CFU
INTERNATIONAL TRADE
& SERVICES INC.

Concrete

Testing Equipments

Concrete is a composite construction material made primarily from aggregate, cement, and water. There are many formulations of concrete that provide various properties. Concrete is the most widely used man-made product in the world as the main building material within architectural structures, foundations, brick/block walls, pavements, bridges/overpasses, motorways/roads, runways, parking structures, dams, pools/reservoirs, pipes, footings for gates, fences, poles and even boats.

The quality of concrete is important in planning earthquake resistant structures that minimize damage, preventing injury and human loss.

Due to this reason, concrete must be closely controlled according to the relevant standards in every stage of production by experienced people using quality test equipment.

In the concrete section, CFU Testing Equipment is basically grouped in four main headings

- Compression and Flexural Testing Machines
- Fresh Concrete Testing
- Hardened Concrete Testing
- Protection and Repair of Concrete Structures (NDT)

CONTENTS

ASTM & AASHTO - COMPRESSION TESTING FRAMES

ASTM & AASHTO COMPRESSION TESTING FRAMES FOR CYLINDERS

Product Code

CFC-4601 600 kN (135000 lbf) Compression Testing Frame with Ø105mm (4,13") Upper Bearing Blocks for Cylinders, ASTM&AASHTO

CFC-4701 1100 kN (245000 lbf) Compression Testing Frame with Ø105mm (4,13") Upper Bearing Blocks for Cylinders ASTM&AASHTO

CFC-4602 600kN (135000 lbf) Compression Testing Frame with Ø165mm(6,5") Bearing Blocks for Cylinders ASTM &AASHTO

CFC-4702 1100 kN (245000 lbf) Compression Testing Frame with Ø165mm (6,5") Upper Bearing Blocks for Cylinders ASTM & AASHTO

CFC-4712 1500 kN 335000 lbf) Compression Testing Frame with Ø165mm (6,5") Bearing Blocks for Cylinders ASTM & AASHTO

CFC-4722 2000 kN (450000 lbf) Compression Testing Frame with Ø165mm (6,5") Bearing Blocks for Cylinders ASTM & AASHTO

CFC-4732 3000 kN (670000 lbf) Compression Testing Frame with Ø165mm (6,5") Bearing Blocks for Cylinders ASTM & AASHTO

CFC-4680 Pedestal for 600kN (135000 lbf) ve1100kN (245000 lbf) Compression Testing Frames

CFC-4682 Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames

Standards

ASTM C39; AASHTO T22

ASTM & AASHTO compression testing frames for cylinders consist of a rigid welded steel walls, a loading cylinder assembly and lower and upper (spherically-seated) bearing platens.

The frames provide the stability needed for accurate and repeatable test results over the years of operation.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistons are designed to work with the load capacity. The lower bearing platens are provided with concentric centering line/s

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below tables for supplied items with the frames.

ASTM & AASHTO COMPRESSION TESTING FRAMES FOR CYLINDERS

Models	CFC-4601	CFC-4701	CFC-4602	CFC-4702
Capacity	600 kN (135000 lbf)	1100 kN (245000 lbf)	600 kN (135000 lbf)	1100 kN (245000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	Ø 105 mm (4.13")	Ø 105 mm (4.13")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Piston Diameter	150 mm (5,9")	190 mm (7,48")	150 mm (5,9")	190 mm (7,48")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm (13,4")	380 mm (15")	340 mm (13,4")	380 mm (15")
Horizontal Clearance (B)	230 mm (9,06")	270 mm (10,6")	230 mm (9,06")	270 mm (10,6")
For Cylinder Specimens Sizes	Ø100x200 mm (4"x8")	Ø100x200 mm (4"x8")	Ø100x200mm (4x8") Ø150x300mm (6x12") (**)	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm
Dimensions (wxlxh) (Axd*xF)	270x454x922 mm (10,63"x17,87"x36,3")	310x454x1042 mm (12,2"x17,87"x41,02")	270x454x922 mm (10,63"x17,87"x36,3")	310x454x1042 mm (12,2"x17,87"x41,02")
Weight	280 kg (620 lbs)	378 kg (835 lbs)	291 kg (640 lbs)	389 kg (860 lbs)
Pedestal (Optional)	CFC-4680	CFC-4680	CFC-4680	CFC-4680

(d*) Depth (**) Limited by capacity of the frame

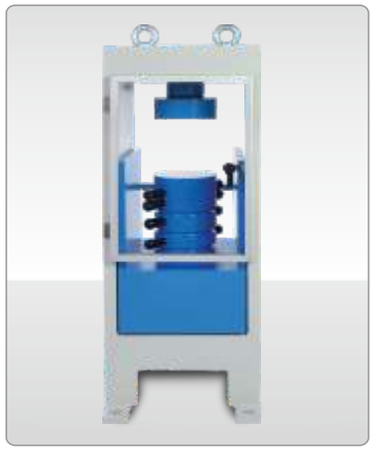
The frames are supplied complete with;

- CFC-4601 and CFC-4602: 100 mm(3,93") 50 mm (1,97"), 30 mm (1,2") height x Ø165mm (Ø 6,5") distance pieces
- CFC-4701 and CFC-4702: 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- Removable transparent front and rear safety doors

CFC-4732 with CFC-4682

CFC-4601

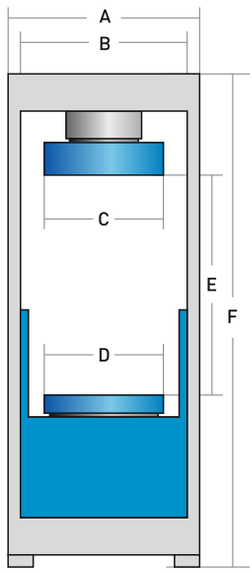
CFC-4602



CFC-4712

CFC-4722

Models	CFC-4712	CFC-4722	CFC-4732
Capacity	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Piston Diameter	230 mm (9,06")	250 mm (9,84")	310 mm (12,2")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm (15")	380 mm (15")	380 mm (15")
Horizontal Clearance (B)	320 mm (12,6")	360 mm (14,17")	415 mm (16,34")
For Cylinder Specimens Sizes	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm
Dimensions (wxlxh) (Axd*xF) d*) depth	380x451x1104 mm (14,96"x17,76"x43,86")	420x453x1144 mm (16,54"x17,83"x45,04")	475x497x1204mm (18,7"x19,57"x47,4")
Weight	528 kg (1165 lbs)	615 kg (1355 lbs)	837kg (1845 lbs)
Pedestal (Optional)	CFC-4682	CFC-4682	CFC-4682



The frames are supplied complete with;;

- 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") mm height x Ø165 mm (Ø 6,5") distance pieces
- Removable transparent front and rear safety doors

ASTM & AASHTO - COMPRESSION TESTING FRAMES

ASTM COMPRESSION TESTING FRAMES FOR BLOCKS

Product Code

CFC-4706 1100 kN (245000 lbf) Compression Testing Frame for Blocks, ASTM
CFC-4716 1500 kN (335000 lbf) Compression Testing Frame for Blocks, ASTM
CFC-4726 2000 kN (450000 lbf) Compression Testing Frame for Blocks, ASTM
CFC-4736 3000 kN (670000 lbf) Compression Testing Frame for Blocks, ASTM
CFC-4680 Pedestal for 600 kN (135000 lbf) or 1100 kN (245000 lbf) Compression Testing Frames
CFC-4682 Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames

Standards

ASTM C140, C1314


CFC-4629


CFC-4726

ASTM & AASHTO compression testing frames for blocks consist of a rigid welded steel walls, a loading cylinder assembly and lower and upper (spherically-seated) bearing platens.

The frames provide the stability needed for accurate and repeatable test results over the years of operation.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistons are designed to work with the load capacity. The lower bearing platens are provided with centering line/s

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below tables for supplied items with the frames.

ASTM COMPRESSION TESTING FRAMES FOR BLOCKS

Models	CFC-4706	CFC-4716	CFC-4726	CFC-4736
Capacity	1100 kN (245000 lbf)	1500 kN (245000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")
Surface Hardness of Bearing Blocks	60 HRC	60 HRC	60 HRC	60 HRC
Flatness Tolerance	0,025 mm / 150 mm (0,001"/"6")	0,025 mm / 150 mm (0,001"/"6")	0,025 mm / 150 mm (0,001"/"6")	0,025 mm / 150 mm (0,001"/"6")
Piston Diameter	230 mm (9,06")	230 mm (9,06")	250 mm (9,84")	310 mm (12,2")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")
Horizontal Clearance (B)	320 mm (12,6")	320 mm (12,6")	360 mm (14,17")	415 mm (16,34")
Dimensions (wxlxh) (Axd*xF) (d*) Depth	380x451x1104mm (14,96"x17,76"x43,86")	380x451x1104mm (14,96"x17,76"x43,86")	420x453x1144 mm (16,54"x17,83"x45,04")	475x497x1204mm (18,7"x19,57"x47,4")
Weight	723 kg (1595 lbs)	723 kg (1595 lbs)	810 kg (1785 lbs)	1032 kg (2275 lbs)
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682	CFC-4682

The frames are supplied complete with;

- 50 mm (1,97"), 2 pcs. 30 mm (1,2"), 15 mm (0,59") height x Ø 165 mm (Ø6,5") distance pieces
- Lifting Device for Lower Bearing Platen (CFC-4629)
- Removable transparent front and rear safety doors

ASTM & AASHTO - COMPRESSION TESTING FRAMES

ASTM COMPRESSION TESTING FRAMES FOR BLOCKS AND CYLINDERS

Product Code

CFC-4725 2000 kN (450000 lbf) Compression Testing Frame for Blocks and Cylinders, ASTM
CFC-4735 3000 kN (670000 lbf) Compression Testing Frame for Blocks and Cylinders, ASTM
CFC-4528 Upper Bearing Platens Replacement Equipment for CFC-4725 and CFC-4735
CFC-4682 Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames with Welded Wall

Standards

ASTM C39, C140, C1314; AASHTO T22

(*) Depending on the type of specimen to be tested, the bearing platens set can be easily switched with other bearing platens by users with the help of CFC-4528

CFC-4528 and CFC-4512

CFC-4725 and CFC-4529

ASTM & AASHTO compression testing frames for blocks and cylinders consist of a rigid welded steel walls, a loading cylinder assembly and lower and upper (spherically-seated) bearing platens.

The frames provide the stability needed for accurate and repeatable test results over the years of operation.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

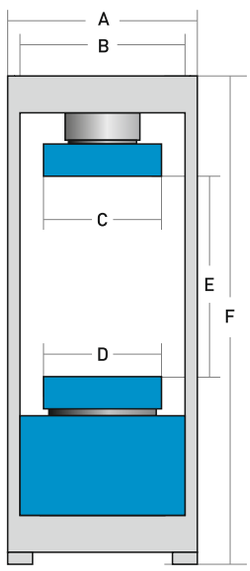
All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistons are designed to work with the load capacity. The lower bearing platens are provided with centering line/s

CFC-4528 Upper bearing platens replacement equipment is used by the user for changing the upper bearing platens depending on whether the specimen to be tested is a block or cylinder.

CFC-4682 Pedestal that is made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below table for supplied items with the frames

Models		CFC-4725	CFC-4735
Capacity		2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type		Welded Steel	Welded Steel
Lower Bearing Platens Dimensions (D)	Block	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")
	Circular	Ø165 mm (6.5")	Ø165 mm (6.5")
Upper Bearing Block Dimensions (C)	Block	310x410x90 mm (12.2"x16.1"x3.5")	310x410x90 mm (12.2"x16.1"x3.5")
	Circular	Ø165 mm (6.5")	Ø165 mm (6.5")
Surface Hardness of Bearing Platens	Block	60 HRC	60 HRC
	Circular	55 HRC	55 HRC
Flatness Tolerance	Block	0,025mm / 150 mm (0,001"/"6")	0,025mm / 150 mm (0,001"/"6")
	Circular	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Maximum Vertical Clearance Between Bearing Blocks (E)	Block	250 mm (9,84")	250 mm (9,84")
	Circular	380 mm (15")	380 mm (15")
Piston Diameter		250 mm (9,84")	310 mm (12,2")
Piston Stroke		50 mm (1,97")	50 mm (1,97")
Horizontal Clearance (B)		360 mm (14,17")	415 mm (16,34")
Dimensions (wxlxh) (Axd*xF) (d*) Depth		420x453x1144 mm (16,54"x17,83"x45,04")	475x497x1204mm (18,7"x19,57"x47,4")
Weight		908 kg (2000 lb)	1129 kg (2490 lb)
Pedestal (Optional)		CFC-4682	CFC-4682



The frames are supplied complete with;

- 310x410x90 mm (12.2"x16.1"x3.54") lower and upper (spherically seated) bearing platens (comes with mounted to the frame)
- Ø165 mm (6.5") lowerand upper bearing blocks
- Upper Bearing Platens Replacement Equipment (CFC-4528)
- Lifting Device for Lower Bearing Platen (CFC-4629)
- 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2"), 15 mm (0,59") height x Ø165 mm (6,5") distance pieces
- Removable transparent front and rear safety doors

EN - COMPRESSION TESTING FRAMES

EN 12390-4 COMPRESSION TESTING FRAMES WITH WELDED WALLS FOR CUBES AND CYLINDERS

Product Code

CFC-5727	2000 kN EN 12390-4 Compression Testing Frame for Cubes and Cylinders
CFC-5737	3000 kN EN 12390-4 Compression Testing Frame for Cubes and Cylinders
CFC-4682	Pedestal for 1500 kN, 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

Standards

EN 12390-4, EN 12390-3

CFC-5727 and CFC-5737 compression testing frames for cubes and cylinders consist of rigid welded steel walls, a loading cylinder assembly, lower and upper (spherically-seated) loading platens. acc. to EN standards.

EN compression testing frames provides the stability needed for accurate and repeatable test results over the years of operation.

The frames are supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the piston is designed to work with the load capacity. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder.

The lower loading platens are provided with concentric centfering lines and fixture for centering specimens

CFC-4682 Pedestal that is made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below table for supplied items with the frames.

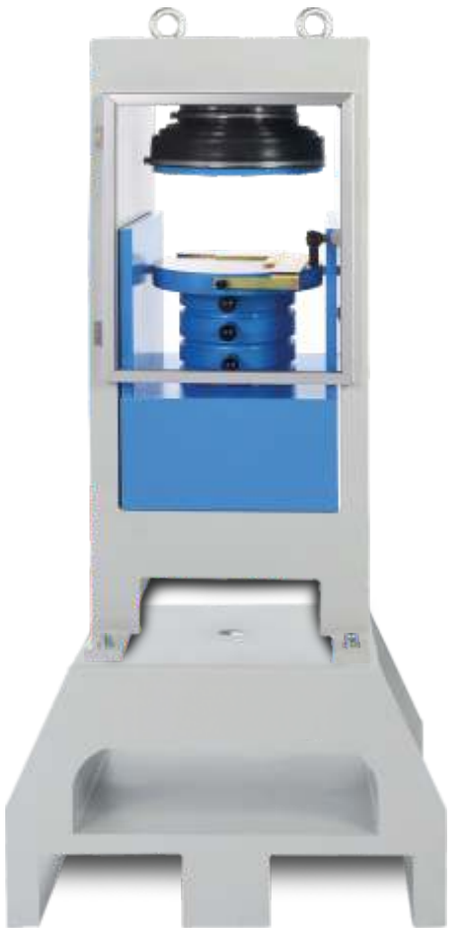
Models	CFC-5727	CFC-5737
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 300 mm	Ø 300 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm
Surface Hardness of Bearing Blocks	53 HRC	53 HRC
Flatness Tolerance	0,03 mm	0,03 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
For Cubes (up to) Specimens Sizes	200 mm (**)	200 mm (**)
For Cylinder (up to) Specimens Sizes	Ø160x320 mm	Ø160x320 mm
Dimensions (wxlxh) (Axd*xF)	450x455x1145 mm	505x500x1205 mm
Weight	755 kg	990 kg
Pedestal (Optional)	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The frames for cubes and cylinders are supplied complete with;

- 100 mm, 50 mm and 30 mm height Ø205 mm distance pieces
- CFC-4622E - Fixture for Centering Specimens, compatible with Ø300 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders
- Removable transparent front and rear safety doors

Appropriate Distance piece/s for the cylinder and cube specimens with the height of lower than 150 mm should be ordered separately.



CFC-4727 with CFC-4682

EN - COMPRESSION TESTING FRAMES

EN 12390-4 FOUR COLUMN COMPRESSION TESTING FRAMES FOR CUBES and CYLINDERS

Product Code

CFC-6727	2000 kN Capacity Four Column Compression Testing Frame for Cubes and Cylinders, EN
CFC-6737	3000 kN Capacity Four Column Compression Testing Frame for Cubes and Cylinders, EN
CFC-6748	4000 kN Capacity Four Column Compression Testing Frame for Cubes and Cylinders, EN
CFC-6758	5000 kN Capacity Four Column Compression Testing Frame for Cubes and Cylinders, EN
CFC-4684	Pedestal for 2000 kN and 3000 kN Four Column Compression Testing Frames
CFC-4686	Pedestal for 4000 kN and 5000 kN Four Column Compression Testing Frames

Standards

EN 12390-4, EN 12390-3

CFC-6727, CFC-6737, CFC-6748 and CFC-6758 compression testing frames with four column for cubes and cylinders consist of a loading cylinder assembly, lower and upper (spherically-seated) loading platens. acc. to EN standards.

EN four column compression testing frames provides the stability needed for accurate and repeatable test results over the years of operation.

The frames are supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistons are designed to work with their load capacities. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder.The lower loading platens are provided with centering lines and fixture for centering specimens

CFC-4684 and UT-4686 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below table for supplied items with the frames.

Models	CFC-6727	CFC-6737	CFC-6748	CFC-6758
Capacity	2000 kN	3000 kN	4000 kN	5000 kN
Frame Type	Four Column	Four Column	Four Column	Four Column
Lower Bearing Block, Dimensions (D)	Ø 300 mm	Ø 300 mm	Ø 360 mm	Ø 360 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm	Ø 360 mm	Ø 360 mm
Surface Hardness of Bearing Blocks	53 HRC	53 HRC	53 HRC	53 HRC
Flatness Tolerance	0,03 mm	0,03 mm	0,03 mm	0,03 mm
Piston Diameter	250 mm	310 mm	360 mm	400 mm
Piston Stroke	50 mm	50 mm	100 mm	100 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm	520 mm	520 mm
For Cubes (up to) Specimens Sizes	200 mm (**)	200 mm (**)	200 mm	200 mm
For Cylinder (up to) Specimens Sizes	Ø160x320 mm	Ø160x320 mm	Ø250x500 mm (**)	Ø250x500 mm (**)
Dimensions (wxlxh) (Axd*xF)	590x560x1100 mm	680x690x1150 mm	772x825x1540 mm	772x825x1570 mm
Weight	935 kg	1435 kg	2485 kg	2540 kg
Pedestal (Optional)	CFC-4684	CFC-4684	CFC-4686	CFC-4686

(d*) Depth (**) Limited by capacity of the frame

The frames for cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø 205 mm distance pieces (two pcs. each for CFC-6748 and CFC-6758)
- CFC-4622E - Fixture for Centering Specimens, compatible with Ø300 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders (for CFC-6727 and CFC-6737)
- CFC-4624E - Fixture for centering specimens, compatible with Ø 360mm lower loading platen for 150 mm and 250 mm cubes, Ø 150 mm and 250 mm cylinders (for CFC-6748 and CFC-6758)
- Removable transparent front and rear safety doors

Appropriate Distance piece/s for the cylinder and cube specimens with the height of lower than 150mm should be ordered separately.

EN - COMPRESSION TESTING FRAMES

EN 12390-4 and EN 772-1 COMPRESSION TESTING FRAMES FOR CONCTERE CUBES AND CYLINDERS AND MASONARY UNITS

Product Code

CFC-5729 2000 kN Capacity Compression Testing Frame for Masonary Units, Cubes and Clinders, EN
CFC-5739 3000 kN Capacity Compression Testing Frame for Masonary Units, Cubes and Clinders, EN
CFC-4682 Pedestal for 1500 kN, 2000 kN and 3000 kN Compression Testing Frames

Standards

EN 12390-4, EN 12390-3, EN 772-1

CFC-5729 and CFC-5739 compression testing frames with rigid welded steel walls for masonary units, cubes and cylinders consist of a loading cylinder assembly, lower and upper (spherically-seated) loading platens. acc. to EN standards.

The frames are tested and certified for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4 by CFU. EN compression testing frames provides the stability needed for accurate and repeatable test results over the years of operation.

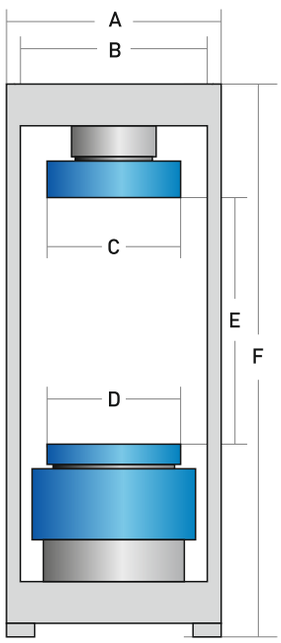
The frames are supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistona are designed to work with the load capacity. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder. The lower loading platens are provided with concentric centering lines and fixture for centering specimens

CFC-4682 Pedestal that is made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately. See the below table for supplied items with the frames.

Models		CFC-5729	CFC-5739
Capacity		2000 kN	3000 kN
Frame Type		Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)		310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)		310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks		55 HRC	55 HRC
Flatness Tolerance		0,03mm	0,03mm
Piston Diameter		250 mm	310 mm
Piston Stroke		50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)		350 mm	350 mm
Horizontal Clearance (B)		360 mm	415 mm
Sizes of Specimens	For Cylinder (up to)	Ø160x320 mm	Ø160x320 mm
	For Cubes (up to)	300 mm (**)	300 mm (**)
	For Masonary Units (up to)	300x500 mm (**)	300x500 mm (**)
Dimensions (wxlxh) (Axd*xF)		450x550x1145 mm	505x550x1205 mm
Weight		880 kg	1120 kg
Pedestal (Optional)		CFC-4682	CFC-4682



(d*) Depth (**) Limited by capacity of the frame

The frames for masonary units, cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces
- Fixture for Centering Specimens, compatible with 310x510x50 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

Appropriate Distance piece/s for the cylinder and cube specimens with the height of lower than 150mm should be ordered separately

EN - COMPRESSION TESTING FRAMES

EN 12390-4 and EN 772-1 FOUR COLUMN COMPRESSION TESTING FRAMES FOR CONCTERE CUBES AND CYLINDERS AND MASONARY UNITS

Product Code

CFC-6729	2000 kN Capacity Four Column Compression Testing Frame for Masonary Units, Cubes and Clinders, EN
CFC-6739	3000 kN Capacity Four Column Compression Testing Frame for Masonary Units, Cubes and Clinders, EN
CFC-6749	4000 kN Capacity Four Column Compression Testing Frame for Masonary Units, Cubes and Clinders, EN
CFC-6759	5000 kN Capacity Four Column Compression Testing Frame for Masonary Units, Cubes and Clinders, EN
CFC-4684	Pedestal for 2000 kN and 3000 kN Four Column Compression Testing Frames
CFC-4686	Pedestal for 4000 kN and 5000 kN Four Column Compression Testing Frames

Standards

EN 12390-4, EN 12390-3, EN 772-1

CFC-6749

CFC-6729, CFC-6739, CFC-6749 and CFC-6759 compression testing frames with four column for masonary units, cubes and cylinders consist of a loading cylinder assembly, lower and upper (spherically-seated) loading platens. acc. to EN standards.

EN four column compression testing frames provides the stability needed for accurate and repeatable test results over the years of operation.

The frames are supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistons are designed to work with their load capacities. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder.The lower loading platens are provided with centering lines and fixture for centering specimens

CFC-4684 and UT-4686 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below table for supplied items with the frames.

CFC-6749 with CFC-4682

EN 12390-4 and EN 772-1 FOUR COLUMN COMPRESSION TESTING FRAMES FOR CONCTERE CUBES AND CYLINDERS AND MASONARY UNITS

Models		CFC-6729	CFC-6739	CFC-6749	CFC-6759
Capacity		2000 kN	3000 kN	4000 kN	5000 kN
Frame Type		Four Column	Four Column	Four Column	Four Column
Lower Bearing Block, Dimensions (D)		310x510x50 mm	310x510x50 mm	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)		310x510x50 mm	310x510x50 mm	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks		55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance		0,03mm	0,03mm	0,03mm	0,03mm
Piston Diameter		250 mm	310 mm	360 mm	400 mm
Piston Stroke		50 mm	50 mm	100 mm	100 mm
Maximum Vertical Clearance Between Bearing Blocks (E)		350 mm	350 mm	520 mm	520 mm
Sizes of Specimens	For Cylinder (up to)	Ø150x300 mm	Ø150x300 mm	Ø250x500 mm (**)	Ø250x500 mm (**)
	For Cubes (up to)	300 mm (**)	300 mm (**)	300 mm (**)	300 mm (**)
	For Masonary Units (up to)	300x500 mm (**)	300x500 mm (**)	300x500 mm (**)	300x500 mm (**)
Dimensions (wxlxh) (Axd*xF)		590x560x1100 mm	680x690x1150 mm	772x825x1540 mm	865x640x1555 mm
Weight		1040 kg	1540 kg	2555 kg	3260 kg
Pedestal (Optional)		CFC-4684	CFC-4684	CFC-4686	CFC-4686

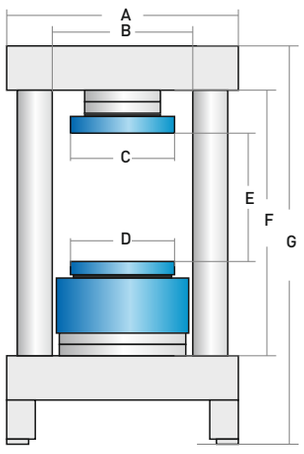
(d*) Depth

(**) Limited by capacity of the frame

The frames for masonary units, cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces (two pcs. each for CFC-6749 and CFC-6759)
- CFC-4626E - Fixture for centering specimens, compatible with 310x510x50 mm lower loading platen, for 100 mm and 150 mm cubes and Ø100 mm and Ø150 mm cylinders (for CFC-6729 and CFC-6739)
- CFC-4627E - Fixture for centering specimens, compatible with 310x510x50 mm lower loading platen, for 150 mm and 250 mm cubes, Ø150 mm and Ø250 mm cylinders for CFC-6749 and CFC-6759
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

Appropriate distance piece/s for the cylinder and cube specimens with the height of lower than 150 mm should be ordered separately for CFC-6729.FPR and CFC-6739.FPR



GENERAL PURPOSE COMPRESSION TESTING FRAMES FOR CUBES AND CYLINDERS

Product Code

CFC-4713G	1500 kN Capacity General Purpose Compression Testing Frame with ø216mm Loading Platens for Cubes and Cylinders
CFC-4723G	2000 kN Capacity General Purpose Compression Testing Frame with Ø216mm Loading Platens for Cubes and Cylinders
CFC-4733G	3000 kN Capacity General Purpose Compression Testing Frame with Ø216mm Loading Platens for Cubes and Cylinders
CFC-4727G	2000 kN Capacity General Purpose Compression Testing Frame with Ø 300mm Loading Platens for Cubes and Cylinders
CFC-4737G	3000 kN Capacity General Purpose Compression Testing Frame with Ø 300mm Loading Platens for Cubes and Cylinders
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

CFC-4727G

Standards

EN 12390-4, EN 12390-3

General purpose testing frames for cubes and cylinders consist of a rigid welded steel walls, a loading cylinder assembly and Ø 216 mm or Ø 300mm a lower and an upper (spherically-seated) loading platens by taking into account user requests for general purposes.

The frames have a 380 mm vertical clearance that make possible to perform compression test of cylinders with capping retainers and neopren pads.

The General Purpose compression testing frames provides the stability needed for accurate and repeatable test results over the years of operation.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frames for easier accessibility, increased productivity and for safer operations.

All frames also have front and rear protective doors and limit swich for piston stroke for safety,

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below tables for supplied items with the frames.

CFC-4723G

GENERAL PURPOSE COMPRESSION TESTING FRAMES WITH Ø216mm LOADING PLATENS FOR CUBES AND CYLINDERS

Models	CFC-4713G	CFC-4723G	CFC-4733G
Capacity	1500 kN	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	Ø 216 mm	Ø 216 mm	Ø 216 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 216 mm	Ø 216 mm	Ø 216 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm	0,05 mm
Piston Diameter	230 mm	250 mm	310 mm
Piston Stroke	50 mm	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm	380 mm	380 mm
Horizontal Clearance (B)	320 mm	360 mm	415 mm
For Cylinder (up to) Specimens Sizes	Up to Ø160x320mm	Up to Ø160x320mm	Up to Ø160x320mm
For Cubes Specimens Sizes	Up to 150mm	Up to 200mm	Up to 200mm
Dimensions (wxlxh) (Axd*xF)	380x451x1104 mm	420x453x1144 mm	475x497x1204 mm
Weight	540 kg	630 kg	850 kg
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The frames are supplied complete with;

- 100 mm, 50 mm and 2 pcs. 30 mm x Ø165 mm distance pieces
- Removable transparent front and rear safety doors

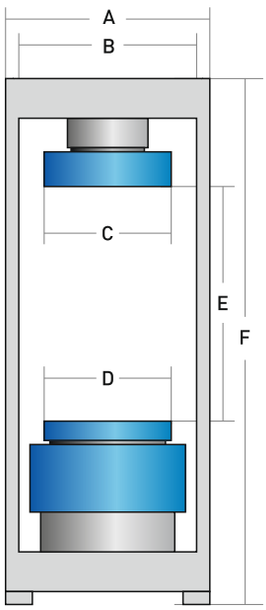
GENERAL PURPOSE COMPRESSION TESTING FRAMES WITH Ø300 mm LOADING PLATENS FOR CUBES AND CYLINDERS

Models	CFC-4727G	CFC-4737G
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	300 mm	300 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	300 mm	300 mm
Surface Hardness	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
For Cylinder (up to) Specimens Sizes	Up to Ø160x320 mm	Up to Ø160x320 mm
For Cubes Specimens Sizes (**)	Up to 200 mm	Up to 200 mm
Dimensions (wxlxh) (Axd*xF)	420x453x1144 mm	475x497x1204 mm
Weight	665 kg	890 kg
Pedestal (Optional)	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The frames are supplied complete with;

- 100 mm, 50 mm and 30 mm x Ø205 mm distance pieces
- Removable transparent front and rear safety doors



GENERAL PURPOSE COMPRESSION TESTING FRAMES

GENERAL PURPOSE AND EN 772-1 COMPRESSION TESTING FRAMES FOR MASONARY UNITS/BLOCKS, CUBES AND CYLINDERS

Product Code

CFC-4714GE 1500 kN General Purpose and EN 772-1 Compression Testing Frame for Masonary Units/Blocks, Cubes and Cylinders
CFC-4729GE 2000 kN General Purpose and EN 772-1 Compression Testing Frame for Masonary Units/Blocks, Cubes and Cylinders
CFC-4739GE 3000 kN General Purpose and EN 772-1 Compression Testing Frame for Masonary Units/Blocks, Cubes and Cylinders
CFC-4680 Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls
CFC-4682 Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

CFC-4729GE

CFC-4714GE, CFC-4729GE nd CFC-4739GE, general purpose testing frames for masonary units/blocks cubes and cylinders consist of a rigid welded steel walls, a loading cylinder assembly and a lower and an upper (spherically-seated) loading platens by taking into account user requests for general purposes.

The frames provide the stability needed for accurate and repeatable test results over the years of operation.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

The frames also have front and rear protective doors and limit swich for piston stroke for safety.

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

See the below tables for supplied items with the frame.

Models	CFC-4714GE	CFC-4729GE	CFC-4739GE
Capacity	1500 kN	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	220x410x50 mm	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	220x410x50 mm	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm	0,05 mm
Piston Diameter	230 mm	250 mm	310 mm
Piston Stroke	50 mm	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm	330 mm	330 mm
Horizontal Clearance (B)	320 mm	360 mm	415 mm
Specimens Sizes (Masonary units/blocks)	Up to 200x400 mm	Up to 300x500 mm	Up to 300x500 mm
Specimens Sizes	up to Ø160x320 mm cylinders 200 mm cubes	up to Ø160x320 mm cylinders 200 mm cubes	up to Ø160x320 mm cylinders 200 mm cubes
Dimensions (wxlxh) (Axd*xF)	380x451x1104 mm	420x600x1144 mm	475x600x1204 mm
Weight	620 kg	780 kg	1000 kg
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682

(d*) Depth (**) Limited by capacity of the frame

The frames are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø165 mm distance pieces (plus 15 mm x Ø165 mm for CFC-4714GE)
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

GENERAL PURPOSE COMPRESSION TESTING FRAMES

EN 772-1 and GENERAL PURPOSE COMPRESSION TESTING FRAMES FOR MASONARY UNITS/BLOCKS, CYLINDERS AND CUBES

Product Code

CFC-4609EG	600 kN EN 772-1 and General Purpose Compression Testing Frame for Masonary Units/ Blocks, Cylinders And Cubes
CFC-4709EG	1100 kN EN 772-1 and General Purpose Compression Testing Frame for Masonary Units/ Blocks, Cylinders And Cubes
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls

Standards

EN 772-1

CFC-4729GE

CFC-4609EG and CFC-4609EG compression testing frames for masonary units/ blocks, cylinders and cubes consist of a loading cylinder assembly, lower and upper (spherically-seated) loading platens.

The compression testing frames provides the stability needed for accurate and repeatable test results over the years of operation.

Any hydraulic power pack with control and read out unit and a pressure transducer for measuring the loads, can be positioned on the right hand side of the load frame for easier accessibility, increased productivity and for safer operations.

All frames have a single acting up stroking ram and also have front and rear protective doors and limit swich for piston stroke for safety. The diameter of the pistons are designed to work with their load capacities. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder.

The lower loading platens are provided with lines for centering specimens

CFC-4682 Pedestal that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

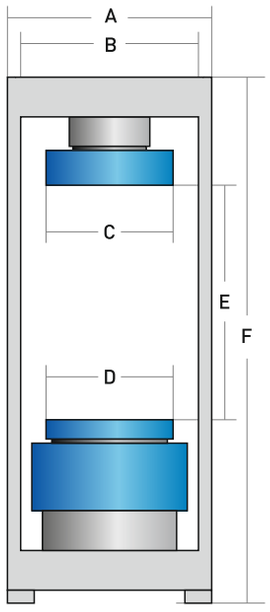
See the below table for supplied items with the frames.

