

COPROMEC
DIE CASTING

Lubrication Unit



ncc DIE CASTING LLC

unikasting

CENTRAL LUBRICATION DEVICE

Copromec Die Casting, with more than 20 years of experience, produces patented tooling technologies and solutions for the high pressure die casting industry. Globally recognized thanks to our innovative products, we are a reliable partner trusted by the most renowned automotive companies in the world.

A signal generated by the die casting machine triggers the electro valve positioned inside the cabinet which activates the high-pressure pump. The lubricant is consequently drawn through a pipe from the barrel to the shot rod, up to the plunger tip head.



THE LUBRICATION UNIT & ITS OPTIONAL ACCESSORIES

The lubrication unit can be customized with the following optional extras:

FLOW METER:

sensor that generates an electrical impulse when a certain amount of lubricant flows through it.



TOWER LIGHT:

combination of 3 modules with various signaling elements.

INTEGRATED PLC:

touch screen panel which allows to monitor and control the lubrication cycle, adjust the lubricant quantity and save different lubrication programs.



MANUAL LUBRICATION BUTTON:

push button which activates the high-pressure pump, dispensing the set amount of lubricant.



LED INDICATOR:

indicator light that flashes green when the unit receives the signal to lubricate from the die casting machine.



LASER LUBRICANT LEVEL SENSOR:

sensor that, by means of a laser beam, accurately measures the lubricant level in the barrel.



LUBRICANT MIXER:

electric agitator used for stirring the lubricant in the barrel.



LUBRICANT LEVEL SENSOR:

sensor with one or two floats that activates a pre-alarm and an alarm when the barrel is running out of lubricant.



SMART LUBRICATION UNIT



MAIN FEATURES:

