

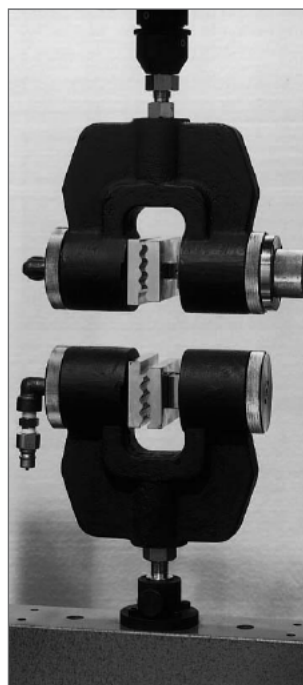
## Hydraulic Flat Grips for Heavy Cloth

Hydraulic flat grips have wide grip faces and a strong, symmetric clamping force, making these grips ideal for tensile testing heavy cloth. Two models of hydraulic flat grips are available: 10 kN (2,200 lbf) and 50 kN (11,000 lbf) capacity models.

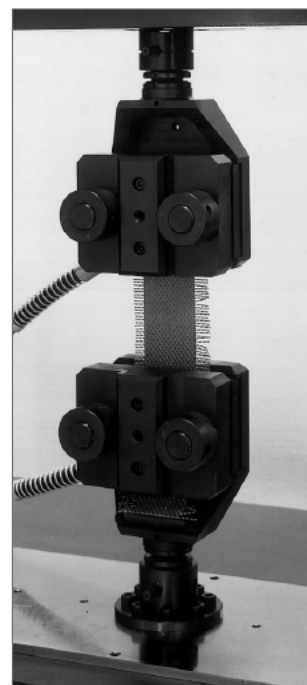
Grip kits include upper and lower grips, wave grip faces, a grip face opening and closing device, and a hydraulic unit. The 10 kN hydraulic flat grips have a provisional tightening mechanism for mounting specimens temporarily to the grip with small force, which helps in centering the specimen before the full gripping force is applied.

A water-cooled hydraulic unit is used for the 10 kN grips and requires a water supply of 10 L/min, has a maximum pressure of 21 MPa (214 kg/cm<sup>2</sup>, 3,046 psi), and uses an AC 3-phase 200 V, 2.5 W power source. The 50 kN grip's hydraulic unit is air cooled, provides a maximum pressure of 70 MPa (714 kg/cm<sup>2</sup>, 10,153 psi), and requires two power sources: an AC 3-phase 200 V, 750 W power source for the unit, and an AC single-phase 200 V, 35 W power source for the cooling fan.

Additional and replacement wave grip face options can be found in the document on Grip Faces for Hydraulic Flat Grips for Heavy Cloth.



10 kN



50 kN

### Relevant Materials

Heavy Cloth

### Relevant Specimens

Belt

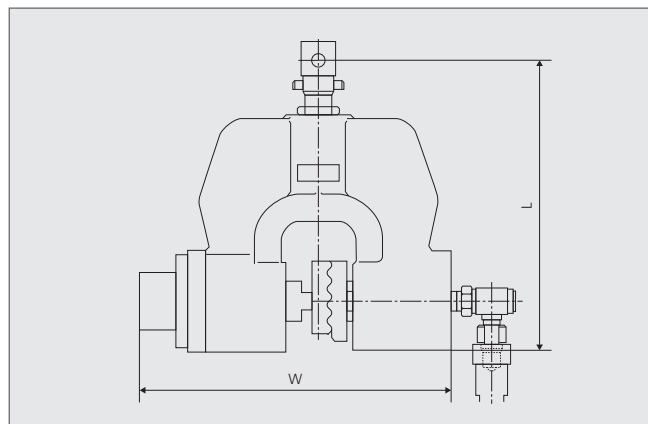
### Operation

Specimens are loaded from the front of the grips. For the 10 kN hydraulic flat grips, the specimen is held temporarily by a provisional tightening mechanism. Grip faces are closed using the grip face opening and closing device. A strong, symmetric clamping force is then supplied throughout testing to minimize slippage within the grip faces.

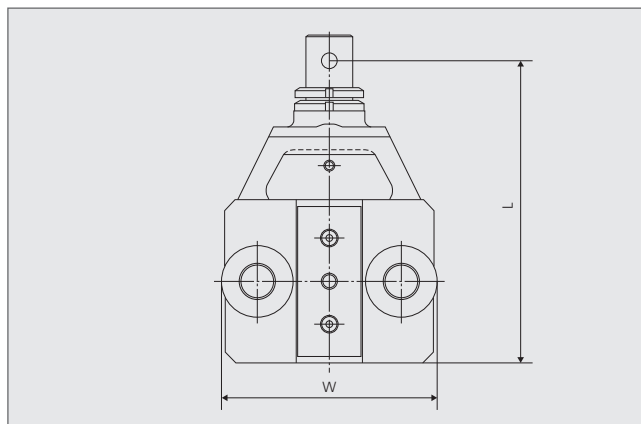
## Specification

Maximum Grip Capacity			Applicable Specimen Thickness Note 1	Grip Face Size		Temperature Range	Grip Size		Upper Grip Mass	Upper Grip Ø Fitting (Ø pin)	Lower Grip Ø Fitting (Ø pin)
				Width	Length		Width	Length Upper / Lower			
kN	kgf	lbf	mm (in)	mm (in)	mm (in)	°C (°F)	mm (in)	mm (in)	kg (lb)	mm	mm
50	5,000	11,000	0 to 10 (0 to 0.39)	72 (2.8)	100 (3.9)	0 to 40 (32 to 104)	165 (6.5)	218 / 218 (8.6 / 8.6)	20 (44)	35 (13)	35 (13)
10	1,000	2,200	0 to 10 (0 to 0.39)	85 (3.3)	55 (2.2)	0 to 40 (32 to 104)	180 (7.1)	210 / 219 (8.3 / 8.6)	8 (18)	25 (10)	25 (10)

Note 1: The applicable specimen thickness is valid only for grip faces supplied with the grips and may change when other grip faces are used.



10 kN



50 kN

## Ordering Information

P/N	Description
<b>Hydraulic Flat Grip Kits</b>	
Includes: upper and lower hydraulic flat grips, wave grip faces, and a hydraulic unit	
346-53881-01	50 kN hydraulic flat grip kit with wave R7.5 grip faces
346-53880-01	10 kN hydraulic flat grip kit with wave R4 grip faces



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