



**Digital scale**

Règle digitale

**Digitale Einbaumessschieber**

Scala digitale

**Regla digital**

**ULD 4**



**INSTRUCTIONS  
MODE D'EMPLOI  
BEDIENUNGSANLEITUNG  
MANUALE D'USO  
MODO DE EMPLEO**

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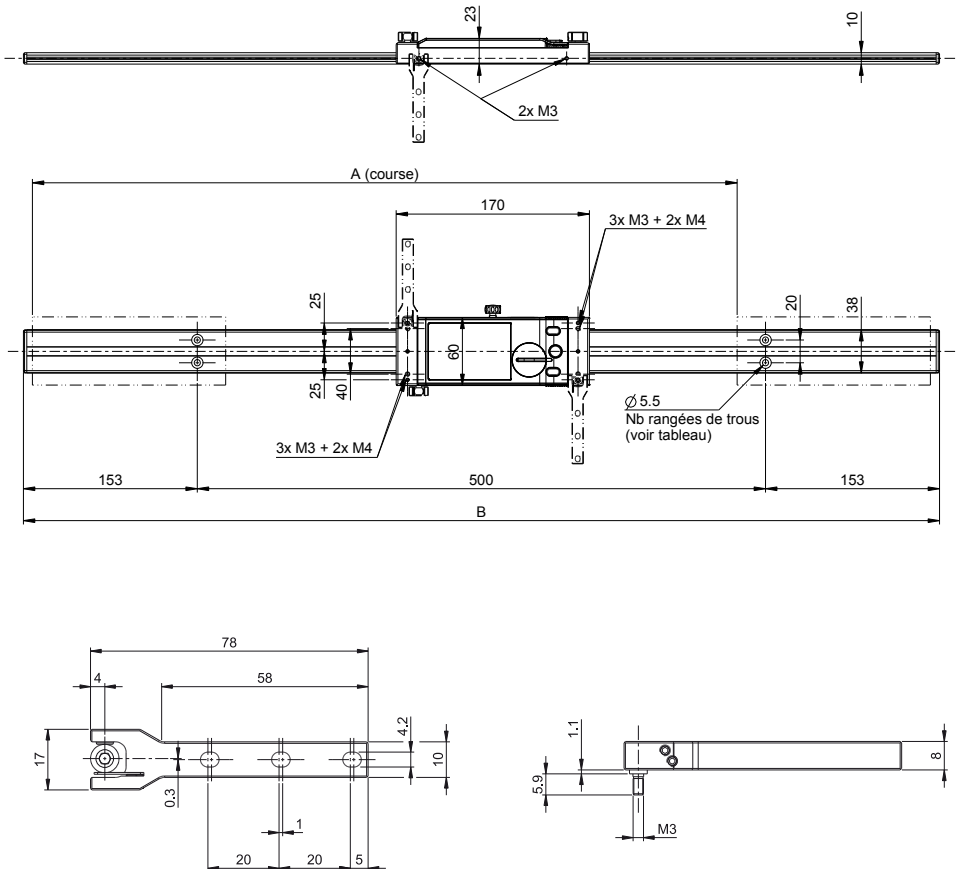
# Outline dimension drawing

Schéma d'encombrement

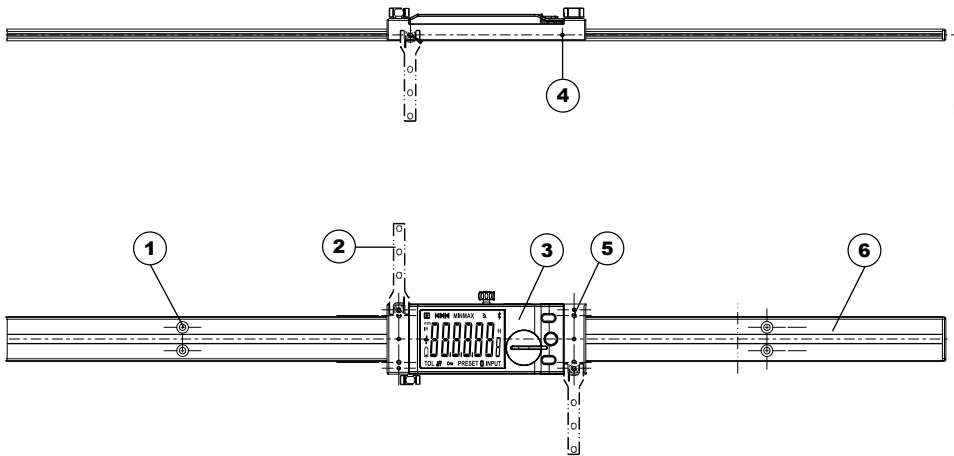
Masszeichnung

Disegno quotato

Planos dimensionales



## 1. Description of the instrument



1. Beam fixing point
2. Moving means
3. Electronic module (see 681.279.05)
4. Side fixing position
5. Top fixing position
6. Main beam