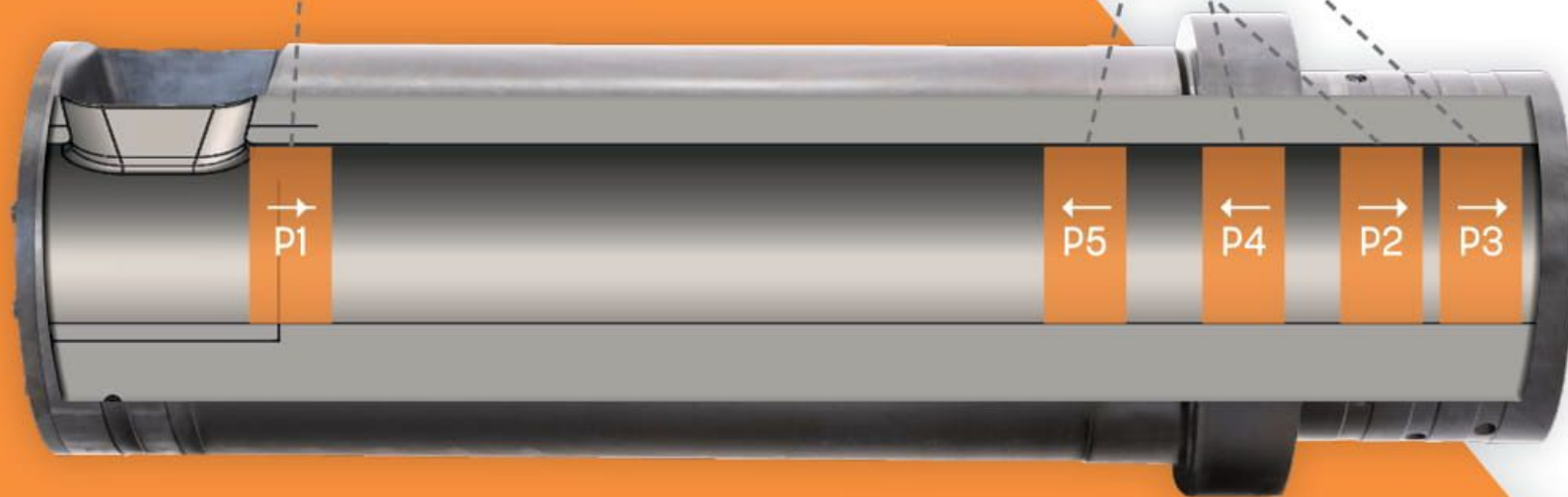
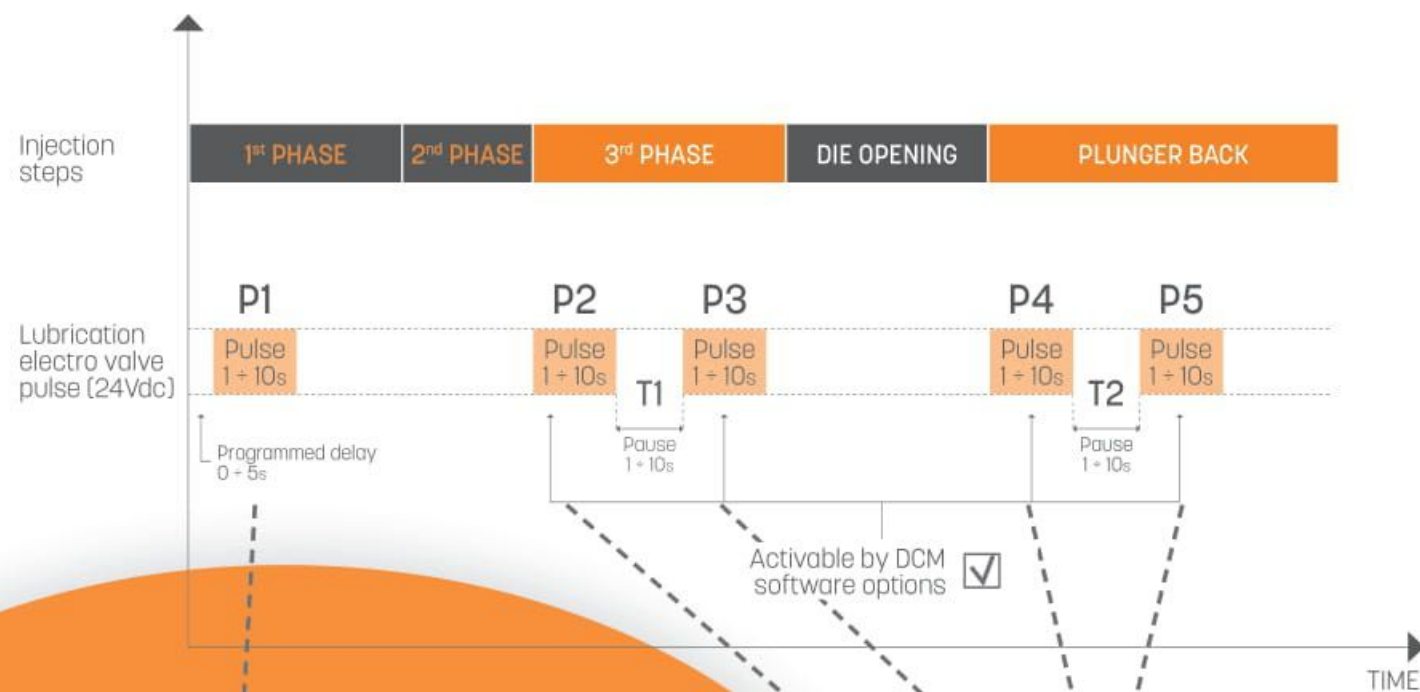
1. Customise the lubricant quantity delivered with every single signal;
2. Create and save different lubrication programs;
3. Save history data of each lubrication cycle;
4. Exchange data through PROFINET protocol;
5. Remote assistance.

The SMART Lubrication Unit requires only one impulse from the DCM (usually "plunger start") to operate. Starting from this impulse it is possible to set delays and generate additional signals, so that the lubricant is dispensed at the right point and at the right time. Every single setting regarding the lubrication cycle can be adjusted by means of the PLC integrated in the front door of the cabinet.

COMPLETE CONTROL OVER LUBRICATION PROCESS

Our patented lubrication system allows the customer to have full control over the lubrication process, as both the amount of oil and the point where it is dispensed can be set in order to achieve an even lubrication of all the internal surface of the shot sleeve.

The diagram below shows the recommended setting for the lubrication signals and the position in which the lubricant is delivered. The pulse arrangement can be modified as the customer sees fit.



WHICH LUBRICANT SHOULD I USE?

Choosing the right lubricant is essential not only to avoid the seizing of the plunger tip and fast wearing of all the other components of the injection system, but it also affects the quality of the cast parts.

Copromec has developed two high quality lubricants for its lubrication unit to guarantee the best performances:



MINERAL OIL WITH GRAPHITE

Advantages

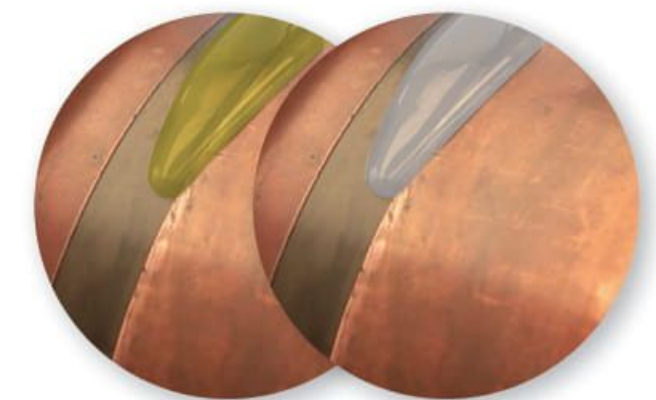
- Excellent lubricity;
- Extended tooling lifetime;
- Ensure a smooth and stable injection.



