

P-300 SCF Delivery System

MuCell



Lighter, lower cost and more sustainable packaging

MuCell physical foaming advantages are for the first time available to the thin-wall packaging industry through the introduction of P-Series.

- 5% to 12% lighter parts
- 20% to 50% less clamp tonnage
- 10% to 20% lower viscosity > lower injection pressure
- enables new package designs (higher L/T, ability to fill from thin to thick)
- up to 20% faster cycle
- 5% to 12% lower carbon footprint

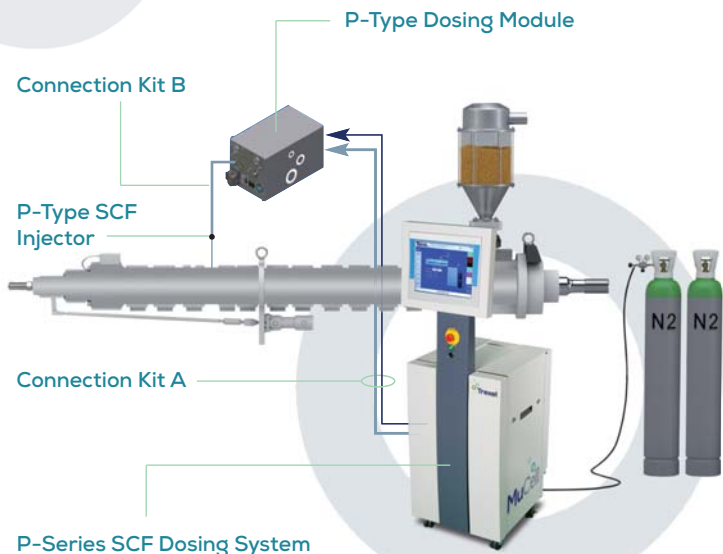
Foaming technology for fast cycling applications

The Trexel MuCell P-Series SCF (Super Critical Fluid) delivery system is a state of the art Nitrogen delivery and dosing system, designed specifically for fast cycling thin wall applications. The system converts industrial grade N₂ (CO₂ optional) into a super critical fluid and precisely doses the SCF into the injection molding machine. The single phase solution of plastic melt and SCF in the barrel reduces the melt viscosity allowing for lower injection pressure and longer flow length relative to wall thickness to be realized. As the polymer is injected into the mold, N₂ cells nucleate and expand to pack the cavity from within. The traditional pack-and-hold phase is eliminated. Packing by local cell growth, instead of remote screw force, reduces clamp pressure, molded-in stress, warp and creates new light-weighting opportunities. MuCell's unique ability to fill thin-to-thick enables thinner base and side walls while retaining a thick rim for sealing purposes. Brand owners striving to meet cost reduction and sustainability goals will benefit from less resin use and reduced energy consumption.

Equipment & Specifications

P-series MuCell packaging system consists of following components:

- P-Series SCF delivery system (booster)
- Connection Kit "A" from SCF system to dosing module
- P-Series dosing module
- Connection Kit "B" from dosing module to injector
- P-Series SCF injector



Trexel

Technical Data

Model	P-300
Plasticizing Screw ¹	up to 60mm
Min SCF dose (N ₂)	100 mg
Max. SCF flow rate ²	400 mg/sec
Max. discharge pressure	345 bar
SCF delivery system	
Overall dimensions WxDxH	55x79x155 cm
Weight	216 kg
Electrical connection	230/110 VAC 1ø50/60 Hz 1.6 A
Compressed Air consumption	6.2 bar – 2250 NL/h – 10 mm
SCF Gas connection	17.2 – 200 bar – 8.2 kg/h- 8 mm
Max length kit "A"	6 m
Max length kit "B"	0.9 m (3ft) (>D40 1,2m (4ft))
P-series dosing module	
Overall dimensions WxDxH	24.8x47.4x27 cm
Weight	10.6 kg

¹ Guidelines only. For application specific system selection please contact Trexel.

² Based on expected 1 year service life time

Available Options

- **CO₂:** Configures gas components with the capability to process CO₂ and N₂
- **Dual Bottle:** Automatic nitrogen bottle switching station from 2 gas sources
- **Nitrogen Purity Control:** Monitors purity of the nitrogen supply

About Trexel

Trexel is in the business of providing technology which places tiny cells of gas in plastic parts, and our passion is manifested in the broader benefits that these micro bubbles can deliver. Our microcellular foaming technology **reduces production cost** while **increasing environmental sustainability**.

Our technology enables **lighter, more dimensionally stable products** which can be **produced faster** on **smaller, more energy efficient equipment**.

Since 1995 we have been applying our technology to thousands of applications in dozens of industries.

We have developed unsurpassed know-how, continuously improved our technology and enhanced our services, growing into the **global leader in microcellular foaming technology** we are today.

