proRheo

rheological answers!

Covimat 205 TO

The Covimat 205 TO enables the continuous measurement of the viscosity of flowable substances in containers during the process or during product mixing or storage. It provides **measurement data without taking samples** and therefore without labor, material and time loss - **reliably 24 hours a day, 365 days a year.**

www.prorheo.de

proRheo
rheological answers!

MEASURING HEAD

The measuring unit of the Covimat 205 contains the electronics, which perform two functions:
- The motor rotates the measuring body at a specified speed.
- It measures the viscosity and outputs a corresponding analog signal.

The speed can be set via a selector switch in 5 fixed steps or specified via an external control signal. The viscosity is measured using a torsion element. A standard 4-20 mA measuring signal proportional to the viscosity is output. This can be recorded or utilized via a control system provided by the customer.

Explosion-proof according to ATEX.

RODS

The measuring system consists of a retaining plate that is attached to the container. A rod is attached to it, which holds the measuring cup and the measuring body in the liquid. The measuring body is located in the base of the measuring rod (measuring cup) and is driven by an axis via a magnetic coupling. The outer ring of the rod base forms the measuring cage with the measuring body.

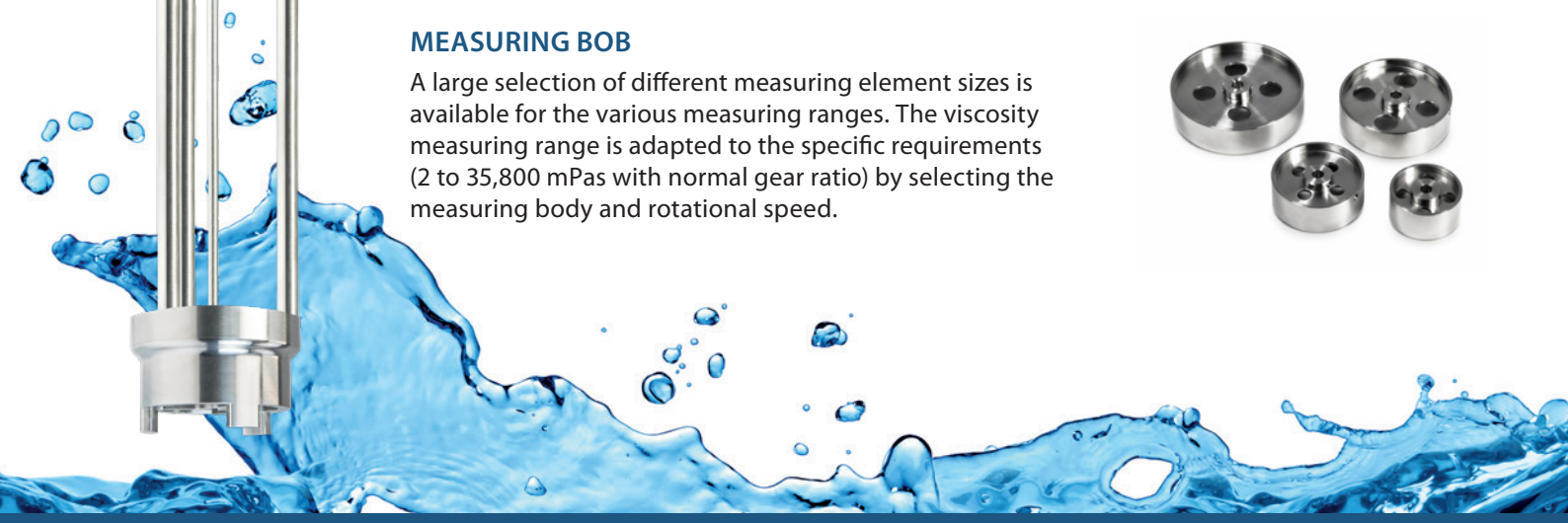
Standard lengths for the measuring rod are 20, 30 and 50 cm. Other measuring system lengths are available as special models.