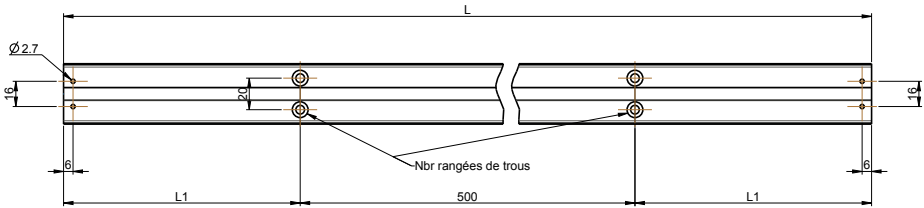
## 2. Specifications

Instrument	ULD4 1000	ULD4 1500	ULD4 2000	ULD4 2500	ULD4 3000
Measuring range (A)	0-1120mm	0-1620mm	0-2120mm	0-2620mm	0-3120mm
External dimension (C)	1306mm	1806mm	2306mm	2806mm	3306mm
Nb. holes row	3	4	5	6	7
Max error.	60 µm	90 µm	120 µm	150 µm	200 µm
Repeatability	20 µm (with constant measuring force)				
Weight	1.2	1.5	1.8	2.2	2.5
Max. speed of travel	2.0 m/s				
Measurement system	Sylvac Inductive System (patented)				
Working temperature (storage)	+5 to +40° C (-10 to +45° C)				
Electromagnetic compatibility	as per. EN 61326-1				
IP rating (according with IEC60549)	electronic module : IP67				
Coefficient of expansion	Steel 11.5um/°C/m				

### 3. Construction

#### Hardened steel guide rods

#### Measuring rule affixed on a steel basis



Version	L	L1	Nb raw holes	Beam(s)
600mm / 24"	800	150	2	1 x 800
800mm / 32"	1000	250	2	1 x 1000
1000mm / 40"	1200	300	2	1 x 1200
1200mm / 48"	1400	200	3	1 x 1400
1500mm / 60"	1700	350	3	1 x 1700
1700mm / 70"	1900	200	3	1 x 1900
2000mm / 80"	2200	350	4	1 x 2200
2500mm / 100"	2700	350	5	1 x 2700
3000mm / 120"	3200	350	6	1 x 3200
3000mm / 120"	3400	450	6	2 x 1700
3400mm / 134"	3600	550	6	2 x 1800
4000mm / 158"	4200	350	8	2 x 2100
4700mm / 185"	4900	200	10	2 x 2450
5300mm / 208"	5500	500	10	2 x 2750
6200mm / 244"	6400	450	12	2 x 3200
6700mm / 264"	6900	200	14	3 x 2300
7600mm / 299"	7800	400	15	3 x 2600
9400mm / 370"	9600	300	19	3 x 3200

#### Formules

$$L = \text{range} + 200$$

$$L1 = (L - ((\text{Nb} - 1) \times 500)) / 2$$

#### Beams

$$< 3200 = 1$$

$$< 6400 = 2$$

$$< 9600 = 3$$

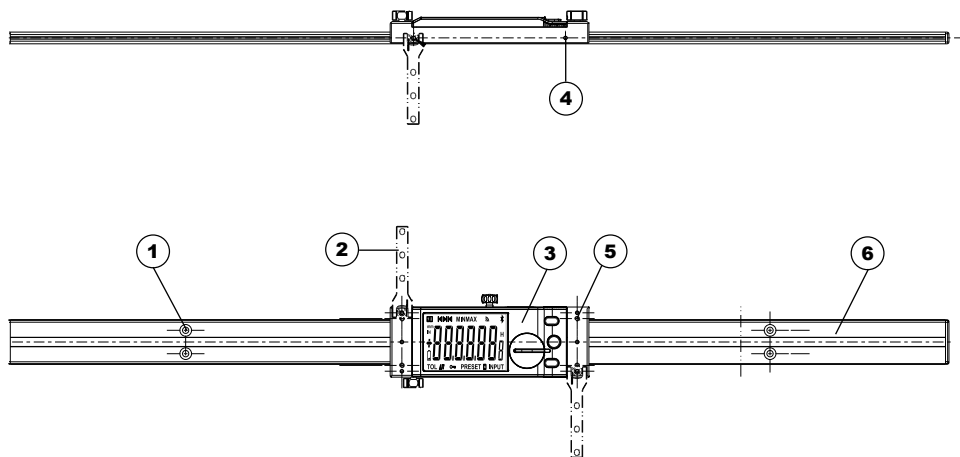
### 4. Set-up recommendations

- Make sure to line up the beam on the axis of the machine
- The carriage of ULD4 scale must slide freely
- Vertical mount, be careful at the moving mean orientation (spring blade faces up)
- Spring Blade tension





