

ROBBINS INSTRUMENTS

DERMO-JET

Your DERM-O-JET is the latest model of the only original, authentic needleless pressure infiltration apparatus available in the United States. Invented by Dr. A. Krantz, a French physician, the DERM-O-JET is protected by U.S. and foreign patents. The DERM-O-JET is a versatile, time-tested, medical instrument for administration of subtopical injections of parenteral medicaments, anesthetic solutions, steroids in aqueous suspension, soluble drugs, vaccines, antibiotics, etc. The DERM-O-JET is made of the highest quality materials and is marketed exclusively by Robbins Instruments Inc., Chatham, NJ.

Each DERM-O-JET is stamped with a recorded serial number and is guaranteed against mechanical defects for a period of one year from the day of purchase when used in accordance with these instructions. The guarantee is not applicable to the Plastic Chamber and Plastic Spacer. THE GUARANTEE SHALL BECOME VOID IF TAMPERING OR UNAUTHORIZED REPAIRING HAS BEEN ATTEMPTED.

WARNING: Opening of the compressed spring mechanism may result in a serious injury.
Never dry-fire. Refill before reservoir is completely empty.

BASIC DERM-O-JET INSTRUCTIONS

Sterilization

Prior to sterilization, the Plastic or Pyrex Chamber should be filled with **sterile** water and the DERM-O-JET fired a few times to cleanse the plunger and the Injector Head. The Injector Head and Chamber should be unscrewed from the DERM-O-JET body and separated. The Chamber should be scrubbed with a soft brush, such as a nylon perculator brush, in a detergent solution, followed by a thorough rinsing in clean water. **The brush should not be used for cleaning the Injector Head, as it may damage the fine wire mesh filter. Never push any cleaning object inside the Injector Head.**

The DERM-O-JET may be sterilized by boiling water or autoclaving (**no gas**) up to 284°F (140°C). The preferred sterilization method for the DERM-O-JET is by steam-autoclave. **Avoid dry heat.** The Chamber and the Injector Head should be **wrapped separately** in gauze pads, and the body of the DERM-O-JET placed on a small towel to prevent direct contact with the sterilizer. The autoclave should be set for 15 lbs. for 20 minutes. When finished, allow the DERM-O-JET, Injector Head, and Chamber to cool off before assembling it. When sterilizing the Injector Head with Spacer attached in a bath of germicidal solution, the droplets must be shaken off after each immersion and the DERM-O-JET fired once to clear the Orifice. Wipe any residual solution with an alcohol swab. There should be sterile water or medicament in the chamber. Never dry fire the DERM-O-JET.



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Loading

Unscrew the Injector Head and pull it out with Chamber attached. The DERMO-JET is normally filled with a needle syringe from a vial with 0.5 to 4.5ml of medicament. **The chamber holds 5ml but should not be filled over the Chamber ring line, which indicates a 4.5ml filling capacity.** If filling from an ampule, avoid the possibility of occluding the Injector Head with a glass splinter when pouring directly from the ampule. To refill, unscrew the Injector Head and Chamber just enough to make a side opening for the entrance of a needle syringe. It is advisable to discharge 3 to 4 injections into the air after refilling with a different solution, in order to evacuate the Injector Head of the residue that is left there from the previous charge.

Priming

Please note that after the detachment of the Injector Head, and especially following sterilization, there will be a small volume of air trapped inside the Injector Head's channel and until this air is expelled by repeated priming, the ejected spray will not infiltrate the tissue. It may require a few firings until all traces of air have been evacuated with the ejected solution and the DERMO-JET is producing a characteristic sound like a "crack."

Hold the DERMO-JET vertically with one hand and point the **Injector Head down**. Swing the Jack Handle down with the other hand until a cocking click is heard. Allow the spring to return the Jack Handle to rest. (With some practice, priming can be done with one hand.) Priming the Plunger simultaneously fills the ejection chamber with 0.1ml. Because the ejection chamber is filled by gravity, maintaining the vertical position is highly important when the Reservoir Chamber's contents are low.

