

35-51-10 L/V
35-51-11 S/V
35-51-12 H/V



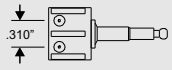

35-51-20 L/V
35-51-21 S/V
35-51-22 H/V



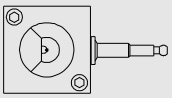

35-51-25 L/V
35-51-26 S/V
35-51-27 H/V




35-51-30 L/V
35-51-31 S/V
35-51-32 H/V




35-51-35 L/V
35-51-36 S/V
35-51-37 H/V



35-52-00 L/V
35-52-01 S/V
35-52-02 H/V

35-51-55 L/V
35-51-56 S/V
35-51-57 H/V
MINI-SQUIRT

35-51-60 L/V
35-51-61 S/V
35-51-62 H/V
MINI-SPRAY

# 35-51 Series

## Squirt Applicator Valves

Used to squirt adhesive on a product under pressure. The adhesive is deposited in a single stream. No product contact is required.

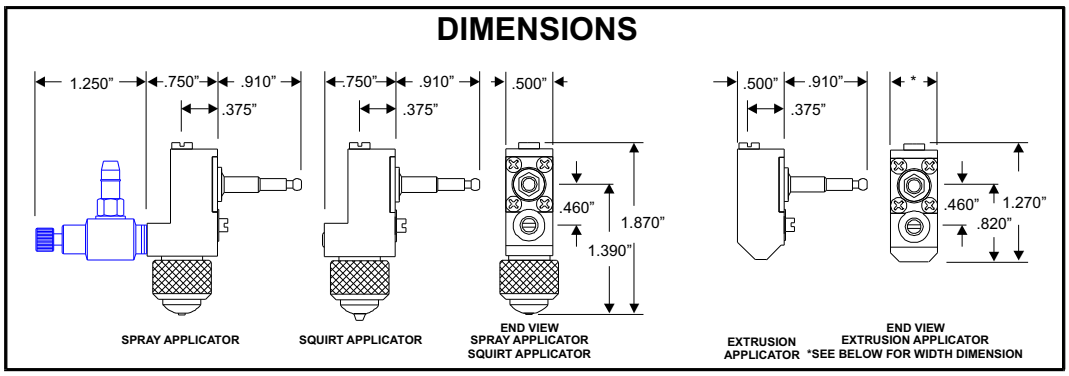
## Extrusion Applicator Valves

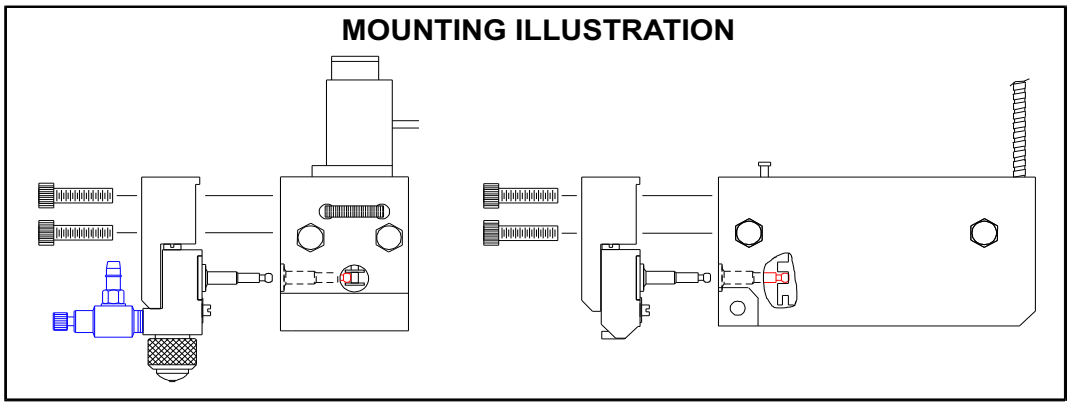
Used to apply fine lines of adhesive on a product. Available for in-line sheet fed and in-line web fed mounting. Single outlet valves are also available for right angle actuator mounting. The dual outlet valves come with a choice of a 0.250” or 0.312” orifice spring. No product contact is required.

## Spray Applicator Valves

Used to spray the adhesive on a product. This is particularly useful when a thin adhesive film or fast tack time are required. Atomizing air control is provided to adjust the spray pattern. No product contact is required.

# Technical Characteristics

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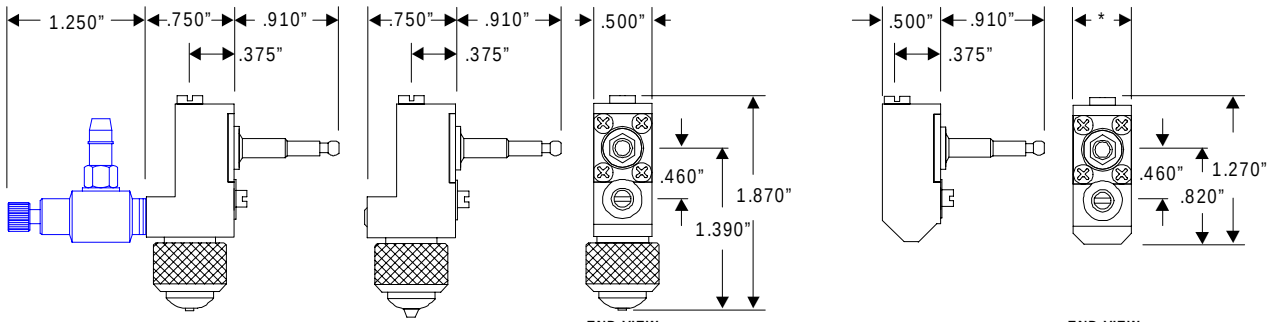
# 35-51 SERIES Miniature Applicators

