Myr ROTARY VISCOMETER

Rotary Viscometers MYR V0/V1/V2 acc. to ISO 2555/ASTM (Brookfield method)

SERIE VR 3000

VISCOMETERS VR 3000

The MYR viscometers, models V0, V1 and V2, are rotational viscometers for the fast determination of viscosity as specified in ISO 2555 and other ASTM norms. Instrument offers viscosity measurements which are 100% compatible with the Brookfield method and permits to carry out comparative measurements in accordance to recognized standards in quality control laboratories
All models are available in three different versions: version "L" for low to medium viscosity, version "R" for medium to high viscosity and version "H" for high to very high viscosity.

FEATURES

The basic model, V0, has digital display for direct reading of diverse parameters (see detail), under- or over-range warning signal and 24 months warranty.
Model V1 adds interface RS232, software ViscosoftBasic for data gathering and temperature probe (PT 100). Used together with a thermal printer (optional) meets requirements of the storage data in quality control Additionally model V2 has 2 more speeds —and consequently a wider viscosity range —, bi-directional interface RS232 and optionally, software ViscosoftPlus, for the automated control of viscometer and the issuing of rheological studies.

COMPATIBILITY

Standard ISO 2555 describes a viscometer in torque, speed and spindle geometry. MYR rotary viscometers meet such specifications and are therefore 100% Brookfield method compatible.

DISPLAYED DATA

Speed selected	rpm
Spindle used	spindle reference
Dynamic viscosity	mPas or cP (in version H, dPas or P)
Full scale percentage	%
Sample temperature	°C or °F
Auto range to display viscosity limits	mPas or cP (in version H, dPas or P)
Shear Rate (SR) (with special spindles)	1/sec (only in V2 version)
Shear Stress (SS) (with special spindles)	N/m2 or dyne/cm2 (only in V2 version)

ACCESORIES

ADAPTER FOR SMALL SAMPLE VOLUME

The Adapter for small sample volume (APM) consists in a precision spindle rotating inside a sample container. Container fits into a circulating water jacket for precise temperature control (-10ºC to +100ºC). It is commonly used when available sample is in very small quantities (8 – 13 ml) and depending on the viscometer version uses a different set of cylindrical spindles which have to be ordered separately.
Direct readout of sample temperature is possible by ordering an Adapter with embedded temperature sensor in lower cap.

Viscosity range

V0L	+ special spindles set (TL5 – TL7):	3	- 200.000	mPas/cP
V0R	+ special spindles set (TR8 – TR11):	50	- 3.300.000	mPas/cP
V0H	+ special spindles set (TR8 – TR11):	4	- 266.000	dPas/P
V1L	+ special spindles set (TL5 – TL7):	1,5	- 200.000	mPas/cP
V1R	+ special spindles set (TR8 – TR11):	25	- 3.300.000	mPas/cP
V1H	+ special spindles set (TR8 – TR11):	2	- 266.000	dPas/P
V2L	+ special spindles set (TL5 – TL7):	1,5	- 600.000	mPas/cP
V2R	+ special spindles set (TR8 – TR11):	25	- 10.000 000	mPas/cP
V2H	+ special spindles set (TR8 – TR11):	2	- 800.000	dPas/P

SPINDLE R1

Only applicable to versions R and H. It allows extending the lower viscosity limit.

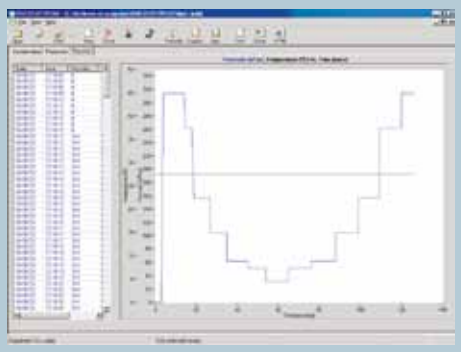
with model V0R:	10	- 33.000	mPas/cP
with model V1R:	5	- 33.000	mPas/cP
with model V2R:	5	- 100.000	mPas/cP
with model V0H:	0,8	- 2.666	mPas/cP
with model V1H:	0,4	- 2.666	dPas/P
with model V2H:	0,4	- 8.000	dPas/P

ACCESORIES

PC BASED SOFTWARE

ViscosoftBasic supplied together with model V1 allows to download data directly from Viscometer. Measured values are shown in a chart and can be saved in Excel format for posterior evaluation.

Use **ViscosoftPlus** with model V2 and control instrument from your PC. Software permits to program different analysis methods (processes) to obtain graphics and charts including test data. Results obtained can be displayed in graphics. Viscosity plots can be configured vs. different parameters.



ADAPTER FOR LOW VISCOSITY MATERIALS

The Adapter for low viscosity materials (LCP) is an accessory which consists in a precision spindle rotating inside a sample container. Container fits into a circulating water jacket for precise temperature control.
Used together with the MYR viscometers it allows accurate and reproducible measurements on low viscosity materials and shear rate determinations. It is commonly used to enlarge low viscosity ranges until 1 cP. It is also available with embedded PT 100 in lower cap for a direct readout of sample temperature and without water jacket for samples requiring to be temperized at high temperatures (up to 200ºC).