Models	CFC-4609EG	CFC-4709EG
Capacity	600 kN	1100 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm
Piston Diameter	230 mm	230 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	330 mm	330 mm
Horizontal Clearance (B)	320 mm	320 mm
For Cylinder (up to) Specimens Sizes	up to 300x500 mm masonary units/blocks	
	up to Ø160x320 mm cylinders, 200 mm cubes	
Blocks Masonary Units (up to)	Limited by the capacity of the machines and sizes of loading platens	
Dimensions (wxlxh) (Axd*xF)	380x550x750 mm	380x550x750 mm
Weight	690 kg	690 kg
Pedestal (CFC-4682)	CFC-4680	CFC-4680

(d*) Depth (**) Limited by capacity of the frame

The frames are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø165 mm distance pieces
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors



COMPRESSION TESTING FRAME ACCESSORIES

Product Code

CFC-4630 Distance Pieces, Ø165x15 mm (Ø6,5" x 0,59")
CFC-4631 Distance Pieces, Ø165x30 mm (Ø6,5" x 1,18")
CFC-4633 Distance Pieces, Ø165x50 mm (Ø6,5" x 1,97")
CFC-4634 Distance Pieces, Ø165x100 mm (Ø6,5" x 3,93")
CFC-4636 Distance Pieces, Ø205x30 mm (Ø8,07" x 1,18")
CFC-4638 Distance Pieces, Ø205x50 mm (Ø8,07" x 1,97")
CFC-4639 Distance Pieces, Ø205x100 mm (Ø8,07" x 3,93")
CFC-4680 Pedestal for 600kN (135000 lbf) and 1100kN (245000 lbf) Compression Testing Frames
CFC-4682 Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames
CFC-4684 Pedestal for Four Column 2000 kN (45000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames
CFC-4686 Pedestal for Four Column 4000 kN (900000 lbf) and 5000 kN (1250000 lbf) Compression Testing Frames

Distance Pieces

Distance Pieces

Standards

EN 12390-3, 12390-4; BS 1881; ASTM C39

Distance pieces are used to reduce the amount of vertical clearance between the upper platen and the lower platen. For lowering the minimum distance between upper and lower platens down to required height, 2000 kN , 3000 kN and 4000 kN machines are supplied with 205 mm (8,07") dia. distance pieces and 600 kN, 1100 kN and 1500 kN machines are supplied with 165 mm (6,5") dia. distance pieces.

Distance pieces are equipped with handles.

LOADING CYLINDER ASSEMBLY

All frames have a single acting up stroking ram. The diameter of the piston is designed to work with the load capacity.

The maximum ram movement is 50 mm. The pressure transducer is used for load measurements. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder.


Loading Cylinder Assembly and Limit Switch

PEDESTAL FOR FRAMES

The pedestals make it easier for the user to placement of specimens in the frames for compression test.

	Dimensions	Weight (approx.)
CFC-4630	165x165x15 mm (6,5"x6,5"x0,59")	2,5 kg (5,5 lbs)
CFC-4631	165x165x30 mm (6,5"x6,5"x0,59")	5 kg (11 lbs)
CFC-4633	165x165x50 mm (6,5"x6,5"x0,59")	8 kg (17,6 lbs)
CFC-4634	165x165x100 mm (6,5"x6,5"x0,59")	15,5 kg (34,2 lbs)
CFC-4636	205x205x30 mm (8,07"x8,07"x1,18")	8 kg (17,6 lbs)
CFC-4638	205x205x50 mm (8,07"x8,07"x1,97")	13 kg (28,7 lbs)
CFC-4639	205x205x100 mm (8,07"x8,07"x3,93")	24,5 kg (54 lbs)
UTD-4680	545x540x545 mm (21,5"x21,3"x21,5")	50 kg (110 lbs)
CFC-4682	725x540x445 mm (28,5"x21,3"x17,5")	55 kg (122 lbs)
CFC-4684	775x580x445 mm (30,5"x22,8"x17,5")	84 kg (186 lbs)
CFC-4686	785x580x445 mm (30,9"x22,8"x17,5")	90 kg (199 lbs)


CFC-4680 or CFC-4682 Pedestal

COMPRESSION TESTING FRAME ACCESSORIES

Product Code

CFC-4511	Ø105 mm (4,13") Upper (spherically seated) and Ø165 mm (6,5") Lower Bearing Blocks, ASTM C39
CFC-4512	Lower and Upper (spherically seated) Bearing Blocks, Ø165 mm (6,5"), ASTM C39
CFC-4513	Lower and Upper (spherically seated) Bearing Blocks, Ø 216 mm (8,5"), ASTM C39
CFC-4514	Lower and Upper (spherically seated) Loading Platens, 220x410x50 mm (8,66x16,1x1,97")
CFC-4516	Lower and Upper (spherically seated) Bearing Platens, 310x410x90 mm (12,2x16,1x3,54"), ASTM C140
CFC-4517	Lower and Upper (spherically seated) Loading Platens, Ø 300 mm, EN 12390-4
CFC-4518	Lower and Upper (spherically seated) Loading Platens, Ø 360 mm, EN 12390-4
CFC-4519	Lower and Upper (spherically-seated) Loading Platens, 310x510x50 mm EN 12390-4 and EN 772-1
CFC-4528	Upper Bearing Platens Replacement Equipment, for CFC-4725 and CFC-4735
CFC-4622E	Fixture for Centering Specimens, for Ø300 mm Lower Loading Platen
CFC-4624E	Fixture for Centering Specimens, for Ø360 mm Lower Loading Platen
CFC-4626E	Fixture for Centering Specimens, for 310x510x50 mm Lower Loading Platen for CFC-5729, CFC-5739, CFC-6729 and CFC-6739 frames
CFC-4627E	Fixture for Centering Specimens, for 310x510x50 mm Lower Loading Platen For CFC-6749 and CFC-6759 frames and machines
CFC-4629	Lifting Device for Lower Loading Platen for CFC-4514, CFC-4516 and CFC-4519

The platens enable the testing of a wide variety of cylinder, cube, blocks or similar specimens.

- Manufactured from high quality steel, which is then hardened, smoothed and finished.
- The roughness value for the surface texture of the auxiliary platens are ≤3.2 µm.
- CFC-4512, CFC-4513, CFC-4517 and CFC- 4518 have centering rings on the lower platens for proper centering of 100 mm and 150 mm cube, 100 mm and 150 mm cylinder samples.
- Ø 300 mm CFC-4517 has an specimen centering apparatus on lower platen as standard for 150 mm cube

Lifting Device for Lower Loading Platen (CFC-4629) which can be used easy replacement of the distance pieces between the piston and the lower platen for setting the vertical clearence of the frames.
The device should be ordered separately for CFC-4514, CFC-4516 and CFC-4519.

CFC-4628
Upper Bearing Platens Replacement Equipment

CFC-4629

CFC-4629
Lifting Device for Lower Loading Platen

CFC-4629

COMPRESSION TESTING FRAME ACCESSORIES

CFC-4511

CFC-4512

CFC-4513

CFC-4514

CFC-4516

CFC-4517

Centering apparatus on CFC-4518

CFC-4519

	CFC-4511	CFC-4512	CFC-4513	CFC-4514	CFC-4516	CFC-4517	CFC-4518	CFC-4519
Sizes of Platens	Ø105 mm (4,13") Upper Ø165 mm (6,5") Lower	Ø165 mm (6,5")	Ø216 mm (8,5")	220x410x50 mm	310x410x90mm (12,2x16,1x3,54")	Ø300 mm	Ø360 mm	310x510x50mm
Sizes of Specimens (Can be tested)	2", 3", 4" dia. cylinders	4", 6" dia. cylinders	6" dia. cylinders	Blocks up to 210x410 mm	Blocks up to 310x390 mm (8,7"x15",3")	100, 150, 160, 250 mm dia. cylinders 100, 150, 200 mm cubes	100, 150, 160, 250 mm dia. cylinders 100,150,200mm cubes	Masonary Units up to 310x510 mm
Standards	ASTM C39	ASTM C39	ASTM C39	EN 772-1	ASTM C140 C1314	EN 12390-4	EN 12390-4 For ≥4000 kN compression frames	EN 12390-4 EN 772-1
Hardness	≥ 55 HRC	≥ 55 HRC	≥ 55 HRC	≥ 600 HV	≥ 60 HRC	≥ 53 HRC	≥ 53 HRC	≥ 600 HV
Dimensions	11x11x13 cm (4,3"x4,3"x5")	17x17x13 cm (6,7"x6,7"x5")	22x22x13 cm (8,7"x8,7"x5")	23x43x15 cm	33x43x15 cm (13"x17"x6")	32x32x20 cm	43x43x30 cm	33x50x14 cm
Weight	7 kg (15,4 lbs)	20 kg (44 lbs)	37 kg (82 lbs)	170 kg	200 kg (241 lbs)	75 kg	110 kg	180 kg

DIGITAL READOUT UNITS

Product Code

CFC-4920LP LPI Battery Operated Digital Readout Unit

CFC-4920 is used for reading of the applied load on load cells or pressure transducers in different material test applications.

- Can operate with 2 x AA batteries or 5 V AC adapter
- Real time numeric display of load and load pressure
- 1 channel with two different calibration table (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Peak hold property
- Multi-point calibration
- 8 keys keyboard
- RS232 Serial port for PC or thermal or dot matrix printer

The LPI is a very convenient readout unit that can be used to retrofit old compression machines with manometer (gauge).

Dimensions	150x200x200 mm
Weight (approx.)	1 kg

U-Touch PRO CONTROL UNIT FOR COMPRESSION/FLEXURE TESTING MACHINES

Product Code

CFC-4930.FPR U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines 110-220V 50-60 Hz. 1 ph

CFC-4930.FPR U-Touch PRO Control Unit, designed to control the automatic compression/flexure testing machines for compression, flexure, splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks.

All the operations of U-Touch PRO Control Unit are controlled from the front panel color resistive touch screen display and function keys. The unit can be configured as using for two frames or one frame with three dispalacement transducers.

The Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Its specimen setting sub-menu lists different specimen types including but not limited to cube, cylinder, block, beam, beam double upper bearers, cube splitting tensile, cylinder splitting tensile, paving block splitting tensile and kerb flexure.

Digital graphic display of the unit is able to draw real-time "Load vs. Time" or "Stress vs. Time" graphics.

CFC-4930.FPR Unit offers many addition unique features.Thanks to its built-in internet protocol suite, every aspect of the device can be controlled remotely from anywhere around the world.

Following tests can be perform by on CFC-4930.FPR control unit (also with appropriate hydraulic power pack, testing frame and accessories).

- **Compressive Strength of Concrete Cylinders / Cubes**
- **Flexural Strength of Concrete Beams**
- **Flexural Strength of Concrete Kerbs**
- **Tensile Splitting Strength of Concrete Cylinders / Cubes**
- **Tensile Splitting Strength of Concrete Paving Blocks**
- **Compressive Strength of Masonry Units/Blocks**
- **Flexural Strength of Concrete Flagstones/Slabs**
- **Compressive Strength of Hydraulic-Cement Mortars**
- **Flexural Strength of Hydraulic-Cement Mortars**

Main Features

- **Two analog channels which provides load control of two load-cells or/and pressure transducers**
- **Also two additional channel inputs for displacement measurement (Activated only by the CFU technical service)**
- **Multi-Point calibration function for the channels**
- **Programmable digital gain adjustment for load voltage and current transmitters**
- **Provides load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selector valve and selectimg channel**
- **Real time numeric display of load and load pressure with test graph.**
- **3 different unit system selection; kN, kgf and lbf**
- **Backup and recall option for device settings**
- **Easy recall of embedded test parameters for different types of tests and sample sizes Real time and adjustable date/ time**
- **Multi-language support (English, French, Spanish, Turkish, Russian...)**
- **Ethernet port for connecting to a PC or network and for instantaneous transfer of test data to PC**
- **USB port support for transfer of test data to a flash drive**
- **Optionally supplied-integrated thermal printer (If requested, must be specified in the order)**

PLEASE see the pages of "U-Touch PRO Control Units" for details of the properties of software and hardware.

CFC-4930.FPR

CFU SOFTWARE FOR AUTOMATIC COMPRESSION/FLEXURE TESTING MACHINES

Product Code

USOFT-4830.FPR CFU Software for Automatic Compression /Flexure Testing Machines with CFC-4830.FPR Hydrolic Power Pack

CFU USOFT-4930.FPR Software has been designed for data acquisition, processing controlling, presentation and reporting compression, flexure, splitting tensile strength tests of construction materials such as concrete, cement, masonry units/blocks with appropriate Automatic Compression/Flexure Testing Machines and also with a computer.

This software provides data acquisition and management for compression, flexure and splitting tensile tests of construction materials such as concrete, cement, bricks. The advanced functions for data base management provide an easy navigation of all saved data.

The test results certificate includes all descriptive information. Therefore, test parameters can be set and details about the test carried out such as client details, test type, specimen type, user info and other information required can be entered and printed out as well as test report and graph.

Following tests can be done with the USOFT-4930.FPR Software;

- Compressive Strength of Concrete Cylinders / Cubes
- Flexural Strength of Concrete Beams
- Flexural Strength of Concrete Kerbs
- Tensile Splitting Strength of Concrete Cylinders / Cubes
- Tensile Splitting Strength of Concrete Paving Blocks
- Compressive Strength of Masonry Units/Blocks
- Flexural Strength of Concrete Flagstones/Slabs
- Compressive Strength of Hydraulic-Cement Mortars
- Flexural Strength of Hydraulic-Cement Mortars

Detailed information of the following properties of USOFT-4930.FPR software, please look at the CFU "USOFT Series Softwares Softwares" pages.

- Multi-Language Support and Customizable User Interface
- User Identification and Authorization
- Unlimited Test Result Storage Capacity in One Test File
- Exporting Test Results to Database
- Advanced Test Graphical Interface
- Option to Store and Recall Test Information
- Modification of Test Machine Parameters Using the Software
- Exporting Reports and Graphs
- Flexible Report and Graph Formats
- Help and User Manual Display

USOFT-4830.FPR CFU Software

HAND OPERATED HYDRAULIC POWER PACK AND READ-OUT UNIT

Product Code

CFC-4810 Hand Operated Hydraulic Power Pack
CFC-4920LP LPI Battery Operated Digital Read-Out Unit
CFC-4810MLP Hand Operated Hydraulic Power Pack with LPI Battery Operated Digital Read-Out Unit

The CFC-4810 Hand Operated (Manual) Hydraulic Power Pack has been designed to be used with range of CFU compression and flexural frames to use on site and/or where electricity is not available.

The pump is equipped with a radial piston pump so that the loading is continuous as long as the user turns the wheel installed on the pump. The loading is uniform as on an automatic machine. The user can easily load up to 400 bars with minimal effort. Maximum working pressure of system is 400 bar.

CFC-4810MLP consists of CFC-4810 and CFC-4920LP. In this application CFC-4920LP is used for reading the applied load by CFC-4810 in any frame.

The specifaications of the LPI Battery Operated Digital Read-Out Unit can be seen on CFC-4920LP page.

Dimensions	300x250x500 mm
Weight (approx.)	50 kg

HYDRAULIC POWER PACKS

Product Code

CFC-4820 Motorized (Semi-Automatic) Hydrolic Power Pack
CFC-4920LP LPI Battery Operated Digital Read-Out Unit

Models for 220-240V 50-60 Hz, 1 ph.	CFC-4820
Models for 110-120V 60 Hz, 1 ph.	CFC-4820-N

The CFC-4820 Motorized (Semi-Automatic) Power Pack, controlled by a pressure rate control valve is designed to supply the required oil to the load frames for loading. The power pack can load different frames with required pace rates. A rapid approach pump is supplied as standard. The power pack is equipped with a safety valve (maximum pressure valve) to avoid machine overloading. Maximum working pressure of the system is 400 bar.

CFC-4920LP is used with CFC-4820 Motorized (Semi-Automatic) Hydrolic Power Pack for reading the applied load by pressure transducer during the compression tests.Plase see the page of CFC-4920LP "LPI Battery Operated Digital Read-Out Unit" for details of the properties.

CFC-4920LP Unit should be ordered separately.

DUAL STAGE PUMP

- Low pressure gear pump
- High pressure durable variable output pump

On the dual stage pump, a high delivery low pressure gear pump is used for rapid approach, while a low delivery high pressure durable variable output pump is used for test execution. Rapid approach property of the machine shortens the time interval from when the piston starts moving until the upper platen touches the specimen and helps to save a great amount of time in a busy test laboratory.

MOTOR

- Dual pump is driven by an AC motor
- 220 V (110 V), 50-60 Hz single phase and 550 W

DISTRIBUTION BLOCK

- Safety valve (maximum pressure valve)
- Pressure relief valve

A distribution block is used to control the oil flow direction supplied by the dual stage pump which has the safety valve and pressure relief valve mounted upon it.

CFC-4820 with CFC-4920

OIL TANK

The tank (20 L capacity) includes enough oil to fill the mechanism which pushes the ram during the test. The level and oil temperature can be seen on the indicator fitted to the tank. Hydraulic motor oil number 46, must be used.

SAFETY FEATURES

- Maximum pressure valves to avoid machine overloading

Dimensions	300x420x850 mm
Weight (approx.)	70 kg
Power	550 W

AUTOMATIC HYDRAULIC POWER PACKS

Product Code

CFC-4830FPR Automatic Hydraulic Power Pack with U-Touch PRO Control Unit

CFC-4840FPR High Oil Capacity Automatic Hydraulic Power Pack with U-Touch PRO Control Unit for the Frames with Double Ended Pistons

CFC-4841FPR High Oil Capacity Automatic Hydraulic Power Pack with U-Touch PRO Control Unit for the Frames with Single Ended Pistons

Models for 220-240V 50-60 Hz, 1 ph.		
CFC-4830FPR	CFC-4840FPR	CFC-4841FPR

Models for 110-120V 60 Hz, 1 ph.		
CFC-4830FPR-N	CFC-4840FPR-N	CFC-4841FPR-N

The CFC-4830FPR Automatic Hydraulic Power Pack, dual stage, controlled by U-Touch PRO Control Unit is designed to supply the required oil to the load frames for loading. The power pack is very silent, even at full load A rapid approach pump is supplied as standard. A safety valve (maximum pressure valve) is used to avoid machine overloading.

The CFC-4840FPR and CFC-4841FPR have the same specifications with CFC-4830FPR except for high oil capacity. As the name suggests, CFC-4840FPR is used with the frames with double ended pistons and CFC-4841FPR is used with the frames with single ended pistons.

DUAL STAGE PUMP

1. Low pressure gear pump
2. High pressure durable variable output pump

On the dual stage pump, a high delivery low pressure gear pump is used for rapid approach, while low delivery high pressure radial piston pump is used for test execution. Rapid approach facility of the machine shortens the time interval from when the piston starts moving until the upper platen touches to the specimen, this facility saves a great amount of time in a busy test laboratory.

MOTOR

The motor which drives the dual pump is a 0.75 kW AC motor which is controlled by an Omron J7 motor inverter. The variation in the oil flow is executed with the variation of the rotation speed of the motor.

DISTRIBUTION BLOCK

Distribution block is used to control the oil flow direction supplied by the dual stage pump and the following hydraulic components are fitted to it:

a - Solenoid valve
b - Safety valve (maximum pressure valve)
c - Transducer
d - Low pressure gear pump
e - High pressure radial piston pump

OIL TANK

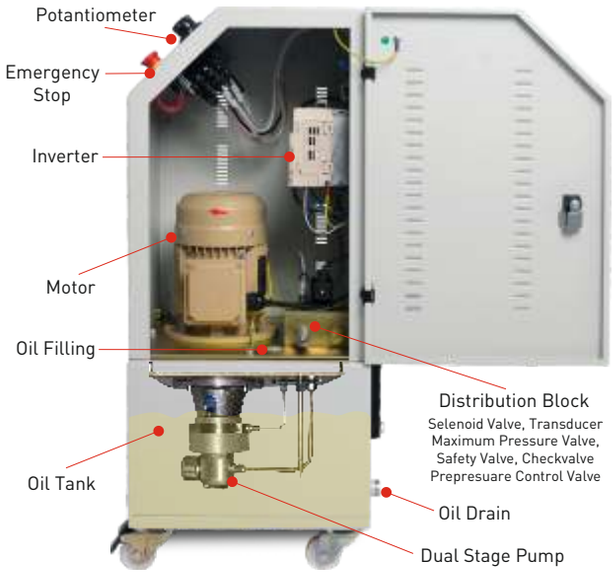
The tank includes enough oil to fill the mechanism which pushes the ram during the test. The level and oil temperature can be seen on the indicator fitted to the tank. The oil capacity of the tank is 20 lt. for CFC-4830FPR and and 32 lt. for CFC-4840 FPR. Hydraulic motor oil, number 46, must be used.

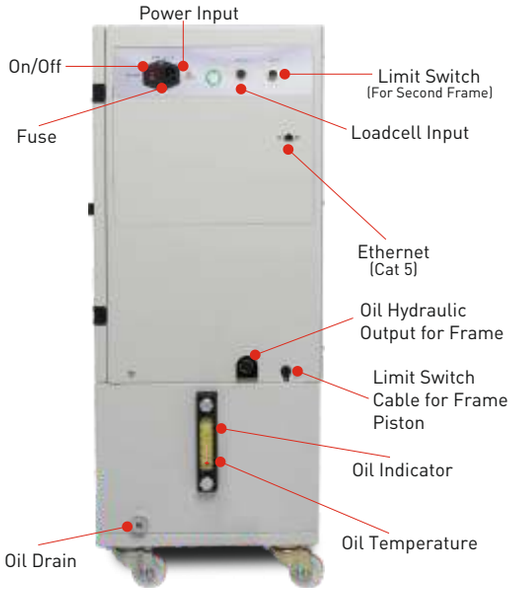
PLEASE see the pages of "U-Touch PRO Control Unit CFC-4930.FPR" for details of the properties.

	CFC-4830FPR	CFC-4840FPR
Dimensions	370x400x920 mm	605x455x1015 mm
Weight (approx.)	85 kg	150 kg
Power	1000 W	1000 W

CFC - 4830FPR

CFC - 4840FPR





ASTM MANUAL COMPRESSION TESTING MACHINES

ASTM & AASHTO LOW CAPACITY MANUEL COMPRESSION TESTING MACHINES FOR CYLINDERS

Product Code

CFC-4601.MLP	600 kN (135000 lbf) Manual Compression Testing Machine with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4701.MLP	1100 kN (245000 lbf) Manual Compression Testing Machine with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4602.MLP	600 kN (135000 lbf) Manual Compression Testing Machine with Ø165mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4702.MLP	1100 kN (245000 lbf) Manual Compression Testing Machine with Ø165mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4712.MLP	1500 kN (335000 lbf) Manual Compression Testing Machine with Ø165mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4680	Pedestal for 600kN (135000 lbf) and 1100kN (245000 lbf) Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 1500 kN(335000 lbf), 2000 kN (450000 lbf) and 3000 kN(670000 lbf Compression Testing Frames with Welded Walls

CFC - 4601.MLP

Standards

ASTM C39, C42

The CFU 600 kN, 1100 kN and 1500 kN capacity Manual Compression Testing Machines are designed to perform reliable compression tests on concrete specimens especially suitable for on-site applications when electric power supply is unavailable.

Being a low cost alternative, the CFU manual testing series combines precision and simplicity with the unique design of the manual power pack which is hand operated and enables even an inexperienced operator to perform excellent compression and flexure tests on-site.

The machines are supplied in Class A starting from with the 5% of the machine capacity.

With their exceptional performance, the machines consist of a heavy duty welded frame and hand operated hydraulic power pack with LPI Battery Operated Digital Readout Unit .

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

CFC - 4712.MLP

CFC - 4602.MLP

CFC - 4701.MLP

ASTM & AASHTO LOW CAPACITY MANUEL COMPRESSION TESTING MACHINES FOR CYLINDERS

Models	CFC-4601.MLP	CFC-4701.MLP	CFC-4602.MLP	CFC-4702.MLP	CFC-4712.MLP
Capacity	600 kN (135000 lbf)	1100 kN (245000 lbf)	600 kN (135000 lbf)	1100 kN (245000 lbf)	1500 kN (337 klbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 105 mm (4,13")	Ø 105 mm (4,13")	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 105 mm (4,13")	Ø 105 mm (4,13")	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02 mm / 150 mm (0,001"/6")	0,02 mm / 150 mm (0,001"/6")	0,02 mm / 150 mm (0,001"/6")	0,02 mm / 150 mm (0,001"/6")	0,02 mm / 150 mm (0,001"/6")
Piston Diameter	150 mm	190 mm (7,48")	150 mm	190 mm (7,48")	230 mm
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm (13,4")	380 mm (15")	340 mm (13,4")	380 mm (15")	380 mm (15")
Horizontal Clearance (B)	230 mm (9,06")	270 mm (10,6")	230 mm (9,06")	270 mm (10,6")	270 mm (10,6")
For Cylinder Sizes	Ø100x200 mm (4"x8")	Ø100x200 mm (4"x8")	Ø100x200 mm (4"x8") Ø150x300mm(6"x12") (**)	Ø100x200mm(4"x8") Ø150x300mm(6"x12") Ø160x320mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm
Power	550 W	550 W	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	340 Bar	362 Bar	340 Bar	390 Bar	362 Bar
Dimensions (wxlxh) (Axd*xF)	570x454x922mm (22,44"x17,87"x36,3")	610x454x1042mm (24,02"x17,87"x41,02")	570x454x922mm (22,44"x17,87"x36,3")	610x454x1042mm (24,02"x17,87"x41,02")	680x451x1104mm (26,77"x17,76"x43,86")
Weight	330 kg (728 lbs)	428 kg (944 lbs)	330 kg (728 lbs)	439 kg (968 lbs)	578 kg (1275 lbs)
Pedestal (Optional)	CFC-4680	CFC-4680	CFC-4680	CFC-4680	CFC-4682

(d*) Depth (**) Limited by capacity of the frame

The Machines are supplied complete with;

- CFC-4601.MLP and CFC-4602.MLP : 100mm(3,93"), 50mm(1,97"), 30mm(1,2") height x Ø165mm(Ø 6,5") distance pieces
- CFC-4701.MLP, CFC-4702 and CFC-4712.MLP: 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") height x Ø165 mm (Ø 6,5 distance pieces.
- Removable transparent front and rear safety doors

GENERAL PURPOSE MANUAL COMPRESSION TESTING MACHINE

GENERAL PURPOSE MANUAL COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Product Code

CFC-4713G.MLP	1500 kN General Purpose Manual Compression Testing Machine with Ø216mm Loading Platens for Cubes and Cylinders
CFC-4682	Pedestal for 1500 kN, 2000 kN and 3000 kN Compression Testing Frames

General Purpose Manual Compression Testing Machine is designed to perform reliable compression tests on concrete specimens especially suitable for on-site applications when electric power supply is unavailable.

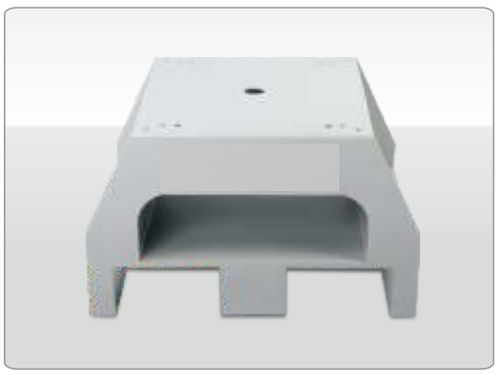
Being a low cost alternative, the CFU manual testing series combines precision and simplicity with the unique design of the manual power pack which is hand operated and enables even an inexperienced operator to perform excellent compression and flexure tests on-site.

The machine is supplied in Class A starting from with the5 % of the machine capacity.

With their exceptional performance, the machine consists of a heavy duty welded frame and hand operated hydraulic power pack with LPI Battery Operated Digital Readout Unit .

CFC-4680 Pedestal that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

CFC - 4713G.MLP



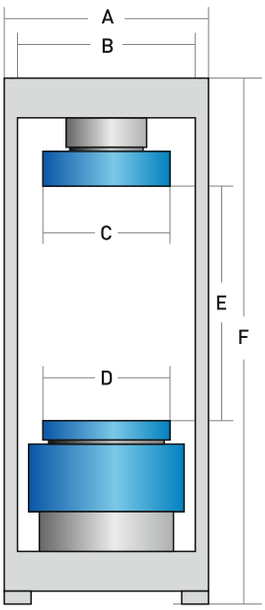
CFC-4682 Pedestal

Models	CFC-4713G.MLP
Capacity	1500 kN
Frame Type	Welded Steel
Bearing Platens Dimensions (D)	Ø 216 mm (8,5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 216 mm (8,5")
Surface Hardness of Bearing Blocks	55 HRC
Flatness Tolerance	0,05 mm
Piston Diameter	230 mm
Piston Stroke	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	370 mm
Horizontal Clearance (B)	320 mm
For Cylinder (up to) Specimens Sizes	Ø160x320mm
For Cubes (up to) Specimens Sizes	150 mm
Dimensions (wxlxh) (Axd*xF)	680x500x930 mm
Weight	590 kg
Pedestal (Optional)	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The machine is supplied complete with;

- 100 mm, 50 mm and 2 pcs. 30 mm x Ø165 mm (6,5") distance pieces
- Removable transparent front and rear safety doors



GENERAL PURPOSE MANUAL COMPRESSION TESTING MACHINE

GENERAL PURPOSE MANUEL COMPRESSION TESTING MACHINES FOR BLOCKS, CUBES AND CYLINDERS

Product Code

CFC-4714GE 1500 kN General Purpose and EN 772-1 Manuel Compression Testing Machine for Blocks, Cubes and Cylinders

CFC-4680 Pedestal for 600 kN, 1000 kN and 1500 kN Compression Testing Frames

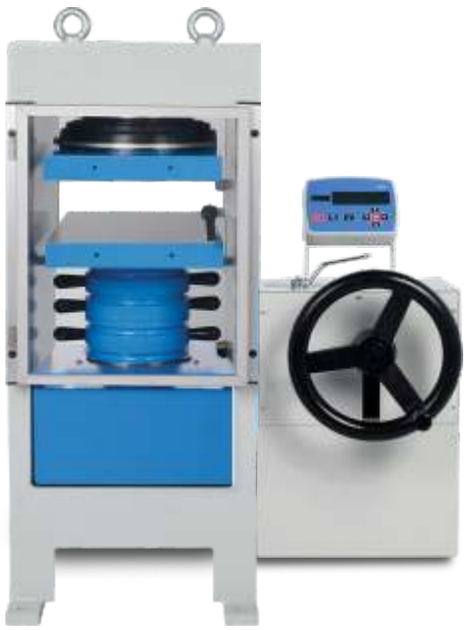
General Purpose and EN 772-1 Manual Compression Testing Machine is designed to perform reliable compression tests on concrete specimens especially suitable for on-site applications when electric power supply is unavailable.

Being a low cost alternative, the CFU manual testing series combines precision and simplicity with the unique design of the manual power pack which is hand operated and enables even an inexperienced operator to perform excellent compression and flexure tests on-site.

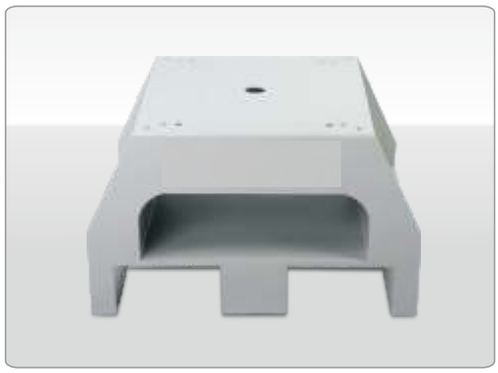
The machines are supplied in Class A starting from with the5 % of the machine capacity.

With their exceptional performance, the machines consist of a heavy duty welded frame and hand operated hydraulic power pack with LPI Battery Operated Digital Readout Unit .

CFC-4680 Pedestal that is made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.



CFC - 4714GE



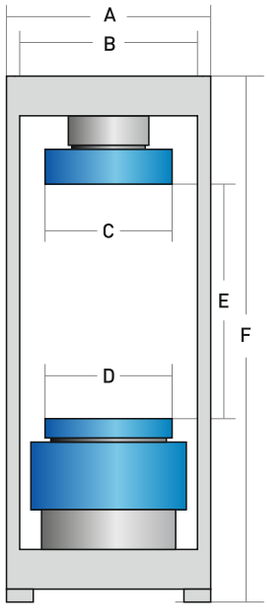
CFC-4680 Pedestal

Models	CFC-4714GE.MLP
Capacity	1500 kN
Frame Type	Welded Steel
Bearing Platens Dimensions (D)	210x410x50mm (8.2"x16,1"x1,9")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	210x410x50mm (8.2"x16,1"x1,9")
Surface Hardness of Bearing Blocks	55 HRC
Flatness Tolerance	0,05 mm
Piston Diameter	230 mm
Piston Stroke	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm
Horizontal Clearance (B)	320 mm
For Cylinder (up to) Specimens Sizes	Up to Ø160x320 mm (**)
For Cubes (up to) Specimens Sizes	200 mm (**)
For Masonary Units (up to) Specimens Sizes	Up to 200x400 mm (**)
Dimensions (wxlxh) (Axd*xF)	680x500x930 mm
Weight	730 kg
Pedestal (Optional)	CFC-4680

(d*) Depth
(**) Limited by capacity of the frame

The Machine for blocks, cubes and cylinders is supplied complete with;

- 100 mm, 50 mm, 30mm and 15 mm height x Ø165 mm distance pieces
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors



ASTM & AASHTO - SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

ASTM & AASHTO SEMI -AUTOMATIC COMPRESSION TESTING MACHINES FOR CYLINDERS

Product Code

CFC-4601. SLP	600kN (135000 lbf) Semi-Automatic Compression Testing Machines with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4701. SLP	1100kN (245000lbf) Semi-Automatic Compression Testing Machines with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4602.SLP	600kN (135000 lbf) Semi-Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4702.SLP	1100kN (245000lbf) Semi-Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4712. SLP	1500 kN (335000 lbf)Semi-Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4722. SLP	2000 kN (450000 lbf) Semi-Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4732. SLP	3000 kN (670000 lbf) Semi-Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600kN (135000 lbf) and 1100kN (245000lbf) Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames with Welded Walls

CFC - 4732.MLP

Product Code

ASTM C39; AASHTO T22

Models for 220-240V 50-60 Hz, 1 ph.	CFC-4601.SLP	CFC-4701.SLP	CFC-4602.SLP	CFC-4702.SLP	CFC-4712.SLP	CFC-4722.SLP	CFC-4732.SLP
Models for 110-120V 60 Hz, 1 ph.	CFC-4601.SLP-N	CFC-4701.SLP-N	CFC-4602.SLP-N	CFC-4702.SLP-N	CFC-4712.SLP-N	CFC-4722.SLP-N	CFC-4732.SLP-N

CFC-4601.SLP, CFC-4701.SLP, CFC-4602.SLP, CFC-4702.SLP, CFC-4712.SLP, CFC-4722.SLP and CFC-4732.SLP Semi-Automatic Compression Testing Machines for compression testing of cylinders are manufactured acc. to ASTM & AASHTO standards

These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

The Machines consist of a welded frame (see below table), hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-4920LP).

