



Physical Test Solutions

Innovative Solutions in Material Test Equipment

Compuline Series of Universal Testing Machines



COMPULINE
COMPULINE



Static Universal Testing Machines

Physical Test Solutions (PTS) has one of the most comprehensive ranges of electromechanical universal testing machines. Selecting the right machine for the material testing task may become a challenging endeavor like walking astray in a jungle trying to find your way home. Recognizing the complexity of the decision making process, at PTS we are attempting to make this process easy and understandable. The first step is to take the initial guesswork away. Many times, quotations are submitted with a long list of “*standard*”, “*recommended*” and then “*optional*” accessories. The only way to decipher the quotations that look like an attorney’s list of terms and conditions is to sit down with a sales engineer that in some instances may take up the valuable time you do not have. But if the application is simple, PTS offers *turn – key solution* packages that include not only the basic accessories to get started right away like load cells, grips and inserts, and then some, like compression plates, flex fixtures and more.

The static series of universal testing machines has a highly extensive line of machines for most applications. The electromechanical universal testing machines feature preloaded precision ball-screws that ensure high speed and position measurement accuracy. The testers also have a micro switch that is mechanically activated for overload protection.

Physical Test Solutions (PTS) universal testing machines are manufactured in an ISO 9001 certified facility, and comply with ASTM A730, ASTM E4, ASTM E83, ISO6892, ISO7438, ISO75000-1 and EN 10002-4.

Compuline Series of Static Universal Testing Machines

PTS introduces the *Compuline* Series of practical and economical line of electromechanical universal testing machines that feature computerized servo control capabilities. In addition to the above mentioned standard equipment, the *Compuline* Series of static universal testing machines also includes the popular user friendly *PTS Solutions Software*. The *Compuline* Series is available in capacities from 1 KN (225 lbs) to 600 KN (135,000 lbs).

All *Compuline* Series of static universal testing machines comply with ASTM A730, ASTM E4, ASTM E83, ISO6892, ISO7438, ISO75000-1 and EN 10002-4.

- ❖ *Compuline* SCC series; Single column testers
- ❖ *Compuline* TDC series; Table model dual column testers
- ❖ *Compuline* FMC series; Floor model medium capacity testers.
- ❖ *Compuline* FHC series; Floor model high capacity testers
- ❖ *Compuline* FVC series; Floor model very high capacity testers
- ❖ *Compuline* CMT series; Floor model testers



Compuline SCC Series

For low capacity applications, the *Compuline series* of static universal testing machines begins with the *Compuline SCC*, single column models. The *Compuline SCC series* constitutes the ideal material testing solution for applications that demand low capacity tests with servo controlled computer data acquisition capabilities.

The *Compuline SCC* testers include the following standard accessories:

- ✓ PC Computer
- ✓ PTS Solutions Software
- ✓ Load cell
- ✓ Wedge grips
- ✓ Four sets of inserts
 - Flat inserts; 0 - 0.27" (0-7mm) and 0.27" - 0.55" (7-14mm)
 - Vee inserts; 0.15" - 0.35" (4-9mm) and 0.35" - 0.55" (9-14mm)
- ✓ Compression Plates 4 " diameter (100mm)
- ✓ Flex fixture length 11" (280mm), nose diameter; 0.4" (10mm)
- ✓ Extensometer



TSCC-5

Compuline SCC Specifications

Model	TSCC-1	TSCC-2.5	TSCC-5
Capacity			
KN	1	2.5	5
LBF	225	562	1125
KGF	102	255	510
Load accuracy	≤ ± 0.5%		
Deformation accuracy	≤ ± 0.5%		
Displacement Resolution	0.01 mm		
Test Speed	0.005 mm/min — 500 mm/min		
Vertical Test Space	560 mm		
Total Crosshead Travel	750 mm		
Column Clearance	N / A		
Load Frame Stiffness	400 KN / mm (2,000,000 lbs./inch)		
Load Frame Dimensions	550 X 386 X 1436 mm		
Weight		119 Kg.	