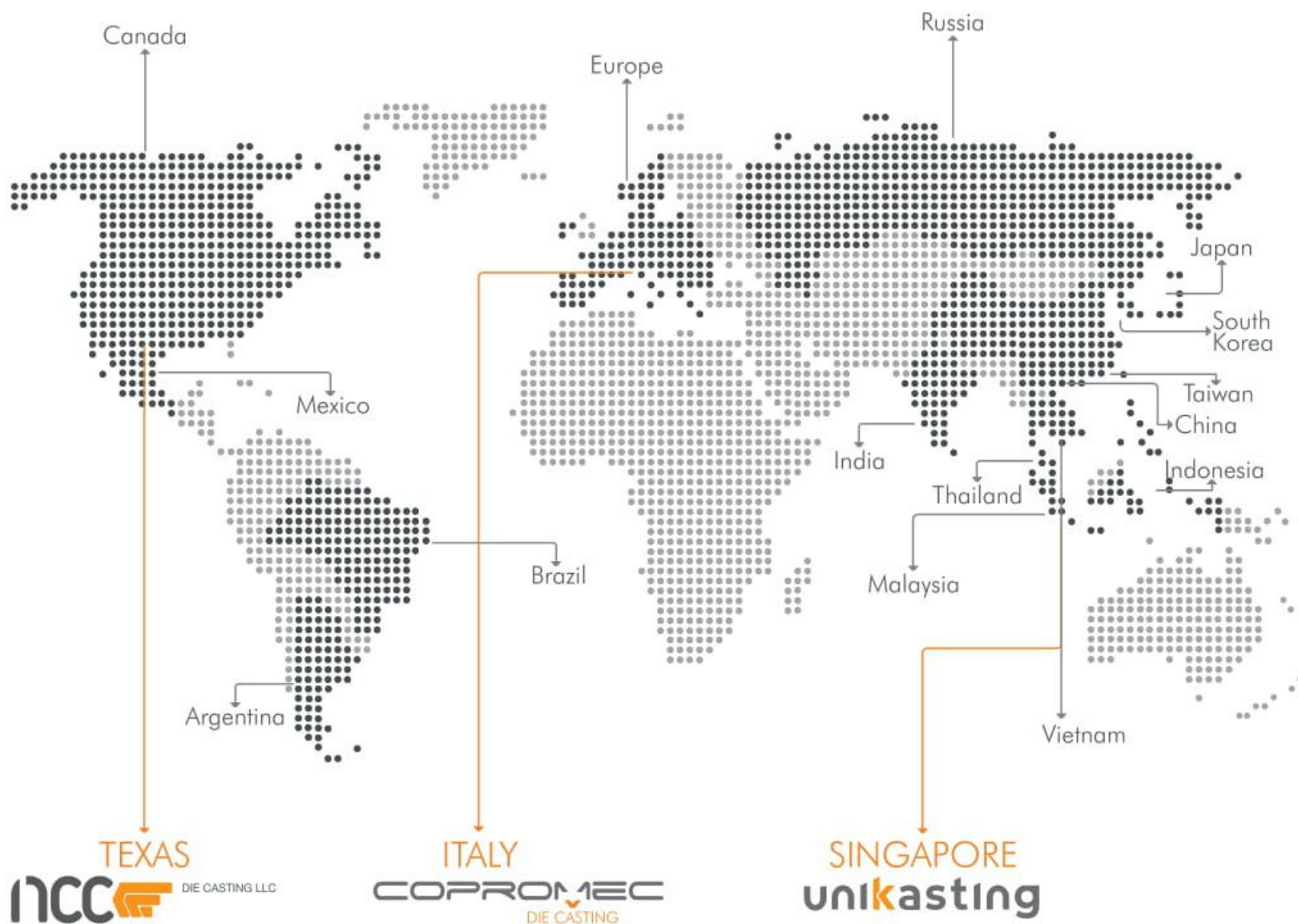
SYNTHETIC OIL WITHOUT GRAPHITE

Advantages

- Minimize flames during pouring of the alloy;
- Generate less gas compared to mineral oils;
- Biodegradable.



OUR LOCATIONS and Distributors



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