A faster method of priming can be produced by rotating the Jack Handle about 125° to a point where it almost locks the Plunger into a firing position, while holding the DERMO-JET vertically. During such manipulation, the Jack Handle remains under the spring pressure. Now, while moving the Jack Handle down and rapidly up, the Injector Head will be emitting pulsating squirts of liquid and simultaneously purging the Injector Head of air.

Ejection and Injection

The DERMO-JET can be fired from any angle. It is actuated by pressing the thumb upon the Release Button, which instantly triggers the ejection mechanism with an explosive impact. In using a micronized drug suspension, give the DERMO-JET a thorough shake before priming to produce a uniform dispersal of the drug. Should there be a time lag after priming, shake the DERMO-JET again before firing.

The detachable plastic Spacer functions as a positioner and the injection-site stabilizer. The Spacer can be sterilized in a germicidal bath (avoid harsh agents) and provides clinical asepsis for routine injections. Between patient injections, the Injector Head and Spacer can be cleansed with an alcohol swab. To avoid lacerations, one should hold the DERMO-JET steady and vertically. The closer the Injector Head is held to the site of infiltration, the smaller will be the puncture and the larger the dosage of injection. Unlike a hypodermic needle, the DERMO-JET does not core, but punctures, producing a wheal. **No air can be injected.** To avoid vein piercing, the wheal should be placed next to the vein.

Firing of the DERMO-JET is accompanied by an explosive burst, produced by the liquefied micro-jet ejected from the orifice with a velocity that is higher than the speed of sound. If the patient is treated with a DERMO-JET for the first time, the physician can demonstrate the sound effect of ejection by firing into the air. To a child patient, the painless DERMO-JET injections can be demonstrated by harmless firing on the physician's palm from a distance of 10 inches.

ADDITIONAL INFORMATION AND INSTRUCTIONS

1. The DERMO-JET is supplied with sterile water that was used for testing.
2. Approximate the volume of medication that will be needed, so that there will be none left at the day's end. One can always refill if additional medication is needed.
3. When using steroids in suspension during office hours, the DERMO-JET should be kept upside down in a sterilized stainless steel DERMO-JET Stand (available from Robbins). Before each priming, one should homogenize precipitation of steroid's crystalline particles by shaking DERMO-JET well.
4. When changing from steroids to local anesthetic solutions, DERMO-JET should be flushed with alcohol. Never poke anything into Injector Head and do not clean it ultrasonically. It is self-cleaning by ejections with alcohol or water.
5. When advancing the Injector Head mounted with the Pyrex Chamber (glass), stop when the Chamber touches the White Seal. The White Seal should not be compressed by finger tightening, as it functions as a shock absorber for glass, which can crack due to over tightening.
6. The DERMO-JET should be emptied at the close of each office day and flushed by firing or pumping with alcohol or sterile or distilled water, and stored in a dust-free atmosphere. Cleanse drug stains with an alcohol swab.
7. Discard any solution that may be left at the end of the office hours and fill half the Chamber with distilled water or alcohol; shake well and fire **10** times.
8. Discard, refill as above and fire again **10** times and discard or discard by pumping.
9. Detach the Chamber from the Injector Head and wipe the inside by drawing gauze through it. Wipe the Upper Seal, the entire length of the Plunger and the walls of the Body with a sturdy wooden handled swab stick.
10. Reassemble and keep the DERMO-JET stored in a dust-free place or cover it with a towel until ready for sterilization.
11. After periodic layoffs, or after sterilization by steam-pressure, the DERMO-JET should be test-fired to equalize pressure in Injector Head. Pressure balance can also be done by pumping (milking) by rotation of Jack Handle to about 10° **short of its priming mark** and letting it return rapidly to its resting place. Two to three pumpings with Injector Head held in priming position will restore jet performance to its top efficacy.

