

WORKTECH
MODERN INDUSTRIAL TECHNOLOGIES

FluentSpin

Magnetic capping
head based on
hysteresis
technology



Twisted world



Equilibrium is one of the basic principles governing the world we are surrounded by. In many cases, to succeed, it is essential to find a midpoint, a perfect balance between extremes.

During everyday operation of a bottling line, it is necessary to regulate the tightening torque of capping heads depending on the assumed efficiency and work speed. It is related to the need of frequent changes of setpoints during production and the necessity to repeatedly regulate the capping head, which forces us to waste the most important resource – time.

Certainly, everyone of us has experienced problems with a stuck bottle cap or hurt hand with a damaged bottle collar. Both of these problems result from the changes in force applied by the capping machines depending on the proper regulation activities and the rotational speed of capping head. Is there any way to solve these issues? Of course!

In our laboratories, we developed a solution eliminating the adverse phenomena occurring in the traditional heads.

Using our experience and technical potential, we created the FluentSpin capping head with hysteresis clutch.

FluentSpin capping head with a hysteresis clutch.



Constant tightening torque over the entire range of rotational speeds (+/- 3%)



Asepticity – the aseptic construction made of titanium and stainless steel, sealed with PTFE, no lubrication requiring parts



Very smooth transfer of tightening torque, anti-hopping mechanism



Low inertness making possible the operation at the maximum rotational speed of 500 rpm



High durability and automaticity



The possibility of sterilising the entire head with the use of autoclave



Easy regulation of tightening torque without the use of tools within the range between 0.5 and 2.2 Nm



adjustments can be applied to ensure the compatibility with customer's equipment

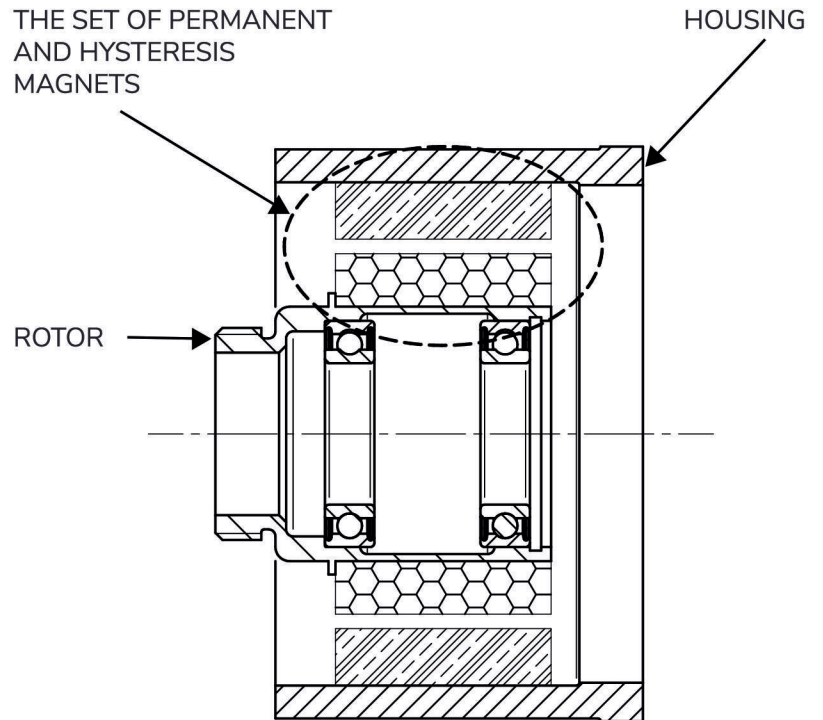
(different ranges may be set due to customer needs)

FluentSpin Magnetic Hysteresis Head

FluentSpin head working principle

The use of magnetic hysteresis clutch results in more fluent operation compared to the traditional mechanical and magnetic heads.

The elimination of friction parts ensures long-lasting trouble-free operation and constant torque, regardless of working speed



FluentSpin capping head of Worktech ensures **stable tightening torque** regardless of the rotational speed of the head and its regulation is smooth and does not require tools use.

The use of top-notch **high temperature resistant magnets** ensures stability of the parameters throughout the entire life cycle of the head. The materials used - including **titanium and PTFE** - make the head highly **aseptic** and easy to clean.

The use of anti-hopping hysteresis clutch eliminates the phenomenon of mechanical shock – “hopping” of the capping head.