CFC-4680 or CFC-4682 Pedestal for the frames of the machines should be ordered separately.

Main Features

- Class A starting from with the 5% of the machine capacity,

(Special calibration option starting from 1% of the full range with CFC-0210)

- 1 channel with two different calibration table, test parameters and specimen information

(by changing the sensor belong to other frame, the unit can be control for second test frame)

- Multi-point calibration
- Real time numeric display of load and load pressure
- Peak hold property
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines(USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary units

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

USOFT-4820.SLP Test Software is improved for semi-automatic concrete compression and flexural testing machines with LPI Battery Operated Digital Readout Unit durring the test to collect and record data and to prepare the report containing the results obtained.Before the test, a PC which the CFU software is installed is connected to RS232 port of LPI reading unit, the data obtained in the test can be monitored and recorded in real time. The advanced functions for data base management provide an easy navigation of all saved data. Test report including the test results and user defined test information (names and the Company details, test type, specimen type, user info and other knowledge required) can be print out.

Models	CFC-4601.SLP	CFC-4701.SLP	CFC-4602.SLP	CFC-4702.SLP
Capacity	600 kN (135000 lbf)	1100 kN (245000 lbf)	600 kN (135000 lbf)	1100 kN (245000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	Ø 105 mm (4.13")	Ø 105 mm (4.13")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Piston Diameter	150 mm (5,9")	190 mm (7,48")	150 mm (5,9")	190 mm (7,48")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm (13,4")	380 mm (15")	340 mm (13,4")	380 mm (15")
Horizontal Clearance (B)	230 mm (9,06")	270 mm (10,6")	230 mm (9,06")	270 mm (10,6")
For Cylinder Specimens Sizes	Ø100x200 mm (4"x8")	Ø100x200 mm (4"x8")	Ø100x200mm (4x8") Ø150x300mm (6x12") (**)	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm
Power	550 W	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	340 Bar	390 Bar	340 Bar	390 Bar
Dimensions (wxlxh) (Axd*xF)	570x454x922 mm (22,44"x17,87"x36,3")	610x454x1042 mm (24,02"x17,87"x41,02")	570x454x922 mm (22,44"x17,87"x36,3")	610x454x1042 mm (24,02"x17,87"x41,02")
Weight	350 kg (770 lbs)	448 kg (990 lbs)	361 kg (795 lbs)	459 kg (1010 lbs)
Pedestal (Optional)	CFC-4680	CFC-4680	CFC-4680	CFC-4680

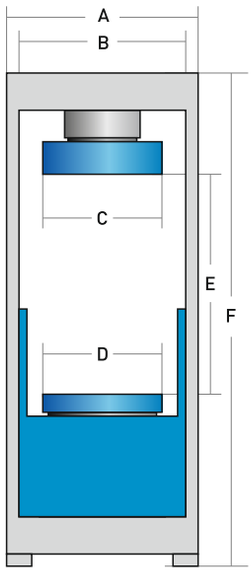
(d*) Depth (**) Limited by capacity of the frame
The Machines are supplied complete with;

- CFC-4601.SLP and CFC-4602.SLP: 100 mm (3,93"), 50 mm (1,97"), 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- CFC-4701.SLP and CFC-4702.SLP: 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") mm height x Ø165 mm (Ø 6,5") distance pieces
- Removable transparent front and rear safety doors

Models	CFC-4712	CFC-4722	CFC-4732
Capacity	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Piston Diameter	230 mm (9,06")	250 mm (9,84")	310 mm (12,2")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm (15")	380 mm (15")	380 mm (15")
Horizontal Clearance (B)	320 mm (12,6")	360 mm (14,17")	415 mm (16,34")
For Cylinder Specimens Sizes	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm
Power	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF) (d*) depth	680x451x1104 mm (26,77"x17,76"x43,86")	720x453x1144 mm (28,35"x17,83"x45,04")	775x497x1204mm (30,51"x19,57"x47,4")
Weight	598 kg (1320 lbs)	685 kg (1510 lbs)	907kg (2000 lbs)
Pedestal (Optional)	CFC-4682	CFC-4682	CFC-4682

The Machines are supplied complete with;

- 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- Removable transparent front and rear safety doors



ASTM & AASHTO - SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

ASTM SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS

Product Code

CFC-4706.SLP	1100 kN (245000 lbf) Semi-Automatic Compression Testing Machines for Blocks, ASTM
CFC-4716.SLP	1500 kN (335000 lbf) Semi-Automatic Compression Testing Machines for Blocks, ASTM
CFC-4726.SLP	2000 kN (450000 lbf) Semi-Automatic Compression Testing Machines for Blocks, ASTM,
CFC-4736.SLP	3000 kN (670000 lbf) Semi-Automatic Compression Testing Machines for Blocks, ASTM,
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600 kN (135000 lbf) ve 1100 kN (245000 lbf) Compression Testing Frames
CFC-4682	Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames

Models for 220-240V 50-60 Hz, 1 ph.			
CFC-4706	CFC-4716	CFC-4726	CFC-4736
Models for 110-120V 60 Hz, 1 ph.			
CFC-4706-N	CFC-4716-N	CFC-4726-N	CFC-4736-N

CFC - 4726.SLP

Standards

ASTM C140, C1314

CFC-4716.SLP, CFC-4726.SLP and CFC-4736.SLP Semi-Automatic Compression Testing Machines for compression testing of blocks are manufactured acc. to ASTM standards.

These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

The Machines consist of a welded frame (see below table), hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-4920LP).

CFC-4680 or CFC-4682 Pedestal for the frames of the machines should be ordered separately.

Main Features

- Class A starting from with the 5% of the machine capacity, (Special calibration option starting from 1% of the full range with CFC-0210)
- 1 channel with two different calibration table, test parameters and specimen information (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Multi-point calibration
- Real time numeric display of load and load pressure
- Peak hold property
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines(USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary unitsmaterials such as concrete, cement, brick/masonary units

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

USOFT-4820.SLP Test Software is improved for semi-automatic concrete compression and flexural testing machines with LPI Battery Operated Digital Readout Unit durring the test to collect and record data and to prepare the report containing the results obtained.Before the test, a PC which the CFU software is installed is connected to RS232 port of LPI reading unit, the data obtained in the test can be monitored and recorded in real time. The advanced functions for data base management provide an easy navigation of all saved data. Test report including the test results and user defined test information (names and the Company details, test type, specimen type, user info and other knowledge required) can be print out.

ASTM SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS

Models	CFC-4706.SLP	CFC-4716.SLP	CFC-4726.SLP	CFC-4736.SLP
Capacity	1100 kN (245000 lbf)	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")
Surface Hardness of Bearing Blocks	60 HRC	60 HRC	60 HRC	60 HRC
Flatness Tolerance	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")
Piston Diameter	230 mm (9,06")	230 mm (9,06")	250 mm (9,84")	250 mm (9,84")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")
Horizontal Clearance (B)	320 (12,6")	320 (12,6")	360mm(14,17")	415 mm (16,34")
Power	550 W	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressureor	390 Bar	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	680x451x1104 mm (26,77"x17,76"x43,86")	680x451x1104 mm (26,77"x17,76"x43,86")	720x453x1144 mm (16,54"x17,83"x45,04")	775x497x1204 mm (18,7"x19,57"x47,4")
Weight	793 kg (1750 lbs)	793 kg (1750 lbs)	880 kg (1940 lbs)	1102 kg (2430 lbs)
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The machines for block are supplied complete with;

- 50 mm (1,97"), 2 pcs. 30 mm (1,2"), 15 mm (0,59") height x Ø165 mm (Ø6,5") distance pieces
- Lifting Device for Lower Bearing Platen (CFC-4629)
- Removable transparent front and rear safety doors

CFC - 4726.SLP - 2000 kN (450000 lbf) Semi-Automatic Compression Testing Machines for Blocks and Pedestal

EN - SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

EN 12390-4 SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Product Code

CFC-5727.SLP	2000 kN EN 12390-4 Semi-Automatic Compression Testing Machines for Cubes and Cylinders
CFC-5737.SLP	3000 kN EN 12390-4 Semi-Automatic Compression Testing Machines for Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4682	Pedestal for 1500 kN (335000 lbf), 2000 kN and 3000 kN Compression Testing Frames

Models for 220-240V 50-60 Hz, 1 ph.	
CFC-5727.SLP	CFC-5737.SLP

Models for 110-120V 60 Hz, 1 ph.	
CFC-5727.SLP-N	CFC-5737.SLP-N

Product Code

ASTM C39; AASHTO T22

CFC-5727.SLP and CFC-5737.SLP models Semi-Automatic Compression Testing Machines are manufactured for compression testing of cubes and cylinders acc. to EN standards.

These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

The Semi-Automatic Compression Machines consist of a welded frame (see table), hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-4920LP).

CFC-4682 Pedestal for the frames of the machines should be ordered separately.

CFC-5727.SLP for Pedestal

Main Features

- Class A starting from with the 5% of the machine capacity, (Special calibration option starting from 1% of the full range with CFC-0210)
- 1 channel with two different calibration table, test parameters and specimen information (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Multi-point calibration
- Real time numeric display of load and load pressure
- Supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines(USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary units

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

USOFT-4820.SLP Test Software is improved for semi-automatic concrete compression and flexural testing machines with LPI Battery Operated Digital Readout Unit durring the test to collect and record data and to prepare the report containing the results obtained.Before the test, a PC which the CFU software is installed is connected to RS232 port of LPI reading unit, the data obtained in the test can be monitored and recorded in real time. The advanced functions for data base management provide an easy navigation of all saved data. Test report including the test results and user defined test information (names and the Company details, test type, specimen type, user info and other knowledge required) can be print out.

EN 12390-4 SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Models	CFC-5727.SLP	CFC-5737.SLP
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
	Ø 300 mm	Ø 300 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm
Surface Hardness of Bearing Blocks	53 HRC	53 HRC
Flatness Tolerance	0,03 mm	0,03 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
For Cubes Specimens Sizes	200 mm (**)	200 mm (**)
For Cylinder (up to) Specimens Sizes	Ø160x320mm	Ø160x320mm
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressureor	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	750x455x1145 mm	805x500x1205 mm
Weight	820 kg	1060 kg
Pedestal (Optional)	CFC-4682	CFC-4682

(d*) Depth (**) Limited by capacity of the frame

The machines for cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces
- CFC-4622E - Fixture for Centering Specimens, compatible with Ø300 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders
- Removable transparent front and rear safety doors

Appropriate Distance piece/s for the cylinder and cube specimens with the height of lower than 150mm should be ordered separately.

CFC-5737.SLP

EN - SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

EN 12390-4 and EN 772-1 SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS, CUBES AND CYLINDERS

Product Code

CFC-5729.SLP	2000 kN EN 12390-4 and EN 772-1 Semi-Automatic Compression Testing Machines for Masonary Units, Cubes and Cylinders
CFC-5739.SLP	3000 kN EN 12390-4 and EN 772-1 Semi-Automatic Compression Testing Machines for Masonary Units, Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4682	Pedestal for 1500 kN (335000 lbf), 2000kN and 3000 kN Compression Testing Frames with Welded Walls

Models for 220-240V 50-60 Hz, 1 ph.	
CFC-5729.SLP	CFC-5739.SLP

Models for 110-120V 60 Hz, 1 ph.	
CFC-5729.SLP-N	CFC-5739.SLP-N

Product Code

EN 12390-4, EN 12390-3

CFC-5729.SLP and CFC-5739.SLP models Semi-Automatic Compression Testıng Machines are manufactured for compression testing of masonary units, cubes and cylinders acc. to EN standards. These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test. The machines are supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4.
The Semi-Automatıc Compression Machines consist of a welded frame (see table), hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-CFC-4920LP).
CFC-4682 Pedestal for the frames of the machines should be ordered separately.

CFC - 5729.SLP

Main Features

- Class A starting from with the 5% of the machine capacity, (Special calibration option starting from 1% of the full range with CFC-0210)
- 1 channel with two different calibration table, test parameters and specimen information (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Multi-point calibration
- Real time numeric display of load and load pressure
- Peak hold property
- Supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines(USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary units

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

USOFT-4820.SLP Test Software is improved for semi-automatic concrete compression and flexural testing machines with LPI Battery Operated Digital Readout Unit durring the test to collect and record data and to prepare the report containing the results obtained.Before the test, a PC which the CFU software is installed is connected to RS232 port of LPI reading unit, the data obtained in the test can be monitored and recorded in real time. The advanced functions for data base management provide an easy navigation of all saved data. Test report including the test results and user defined test information (names and the Company details, test type, specimen type, user info and other knowledge required) can be print out.

EN 12390-4 and EN 772-1 SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS, CUBES AND CYLINDERS

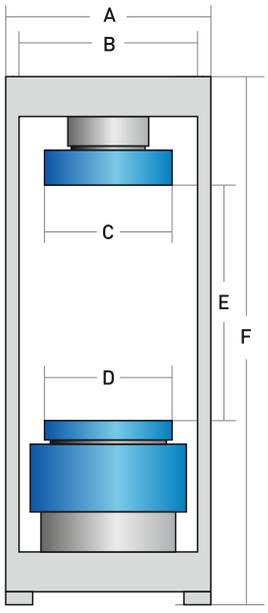
Models	CFC-5729.SLP	CFC-5739.SLP
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x510x50mm	310x510x50mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x510x50mm	310x510x50mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,03 mm	0,03 mm
Piston Diameter	250 mm	300 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
For Cubes (up to) Specimens Sizes	Ø160x320 mm	Ø160x320 mm
For Cylinder (up to) Specimens Sizes	300 mm (**)	300 mm (**)
For Masonary Units (up to) Specimens Sizes	300x500 mm (**)	300x500 mm (**)
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressureor	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	750x550x1145 mm	805x550x1205 mm
Weight	950 kg	1190 kg
Pedestal (Optional)	CFC-4682	CFC-4682

(d*) Depth (**) Limited by capacity of the frame

The machines for cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces
- Fixture for Centering Specimens, compatible with 310x510x50 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

Appropriate Distance piece/s for the cylinder and cube specimens with the height of lower than 150 mm should be ordered separately.



CFC - 5739.SLP

GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Product Code

CFC-4713G.SLP	1500 kN Capacity General Purpose Semi-Automatic Compression Testing Frame with ø216mm Loading Platens for Cubes and Cylinders
CFC-4723G.SLP	2000 kN Capacity General Purpose Semi-Automatic Compression Testing Frame with Ø216mm Loading Platens for Cubes and Cylinders
CFC-4733G.SLP	3000 kN Capacity General Purpose Semi-Automatic Compression Testing Frame with Ø216mm Loading Platens for Cubes and Cylinders
CFC-4727G.SLP	2000 kN Capacity General Purpose Semi-Automatic Compression Testing Frame with Ø 300mm Loading Platens for Cubes and Cylinders
CFC-4737G.SLP	3000 kN Capacity General Purpose Semi-Automatic Compression Testing Frame with Ø 300mm Loading Platens for Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

CFC - 4713G.SLP

Product Code

ASTM C39; AASHTO T22

Models for 220-240V 50-60 Hz, 1 ph.	CFC-4713.SLP	CFC-4723.SLP	CFC-4733.SLP	CFC-4727.SLP	CFC-4737.SLP
Models for 110-120V 60 Hz, 1 ph.	CFC-4713.SLP-N	CFC-4723.SLP-N	CFC-4733.SLP-N	CFC-4727.SLP-N	CFC-4737.SLP-N

CFC-4713G.SLP, CFC-4723G.SLP, CFC-4733G.SLP, CFC- CFC-4727G.SLP and CFC- CFC-4737G.SLP model Semi-Automatic Compression Testing Machines are manufactured for compression testing of cubes and cylinders by taking into account user requests for general purposes. These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

CFC- CFC-4727G.SLP ve CFC- CFC-4737G.SLP model products are designed for compressive-strength testing of larger size specimens.

The Machines consist of a welded frame (see below table) and hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-CFC-4920LP).

CFC-4680 andCFC-4682 Pedestal for the frames of the machines should be ordered separately.

Main Features

- Load Accuracy Class 1 starting from with the 5% of the machine capacity (Special calibration option starting from 1% of the full range with CFC-0210)
- 1 channel with two different calibration table, test parameters and specimen information (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Multi-point calibration
- Real time numeric display of load and load pressure
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines(USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary units

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

USOFT-4820.SLP Test Software is improved for semi-automatic concrete compression and flexural testing machines with LPI Battery Operated Digital Readout Unit durring the test to collect and record data and to prepare the report containing the results obtained.Before the test, a PC which the CFU software is installed is connected to RS232 port of LPI reading unit, the data obtained in the test can be monitored and recorded in real time. The advanced functions for data base management provide an easy navigation of all saved data. Test report including the test results and user defined test information (names and the Company details, test type, specimen type, user info and other knowledge required) can be print out.

GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES WITH Ø216 mm FOR CUBES AND CYLINDERS

	CFC-4713G.SLP	CFC-4723G.SLP	CFC-4733G.SLP
	1500 kN	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel	Welded Steel
Models Bearing Platens Dimensions (D) Capacity	Ø 216 mm (8.5")	Ø 216 mm (8.5")	Ø 216 mm (8.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 216 mm (8.5")	Ø 216 mm (8.5")	Ø 216 mm (8.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm	0,05 mm
Piston Diameter	230 mm	250 mm	300 mm
Piston Stroke	50 mm	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm	380 mm	380 mm
Horizontal Clearance (B)	320 mm	360 mm	415 mm
Cylinders (Up to) Sizes for Specimens	Ø160x320 mm Ø150x300 mm (Ø6"x12")	Ø160x320 mm Ø150x300 mm (Ø6"x12")	Ø160x320 mm Ø150x300 mm (Ø6"x12")
Cubes (Up to) Sizes for Specimens	150 mm	200 mm (**)	200 mm (**)
Dimensions (wxlxh) (Axd*xF)	680x451x1104 mm	720x453x1144 mm	775x497x1204 mm
Weight	610 kg	700 kg	920 kg
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682

(d*) Depth

(**) Limited by capacity of the frame

The machines are supplied complete with;

- 100 mm, 50 mm and 2 pcs. 30 mm x Ø165mm distance pieces
- Removable transparent front and rear safety doors

CFC - 4723G.SLP

CFC - 4733G.SLP

GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES WITH Ø300mm LOADING PLATENS FOR CUBES AND CYLINDERS

Models	CFC-4727G.SLP	CFC-4737G.SLP
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	Ø 300 mm	Ø 300 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
Sizes for Specimens Cylinders (Up to)	Ø 160x320 mm	Ø 160x320 mm
Sizes for Specimens Cylinders (Up to)	Ø 200 mm (**)	Ø 200 mm (**)
Dimensions (wxlxh) (Axd*xF)	720x453x1144 mm	775x497x1204 mm
Weight	735 kg	960 kg
Pedestal (Optional)	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The machines are supplied complete with;

- 100 mm, 50 mm and 30 mm x Ø205mm distance pieces
- Removable transparent front and rear safety doors

CFC - 4727G.SLP

CFC - 4737G.SLP

GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

GENERAL PURPOSE AND EN 772-1 SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS/BLOCKS, CUBES AND CYLINDERS

Product Code

CFC-4714GE.SLP	1500 kN General Purpose and EN 772-1 Semi-Automatic Compressıon Testıng Machine for Masonary Units/Blocks, Cubes and Cylinders
CFC-4729GE.SLP	2000 kN General Purpose and EN 772-1 Semi-Automatic Compressıon Testıng Machine for Masonary Units/Blocks, Cubes and Cylinders
CFC-4739GE.SLP	3000 kN General Purpose and EN 772-1 Semi-Automatic Compressıon Testıng Machine for Masonary Units/Blocks, Cubes and Cylinders
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 2000kN and 3000 kN Compression Testing Frames with Welded Walls

Models for 220-240V 50-60 Hz, 1 ph.		
CFC-4714GE.SLP	CFC-4729GE.SLP	CFC-4739GE.SLP

Models for 110-120V 60 Hz, 1 ph.		
CFC-4714GE.SLP-N	CFC-4729GE.SLP-N	CFC-4739GE.SLP-N

Product Code

EN 772-1

CFC-4714GE.SLP, CFC-4729GE.SLP, and CFC-4739GE.SLP model Semi-Automatic Compression Testing Machines are manufactured for compression testing of masonary units/blocks, cubes and cylinders by taking into account user requests for general purposes (see below table).
These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.
The Machines consist of a welded frame (see below table) and hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-4920LP).
CFC-4682 Pedestal for the frames of the machines should be ordered separately.

CFC - 4729E.SLP

Main Features

- Load Accuracy Class 1 starting from with the 5% of the machine capacity (Special calibration option starting from 1% of the full range with CFC-0210)
- 1 channel with two different calibration table, test parameters and specimen information (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Multi-point calibration
- Real time numeric display of load and load pressure
- Supplied with factory calibration certificate for load measurement
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines (USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary units

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

USOFT-4820.SLP Test Software is improved for semi-automatic concrete compression and flexural testing machines with LPI Battery Operated Digital Readout Unit durring the test to collect and record data and to prepare the report containing the results obtained.Before the test, a PC which the CFU software is installed is connected to RS232 port of LPI reading unit, the data obtained in the test can be monitored and recorded in real time. The advanced functions for data base management provide an easy navigation of all saved data. Test report including the test results and user defined test information (names and the Company details, test type, specimen type, user info and other knowledge required) can be print out.

GENERAL PURPOSE AND EN 772-1 SEMI-AUTOMATIC COMPRESSION TESTING MACHINE FOR MASONARY UNITS/BLOCKS, CUBES AND CYLINDERS

Models	CFC-4714GE.SLP	CFC-4729GE.SLP	CFC-4739GE.SLP
Capacity	1500 kN	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	220x410x50 mm	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	220x410x50 mm	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm	0,05 mm
Piston Diameter	230 mm	250 mm	3100 mm
Piston Stroke	50 mm	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm	330 mm	330 mm
Horizontal Clearance (B)	320 mm	360 mm	415 mm
Blocks/Masonary (Up to) Sizes for Specimens	up to 200x400mm masonary units/blocks	up to 300x500mm masonary units/blocks	up to 300x500mm masonary units/blocks
Cubes (Up to) Sizes for Specimens	200 mm (**)	200 mm (**)	200 mm (**)
Cylinders (Up to) Sizes for Specimens	up to Ø160x320 mm cylinders	up to Ø160x320 mm cylinders	up to Ø160x320 mm cylinders
Power	550 W	550 W	550 W
Oil Capacity	20 L	20 L	20 L
Maximum Working Pressure	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	780x451x1104 mm	720x600x1144 mm	775x600x1204 mm
Weight	690 kg	850 kg	1070 kg
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682

(d*) Depth (**) Limited by capacity of the frame

The machines for blocks, cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30mm height x Ø165 mm distance pieces (plus 15 mm x Ø165 mm for CFC-4714GE)
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES

EN 772-1 and GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS/BLOCKS, CYLINDERS AND CUBES

Product Code

CFC-4609EG.SLP	600 kN EN 772-1 and General Purpose Semi-Automatic Compression Testing Machines for Masonary Units/ Blocks, Cylinders And Cubes
CFC-4709EG.SLP	1100 kN EN 772-1 and General Purpose Semi-Automatic Compression Testing Machines for Masonary Units/ Blocks, Cylinders And Cubes
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4682	Pedestal for 1500 kN, 2000kN and 3000 kN Compression Testing Frames with Welded Walls
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls

Product Code

EN 772-1

Models for 220-240V 50-60 Hz, 1 ph.		
CFC-4714GE.SLP	CFC-4729GE.SLP	CFC-4739GE.SLP

Models for 110-120V 60 Hz, 1 ph.		
CFC-4714GE.SLP-N	CFC-4729GE.SLP-N	CFC-4739GE.SLP-N

CFC - 4709EG.SLP

CFC-4609EG.SLP and CFC-4709EG.SLP models Semi-Automatic Compression Testing Machines are manufactured for compression testing of masonary units/blocks, cylinders and cubes.

These machines also meet the requirements of CE norms with respect to the he

alth and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

The Semi-Automatic Compression Machines consist of a welded frame (see table), hydraulic power pack (CFC-4820) with LPI battery operated digital readout unit (CFC-4920LP).

CFC-4682 Pedestal for the frames of the machines should be ordered separately.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Removable transparent front and rear safety doors

Main Features

- Load Accuracy Class 1 starting from with the 5% of the machine capacity (Special calibration option starting from 1% of the full range with CFC-0210)
- 1 channel with two different calibration table, test parameters and specimen information (by changing the sensor belong to other frame, the unit can be control for second test frame)
- Multi-point calibration
- Real time numeric display of load and load pressure
- Peak hold property
- Welded steel walled frame with lower and upper (shperically-seated) loading platens
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- RS232 Serial port for PC or thermal or dot matrix printer
- Free of charge CFU software for compression/flexture testing machines (USOFT-4820.SLP) for compression, flexture, splitting tensile strength tests of construction materials such as concrete, cement, brick/masonary units

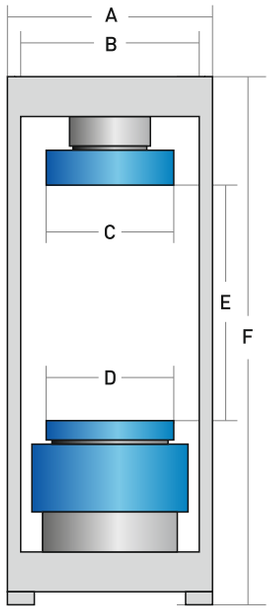
EN 772-1 and GENERAL PURPOSE SEMI-AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS/BLOCKS, CYLINDERS AND CUBES

Models	CFC-4609EG.SLP	CFC-4709EG.SLP
Capacity	600 kN	1100 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm
Piston Diameter	230 mm	230 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	330 mm	330 mm
Horizontal Clearance (B)	320 mm	320 mm
For Cylinder (up to) Specimens Sizes	up to 300x500 mm masonary units/blocks	
	up to Ø160x320 mm cylinders	
	200 mm cubes	
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressure	150 Bar	150 Bar
Dimensions (wxlxh) (Axd*xF)	680x550x750mm	680x550x750mm
Weight	690 kg	690 kg
Pedestal (CFC-4682)	CFC-4680	CFC-4680

(d*) Depth (**) Limited by capacity of the frame

The machines are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø165 mm distance pieces
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors



ASTM & AASHTO - AUTOMATIC COMPRESSION TESTING MACHINES

Product Code

CFC-4601.FPR	600 kN (135000 lbf) Automatic Compression Testing Machines with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4701.FPR	1100 kN (245000lbf) Automatic Compression Testing Machines with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4602.FPR	600 kN (135000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4702.FPR	1100 kN (245000lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC- 4712.FPR	1500 kN (335000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4722.FPR	2000 kN (450000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-4732.FPR	3000 kN (670000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600kN (135000 lbf) and 1100 kN (245000lbf) Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames with Welded Walls

CFC - 4702.FPR

Standards

ASTM C39; AASHTO T22

Models for 220-240V 50-60 Hz, 1 ph.	CFC-4601.FPR	CFC-4701.FPR	CFC-4602.FPR	CFC-4702.FPR	CFC-4712.FPR	CFC-4722.FPR	CFC-4732.FPR
Models for 110-120V 60 Hz, 1 ph.	CFC-4601.FPR-N	CFC-4701.FPR-N	CFC-4602.FPR-N	CFC-4702.FPR-N	CFC-4712.FPR-N	CFC-4722.FPR-N	CFC-4732.FPR-N

CFC-4701.FPR, CFC-4701.FPR, CFC-4602.FPR, CFC-4702.FPR, CFC-4712, CFC-4722.FPR and CFC-4732.FPR models Automatic Compression Testing Machines are manufactured for compression testing of acc. to ASTM & AASHTO standards. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of concentric centering line/s of lower bearing block (except Ø105 mm), the only required operations are;

• Setting test parameters, including pace rate (only required when the specimen type is changed).

• Pressing the START button on the control unit.

• The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

• Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

Main Features

• Pace Rate control between 1 kN to 25 kN

• Accuracy Class A acc. to E74 starting from with the 5% of the machine capacity

• Special calibration option Class A starting from 1% of the full range with CFC-0210)

• Supplied with factory calibration certificate for load measurement

• Tests automatically with closed loop control

• The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.

- Load measurment with a pressure transducer
- Hydraulic pump with dual stage for rapid approach
- Welded steel walled frame with a single acting piston
- Piston return at the end of test automatically

Safety Features

• Maximum pressure valves to avoid machine overloading
• Limit switch for piston stroke
• Emergency stop button
• Removable transparent front and rear safety doors
• Software controlled maximum load value

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel and additional selector valve.

U-Touch PRO Contraol Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines

The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

CFC-4712.FPR or CFC-4680

ASTM & AASHTO AUTOMATIC COMPRESSION TESTING MACHINES FOR CYLINDERS

Models	CFC-4601.FPR	CFC-4701.FPR	CFC-4602.FPR	CFC-4702.FPR
Capacity	600 kN (135000 lbf)	1100 kN (245000 lbf)	600 kN (135000 lbf)	1100 kN (245000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	Ø 105 mm (4.13")	Ø 105 mm (4.13")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02 mm / 150 mm (0,001"/"6")	0,02 mm / 150 mm (0,001"/"6")	0,02 mm / 150 mm (0,001"/"6")	0,02 mm / 150 mm (0,001"/"6")
Piston Diameter	150 mm (5,9")	190 mm (7,48")	150 mm (5,9")	190 mm (7,48")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm (13,4")	380 mm (15")	340 mm (13,4")	380 mm (15")
Horizontal Clearance (B)	230 mm (9,06")	270 mm (10,6")	230 mm (9,06")	270 mm (10,6")
For Cylinder Specimens Sizes	Ø100x200 mm (4"x8")	Ø100x200 mm (4"x8")	Ø100x200mm (4x8") Ø150x300mm (6x12") (**)	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm
Power	550 W	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	340 Bar	390 Bar	340 Bar	390 Bar
Dimensions (wxlxh) (Axd*xF)	640x454x922mm (25,2"x17,87"x36,3")	680x454x1042mm (26,77"x17,87"x41,02")	640x454x922mm (25,2"x17,87"x36,30")	680x454x1042mm (26,77"x17,87"x41,02")
Weight	365 kg (805 lbs)	463 kg (1020 lbs)	376 kg (830 lbs)	474 kg (1045 lbs)
Pedestal (Optional)	CFC-4680	CFC-4680	CFC-4680	CFC-4680

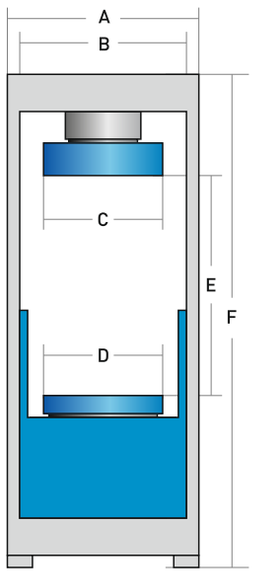
(d*) Depth (**) Limited by capacity of the frame

The Machines are supplied complete with;

- CFC-4601.FPR and CFC-4602.FPR: Ø100 mm (3,93"), 50 mm (1,97"), 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- CFC-4701.FPR and CFC-4702.FPR: Ø100 mm (3,93"), 50 mm (1,97") 2 pcs. 30 mm (1,2") mm height x Ø165 mm (Ø6,5") distance pieces
- Removable transparent front and rear safety doors

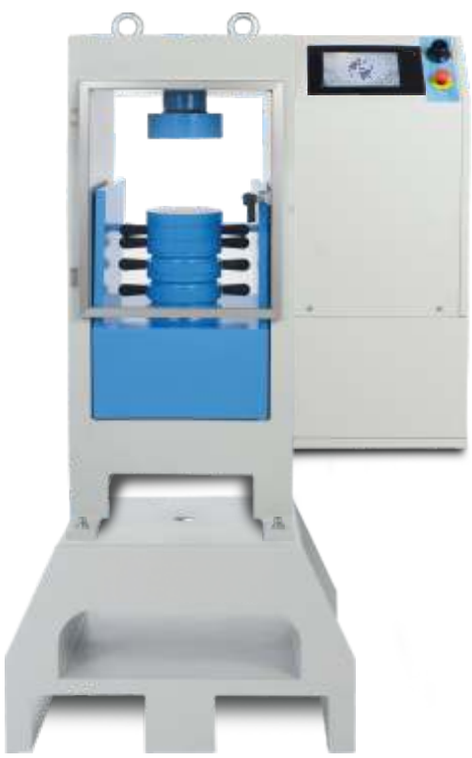
ASTM & AASHTO AUTOMATIC COMPRESSION TESTING MACHINES FOR CYLINDERS

Models	CFC-4712.FPR	CFC-4722.FPR	CFC-4732.FPR
Capacity	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block,(With Spherically Seating Assembly) Dimensions (C)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Piston Diameter	230 mm (9,06")	250 mm (9,84")	310 mm (12,2")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm (15")	380 mm (15")	380 mm (15")
Horizontal Clearance (B)	320 mm (12,6")	360 mm (14,17")	415 mm (16,34")
For Cylinder Specimens Sizes	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm
Power	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF) (d* depth)	680x451x1104 mm (26,77"x17,76"x43,86")	790x453x1144 mm (31,10"x17,83"x45,04")	845x497x1204mm (33,27"x19,57"x47,4")
Weight	598 kg (1320 lbs)	700 kg (1545 lbs)	922 kg (2030 lbs)
Pedestal (Optional)	CFC-4682	CFC-4682	CFC-4682



The Machines are supplied complete with;

- 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- Removable transparent front and rear safety doors



CFC - 4722.FPR

CFC - 4732.FPR

ASTM AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS

Product Code

CFC-4706.FPR	1100 kN (245000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
CFC-4716.FPR	1500 kN (335000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
CFC-4726.FPR	2000 kN (450000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
CFC-4736.FPR	3000 kN (670000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600kN (135000 lbf) and 1100kN (245000 lbf) Compression Testing Frames
CFC-4682	Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames

Models for 220-240V 50-60 Hz, 1 ph.			
CFC-4706.FPR	CFC-4716.FPR	CFC-4726.FPR	CFC-4736.FPR

Models for 110-120V 60 Hz, 1 ph.			
CFC-4706.FPR-N	CFC-4716.FPR-N	CFC-4726.FPR-N	CFC-4736.FPR-N

Standards

ASTM C39, C140, C1314

CFC-4726.FPR and CFC-4736.FPR models Automatic Compression Testing Machines have been designed for testing both blocks and cylinders specimens with the same frame according to ASTM standards. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The frames of the machines have a rectangular and a circular bearing platen set (each consists of a lower and a shperically-seated upper platen). Depending on the type of specimen to be tested, the bearing platens set can be easily switched with otherset with help of CFC-4525 by users.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of concentric centering lines of lower bearing platen. The only required operations are;

• Setting test parameters, including pace rate (only required when the specimen type is changed).