## 1. Description de l'instrument



1. Points de fixation
2. Dispositif de déplacement
3. Module électronique (voir 681.279.05)
4. Positions de fixation latérale
5. Positions de fixation frontale
6. Perche principale

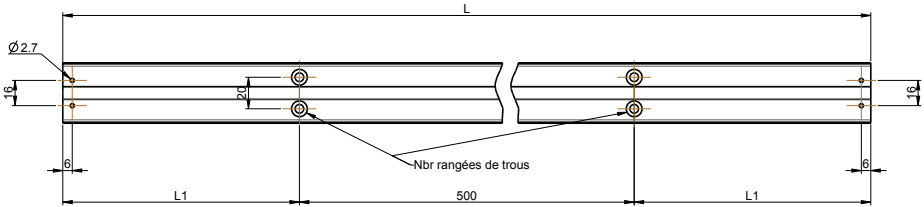
## 2. Spécifications

Instrument	ULD4 1000	ULD4 1500	ULD4 2000	ULD4 2500	ULD4 3000
Etendue de mesure (A)	0-1120mm	0-1620mm	0-2120mm	0-2620mm	0-3120mm
Dimensions extérieures (C)	1306mm	1806mm	2306mm	2806mm	3306mm
Nombre de rangées de trous	3	4	5	6	7
Erreur max.	60 µm	90 µm	120 µm	150 µm	200 µm
Répétabilité	20 µm (avec force de mesure constante)				
Poids	1.2	1.5	1.8	2.2	2.5
Vitesse max de déplacement	2.0 m/s				
Système de mesure	Sylvac Inductive System (breveté)				
Température de travail (stockage)	+5 à +40° C (-10 à +45° C)				
Compatibilité électromagnétique	as per. EN 61326-1				
Spécification IP (selon IEC60549)	module électronique : IP67				
Coefficient de dilatation	acier 11.5µm°C/m				

### 3. Construction

Guidage sur tiges en acier inoxydable trempé

Règle de mesure sur base acier



Version	L	L1	Nbr rangées de trous	Perche(s)
600mm / 24"	800	150	2	1 x 800
800mm / 32"	1000	250	2	1 x 1000
1000mm / 40"	1200	300	2	1 x 1200
1200mm / 48"	1400	200	3	1 x 1400
1500mm / 60"	1700	350	3	1 x 1700
1700mm / 70"	1900	200	3	1 x 1900
2000mm / 80"	2200	350	4	1 x 2200
2500mm / 100"	2700	350	5	1 x 2700
3000mm / 120"	3200	350	6	1 x 3200
3000mm / 120"	3400	450	6	2 x 1700
3400mm / 134"	3600	550	6	2 x 1800
4000mm / 158"	4200	350	8	2 x 2100
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6700mm / 264"	6900	200	14	3 x 2300
7600mm / 299"	7800	400	15	3 x 2600
9400mm / 370"	9600	300	19	3 x 3200