## DIMENSIONS




SPRAY APPLICATOR

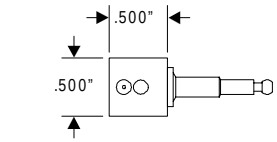
SQUIRT APPLICATOR

END VIEW
SPRAY APPLICATOR
SQUIRT APPLICATOR

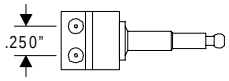
EXTRUSION APPLICATOR

END VIEW
EXTRUSION APPLICATOR
*SEE BELOW FOR WIDTH DIMENSION

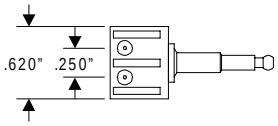
## HOW TO ORDER



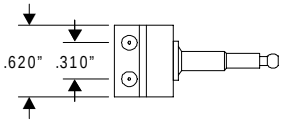

**35-51-10 L/V**
**35-51-11 S/V**
**35-51-12 H/V**



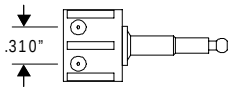

**35-51-20 L/V**
**35-51-21 S/V**
**35-51-22 H/V**



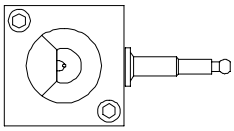

**35-51-25 L/V**
**35-51-26 S/V**
**35-51-27 H/V**




**35-51-30 L/V**
**35-51-31 S/V**
**35-51-32 H/V**

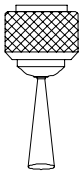



**35-51-35 L/V**
**35-51-36 S/V**
**35-51-37 H/V**



**35-52-00 L/V**
**35-52-01 S/V**
**35-52-02 H/V**

**35-52 SERIES**
**(SEE BROCHURE *DAN***
**FOR FURTHER DETAILS)**



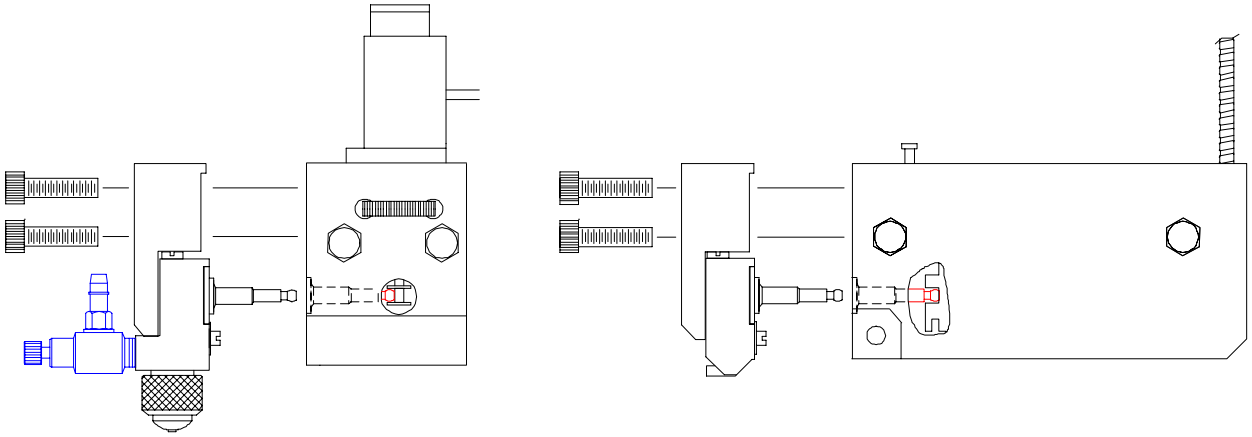
**35-51-55 L/V**
**35-51-56 S/V**
**35-51-57 H/V**

**MINI-SQUIRT**

**35-51-60 L/V**
**35-51-61 S/V**
**35-51-62 H/V**

**MINI-SPRAY**

## MOUNTING ILLUSTRATION



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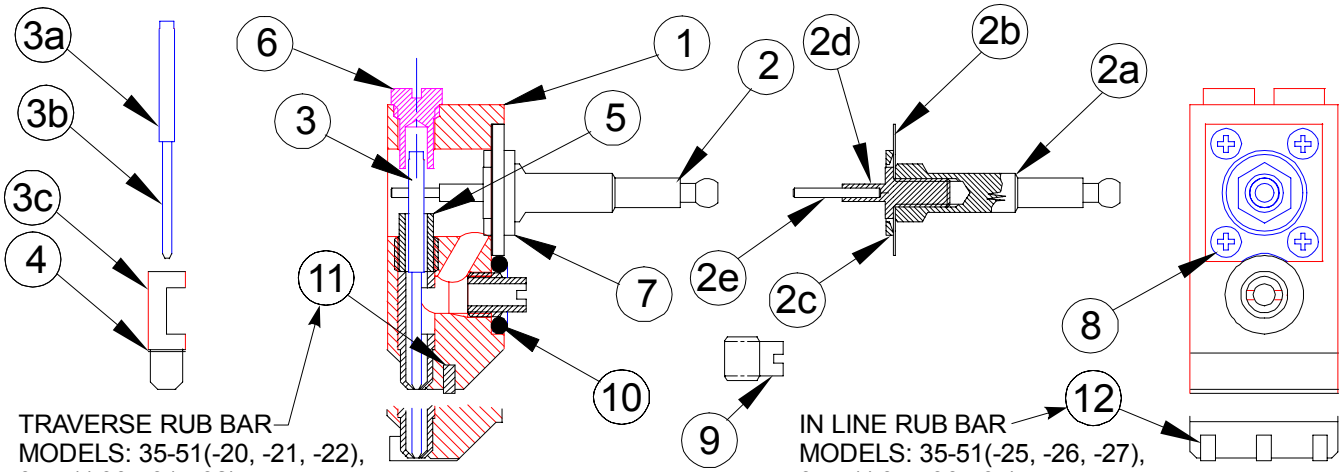
# COMPONENT PARTS

# Miniature Extrusion Type Applicator

## 35-51(-20, -21, -22, -30, -31, -32) Travers Rub Bar Model

## 35-51(-25, -26, -27, -35, -36, -37) In Line Rub Bar Model




TRAVERSE RUB BAR
MODELS: 35-51(-20, -21, -22), 35-51(-30, -31, -32)

IN LINE RUB BAR
MODELS: 35-51(-25, -26, -27), 35-51(-35, -36, -37)

| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 1 | 90-35-43 | 1 | Valve Body (-20, -21, -22) |
| | 90-35-44 | 1 | Valve Body (-25, -26, -27) |
| | 90-35-45 | 1 | Valve Body (-30, -31, -32) |
| | 90-35-46 | 1 | Valve Body (-35, -36, -37) |
| 2 | 90-35-35 | 1 | Actuator Lever Assembly |
| (Actuator Lever Assembly includes 2a through 2e) | | | |
| 2a | 90-35-08 | 1 | Actuating Lever |
| 2b | 90-35-32 | 1 | Diaphragm |
| 2c | 90-35-15 | 1 | Thrust Plate |
| 2d | 90-35-11 | 1 | Actuating Fork |
| 2e | 90-35-23 | 2 | Pin |
| 3 | 90-35-38 | 2 | Needle & Seat Assembly, L/V |
| | 90-35-26 | 2 | Needle & Seat Assembly, S/V |
| | 90-35-39 | 2 | Needle & Seat Assembly, H/V |

| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| (Needle & Seat Assembly includes 3a through 3c) | | | |
| 3a | 90-35-19 | 1 | Needle Head |
| 3b | 90-35-20 | 1 | Valve Needle |
| 3c | 90-35-36 | 1 | Nozzle, L/V, 0.010 |
| | 90-35-12 | 1 | Nozzle, S/V, 0.020 |
| | 90-35-37 | 1 | Nozzle, H/V, 0.030 |
| 4 | 90-35-17 | 8 | Seat Seal |
| 5 | 90-35-14 | 3 | Needle Guide |
| 6 | 90-35-13 | 2 | Valve End Plug |
| 7 | 90-35-30 | 1 | Diaphragm Retainer |
| 8 | 90-07-12 | 4 | 1-72 x 3/16" Screw |
| 9 | 90-35-31 | 1 | Plug |
| 10 | 90-07-01 | 1 | O-Ring |
| 11 | 90-35-21 | 1 | Rub Bar (-00, -01, -02) |
| 12 | 90-35-22 | 3 | Rub Bar (-05, -06, -07) |

### ACTUATOR LEVER ASSEMBLY SERVICE KIT

Item 2: Actuator Lever Assembly is factory assembled.