Compuline TDC Series

The *Compuline* TDC series features table top dual column load frames with servo control. This series combine's load frame elegance with computer control data acquisition.

The *Compuline* TDC series includes the following standard accessories:

- ✓ PC Computer
- ✓ PTS Solutions Software
- ✓ Load cell
- ✓ Wedge grips
- ✓ Four sets of inserts:
 - Flat inserts; 0 - 0.27" (0-7 mm) and 0.27" - 0.55" (7-14 mm)
 - Vee inserts; 0.15" - 0.35" (4-9 mm) and 0.35" - 0.55" (9-14 mm)
- ✓ Compression Plates 4" dia. (100mm)
- ✓ Flexure fixture: length 11" (280 mm), nose diameter, 0.4" (10 mm)

Note: TDCC-50 also includes 14 – 21 mm flat inserts and 14 – 20 mm Vee inserts.



Compuline TDC Specifications

Model	TDCC-5	TDCC-10	TDCC-20	TDCC-50
Capacity				
KN	5	10	20	50
LBF	1,125	2,250	4,500	11,250
KGF	510	1,020	2,040	5100
Load accuracy	≤ ± 0.5%			
Deformation accuracy	≤ ± 0.5%			
Displacement Resolution	0.01 mm			
Test Speed	0.005 mm/min — 500 mm/min			
Vertical Test Space	700 mm (28")			
Total Crosshead Travel	1100 mm (43")		1200 mm (47")	
Clearance b/ Columns	420 mm (17")		570 mm (23")	
Load Frame Stiffness	400 KN / mm (2,0000,000 lbs./inch)			
Load Frame Dimensions				
Height	1747 mm			2000 mm
Width	730 mm			880 mm
Depth	577 mm			680 mm
Weight	165 Kg.			550 Kg.

Compuline FMC Series

The *Compuline FMC series* is a medium capacity floor model computer controlled universal testing machine that affords added test space and versatility in material testing applications. The *Compuline FMC series* is available in two capacities; 50 KN (11,250 lbf.), and 100 KN (22,500 lbf.).



Standard accessories for the *Compuline FMC*

- ✓ PC Computer
- ✓ PTS Solutions Software
- ✓ Load cell
- ✓ Wedge grips
- ✓ Six sets of inserts:
 - Flat inserts; 0 - 0.27" (0-7 mm), 0.27" - 0.55" (7-14 mm) and 0.55" - 0.83" (14 - 21mm)
 - Vee inserts; 0.15" - 0.35" (4-9 mm), 0.35" - 0.55" (9-14 mm) and 0.55" - 0.78" (14 - 20 mm)
- ✓ Compression Plates 4 " dia. (100mm)
- ✓ Flexure fixture: length 11" (280 mm), nose diameter, 0.4" (10 mm)

Compuline FHC Series

The *Compuline FHC series* is a high capacity floor model universal testing machines has an added convenience, of having *dual test cavities*. This design allows the operator to perform tension tests in one cavity and then compression tests in another without the hassle of taking off the grips to place the compression plates on the load frame. The *Compuline FHC series* is available in capacities of 200 KN (45,000 lbf.) and 300 KN (67,500 lbf.).

Standard accessories for model *Compuline FHC series*

- ✓ PC Computer
- ✓ PTS Solutions Software
- ✓ Load cell
- ✓ Wedge grips
- ✓ Six sets of inserts:
 - Flat inserts; 0 - 0.27" (0-7 mm), 0.27" - 0.55" (7-14 mm) and 0.55" - 0.83" (14 - 21mm)
 - Vee inserts; 0.35" - 0.55" (9 - 14 mm), 0.55" - 0.78" (14 - 20 mm) and 0.78" - 1.01" (20 - 26 mm)
- ✓ Compression Plates 4 " diameter (100mm)
- ✓ Flexure fixture: length 11" (280 mm), nose diameter, 0.4" (10 mm)



FHCC-300

Note: 300 KN unit includes Hydraulic grips as standard equipment.

