

# ISF1-Z BASIC BELUGA



The perfect fit for automation



The newly offered ISF1-Z Basic Beluga emerged from a customized project and was specifically designed for automation and robotic systems. A robot arm can reach into the chamber with its generous interior space and grab any vessel of the tray.

The incubator shaker also includes the two options automatic door and the newly developed Kuhner Tray Positioning System (Kuhner TPS+) which are ideal for robotic applications.

The ISF1-Z Basic Beluga can be integrated into many areas of automation, such as screening for an optimal cell line, for media development or

## Interfaces



Stay connected

Independently of the bus system your monitoring system is using, our flexible NET-60 interface connects all conventional bus systems to the Kuhner shaker internal CAN-bus.

Further  
infos at:



## TPS+



Tray Positioning System

The drive stops at one exact position which is useful for robotic applications.



Watch our Video  
on YouTube

## Special connectivity features



In addition to the standard interfaces, the Beluga has been expanded by optocoupler modules. This allows for an increased number of input and output signals, enabling significantly more specific interactions. A modified D-Sub connector on the back of the shaking incubator is available for this purpose.

With the additional input and output signals, user safety in handling the automated system is increased.

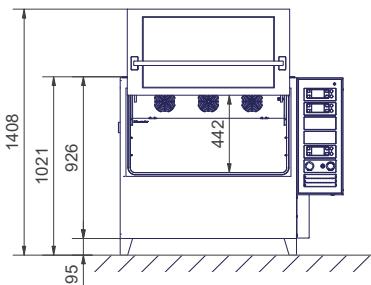
## ISF1-Z Basic Beluga Expert

Feel free to contact our team of ISF1-Z Basic Beluga experts for more information.

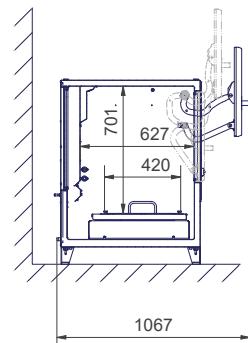
E-mail: [automation@kuhner.com](mailto:automation@kuhner.com)

# Technical data

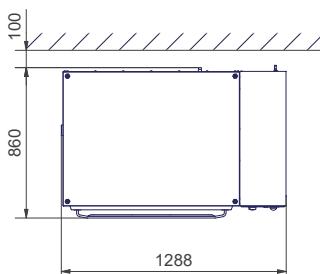
	Unit	ISF1-Z Basic ISF1-ZC Basic
<b>Temperature Control</b>		
Cooling	yes/no	no
Temp. minimum	°C	RT + 10
Temp. maximum	°C	80 (60 with CO <sub>2</sub> control)
Temperature distribution at 37°C	±°C	< 0.20
Power of heating (electric)	W	800 (resistance)
Power of cooling (electric)	W	-
Principle of temp. sensor	type	Pt-100
Gas circulation	m <sup>3</sup> / h	570



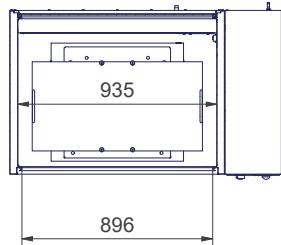
<b>CO<sub>2</sub> Control</b>		
CO <sub>2</sub> max.	%	20
CO <sub>2</sub> min.	%	0
Accuracy absolute	±%	0.40 at 5% CO <sub>2</sub>
Temperature range	°C	up to 60
CO <sub>2</sub> supply	bar	max. 2 bar overpressure
Principle of sensor	type	Infrared



<b>Shaking Control</b>		
Motor	type	direct drive
Shaking diameter	mm	3/6/9/12.5/19/25/50/70 (0-70 mm, stepless)
(user-adjustable, all incl.)		
Shaking motion	type	orbital
Shaking frequency 12.5 mm	rpm	0/20-500
Shaking frequency 25 mm	rpm	0/20-400
Shaking frequency 50 mm	rpm	0/20-300
Shaking frequency 70 mm	rpm	0/20-250
Tray size max.	mm	F (800 x 420 mm)
Loading max.	kg	25 (up to 60**)
Setting, digital	rpm	1
Accuracy absolute	±rpm	0,5
Timer	s: h	1 s - 999 h
Acceleration		controlled
Active brake		adjustable
Stop on position		yes
Power of standard motor (EM-Z / EM-Z (HP/HS))	W	70/140



<b>General</b>		
Power consumption typical	W	approx. 220
Power consumption max.	W	approx. 1000
Incubation gas volume	L	555
Weight	kg	257
Illumination	type	LED
Operation menu MMI		DE, FR, EN, IT, ES
Operation menu Insight		EN
Interface, standard		CAN-Bus
Interface, optional		USB, Ethernet, digital, analogue
Ambient temperature	°C	10-35
Cable feedthrough port	mm	40
Dimensions (L x D x H)	mm	1288 x 860 x 1021
Material incubation chamber		stainless steel
Material outer chamber		painted stainless steel
Useful height above shaker tray	mm	705
Door glass and frame		-



Technical data subject to change



[www.kuhner.com](http://www.kuhner.com)

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