90-35-35 Actuator Lever Assembly

### NEEDLE & SEAT ASSEMBLY SERVICE KITS

Item 3: Needle and Seat Assembly is factory assembled and lapped as a set.

90-35-38 Needle & Seat Assembly, L/V
90-35-26 Needle & Seat Assembly, S/V
90-35-39 Needle & Seat Assembly, H/V

**RECOMMENDED:** Use 90-35-17 Seat Seal with any of the above service kits.

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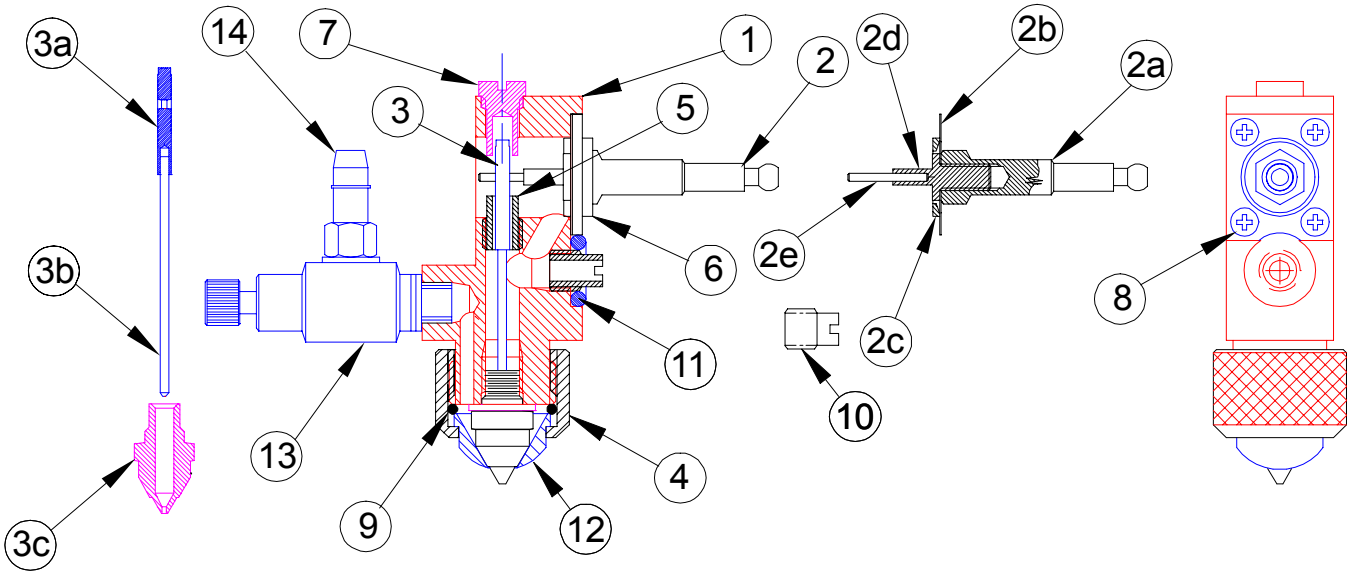
# 35-51 Series
# Miniature Spray Applicator

## COMPONENT PARTS




| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 1 | 90-35-49 | 1 | Applicator Valve Body |
| *2 | 90-35-33 | 1 | Actuator Lever Assembly |
| (Actuator Lever Assembly includes 2a through 2e) | | | |
| 2a | 90-35-08 | 1 | Actuating Lever |
| 2b | 90-35-32 | 1 | Diaphragm |
| 2c | 90-35-15 | 1 | Thrust Plate |
| 2d | 90-35-09 | 1 | Actuating Fork |
| 2e | 90-35-23 | 1 | Pin |
| *3 | 90-35-61 | 1 | Needle & Seat Assembly, L/V |
| | 90-35-62 | 1 | Needle & Seat Assembly, S/V |
| | 90-35-63 | 1 | Needle & Seat Assembly, H/V |
| (Needle & Seat Assembly includes 3a through 3c) | | | |
| 3a | 90-35-19 | 1 | Needle Head |
| 3b | 90-35-52 | 1 | Valve Needle |
| 3c | 90-35-53 | 1 | Spray Nozzle, L/V, 0.010 |
| | 90-35-54 | 1 | Spray Nozzle, S/V, 0.020 |
| | 90-35-55 | 1 | Spray Nozzle, H/V, 0.030 |

| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 4 | 90-35-59 | 1 | Air Nozzle Retaining Nut |
| 5 | 90-35-14 | 2 | Needle Guide |
| 6 | 90-35-30 | 1 | Diaphragm Retainer |
| 7 | 90-35-13 | 1 | Valve End Plug |
| 8 | 90-07-12 | 4 | 1-72 x 3/16" Screw |
| 9 | 90-02-33 | 1 | O-Ring |
| 10 | 90-35-31 | 1 | Plug (Shipped Loose) |
| 11 | 90-07-01 | 1 | O-Ring |
| 12 | 90-35-60 | 1 | Air Nozzle |
| 13 | 90-35-67 | 1 | Atomizing Air Adj. Valve |
| 14 | 90-06-98 | 1 | Hose Barb |

***NOTE:** Item 2 (90-35-33) is shipped factory assembled.

Item 3 (90-35-26) is shipped factory assembled with Needle and Nozzle lapped as a set.