• Pressing the START button on the control unit.

• The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

• Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

CFC - 4726.FPR for CFC-4682 Pedestal

Main Features

• Pace Rate control between 1 kN to 25 kN

• Accuracy Class A acc. to E74 starting from with the 5% of the machine capacity (Special calibration option Class A starting from 1% of the full range with CFC-0210)

• Supplied with factory calibration certificate for load measurement

• Tests automatically with closed loop control

• The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.

• Load measurment with a pressure transducer

• Hydraulic pump with dual stage for rapid approach

• Welded steel walled frame with a single acting piston

• Piston return at the end of test automatically

Safety Features

• Maximum pressure valves to avoid machine overloading

• Limit switch for piston stroke

• Emergency stop button

• Removable transparent front and rear safety doors

• Software controlled maximum load value

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

ASTM AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS

Models	CFC-4706.FPR	CFC-4716.FPR	CFC-4726.FPR	CFC-4736.FPR
Capacity	1100 kN (245000 lbf)	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")
Surface Hardness of Bearing Blocks	60 HRC	60 HRC	60 HRC	60 HRC
Flatness Tolerance	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")
Piston Diameter	230 mm (9,06")	230 mm (9,06")	250 mm (9,84")	250 mm (9,84")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")
Horizontal Clearance (B)	320 (12,6")	320 (12,6")	360mm(14,17")	415 mm (16,34")
Power	550 W	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressureor	390 Bar	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF) (d*) Depth	750x451x1104mm (29,53"x17,76"x43,86")	750x451x1104mm (29,53"x17,76"x43,86")	790x453x1144 mm (31,1"x17,83"x45,04")	845x497x1204mm (33,27"x19,57"x47,4")
Weight	808 kg (1780 lbs)	808 kg (1780 lbs)	895 kg (1975 lbs)	1117 kg (2465 lbs)
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682	CFC-4682

The machines for block are supplied complete with;

- 50 mm (1,97"), 2 pcs. 30 mm (1,2"), 15 mm (0,59") height x Ø165 mm (Ø6,5") distance pieces
- Lifting Device for Lower Bearing Platen (CFC-4629)
- Removable transparent front and rear safety doors

ASTM AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS AND CYLINDERS

Product Code

CFC-4725.FPR	2000 kN (450000 lbf) Automatic Compression Testing Machines for Blocks and Cylinders ASTM
CFC-4735.FPR	3000 kN (670000 lbf) Automatic Compression Testing Machines for Blocks and Cylinders ASTM
CFC-4528	Upper Bearing Platens Replacement Equipment for CFC-4725 and CFC-4735
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4682	Pedestal for 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames with Welded Wall

Models for 220-240V 50-60 Hz, 1 ph.	
CFC-4725.FPR	CFC-4735.FPR

Models for 110-120V 60 Hz, 1 ph.	
CFC-4725.FPR-N	CFC-4735.FPR-N

Standards

ASTM C39, C140, C1314

CFC-4725.FPR and CFC-4735.FPR models Automatic Compression Testing Machines have been designed for testing both blocks and cylinders specimens with the same frame according to ASTM standards. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The frames of the machines have a rectangular and a circular bearing platen set (each consists of a lower and a shperically-seated upper platen). Depending on the type of specimen to be tested, the bearing platens set can be easily switched with otherset with help of CFC-4525 by users.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of concentric centering lines of lower bearing platen. The only required operations are;

• Setting test parameters, including pace rate (only required when the specimen type is changed).

• Pressing the START button on the control unit.

• The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

• Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value

CFC - 4725.FPR for CFC-4682 Pedestal

CFC-4628
Upper Bearing Platens Replacement Equipment

Main Features

- Pace Rate control between 1 kN to 25 kN
- Accuracy Class A acc. to E74 starting from with the 5% of the machine capacity (Special calibration option Class A starting from 1% of the full range with CFC-0210)
- Supplied with factory calibration certificate for load measurement
- Tests automatically with closed loop control
- The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
- Load measurment with a pressure transducer
- Hydraulic pump with dual stage for rapid approach
- Welded steel walled frame with a single acting piston
- Piston return at the end of test automatically

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

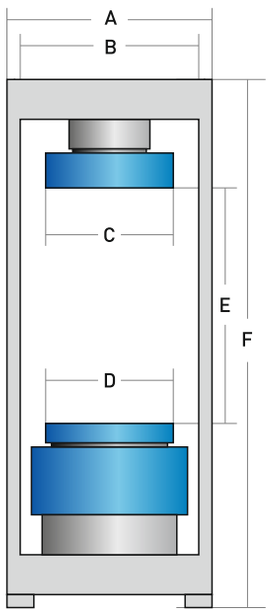
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

Models	CFC-4725.FPR	CFC-4735.FPR
Capacity	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Frame	Welded Frame
Lower Bearing Platen Dimensions (D)	(Block) 310x410x90mm (Circular) Ø165 mm (6.5")	(Block) 310x410x90mm (Circular) Ø165 mm (6.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	(Block) 310x410x90mm (Circular) Ø165 mm (6.5")	(Block) 310x410x90mm (Circular) Ø165 mm (6.5")
Surface Hardness of Bearing Blocks	(Block) 60 HRC (Circular) 55 HRC	(Block) 60 HRC (Circular) 55 HRC
Flatness Tolerance	(Block) 0,025 mm / 150 mm (Circular) 0,02 mm / 150 mm	(Block) 0,025 mm / 150 mm (Circular) 0,02 mm / 150 mm
Maximum Vertical Clearance Between Platens (E)	(Block) 250 mm (9,84") (Circular) 380 mm (15")	(Block) 250 mm (9,84") (Circular) 380 mm (15")
Piston Diameter	250 mm (9,84")	310 mm (12,2")
Piston Stroke	50 mm (1,97")	50 mm (1,97")
Horizontal Clearance (B)	360 mm (14,17")	415 mm (16,34")
Dimensions (wxlxh) (Axd*xF) (d*) Depth	790x453x1144 mm (31,1x17,83"x45,04")	845x497x1204mm 33,27"x19,57"x47,4")
Weight	993 kg (2190 lb)	1215 kg (2680 lb)
Pedestal (Optional)	CFC-4682	CFC-4682



The ASTM machines for blocks and cylinders are supplied complete with;

- 310x410x90 mm (12.2"x16.1"x3.54") lower and upper (spherically seated) bearing platens (comes with mounted to the frame)
- Ø165 mm (6.5") lowerand upper (spherically seated) bearing blocks
- Upper Bearing Platens Replacement Equipment (CFC-4528)
- Lifting Device for Lower Bearing Platen (CFC-4629)
- Ø100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2"), 15 mm (0,59") height x Ø165 mm (Ø6,5") distance pieces
- Removable transparent front and rear safety doors

EN 12390-4 AUTOMATIC COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Product Code

CFC-5727.FPR	2000 kN EN 12390-4 Automatic Compression Testing Machines for Cubes and Cylinders
CFC-5737.FPR	3000 kN EN 12390-4 Automatic Compression Testing Machines for Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer
CFC-4682	Pedestal for 1500 kN, 2000 kN and 3000 kN Compression Testing Frames with Welded Wall

Models for 220-240V 50-60 Hz, 1 ph.	CFC-5727.FPR	CFC-5737.FPR
Models for 110-120V 60 Hz, 1 ph.	CFC-5727.FPR-N	CFC-5737.FPR-N

Standards

EN 12390-4, EN 12390-3

CFC-5727.FPR and CFC-5737.FPR models Automatic Compression Testing Machines are manufactured for compression testing of cubes and cylinders acc. to EN 12390-4. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of fixtures or/and concentric centering lines of lower loading platen, the only required operations are;

• Setting test parameters, including pace rate (only required when the specimen type is changed).

• Pressing the START button on the control unit.

• The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

• Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

Safety Features

• Maximum pressure valves to avoid machine overloading
• Limit switch for piston stroke
• Emergency stop button
• Removable transparent front and rear safety doors
• Software controlled maximum load value

CFC-5727.FPR or CFC-4682

Main Features

• Pace Rate control between 1 kN to 25 kN
• Accuracy Class A acc. to E74 starting from with the 5% of the machine capacity (Special calibration option Class A starting from 1% of the full range with CFC-0210)
• Supplied with factory calibration certificate for load measurement
• Tests automatically with closed loop control
• The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
• Load measurment with a pressure transducer
• Hydraulic pump with dual stage for rapid approach
• Welded steel walled frame with a single acting piston
• Piston return at the end of test automatically
• Multi-Point calibration function for the channels
• Optionally supplied-integrated thermal printer (If requested, must be specified in the order)
• Real time numeric display of load and load pressure with test graph.

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines

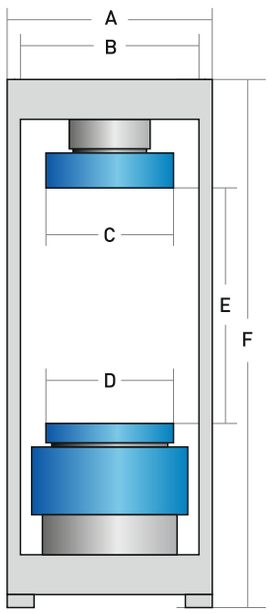
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

Models	CFC-5727.FPR	CFC-5737.FPR
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	Ø 300 mm	Ø 300 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm
Surface Hardness of Bearing Blocks	53 HRC	53 HRC
Flatness Tolerance	0,03 mm	0,03 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm (13,4")	350 mm (13,4")
Horizontal Clearance (B)	360 mm	415 mm
Sizes for Cubes (up to)	200 mm (**)	200 mm (**)
Sizes for Cylinders (up to)	Ø160x320 mm	Ø160x320 mm
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressure	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF) (d*) depth	820x455x1145 mm	875x500x1205 mm
Weight	835 kg	1075 kg
Pedestal (CFC-4682)	CFC-4682	CFC-4682



The Machines for cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces
- Fixture for Centering Specimens, compatible with Ø300 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders
- Removable transparent front and rear safety doors

Appropriate distance piece/s for the cylinder and cube specimens with the height of lower than 150 mm should be ordered separately.

AUTOMATIC COMPRESSION TESTING MACHINES - EN

EN 12390-4 AUTOMATIC FOUR COLUMN COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Product Code

CFC-6727.FPR	2000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders
CFC-6737.FPR	3000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders
CFC-6748.FPR	4000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders
CFC-6758.FPR	5000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4684	Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Four Column
CFC-4686	Pedestal for 4000kN and 5000 kN Compression Testing Frames with Four Column

Models for 220-240V 50-60 Hz, 1 ph.			
CFC-6727.FPR	CFC-6737.FPR	CFC-6747.FPR	CFC-6757.FPR

Models for 110-120V 60 Hz, 1 ph.			
CFC-6727.FPR-N	CFC-6737.FPR-N	CFC-6747.FPR-N	CFC-6757.FPR-N

Standards

EN 12390-4, EN 12390-3

CFC-6727.FPR, CFC-6737.FPR CFC-6747.FPR and CFC-6757.FPR models Automatic Four Column Compression Testing Machines are manufactured for compression testing of cubes and cylinders acc. to EN. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of fixtures or/and concentric centering lines of lower loading platen, the only required operations are;

Setting test parameters, including pace rate (only required when the specimen type is changed).

Pressing the START button on the control unit.

The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value

CFC-6748 with CFC-4682

Main Features

- Pace Rate control between 1 kN to 25 kN
- Accuracy Class 1 starting from with the 5% of the machine capacity, (Special calibration option Class 1 starting from 1% of the full range with CFC-0210)
- Supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4
- Tests automatically with closed loop control
- The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- Welded steel walled frame a single acting piston
- Piston return at the end of test automatically

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines

The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

Models	CFC-6727.FPR	CFC-6737.FPR	CFC-6748.FPR	CFC-6758.FPR
Capacity	2000 kN	3000 kN	4000 kN	5000 kN
Frame Type	Four Column	Four Column	Four Column	Four Column
Lower Bearing Block, Dimensions (D)	Ø 300 mm	Ø 300 mm	Ø 360 mm	Ø 360 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm	Ø 360 mm	Ø360 mm
Surface Hardness of Bearing Blocks	53 HRC	53 HRC	53 HRC	53 HRC
Flatness Tolerance	0,03 mm	0,03 mm	0,03 mm	0,03 mm
Piston Diameter	250 mm	310 mm	360 mm	400 mm
Piston Stroke	50 mm	50 mm	100 mm	100 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm	520 mm	520 mm
Horizontal Clearance (B)	200 mm (**)	200 mm (**)	200 mm	200 mm
For Cylinder Sizes	Ø160x320 mm	Ø160x320 mm	Ø250x500 mm (**)	Ø250x500 mm (**)
Power	750 W	750 W	750 W	750 W
Oil Capacity	20 L	20 L	20 L	20 L
Maximum Working Pressure	410 Bar	410 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	960x560x1100 mm	1050x690x1150 mm	1145x825x1540 mm	1145x825x1570 mm
Weight	1020 kg	1520 kg	2570 kg	2540 kg
Pedestal (CFC-4684 or CFC-4686)	CFC-4684	CFC-4684	CFC-4684	CFC-4684

(d*) Depth (**) Limited by capacity of the frame

The machines for cubes and cylinders are supplied complete with;

- 100mm, 50mm, 30mm height x Ø205 mm distance pieces (two pcs. each for CFC-6748 and CFC-6758)
- CFC-4622E - Fixture for Centering Specimens, compatible with Ø300 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders (for CFC-6727 and CFC-6737)
- CFC-4624E - Fixture for centering specimens, compatible with Ø360 mm lower loading platen for 150mm and 250 mm cubes, Ø150 mm and 250 mm cylinders (for CFC-6748 and CFC-6758)
- Removable transparent front and rear safety doors

Appropriate distance distance piece/s for the cylinder and cube specimens with the height of lower than 150mm should be ordered separately for CFC-6727 and CFC-6737.

EN EN 12390-4 and EN 772-1 AUTOMATIC COMPRESSION TESTING MACHINES WITH WELDED WALLS FOR MASONARY UNITS, CUBES AND CYLINDERS

Product Code

CFC-5729.FPR	2000 kN EN 12390-4 and EN 772-1 Automatic Compression Testing Machines for Masonary Units, Cubes and Cylinders
CFC-5739.FPR	3000 kN EN 12390-4 and EN 772-1 Automatic Compression Testing Machines for Masonary Units, Cubes and Cylinders
CFC-0210	High Precision Pressure and Electronic
CFC-4682	Pedestal for 1500 kN, 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

Models for 220-240V 50-60 Hz, 1 ph.	CFC-5729.FPR	CFC-5739.FPR
Models for 110-120V 60 Hz, 1 ph.	CFC-5729.FPR-N	CFC-5739.FPR-N

Standards

EN 12390-4, EN 772-1

CFC-5729.FPR and CFC-5739.FPR models Automatic Compression Testing Machines are manufactured for compression testing of masonary units, cubes and cylinders acc. to EN standards .These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of fixtures or/and concentric centering lines of lower loading platen, the only required operations are;

- Setting test parameters, including pace rate (only required when the specimen type is changed).
- Pressing the START button on the control unit.
- The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.
- Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value

CFC-5729 with CFC-4682

Main Features

- Pace Rate control between 1 kN to 25 kN
- Accuracy Class 1 starting from with the 5% of the machine capacity, (Special calibration option Class 1 starting from 1% of the full range with CFC-0210)
- Supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4
- Tests automatically with closed loop control
- The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
- Load measurment with a pressure transducer
- Hydrolic pump with dual stage for rapid approach
- Welded steel walled frame a single acting piston
- Piston return at the end of test automatically

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines

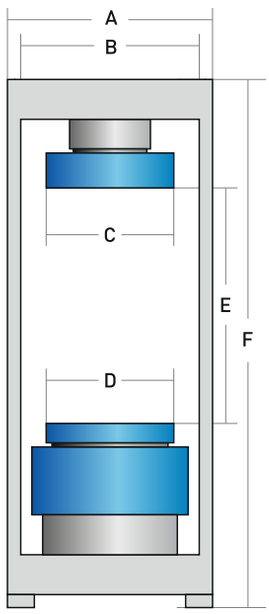
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

Models	CFC-5729.SLP	CFC-5739.SLP
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x510x50mm	310x510x50mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x510x50mm	310x510x50mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,03 mm	0,03 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
For Cubes (up to) Specimens Sizes	Ø160x320 mm	Ø160x320 mm
For Cylinder (up to) Specimens Sizes	300 mm (**)	300 mm (**)
For Masonary Units (up to) Specimens Sizes	300x500 mm (**)	300x500 mm (**)
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressureor	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	820x550x1145 mm	875x550x1205 mm
Weight	965 kg	1205 kg
Pedestal (Optional)	CFC-4682	CFC-4682



(d*) Depth (**) Limited by capacity of the frame

The machines for cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces
- Fixture for Centering Specimens, compatible with 310x510x50 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

Appropriate Distance piece/s for the cylinder and cube specimens with the height of lower than 150 mm should be ordered separately.

EN 12390-4 and EN 772-1 AUTOMATIC FOUR COLUMNS COMPRESSION TESTING MACHINES FOR MASONARY UNITS, CUBES AND CYLINDERS

Product Code

CFC-6729.FPR	2000 kN EN 12390-4 and EN 772-1 Automatic Four Column Testing Machines for Masonary Units, Cubes and Cylinders
CFC-6739.FPR	3000 kN EN 12390-4 and EN 772-1 Automatic Four Column Testing Machines for Masonary Units, Cubes and Cylinders
CFC-6749.FPR	4000 kN EN 12390-4 and EN 772-1 Automatic Four Column Testing Machines for Masonary Units, Cubes and Cylinders
CFC-6759.FPR	5000 kN EN 12390-4 and EN 772-1 Automatic Four Column Testing Machines for Masonary Units, Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4684	Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Four Column
CFC-4686	Pedestal for 4000 kN and 5000 kN Compression Testing Frames with Four Column

Standards

EN 12390-4, EN 772-1

CFC-6729.FPR, CFC-6739.FPR, CFC-6749.FPR and CFC-6759.FPR models Automatic Compression Testıng Machines are manufactured for compression testing of masonary units, cubes and cylinders acc. to EN standards .These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of fixtures or/and concentric centering lines of lower loading platen, the only required operations are;

• Setting test parameters, including pace rate (only required when the specimen type is changed).

• Pressing the START button on the control unit.

• The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

• Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

Safety Features

• Maximum pressure valves to avoid machine overloading
• Limit switch for piston stroke
• Emergency stop button
• Removable transparent front and rear safety doors
• Software controlled maximum load value

CFC-6749 with CFC-4682

Main Features

• Pace Rate control between 1 kN to 25 kN

• Accuracy Class 1 starting from with the 5% of the machine capacity, (Special calibration option Class 1 starting from 1% of the full range with CFC-0210)

• Supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4

• Tests automatically with closed loop control

• The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.

• Load measurment with a pressure transducer
• Hydrolic pump with dual stage for rapid approach
• Welded steel walled frame a single acting piston
• Piston return at the end of test automatically

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.
All the operations of U-Touch PRO are controlled from the front panel touch screen display.
U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.
PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.
In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

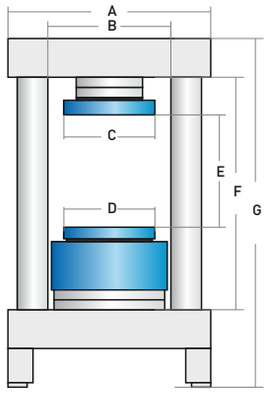
Models		CFC-6729.FPR	CFC-6739.FPR	CFC-6749.FPR	CFC-6759.FPR
Capacity		2000 kN	3000 kN	4000 kN	5000 kN
Frame Type		Four Column	Four Column	Four Column	Four Column
Lower Bearing Block, Dimensions (D)		310x510x50 mm	310x510x50 mm	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)		310x510x50 mm	310x510x50 mm	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks		55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance		0,03mm	0,03mm	0,03mm	0,03mm
Piston Diameter		250 mm	310 mm	360 mm	400 mm
Piston Stroke		50 mm	50 mm	100 mm	100 mm
Maximum Vertical Clearance Between Bearing Blocks (E)		350 mm	350 mm	520 mm	520 mm
Sizes of Specimens	For Cylinder (up to)	Ø160x320 mm	Ø160x320 mm	Ø250x500 mm (**)	Ø250x500 mm (**)
	For Cubes (up to)	300 mm (**)	300 mm (**)	300 mm (**)	300 mm (**)
	For Masonary Units (up to)	300x500 mm (**)	300x500 mm (**)	300x500 mm (**)	300x500 mm (**)
Power		750 W	750 W	750 W	750 W
Oil Capacity		20 L	20 L	20 L	20 L
Maximum Working Pressure		410 Bar	410 Bar	315 Bar	350 Bar
Dimensions (wxlxh) (Axd*xF)		960x560x1100 mm	1050x690x1150 mm	1145x825x1540 mm	1235x640x1555 mm
Weight		1110 kg	1625 kg	2640 kg	3345 kg
Pedestal (Optional)		CFC-4684	CFC-4684	CFC-4684	CFC-4684

(d*) Depth (**) Limited by capacity of the frame

The machines for masonary units,cubes and cylindrs are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø205 mm distance pieces (two pcs. each for CFC-6749 and CFC-6759)
- CFC-4626E - Fixture for centering specimens, compatible with 310x510x50 mm lower loading platen, for 100 mm and 150mm cubes and Ø100 mm and Ø150 mm cylinders (for CFC-6729 and CFC-6739)
- CFC-4627E - Fixture for centering specimens, compatible with 310x510x50 mm lower loading platen, for 150mm and 250mm cubes, Ø150mm and Ø250mm cylinders for CFC-6749 and CFC-6759
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

Appropriate distance piece/s for the cylinder and cube specimens with the height of lower than 150 mm should be ordered separately for CFC-6729.FPR and CFC-6739.FPR



GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

Product Code

CFC-4713G.FPR	1500 kN General Purpose AutomaticAutomatic Compression Testing Machine with Ø216 mm Loading Platens for Cubes and Cylinders
CFC-4723G.FPR	2000 kN General Purpose AutomaticAutomatic Compression Testing Machine with Ø216 mm Loading Platens for Cubes and Cylinders
CFC-4733G.FPR	3000 kN General Purpose AutomaticAutomatic Compression Testing Machine with Ø216 mm Loading Platens for Cubes and Cylinders
CFC-4727G.FPR	2000 kN General Purpose AutomaticAutomatic Compression Testing Machine with Ø300 mm Loading Platens for Cubes and Cylinders
CFC-4737G.FPR	3000 kN General Purpose AutomaticAutomatic Compression Testing Machine with Ø300 mm Loading Platens for Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

CFC - 4713G.FPR

Models for 220-240V 50-60 Hz, 1 ph.	CFC-4713G.FPR	CFC-4723G.FPR	CFC-4733G.FPR	CFC-4727G.FPR	CFC-4737G.FPR
Models for 110-120V 60 Hz, 1 ph.	CFC-4713G.FPR-N	CFC-4723G.FPR-N	CFC-4733G.FPR-N	CFC-4727G.FPR-N	CFC-4737G.FPR-N

CFC-4713G.FPR, CFC-4723G.FPR, CFC-4733G.FPR, CFC-4727G.FPR and CFC-4737G.FPR model Automatic Compression Testing Machines are manufactured for compression testing of cubes and cylinders by taking into account user requests for general purposes. CFC-4727.FPR ve CFC-4737.FPR model products are designed for compressive-strength testing of larger size specimens. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of concentric centering line/s of lower bearing block the only required operations are;

• Setting test parameters, including pace rate (only required when the specimen type is changed).

• Pressing the START button on the control unit.

• The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

• Automatically saves the test parameters and test results.

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

The Machines consist of a welded steel frame (see table), hydraulic power pack with U-Touch PRO Control Unit.

Main Features

• Pace Rate control between 1 kN to 25 kN

• Load Accuracy Class 1 acc. to EN 12390-4 and acc. to E74 starting from with the 5% of the machine capacity (Special calibration option starting from 1% of the full range with CFC-0210)

• Tests automatically with closed loop control

• The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.

• Load measurment with a pressure transducer

• Hydraulic pump with dual stage for rapid approach

• Welded steel walled frame with a single acting piston

• Piston return at the end of test automatically

Safety Features

• Maximum pressure valves to avoid machine overloading
• Limit switch for piston stroke
• Emergency stop button
• Removable transparent front and rear safety doors
• Software controlled maximum load values

Compression and Flexural Testing Machines

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.
All the operations of U-Touch PRO are controlled from the front panel touch screen display.
U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.
PLEASE see the pages of "U-Touch PRO Control Unit CFC-4930.FPR" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the USOFT-4930.FPR (The CFU Software for Automatic Compression / Flexure Testing Machines with CFC-4830FPR Hydrolic Power Pack) pages.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.
In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINES WITH Ø216mm FOR CUBES AND CYLINDERS

	CFC-4713G.FPR	CFC-4723G.FPR	CFC-4733G.FPR
	1500 kN	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel	Welded Steel
Models Bearing Platens Dimensions (D) Capacity	Ø 216 mm	Ø 216 mm	Ø 216 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 216 mm	Ø 216 mm	Ø 216 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm	0,05 mm
Piston Diameter	230 mm	250 mm	310 mm
Piston Stroke	50 mm	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm	380 mm	380 mm
Horizontal Clearance (B)	320 mm	360 mm	415 mm
Cylinders (Up to) Sizes for Specimens	Ø160x320 mm	Ø160x320 mm	Ø160x320 mm
Cubes (Up to) Sizes for Specimens	150 mm	200 mm (**)	200 mm (**)
Power	550 W	550 W	550 W
Oil Capacity	20 L	20 L	20 L
Maximum Working Pressure	370 Bar	370 Bar	370 Bar
Dimensions (wxlxh) (Axd*xF)	750x451x1104 mm	790x453x1144 mm	845x497x1204 mm
Weight	625 kg	715 kg	935 kg
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The machines are supplied complete with;

- 100 mm, 50 mm and 2 pcs. 30 mm x Ø165 mm distance pieces
- Removable transparent front and rear safety doors

GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINES WITH Ø300 mm FOR CUBES AND CYLINDERS

Models	CFC-4727G.FPR	CFC-4737G.FPR
Capacity	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	Ø 300 mm	Ø 300 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 300 mm	Ø 300 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm
Piston Diameter	250 mm	310 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm
Horizontal Clearance (B)	360 mm	415 mm
Sizes for Specimens Cylinders (Up to)	Ø 160x320 mm	Ø 160x320 mm
Sizes for Specimens Cylinders (Up to)	Ø 200 mm (**)	Ø 200 mm (**)
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressure	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	790x453x1144 mm	845x497x1204 mm
Weight	750 kg	975 kg
Pedestal (Optional)	CFC-4682	CFC-4682

(d*) Depth
(**) Limited by capacity of the frame

The machines are supplied complete with;

- 100 mm, 50 mm and 30 mm x Ø205 mm distance pieces
- Removable transparent front and rear safety doors

CFC - 4723G.FPR

CFC - 4733G.FPR

GENERAL PURPOSE AND EN 772-1 AUTOMATIC COMPRESSION TESTING MACHINES

GENERAL PURPOSE and EN 772-1 AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS/BLOCKS, CUBES AND CYLINDERS

Product Code

CFC-4714GE.FPR	1500 kN General Purpose and EN 772-1 Automatic Compression Testing Machine for Masonary Units/Blocks, Cubes and Cylinders
CFC-4729GE.FPR	2000 kN General Purpose and EN 772-1 Automatic Compression Testing Machine for Masonary Units/Blocks, Cubes and Cylinders
CFC-4739GE.FPR	3000 kN General Purpose and EN 772-1 Automatic Compression Testing Machine for Masonary Units/Blocks, Cubes and Cylinders
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls
CFC-4682	Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Welded Walls

Models for 220-240V 50-60 Hz, 1 ph.		
CFC-4714GE.FPR	CFC-4729GE.FPR	CFC-4739GE.FPR

Models for 110-120V 60 Hz, 1 ph.		
CFC-4714GE.FPR-N	CFC-4729GE.FPR-N	CFC-4739GE.FPR-N

Product Code

EN 772-1

CFC-4714GE.FPR, CFC-4729GE.FPR and CFC-4739GE.FPR model Automatic Compression Testing Machines are manufactured for compression testing of masonary units/blocks, cubes and cylinders by taking into account user requests for general purposes (see below table).These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of concentric centering line/s of lower bearing block the only required operations are;

- Setting test parameters, including pace rate (only required when the specimen type is changed).
- Pressing the START button on the control unit.
- The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.
- Automatically saves the test parameters and test results.

CFC-4680 and CFC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the frames for compression test should be ordered separately.

The Machines consist of a welded steel frame (see table) and CFC-4830.FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

CFC - 4729GE.FPR

Main Features

- Pace Rate control between 1 kN to 25 kN
- Load Accuracy Class 1 acc. to EN 12390-4 and acc. to E74 starting from with the 5% of the machine capacity (Special calibration option starting from 1% of the full range with CFC-0210)
- Tests automatically with closed loop control
- The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
- Load measurment with a pressure transducer
- Hydraulic pump with dual stage for rapid approach
- Welded steel walled frame with a single acting piston
- Piston return at the end of test automatically

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.
All the operations of U-Touch PRO are controlled from the front panel touch screen display.
U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.
PLEASE see the pages of "U-Touch PRO Control Unit CFC-4930.FPR" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the USOFT-4930.FPR (The CFU Software for Automatic Compression / Flexure Testing Machines with CFC-4830FPR Hydrolic Power Pack) pages.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.
In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINE FOR BLOCKS, CUBES AND CYLINDERS

Models	CFC-4714GE.FPR	CFC-4729GE.FPR	CFC-4739GE.FPR
Capacity	1500 kN	2000 kN	3000 kN
Frame Type	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	220x410x50 mm	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	220x410x50 mm	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm	0,05 mm
Piston Diameter	230 mm	250 mm	3100 mm
Piston Stroke	50 mm	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	340 mm	330 mm	330 mm
Horizontal Clearance (B)	320 mm	360 mm	415 mm
Blocks/Masonary (Up to) Sizes for Specimens	up to 200x400mm masonary units/blocks	up to 300x500mm masonary units/blocks	up to 300x500mm masonary units/blocks
Cubes (Up to) Sizes for Specimens	200 mm (**)	200 mm (**)	200 mm (**)
Cylinders (Up to) Sizes for Specimens	up to Ø160x320 mm cylinders	up to Ø160x320 mm cylinders	up to Ø160x320 mm cylinders
Power	550 W	550 W	550 W
Oil Capacity	20 L	20 L	20 L
Maximum Working Pressure	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	780x451x1104 mm	720x600x1144 mm	775x600x1204 mm
Weight	690 kg	850 kg	1070 kg
Pedestal (Optional)	CFC-4680	CFC-4682	CFC-4682

(d*) Depth (**) Limited by capacity of the frame

The machines for blocks, cubes and cylinders are supplied complete with;

- 100 mm, 50 mm, 30mm height x Ø165 mm distance pieces (plus 15 mm x Ø165 mm for CFC-4714GE)
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors

GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINES

EN 772-1 and GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS/BLOCKS, CYLINDERS AND CUBES

Product Code

CFC-4609EG.FPR	600 kN EN 772-1 and General Purpose Automatic Compression Testing Machines for Masonary Units/ Blocks, Cylinders And Cubes
CFC-4709EG.FPR	1100 kN EN 772-1 and General Purpose Automatic Compression Testing Machines for Masonary Units/ Blocks, Cylinders And Cubes
CFC-0210	High Precision Pressure Transducer and Electronic
CFC-4680	Pedestal for 600 kN, 1100 kN and 1500 kN Compression Testing Frames with Welded Walls

Models for 220-240V 50-60 Hz, 1 ph.	CFC-4609EG.FPR	CFC-4607EG.FPR
Models for 110-120V 60 Hz, 1 ph.	CFC-4609EG.FPR-N	CFC-4607EG.FPR-N

Product Code

EN 772-1

CFC-4609EG.FPR and CFC-4709EG.FPR Automatic Compression Testing Machines are manufactured for compression testing of masonary units/ blocks, cylinders and cubes.. These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of centering lines of lower loading platen, the only required operations are;

•Setting test parameters, including pace rate (only required when the specimen type is changed).
•Pressing the START button on the control unit.
•The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.
•Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and CFC-4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

CFC-4680 Pedestal for the frames of the machines should be ordered separately.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value

CFC - 4709EG.FPR

Main Features

- Pace Rate control between 1 kN to 25 kN
- Load Accuracy Class 1 acc. to EN 12390-4 and acc. to E74 starting from with the 5% of the machine capacity (Special calibration option starting from 1% of the full range with CFC-0210)
- Tests automatically with closed loop control
- The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
- Load measurment with a pressure transducer
- Hydraulic pump with dual stage for rapid approach
- Welded steel walled frame with a single acting piston
- Piston return at the end of test automatically

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.
All the operations of U-Touch PRO are controlled from the front panel touch screen display.
U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.
PLEASE see the pages of "U-Touch PRO Control Unit CFC-4930.FPR" for details of the properties.

