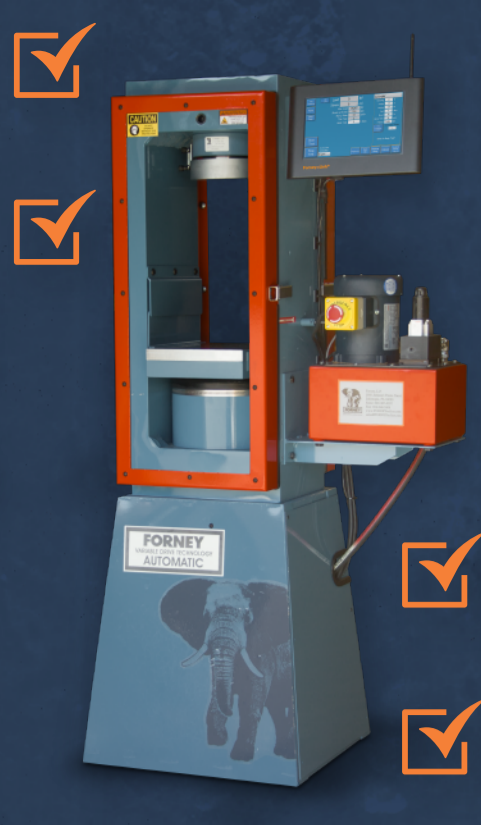


# A VISUAL GUIDE TO CHOOSING A CMT MACHINE



## STEP #1: KNOW YOUR TESTING NEEDS



### MATERIALS

- Concrete
- Cement
- Grout
- Blocks
- FRC
- Metals
- Proppant Sand



### SPECIMEN GEOMETRIES

- Cylinders
- Cubes
- Blocks
- Prisms
- Tiles
- Pavers
- Rebar
- Rock Core

### STANDARD TESTS

- Compression
- Tensile
- Tensile Splitting
- Flexural

### ADVANCED TESTS

- Modulus of Elasticity (MOE)
- Poisson's Ratio
- Displacement

## STEP #2: SELECT LOAD FRAME CAPACITY

To help you select the correct size, please use the following table:

### SUGGESTED LOAD CAPACITY WITH MAXIMUM EXPECTED STRENGTH (PSI OR MPA)

IMPERIAL	F SERIES MACHINE MODELS				FHS SERIES MACHINE MODELS				
	250 klbf	325 klbf	450 klbf	650 klbf	300 klbf	400 klbf	500 klbf	600 klbf	700 klbf
<b>Cylinder Diameter</b>	<b>Max Specimen Strength (psi)</b>								
<b>Pad Caps</b>									
3"	10,600	13,800	19,100	27,600	15,300	20,400	25,500	30,600	35,700
4"	8,000	10,400	14,300	20,700	11,200	15,000	18,700	22,500	26,200
6"	4,900	6,300	8,800	12,700	6,900	9,200	11,500	13,800	16,100
<b>Ground Ends</b>									
3"	26,500	34,500	47,800	69,000	36,100	48,100	60,200	72,200	84,200
4"	14,900	19,400	26,900	38,800	20,300	27,100	33,800	40,600	47,400
6"	6,600	8,600	11,900	17,300	9,000	12,000	15,000	18,000	21,100

METRIC	KN SERIES MACHINE MODELS				FHS SERIES MACHINE MODELS (METRIC EQUIVALENT)				
	1100 kN	1500 kN	2000 kN	3000 kN	1320 kN	1760 kN	2200 kN	2640 kN	3080 kN
<b>Cylinder Diameter</b>	<b>Max Specimen Strength (MPa)</b>								
<b>Pad Caps</b>									
75mm	75	100	135	205	110	140	180	220	250
100mm	55	75	100	155	80	110	130	160	180
150mm	35	45	60	95	50	60	80	100	110
<b>Ground Ends</b>									
75mm	185	255	340	510	250	340	420	510	590
100mm	105	145	190	285	140	190	240	290	330
150mm	45	65	85	125	60	80	110	130	150

\* Highlighted values exceed ASTM C39 Pad Cap Limitations

\* Please consult factory for all high strength specimen testing applications.