Compuline FVC Series

The *Compuline FVC series* is a very high capacity floor model universal testing machine that features hydraulic grips as standard equipment with all machines. Like the *Compuline FHC series* the *Compuline FVC series* also has the added convenience of *dual test cavities*. The *Compuline FVC series* is available in capacities of 500 KN (121,500 lbf.) and 600 KN (135,000 lbf).

Standard accessories for model *Compuline FVC*

- ✓ PC Computer
- ✓ PTS Solutions Software
- ✓ Load cell
- ✓ Hydraulic grips
- ✓ Four sets of inserts:
 - Flat inserts; 0 - 0.6" (0-15 mm), 0.6" – 1.2" (15-30 mm)
 - Vee inserts; 0.5" – 1.1" (12- 26 mm), 1.1" – 1.6" (26 – 40 mm)
- ✓ Compression Plates 6 " dia. (150 mm)
- ✓ Flexure fixture: length 20" (500 mm), nose diameter, 1.2" (30 mm)



PTS Floor Model Specifications

Model	FMCC-50	FMCC-100	FHCC-200	FHCC-300	FVHC-500	FVHC-600
Capacity						
KN	50	100	200	300	500	600
LBF	11,250	22,500	45,000	67,500	112,500	135,000
KGF	5,100	10,200	20,400	30,600	51,000	61,200
Load accuracy	≤ ± 0.5%					
Deformation accuracy	≤ ± 0.5%					
Displacement Resolution	0.01 mm					
Test Speed	0.005 mm/min — 500 mm/min				0.005 mm/min-250 mm/min	
Vertical Test Space	500 mm (20")		500 mm (20")		800 mm (31")	
Total Crosshead Travel	1350 mm (53")		1350 mm (53")		1550 mm (61")	
Clearance / Columns	575 mm (22")		575 mm (22")		575 mm (22")	
Load Frame Stiffness	300 KN /mm		(1,500,000 lbs./inch)			
Load Frame Dimensions						
Height	2115 mm (83 ")		2614 mm (102")		3168 mm (125")	
Width	1022 mm (40")		1110 mm (43")		1250 mm (49")	
Depth	700 mm (27")		785 mm (31")		972 mm (38")	
Weight	1,000 Kg. (2,2,04 lb)		2,100 Kg. (5,600 lb)		2,800 Kg. (6,200 lb)	

CMT Series

The **CMT series** Computer controlled servo universal testing machine is designed with a unique fixed crosshead, single screw design that constitutes a money savings solution for applications that range between 150 KN and 300 KN. The **CMT series** precision universal testing machine also features a practical remote control LCD display for convenience of operation. It has high stability as well as high precision, equipped with PC computer system for data acquisition and control functions.

Main specifications:

	CMT-150	CMT-200	CMT-300
Maximum Load	150	200kN	300kN
Load accuracy	$\leq \pm 0.5\%$		
Deformation accuracy	$\leq \pm 0.5\%$		
Displacement resolution	0.01mm		
Testing speed	0.01mm-100mm/min		
Space(without grips)	800 mm		
Grip stroke	250mm or more		
Power	220V, 60Hz, 3 phases		
Dimensions (mm)	2150 X 800 X500		2150x800x500
Weight (kg)	750	800	900



CMT-300

PTS Solutions Software

The **PTS Solutions Software** operates in a windows environment and combines a user friendly working operation with powerful data acquisition and control capabilities. The **PTS Solutions Software** has the following outstanding features:

- Full digital control
- Individual or Batch Testing Capabilities
- Test Curve Analysis
- Convenient and Practical Parameter Settings
- Multilevel Security Management
- Automatic Program Control
- Versatile Test Report Generation
- Practical Database Management



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