#### Formules

$L = \text{course} + 200$

$L1 = (L - ((Nb - 1) \times 500)) / 2$

#### Perches

$< 3200 = 1$

$< 6400 = 2$

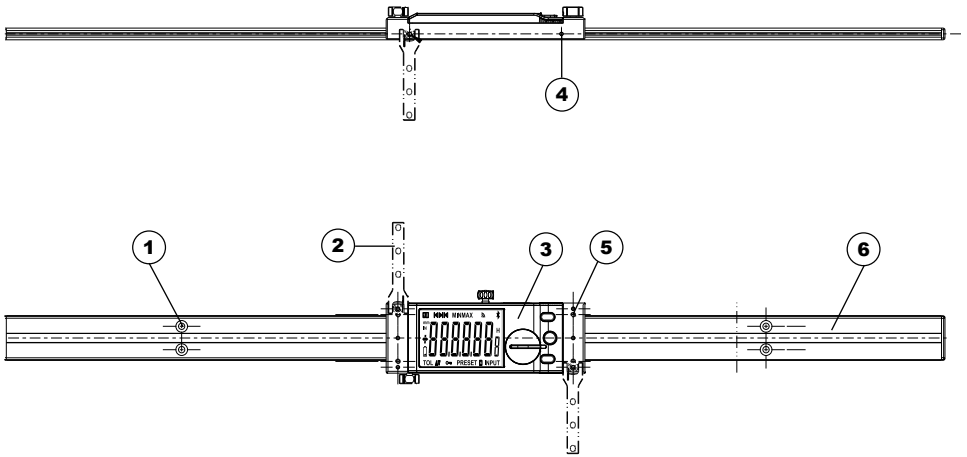
$< 9600 = 3$

### 4. Recommandation d'installation

- Bien aligner la règle avec l'axe de la machine
- Le chariot de la règle ULD4 doit coulisser librement
- En cas de montage vertical, veiller à l'orientation du dispositif de déplacement (lame flexible contre le haut)
- Tension de la lame de ressort



## 1. Beschreibung des Geräts



1. Befestigungspunkte
2. Verschiebeeinrichtung
3. Elektronikmodul (siehe 681.279.02)
4. Seitenbefestigungspositionen
5. Vordere Befestigungspositionen
6. Hauptausleger

## 2. Technische Daten

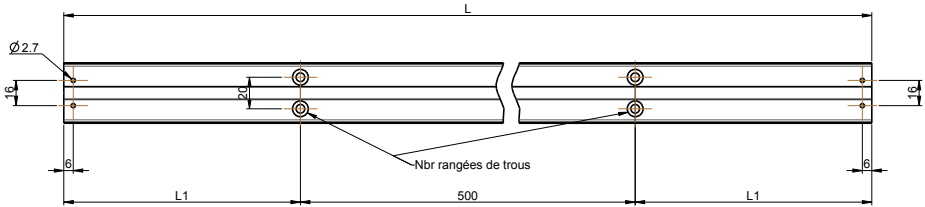
Instrument	ULD4 1000	ULD4 1500	ULD4 2000	ULD4 2500	ULD4 3000
Messbereich (A)	0-1120mm	0-1620mm	0-2120mm	0-2620mm	0-3120mm
Außenabmessungen (B)	1306mm	1806mm	2306mm	2806mm	3306mm
Anzahl der Lochreihen	3	4	5	6	7
Fehlergrenze	60 µm	90 µm	120 µm	150 µm	200 µm
Wiederholbarkeit	20 µm (mit konstante Messkraft)				
Gewicht	1.2	1.5	1.8	2.2	2.5
Maximale Verstellgeschwindigkeit	2.0 m/s				
Messspanne	Sylvac Inductive System (patentiert)				
Arbeitstemperatur (Lagerung)	+5 bis +40° C (-10 bis +45° C)				
Elektromagnetische Verträglichkeit	gemäss EN 61326-1				
IP Spezifikation	Elektronikmodul : IP67				
Ausdehnungskoeffizient	Stahl 11.5µm / ° C/m				



### 3. Konstruktion

Führung in Schäften aus gehärtetem Edelstahl

Messskala auf Stahlbasis



Version	L	L1	Anzahl der Lochreihen	Stange(n)
600mm / 24"	800	150	2	1 x 800
800mm / 32"	1000	250	2	1 x 1000
1000mm / 40"	1200	300	2	1 x 1200
1200mm / 48"	1400	200	3	1 x 1400
1500mm / 60"	1700	350	3	1 x 1700
1700mm / 70"	1900	200	3	1 x 1900
2000mm / 80"	2200	350	4	1 x 2200
2500mm / 100"	2700	350	5	1 x 2700
3000mm / 120"	3200	350	6	1 x 3200
3000mm / 120"	3400	450	6	2 x 1700
3400mm / 134"	3600	550	6	2 x 1800
4000mm / 158"	4200	350	8	2 x 2100
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6200mm / 244"	6400	450	12	2 x 3200
6700mm / 264"	6900	200	14	3 x 2300
7600mm / 299"	7800	400	15	3 x 2600
9400mm / 370"	9600	300	19	3 x 3200