Advantages of Worktech FluentSpin head

	FluentSpin hysteresis head	Hysteresis head of the competitor (producer 1)	Magnetic head based on eddy current technology (producer 2)	Head with a clutch with permanent magnets (producer 3)	Mechanical head - traditional (producer 4)
Wear parts	no	no	no	no	yes
Smoothness of transfer of tightening torque	high	high	high	very low	low/very low
Inertia	low	low	medium	medium	high
Stability of work parameters in time	high	high	high	high	very low
Tightening torque as a function of revolutions	constant	constant	linearly increasing	constant	linearly increasing
Asepticity	perfect	very good	good	good	poor
Lubrication requiring parts	no	yes	yes	yes	yes
Possibility of cleaning	very good	good	good	good	hindered
Sterilisation in autoclave	yes	no	no	no	no
Regulation tool	not required	not required	required	required	required

FluentSpin head may effectively replace all of the most popular solutions of producers, ensuring the highest quality for the reasonable price.

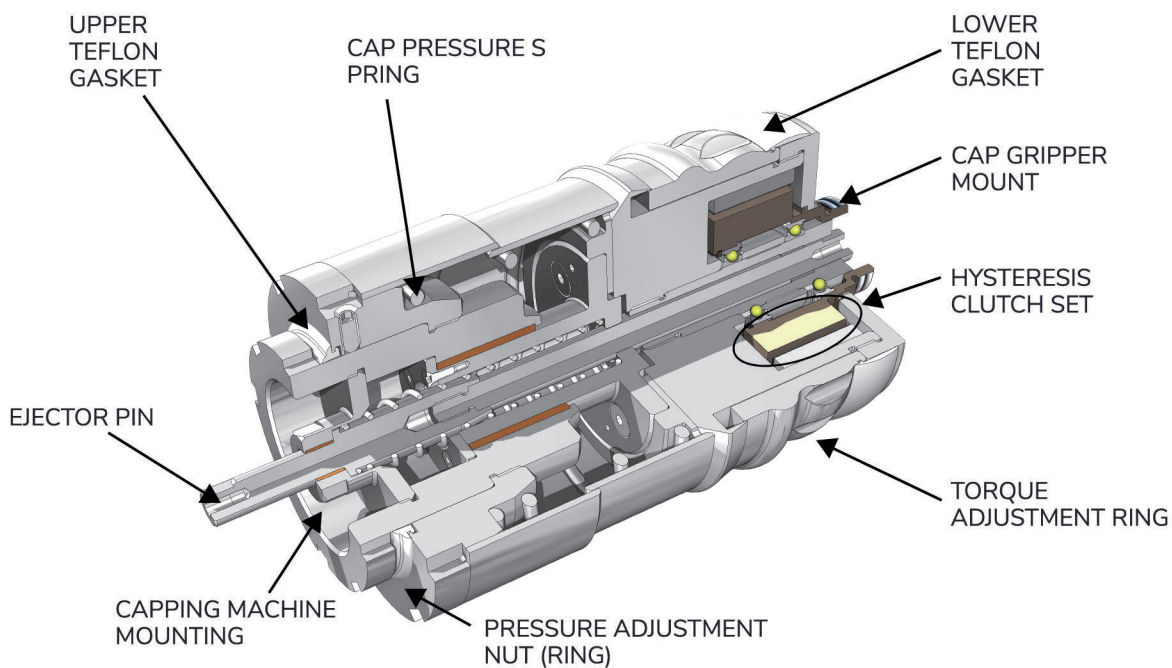
We make it possible to adjust the head to the capping machines of all popular producers, i.a. **Zalkin, Arol, Krones, Alcoa**.

The head does not include any parts requiring lubrication, which increases its asepticity and eliminates the necessity of this kind of maintenance. The entire head may be cleaned at a high temperature and sterilised in autoclave.