CFU Software

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines
The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the USOFT-4930.FPR (The CFU Software for Automatic Compression / Flexure Testing Machines with CFC-4830FPR Hydrolic Power Pack) pages.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.
In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

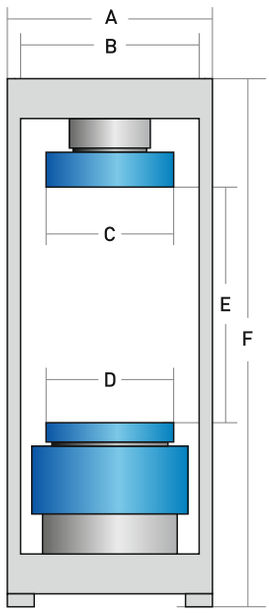
EN 772-1 and GENERAL PURPOSE AUTOMATIC COMPRESSION TESTING MACHINES FOR MASONARY UNITS/BLOCKS, CYLINDERS AND CUBES

Models	CFC-4609EG.FPR	CFC-4709EG.FPR
Capacity	600 kN	1100 kN
Frame Type	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x510x50 mm	310x510x50 mm
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x510x50 mm	310x510x50 mm
Surface Hardness of Bearing Blocks	55 HRC	55 HRC
Flatness Tolerance	0,05 mm	0,05 mm
Piston Diameter	230 mm	230 mm
Piston Stroke	50 mm	50 mm
Maximum Vertical Clearance Between Bearing Blocks (E)	330 mm	330 mm
Horizontal Clearance (B)	320 mm	320 mm
For Cylinder (up to) Specimens Sizes	up to 300x500 mm masonary units/blocks	
	up to Ø160x320 mm cylinders	
	200 mm cubes	
Power	550 W	550 W
Oil Capacity	20 L	20 L
Maximum Working Pressure	150 Bar	150 Bar
Dimensions (wxlxh) (Axd*xF)	750x550x750 mm	750x550x750 mm
Weight	775 kg	775 kg
Pedestal (CFC-4682)	CFC-4680	CFC-4680

(d*) Depth (**) Limited by capacity of the frame

The machines are supplied complete with;

- 100 mm, 50 mm, 30 mm height x Ø165 mm distance pieces
- Lifting Device for Lower Loading Platen (CFC-4629)
- Removable transparent front and rear safety doors



ACCESSORIES

Product Code

CFC-0303A	Compressometer-Extensometer for Ø100x200 mm (Ø4"x8") cylinders with 2 pcs. 12.7x0.001 mm digital dial gauges, ASTM C469. (1pcs. for vertical and 1pcs. for diametrical displacement)
CFC-0304A	Compressometer-Extensometer for Ø150x300 mm (Ø6"x12") cylinders with 2pcs. 12.7x0.001 mm digital dial gauges, ASTM C469. (1pcs. for vertical and 1pcs. for diametrical displacement)
CFC-0313A	Compressometer-Extensometer for Ø100x200 mm (Ø4"x8") cylinders with 2 pcs. 10 mm high accurate strain gauge based displacement transducers, ASTM C469. (1pcs. for vertical and 1pcs. for diametrical displacement)
CFC-0314A	Compressometer-Extensometer for Ø150x300 mm (Ø6"x12") cylinders with 2 pcs. 10 mm high accurate strain gauge based displacement transducers, ASTM C469. (1pcs. for vertical and 1pcs. for diametrical displacement)
CFC-0323	Compressometer-Extensometer for Ø100x200mm(Ø4"x8") cylinders with 3 pcs. 10 mm high accurate strain gauge based displacement transducers, for vertical displacement, EN
CFC-0324	Compressometer-Extensometer for Ø150x300mm(Ø6"x12"), Ø160x320 mm cylinders with 3pcs. 10 mm high accurate strain gauge based displacement transducers, for vertical displacement, EN
CFCU-0320	Interface unit for data acquisition with 4 channel
CFCU-0330	Advanced interface unit for data acquistion with 4 channel
CFCU-0370	Datalogger for data acquisition and record with 4 channel
CFGM-0152	Digital Dial Gauge, 12,7 x 0.001 mm, LCD Display
CFGM-0072	High Accurate Strain Gauge Based Displacement Transducer, 10 mm
CFGM-0180	General Purpose Strain Gauge, 10 mm
CFGM-0182	General Purpose Strain Gauge, 20 mm
CFGM-0184	General Purpose Strain Gauge, 30 mm
CFGM-0186	Connection cable for strain gauge, 1 m
CFGM-0188	Adhesive for strain gauge (1 Package = 10 g)

Standards

ASTM C469; EN 12390-13

CFC-0313

CFC-0303

CFC-0303A, CFC-0304A, CFC-0313A and CFC-0314A Concrete Compressometers are used for determination of modulus of elasticity (Young's) and Poisson's ratio of molded concrete cylinders and diamond-drilled concrete cores when under longitudinal compressive stress acc. to ASTM C469.
CFC-0323E and CFC-0324E Concrete Compressometers are used determination of secant modulus of elasticity in compression in compression of hardened concrete on test specimens which may be cast or taken from a structure acc. to EN 12390-13
In cases when it is not mandatory to carry out loading / unloading operations consecutively and longitudinal strain measurement is only performed with loading ramps, the interface units and the data logger can be used with CFU automatic hydrolic power pack with U-Touch PRO control unit which can be coupled with CFU compression testing frames.
CFC-0313A and CFC-0314A models for modulus of elasticity (Young's) and Poisson's ratio, can be connected to, directly to our servo controlled automatic power pack (CFC-4870.SVD2) which can be coupled with any CFU ASTM compression testing frames.

CFC-0323E and CFC-0324E models for Secant Elastıc Modulus, can be connected to, directly to our servo controlled automatic power pack (CFC-4870.SVD2) which can be coupled with any CFU EN 12390-4 Compression Testing Frames.
The test are performed by connecting to PC with CFU Elastic Modulus of Concrete Softwares (USOFT-0320.01, USOFT-0330.01, USOFT-0370.01, USOFT-4870.SVD2.01)

The Compressometers/Extensometers are supplied complete with;
- Wooden Box

CFC-0303, CFC-0304, CFC-0313, CFC-0314, CFC-0323, CFC-0324	
Dimensions	350x350x350 mm (packed)
Weight (approx.)	6 kg

ACCESSORIES

Product Code

CFC-0350 Splitting Tensile Test Device for Ø150x300 mm (Ø6x12") and Ø160x320 mm Cylindrical Specimens

CFC-0351 Distance Piece for CFC-0350 for Ø100x200 mm (Ø4x8") Cylindrical Specimens

CFC-0355 Splitting Tensile Test Device for 60-150 mm height x 220 mm length Concrete Block Pavers

CFC-0360 Splitting Tensile Test Device for 150x150 mm Concrete Cubes, EN

CFC-0361 Distance Piece for CFC-0360 for 100x100 Concrete Cubes, EN

CFC-0365 Wood Fibre Boards, 4x15x345 mm, Pack of 50

Standards

EN 1338, 12390-6; ASTM C496

The CFC Series Splitting Tensile Test Devices are accessories for compression machines for measuring the splitting tensile strengths of Ø150x300 mm (Ø6x12") and Ø160x320 mm cylindrical specimens, 150 mm cube concrete specimens and of 60-150 mm height x 220mm length concrete block pavers according to the requirements of the related standards.

CFC-0351 Distance piece for Ø100x200 mm (Ø4x8") cylindrical specimens and CFC-0361 distance piece for 100 mm cube concrete specimens should be ordered seperately.

All the accessories can easily be fitted to the machine without the removal of the upper platen and spherical seat.

CFC-0350

CFC-0355

CFC-0360

Product Code	CFC-0350	CFC-0355	CFC-0360
Specimens	Cylindrical Ø150x300 mm Ø100x200 mm (with CFC-0351) Ø160x320 mm	Concrete Block Pavers 60-100 mm height 220 mm lenght	Concrete Cubes 150 mm 100mm (with CFC-0361)
Related Standards	EN 12390-6; ASTM C496	EN 1338	EN 12390-6
Dimensions	340x150x330 mm	240x160x320 mm	180x150x320 mm
Weight (approx.)	25 kg	17,5 kg	15 kg

CFC-0365A

ACCESSORIES

Product Code

CFC-0370 Flextural Test Device for Flexural Tests on Concrete Beams

Standards

EN 12390-5; ASTM C78, C293; AASHTO T 97

Flexural test device for center-point or two-point (third-point-ASTM) loading flexural tests on concrete beams of 100x100x400-500 mm, 150x150x600-750 mm. Consist of two upper rollers and two lower rollers of 25 mm dia. and 160 mm lenght.

- **Capacity: 150 kN**
- **Total height: 365 mm with 150mm beam, 290 mm with 100 mm beams.**
- **Distance between upper rollers:** 100 mm or 150 mm
- **Distance between lower rollers:** 300 mm or 450 mm
- **Max vertical daylight:** 160 mm for 150mm beam
- **Min vertical daylight:** 110 mm for 100mm beam
- **Max travel :** 40 mm
- **Total width :** 310 mm

Usable with all CFU compression testing machines by replacing CFC-0370 with lower platen.

CFC-0370

Dimensions	600x365x310mm
Weight (approx.)	41 kg

ACCESSORIES

Product Code

CFC-0372A	Capping Retainers for Ø2" Cylinders, Set of Two
CFC-0373A.SH50	Neoprene Pads for Ø2" Cylinders, 50 Shore A, Set of Two
CFC-0373A.SH60	Neoprene Pads for Ø2" Cylinders, 60 Shore A, Set of Two
CFC-0373A.SH70	Neoprene Pads for Ø2" Cylinders, 70 Shore A, Set of Two
CFC-0374A	Capping Retainers for Ø3" Cylinders, Set of Two
CFC-0375A.SH50	Neoprene Pads for Ø3" Cylinders, 50 Shore A, Set of Two
CFC-0375A.SH60	Neoprene Pads for Ø3" Cylinders, 60 Shore A, Set of Two
CFC-0375A.SH70	Neoprene Pads for Ø3" Cylinders, 70 Shore A, Set of Two
CFC-0376A	Capping Retainers for Ø4" (100 mm) Cylinders, Set of Two
CFC-0378A.SH50	Neoprene Pads for Ø4" Cylinders, 50 Shore A, Set of Two
CFC-0378A.SH60	Neopran Pads for Ø4" (100 mm) Cylinders, 60 Shore A, Set of Two
CFC-0378A.SH70	Neoprene Pads for Ø4" Cylinders, 70 Shore A, Set of Two
CFC-0380A	Capping Retainers for Ø6" (150 mm) Cylinders Set of Two
CFC-0382A.SH50	Neoprene Pads for Ø6" Cylinders, 50 Shore A, Set of Two
CFC-0382A.SH60	Neopran Pads for Ø6" (150 mm) Cylinders, 60 Shore A, Set of Two
CFC-0382A.SH70	Neoprene Pads for Ø6" Cylinders, 70 Shore A, Set of Two
CFC-0390	Capping Retainers for Ø160 mm Cylinders Set of Two
CFC-0392A.SH50	Neoprene Pads for Ø160 mm Cylinders, 50 Shore A, Set of Two
CFC-0392.SH60	Neopran Pads for Ø160 mm Cylinders, 60 Shore A, Set of Two
CFC-0392A.SH70	Neoprene Pads for Ø160 mm Cylinders, 70 Shore A, Set of Two

Standards

ASTM C1231; AASHTO T22,T851

Unbounded Cap is usedfor determining of compressive strength of hardened concrete cylinders as alternative method to the sulphur hot capping of concrete cylinder specimens. The pads even out irregularities, distributing the test load uniformly to ensure reliable strength results. Pads are reusable for limited number of tests acc. to the standards.

FLEXURAL TESTING FRAMES

Product Code

CFC-5610 **200 kN Capacity Flexural Testing Frame**
CFC-5630 **300 kN Capacity Flexural Testing Frame C Type**

Standards

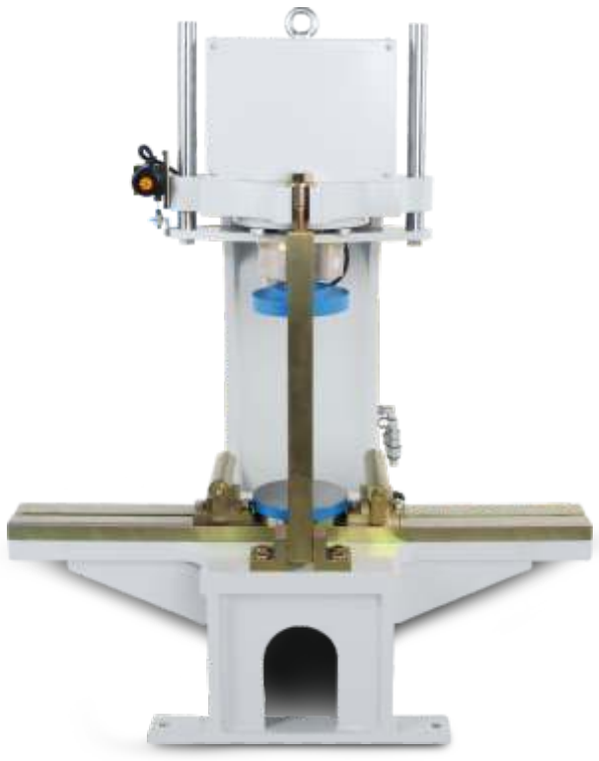
EN 1338, 1339, 1340, 1341, 1343, 12390-5, 12390-6;
BS 1881; ASTM C78, C293, C496

The versatile CFU Flexural Testing Frames are designed for minimum deflection at maximum load resulting in very high accuracy. The load frame is a welded steel fabrication carrying the ram fitted to the upper crosshead. The frames have a single acting down stroking ram with over travel switch protection to shut the machine down when maximum ram travel is reached. The return of the ram is done by spring to get maximum accuracy on the load measurement. A load cell is used for load measurements on all frames.
Each model is designed to accept all accessories required for flexural, transverse or compression tests.
CFU Flexural Frames CFC-5610 and CFC-5630 models are designed to allow easy and practical front loading of the specimens.
CFC-5630 The very rigid C type design is ideal either for conventional flexural test or for more sophisticated tests such as deformability and ductility index.
The load frame provides the stability needed for accurate and repeatable test results over the years of operation.
All frames can be connected to any CFU compression machine as a second frame or can be used with any CFU power pack as an independent Flexural Machine.

The main characteristics are:
Beam, kerb, deflection controlled test
- High stability welded assembly
- Safety limit switch for 100 mm piston stroke
- High accuracy load measurement with strain gauge load cells
- Can accept wide range of accessories for mentioned standards
- Can be connected to any CFU compression machine or CFU power pack

Test assemblies such as;
- Flexture strengt test of concrete beam(CFC-5501), kerb(CFC-5502) and flagstone(CFC-5504),
- Indirect tensile strengt test of paving block (CFC-0355 and CFC-5510)),
- Splitting tensile strengt test of concrete cubes (CFC-0360)and cylinders (CFC-0350),
- Compression strengt test of any condtruction material (CFCM-4116 and distance pieces CFC-4630, CFC-4631, CFC-4633 and CFC-4634) should be ordered separately.

CFC-5610 with CFCM-4116



CFC-5630 with CFCM-4116

Product Code	CFC-5610	CFC-5630
Capacity	100 kN	300 kN
Ram Travel	100 mm	100 mm
Max. Vertical Clearance	435 mm (without accessories)	425 mm (without accessories)
Max. Horizontal Clearance	870 mm	640 mm
Max. Clerance Between Lower Rollers	744 mm (with CFC-5501, CFC-5502 and CFC-5504)	900 mm
The Distance Between The Center of The Piston to The Side of The Frame	--	320 mm
Ram return by	Spring	Spring
Overall Dimensions	1170x515x1144 mm	1100x900x1250 mm
Weight (approx.)	225 kg	555 kg

MANUAL FLEXURAL TESTING MACHINE

Product Code

CFC-5610.MLP 100 kN Manual Flexural Testing Machine

Standards

EN 1338, 1340, 12390-5, 12390-6; BS 1881;
ASTM C78, C293, C496

The CFC-5610.MLP 100 kN Capacity Manual Flexure Testing Machine is designed to perform reliable flexure tests on standard concrete beams, concrete or natural stone kerbs, concrete paving flags, and natural stone slabs and tensile splitting test of concrete paving blocks. Especially suitable for on-site applications when electric power supply is not available.

Being a low cost alternative, CFC-5610.MLP testing machine combines precision and simplicity with the unique design of the manual power pack. Hand Operated Hydraulic Power Pack enables even an inexperienced operator to perform the flexure tests on-site.

The CFU range of flexural machines have the accuracy of Class 1 starting from 2% of the full capacity.

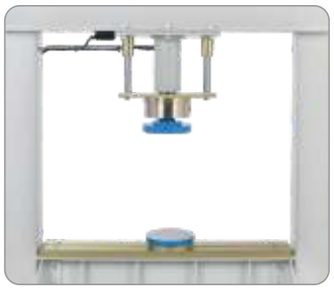
CFC-5610.MLP flexure testing machine consists of a heavy duty welded frame, manuel hydraulic power pack and data acquisition system LPI.

Flextural test assemblies should be ordered separately.

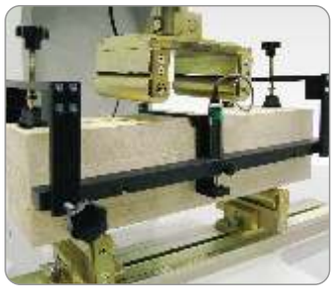
CFC-5610.MLP with CFC-5504

CFC-5501

CFC-5502



CFCM-4116



CFC-5506

Capacity		100 kN
Class 1 range		4-200 kN
Resolution		1/65.000
Ram Travel		100 mm
Max. Vertical Clearance		435 mm (without accessories)
Max. Horizontal Clearance		870 mm
Max. Clerance Between Lower Rollers		744 mm
Frame		CFC-5610
Power Pack		CFC-4810
Overall Dimensions	Frame	1170x512x1144 mm
	Power Pack	300x250x500 mm
Weight (Approx.)	Frame	225 kg
	Power Pack	50 kg

SEMI-AUTOMATIC FLEXURAL TESTING MACHINES

Product Code

CFC-5610.SLP 100 kN Semi-Automatic Flexural Testing Machine

Models for 220-240V 50-60 Hz, 1 ph.	CFC-5610.SLP
Models for 110-120V 60 Hz, 1 ph.	CFC-5610.SLP-N

Standards

EN 1338, 1339, 1340, 12390-5, 12390-6;
BS 1881; ASTM C78, C293, C496

The CFU Semi-Automatic range of 200 kN capacity flexure testing machine was been designed for reliable and consistent testing of flexural test on standard concrete beams, concrete or natural stone kerbs, concrete paving flags and natural stone slabs and tensile splitting test of concrete paving blocks.

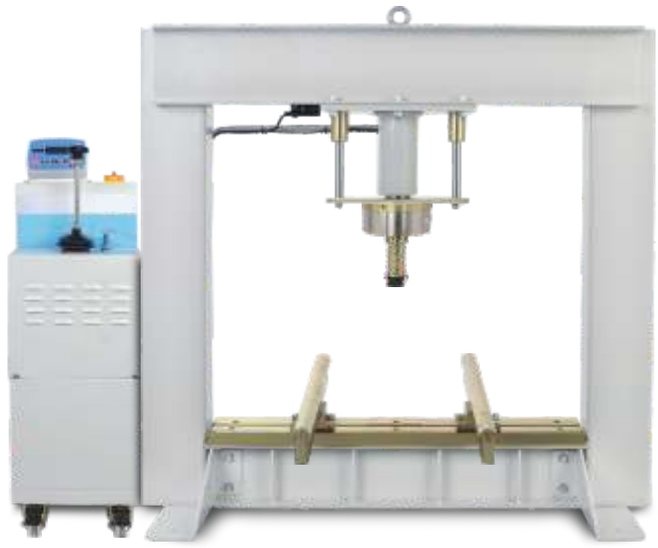
These flexure testing machines are the results of continuous research to upgrade testing machines with latest technologies and to conform to the latest standards EN 12390-5, EN 12390-6, EN 1338, EN 1340, BS 1881, ASTM C78, C293 and C496 in terms of its technical properties taking into account client requirements. These testers also meet the requirements of CE norms for health and safety of the operator.

The CFU Semi-Automatic range of 100 kN capacity flexure testing machines allow inexperienced operators to perform the test.

The flexural testing machines consist of heavy duty welded frame, hydraulic power pack with LPI Battery Operated Digital Readout Unit

CFU Flexural Machine CFC-5610.SLP is designed to allow easy and practical front loading of the specimens.

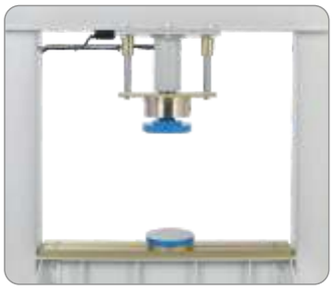
The CFU range of Flexural Machines have the accuracy of Class 1 starting from 2% of the full capacity.



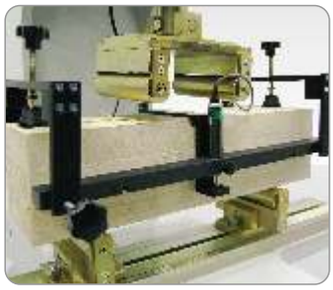
CFC-5610.SLP with CFC-5502

CFC-5501

CFC-5504



CFCM-4116



CFC-5506

Safety Features

- Max pressure valve to avoid machine overloading
- Ram travel switch to prevent excessive piston travel

The test assemblies such as;

- Flexture strengt test of concrete beam(CFC-5501), kerb(CFC-5502) and flagstone(CFC-5504),
- Indirect tensile strengt test of paving block (CFC-0355 and CFC-5510),
- Splitting tensile strengt test of concrete cubes (CFC-0360) and cylinders (CFC-0350),
- Compression strengt test of any condtruction material (CFCM-4116 and distance pieces CFC-4630, CFC-4631, CFC-4633 and CFC-4634) should be ordered separately

Capacity		100 kN
Class 1 range		4-200 kN
Resolution		1/ 65.000
Ram Travel		100 mm
Max. Vertical Clearance		435mm (without accessories)
Max. Horizontal Clearance		870 mm
Max. Clerance Between Lower Rollers		744 mm (with CFC-5501, CFC-5502 and CFC-5504)
Frame		CFC-5610
LPI Digital Readout Unit		CFC-4820.SLP
Overall Dimensions	Frame	1170x515x1144 mm
	Power Pack	300x420x850 mm
Weight (Approx.)	Frame	225 kg
	Power Pack	70 kg

AUTOMATIC FLEXURAL TESTING MACHINE

Product Code

CFC-5610.FPR 100kN Automatic Flexural Testing Machine
CFC-5630.FPR 300 kN Automatic Flexural Testing Machine, C Type
CFC-5660.FPR 600 kN Automatic Flexural Testing Machine, Four Column Type

Models for 220-240V 50-60 Hz, 1 ph.		
CFC-5610.FPR	CFC-5630.FPR	CFC-5660.FPR

Models for 110-120V 60 Hz, 1 ph.		
CFC-5610.FPR-N	CFC-5630.FPR-N	CFC-5660.FPR-N

Standards

EN 1338, 1339, 1340, 12390-5, 12390-6; BS 1881; ASTM C78, C293, C496

CFC-5610.FPR with CFC-5501

The CFU Automatic range of 100 kN, 300 kN and 600 kN capacity flexure testing machines have been designed for reliable and consistent testing of flexural test on standard concrete beams, concrete or natural stone kerbs, concrete paving flags, and natural stone slabs and tensile splitting test of concrete paving blocks. These flexure testing machines are the result of continuous research to upgrade the testing machines with latest technologies to conform to the latest standards EN 12390-5, EN 12390- 6, EN 1338, EN 1340, BS 1881, ASTM C78, C293 and C496 in terms of its technical properties taking into account client requirements. These also meet the requirements of CE norms for health and safety of the operator.

Tests can be performed by either on U-Touch PRO Control Unit or on a computer with using free CFU Software. The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc.

The CFU Automatic range of 200 kN, 300 kN and 600 kN capacity flexure testing machines allow inexperienced to perform the test. Once the machine is switched on and specimen is placed, then the only required operations are;

• Setting test parameters, including pace rate only required when the specimen type is changed.
• Pressing the START button on the control unit.
• The machine automatically starts the rapid approach; switches the test speed after 1% of the load capacity of the machine and stops once the specimen failure.
• Automatically saves the test parameters and test results.

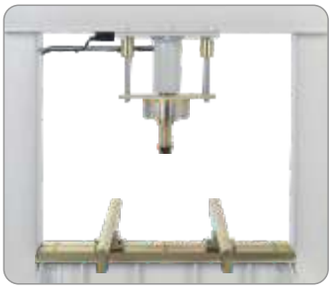
The CFU range of Flexural Machines have the accuracy of Class 1 starting from 2% of the full capacity.

The Machines consist of a rigid steel frame and hydraulic power pack with U-Touch PRO Control Unit(see table).The software (USOFT-4830.FPR) is provided free of charge with the machines.

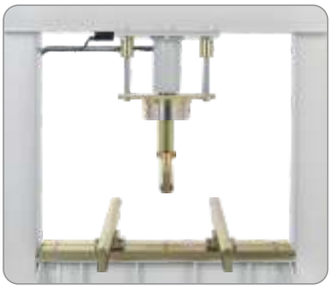
CFU Flexural Machine CFC-5610.FPR and CFC-5630.FPR are designed to allow easy and practical front loading of the specimens.The equipment to place the specimens in the frame which is similar to the picture shown below should be ordered separately seperately for CFC-5660.FPR.

The test assemblies such as;
• Flexture strengt test of concrete beam(CFC-5501), kerb(CFC-5502) and flagstone(CFC-5504),
• Indirect tensile strengt test of paving block (CFC-0355 and CFC-5510)),
• Splitting tensile strengt test of concrete cubes (CFC-0360)and cylinders (CFC-0350),
• Compression strengt test of any condtruction material (CFCM-4116 and distance pieces CFC-4630, CFC-4631, CFC-4633 and CFC-4634) should be ordered separately.

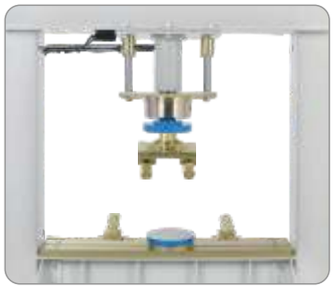
The main characteristics are:
• Closed loop control with automatic test procedure
• Supplied with factory calibration certificate for load measurement
• Can perform the test with load control
• The tests can be performed by controlling the machine either on U-Touch PRO control unit (CFC-4930.FPR) or on a computer with using free CFU Software (USOFT-4830.FPR) which is provided free of charge with the machines.
• Load measurment with a loadcell
• Welded steel frame



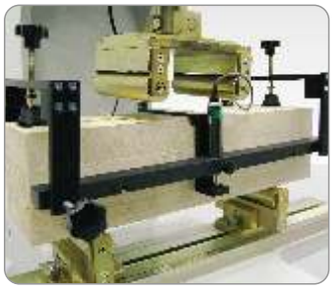
CFC-5502



CFC-5504



CFCM-4116



CFC-5506

		CFC-5610.FPR
Capacity		100 kN
Class 1 range		4-200 kN
Resolution		1/65.000
Ram Travel		100 mm
Max. Vertical Clearance		435 mm (without accessories)
Max. Horizontal Clearance		870 mm
Max. Clerance Between Lower Rollers		744 mm (with CFC-5501, CFC-5502 and CFC-5504)
Frame		CFC-56100
Power Pack		CFC-4830FPR
Overall Dimensions	Frame	1170x515x1144 mm
	Power Pack	370x400x920
Weight (Approx.)	Frame	225 kg
	Power Pack	85 kg

		CFC-5630.FPR
Capacity		300 kN
Class 1 range		6-300 kN
Resolution		1/ 65.000
Ram Travel		100 mm
Max. Vertical Clearance		425 mm (without accessories)
Max. Horizontal Clearance		640 mm
Max. Clerance Between Lower Rollers		900 mm
The Distance Between The Center of The Piston to The Side of The Frame		320 mm
Frame		CFC-5630
Power Pack		CFC-4830FPR
Overall Dimensions	Frame	1000x900x1250 mm
	Power Pack	370x400x920
Weight (Approx.)	Frame	555 kg
	Power Pack	85 kg

		CFC-5660.FPR
Capacity		600 kN
Class 1 range		12-6000 kN
Resolution		1/ 65.000
Ram Travel		350 mm
Ram Type		Double Acting
Max. Vertical Clearance		930 mm (without accessories)
Max. Horizontal Clearance		640 mm
Max. Clerance Between Lower Rollers		2000 mm
Frame		CFC-5660
Power Pack		CFC-4840FPR
Overall Dimensions	Frame	1100x2000x2650 mm
	Power Pack	605x455x1015 mm
Weight (Approx.)	Frame	2750 kg
	Power Pack	150 kg

CFC-5660.FPR
with
CFC-5502

U-Touch PRO Control Unit

U-Touch PRO Control Unit CFC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

CFU Software for Automatic Compression / Flexure Testing Machines

CFU software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonary units/blocks by controlling the CFU automatic compression / flexure testing machines.

The advantages of performing tests on computer with using CFU Software, such as reporting, graphical output, etc. can be seen in detail at the pages of CFU Software for Automatic Compression / Flexure Testing Machines.

Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately.

In this case, the machines provide load control of two seperate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel and additional selector valve.

Safety Features

- **Maximum pressure valves to avoid machine overloading**
- **Piston travel limit switch**
- **Emergency stop button**
- **Software controlled maximum load value**

FLEXURAL TESTING ACCESSORIES

Product Code

CFC-5501	Flexural Testing Assembly for Concrete Beams, Set of 2 upper and 2 lower rollers of 38 mm dia and 160 mm length
CFC-5502	Flexural Testing Assembly for Concrete Kerbs, Set of 2 lower roller of 38 mm dia. x620 mm lenght and upper loading arm with Ø 40 mm swivel jointed steel pad
CFC-5504	Flexural Testing Assembly, Set of 2 lower and 1 upper roller of 38 mm dia. and 620 mm lenght
CFC-5506	Auxiliary Testing Frame for The Measurement of Deflection on Concrete Beams with 2 pcs. Linear Potentiometric Displacement Transducer
CFC-5507	Auxiliary Testing Frame for The Measurement of Deflection on Beams with 2 pcs. High Accurate Displacement Transducer
CFCM-1116	Upper Platen with Ball Seating Assembly Ø165 mm and Lower Platen Ø165 mm
CFC-5510	Distance Piece (Ø165 mm x 20 mm thick) for Flextural Testing Frame

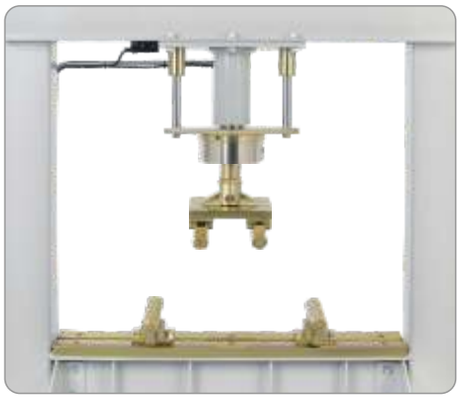
Standards

EN 1338, 1339, 1340, 12390-5, 12390-6; BS 1881; ASTM C78, C293, C496, UNI10834

CFC-5501 Flexural Testing Assembly for Concrete Beams

The test assembly, conforming with EN 12390-5, ASTM C78, ASTM C293, BS 1881:118, is used for center or two-point (third-point loading-ASTM) loading flexural tests on 100 mm or 150 mm concrete beams.

Can be used with all CFU flexural testing frames. The distance of lower rollers can be adjusted between 100 mm to 800 mm. The distance between upper rollers can be set to 100 mm or 150 mm. For center-point loading flextural test one of the rollers can be removed and the other placed in the center. The rollers dimensions are 38 mm dia.x 160 mm length.



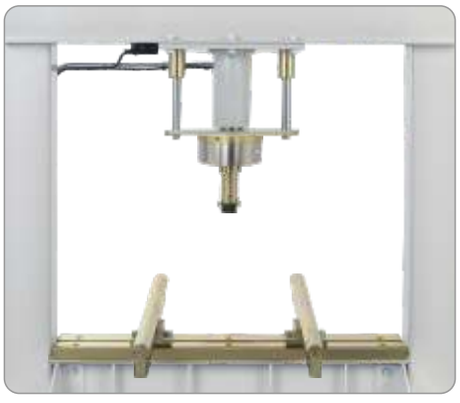
CFC-5501

Dimensions	200x200x200 mm
Weight (approx.)	16 kg

CFC-5502 Flexural Testing Assembly for Concrete Kerbs

The testing assembly, conforming with EN 1340, is used for flexural tests on concrete kerbs. The set consists of two lower rollers 38 mm dia. x 620 mm long and 40 mm dia. upper loading piston with ball seating assembly.

Can be used with all CFU flexural testing frames. The distance of lower rollers can be adjusted between 100 mm to 800 mm.



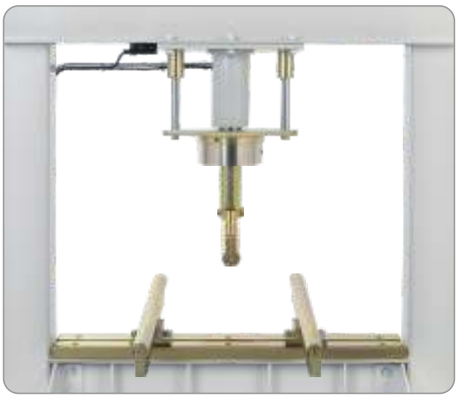
CFC-5502

Dimensions	620x250x100 mm
Weight (approx.)	17 kg

CFC-5504 Flexural Test Assembly

CFC-5504 Flexural Testing Assembly consist of two lower rollers and one upper roller of 38 mm dia. and 620 mm length is used for flexural tests on concrete paving flags and concrete terrazo tiles, natural stone kerbs and slabs. The distance of lower rollers can be adjusted between 100 mm to 800 mm. Conform with EN 1339, EN 1343, EN 12372.

For the samples with low strenght 10 kN loadcell connection flange and adaptor for the load cell should be orderd seperately .



CFC-5504

Dimensions	620x260x150 mm
Weight (approx.)	25 kg

CFC-5506 & CFC-5507 Auxiliary Testing Frames for The Measurement of Deflection on Concrete Beams

The Auxiliary testing frame is used for the measurement of deflection during the flexure test on 100x100x400/500 mm and 150x150x500/600 mm beams conforming to ASTM C1018.

The auxiliary testing frames can be used on all CFU flexural testing frames.

For displacement controlled test, CFC-5507 Auxiliary testing frames with high accurate displacement transducers should be used with CFC-4850 or CFC-4860 advanced servo controlled automatic power packs with proportional valve units or CFC-4870 advanced servo controlled automatic power pack with servo valve.

For load controlled test, CFC-5506 Auxiliary testing frames with linear potantiometric displacement transducers or CFC-5507 Auxiliary testing frames with high accurate displacement transducers should be used with any CFU servo controlled or automatic power packs.