MEASURING CAGE

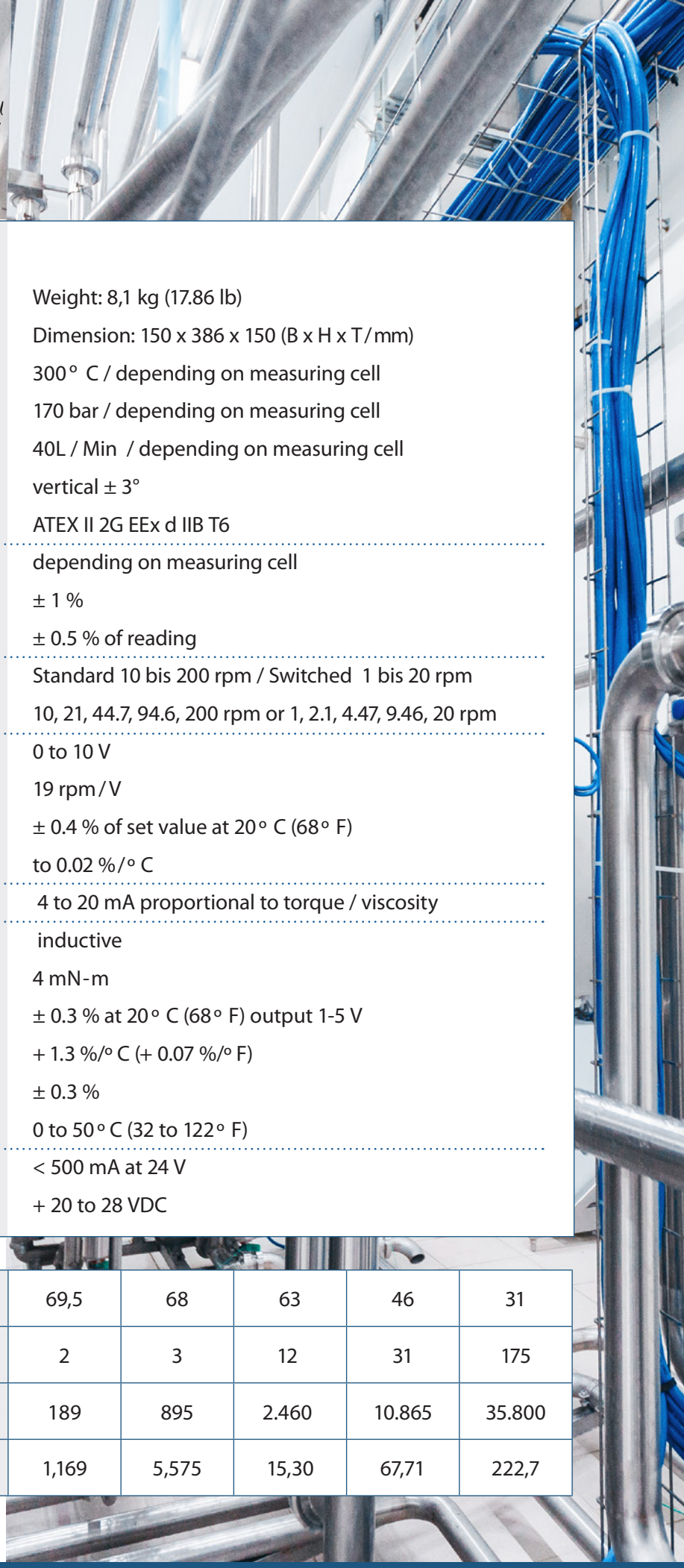
As the Covimat is a classic rotational viscometer, it measures viscosity independently of the density of the medium, unlike oscillating devices or capillary viscometers. The stainless-steel measuring cage forms the measuring gap and enables variable measuring bodies.

MEASURING BOB

A large selection of different measuring element sizes is available for the various measuring ranges. The viscosity measuring range is adapted to the specific requirements (2 to 35,800 mPas with normal gear ratio) by selecting the measuring body and rotational speed.



proRheo
rheological answers!



MEASURING BOB

Covimat 205 DC Dimensions	Weight: 8,1 kg (17.86 lb)
	Dimension: 150 x 386 x 150 (B x H x T/mm)
Maximum product temperature	300° C / depending on measuring cell
Maximum pressure	170 bar / depending on measuring cell
Maximum flow rate	40L / Min / depending on measuring cell
Installation	vertical ± 3°
Safety	ATEX II 2G EEx d IIB T6
Viscosity range	depending on measuring cell
Accuracy	± 1 %
Repeatability	± 0.5 % of reading
RPM Range	Standard 10 bis 200 rpm / Switched 1 bis 20 rpm
Fixed Speeds	10, 21, 44.7, 94.6, 200 rpm or 1, 2.1, 4.47, 9.46, 20 rpm
External speed control	0 to 10 V
Transfer function	19 rpm/V
Rotational speed accuracy	± 0.4 % of set value at 20° C (68° F)
Temperature coefficient – speed	to 0.02 %/° C
Output signal	4 to 20 mA proportional to torque / viscosity
Torsion angle measurement	inductive
Maximum torque	4 mN-m
Torque tolerance	± 0.3 % at 20° C (68° F) output 1-5 V
Termperature coefficient – torque	+ 1.3 %/° C (+ 0.07 %/° F)
Linearity	± 0.3 %
Temperature range	0 to 50° C (32 to 122° F)
Supply Current	< 500 mA at 24 V
Supply voltage range	+ 20 to 28 VDC

Measuring bob Ø mm	69,5	68	63	46	31
Min. Viscosity [mPas]	2	3	12	31	175
Max. Viscosity [mPas]	189	895	2.460	10.865	35.800
Resolution [mPas/0,1 mA]	1,169	5,575	15,30	67,71	222,7

proRheo GmbH • Bahnhofstraße 40/2 • 75382 Althengstett
07051 924 890 • office@prorheo.de • www.prorheo.de