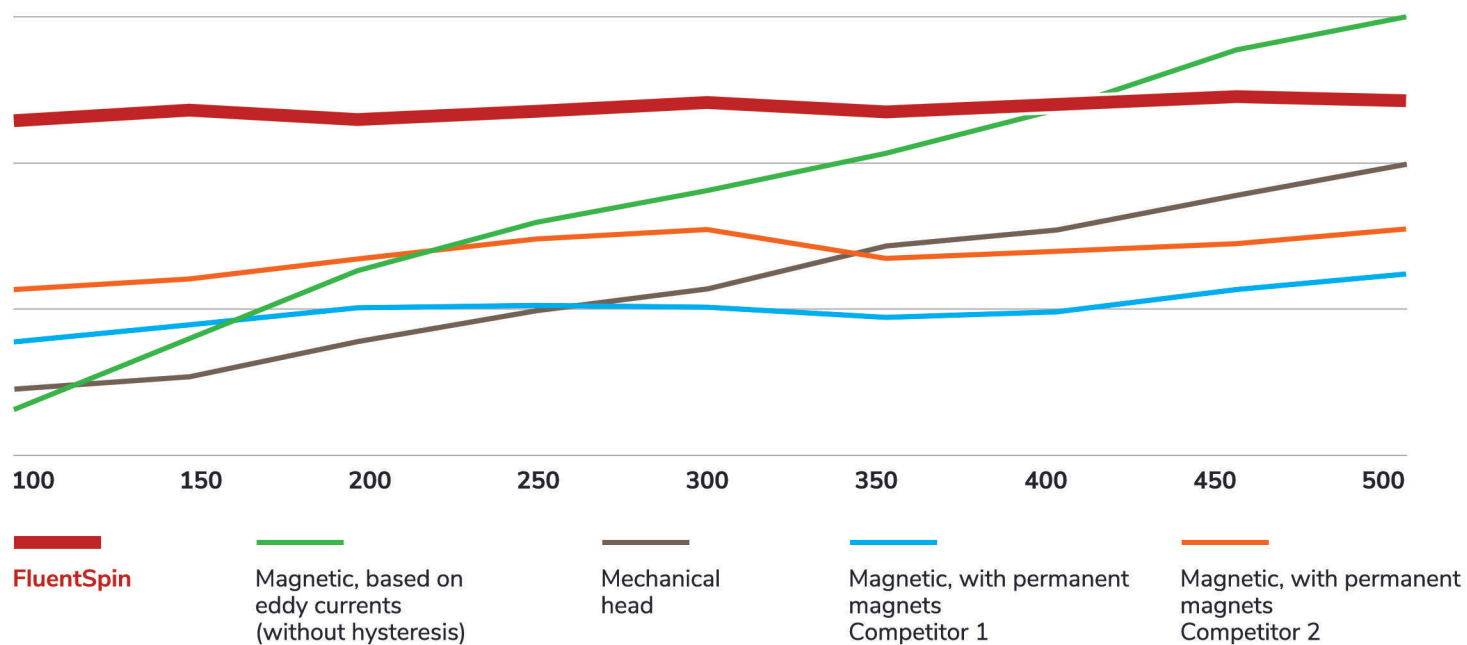
All seals are based on **PTFE gaskets**, as a result, during operation, movement of intermeshing parts involves very low friction and the highest impermeability of the connection is maintained.

The tightening torque is smoothly regulated with a handy ring within the range between 0.5 and 2.2 Nm without a need of using of any tools, the precise regulation makes it possible to set the desired torque with 0.02 Nm accuracy.

TECHNICAL DATA



Tightening torque as a function of rotational speed [RPM]



