

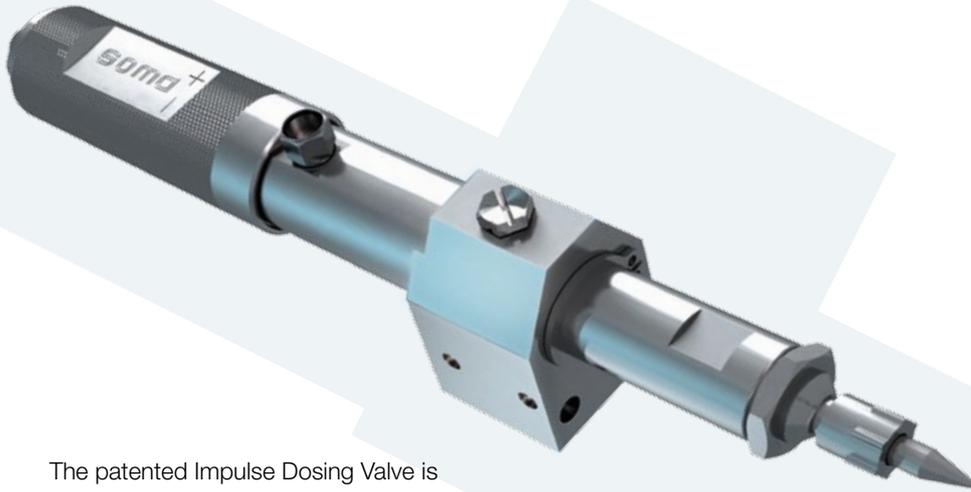
# IDV–Impulse Dosing Valve

Volumetric dosing of lubricants :  
contactless, reproducible, fast



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The patented Impulse Dosing Valve is the result of years of experience in the development and production of components in the field of volumetric dosing of lubricants. Wherever lubricants have to be accurately dosed with a precise volume, the IDV is in its element.

## The advantages at a glance

- ▣ contactless dosing method
- ▣ easy application in automated handling systems due to its small design and suitability in every area
- ▣ high process reliability
- ▣ required medium primary pressure is low, to prevent the lubrication from decomposing
- ▣ high dosing velocity

Driven by a monostable fast-acting pneumatic valve at a pressure range of 5 – 6 bar (72.5 – 87.0 PSI), up to 20 point-shaped dosings per second can be achieved. Thus, different dosing volumes are possible without having a noticeable time delay by initiation of the equivalent number of triggers.

## The IDV functional principle

The lubricant to be dosed is delivered to the IDV by means of the valve connection block at a static pressure of 3 – 6 bar (43.5 – 87.0 PSI). A built-in check valve inside the IDV's dosing chamber prevents the lubricant from leaking out in an uncontrolled manner. Upon actuation, the dosing piston inside

the valve cartridge is abruptly pressurized, causing the precisely fitted piston rod to shoot into the dosing chamber at a very high velocity. Thereby, the loaded lubricant column will be driven towards the dosing jet and opens the check valve. The resulting displacement stroke is carried out with high power, forcing the lubricant to escape through the dosing jet at high kinetic energy and flow velocity. The dosing piston stops abruptly as soon as it reaches its adjustable limit stop position. This terminates the lubricant jet instantly. Thus, pinpoint lubrication application at constant volume is guaranteed. The volume of lubricant can be manually adjusted by means of the turnable valve cylinder which limits the stroke of the dosing piston.

## IDV – More than the sum of its parts

The Impulse Dosing Valve is built according to a modular design principle and is made completely of stainless steel. Its main components are:

- ▣ valve cartridge
- ▣ valve connector block
- ▣ jet adapter and
- ▣ changeable dosing jets

This principle allows the best possible adjustment to the specific lubricant characteristics and product-specific dosing requirements by combining valve components with different dimensions together with optionally available accessories.

- ▣ valve cartridges with different dosing piston diameters for dosing volumes from 0.3 mm<sup>3</sup> – 40 mm<sup>3</sup>
- ▣ standardized changeable dosing jets with jet diameters of 0.4 mm – 1.5 mm; alternatively dosing jets supported by blow air
- ▣ controllable valve heating system to improve the flow characteristic and to avoid influence from the ambient air temperature

## Service as a key to success

The variety of lubricants to be dosed and their areas of application, as well as the number of product-related dosing requirements mostly demand an individually tuned dosing component.

Based on our expertise and technical possibilities, we offer our customers comprehensive services that range from feasibility analysis through to the individual adaption of single valve components and the execution of automated system solutions.

## Your request is our challenge

With our in-house dosing laboratory, we are able to do a first dosing analysis with our IDVs while using your product and your lubricant. Furthermore, we will be able to offer different system solutions that meet your requirements.

When will you challenge us?