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**DAO1199**


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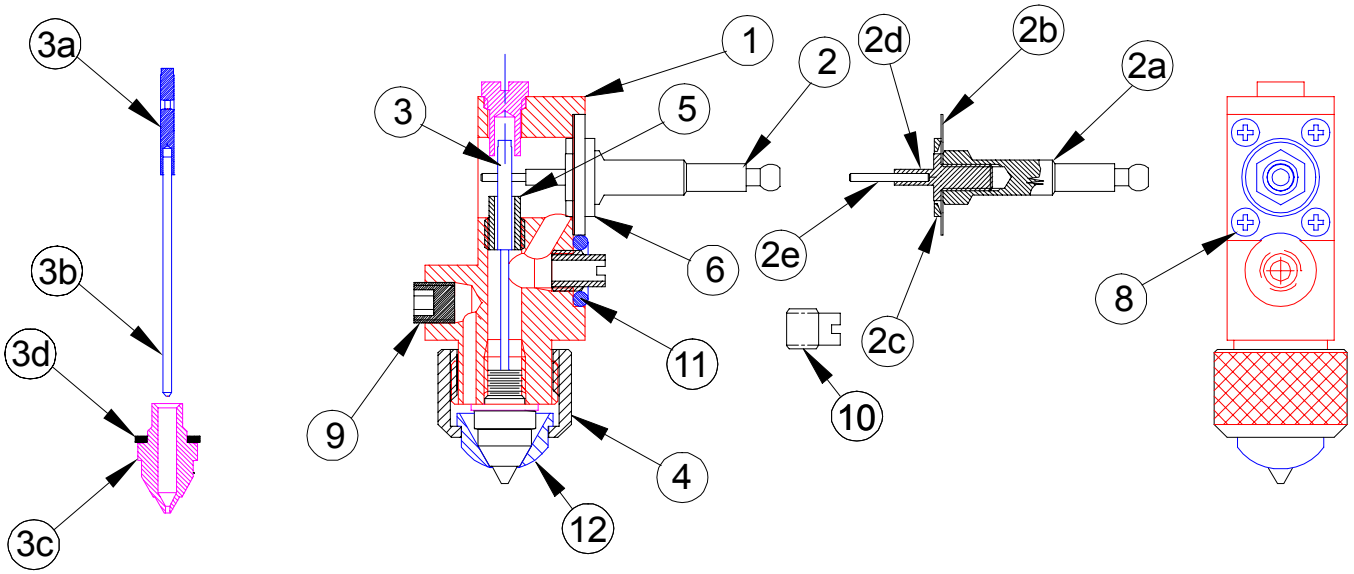
# 35-51 Series
# Miniature Squirt Applicator

## COMPONENT PARTS




| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 1 | 90-35-49 | 1 | Applicator Valve Body |
| *2 | 90-35-33 | 1 | Actuator Lever Assembly |
| (Actuator Lever Assembly includes 2a through 2e) | | | |
| 2a | 90-35-08 | 1 | Actuating Lever |
| 2b | 90-35-32 | 1 | Diaphragm |
| 2c | 90-35-15 | 1 | Thrust Plate |
| 2d | 90-35-09 | 1 | Actuating Fork |
| 2e | 90-35-23 | 1 | Pin |
| *3 | 90-35-64 | 1 | Needle & Seat Assembly, L/V |
| *3 | 90-35-65 | 1 | Needle & Seat Assembly, S/V |
| *3 | 90-35-66 | 1 | Needle & Seat Assembly, H/V |
| (Needle & Seat Assembly includes 3a through 3d) | | | |
| 3a | 90-35-19 | 1 | Needle Head |
| 3b | 90-35-52 | 1 | Valve Needle |
| 3c | 90-35-56 | 1 | Squirt Nozzle, L/V, 0.010 |
| | 90-35-57 | 1 | Squirt Nozzle, S/V, 0.020 |
| | 90-35-58 | 1 | Squirt Nozzle, H/V, 0.030 |
| 3d | 90-35-71 | 1 | Gasket |

| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 4 | 90-35-59 | 1 | Air Nozzle Retaining Nut |
| 5 | 90-35-14 | 2 | Needle Guide |
| 6 | 90-35-30 | 1 | Diaphragm Retainer |
| 7 | 90-35-13 | 1 | Valve End Plug |
| 8 | 90-07-12 | 4 | 1-72 x 3/16" Screw |
| 9 | 90-02-49 | 1 | 10-32 x 3/16" Set Screw |
| 10 | 90-35-31 | 1 | Plug (Shipped Loose) |
| 11 | 90-07-01 | 1 | O-Ring |
| 12 | 90-35-70 | 1 | Nozzle Cover |

***NOTE:** Item 2 (90-35-33) is shipped factory assembled.

Item 3 (90-35-26) is shipped factory assembled with Needle and Nozzle lapped as a set.

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# 35 Series

## Model 35-52 Smooth Nose Valve

vanSco
Gluing Systems
A Valco Cincinnati Company

### Quality, high-speed precision.

vanSco 's high-speed 35-52 Smooth Nose Valve offers a unique design for durable and rapid placement. The 32-52 valve attaches to the actuator with a single screw to provide easy assembly and disassembly. A push fitting is also included at the adhesive inlet for an easy installation. Its compact design allows the valve to fit easily into tight places to meet a range of industry needs.

### vanSco 's 35-52 Smooth Nose Valve features:

**Fastest and Most Accurate Valve**
Combined with the VanSco® 40-40-02 Actuator, the 35-52 series valve offers fast and accurate adhesive placement.

**Optimal Gluing**
Light product contact during application allows smearing of the adhesive directly onto the substrate to maximize absorption into the fiber for a secure bond.

**High Performance**
Direct mechanical actuation is automatically opened and closed by the actuator for consistent, repeatable performance. Low weight moving parts minimize valve inertia and maximize valve speed.

**Versatile Mount**
The one-piece valve seat and application head can be mounted on the valve body at 90-degree increments, allowing the attached actuator to be positioned as required for in-line product travel.

**Unique Design**
A unique diaphragm seal suspends the actuating lever that reduces actuation friction.

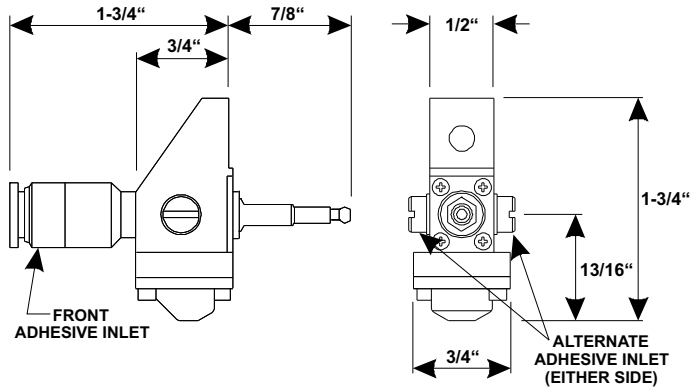
**Durability**
A hardened valve seat is used for extended valve life. All wetted parts are brass, stainless-steel, and UHMW polyethylene.

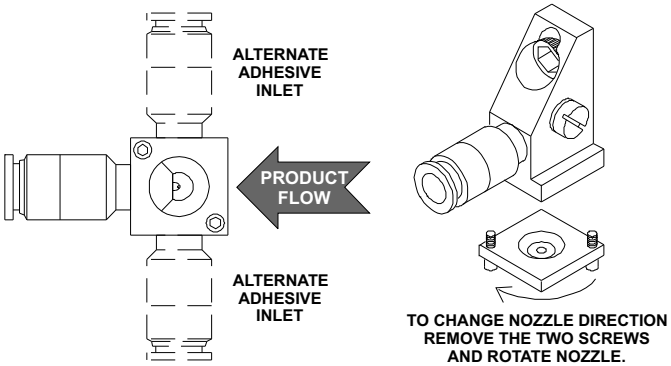
**Compact Design**
A small package means easy installation and mounting adaptability.

