

Covimat 205 DD



Measuring bobs

DD

Through choice of measuring bob in combination with different inserts, the measurement range can be adapted to the specified requirements.
(1 – 13.200 mPas)



Measuring area and resolution DD

Insert	DDA-005	DDA-006	DDA-007	DDA-008	DDA-009	DDA-0010	DDA-011
Min. Viscosity [mPas]	1	5	10	15	30	40	50
Max. Viscosity [mPas]	460	1.350	3100	5.000	8.800	11.200	13.200
Resolution [mPas/0,1 mA]	2,869	8,406	19,31	31,15	54,81	69,75	82,18

DD+

There is only one measuring bob available for the DD+

Measuring area and resolution DD+

Speed range (fixed)	5	4	3	2	1
Min. Viscosity [mPas]	1	1	2	3	4
Max. Viscosity [mPas]	215,5	455,1	963,2	2050,3	4305,6

iscosity calculated using a pressureless, resting Newtonian liquid.)

Included in standard delivery:

Metering head Covimat 205 DD
Measuring cell with coupling
Measuring bob



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Covimat 205 DD

Inline viscosity measuring for the Paint and Coating Industry (manufacturing and processing)

The Covimat 205 is a proven viscometer, that when integrated within the manufacturing process - can measure the viscosity of a liquid, 24 hours a day - 365 days a year. It delivers the data without wasting time, resources and any of the product itself.

The Covimat 205 DD & DD+ are rotational rheometers that have been specially designed for use in the Paint and Coating Industry.

Being a classical rotational rheometer, the viscosity of the product is measured without having to take the density of the product into consideration. Unlike vibrating or capillary viscometers, the Covimat is not affected by any variation in the density of the product.

The Covimat 205 DD & DD+ is DIN 53019 compliant and enables you to monitor the viscosity directly during the processing or manufacturing procedure.

Measuring can take place within the main stream of flow, or when volumes are being processed, via a short bypass.

The measuring principle of a rotational rheometer can be explained as followed: A measuring bob is submerged into a product and rotates at a predefined speed. The force created by the liquid trying to stop the rotation of the bob is used for measuring the viscosity of a product.

A direct comparison to the data collected in a laboratory is possible, as laboratories use the same principle when measuring the viscosity of a product.

The choice of different measuring bobs and rotation speeds enable a wide range of measurement.

All Covimat 205 process viscometers are protected against explosion and deliver a signal that can be used for directly regulating the production process.

The Covimat 205 DD or DD+ consists of 3 parts:

- Metering head
- Measuring cell with spacer
- Measuring bob



The Metering head

The metering head of the Covimat holds the electronics that has two functions:

- Controlling the motor that rotates the measuring bob with a user defined speed
- Measuring the viscosity and providing an analogue signal.

The speed of rotation can be set to one of 5 preset speeds using an internal switch. It can also be controlled by an external input signal.

A torsion element is used to measure the viscosity of a product.

The output is a 4-20 mA signal proportional to the measured torque/viscosity. This signal can be recorded or utilised to control the customer's production line.

The metering head is protected against explosion according to ATEX.



new design

Technical Data:

Weight:	8,1 kg	Motor speed range:	Switched 200/ 94.6/ 44.7/ 21/ 10 rpm
Overall dimensions:	Height 386 mm Width 150 mm Depth 150 mm	External control signal:	0 – 10 V or 4 – 20 mA (for variable speed) (analogue signal)
Output signal:	4 – 20 mA	Supply voltage:	20 - 28 VDC
Max. Torque:	4 mNm,	Supply current:	<200 mA at 24 VDC
Torque tolerance:	>1% of the measured value. Other tolerances are available by special request	Safety:	PTB 08 ATEX 1033 X Ex II 1/2 G Ex de IIC T6
Motor speed:	200 to 10 rpm	Alternative:	PTB Ex 09 19200 Ex II 1/2 G Ex de IIB T6
		Operating temperature:	0 - 50 °C
		Mounting position:	Upright ± 3°

DD measuring cells

The measuring cells are available in two versions:

Covimat 205 DD

The Covimat 205 DD range is designed for volumetric flows of up to 5 l/min and small samples with a low viscosity. It is used widely within the Paint and Coating Industry.

The measuring area is totally enclosed and is coupled up to the metering head via a magnetic coupling, meaning no bushings are in use.



Covimat 205 DD+

Designed for water based coatings

The 205 DD+ double-slotted viscosity measuring system has been, due to its bearing less rotating cylindrical body, specially designed for thin and runny substances requiring a high measuring resolution. Developed for large paint mixing facilities, the maximum flow rate of 500 l/min with a 35 mm connection enables the 205 DD+ to be attached directly to main pipelines.

Measurement range and resolution can be tailored specially by altering the rotation speed.



Technical data:

	DD	DD+
Weight	12 kg	14 kg
max. temp. of product	90 °C	90 °C
max. Pressure	20 bar	32 bar
max. flow rate	< 5 l / min	< 500 l / min
connecting thread	G 3/8"	35 mm
Material of measuring cell	1.4436	1.4571
Material of bearing:	NBR	none
Viscosity range	1 to 1,32 x 10 ⁴ mPas	4 to 4,3 x 10 ³ mPas

Measuring cells are not pigable