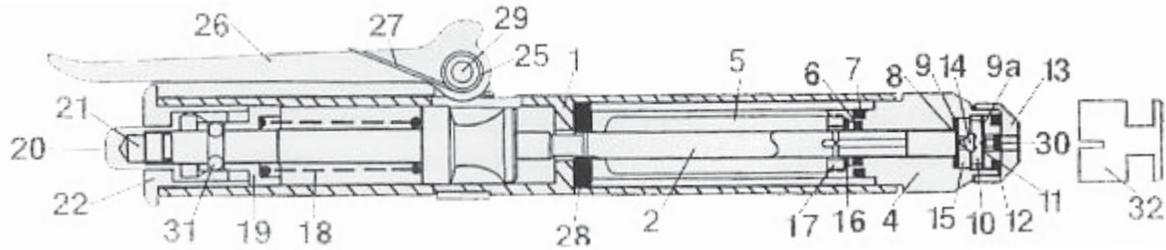
DO NOT STORE DRUGS OVERNIGHT IN DERMO-JET

WARNING:
**BEWARE OF MISREPRESENTATIONS AND COSTLIER AND
INFERIOR IMITATIONS**

Should a DERMO-JET order be requisitioned through the purchasing channels in the medical institution, one should beware of getting some other "jet". The authentic DERMO-JET bears stampings: "U.S. Patent No. 3, 129, 708, Robbins Instruments Co., Chatham, NJ".

Caution—Important

The Release button (#20) that triggers the Plunger (#2) is set to actuate at a predetermined thumb pressure. With extensive usage, the DERMO-JET may in time develop a wear in the Pressure Release components resulting in sensitivity of the Release Button, which may trigger the actuation of the Plunger by just touching it. **It is incumbent upon the user of the DERMO-JET, when noticing a trigger sensitivity, to immediately discontinue use of the DERMO-JET** and return it to Robbins Instruments, Inc., 2 North Passaic Avenue, P.O. Box 441, Chatham, NJ 07928, for overhaul of the release mechanism.



DERMO-JET Applications in Human Medicine

- **Painless Uses**

A local anesthetic prior to an injection using a syringe with a needle or a puncture (lumbar, pleural, articular, sternal, etc.).

- **Intradermic Injections and Tests**

The reading of the result of the test is clearer due to the absence of any secondary infection which might be caused by a needle.

- **Intradermic Vaccinations**

BCG, Anti-cholera, Tetanus, Diphtheria, Whooping Cough, Measles.

- **Mesotherapy**

Needleless injections can be given for intradermic treatment, local anesthetics or in connection with reflexology.

- **Dermatology**

This method can be used for in situ injections in the treatment of alopecia, psoriasis, keloids and hypertrophical scars, sclerodism, keratosis, acne, etc.

- **Phlepolology**

Anesthetics prior to a thrombectomy and before hardening injections.

- **Urology**

The treatment of Peyronie's disease.

- **Proctology**

The treatment of hemorrhoids.

- **Gynecology**

Needleless injections of progesterone to regularize the ovarian cycles.

- **Minor Surgery**

Painless suturing. By making contiguous papules one produces linear zones of anaesthetic which help incision with a bistouri.

- **Miscellaneous Uses**

Acupuncture, sports medicine, aesthetic medicine, etc.

DERMO-JET PARTS LIST

- | | | | |
|-----|-----------------------|-----|---------------------|
| 1. | Body | 16. | Escutcheon |
| 2. | Piston | 17. | Retaining Nut |
| 3. | Block | 18. | Main Spring |
| 4. | Injector Head Housing | 19. | Cage |
| 5. | Chamber | 20. | Release Button |
| 6. | Small O-Ring | 21. | Release Spring |
| 7. | Large O-Ring | 22. | Body Cover |
| 8. | Washer | 25. | Jack Handle Bushing |
| 9. | Fine Filter | 26. | Jack Handle |
| 9a. | Coarse Filter | 27. | Jack Handle Spring |
| 10. | Valve Spring | 28. | Seal |
| 11. | Orifice Mount | 29. | Jack Handle Axle |
| 12. | Medium O-Ring | 30. | Jewel Orifice |
| 13. | Head Cover | 31. | Ball Bearing |
| 14. | Valve | 32. | Spacer |
| 15. | Valve Seat | | |

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