CFC-5506 Auxiliary Testing Frame is supplied complete with 2 pcs. linear potantiometric displacement transducers (10mm x0,001mm CFGM-0060) and CFC-5507 Auxiliary Testing Frame is supplied complete with 2 pcs. high accurate displacement transducers (10mm x0,001mm CFGM-0072).

CFC-5501 Flexural Test Assembly for concrete beams should be ordered separately.

CFC-5506

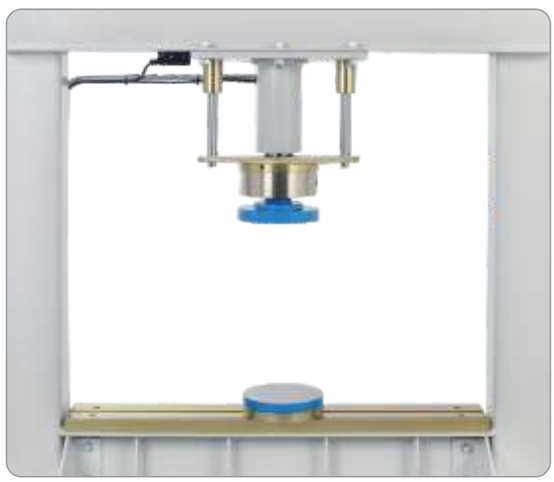
Dimensions	500x250x100 mm
Weight (approx.)	4 kg

Spilitting Tensile Test for Concrete Paving Blocks and Compressive Strength Test with Flexural Testing Frames

The test assembly is used to perform spilitting tensile test for concrete paving blocks and compressive strength tests with the CFU flexure testing frames.

The set consists of CFCM-1116 Upper Platen (with spherical seating assembly) Ø165 mm and Lower Platen Ø165 mm and CFC-5510 Distance Piece (Ø165 x 20 mm thick). For the spilitting tensile test for concrete paving blocks (EN 1338), splitting tensile test device (CFC-0355) should be ordered separately.

For the compressive strength test, depending on the height of the specimens to be tested, Ø165 mm distance pieces (15 mm: CFC-4630, 30 mm:CFC-4631, 50 mm: CFC-4633, 90 mm: CFC-4634) should be ordered separately.



CFCM-4116

	Dimensions	Weight (approx.)
CFCM-1116	170x170x145 mm	9 kg
CFC-5510	210x210x30 mm	2 kg
CFC-0355	240x160x320 mm	17,5 kg
CFC-4630	165x285x20 mm	2,5 kg
CFC-4631	165x285x35 mm	5 kg
CFC-4633	165x285x55 mm	8 kg
CFC-4634	165x285x95 mm	14 kg

FLEXURAL TESTING FRAMES

Product Code

CFC-5660 600 kN Capacity Flexural Frame Four Column Type

Standards

EN 1338, 1339, 1340, 12390-5, 12390-6; ASTM C78, C293, C496

CFU 600 kN capacity Flexural Frame is designed for minimum deflection at maximum load resulting in very high accuracy. The load frame is a four column design carrying the ram fitted to the upper crosshead. The frames has a double acting stroking ram with over travel switch protection to shut the machine down when maximum ram travel is reached. A load cell is used for load measurements on the frame.

CFU 600 kN capacity Flexural Frame is designed to accept all accessories required for flexural, splitting tensile or compression tests.

The equipment to place the specimens in the frame which is similar to the picture shown below should be ordered separately.

The load frame provides the stability needed for accurate and repeatable test results over the years of operation.

CFU 600 kN capacity Flexural Frame can be connected to any CFU compression machine as a second frame or can be used with any CFU power pack as an independent Flexural Machine.

The main characteristics are;

- High stability four column design
- 350 mm piston stroke with safety limit switch
- High accuracy load measurement with strain gauge load cells
- Can accept wide range of accessories for mentioned standards
- The distance between lower rollers can be set up to 1400 mm
- Can be connected to any CFU compression machine or CFU power pack

Test assemblies such as;

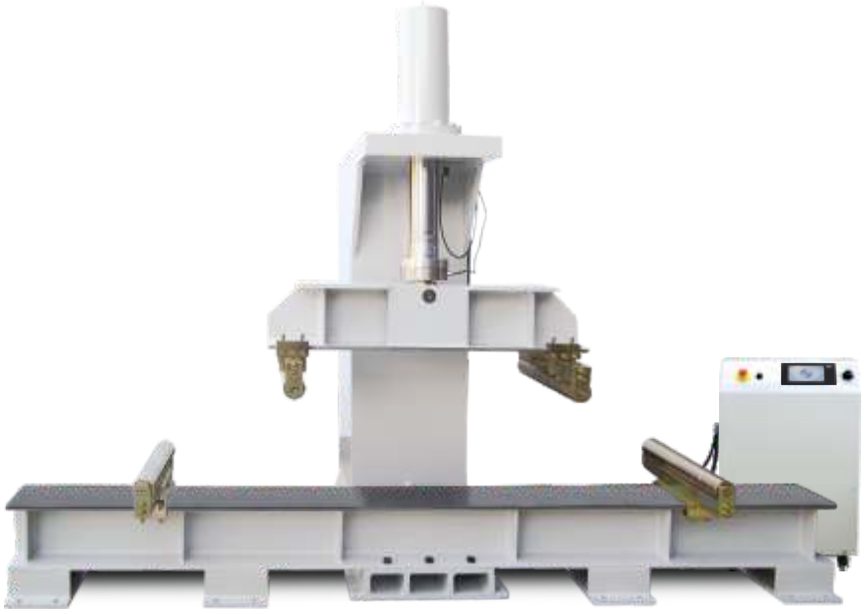
- Flexture strengt test of concrete beam(CFC-5501), kerb(CFC-5502) and flagstone(CFC-5504),
- Indirect tensile strengt test of paving block (CFC-0355 and CFC-5510)),
- Splitting tensile strengt test of concrete cubes (CFC-0360)and cylinders (CFC-0350),
- Compression strengt test of any condtruction material (CFCM-4116 and distance pieces CFC-4630, CFC-4631, CFC-4633 and CFC-4634) should be ordered separately.

Capacity	600 kN
Ram Travel	350 mm
Max. Vertical Clearance	930 mm (without accessories)
Max. Horizontal Clearance	640 mm

Max. Clerance Between Lower Rollers	2000 mm
Ram Type	Double Acting
Overall Dimensions	1100x2000x2650 mm
Weight (approx.)	2750 kg

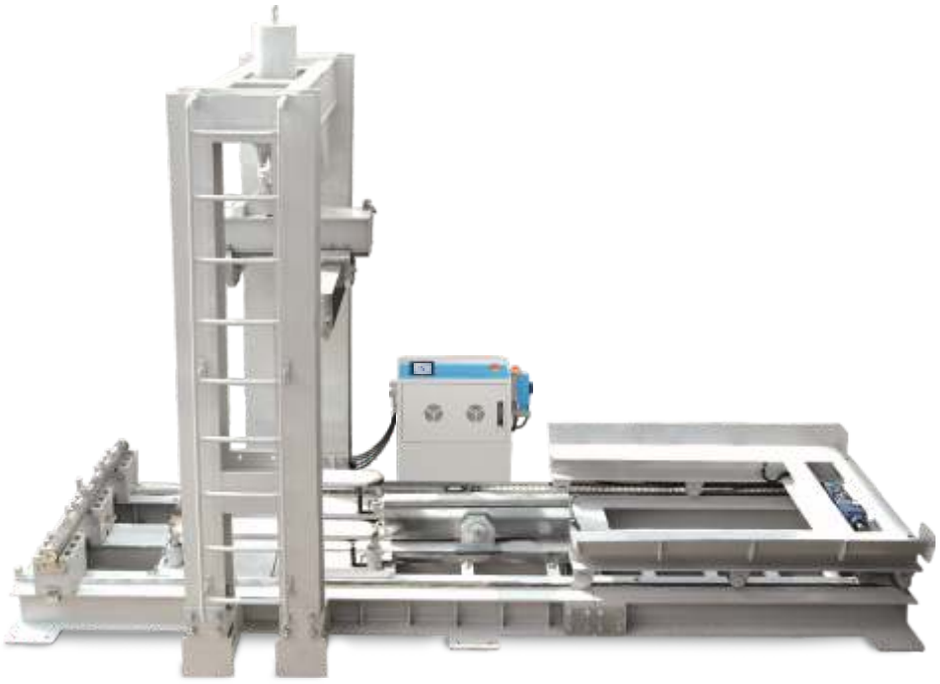
SPECIAL FLEXURAL TESTING MACHINES

A wide range of flexural testing machines to support specific requirements of clients can be custome produced.
Some examples of special flextural machines and frames produced by CFU are shown below .



Frame Type	C Type
Capacity	600 kN
Maximum Sample Size	600x600x6000 mm
Hydraulic Power Pack	CFC-4830
Piston Stroke	400 mm

Frame Type	C Type
Capacity	600 kN
Maximum Sample Size	500x500x3000 mm
Hydraulic Power Pack	CFC-4840
Piston Stroke	600 mm



Frame Type	U Type
Capacity	1000 kN
Maximum Sample Size	1500x1500x6000 mm
Hydraulic Power Pack	CFC-4850
Piston Stroke	800 mm

Frame Type	C Type
Capacity	600 kN
Maximum Sample Size	500x500x3000 mm
Hydraulic Power Pack	CFC-4840
Piston Stroke	600 mm

SERVO CONTROLLED UNIVERSAL AUTOMATIC BENDING TEST MACHINE

Product Code

CFC-5552 100 kN Servo Controlled Universal Automatic Bending Test Machine, 220-240 V 50-60 Hz
CFC-5556 300 kN Servo Controlled Universal Automatic Bending Test Machine, 220-240 V 50-60 Hz

Standards

**EN 12390-5, 1339, 1340, 14651, 14488-3, 14488-5; ASTM C 78, C 293, C 1550, C1609,
EFNARC Guidelines for Sprayed Concrete**

Servo Controlled Universal Automatic Bending Test Machines are specially configured for energy absorption capacity tests and also other tests of fibre reinforced sprayed concrete specimens.

The Machines can be used;

- **for energy absorption capacity test on fibre reinforced sprayed concrete slab or round specimens**
- **for four point bending strengths (first peak, ultimate and residual) tests on fibre reinforced concrete beam specimens.**
- **for flexural tensile strength (limit of proportionality (LOP), residual) for metallic fibre concrete**
- **for EFNARC three point bending test on square panel with notch**
- **for flexural strength test of concrete beams, paving flags and kerbs**
- **for measuring of deflection on concrete beams**

The machines consist of extremly high stiffness frame and servo controlled hydrolic power pack.

Load Frames

The frames of machines are designed torsionally stiff up to the maximum capacity with anti-rotation system to prevent the natural tendency to rotate the columns of frame. The four columns of frame are clamped with zero clearance.

Test cylinder mounted on the top crosshead has double-action with long piston stroke in servo slide quality (particularly low friction). SSI type displacement transducer with 5 mikron resolution is integrated in the double-acting actuator.

An anti-rotation device prevents twisting the piston rod from twisting with the top bending beam and the precision load cell.

The test accessories İncluding energy absorption capacity test equipment on the frame can be easily removed and the test accessories suitable the test to be performed can be installed.

Different sized frames can be availableon request.

Power Pack

The power pack contains a hydraulic pump and a fine flow oil filter. The hydraulic unit consists of a high-pressure radial piston pump. All operating and control elements are located on the power pack.The powerpack consists of oil level indicator, high temperature indicator, mechanical filter clogged indicator and cooling unit.

Different type tests with automatic test sequence can be performed by help of free software.

Main Features

- **Pace rate control from 0.01 kN/s to 15 kN/s (depend on the specimen stiffness.**
- **3 analogue channels for displacement transducers, CMOD, etc. built in the system as an addition to frame loadcells**
- **Instrumentation amplifiers for sensor excitation and amplification**
- **1/65.000 resolution and 1.000 Hz control for each channel**
- **Ethernet port for connecting to computer**
- **240x320 pixel LCD display**
- **Touchscreen operator panel**
- **Can execute load, displacement or strain controlled tests for post peak**
- **Free of charge PC software for test control and advanced report printout**
- **Multiple language support**

Data Acquisition & Control PC Software

Servo Controlled Universal Bending Test Machines can be controlled (Start, Stop commands) by a computer with the Free of Charge software supplied with the machine. This software provides data acquisition and management for compression, flexure and splitting tensile test throughout the test execution. The engineering values such as modulus, toughness, energy has been supported. The advanced functions for data base management provide an easy navigation of all saved data. The test results certificate includes all descriptive information. Test parameters can be set and details about the test carried out such as customer details, test type, specimen type, user info and other information required can be entered and printed out as well as test report and graph.

Safety Features

- **Maximum pressure valves to avoid machine overloading**
- **Piston travel limit switch**
- **Emergency stop button**
- **Software controlled maximum load value**

Optional Accessories

CFC-5501 Flextural testing asseblies for concrete beams.
Set of 2 upper and 2 lower rollers of 38 mm dia and 160 mm lenght
CFC-5502 Flextural testing asseblies for concrete kerb.
Set of 2 lower roller of 38mm dia.x620mm lenght and
upper load point of 40 mm dia with ball seating
CFC-5504 Flexural Test Assembly Set of 2 lower rollers and
1 upper roller of 38 mm dia. and 620 mm lenght.
CFC-5506 Auxiliary Testing Frames For The Measurement of
Deflection on Concrete Beams with 2 pcs Linear Potentiometric
Displacement Transducer, for 100x100x400/500 mm and
150x150x500/600 mm beams.
CFC-5507 Auxiliary Testing Frames For The Measurement of
Deflection on Concrete Beams with 2 pcs. High Accurate
Displacement Transducer, for 100x100x400/500 mm and
150x150x500/600 mm beams.
CFC-5508/E Energy absorption capacity test equipment for fibre reinforced sprayed concrete slab specimens, EN 14488-5 EFNARC Guide (Consists of a displacement transducer, square frame with a yoke(for transducer) and a square loading block)
CFC-5508/A Energy absorption capacity test equipment for fibre reinforced sprayed concrete round specimens, (Consists of a displacement transducer, a support fixture with three pivots (with a yoke for connecting the dispacement transducer) and a loading piston)
CFC-0509/E Square Steel Form for Energy Absorption Test, EN,
with Rigid Steel Base and Handles for Transport and Handling
CFC-0509/A Round Steel Form for Energy Absorption Test,
ASTM, with Rigid Steel Base and Handles for Transport and Handling
CFC-5511 Flextural Testing Assembly Set for EFNARC
Three Point BendingTest on Square Panel with Notch, Set of 2 lower rollers and 1 upper rollers of 30 mm dia and 620 mm lenght.
CFGM-0090 Crack Mouth Opening Displacement (CMOD)
Transducer,measuring range 7mm, gauge length 5mm
CFC-5514 Energy absorption capacity test assemblies for
fibre reinforced sprayed concrete slab specimens, UNI 10834
CFC-4511 Upper platen (with ball seatig assembly) and lower platen,
Ø165mm platens for compressive strenght tests up to
the machine capacity.

The optional accessories for the tests performed should be ordered seperately.

Capacity	CFC-5552	100 kN
	CFC-5556	300 kN
Accuracy Class		Class 1 EN ISO 7500-1 starting from 1% of the capacity
Force Measurement Range	CFC-5552	1 to 100 kN
	CFC-5556	3 to 300 kN
Test Speed Range		0.01 - 50 mm/min.
Load Rate		0,001-15 kN/s (Depend on specimen stiffness)
Distance Between The Columns (front / side)		900 / 300 mm
Maximum Vertical Clearance (Lower crosshead at middle stroke)		450 mm (Without accessories)
Maximum Piston Movement		250 mm
Power		1500 W
Electrical Requirement		220-240 V 50-60 Hz
Maximum Working Pressure		280 bar
Dimensions	Frame	1200 x 600 x 2045 mm
	Power Pack	1100x700x1030mm
Weight	Frame	3000 kg
	Power Pack	210 kg

Other voltages and frequencies available on request.

WORKABILITY & CONSISTENCY

Product Code

CFC-0400E	Slump Test Set, EN
CFC-0402E	Slump Cone, EN
CFC-0404E	Slump Base Plate 500x500x60 mm with Handle, EN
CFC-0406E	Slump Funnel, Galvanized Steel, EN
CFC-0408	Tamping Rod Ø 16x600 mm
CFC-0410	Tamping Rod Ø 10x300 mm
CFGH-1605	Round Scoop, Medium
CFGM-0380	Steel Ruler 300x1 mm

Standards

EN 12350-2

The Slump test method is used for the determination of the consistency and workability of fresh concrete.

The CFC-0400E Slump Test Set is supplied galvanized to prevent corrosion.

The Slump Test Set are supplied complete with

- Slump Cone Top Dia: 100 ±2 mm / Base Dia: 200 ±2 mm/ Height: 300 ±2 mm /Thickness 1,5mm
- Slump Base Plate 500x500x60 mm with Handle
- Slump Funnel, Galvanized Steel
- Tamping Rod Ø 16x600 mm
- Round Scoop, medium
- Steel Ruler 300x1 mm

Dimensions	550x600x250 mm (packed)
Weight (approx.)	6 kg

WORKABILITY & CONSISTENCY

Product Code

CFC-0400A	Slump Test Set, ASTM
CFC-0402A	Slump Cone, Seemless Spun Metal, ASTM
CFC-0404A	Aluminium Base Plate with clamps and measuring bridge
CFC-0406A	Slump Cone Funnel, Seemless Spun Steel
CFC-0408A	Tamping Rod, Graduated, for CFC-0400A
CFGH-1618A	Scoop, Flat Bottom, 24 oz.
CFGH-1620	Scoop, cast aluminum, 38 oz.

Standards

ASTM C143; AASHTO T119

The Slump test method is used for the determination of the consistency and workability of fresh concrete.

CFC-0406A Slump Cone Funnel, made of seemless spun steel, should be ordered separately.

CFC-0400A Slump Test Set are supplied complete with;

- Slump Cone, Seemless spun metal
- Aluminium Base Plate with clamps and measuring bridge
- Tamping Rod, Graduated
- Scoop, cast aluminum 38 oz.

Dimensions	550x600x250 mm (packed)
Weight (approx.)	10,4 kg

WORKABILITY & CONSISTENCY

Product Code

CFC-0510 Concrete Flow Table Test Set
CFC-0512 Flow Cone for CFC-0510
CFC-0513 Wooden Tamper 40x40x335 mm

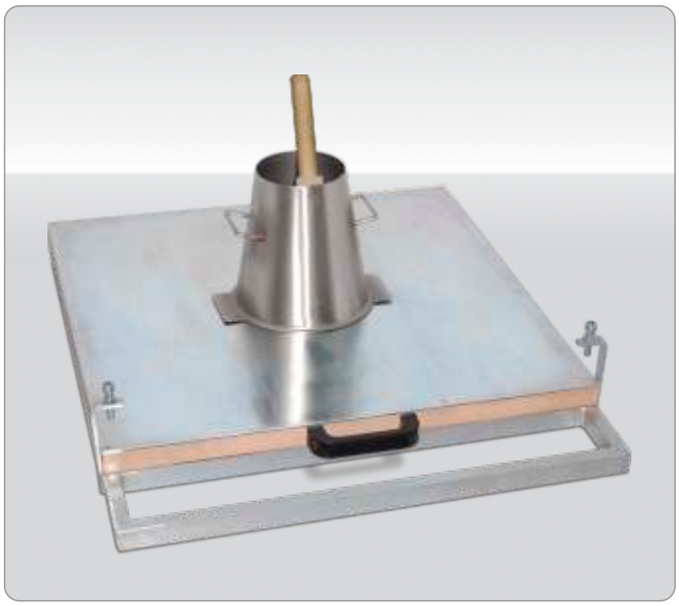
Standards

EN 12350-5

The test set is used for concrete mixes of high workability and determines flow index as an arithmetic mean of the diameter of the specimen after working on a flow table.

The apparatus consists of a double steel table, an upper table measuring 700x700 mm and hinged at one side to the lower table. The top table is inscribed and all parts are protected against corrosion.

The stainless steel cone has a 130 ±2 mm top diameter, 200 ±2 mm base diameter and 200 ±2 mm height and 1.5 mm thickness.



The Concrete Flow Table is supplied complete with

- Flow Cone
- Wooden Tamper

Dimensions	700x850x300 mm
Weight (approx.)	40 kg

SELF COMPACTING CONCRETE (SCC) TESTS

Product Code

CFC-0518 Sieve Segregation Test Set
CFG-4PC0050/Y Sieve Ø 300x75 mm 5 mm Square Aperture
CFG-4002/Y Pan Ø 300x75 mm

Standards

EN 12350-11

The CFC-0518 Sieve Segregation Test Set is used for determining the resistance to sieve segregation of Self Compacting Concrete.

The Sieve has 5 mm square apertures with a frame diameter of 300 mm conforming to ISO 3310-2 standard.

Supplied complete with a Pan.

Dimensions	350x350x250 mm
Weight (approx.)	2,5 kg

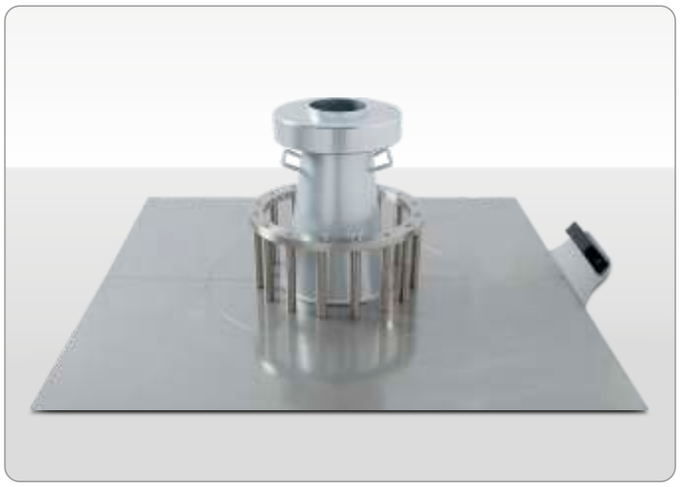
SELF COMPACTING CONCRETE (SCC) TESTS

Product Code

CFC-0522E	Slump Cone for CFC-0520E
CFC-0402A	Slump Cone, Seemless Spun Metal, ASTM
CFC-0524	Base Plate, Stainless Steel, for J-Ring and Slump-Flow Tests
CFC-0526E	Steel Weighted Collar, 9 kg, EN, for Slump Cone On J-Ring or Slump Flow Test
CFGH-1605	Round Scoop, Medium
CFGT-1580	Digital Stop Watch

Standards

EN 12350-8, 12350-2; ASTM C 1611, C143



The Slump-Flow test is performed for determining the slump-flow and t500 time for self-compacting/consolidation concrete(SCC),

This test method is considered applicable to self-consolidating concrete having coarse aggregate ;

• up to 25 mm in size acc. to ASTM standard

• up to 40 mm in size acc. to EN standard

The CFC-0524 Base Plate 920x920 mm is made of stainless steel with engraved circles of 210 mm and 500 mm diameter conforming to EN 12350-8.

Product Code	Dimensions	Weight (approx.)
CFC-0522E	200x200x300 mm	2 kg
CFC-0524	900x900x8 mm	21 kg
CFC-0526E	250x250x50 mm	10 kg

Product Code

CFC-0520A	J-Ring with Smooth Roads, ASTM
CFC-0520AR	J-Ring with Rebar Roads, ASTM
CFC-0402A	Slump Cone, Seemless Spun Metal, ASTM
CFC-0524	Base Plate, for J ring and slump-flow test, EN, ASTM

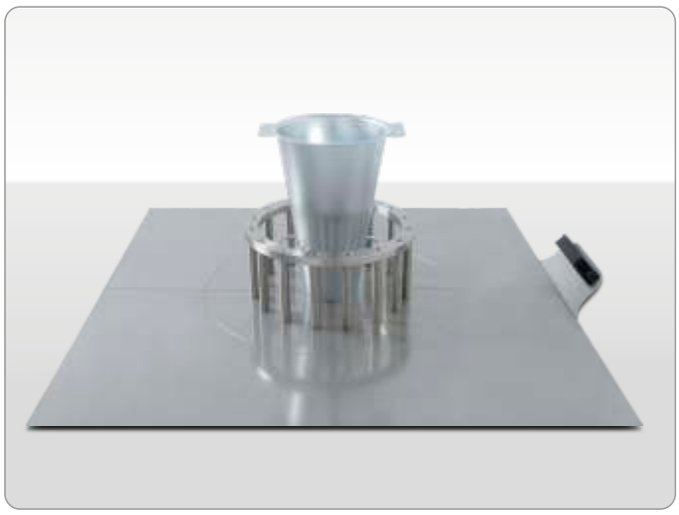
Standards

ASTM C1611, C1621

The J-Ring Test is used for determining the passing ability of self-consolidation concrete. Exept J ring, the apparatus can be used for performing the slump-flow test.

The CFC-0520A, J-Ring with Smooth Roads, is manufactured from stainless steel.

The CFC-0524 Base Plate is 920x920x3 mm square, made of stainless steel with engraved circles of 200 mm and 500 mm diameter conforming to EN and ASTM.



Product Code	Dimensions	Weight (Approx.)
CFC-0520A	350x350x140 mm	10 kg
CFC-0524	920x920x8 mm	21 kg

SELF COMPACTING CONCRETE (SCC) TESTS

Product Code

CFC-0540 V Funnel

Standards

EN 12350-9

The CFC-0540 V Funnel apparatus is used to evaluate the flow time of freshly mixed self-compacting concrete. The test is not suitable when the maximum size of the aggregate exceeds 22.4 mm.

The test set consists of a stainless steel funnel placed vertically on a supporting stand. The discharge orifice is equipped with a lid, which can be momentarily opened.

Dimensions	525x300x1040 mm
Weight (approx.)	18 kg

Product Code

CFC-0545 L Shape Box Apparatus

Standards

EN 12350-10

The CFC-0545 L Shape Box is used for determining the passing ability rate of freshly mixed self-compacting concrete. The distance between 12 mm diameter bars can be set between 41±1 mm or 59±1 mm.

L Shape Box is designed for ease of cleaning the vertical and horizontal hoppers.

The L Shape Box Apparatus is supplied complete with

- Filling Hopper
- Base

Dimensions	300x1000x1350 mm
Weight (approx.)	35 kg

SELF COMPACTING CONCRETE (SCC) TESTS

Product Code

CFC-0547 U Shape Box Apparatus

Standards

UNI 11044; Rilem report No. 23

The CFC-0547 U Shape Box Apparatus is used to determine the filling and passing ability of self-compacting concrete (SCC). The U box is made of stainless steel consisting of three 12 mm dia. rebars.

The U box is mounted on a frame with a fixing mechanism.

Dimensions
650x650x1100 mm
Weight (approx.)
20 kg

FILL BOX TEST METHOD

Product Code

CFC-0548 Fill Box Apparatus (Kajima Test)

The CFC-0548 Fill Box Apparatus is used to measure the filling ability of self-compacting concrete with a maximum aggregate size of 20 mm. The apparatus is also known as "Kajima Test" Apparatus consists of a container (transparent) with a flat and smooth surface.

Dimensions	500x300x900 mm
Weight (approx.)	5 kg

WORKABILITY & CONSISTENCY

Product Code

CFC-0560E Vebe Consistometer, EN
CFC-0560A Vebe Consistometer, ASTM C 1170
CFC-0562A Vebe Consistometer, ASTM C 1176
CFC-0563 Mass of Calibration for CFC-0560A and CFC-0562A, ASTM
CFC-0564 Equipment for Amplitude Calibration of Vebe Consistometers

Models for 220-240V 50-60Hz, 1ph.	CFC-0560E	CFC-0560A	CFC-0562A
Models for 110-120V 60 Hz, 1 ph.	CFC-0560E-N	CFC-0560A-N	CFC-0562A-N

Standards

EN 12350-3, ASTM C 1170, C 1176


CFAS-0560E

CFC-0560E model consistometer conforms to EN 12350-3 for determining the consistency of fresh concrete by means of the Vebe time. The unit consists of a vibrating table, cylindrical bucket, slump cone, thick transparent disc complete with filling funnel and tamping rod.

CFC-0560A model consistometer conforms to ASTM C 1170 for Determining Consistency and Density of Roller-Compacted Concrete. The unit consists of a vibrating table, swing arm with guide sleeve, test.mold, surcharge assembly with 12,5 kg (27,5 lb) and 22,7 kg (50 lb) weihgts.

CFC-0562A model consistometer conforms to ASTM C 1176 for preparing and making roller-compacted concrete in cylinder molds intended for use in testing.The unit consists of a vibrating table, swivel arm with guide sleeve, surcharge assembly with 9 kg (20 lb) weihgt and steel type A mold.

CFC-0563 Mass of Calibration for CFC-0560A and CFC-0564 Equipment for Calibration of Amplitude of Vebe Consistometers) should be ordered seperately.


CFAS-0560/A

	Dimensions	Weight (approx.)	Power
CFC-0560E	490x320x750 mm	48 kg	170 W
CFC-0560A	490x305x830 mm 19,3"x12"x32,7"	133 kg (294 lbs)	170 W
CFC-0562A	460x350x730 mm 18,1"x13,8"x28,7"	135 kg (298 lbs)	170 W

WORKABILITY & CONSISTENCY

Product Code

CFC-0550 Degree of Compactability (Waltz) Container

Standards

EN 12350-4

The CFC-0550 Degree of Compactability (Waltz) Container is used to measure the degree of compactability of fresh concrete.

It consists of a 200x200x400 mm (width x depth x height) metal container with two carrying handles.

Coated against corrosion.

Dimensions	300x210x410 mm
Weight (approx.)	5 kg

WORKABILITY & CONSISTENCY

Product Code

CFC-0570 Kelly Ball Apparatus

Standards

ASTM C360

The Kelly Ball test was developed in the 1950's in the United States as a fast alternative to the slump test.

The simple and inexpensive test can be quickly performed on in-place concrete and the results can be correlated to slump.

The CFC-0570 Kelly Ball Apparatus consists of a 6 inch (152 mm) diameter ball which slides through a frame that rests on the fresh concrete.

Dimensions
360x160x360 mm

Weight (approx.)
15 kg

Product Code

CFC-0580 Compacting Factor Apparatus

Standards

BS 1881-103, 5075

The CFC-0580 Compacting Factor Apparatus is used to determine the compaction factor of concrete with low, medium and high workability.

Comprising two conical hoppers having a hinged trap door attached to the lower end of each hopper, allowing the concrete sample to flow freely into the cylindrical mould.

The hoppers and the mould are mounted onto a rigid steel frame and are easily removable for cleaning.

Dimensions	300x400x1300 mm
Weight (approx.)	41 kg

DENSITY

Product Code

CFC-0603E Density (Unit Weight) Measure 3 lt. Capacity, EN
CFA-0705E Density (Unit Weight) Measure 5 lt. Capacity, EN
CFC-0607E Density (Unit Weight) Measure 7 lt. Capacity, EN
CFC-0610E Density (Unit Weight) Measure 10 lt. Capacity, EN
CFC-0615E Density (Unit Weight) Measure 15 lt. Capacity, EN
CFA-0720E Density (Unit Weight) Measure 20 lt. Capacity, EN
CFC-0630E Density (Unit Weight) Measure 30 lt. Capacity, EN

Standards

EN 12350-6, 1097–3

Density (Unit Weight) Measures are used to determine the weight per cubic meter of freshly mixed and compacted concrete.

Manufactured from heavy gauge steel complying with the related standard.

Available in 3, 5, 7, 10, 15, 20 and 30 liter capacity models according to the requirements of different standards. Coated against corrosion.

Product Code	Dimensions	Weight (approx.)
CFC-0603E	150x200x200 mm	4.5 kg
CFA-0705E	160x160x250 mm	5 kg
CFC-0607E	250x180x250 mm	6.5 kg
CFC-0610E	250x200x300 mm	8.5 kg
CFC-0615E	250x300x320 mm	13 kg
CFA-0720E	260x260x365 mm	12 kg
CFC-0630E	300x360x420 mm	16 kg

AIR CONTENT of FRESH CONCRETE

Product Code

CFC-0650	Air Entrainment Meter, 7 Liter, B Type
CFC-0651	Air Entrainment Meter, 8 Liter, B Type
CFC-0652	Manometer for CFC-0650
CFC-0408	Tamping Rod Ø16x600 mm
CFC-0412B.E	Compacting Bar (Square Section, 25x25 mm) Steel, approx. 380 mm
CFC-0656	Calibration Vessel for CFC-0650, Brass, (%5)
CFC-0657	Calibration Vessel for CFC-0650, Aluminium, (%5), for CFC-0650
CFC-0658	Calibration Vessel for CFC-0651, Brass, (%5)
CFC-0659	Calibration Vessel for CFC-0650, Calibration Vessel, Aluminium, (%5), for CFC-0651
CFS-0714	Straight Edge 300x30x3 mm

Standards

EN 12350–7; ASTM C231; AASHTO T152; BS 1881:108

The CFC-0650 and CFC-0651 Air Entrainment Meters are used for determining the air content of fresh concrete. They consist of a flanged 7 or 8 liter capacity cylindrical vessel and cover assembly incorporating a pressure gauge, air pump and valves. They have a quick action clamping system. Direct pressure gauge reading to the nearest 0.1% up to 6%, 0.2% from 6 to 8 and % 0.5 from 8 to 15. It is not affected by changes in barometric pressure.

Calibration vessels and compacting bar with square section should be ordered seperately.

The Air Entrainment Meter is supplied complete with;

- Straight Edge
- Tamping Rod, Ø16x600 mm
- Wash Bottle. 250cc
- An inner and an outer (J-Type) calibration pipes
- Special Carrying Case

	CFC-0650	CFC-0651
Capacity	7 litres	8 litres
Graduations	0.1% up to 6%, 0.2% from 6 to 8%; 0.5% from 8 to 15%	
Dimensions (All supplied items)	320x330x630 mm	
Weight (approx.) (All supplied items)	19 kg	20 kg

MASS CONCRETE TEMPERATURE MEASUREMENT

Product Code

CFGT-1350	Hand Type Digital Thermometer, -50° C to 1350° C
CFGT-1355	Connector, Type: OMTS-K-E
CFGT-1360	Cable, Type: E-0,5 T2KTTEA. Meter
CFGT-1352	4 Channel Digital Display Temperature Datalogger

The products are used for monotoring of temperature development of mass concrete.

The number of measurement points for connectors and the cable length needed for each measurement point should be indicated.

The products should be ordered seperately.

CFGT-1352 4 Channel Digital Display Temperature Datalogger is an alternative to CFGT-1350 and can record continuously in the time interval selected by the user.