**Zero Cavity for Increased Quality**
A sealed tip reduces the possibility of adhesive drying in the valve.

# 35-52 Series Valve

## DIMENSIONS

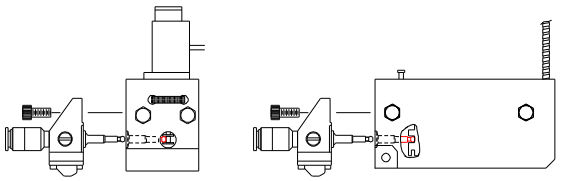





TO CHANGE NOZZLE DIRECTION
REMOVE THE TWO SCREWS
AND ROTATE NOZZLE.

MOUNTING ILLUSTRATION



Applicators are shipped with a mounting screw (part number 90-07-05) that is used to mount the valve to the actuator.

### Service Kits:

| Part Number | Description |
|---|---|
| 90-35-80 | Needle and seat assembly, L/V |
| 90-35-81 | Needle and seat assembly, R/H |
| 90-35-82 | Needle and seat assembly, H/V |
| 90-35-33 | Actuating lever assembly |

### How to order:

| Part Number | Description |
|---|---|
| 35-52-00 | Smooth nose, low volume, 0.010” orifice |
| 35-52-01 | Smooth nose, standard volume, 0.020” orifice |
| 35-52-02 | Smooth nose, high volume, 0.030” orifice |

# Technical Characteristics

| 35-52 Series Specifications | |
|---|---|
| **Fluid pressure:** | Up to 65 psi fluid pressure |
| **Fluid viscosity range:** | 200-2,000 centipoise |
| **Construction:** | All wetted parts are brass, stainless-steel, nylon, and UHMWPE |
| **Fluid inlet:** | 1/4” OD Tube x 10-32 push fitting |

For more information visit www.vansco.com or contact us direct.

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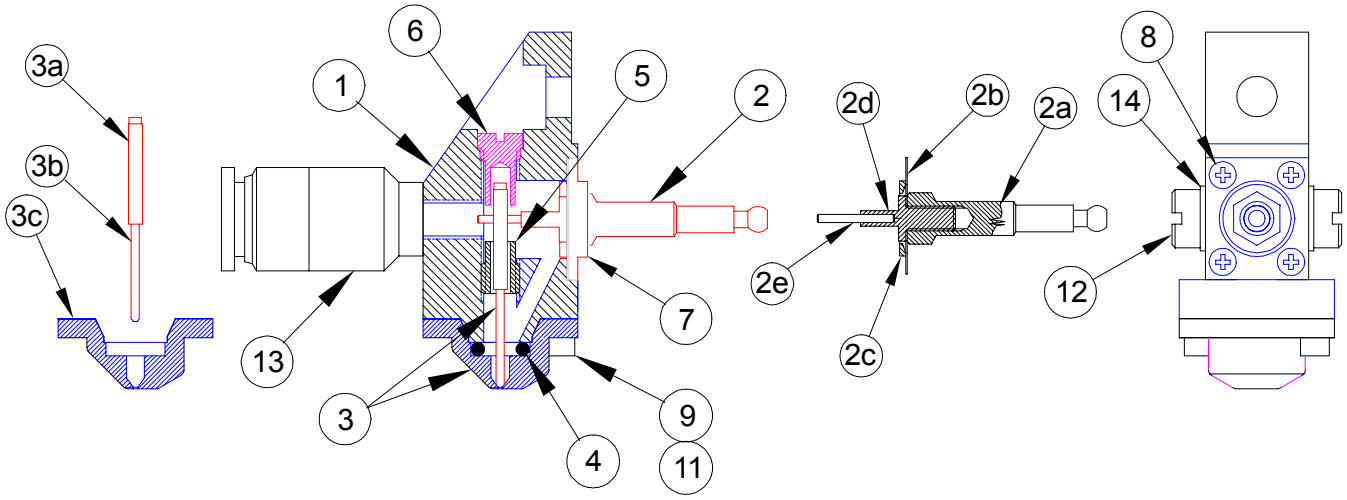
# 35-52 Series COMPONENT PARTS
# Miniature Universal Applicator




| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 1 | 90-35-75 | 1 | Applicator Valve Body |
| 2 | 90-35-33 | 1 | Actuator Lever Assembly |
| | (Actuator Lever Assembly includes 2a through 2e) | | |
| 2a | 90-35-08 | 1 | Actuating Lever |
| 2b | 90-35-32 | 1 | Diaphragm |
| 2c | 90-35-15 | 1 | Thrust Plate |
| 2d | 90-35-09 | 1 | Actuating Fork |
| 2e | 90-35-23 | 1 | Pin |
| 3 | 90-35-80 | 1 | Needle & Seat Assembly, L/V |
| | 90-35-81 | 1 | Needle & Seat Assembly, S/V |
| | 90-35-82 | 1 | Needle & Seat Assembly, H/V |
| | (Needle & Seat Assembly includes 3a through 3c) | | |
| 3a | 90-35-19 | 1 | Needle Head |
| 3b | 90-35-20 | 1 | Valve Needle |

| ITEM | PART NO. | QTY | DESCRIPTION |
|---|---|---|---|
| 3c | 90-35-76 | 1 | Squirt Nozzle, L/V, 0.010 |
| | 90-35-77 | 1 | Squirt Nozzle, S/V, 0.020 |
| | 90-35-78 | 1 | Squirt Nozzle, H/V, 0.030 |
| 4 | 90-07-64 | 1 | O-Ring, Buna N |
| 5 | 90-35-14 | 2 | Needle Guide |
| 6 | 90-35-83 | 1 | Valve End Plug |
| 7 | 90-35-30 | 1 | Diaphragm Retainer |
| 8 | 90-07-12 | 4 | 1-72 x 3/16" Screw |
| 9 | 90-07-65 | 2 | 2-56 x 1/4", SHCS, S.S. |
| 10 | 90-07-05 | 1 | 10-32 x3/8", SHCS |
| 11 | 90-07-66 | 2 | #2 Split Lock Washer |
| 12 | 90-46-29 | 2 | 10-32 Plug (Includes Item 14) |
| 13 | 90-07-37 | 1 | 10-32 x 1/4" Push Fitting |
| 14 | 90-46-28 | 2 | Gasket |

**ACTUATOR LEVER ASSEMBLY SERVICE KIT**

Item 2: Actuator Lever Assembly factory assembled.

90-35-33 Actuator Lever Assembly

**NEEDLE & SEAT ASSEMBLY SERVICE KITS**

Item 3: Needle and Seat Assembly is factory assembled and lapped as a set.

90-35-80 Needle & Seat Assembly, L/V
90-35-81 Needle & Seat Assembly, S/V
90-35-82 Needle & Seat Assembly, H/V

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# 35 SERIES TECHNICAL & SERVICE MANUAL

## PRINCIPLES OF OPERATION:

All applicator valves are designed to mount on the 40-40 series actuators. The actuator moves the actuating lever downward which lifts the needle from the seat and allows adhesive to flow. Upward movement of the actuating lever closes the valve.