Basic data of FluentSpin head

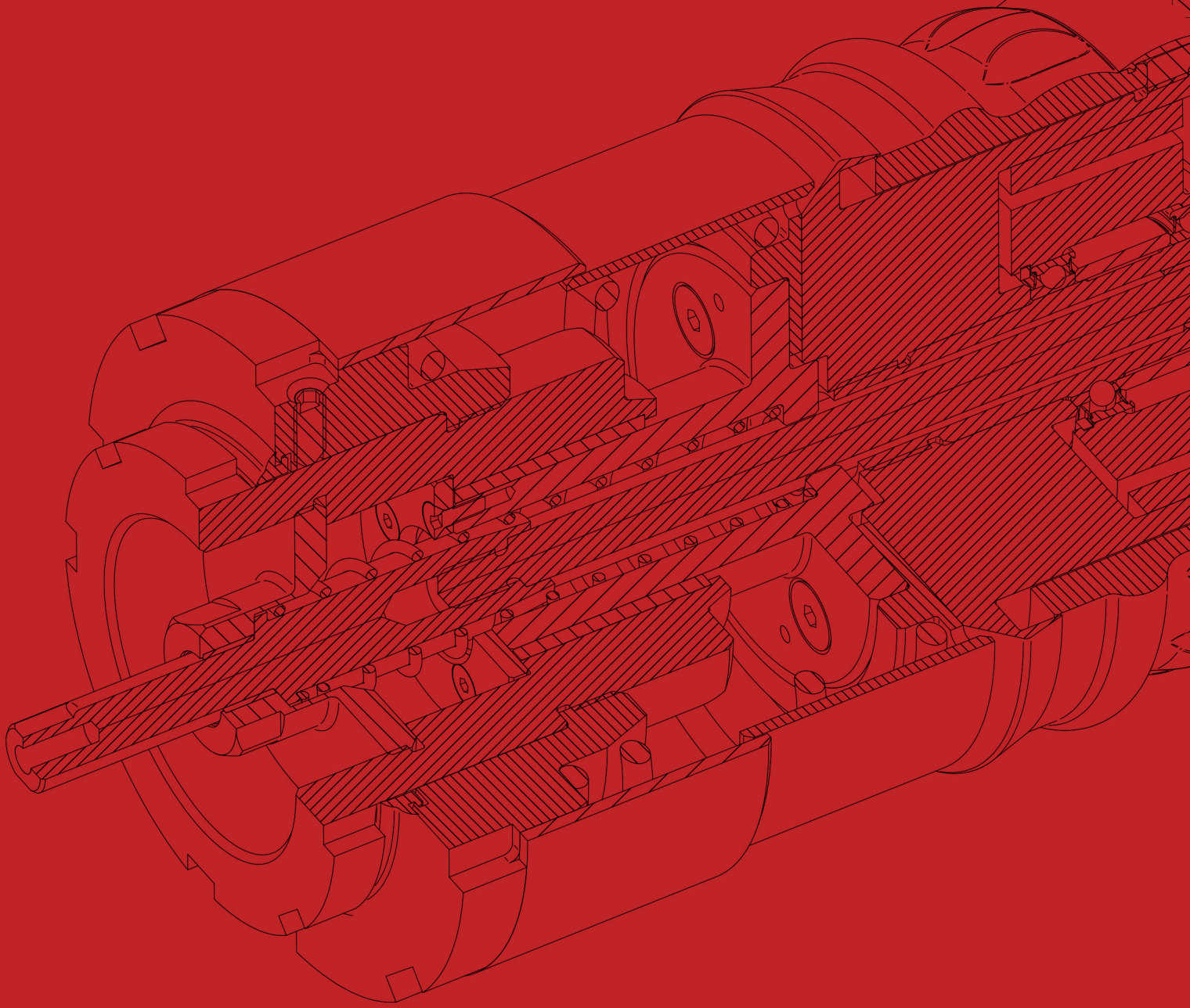
Technical data		FluentSpin
Tightening torque range	Nm	0,5 – 2,2
Working temperature	°C	-40 ÷ +210
Weight	kg	5,8
Head pressure force	N	165-255
Maximum height of cap thread	mm	15
Maximum rotational speed	rpm	500
Height without interfaces	mm	167
Total height	mm	204
External diameter	mm	99

Worktech

Our company has more than ten years of experience in production of machines used for blow-moulding of PET bottles. We provided customers operating at three continents with blow-moulding machines and we sold more than 50 production units. Our customers included i.a. Kinga Pienińska, Ustronianska and Danone. Suffice it to say that all devices provided by Worktech are active to date.

In addition to capping machines, Worktech offers also innovative, high efficiency (up to 12 thousand bottles per hour) compact machine for PET blow-moulding, using two times less energy than competitors' solutions. The high efficiency is achieved despite the external dimensions twice smaller compared to the solutions offered by our competitors.

Moreover, much shorter time is needed for the reconfiguration of the machine compared to the machines produced by competitors, adjusting the settings of our machine in order to change the type of thread and the size of bottles does not require stopping a production line for a long period of time.



Do you have any questions? Call! Na Call us!

Marcin Olszewski

Sales Director

+48 664 005 054
sales@worktech.pl

Adam Jabłonowski

Chief Technology Officer

+48 502 076 315
adam.jablonowski@worktech.pl

WORKTECH
MODERN INDUSTRIAL TECHNOLOGIES

Łukówiec 100, 05-480 Karczew, Poland
+48 22 789 16 89
biuro@worktech.pl
www.worktech.pl