The datalogger has -195˚C to +1000˚C temp. measurement range for K Type sensors, 1s–24h data record range and 2 million data recording capacity.

Battery operated data logger is supplied comğplete with acceessories such as cable for connecting to PC, software, SD card (for collecting the measurement).

CFGT-1352

House for Thermocouple Connectors

SETTING TIME & CONSISTENCY TIME

Product Code

CFC-0700	Concrete Mortar Penetrometer with Pound Reading Scale
CFC-0701	Concrete Mortar Penetrometer with Newton Reading Scale
CFC-0705	Needle Set For Concrete Mortar Penetrometer
CFC-0706	Penetration Needle, Ø 3mm, for CFC-0701
CFC-0707	Penetration Needle, Ø 9mm, for CFC-0701

Standards

ASTM C403; AASHTO T197; EN 14488-2

The CFC-0700 and CFC-0701 Concrete Mortar Penetrometers are used for the determination of setting time of the mortar fraction of fresh concrete. The apparatus consist of a spring loading device. CFC-0700 is graduated from 10 to 150 lbf in 2 lbf divisions. CFC-0701 is graduated from 40 to 600 N in 10 N divisions. A sliding ring indicates the load reached.

The Concrete Mortar Penetrometers are supplied complete with

- Set of interchangeable needle points of 645, 323, 161, 65, 32, 16 mm^2 area
- A steel adaptor for needles
- Carrying case

Dimensions	540x260x60 mm(packed)
Weight (approx.)	5 kg

SETTING TIME & CONSISTENCY TIME

Product Code

CFC-0715 Concrete Pocket Penetrometer

Standards

AASHTO T197; ASTM C403

The CFC-0715 is designed for the determination of initial setting time of fresh concrete for field and laboratory use.

Stainless steel plunger has 32.3 mm^2 (1/20 in^2) area and 0-5 MPa measuring range. The plunger graduated 0,5 MPa.

Dimensions
15x15x200 mm

Weight (approx.)
0,3 kg

BLEEDING of FRESHLY MIXED CONCRETE

Product Code

CFC-0720 Cylindirical Container

Standards

ASTM C 232; EN 480-4

CFC-0720 is used for determination of the relative quantity of mixing water that will bleed from a sample of freshly mixed concrete.

Dimensions
290x255x350mm

Weight (approx.)
6 kg

MIXING CONCRETE in THE LABORATORY

Product Code

CFC-0742 Concrete Mixer with Double Acting, Pan Type, Frequency Controlled, 42 L

CFC-0752 Concrete Mixer with Double-Acting, Pan Type, Frequency Controlled, 100 L.

Models for 220-240V 50-60 Hz, 1 ph.	CFC-0742	CFC-0752
Models for 110-120V 60 Hz, 1ph.	CFC-0742-N	CFC-0752-N

Standards

EN 1766

The difference of CFC-0742 and CFC-0752 from conventional mixers (CFC-0750, CFC-0751) is their ability of preparing more homegenous mixture in a short time through the second motor that rotates the mixing beater in the opposite direction of the mixing drum

To find out the effects of the different type constituents on the concrete properties requires the preparation of numerous and smaller volume of concrete batches in the laboratory. Concrete Mixer, CFC-0742, designed for this purpose has 42 liters dimensional volume of the mixing pan and 15/12 liters effective mixing capacity.

CFC-0752 Concrete Mixer is 108 liters but the effective capacity of the mixer are is 56/40 liters.

The turning speed of the mixers can be adjusted by a frequency controller.

The shutter of the mixers are designed to open 120 degrees for easy access to the pan and keeps the beater in a certain height during mixing. There is a small observation window on the shutter which enables the user to monitor the process.

The mixing pan can be tilted to empty the mixture without hassle and it can be removed for easy cleaning on completion of the mixing operation. Also the mixers are equipped with rubber wheels which provide high mobility.

All parts of the mixer are galvanized or painted with non-corrosive paint. The protection class of mixers are IP55.

	CFC-0742	CFC-0752
Dimensions	650x900x1200 mm	950x1050x1270 mm
Weight (approx.)	230 kg	285 kg
Power	2600 W	3300 W

Product Code

CFC-0750 Concrete Mixer, Pan Type, 100L
CFC-0751 Concrete Mixer, Pan Type, Frequency Controlled, 100 L.

Models for 220-240V 50-60 Hz, 1 ph.	-	CFC-0751
Models for 220-240V 50 Hz, 1 ph.	CFC-0750-T	-
Models for 110-120V 60 Hz, 1 ph.	CFC-0750-N	CFC-0751-N
Models for 220-240V 60 Hz, 1 ph.	CFC-0750-K	-

Standards

EN 1766

CFC-0751

The efficient mixing of concrete is essential if quality specimens are to be manufactured. Pan Type Concrete Mixers are designed to give efficient mixing of both dry and wet materials.

The mixing pans are removable and tilts for easy access to the pan and emptying on completion of the mixing operation. The total volume of the pans are 108 liters but the effective capacity of the mixers are 56/40 liters.

CFC-0750

The turning speed of the pan of CFC- 0751 can be adjusted by a frequency controller.

The mixer head lifts clear to provide maximum access to the pan and holds the mixing blades at a constant depth during the mixing operation. The pan type mixers are also equipped with rubber wheels which provide high portability.

All parts of the mixers are galvanized or painted with non-corrosive paint. The protection class of the mixers are IP55.

	CFC-0750	CFC-0751
Dimensions	950x1050x1250 mm	950x1050x1250 mm
Weight (approx.)	255 kg	255 kg
Power	1500 W	1500 W

MIXING CONCRETE in THE LABORATORY

Product Code

CFC-0762 **Large Volume Concrete Mixer with Double Acting Pan Type, 150 L**

Models for 220-240V 50-60 Hz, 1 ph.	CFC-0762
Models for 110-120V 60 Hz, 1ph.	CFC-0762-N

Standards

EN 1766

To find out the effects of the different type constituents on the concrete properties requires the preparation of numerous and higher volume of concrete batches such as RCC (Roller Compacted Concrete) and Mass Concrete which have bigger sizes coarse aggregate in the laboratory. Double Acting CFC-0762 Concrete Mixer is designed for this purpose.

Dimensional volume of the mixing pans are 150 liters and the effective mixing capacity is 80/60 liters. The difference of CFC-0762 from conventional mixer is their ability of mixing higher volume of mixtures with the help of second engine which rotates the stirring beater in the opposite direction of the mixing pan's rotation direction with high performance.

The shutter of the mixer is designed to open 120 degrees for easy access to the pan and keeps the beater in a certain height during mixing. There is a observation window on the shutter which enables the user to monitor the process. Transaction of opening and closing the shutter is done by a motor.

The mixing pan can be tilted to empty the mixture by a motor for easy cleaning on completion of the mixing operation. The height of the blades from the base of pan can be adjustable to suit the difference of coarse aggregate sizes. CFC-0762 is equipped with rubber wheels which provide high mobility.

All parts of the mixer is galvanized or painted with non-corrosive paint. The protection class of the mixer is IP55.

Dimensions	1430x1400x1410 mm
Weight (approx.)	600 kg
Power	4500 W

MIXING CONCRETE in THE LABORATORY

Product Code

CFC-0790 **Concrete Mixer Drum Type, 220-240 V 50-60 Hz**

The CFC-0790 mixer is used for efficient mixing of concrete, plaster and mosaic. 125 lt. mixing volume and 2-3 m3/h lightweight mixer is equipped with rubber wheels which provide high portability.

Electric and diesel power models are available.

Technical Specifications

Drum Volume	135 lt.
Mixing Volume	125 lt.
Mixing Capacity	2-3 m^3/h

Dimensions	670x1200x900 mm
Weight (approx.)	40 kg
Power	750 W (Electric Powered Model) 3.5 HP (Diesel Engine Powered Model)

CONCRETE MOULDS

Product Code

CFC-0810	Cube Mould 100 mm, Cast Iron
CFC-0812	Cube Mould 100 mm, Two Gang Plastic
CFC-0815	Cube Mould 150 mm, Cast Iron
CFC-0820	Cube Mould 150 mm, Plastic
CFC-0821	Cube Mould 150 mm, High Quality Plastic
CFC-0825	Cube Mould 200 mm, Cast Iron
CFC-0408	Tamping Rod Ø 16x600 mm
CFC-0410	Tamping Rod Ø10x300 mm
CFC-0412B.E	Compacting Bar (Square Section, 25x25mm), Steel, 380mm
CFGH-1605	Round Scoop, Medium
CFGH-1695	Rubber Mallet
CFGH-1645	Trowel

Standards

EN 12390-1, 12390-2; BS 1881

Cast iron and hard plastic moulds are manufactured in accordance with dimensions and tolerances stated in the relevant standard. Four part body and attached to the base with a robust clamp, the cast iron moulds are designed to be durable, corrosion resistant and easy to clean.

CFC-0820 plastic moulds manufactured from robust plastic are one piece and easy for field use, the specimens are ejected from the moulds by compressed air.

CFC-0820

CFC-0812

CFC-0825

CFC-0815 CFC-0810

Product Code	Dimensions	Weight (approx.)
CFC- 0810	270x270x120 mm	9 kg
CFC- 0812	260x120x120 mm	2 kg
CFC- 0815	300x210x160 mm	17 kg
CFC- 0820	220x220x180 mm	2 kg
CFC- 0821	220x220x180 mm	2 kg
CFC- 0825	330x270x220 mm	20 kg

CONCRETE MOULDS

Product Code

CFC-0830	Beam Mould 100x100x400 mm, Steel
CFC-0832	Beam Mould 100x100x500 mm, Steel
CFC-0835	Beam Mould 150x150x600 mm, Steel
CFC-0838	Beam Mould 150x150x750 mm, Steel
CFC-0839	Beam Mould, 6x6x21 ", steel, ASTM
CFC-0840	Beam Mould, 6x6x21 ", plastic, ASTM
CFC-0408	Tamping Rod Ø 16x600 mm
CFC-0410	Tamping Rod Ø10x300 mm
CFC-0412B.E	Compacting Bar (Square Section, 25x25mm), Steel, 380mm
CFGH-1605	Round Scoop, Medium
CFGH-1695	Rubber Mallet
CFGH-1645	Trowel

Standards

EN 12390-1, 12390-2; BS 1881; ASTM C31, C78, C192, C293; AASHTO T23, T97, T126, T177

Steel beam moulds are manufactured in accordance with dimensions and tolerances stated in the related standards.

CFC-0832

CFC-0830

CFC-0839

CFC-0840

CFC-0835

Product Code	Dimensions	Weight (approx.)
CFC- 0830	170x510x150 mm	18 kg
CFC -0832	170x600x160 mm	20 kg
CFC- 0835	220x700x220 mm	32 kg
CFC- 0838	220x850x220 mm	35 kg
CFC-0839	254x635x160 mm	20 kg
CFC-0840	170x600x160 mm	12 kg

CONCRETE MOULDS

Product Code

CFC-0842	Cylinder Mould Ø 100x200 mm, Steel
CFC-0843	Cylinder Mould Ø 100x200 mm, Plastic Body with Steel Plate
CFC-0844	Cylinder Mould Ø100x200 mm, Thick Walled Plastic
CFC-0845	Cylinder Mould Ø 150x300 mm, Steel
CFC-0846	Cylinder Mould Ø 150x300 mm, Plastic Body with Steel Plate
CFC-0847	Cylinder Mould Ø150x300 mm, Thick Walled Plastic
CFC-0850	Cylinder Mould Ø 160x320 mm, Steel
CFC-0851	Cylinder Mould Ø 160x320 mm, Plastic Body with Steel Plate
CFC-0860	Cylinder Mould Ø 250x500 mm, Steel
CFC-0408	Tamping Rod Ø 16x600 mm
CFC-0410	Tamping Rod Ø 10x300 mm
CFC-0412B.E	Compacting Bar (Square Section, 25x25mm), Steel, 380mm
CFGH-1605	Round Scoop, Medium
CFGH-1695	Rubber Mallet
CFGH-1645	Trowel

CFC-0843

CFC-0845

Standards

EN 12390-1, 12390-2; BS 1881; ASTM C39; AASHTO T23, T126

Hard plastic and steel cylinder moulds are manufactured in accordance with dimensions and tolerances stated in the related standards. Two part and clamp attached base plate cast iron, plastic and steel moulds are designed to be durable, corrosion resistant and easy to clean.

Product Code	Dimensions	Weight (approx.)
CFC-0842	160x160x210 mm	6 kg
CFC-0843	160x160x210 mm	1 kg
CFC-0845	250x250x310 mm	9 kg
CFC-0846	200x200x310 mm	2 kg
CFC-0850	300x300x330 mm	11 kg
CFC-0851	190x190x310 mm	3 kg
CFC-0860	360x360x530 mm	46 kg

CONCRETE COMPACTION

Product Code

CFC-0928	Poker Vibrator Ø 22 mm Hand-Held 220-240 V 50-60 Hz
CFC-0930	Poker Vibrator Ø 22 mm, 220-240 V 50-60 Hz
CFC-0932	Poker Vibrator Ø 27 mm, 220-240 V 50-60 Hz
CFC-0935	Poker Vibrator Ø 32 mm, 220-240 V 50-60 Hz
CFC-0938	Cordless Concrete Vibrator, 18 V, Ø:25x1200 mm, 12.500 vpm.

Standards

EN 12390–2; ASTM C31, C192; AASHTO T23, T126

The Poker Vibrator is ideal for the internal compaction of concrete specimens and a good alternative to traditional tamping bar, especially when there are large numbers of specimens to be compacted. Flexible shaft length and tip diameter can be selected from the four available products.

Product Code	Type&Shaft	Frequency	Dimensions	Weight (approx.)
CFC- 0928	Ø22x350 mm tip-1 m shaft	10.000 vib/min	100x750x350 mm	8 kg
CFC- 0930	Ø22x350 mm tip-2 m shaft	12.000 vib/min	160x850x360 mm	14 kg
CFC- 0932	Ø27x370 mm tip-2 m shaft	12.000 vib/min	160x850x360 mm	14 kg
CFC- 0935	Ø32x400 mm tip-2 m shaft	12.000 vib/min	160x850x360 mm	14 kg
CFC-0938	Ø25-1,2 m shaft	12.500 vib/min	250x250x1500 mm	3,5 kg

CONCRETE COMPACTION

Product Code

CFC-0900E Vibrating Table Small, EN
CFC-0910E Vibrating Table Large, EN
CFC-0920E Vibrating Table, Site Type, Portable, EN
CFC-0900A Vibrating Table Small, ASTM
CFC-0910A Vibrating Table Large, ASTM
CFC-0920A Vibrating Table, Site Type, Portable, ASTM

Models for 220-240V 50 Hz, 1 ph.	CFC-0900E-T	CFC-0910E-T
Models for 110-120V 60 Hz, 1 ph.	CFC-0900E-N	CFC-0910E-N
Models for 220-240V 60 Hz, 1 ph.	CFC-0900E-K	CFC-0910E-K
Models for 220-240V 50 Hz, 1 ph.	CFC-0900A-T	CFC-0910A-T
Models for 110-120V 60 Hz, 1 ph.	CFC-0900A-N	CFC-0910A-N
Models for 220-240V 60 Hz, 1 ph.	CFC-0900A-K	CFC-0910A-K

Standards

EN 12390–2; ASTM C192

The CFU fixed amplitude vibrating tables are compact units providing controlled vibro-compaction forcube or cylinder moulds. Vibrating tables consist of vibrating motor, command unit and clamping assembly.

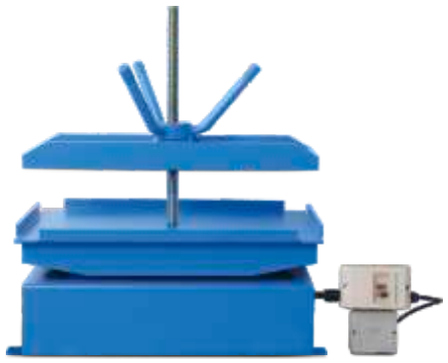
For laboratory use the table is availablein two alternative model. The small table accepts 2, large table accepts 6 cube or cylinder moulds by using clamping assembly.

CFC-0900 and CFC-0910 tables can also be used for beam moulds.

For on site applications, portable CFC-0920 Vibrating Table is designed for preparing the cube or cylinder specimens by vibration. 1 or 2 pcs. cube or cylinder mould can be clamped on the table depending on outer size of the mould to be used.

CFC-0920 Vibration Tables are supplied complete with a converter (DC 12 to 220V).

Product Code	Dimensions (packed)	Weight (approx.)	Power
CFC-0900	610x380x800 mm	52 kg	180 W
CFC-0910	1000x500x1050 mm	130 kg	180 W
CFC-0920	500x500x450 mm	20 kg	180 W



CFC-900E

CFC-910E

CFC-920E

CONCRETE COMPACTION

Product Code

CFC-0944 Vibrating Compaction Hammer for RCC. 220-240 V 50-60 Hz, 1ph
CFC-0945 Shank for CFC-0944
CFC-0946 Tamping Plate, Ø146 mm, for CFS-0945
CFC-0947 Tamping Plate, 146x146 mm, for CFS-0945

Standards

ASTM C1435

CFC-0944 Vibrating Compaction Hammer with the shank and tamping plate is used for molding cylindrical test specimens which are used for testing compressive or tensile strength of concrete when the standard procedures of rodding and internal vibration are not practicable. This compaction method is applicable to freshly-mixed concrete, prepared in the laboratory and the field.

Tamping plate and the shank should be ordered separatelly.

Full Hammering Frequency	1890 impacts/minute
Rated power input	1,850 W
Weigth (without tamping plate and shaft)	10,9 kg
Dimensions (LxWxH)	600x150x330 mm

CONCRETE CURING

Product Code

CFC-0950 Large Metal Curing Tank
CFC-0952 Set of Removable Upper Racks for CFC-0950, (6 pieces)
CFC-0953 Curing Tank Heater for CFC-0970 (6,5 cm connecting channel and 50 cm resistance length)
CFC-0954 Curing Tank Heater for CFC-0950 and CFC-0965 (3 cm connecting channel and 50 cm resistance length)
CFC-0955 Circulating Pump
CFC-0960 Large Plastic Curing Tank
CFC-0962 Wide Plastic Curing Tank
CFC-0956 Curing Tank Heater for CFC-0960 and CFC-0962 (6,5 cm connecting channel and 70 cm resistance length)

Models for 220-240V 50-60 Hz, 1 ph.	CFC-0953	CFC-0954
Models for 110-120V 60 Hz, 1 ph.	CFC-0953-N	CFC-0954-N

Models for 220-240V 50-60 Hz, 1 ph.	CFC-0955	CFC-0956
Models for 110-120V 60 Hz, 1 ph.	CFC-0955-N	CFC-0956-N

Standards

EN 12390–2; ASTM C31, C192, C511; AASHTO T23, T126

The CFC-0950 steel, CFC-0960 and CFC-0962 Plastic Curing Tanks are designed for curing concrete cubes and cylinders.

The temperature can be adjusted and can be kept constant by an electric resistance incorporating a digital thermo regulator which maintains the set temperature between ambient to 40 °C with ± 2 °C accuracy.

The CFC-0950 is manufactured from powder coated sheet steel.

Set of removable upper racks (6 pieces) to hold concrete cubes are available on request CFC-0960 and CFC-0962 plastic tanks are reinforced with a metal carcass.

Running temperature for CFC-0855 Circulating Pump is max. 300C.

Appropriate curing tank heater, circulating pump and CFC-0952 for CFC-0950 (in case of need) should be ordered separately.

CFC-0950

CFC-0960

CFC-0954

CFC-0955

CFC-0952

		CFC-0950	CFC-0960	CFC-0962
Dimensions (WxLxH)	External	860x1560x615 mm	800x1800x950 mm	1100x2100x900 mm
	Internal	800x1500x550 mm (Clear Depth 520mm)	700x1700x850 mm (Clear Depth 820mm)	1000x2000x800 mm (Clear Depth 770mm)
Specimens Capacity	Cube 150 mm	Max. 135 pcs	Max. 220 pcs	Max. 390 pcs
	Cylindrical Ø150x300 mm	Max. 67 pcs	Max. 110 pcs	Max. 195 pcs
Weight (approx.)		92 kg	88 kg	130 kg

CONCRETE CURING

Product Code

CFC-0965 Small Metal Curing Tank
CFC-0953 Curing Tank Heater for CFC-0970
(6,5 cm connecting channel and 70 cm resistance length)
CFC-0954 Curing Tank Heater for CFC-0950 and CFC-0965
(3 cm connecting channel and 50 cm resistance length)
CFC-0955 Circulating Pump
CFC-0970 Small Plastic Curing Tank

Models for 220-240V 50-60 Hz, 1 ph.	CFC-0953	CFC-0954	CFC-0955
Models for 110-120V 60 Hz, 1 ph.	CFC-0953-N	CFC-0954-N	CFC-0955-N

Standards

EN 12390–2; ASTM C31, C192, C511; AASHTO T23, T126

The CFC-0965 Steel and CFC-0970 Polyurethane Small Curing Tanks are designed for curing concrete cubes and cylinders. The temperature can be adjusted to the required value and can be kept constant by an electric resistance incorporating a thermo regulator which maintains the set temperature between ambient to 40 °C with ± 2 °C accuracy.

Running temperature for CFC-0855 Circulating Pump is max. 300C.

The CFC-0965 is manufactured from powder coated sheet steel. Appropriate curing tank heater and circulating pump should be ordered separately.

All Curing Tanks are supplied complete with a Base Metal Rack.

		CFC-0965	CFC-0970
Dimensions (WxLxH)	External	710x710x610 mm	915x1250x660 mm
	Internal	650x650x550 mm (Clear Depth 520mm)	800x1100x550 mm (Clear Depth 520mm)
Specimens Capacity	Cube 150 mm	Max. 48 pcs	Max. 110 pcs
	Cylindrical Ø150x300 mm	Max. 24 pcs	Max. 52 pcs
Weight (approx.)		55 kg	60 kg

CFC-0965

CFC-0970

CONCRETE CURING

Product Code

CFC-0980-C Accelerated Curing Tank, Ambient to +60°C, 380 V 50 Hz, 3 ph.

Standards

ASTM C 684, C 1768 (Procedure A - Warm Water Method)
BS 1881:Part 112 (35°C Method and 55°C Method)

CFC-0980 Accelerated Curing Tank is designed for curing concrete specimens according to ASTM C1768 (Procedure A - Warm Water Method) and BS 1881:Part 112 (35°C Method and 55°C Method).

The Tank consists of an insulated rectangular double walled metal chamber inside lined with stainless steel outer powder coated, an insulated lid with lifting handle to cover the chamber and an stainless steel perforated platform for circulation of water and to support the concrete specimes.

The tank works ambient to +60°C temperature. The temperature is controlled with closed loop PID controlled digital thermoregulator with accuracy of ±2°C. Curing temperature and curing time can also be set.

External Dimensions	1000x750x850 mm
Internal Dimensions	900x600x640 mm
Weight (approx.)	90 kg
Power	4500 W
Current (CFC-0980-C)	20 Ampere

CUTTING / GRINDING

Product Code

CFC-1020 Universal Cutting Machine Junior
CFC-1022 Cutting Blade Ø 450 mm

Models for 220-240V 50-60 Hz, 1 ph.	CFC-1020

Standards

EN 12390–3, 12504-1; ASTM C42, D4543

The CFC Series Universal Cutting Machine has been developed to cut and prepare concrete, rock or natural stone cores or other type test specimens.

Special clamp assembly allows specimens to be held during cutting operation. The machine is supplied complete with "V" block clamp for Ø 100 mm specimens and a water circulation pump.

Cutting Blade should be ordered separately.

CFC-1020 Junior	
Length	1100 mm
Width	710 mm
Height	1350 mm
Blade Diameter	450 mm
Max. Cutting Height	175 mm
Weight	140 kg
Water Pump Power	0.37 hp

CUTTING / GRINDING

Product Code

CFC-1040 Automatic Grinding Machine
CFC-1042 Grinding Wheel for CFC-1040
CFC-1044 Water Restraint Panel Set for Cylinder Specimens for CFC-1040
CFC-1047 Cradle and Water Restraint Panel for three units of 100 mm cube specimens for CFC-1040
CFC-1048 Water Restraint Panel for Ø160 mm Cylinder Specimen for CFC-1040
CFC-1049 Cradle and Water Restraint Panel for one unit of 150 mm Cube Specimens for CFC-1040

Models for 220-240V 50-60 Hz, 1 ph.	CFC-1040
Models for 110-120V 60 Hz, 1ph.	CFC-1040-N

Standards

EN 12390-1, 12390-3, 12504-1; ASTM C 31, C39, C42, C192, C617

The CFC-1040 Automatic Grinding Machine provides fast grinding of cylinder specimen ends to obtain plane and parallel surfaces according to EN and ASTM standards.

Three units of Ø38 to 100 mm or two units of Ø150-160 mm concrete cylinders ends and three units of 100 mm or one unit of 150 mm concrete cubes faces can be ground simultaneously with the suitable cradle and water restraint panel. The lenght of the any specimen must be longer than 70 mm.

According to ASTM and EN standards, the planeness accuracy of grinded surfaces of concrete compression test specimens should be 0.05 mm. and also the deviation of perpendicularity of the side with reference to the end faces should be 0,50.

The equipment has selectable advance grinding time functionality by user from 50 to 400 seconds. Optimum grinding time per end of all type specimens is 90 to 120 seconds.

The cradle which specimens are fixed on has automatic bidirectional radial displacement ability. The safe and ergonomic design prevents the user to exposure to water and dust and provides easy access to the water inlet and outlet. Specimen cradles and water restraint panels can easily be installed without the need for any assembly.

Mobility of the machine is achieved with the help of the integral wheels, and all components of the system can be safely accessed for easy maintenance.

The frame is manufactured from aluminum to obtain a lighter weight and the stainless steel exterior shell assures resistance to corrosion.

CFC-1044 Water Restraint Panel Set for Cylinder consist of panels for Ø150 mm, Ø100 mm and Ø50 mm specimens. For different sized cylindrical specimens, the water restraint panel should be ordered seperately.

The cradle and the water restraint panels should be ordered seperately for 100mm and 150mm cubic specimens.

The Automatic Grinding Machine is supplied complete with

- Grinding Wheel for concrete specimens
- Cradle for Ø150 mm to 160 mm cylindrical specimens (connected to the machine)
- Water restraint panel set (Consist of panels for Ø150, Ø100 and Ø50 mm specimens)

Dimensions	730x1080x1510 mm
Weight (approx.)	260 kg
Power	1850 W

The preparation of concrete cylinder test specimen for compressive strength test	EN 12390-1, 12390-3 ASTM C31, C39, C192, C-617	The maximum tolerance on the flatness of the potential load bearing surfaces (the ends of compression test specimens) is 0.002 in. [0.050 mm]
The preparation of drilled concrete cores specimen for compressive strength test	EN 12504-1, 12390-1, 12390-3 ASTM C42, C39	The deviation of perpendicularity of the side, with reference to the end faces is 5°

CAPPING

Product Code

CFC-1070 Melting Pot 3 L Capacity

Models for 220-240V 50-60 Hz, 1 ph.	CFC-1070
Models for 110-120V 60 Hz, 1ph.	CFC-1070-N

Standards

CEN ISO/TS 17892-2; EN 12390–3, 12390-1, 12504-1; ASTM C31, C192, C617; AASTHO T23, T126

The Melting Pot is designed for melting capping compound, sulphur, wax and similar materials.

The melted paraffin wax is used to seal soil samples and other materials.

The apparatus consists of a 3 liter capacity aluminum container in a well-lagged steel jacket, cover and a thermostatic control heating system to keep the temperature constant in the range of ambient to 200 °C.

Dimensions	350x320x290 mm
Weight (approx.)	9 kg
Power	600 W

CAPPING

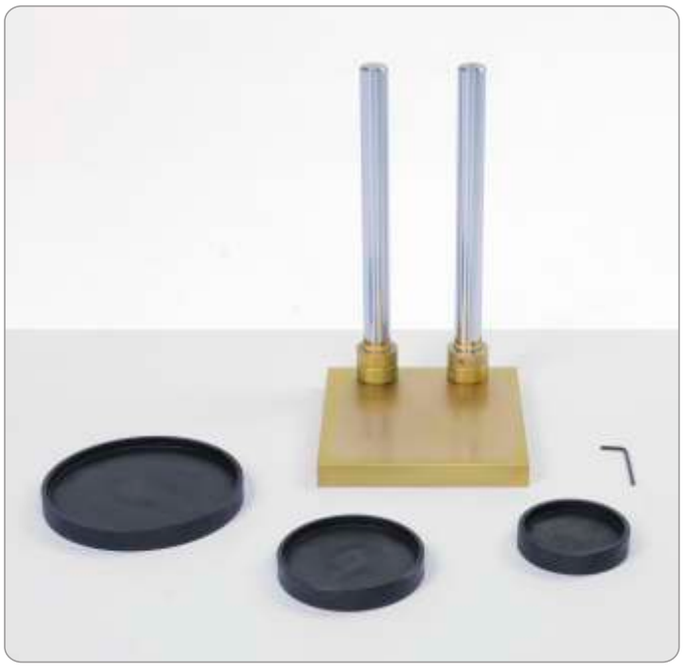
Product Code

CFC-1054 Cylinder Capping Frame

Standards

EN 12390-1, 12390-3, 12504-1; ASTM C31, C39, C42, C192, C617; ASSTHO T23, T126

The CFC-1054 Cylinder Capping Frame is used to ensure that the planed end surfaces are perpendicular to the axis of the cylinder during the capping process. The frame comprises vertical supports mounted on a steel base. All three type of samples can be capped with this single unit.



The Cylinder Capping Frame is supplied complete with

- Base Plates for 75, 100 and 150 mm dia. cylinder specimen

Dimensions	200x200x320 mm
Weight (approx.)	13 kg

PERMEABILITY

Product Code

CFC-1080	Impermeability Test Set with Quantitative Measurement Equipment, 3 Specimen Capacity
CFC-1082	Impermeability Test Set without Quantitative Measurement Equipment, 3 Specimen Capacity
CFC-1090	Impermeability Test Set with Quantitative Measurement Equipment, 6 Specimen Capacity
CFC-1092	Impermeability Test Set without Quantitative Measurement Equipment, 6 Specimen Capacity
CFGE-3700	Laboratory Air Compressor 8 bar- 25 L 220-240 V 50-60 Hz

Standarts

EN 12390-8

Used for the determination of the depth of penetration of water to hardened concrete specimens under pressure.

3 or 6 specimen capacity models and with and without quantitative measurement equipment of water penetratoion models are available.

The system can test 150 mm and 200 mm cube specimens, Ø100x200 and Ø150x300 mm cylinder specimens.

Up to 10 bar of working pressure is generated on the sample with compressed air applied to the integral water tank and controlled by a pressure regulator with a pressure gauge with 0,2 bar graduations.

The test sets with the quantitative measurement equipment of water penetratoion the penetration of water is measured through the burettes.

The system comprises impermeability gaskets for every cell. The measurement apparatus is supplied as standard.

The apparatus has to be fitted with a suitable air compressor.

The Air Compressor should be ordered separately.

Compressed air controlled by a pressure regulator with a pressure gauge with 0,2 bar graduations.

	Dimensions	Weight (approx.)
CFC-1080	1520x570x1800 mm	158 kg
CFC-1082	1520x570x1300 mm	123 kg
CFC-1090	1520x570x1800 mm	194 kg
CFC-1092	1520x570x1300 mm	159 kg

CFC-1090

CFC-1080

PERMEABILITY

Product Code

CFC-1200	Rapid Chloride Permeability Test Equipment 110-230 V 50-60 Hz
CFC-1210	Cell for CFC-1200, Ø(99-101)mm. Supplied with spacer disk and rubber gaskets
CFC-1220	Cell with Cooling Fins for CFC-1200, Ø(99-101)mm. Supplied with spacer disk and rubber gaskets. (Optional)
CFAS-0095	Large size heavy duty vacuum pycnometer (Yale) 10 L supplied with vacuum gauge (CFGE-3552) and plastic tube. (Optional)
CFGE-3530	Vacuum Pump, Dual Stage 128 L/min capacity, 220-240V, 50-60 Hz, 1ph. (Optional)
CFGE-3550	Vacuum Gauge, analog, -760 mm Hg, 20 mm Hg graduated, 63 mm. (Optional)
CFGG-2015	Filter Flask 2000 ml (Optional)

Standards

ASTM C 1202; ASTM C 1760

CFC-1200 Rapid Chloride Permeability Test Equipment (RCPT) is used to evaluate the resistance of a concrete sample to the penetration of chloride ions. Test is performed by placing a 100 mm diameter concrete cylinder into the sample cells that contain 3.0 % salt solution and 0.3 N sodium hydroxide solution. A voltage of 60 V DC is maintained across the ends of the sample throughout the test and the charge that passes through the sample is recorded. Based on the charge, a qualitative rating can be made of concrete's permeability.

Rapid Chloride Permeability Test Equipment contains four standard cells, four PT-100 sensors for temperature monitoring during the test and a 190x64 resolution lcd screen. CFU provides two types of sample cells for RCPT. CFC-1210 is the standard cell for performing chloride resistance test. CFC-1220 has additional cooling fins and can be used when the temperature should be kept constant.

CFU Rapid Chloride Permeability Testing Equipment is supplied with Usoft-1200, CFU Software for RCPT tests. Using Usoft-1200 temperature and current measurements on each of the four cells can be displayed and final charge passed (Q) can be reported.

Technical Specifications	
Measurement Channels	4
Temperature Measurement Range	0-100°C
Dimensions	500x300x200 mm
Weight (approx.)	15 kg

CFC-1200 Rapid Chloride Permeability Test Equipment is supplied complete with;

- Four Ø(99-101)mm sample cells, spacer disks and rubber gaskets.
- Four PT-100 temperature sensors
- Usoft-1200 CFU Software for RCPT testing

CFC-1200

CFGE-3530

CFGG-2015

CEMENT MORTAR

Product Code

CFC-1153	One Gang Shrinkage Mould 75x75x285 mm
CFC-1155	Two Gang Shrinkage Mould 75x75x285 mm
CFC-1161	One Gang Shrinkage Mould 100x100x285 mm
CFC-1170	LargeType Digital Length Comparator
CFC-1175	Large Type Length Comparator with Special Heidenhain Readout Unit and Displacement Transducer
CFCM-0034	Spare Steel Insert, pack of 12 pieces.
CFCM-0035	Reference Rod, 295 mm long
CFCM-0662A	Tamper, Hardwood 13x25x150mm
CFC-0410	Tamping Rod Ø:10x300 mm

Standards

ASTM-C157, C1105, C151, C227, C311, C341, C342, C441, C452, C490, C531, C596, C806, C878; EN 1367–4, 12617–4, 12808-4; BS 1881:5, 6073

The moulds are used for preparpmg the specimens for the purpose of determining the length changes (shrinkage/expansion) in hardened concrete and hydraulic cement mortar .