## ADHESIVE SUPPLY REQUIREMENTS:

Adhesive Supply Pressure Requirements:
- Constant, unvarying adhesive pressure
  - Pressure Range: 0 to 65 psig
  - Typical System Pressure: 10-30 psig

Adhesive Filtration Requirements: 100 mesh

Adhesive Viscosity Recommendations:
- Viscosity Range: 0 to 1,500 cps
- Extrusion Viscosity: 500-1,500 cps
- Squirt Viscosity: 200-1,000 cps
- Spray Viscosity: 200-1,000 cps

Adhesive Composition Requirements:
- Recommended Adhesive Type: water based resin emulsion
- **Stainless Steel model required for natural rubber latex emulsion**

## SUBSTRATE & BACKUP MOUNTING REQUIREMENTS:

Extrusion: Designed for light substrate contact, compression applications where accurate pattern placement is critical. There are two different types of extrusion valves designed for the continuous web application and the individual sheet fed application:

35-52 series actuator provides a positive substrate position.

Spray: Designed for non-contact, fast tack time applications. A fixed substrate position must be maintained in order to create a consistent spray pattern. The typical spray valve to substrate distance is one inch, but it will vary with adhesive application pressure, adhesive composition, adhesive viscosity, and atomizing air pressure.

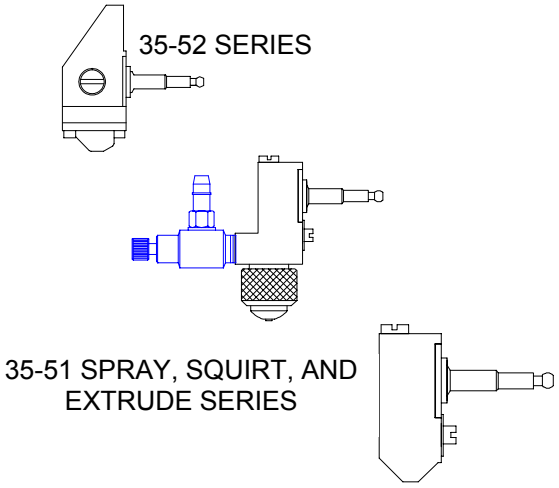


*Illustration 1-1*
**35-51 & 35-52 SERIES**

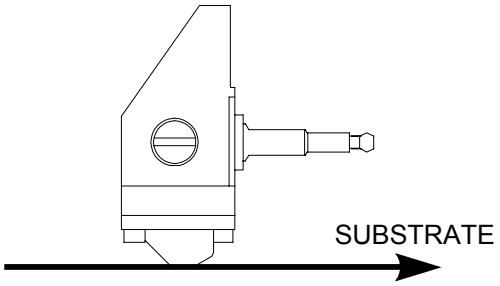


*Illustration 1-2*
**35-52 SERIES CONTACT WITH SUBSTRATE**

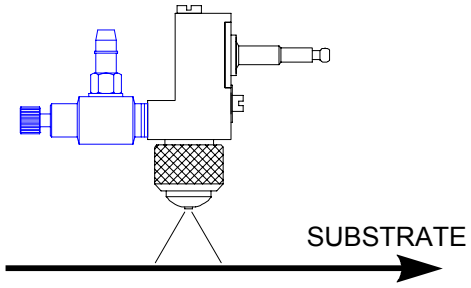


*Illustration 1-3*
**35-51 SERIES SPRAY WITH SUBSTRATE**

Squirt: Designed for non-contact compression application. A fixed substrate position must be maintained in order to create a consistent squirt pattern. The typical squirt valve to substrate distance is one half of one inch, but it will vary with adhesive application pressure, adhesive composition, and adhesive viscosity

## OUTPUT RESULTS:

Reaction Time:

Direct mechanical actuation means the valve response time is directly proportional to the actuator response time. The only delays are due to the dynamic viscous properties of the adhesive, and inertial properties of the actuator and valve.

Fluid Output Adjustment:

Fluid output adjustment is controlled by the adhesive pressure and the 40-40 series actuator onto which the applicator valve is installed. See 40-40 series technical manual for more information. **Note:** Limiting the stroke of the applicator valve can dramatically change both the pattern volume and the pattern cutoff accuracy. The dynamic viscous properties of some adhesives require a fine applicator valve adjustment to eliminate the adhesive cutoff filament trailing, or flooding of the valve at the trailing edge of the pattern in order to achieve the desired pattern.

## MAINTENANCE:

Initial Startup, Running Production, Shutdown, and Restart:

Startup: All fluid and air lines must be clear of foreign material prior to running production. It is recommended to purge the air line with clean, dry, un-lubricated air; and it is recommended to purge the adhesive lines with the adhesive that is to be used for production prior to installation of the applicator valve. After installation of the applicator valve, the entire adhesive section should be purged of all air pockets. This can be achieved by repeatedly cycling the valve while holding it higher than the adhesive supply lines and applying 20 to 30 psi adhesive pressure.

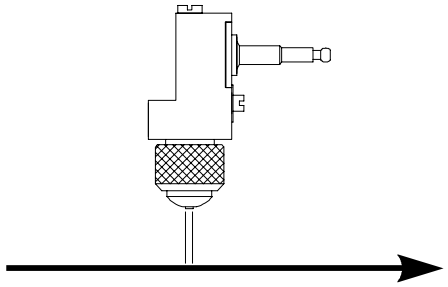

*Illustration 1-4*
**35-51 SERIES SQUIRT WITH SUBSTRATE**

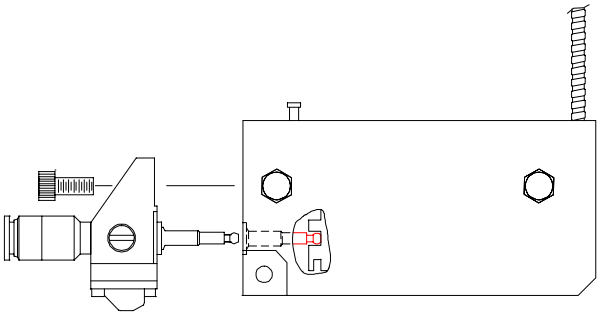

*Illustration 1-5*
**35-52 SERIES WITH 40-40-02 ACTUATOR**

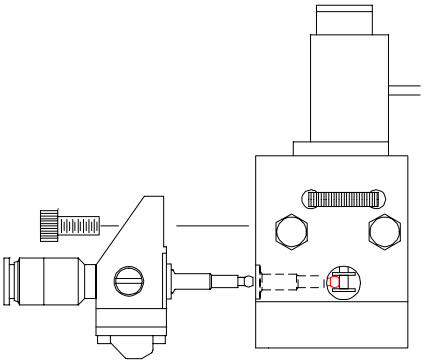

*Illustration 1-6*
**35-52 SERIES WITH 40-40-12 ACTUATOR**

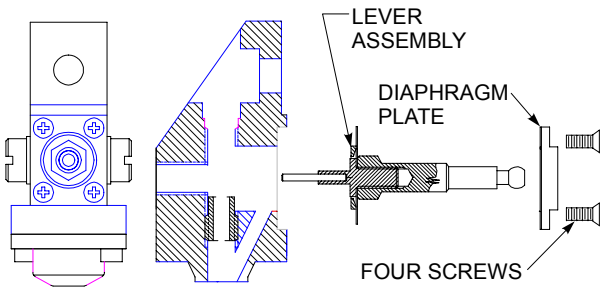


*Illustration 1-7*
**REMOVING LEVER ASSEMBLY**

## REPAIR & REBUILD GUIDE:

**Extrusion** Valve, Rebuild:

Installation of **35-51 Series** Service Kits:

1. Remove four screws in diaphragm plate then remove entire lever assembly (*Illustration 1-8*).
2. Remove valve end plug from valve end opposite outlet.
3. Remove needle through valve end plug hole.
4. Using a narrow, flat head screwdriver, remove needle guide from inside of the valve body. The needle guide holds the valve seat in place and can be accessed through the valve end plug hole (*Illustration 1-8*).
5. Remove valve seat by forcing it up through valve end plug hole. CAUTION: A variable number of seat seal shims may or may not come out of the valve with the valve seat. They are 0.003" thick, so be aware. These seat seals are critical for both valve seal and outlet-to-substrate standoff distance.
6. Install new valve seat and needle guide while making certain the same number of seat seals are between valve seat and body.
7. Install needle guide and measure valve outlet-to-rub bar standoff distance (0.010 +/- 0.002"). If this distance is incorrect, add or remove seat seals as needed.
8. Install new needle, valve end plug, lever assembly, and diaphragm plate.

Installation of **35-52 Series** Service Kits:

1. Disassemble valve as described in steps one through three above.
2. Remove valve seat by removing the two hex head screws (*Illustration 1-9*).
3. Inspect the O-Ring and replace with part number 90-07-64 if needed.
4. Install new valve seat in place with the two screws then install the new needle in place. **NOTE**: The needle and seat assembly, ordered as a service kit, is factory lapped as a pair and should be installed as a pair. If not, you must lap the needle to the seat to insure a no-leak fit.
5. Install valve end plug, lever assembly, and diaphragm plate.

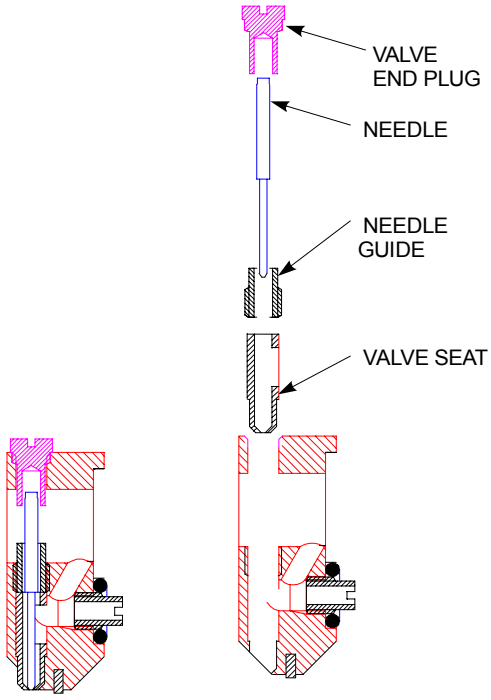


*Illustration 1-8*
**35-51 EXTRUSION VALVE**

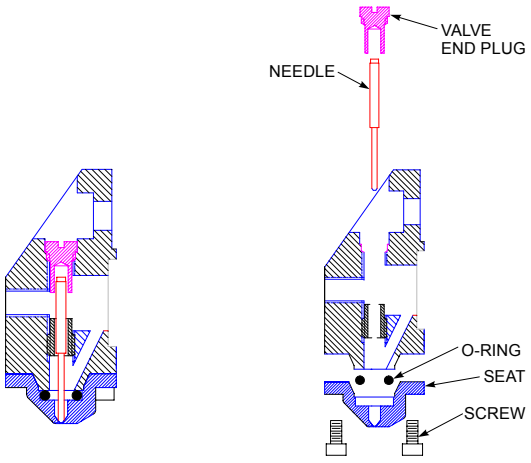


*Illustration 1-9*
**35-52 CONTACT VALVE**

**Spray** & **Squirt** Valves, Rebuild:

1. Remove nozzle cover, nozzle, and seat from valve; the spray valve requires unscrewing the seat from the valve body (*Illustration 1-10*).
2. Remove four screws in diaphragm plate then remove entire lever assembly (*Illustration 1-7*).
3. Remove valve end plug from valve end opposite outlet.
4. Remove needle through valve end plug hole.
5. Install new seat and needle. **NOTE**: The needle and seat assembly, ordered as a service kit, is factory lapped as a pair and should be installed as a pair. If not, you must lap the needle to the seat to insure a no-leak fit.
6. Re-install valve end plug, lever assembly, diaphragm plate, four screws (*Illustration 1-7*), nozzle, nozzle cover, and nozzle retaining nut.

## LEVER ASSEMBLY

Whenever the lever assembly (*Illustration 1-7*) is re-installed it must be adjusted so that at *no power* the needle is in a closed position with the lever shaft at 90° to the valve body.

