

## DAWNING OF A NEW ERA

# The Düker Plunger Valve Type RKV 7015

The most notable aspects of a plunger valve:

- ⇒ the flow passage is ring-shaped in any position
- ⇒ the movable obturator is shaped like a piston
- ⇒ the movement of the obturator is parallel to the axis of the pipeline

Plunger valves are mainly used for applications where pressure rates, flow rates and water levels in vessels must be controlled exactly and reliably; any cavitation is to be directed in a way that no damage can occur on the valve or the following pipeline. With multiple functions such as shut-off valve, check valve, non-return valve, safety and measuring valve, the plunger valve has a key function in plants and transport pipelines:

- to shut off a pipeline
- to adjust flow rates and pressures
- to start up and close down pipelines behind pumps
- to start up turbines in a bypass
- to drain water reservoirs through bottom outlets

This results in an extremely high strain during operation. Therefore a plunger valve must be designed to be robust, yet sensitive.

The **NEW Düker RKV type 7015** fulfils these superior and demanding requirements in total. With the support of CFD flow simulation as well as the finite elements method, the new valve has reached perfection in shape and function. Sophisticated technology, high-quality materials, low noise level, careful and precise manufacture and superior hygiene.

### These are the highlights:

Guiding rails in the body – **for a superior life expectancy**

- min. 8 guiding rails in 2 groups of 4 pieces each
- offset by 45°
- made of high-quality stainless steel with superior hardness, therefore resistant to wear
- fixed securely and tension-free in the body – without bolting or welding
- without material mixing zones

Main sealing – **for excellent operational safety**

- robust large profile sealing ring
- mounted onto the piston
- protected from the flow
- positioned outside of the cavitation zone
- positioned outside of the abrasion zone

Without any dead space – **for optimal hygiene**

- water flow all around the piston
- sealed shaft bearing



Maintenance friendliness – **significant reduction of time and cost expenditures**

- piston made of high-quality stainless steel
- piston with inferior hardness compared to the guiding rails
- any wear occurs on the piston, not on the guiding rails
- piston continuously turnable
- piston easily replaceable

The optimal adjustment range – even in case of low quantities without critical ring gap – is supported excellently by the robust, self-impeding and maintenance-free **Düker slidercrank mechanism**. The slidercrank gear adapts exactly to the torque progress of the valve. In the hydraulically effective closing end phase, the closing speed is reduced. This kinematic behaviour makes for an extremely soft closing. The danger of pressure surges is brought to a minimum.

The new Düker plunger valve type 7015 is synonymous with perfection and quality „**Made in Germany**“: durable – safe – reliable – economic.

Available in the nominal dimensions DN 100, 200 and 300, pressure rating PN 10 up to PN 40, from May 2018.

We will be glad to support you with our technical service for all questions and requests about the **Düker plunger valve type RKV 7015**.

# Düker Plunger Valve Type RKV 7015

as per EN 1074 part 1, 2 and 5  
 Face-to-face length EN 558 basic series 15  
 Düker epoxy finish for water

Shut-off and control valve for pressure adjustment and quantity limiting, one-part body with eye bolts, flanges as per EN 1092-2, inside and outside epoxy blue RAL 5005 according to GSK, ring-shaped passage, sealing both ways, in case of slotted cylinder one-way sealing, optimized flow channelling, control insert: seat ring, slotted cylinder or special versions depending on the operating data, guiding rails for the piston in the body made of stainless steel with superior hardness, fixed firmly in the body (without bolting or welding), robust profile sealing on the piston, piston turnable in case of wear on the guiding, sealing gaskets EPDM and plastic parts according to DVGW W 270.



## Material

- Body – EN-GJS-500-14
- Guiding rails – high-strength stainless steel, highly corrosion-resistant
- Piston – 1.4301
- Seat ring and control inserts – 1.4301
- Shaft – 1.4057
- Bearing bushings – bronze CC483K
- Clamping ring – 1.4301

Special materials on request

All materials in contact with potable water correspond to the latest version of the German UBA guidelines.

## Surface protection

- inside and outside epoxy blue RAL 5005 according to the GSK guidelines
- inside and outside Düker etec enamel as per EN ISO 11177, DEV guideline – on request

**Field of application:** Drinking water and raw water up to +60 °C

Nominal diameter DN	Nominal pressure PN	Test pressure in bar (water)	
		Body	Seat
150–300	10	15	11
150–300	16	24	17,6
150–300	25	37,5	27,5
150–300	40	60	44

## Operation:

- Hand wheel
- Electrical actuator<sup>1</sup>
- Pneumatic drive<sup>1</sup>

<sup>1</sup> special design upon request

DN 150, 200, 300

PN 10, 16, 25, 40

available approx. from May 2018

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Subject to modification and error