All moulds surfaces are protected with anti-corrosion oil. Also all parts of the moulds are matchmarked.

The moulds are supplied complied with the steel inserts screwed on.

According to all standardized test methods for determinig the length changes under different conditions, the muolds are used together with the any CFU Length Comparators (CFC-1170 and CFC-1175) fits the specimens sizes.

CFC-1170 and CFC-1175 LargeType Digital Length Comparators can be used cement/concrete prisms up to 100mm width Adjustable beam height (except dial ggauge) is 365mm and 220mm horizontal clearance). CFC-1170 Consists of a 12.7x0.001 mm graduated digital dial gauge which is mounted on a steel frame.

Reference rod and other equipment be should ordered separately.

Product Code	Dimensions	Weight (approx.)
CFC-1153	390x120x90	13 kg
CFC-1155	390x120x90	25 kg
CFC-1161	390x240x120	17 kg
CFC-0170	390x240x120	17 kg
CFC-0175	390x240x120	20 kg

CFC-1155

CFC-1153

CFC-1161

METAL LOCATION in CONCRETE

Product Code

CFC-2080 Rebar Detector
CFC-2082 Rebar Detector & Monitor
CFC-2085 X Scan Rebar Detector & Monitor

Determining the position, depth and diameter of rebar can be detected in any constructions by Rebar Detector and can be displayed the results by CFC-2082. CFC-2082 Rebar Detector & Monitor is a portable, quick and simple to operating instrument. The data that is received via Rebar Detector can be transffered to monitor via an infrared tool and from monitor to PC via. USB port.

CFC-2085 X Scan Rebar Detector & Monitor is a Portable, quick and easy to use system for detecting objects up to 30 cm in concrete structures. The complete system for hit prevention and structural analysis. Detected rebars can be displayed in 3D image with CFC-2085 X Scan Rebar Detector & Monitor.

FEATURES

- Quick, easy scanning of large areas
- Individual scans over lengths of up to 30 m
- Data transfer from scanner by infrared link for monitor viewing
- Cordless scanner for maximum freedom of movement
- Immediate high resolution image for clear Picture of the reinforcement

APPLICATIONS

- Rebar verification and analysis
- Checking concrete coverage over large areas for structural repair work
- Building acceptance inspections and quality control
- Avoid cutting through critical reinforcement or castly rebar hits
- Prevent damage to rebars during coring or drilling,
- Review and report from the computer receiving the scan analysis

Technical Specifications	CFC-2080	CFC-2085
Maximum Detection Depth	180 mm (at 36 mm rebar diameter)	300 mm depending on base material condition (damp or dry) and object class
Localization accuracy	3 mm	+/- 10 mm
Maximum Depth for Determing Depth of Coverage	160 mm (at 36 mm rebar diameter)	-
Maximum Depth for Determing Rebar Diameter	60 mm	-
Minimum distance between two neighbouring objects	-	40 mm
Maximum Scanning Speed	0.5 m/s	0.5 m/s
Accuracy of depth indication	-	← 100 mm: +/- 10 mm → 100 mm: +/- 15%
Operating Time with Battery	8h	4h
Screen	LCD	LCD
Dust & Water Spray Protection	IP54	IP54
Working Temperature Range	-10 °C - (+50 °C)	-15 °C - (+50 °C)
Scanner Dimensions	260x132x132 mm	318x143x190.1 mm
Scanner Weight (w/batterry)	1.4 kg	2.45 kg
Monitor Dimensions	264x57x152 mm	292x292x207.5 mm
Monitor Weight	1.4 kg	2.26 kg

METAL LOCATION in CONCRETE

Product Code

CFC-2092 Profometer 630 Al Rebar Detector

Standards

BS 1881 Part 204, DIN 1045, SN 505 262

Profometer 630 Al Rebar Detector is an advanced cover meter to detect location of rebars, measurement of concrete cover and bar diameters non-destructively by using the eddy current principle with pulse induction as the measuring method. It also has extended advanced features from the previous version, Profometer5+, like Line and Area Scan Modes and an extensive choice of statistical views. 630 Al is specially suited to measuring large areas, long lines or when comprehensive reporting is required. For example when inspecting tunnels, retaining walls, concrete slab soffits, bridge slabs or dams.

FEATURES

- Measuring wide areas over long distances
- Zoom in to scale rebars according to your needs
- Display with cover curve or signal strength curve
- Visual assistance for speed and signal strength control
- Settings directly accessible on the measurement screen
- Graphical display of measured values and minimum cover set
- Change settings before and after storage
- PM-Link software for downloading saved data to a PC for analysis and export to third party applications
- All-in-one Universal Probe including standard, long range and spot probe
- Spot probe specially for areas with congested rebar arrangements
- Housing specially designed to be used on-site in harsh environments, including carrying strap, integrated stand and sunshield cover
- Battery lifetime of > 8h
- High resolution color display
- 8 GB Flash memory
- Dual core processor supporting diverse communication and peripheral interfaces
- Future proof investment through direct upgrade possibilities to upcoming Profometer products

Technical Specifications

Cover Measuring Range	Up to 185 mm (7.3")
Cover Measuring Accuracy	± 1 mm to ± 4 mm (0.04" to 0.16")
Measuring Resolution	Depending on diameter and cover
Path Measuring accuracy on smooth surface	± 3 mm (0.12") + 0.5% to 1.0% of measured length
Display	7" colour display 800x480 pixels
Diameter Measuring Range	Up to 63 mm (2.5")
Diameter Measuring Accuracy	± 1 bar size
Memory	Internal 8 GB Flash memory
Regional Settings	Metric and imperial units and multi-language supported
Battery	Lithium Polymer, 3.6 V, 14.0 Ah
Battery Lifetime	→ 8h (in standard operating mode)
Mains	9 V - 15 V / 2.0 A
Weight (of display device)	About 1'525 g (incl. Battery)
Operating temperature	0°C - 30°C (Charging*, running instrument), 0°C - 40°C (Charging, instrument is off) -10°C - 50°C (Non-charging)
Humidity	← 95 % RH, non condensing
IP Classification	IP54

METAL LOCATION in CONCRETE

Product Code

CFC-3000 Bartracker Concrete Covermeter

Standards

BS 1881:204

CFC-3000 Bartracker Concrete Covermeter is used to measure the thickness of concrete cover over steel reinforcement bars and metal pipes, furthermore it is also used to identify the location, orientation and diameter of reinforcement bars (rebar). The basic unit can be completed with a number of optional probes for various determinations.

CFC-3000 which uses the Pulse induction technique features a rugged waterproof IP 65 case with probe storage for easy portability. The battery pack can be recharged inside or oCFSide the gauge. The display screen shows you everything you need to know.

CFC-3000 Bartracker Concrete Covermeter is supplied complete with; Main unit, Standard search head to meet most of measurement requirements to identify 40 mm dia. bar up to 95 mm depth (approx.), 8 mm dia. bar up to 70 mm depth (approx.), sensing area 120x60 mm., PC cable, Battery pack and charger, Shoulder strap, Earphone, Carry case and instruction manual.

MAIN FEATURES

- Rebar location
- Rebar orientation
- Depth of cover
- Cover reading thickness mm or inches
- Large graphic display with backlight
- Multiple language menu structure
- Signal strength bar
- Interchangeable heads with led and keypad
- User selectable bar range sizes and numbers
- Autosize mode for quick bar diameter determination
- Orthogonal mode for bar diameter determination
- Other models of search head available on order for Narrow pitch search, Deep cover search, Borehole. See accessories.
- RS 232 output to PC
- Data logging
- Adjustable beep volume & earphone socket
- EDTS MS EXCEL link software

METAL LOCATION in CONCRETE

Product Code

CFC-3010 Fully integrated Rebar Detector and Covermeter

Standards

BS1881-204, DIN1045, SN 505 262, DGZfP B2

CFC-3010 Fully integrated Rebar Detector and Cover meter is a versatile rebar detector system. This is coupled with rebar-proximity indicators and optical and acoustical locating aids. Rebar diameter can also be estimated within the specified testing range. Rebar Detector combines these unique features in a compact, light device that allows the user to operate this rebar detector with one hand making the task of locating rebars a simple and efficient process.

FEATURES

- A rebar detector with real-time visualization of the rebars beneath the instrument
- Visual indication of rebars in close proximity
- Rebar Detector is a rebar detector with the ability to identify the mid-point between rebars as well as the orientation of rebars
- Optical and acoustical indication of rebar location and minimum cover alert
- This rebar detector offers neighboring bar correction
- Regional settings (metric, imperial)
- Cordless and single handed operation
- Switchable display backlight for dark environments
- A rebar detector with icon-based language independent menus
- Start-up test kit allows user to familiarize him/herself with all functions in a comfortable environment, wasting no time on site

APPLICATIONS

- Rebar detector
- Measurement of concrete cover
- Measurement of rebar diameter
- Checking for minimum cover
- Map out the rebar grid and cover for corrosion studies
- Rebar grid examination for planned load changes on the structure

As optional, The rebar locator can store 49'500 measurements.
Please contact us for more information on the Rebar Detector and cover meter.

Technical Specifications

Measuring Range of Cover	Up to 180 mm
Power source	2 x 1.5 V AA (LR6) batteries
Voltage range	3.6 V to 1.8 V
Battery Lifetime Backlight off	50 h
Battery Lifetime Backlight on	15 h
Temperature range	-10° to 60° C (14° to 140° F)
Humidity range	0 to 100% rH

METAL LOCATION in CONCRETE

Product Code

CFC-3015 Deep Scanning Metal Locator

CFC-3015 Deep Scanning Metal Locator is used to find rebar and metalic pipes, conduit, metal studs, junction boxes and metal framing up to 150 mm deep by scanning through most nonmetallic construction material, including solid concrete.

It scans through solid concrete and pinpoints the location and depth of target and differentiates between steel rebar and copper pipe.

Technical Specifications

Battery	9 V alkaline
Position Accuracy	Rebar/Copper pipe 14 mm dia. at a minimum grid spacing of 152 mm are located typically within 13 mm depth
Depth	Up to 152±25 mm
Water Resistance	Splash and water resistance but not water proof

Dimensions	251x109x63 mm
Weight (approx.)	320 g (incl. battery)

METAL LOCATION in CONCRETE

Product Code

CFC-3025 Metal Locator (BOSCH)

The Bosch PDO Multi Digital Detector locates a variety of metal and wooden structures behind walls with the highest precision, ensuring safety before drilling into the wall. Invest in a reliable detector such as the Detector PDO Multi rather than have a water pipe or power cable repaired afterwards.

The PDO Multi's large, easy-to-read display uses a bar display to indicate the detection strength. It displays the charging state of the battery, and also features a zoom function for reliable detection accurate to the millimeter. The function buttons of the PDO Multi make it easy to switch the mode from metal to wood detection. The non-slip soft grip ensures safe and comfortable handling.

When the PDO Multi finds detectable material behind the wall, the LED ring changes color from green to red and alerts the user with an acoustic signal. The result is displayed graphically on a large LCD. The zoom function refines the search even more and locates the detected object within a millimeter range. Use the handy built-in pencil and mark the detected area through the opening in the center of the LED ring.

Digital measuring tools from Bosch impress with precision and extremely easy operation whether when leveling objects, measuring distances or detecting all different kinds of materials and power cables.

Detection Depth, Ferrous Metals (max.)	70 mm
Detection Depth, copper pipe (max.)	60 mm
Calibration	Automatic
Battery	3x1.5 V
Weight	0.20 kg

FEATURES

- Reliable detection up to max. 6 cm detection depth
- Immediately ready for use thanks to fully automatic calibration
- Locates metals and live power cables
- Clear drilling recommendation by means of marking ring illuminated in red /green
- Extremely easy operation - only one button
- Digital display makes the measurement results easy to read
- Soft grip for a better and more comfortable hold

The Metal Locator (Bosch) is supplied complete with;

- Protective case
- Battery, 3x1.5 V
- Instruction Manual

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3028 Concrete Test Hammer (Schmidt Hammer) N Type (CFU)
CFC-3040 Calibration Anvil

Standards

EN 12504-2, 13791; ASTM C 805; BS 1881:202; NF P18-417; DIN 1048; UNI 9189

The quality of concrete is mainly judged by its compressive strength directly affecting the load-bearing capacity and durability of concrete structures.

CFC-3028 Concrete Test Hammer (Schmidt Hammer N Type CFU) is used to measure the compressive strength characteristics of hardened concrete non-destructively, control uniform concrete quality and detect weak spots in the concrete. The test object should have a minimum thickness of 100 mm (3.9 in).

CFC-3040 Calibration Anvil, manufactured from a special steel alloy, is used for the calibration of concrete test hammers.

Product Code	Dimensions	Weight (approx.)
CFC-3028	340x120x120 mm	2 kg
CFC-3040	150x150x230 mm	16 kg

Measuring Range	10–70 N/mm^2
Impact Energy	2.207 Nm

CFC-3028

CFC-3040

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3030 Concrete Test Hammer (Schmidt Hammer) N Type
CFC-3040 Calibration Anvil

Standards

EN 12504-2, 13791; ASTM C 805; BS 1881:202; NF P18-417; DIN 1048; UNI 9189

CFC-3030 Concrete Test Hammer is used for the non-destructive testing of the surface of hardened concrete in order to evaluate the strength in various parts of a structure.

The concrete hammer is supplied complete with plastic carrying case, grinding stone and instruction manual.

CFC-3040 Calibration Anvil, manufactured from a special steel alloy, is used for the calibration of concrete test hammers.

Measuring Range	10–70 N/mm^2
Impact Energy	2.207 Nm

Product Code	Dimensions	Weight (approx.)
CFC-3030	80x80x360 mm	1,5 kg
CFC-3040	150x150x230 mm	16 kg

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3032 Original Schmidt Concrete Test Hammer N Type (Proceq)
CFC-3040 Calibration Anvil

Standards

EN 12504-2, 13791; ASTM C 805; BS 1881:202; NFP18-417; DIN 1048 part 2; UNI 9189; ISO 8045; B 15-225; JGJ/T 23-2001 JJG 817-1993

The quality of concrete is mainly judged by its compressive strength directly affecting the load-bearing capacity and durability of concrete structures.

CFC-3032 Concrete Test Hammer (Original Schmidt Type N - Proceq) is used to measure the compressive strength characteristics of hardened concrete non-destructively, control uniform concrete quality and detect weak spots in the concrete. The test object should have a minimum thickness of 100 mm (3.9 in).

CFC-3040 Calibration Anvil, manufactured from a special steel alloy, is used for the calibration of concrete test hammers.

CFC-3032

CFC-3040

FEATURES

- Type N Original Schmidt: Rebound values are read from a scale for subsequent calculation of the mean. Compressive strength values can be read from a conversion diagram
- Type NR Original Schmidt: Rebound values are recorded as a bar chart on a paper strip which has a capacity for 4'000 test impacts

Product Code	Dimensions	Weight (approx.)
CFC-3032	340x120x120 mm	2 kg
CFC-3040	150x150x230 mm	16 kg

Measuring Range	10–70 N/mm²
Impact Energy	2.207 Nm

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3034 Ultrasonic Pulse Velocity Tester

Standards

EN 12504-4; ASTM C 597

Ultrasonic Pulse Velocity Tester is used to measure the velocity of propagation of ultrasonic pulses through concrete. A pulse of longitudinal vibrations is produced by an electro-acoustical transducer held in contact with one surface of the concrete under test. After traversing a known path length in the concrete, the pulse of vibrations is converted into an electrical signal by a second transducer and electronic timing circuits enable the transit time of the pulse to be measured.

BS EN 12504-4:2004 gives guidance on testing fresh concrete, hardened concrete and concrete in structures. It specifies a method for the determination of the velocity of propagation of pulses of ultrasonic longitudinal waves in concrete.

The measurement of pulse velocity can be used for the determination of the uniformity of concrete, the presence of cracks or voids, changes in properties with time and in the determination of dynamic physical properties.

CFC-3034 Ultrasonic Pulse Velocity Tester is a microprocessor incorporated equipment which can be connected to a PC through the RS 232 output. It can also be connected to an oscilloscope and can perform transit time measurement from 0.1 to 1999.9 µs with a resolution of 0.1 µs. The battery operated equipment has a transmitter output of 800 V and a battery life of 18 hours of activity.

The Ultrasonic Pulse Velocity Tester is supplied complete with

- Two 54 KHz transducers (Transmitter and Receiver) with 3 m cable
- Calibration rod
- Coupling agent (250 mm)
- Carrying case

Dimensions	240x120x75 mm
Weight (approx.)	1,3 kg

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3045 Silver Schmidt Concrete Test Hammer PC N Type (Proceq)
CFC-3040 Calibration Anvil

Standards

EN 12504-2, 13791; ASTM C 805; JGJ/T 23-2001

CFC-3045 Silver Schmidt Test Hammer (Proceq) is the world's most advanced rebound hammer fully adapted specifically to the extremely varied concrete testing applications (Testing on cores and blocks). The Silver Schmidt incorporates statistical methods based on ASTM and ISRM recommendations and provides the user with the freedom to define his own statistical process for determining a rebound number.

FEATURES

Impact Angle Independence: The rebound value is independent of the impact direction.

Optimized for Field Work: Tighter sealing against dirt and dust intrusion for longer life. Significantly lighter and more ergonomic than the classic Schmidt hammer. A large number of readings can be saved and downloaded later to a PC.

Preset Statistics: Statistics methods recommended by ISRM and ASTM are implemented into the hammer for automatic calculation of the rebound number. The option is also there to define a user specific statistics method.

Unconfined Compressive Strength: ISRM recommends a correlation between UCS and the rebound value based on the formula UCS = aebR (where R is the rebound value). A correlation in this format may be defined in the PC software and downloaded onto the RockSchmidt.

E-Modulus: ISRM recommends a correlation between elastic modulus and the rebound value based on the formula Et = cedR (where R is the rebound value). A correlation in this format may be defined in the PC software and downloaded onto the RockSchmidt.

Weathering Grade: Impacting on the same location twice can be used to correlate to weathering grade. The ISRM recommended method has been included in the device.

The Silver Schmidt Concrete Test Hammer is supplied complete with

- Battery Charger with USB Cable
- Carrying Strap
- DVD with PC software
- Grinding Stone
- Documentation
- Carrying Bag

Technical Specifications

Impact Energy	(N) 2.207 Nm, (L) 0.735 Nm
Spring Extension	75 mm (2.95")
Plunger Radius	25 mm (0.98"
Display	17 x 71 pixels; graphic
Battery Lifetime	>5000 impacts between charges
Operating Temperature	0 to 50°C
Storage Temperature	-10 to 70°C

Product Code	Dimensions	Weight (approx.)
CFC-3045	55x55x255 mm	570 g
CFC-3040	150x150x230 mm	16 kg

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3050 Pundit Lab+ Ultrasonic Pulse Velocity Tester (Proceq)
CFC-3055 S-Wave Transducers, 250 kHz, for CFC-3050 (Proceq)
CFC-3060 Pundit PL-200 Ultrasonic Pulse Velocity Tester (Proceq)
CFC-3065 Pundit PL-200PE Ultrasonic Pulse Velocity Tester (Proceq)

Standards

EN 12504-4; ASTM C 597-02; BS 1881 Part 203; ISO1920-7:2004; IS13311; CECS21

Pundit Lab+

Pundit PL200-PE

The measurement of pulse velocity can be used for the determination of the uniformity of concrete, the presence of cracks or voids, changes in properties with time and in the determination of dynamic physical properties. EN 12504:4 gives guidance on testing fresh concrete, hardened concrete and concrete in structures. It specifies a method for the determination of the velocity of propagation of pulses of ultrasonic longitudinal waves in concrete.

CFC-3050 is an ultrasonic pulse velocity test instrument which is used to examine the quality of concrete. It features online data acquisition, waveform analysis and full remote control of all transmission parameters. Along with the traditional transit time and pulse velocity measurement, CFC-3050 offers path length measurement, perpendicular crack depth measurement and surface velocity measurement. Optimized pulse shaping gives greater transmission range at lower voltage levels. This, coupled with automated combination of the transmitter voltage and the receiver gain, ensures an optimum received signal level, guaranteeing accurate and stable measurements. An integrated waveform display allows manual triggering of the received waveform. Pundit Lab+ offers other features such as the possibility to estimate compressive strength by Sonreb Method in combination with a rebound hammer value.

The Pundit PL-200 is a best-in-class Ultrasonic pulse velocity (UPV) test instrument to examine the quality of concrete and other materials such as rock, wood and ceramics.

The Pundit PL-200PE employs state-of-the-art pulse echo technology to extend the ultrasonic application to objects where access is restricted to a single side.

FEATURES OF PUNDIT LAB+

- Integrated wave form display
- Remote control; A USB connection and the Pundit Link application allow full remote control of all features of the ultrasonic test equipment
- Full remote control of the instrument with a third party software
- Direct data logging on the PC
- Runs on battery supply, mains supply via AC adaptor and can also be powered from a PC via the USB connection.
- Supports a wide range of transducers from 24 kHz up to 500 kHz, making it suitable not only for concrete and rock, but also for other materials such as graphite, ceramics, woods, etc.
- Exponential transducers for rough surfaces and shear wave transducers for estimation of dynamic modulus of elasticity complete the portfolio.
- Integrated amplifier gain stage
- Real time stamp
- Direct estimation of compressive strength
- Combined ultrasonic pulse velocity / rebound value estimate of compressive strength (SONREB)
- Data review list on the instrument

FEATURES OF PUNDIT PL SERIES

- Single side determination of slab thickness
- Detection and localization of voids, pipes, delaminations and honeycombing
- Advanced echo tracking technology helps identifying the main echo
- Control buttons and optical feedback directly on the probe increase measurement efficiency
- Automatic estimation of the Pulse Velocity
- Easy B-Scan measuring through center marker and rulers directly on the probe
- Dry-contact transducer: no couplant required, suited for measuring on rough surfaces
- Lightweight and ergonomical handling
- Expandable with Pulse Velocity transducers

Technical Specifications

	Pundit Lab+	Pundit PL Series
Range	0.1 – 9999 µs	0.1 - 7930 µs
Resolution	0.1 µs	0.1 µs (< 793 µs), 1 µs (> 793 µs)
Display	79 x 21 mm passive matrix OLED	7" colour display 800x480 pixels
Memory	Non-volatile, > 500 measured values	Internal 8 GB Flash memory
Power Supply	4x AA batteries (> 20 hours continuous use)	Lithium Polymer, 3.6 V, 14.0 Ah (> 8 hours continuous use)
Operating temperature	-10° to 60°C (0° to 140°F)	0°C - 30°C (Charging, running instrument) 0°C - 40°C (Charging, instrument is off) -10°C - 50°C (Non-charging)
Humidity	< 95% RH, non condensing	< 95 % RH, non condensing
Dimensions	175x55x220 mm (packed)	175x55x220 mm (packed)
Weight (approx.)	1.5 kg (packed)	1.5 kg (packed)

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

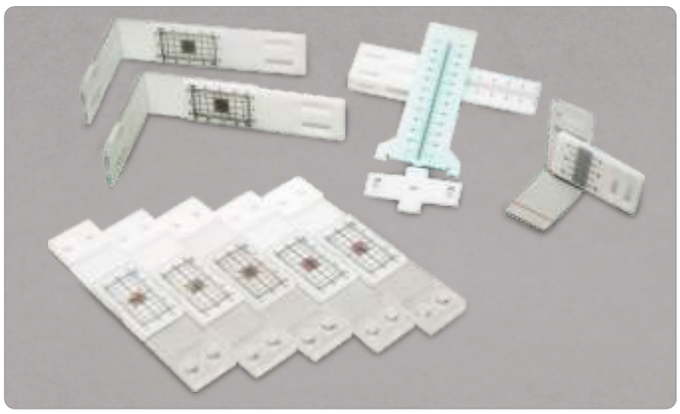
CFC-3100 Complete Set of Crack Width Gauges

Cracks occur in most buildings and civil engineering structures. Monitoring the changes in crack width is an important diagnostic technique for determining the cause and specifying the remedial work.

CFC-3100 Complete Set of Crack Width Gauges is used for measuring the crack widths in different positions. The set consists of; 5 pieces of standard crack width gauge for walls which monitors horizontal and vertical movements across cracks; Crack width gauge for corners which monitors horizontal and vertical movements across cracks in corners; Crack width gauge for floors for monitoring settlement of floors relative to a wall or column and Crack width gauge for level difference for monitoring the movement across a crack when one surface moves out of planet to the other.

SET CONSISTS OF:

- Standard crack width gauge for walls, 5 pieces
- Crack width gauge for corners
- Crack width gauge for floors
- Crack width gauge for level difference



FEATURES

- Suitable for internal or external use
- Monitoring both vertical and horizontal movements
- Monitors the opening or closing of cracks with 1 mm accuracy
- Crack record cards supplied with each gauge to simplify monitoring

Dimensions	235x200x50 mm (packed)
Weight (approx.)	1 kg (packed)

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3110	Mechanical Strain Gauge 100 mm Measuring Base
CFC-3130	Mechanical Strain Gauge 300 mm Measuring Base
CFGM-0190	Serial Cable for PC Connection
CFC-3122	Datum Discs. Pack of 50 Pieces
CFC-3123	Adhesive Tube, 20 g.

Standards

BS 1881:206

CFC-3110 and CFC-3130 Mechanical Strain Gauges are used for determining the length changes in different parts of a structure. These strain gauges are especially designed to perform measurement on concrete structures but they are also suitable to be used for any other type of structure including steel.

Measurin base for CFC-3110 is 100x5 mm range and for CFC-3130 is 300x5 mm range Suitable model should be chosen according to the standard length to be measured. Digital gauge for both models has 0.001 mm resolution and output for PC connection . Serial cable for PC connection should be ordered seperately.

Each model is supplied as a complete set which consists of extensometer with digital gauge, standard bar, calibration bar, No. 50 datum discs, adhesive compound for datum discs and carrying case.

Dimensions	300x400x110 mm (packed)
Weight (approx.)	2.5 kg

NON-DESTRUCTIVE CONCRETE TESTING in STRUCTURES

Product Code

CFC-3150 Crack Microscope 40x

CFC-4050 Crack Microscope is a high definition device which is used for measuring crack widths both in concrete and other structures like masonry walls. Consists of an adjustable lamp unit and a knob for focusing the image. The 360° turning ability of the eyepiece enables the alignment with the direction of the crack or pitch subject to examination.

The battery operated microscope has 40x magnification and 4 mm measuring range with 0.02 mm subdivisions.

Magnification	40 X
Measuring Range	4 mm
Subdivision	0.02 mm

Dimensions	150x80x45 mm (packed)
Weight (approx.)	550 gr.

CARBONATION TEST

Product Code

CFC-3160 Carbonation Test Set

This simple test set is used for determination of carbonation depth of the carbonated layer near the surface of hardened concrete. It is not suitable for concrete made with calcium aluminate cement. The set consists of two 250 ml washing bottles containing distilled water and phenolphthalein solution, and a ruler for depth of carbonation.

MEASUREMENT of REINFORCEMENT CORROSION RATE

Product Code

CFC-3230 Equipment For Measurement of Reinforcement Corrosion Rate in Concrete

CorroMap is developed for measuring related values of corrosion rate, electrochemical potential and electrical resistance and thereby quickly assess the state of corrosion of the embedded reinforcement.

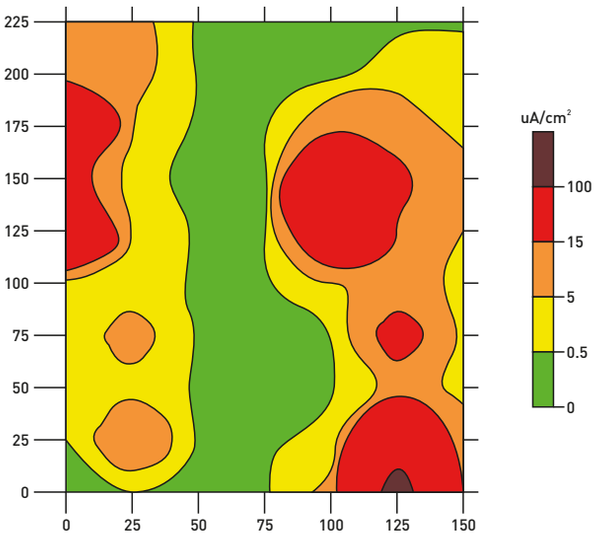
The equipment is based on Psion Work About PC with Windows CE 5.0 with colour "touch screen", which provides unique possibilities of fast overview and immediate treatment of data in the field

Special qualities

- New handheld Psion Work About PC with Windows CE 5.0 and colour Touch Screen
- Protected against dust, rain and snow (IP 65)
- Up to 2400 automated measuremets, one-man operated with "auto trigger" and "auto increment" options
- Can measure related values of corrosion rate, electrochemical potential and electrical resistance
- Estimation of corrosion rate can be carried out in 15 sec.

Overview for evalCFAtion of corrosion condition

- On site graphic display - in colour
- Each colour represents a measurement interval for corrosion rate, potential and resistance
- Zoom function of detail area with display of measurement values
- Measuring results in Excel-format are easily transferred to PC for further processing and presentation



Contour plot from concrete deck in swimming pool

METAL LOCATION in CONCRETE

Product Code

CFC-3250 Digital Bond Strenght /Pull-off Tester

Standards

EN 1015-12, 1348, 1542, 12616-2, 13963, 14496

16 kN measurement capacity apparatus is used for determining of bond/pull-off strenght of repair mortar, hardened rendering, plastering, etc.

The apparatus is basically a dynamometer fitted with a load cell and high resolution digital display unit. The direct tensile force is applied by rotating the hand wheel.

MAIN FEATURES

- Portable equipment for use in any location
- High resolution digital display unit
- Graphic indication of applied load rate
- Serial port for PC connection
- Battery operated, complete with AC adapter
- Indicator of ram position allowing an estimation of the brittle properties of the test sample
- Supplied complete with traceable calibration certificate

Supplied complete with carrying case. Each one of the accessories given below should be ordered separately.

CFC-3254	Drill bit with centering point to obtain, 50 mm dia. test surface
CFC-3256	Drill bit with centering point to obtain, 20 mm dia. test surface
CFC-3257	Metal ring (dinking die), 50 mm int. dia, 25 mm high, for fresh plaster, to EN 1015-12
CFC-3258	Aluminium Test Disc, 50 mm dia.
CFC-3260	Aluminium Test Disc, 20 mm dia.
CFC-3262	Test square plate, aluminium, 50x50mm, conforming to EN 1348
CFC-3264	Serial Cable for PC connection
CFC-3266	Stainless steel test disc 50mm dia. x 20mm thickness. (conforming to EN 1015-12)
CFC-3268	Adhesive Bicomponent. 2x15ml binder and 2x15ml hardener (4 vials)

Technical Specifications

Load capacity	16 kN
Readout unit	Load cell
Resolution	10 N
Working range	0.25 to 16 kN
Accuracy	better than ± 1%
Battery	9 V
Dimensions	340x240x250 mm approx.
Weight	5 kg with carrying case, 3.3 kg tester only

BOND STRENGTH of ANCHORED REBAR

Product Code

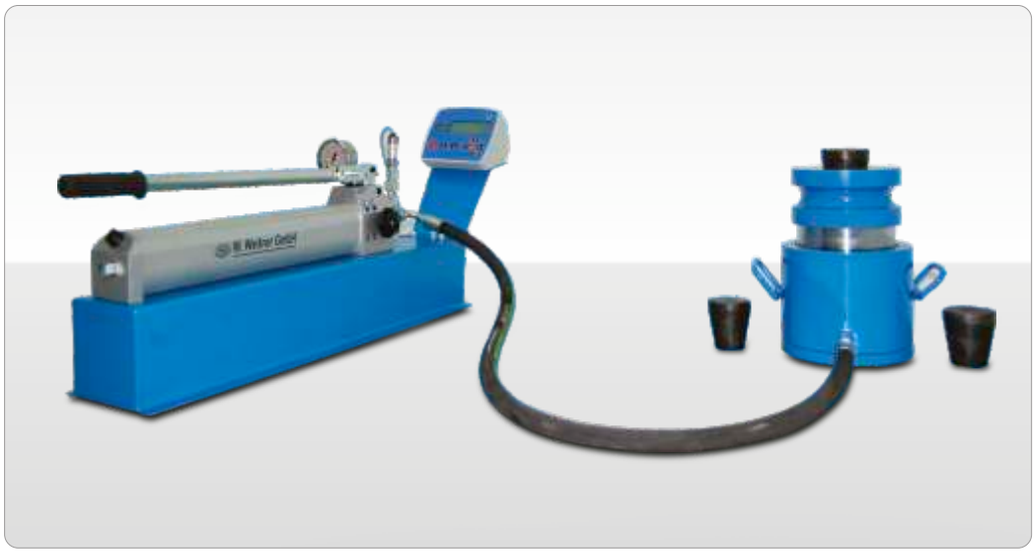
CFC-3190 Digital Rebar Pull-Out Force Tester with Steel Hydrolic Cylinder, 10 ton Capacity
CFC-3210 Digital Rebar Pull-Out Force Tester with Steel Hydrolic Cylinder, 30 ton Capacity

The Apparatus are used for determining the bond strength between anchored reinforcing steel bar (rebar) and concrete and for checking anchorage performance in-situ. LPI Battary Operated Digital Readout Unit connected to a 30 tons capacity hydraulic jack and hand pump provides 1 % sensitive load or tensional strength value readings.

CFC-3190 Digital Rebar Pull-Out Force Tester have a steel hydrolic cylinder. CFC-3210 Digital Rebar Pull-Out Force Tester has an Steel hydrolic cylinder for ease of handling.

The apparatus is supplied complete with three different jaw sets which allows user to test anchorage rebar with different diameters. These jaws are made of high strength steel.

CFC-3190 is supplied complete with two jaw sets for 4-8mm, and 10-16m dia. rebars CFC-3210 are supplied complete with three jaw sets for 4-8mm, 8-20mm and 20-28mm dia. rebars.



Jaw Set

	CFC-3190	CFC-3210
Working ability	10 tons	30 tons
Rebar diameters can be tested	Up to 16mm	Up to 28
Tension journey (stroke)	50 mm	50 mm
Dimensions	150x150x175 mm	150x150x210 mm
Weight (approx.)	13 kg	7.5 kg