Viscosity range

V0L:	0,6	-	2.000	mPas/cP
V0R:	6,4	-	21.333	mPas/cP
V0H:	0,51	-	1.700	dPas/P
V1L:	0,3	-	2.000	mPas/cP
V1R:	3,2	-	21.333	mPas/cP
V1H:	0,25	-	1.700	dPas/P
V2L:	0,3	-	6.000	mPas/cP
V2R:	3,2	-	64.000	mPas/cP
V2H:	0,25	-	5.120	dPas/P

ACCESORIES

ADAPTER FOR HELICOIDAL MOVEMENT

Used together with the viscometers of the VR 3000 serie, the Adapter for Helicoidal movement allows comparative viscosity measurements in substances which cannot be analyzed using standard methods and spindles. Useful to measure viscosity in creams, gels, gelatins and other materials which do not flow easily.

The up-down movement permits spindle to trace a helicoidal path in material avoiding holes and channels.in material. Adapter is supplied with 6 T-type special spindles (PA,PB,PC,PD, PE, PF)

Viscosity range

V0L + special spindles T-Type (PA-PF):	156 -	3.120.000	mPas/cP
V0R + special spindles T-Type (PA-PF):	1.660 -	33.300.000	mPas/cP
V0H + special spindles T-Type (PA-PF):	133 -	2.666.660	dPas/P
V1L + special spindles T-Type (PA-PF):	156 -	3.120.000	mPas/cP
V1R + special spindles T-Type (PA-PF):	1.660 -	33.300.000	mPas/cP
V1H + special spindles T-Type (PA-PF):	133 -	2.666.660	dPas/P
V2L + special spindles T-Type (PA-PF):	156 -	9.400.000	mPas/cP
V2R + special spindles T-Type (PA-PF):	1.660 -	100.000.000	mPas/cP
V2H + special spindles T-Type (PA-PF):	133 -	8.000.000	dPas/P

APLICATIONS

MYR viscometers are present in different industrial sectors – chemical, food, pharmaceutical, cosmetic and print industry- to measure viscosity beneath others of products like: adhesives, paints and coatings, inks, dairy products, hot wax, solvents, paper pulp, gel, asphalt, chocolate, varnish, oils, food industry, chemical industry, pharmaceutical industry, print industry.

SCOPE OF DELIVERY

Our viscometers are supplied as a complete system in a very robust carrying case, including a complete set of standard spindles with storage rack (4 spindles with version L and 6 spindles with version R and H), spindle guard, temperature sensor PT 100 (only models V1 and V2) calibration certificate and user manual.

VISCOMETER SERIE VR 3000

TECHNICAL DATA

Speeds

Model V0:	0.3, 0.5, 0.6, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 10, 12, 20, 30, 50, 60, 100	rpm
Model V1:	0.3, 0.5, 0.6, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 10, 12, 20, 30, 50, 60, 100, 200	rpm
Model V2:	0.1, 0.2, 0.3, 0.5, 0.6, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 10, 12, 20, 30, 50, 60, 100, 200	rpm

Spindles

Version L (low viscosity):	(4 spindle L1 – L2 – L3 – L4)
Version R (medium viscosity):	(6 spindle R2 – R3 – R4 – R5 – R6 – R7)
Version H (high viscosity):	(6 spindle R2 – R3 – R4 – R5 – R6 – R7)

Viscosity range

V0 L:	6	-	2.000.000	mPas/cP	-	72 ranges	(18 speeds with 6 spindles)
V0 R:	40	-	13.000.000	mPas/cP	-	108 ranges	(18 speeds with 6 spindles)
V0 H:	3,2	-	1.066.660	dPas/P	-	108 ranges	(18 speeds with 6 spindles)
V1 L:	3	-	2.000.000	mPas/cP	-	76 ranges	(19 speeds with 6 spindles)
V1R:	20	-	13.000.000	mPas/cP	-	114 ranges	(19 speeds with 6 spindles)
V1 H:	1,6	-	1.066.660	dPas/P	-	114 ranges	(19 speeds with 6 spindles)
V2 L:	3	-	6.000.000	mPas/cP	-	84 ranges	(21 speeds with 6 spindles)
V2 R:	20	-	40.000.000	mPas/cP	-	126 ranges	(21 speeds with 6 spindles)
V2 H:	1,6	-	3.200.000	dPas/P	-	126 ranges	(21 speeds with 6 spindles)

Accuracy:	± 1% of full scale
Repeatability:	± 0,2%

Thermometer

Temperature range:	-15ºC a + 180ºC (+ 5ºF a + 356ºF)
Resolution:	0,1ºC (0,1722ºF
Accuracy:	± 0,1ºC

CALIBRATION STANDARDS

Silicone oils certified, available on request.

STANDARDS

MYR viscometers, models V0, V1 and V2, comply with following standards:

BS:	6075, 5350
ISO:	2555, 1652
ASTM:	115, 789, 1076, 1084, 1286, 1417, 1439, 1638, 1824, 2196, 2336, 2364, 2393, 2556, 2669, 2849, 2983, 2994, 3232, 3236, 3716

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