

## Introduction

The MFI series Melt Flow Index Tester/Extrusion Plastometer. They are suitable to measure the melt flow character of PP, PE, PVC, POM, ABS etc., plastic materials resin and granules. Principle: The melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) are determined by extruding molten material from the cylinder

of a plastometer through a die of specified length and diameter under preset conditions of temperature and load. Test Procedure: Approximately 7 grams of the material is loaded into the barrel of the melt flow apparatus, which has been heated to a temperature specified for the material. A weight specified for the material is applied to a plunger and the molten material is forced through



## Out-of-the-Box Operation

Testing melt flow resistance has never been so economical or easy to do! The Melt Flow Indexer is supplied complete with spare barrel and die, plus all the accessories and weights necessary for maintenance and operation. Nothing else to buy - just plug it in and start testing!

## Key Features

1. Auto Cut-Off by built-in scraper mechanism at preset intervals;
2. Temperature fluctuation is  $\pm 0.5\%$  of set temperature;
3. Clear LCD display and setting;
4. Micro-Printer function;
5. Both test procedure: Melt mass-flow rate (MFR) and melt volume-flow rate (MVR).

# Melt Flow Index Tester

## MFI401 / MFI402 / MFI403

### Application

Melt Flow Indexer is used to measure the flow rate of different polymers. The reported Melt Index value helps to distinguish between the different Grades of Polymers. This is due to the fact that plastic materials are seldom manufactured without incorporating additives, which affect the processing characteristics of material like stability and flowability.

### References

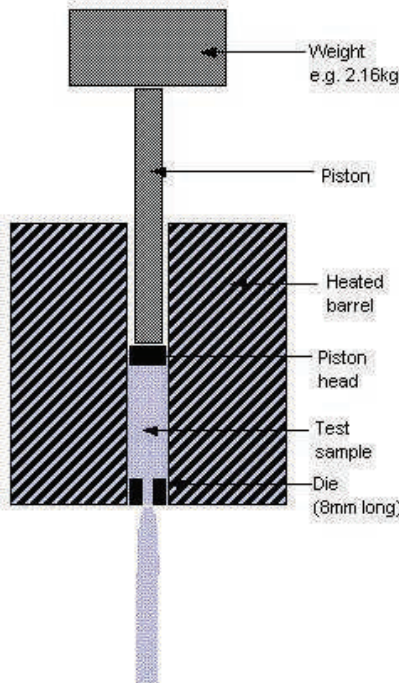
- ISO 1133 "Plastics - Determination of the Melt Mass-Flow Rate (MFR) and Melt Volume-Flow Rate (MVR) of Thermoplastics"
- ASTM D1238 "Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer"
- ASTM D3364, BS 2782, DIN 53735, JIS K7210 etc.,



Mass weight  
0.325kg to 21.6kg



Piston rod,  
weight tray



Die:  $\Phi 2.095 \pm 0.005$   
Die cleaning rod



Model: MFI401



Compact accessories case

NOTA: las imágenes y características pueden cambiar sin previo aviso.

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### Main technical specification

Model	MFI401 (XNR-400)	MFI402 XNR-400A)	MFI403 (XNR-400B)
Temperature range	Ambient temperature to 400°C stepless adjustable, fixed point temperature control		
Temperature fluctuation	±0.2°C		
Temperature resolution	0.1°C		
Weight	8 levels, total 21.6kg mass		
Measuring method & range	MFR (0.1-100)g/10min		MFR (0.1-100)g/10min MVR(0.01-350) cm <sup>3</sup> /10min
Heating power	450W		
Extruding part spec.			
Inner diameter of die	φ2.095±0.005mm		
Length of die	8.000±0.025mm		
Inner diameter of filling canister	Ø9.550±0.025mm		
Weight	Frame: 30kg Standard weights: 25kg		
Power	220V, 50HZ/110V, 60HZ		
Display	Digital display temperature, time, sampling number etc.	LCD display temperature, time, sampling number etc.	LCD display temperature, time, sampling number etc.
Micro-printer	NO	YES	YES
Specimen cutting mode	Manual	Automatic	Automatic & Manual both mode

#### Other model:

1, MFI404 touching screen melt flow index tester, with 7" colorful touching screen.

2, MFI405 computer controlled melt flow index tester, analysis temperature-time curve, print test report (test data, curve etc.,).



Model: MFI405



Model: MFI404

## Comparison

Model	MFI401	MFI402	MFI403	MFI404	MFI405
Test method	MFR	MFR	MFR/MVR	MFR/MVR	MFR/MVR
Display	Digital	LCD	LCD	7" Touching screen	Computer
Printer	No	Micro-printer	Micro-printer	Micro-printer	A4 paper Printer
Specimen cutting	Manual	Automatic	Manual/Automatic	Manual/Automatic	Manual/Automatic
Test curve	No	No	No	No	Yes

## Main accessories

Item	Quantity
Frame	1 set
Die (φ2.095) tungsten carbide material	1 pc
No. 1 weight (piston rod + weight tray): 325g	1 pc
No. 2 weight: 875g	1 pc
No. 3 weight: 1835g	1 pc
No. 4 weight: 3475g	1 pc
No. 5 weight: 4675g	1 pc
No. 6 weight: 5000g	1 pc
No. 7 weight: 2500g	1 pc
No. 8 weight: 2915g	1 pc
Scraper	1 pc
Sample loading hopper	1 pc
Water level	1 pc
Die cleaning rod	1 pc
Cylinder cleaning rod	1 pc
Sample loading rod	1 pc
Sample plate	1 pc
Electric wire	1 pc
Cleaning gauze and gloves	1 pc
Accessories containing case	1 pc
Documents (Manual, packing list, certificate)	

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# Melt Flow Index Tester

## MFI401 / MFI402 / MFI403

### Optional & Extra parts

- 7.1, Die (φ2.095)
- 7.2, Die (φ1.181)
- 7.3, Die plug gauge
- 7.4, Piston rod with weight tray
- 7.5, Scraper
- 7.6, Die cleaning rod

### Test Load

Load (g)	Combination of weight
325	No. 1 weight (piston rod + weight tray)
1200	325+875
2160	325+1835
3800	325+3475
5000	325+4675
10000	325+4675+5000
12500	325+4675+5000+2500
21600	325+875+1835+3475+4675+5000+2500+2915

### Common Melt Flow Rate Conditions by Material

Material	Condition
PS	200/5.00
PE	190/2.16
	190/0.325
	190/21.60
	190/5.00
PP	230/2.16
ABS	220/10.00
PS-I	200/5.00
E/VAC	150/2.16
	190/2.16
	125/0.325
SAN	220/10.00
ASA, ACS, AES	220/10.00
PC	300/1.20
PMMA	230/3.80
PB	190/2.16
PB	190/10.00
POM	190/2.16
MABS	220/10.00

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