## STEP #3: SELECT YOUR HARDWARE

COMPRESSION



DETERMINES A MATERIAL'S BEHAVIOR UNDER APPLIED CRUSHING LOADS

**250,000 - 850,000 lbf**  
LOAD CAPACITY

High strength concrete testing with uncompromising durability, performance and productivity in the lab and field

### FRAMES AVAILABLE

- Standard
- High Capacity
- High Stiffness
- International Metric

### SPECIMEN GEOMETRY

Test cylinders, cubes, beams, blocks, prisms, and bulk fines with ultimate precision and control.

### MATERIALS

Test hydraulic cement, down hole cement, mortar, grout, concrete, self-consolidating concrete, CLSM, flowable fill, proppant, ceramics, metals, and plastics.

### PROTOCOL STANDARDS

- ASTM C39, C78, C140, C293, C109, C469, C496, C1019, C1314, C1609, D7012, A370, A1061, F606, E290, E4
- AASHTO T 22, T 97, T 106
- ISO 13503-2
- API RP 56
- BS 1610, BS 1881, EN ISO7500-1, EN 12390-3, EN 12390-4, EN 772-1

FLEXURAL

PRODUCES TENSILE AND COMPRESSIVE STRESS UNDER BENDING FORCE

**30,000 lbf**  
LOAD CAPACITY



Versatile Beam Flexure and Low Strength Concrete Testing



Great for Concrete Highway & Airport Runway Concrete

### FRAMES AVAILABLE

- Dual Frame (Compression Attachment)
- Laboratory Model



### SPECIMEN GEOMETRY

Test cylinders, cubes, beams, and prisms with ultimate precision and control.

### MATERIALS

Test hydraulic cement, mortar, grout, concrete, CLSM, flowable fill, and plastics.

### PROTOCOL STANDARDS

- ASTM C39, C78, C293, C109, C469, C496, C1019, D7012, E4
- AASHTO T 22, T 97, T 106
- BS 1610, BS 1881, EN ISO7500-1, EN 12390-3, EN 12390-4

UNIVERSAL



MEASURES FORCE, DISPLACEMENT, VELOCITY AND STRAIN

**20,000 - 850,000 lbf**  
LOAD CAPACITY IN TENSION

**30,000 - 1.5 M lbf**  
LOAD CAPACITY IN COMPRESSION

### SPECIMEN GEOMETRY

Test cylinders, cubes, beams, blocks, prisms, rebar, screws, bolts, wire, and coupons with ultimate precision and control.

### MATERIALS

Test hydraulic cement, mortar, grout, concrete, self-consolidating concrete, ceramics, metals, and plastics.

### PROTOCOL STANDARDS

- ASTM C39, C78, C293, C109, C469, C496, C1019, D7012, A370, A1061, F606, E290, E4
- AASHTO T 22, T 97, T 106
- BS 1610, BS 1881, EN ISO7500-1, EN 12390-3, EN 12390-4

## STEP #4: SELECT YOUR CONTROL



### MANUAL

- Requires constant operator monitoring
- Handwritten data collection with pencil and clipboard
- Test variations result from inconsistent operator control



### AUTOMATIC

- Automatic preloading and rate adjustments
- Energy-efficient hydraulics
- Faster and more precise results
- Store results on machine, print reports and transfer via USB



### CONNECTED

- Two-way integration with CMT software
- Pre-test 'smart checks' validate test parameters
- Test faster with automatic pre-load calculations
- Positive specimen identification with bar code scanning
- Future proof your system integrations

### CONNECTED MACHINES RESULT IN...

**99.9%+**

REDUCTION IN MANUAL ERRORS

**66%+**

INCREASE IN PRODUCTIVITY

**100%**

UNALTERABLE, UNQUESTIONABLE DATA

# CONSTRUCTION MATERIALS TESTING MACHINES FOR ANY TESTING CHALLENGE



MANUFACTURED IN THE USA



GLOBAL SUPPORT & SERVICE NETWORK



BUILT TO EXCEED INDUSTRY STANDARDS



DESIGNED FOR NEW OPERATORS