

# EUROSIDER®

## Nitrothermspray F.A.Q. Frequently Asked Questions

Q. *Do I need an air compressor to use the Nitrothermspray?*

R. Yes, of course. NITROTHERMSPRAY does not radically change the existing plant and can be easily integrated. The traditional paint carrier or compressed air is replaced by a nitrogen enriched flow (nitrogen concentration up to 99,5%). Compressed air is needed to supply the nitrogen generator.

Q. *How much nitrogen does the NITROTHERMSPRAY produce?*

R. It depends how many painting stations there are. For example, if one spray gun consumes 400 litres per minute, the right generator is a NITROTHERMSPRAY J20 (with an optional 500 litre built-in receiver tank) which produces 20 m<sup>3</sup>/h of nitrogen.

Q. *What maintenance does the NITROTHERMSPRAY require?*

R. As stated in the manual the NITROTHERMSPRAY does not need any particular kind of maintenance apart from the inlet air filters which need to be changed about once a year or when the hands of the gauge reach the red area.

Q. *How much does it cost to produce nitrogen using the NITROTHERMSPRAY?*

R. It costs slightly more than that of compressed air.

Q. *Does nitrogen alter the chemical formulae in the paint?*

R. Absolutely not, nitrogen is an inert, colourless, odourless gas. Furthermore it is already present in compressed air up to 78%.

Q. *Could I obtain a better transfer efficiency of the paint by just heating it?*

R. No, the benefits are not the same because at the nozzle the compressed air expands and becomes a cold, damp fluid carrier, cancelling the preheating effect of the paint and only temporarily reducing its viscosity before use.

Q. *Instead of using the thermal tube, can I heat compressed air and have the same benefits as those of the heated nitrogen?*

R. The quantity of water vapour present in the air is directly proportional to its temperature: i.e. at 10°C there are about 10 g/m<sup>3</sup> of moisture, at 50°C there are 100 g/m<sup>3</sup>. By heating the air there is an increased quantity of water vapour in the paint fluid carrier, whereas nitrogen being anhydrous can be heated without problems.

Q. *If I dry and filter the compressed air do I have the same benefits as those of the NITROTHERMSPRAY?*

R. No, compressed air filtered and dried has a dew point of about +5°C while nitrogen condensates at – 60°C. Therefore, regardless of the atmospheric conditions, with NITROTHERMSPRAY a clean and dry fluid carrier is used. Moreover compressed air is a mixture of gasses while NITROTHERMSPRAY delivers a stable and inert fluid: nitrogen.

Q. *Do I need more nitrogen generators if I have more than one painting stations?*

R. No, to know how much nitrogen is needed you calculate how many litres per minute of carrier fluid is used during the painting process. Once we have this information, we know the size of the generator that you need. For example, if there are two painting stations the plant can be made up of one NITROTHERMSPRAY J30 nitrogen generator (with an optional 500 litre built-in receiver tank) and one Top Spray module.

Q. *I do not want to buy generators from Eurosider or from its distributors. Can I use other means to generate nitrogen?*

R. No, Eurosider apart from having patented NITROTHERMSPRAY, TOP SPRAY and the heated hose, also holds the patent of the method of paint spraying with heated ionized nitrogen. It is therefore impossible to paint using nitrogen in cylinders (it would be too expensive anyway), PSA generators, cryogenic systems or other membrane nitrogen generators.

Q. *In conclusion, what are the concrete advantages of NITROTHERMSPRAY?*

R. In brief the advantages can be listed as follows:

- Improves quality of less skilled painters
- Higher DOI (Distinction of image)
- Controlled formation of orange peel
- Elimination of mottling
- Increases transfer efficiency
- Eliminates wait time between 1<sup>st</sup> and 2<sup>nd</sup> coats
- Decreases flash times
- Reduces overspray and rebounding paint
- Improves colour matching in solvent and water borne paints
- Removes surface moisture
- 50 to 100% reduction of solvents
- 100% control of delivery
- Reduced application time by min. 25 - 50%
- Reduction of outlet pressure
- Minimum 40% increase in production
- Change of Polarity to promote attraction
- Reduces VOC's emissions
- Allows the return of pure oxygen back to the environment
- Eliminates all the major uncontrollable variables in spray painting
- Extends life of booth filters and less booth maintenance