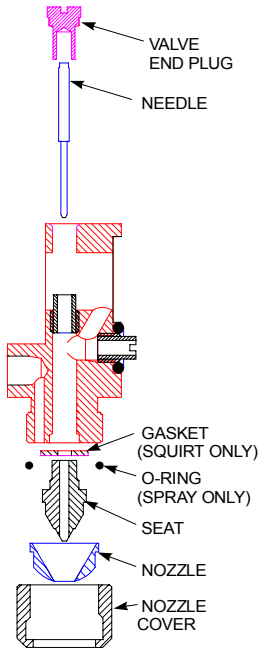


*Illustration 1-10*
**35-51 SQUIRT/SPRAY VALVE**

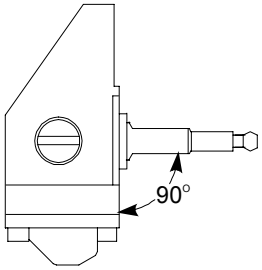


*Illustration 1-11*
**LEVER ASSEMBLY 90° TO VALVE BODY**

## TROUBLESHOOTING GUIDE

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| No adhesive flow or valve is slow to open | Valve installed incorrectly | Install actuating lever in saddle. (See Illustrations 1-5 & 1-6) |
| | Actuator malfunction | Check actuator movement. |
| | Adhesive flow restricted | Open fluid control |
| | Plugged valve seat | Remove foreign debris or dried adhesive from valve |
| | Broken fork pin or actuating lever | Replace actuating lever assembly |
| Adhesive does not shut off or valve is slow to close | Adhesive build up or foreign material in valve seat | Remove foreign debris or dried adhesive from valve seat |
| | Actuator malfunction | Check actuator movement |
| | Needle and valve seat damage due to excessive wear | Replace needle and seat assembly (See chart page 1-6) |
| | Broken fork pin or actuating lever | Replace actuating lever assembly |
| | Coagulated adhesive forming in applicator valve | Remove valve from actuator and thoroughly clean |
| Not enough adhesive | Adhesive flow restricted | Open fluid control |
| | Adhesive pressure too low | Increase fluid pressure |
| | Plugged strainer/filter in adhesive supply | Clean or replace strainer/filter element |
| | Coagulated adhesive forming in applicator valve | Remove valve from actuator and thoroughly clean valve |
| | Adhesive build up or foreign material in valve seat | Remove foreign debris or dried adhesive from valve seat |
| | Incorrect choice of outlet volume | Consult factory for valve with other size outlet volume |
| Too much adhesive | Valve wide open | Adjust fluid control |
| | Adhesive pressure too high | Decrease fluid pressure |
| | Incorrect choice or outlet volume | Consult factory for valve with higher outlet volume |
| Unbalance, distorted, or erratic adhesive pattern | Adhesive build up on valve seat or air nozzle | Remove dried adhesive from valve seat or air nozzle |
| | Extrusion valve not in contact with substrate | Increase valve to substrate contact pressure or install spring backup |
| | Inconsistent substrate | Install machine guides to maintain consistent substrate position |
| | Too much atomizing air for spray | Decrease atomizing air flow |
| | Incorrect mounting position for spray | Make certain valve is perpendicular to substrate |
| Single shot or drop of adhesive as valve closes | Needle pumping adhesive as valve closes | Increase fluid pressure and reduce valve stroke length |
| Rapid adhesive nozzle flow build up | Not enough atomizing air for spray pattern | Increase atomizing air |
| | Contamination or improper adhesive being used | Consult adhesive supplier for assistance |
| Spray pattern to narrow | Spray valve mounted too close to substrate | Increase valve to substrate distance |
| Spray pattern too wide | Spray valve mounted too far to substrate | Decrease valve to substrate distance |
| Valve trailing at shutoff | Adhesive build up on valve seat or air nozzle | Remove dried adhesive from valve seat or air nozzle |
| | Contaminated or improper adhesive being used | Consult adhesive supplier for assistance |

# 35-51 & 35-52 SERIES
# REPLACEMENT ASSEMBLIES

| 35-XX-XX Part No. | *Needle & Seat Ass'y | **Actuating Lever Ass'y | Description |
|---|---|---|---|
| 35-51-00 | 90-35-38 | 90-35-33 | Single Vein Continuous Web L/V |
| 35-51-01 | 90-35-26 | 90-35-33 | Single Vein Continuous Web S/V |
| 35-51-02 | 90-35-39 | 90-35-33 | Single Vein Continuous Web H/V |
| 35-51-05 | 90-35-38 | 90-35-33 | Single Vein Sheet Fed L/V |
| 35-51-06 | 90-35-26 | 90-35-33 | Single Vein Sheet Fed S/V |
| 35-51-07 | 90-35-39 | 90-35-33 | Single Vein Sheet Fed H/V |
| 35-51-10 | 90-35-38 | 90-35-33 | Single Vein Continuous Web L/V |
| 35-51-11 | 90-35-26 | 90-35-33 | Single Vein Continuous Web S/V |
| 35-51-12 | 90-35-39 | 90-35-33 | Single Vein Continuous Web H/V |
| 35-51-20 | 90-35-38 | 90-35-34 | Dual Vein, ¼" Centers, Continuous Web L/V |
| 35-51-21 | 90-35-26 | 90-35-34 | Dual Vein, ¼" Centers, Continuous Web S/V |
| 35-51-22 | 90-35-39 | 90-35-34 | Dual Vein, ¼" Centers, Continuous Web H/V |
| 35-51-25 | 90-35-38 | 90-35-34 | Dual Vein, ¼" Centers, Sheet Fed L/V |
| 35-51-26 | 90-35-26 | 90-35-34 | Dual Vein, ¼" Centers, Sheet Fed S/V |
| 35-51-27 | 90-35-39 | 90-35-34 | Dual Vein, ¼" Centers, Sheet Fed H/V |
| 35-51-30 | 90-35-38 | 90-35-35 | Dual Vein, .310" Centers, Continuous Web L/V |
| 35-51-31 | 90-35-26 | 90-35-35 | Dual Vein, .310" Centers, Continuous Web S/V |
| 35-51-32 | 90-35-39 | 90-35-35 | Dual Vein, .310" Centers, Continuous Web H/V |
| 35-51-35 | 90-35-38 | 90-35-35 | Dual Vein, .310" Centers, Sheet Fed L/V |
| 35-51-36 | 90-35-26 | 90-35-35 | Dual Vein, .310" Centers, Sheet Fed S/V |
| 35-51-37 | 90-35-39 | 90-35-35 | Dual Vein, .310" Centers, Sheet Fed H/V |
| 35-51-40 | 90-35-38 | 90-35-33 | Single Vein Left Hand Sheet Fed L/V |
| 35-51-41 | 90-35-26 | 90-35-33 | Single Vein Left Hand Sheet Fed S/V |
| 35-51-42 | 90-35-39 | 90-35-33 | Single Vein Left Hand Sheet Fed H/V |
| 35-51-45 | 90-35-38 | 90-35-33 | Single Vein Right Hand Sheet Fed L/V |
| 35-51-46 | 90-35-26 | 90-35-33 | Single Vein Right Hand Sheet Fed S/V |
| 35-51-47 | 90-35-39 | 90-35-33 | Single Vein Right Hand Sheet Fed H/V |
| 35-51-60 | 90-35-61 | 90-35-33 | Mini-Spray L/V |
| 35-51-61 | 90-35-62 | 90-35-33 | Mini-Spray S/V |
| 35-51-62 | 90-35-63 | 90-35-33 | Mini-Spray H/V |
| 35-51-55 | 90-35-64 | 90-35-33 | Mini-Squirt L/V |
| 35-51-56 | 90-35-65 | 90-35-33 | Mini-Squirt S/V |
| 35-51-57 | 90-35-66 | 90-35-33 | Mini-Squirt H/V |
| **35-52-00** | **90-35-80** | **90-35-33** | **Smooth Nose, Universal Applicator, L/V** |
| **35-52-01** | **90-35-81** | **90-35-33** | **Smooth Nose, Universal Applicator, S/V** |
| **35-52-02** | **90-35-82** | **90-35-33** | **Smooth Nose, Universal Applicator, H/V** |
| 90-35-32 | Diaphragm | | |

*90-35-17 Seat Seal recommended for each Needle & Seat Assembly replacement and must be ordered seperately. (Not used on Spray, Squirt and 35-52 valves).
**Actuating Lever Assembly includes: Valve Lever, Diaphragm, Thrust Plate, Actuating Fork and Pin.