#### Formel

$$L = \text{Hub} + 200$$

$$L1 = (L - ((Nb - 1) \times 500)) / 2$$

#### Stange(n)

$$< 3200 = 1$$

$$< 6400 = 2$$

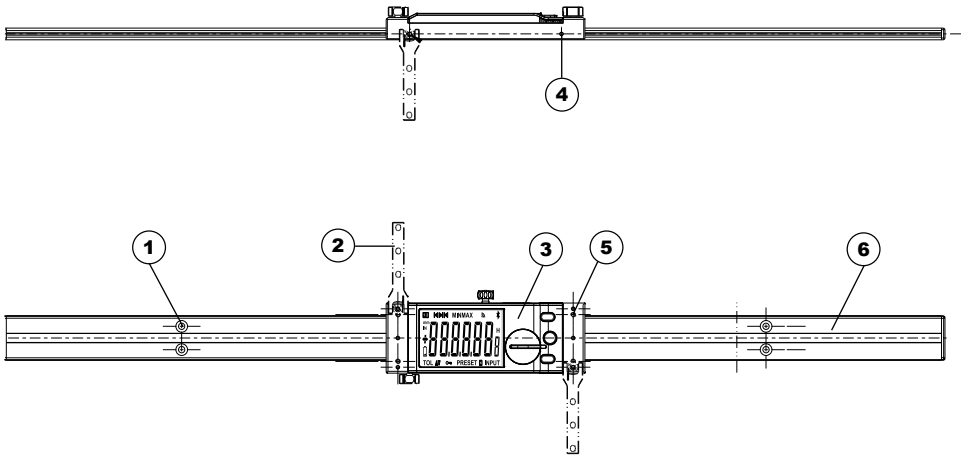
$$< 9600 = 3$$

### 4. Installationsempfehlung

- Achten Sie auf eine exakte Ausrichtung der Messskala entlang der Maschinenachse
- Das Elektronikmodul des ULD4 muss frei in seiner Führung gleiten
- Im Falle einer vertikalen Montage muss sich die Blattfeder der Verschiebeeinrichtung oben befinden
- Blattfeder Spannung



## 1. Descrizione dello strumento



1. Punto di montaggio asta
2. Dispositivo di spostamento
3. Modulo elettronica (vedere 681.279.05)
4. Posizione di montaggio laterale.
5. Posizione di montaggio frontale
6. Asta

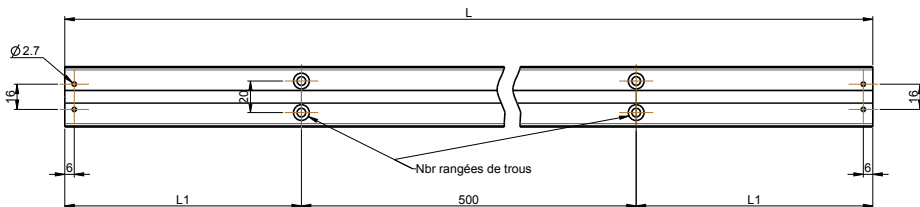
## 2. Specifiche

Strumento	ULD4 1000	ULD4 1500	ULD4 2000	ULD4 2500	ULD4 3000
Capacità di misurazione (A)	0-1120mm	0-1620mm	0-2120mm	0-2620mm	0-3120mm
Dimensioni esterni (C)	1306mm	1806mm	2306mm	2806mm	3306mm
NB dimesioni dei fori	3	4	5	6	7
Errore max.	60 µm	90 µm	120 µm	150 µm	200 µm
Ripetibilità	20 µm (con costante forza di misura)				
Peso	1.2	1.5	1.8	2.2	2.5
Velocità max. di spostamento	2.0 m/s				
Sistema di misura	Sylvac Inductive System (brevettato)				
Temperatura operativa (stoccaggio)	+5 a +40° C (-10 a +45° C)				
Compatibilità elettromagnetica	secondo EN 61326-1				
Specifica IP (secondo IEC60549)	modulo elettronico : IP67				
Coefficiente di dilatazione	Acciaio 11.5µm/°C/m				

### 3. Costruzione

#### Guida sulle aste in acciaio inossidabile temprato

#### Scala di misura su base d'acciaio



Versione	L	L1	NB dimensioni dei fori	Asta
600mm / 24"	800	150	2	1 x 800
800mm / 32"	1000	250	2	1 x 1000
1000mm / 40"	1200	300	2	1 x 1200
1200mm / 48"	1400	200	3	1 x 1400
1500mm / 60"	1700	350	3	1 x 1700
1700mm / 70"	1900	200	3	1 x 1900
2000mm / 80"	2200	350	4	1 x 2200
2500mm / 100"	2700	350	5	1 x 2700
3000mm / 120"	3200	350	6	1 x 3200
3000mm / 120"	3400	450	6	2 x 1700
3400mm / 134"	3600	550	6	2 x 1800
4000mm / 158"	4200	350	8	2 x 2100
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6200mm / 244"	6400	450	12	2 x 3200
6700mm / 264"	6900	200	14	3 x 2300
7600mm / 299"	7800	400	15	3 x 2600
9400mm / 370"	9600	300	19	3 x 3200

#### Formula

$L = \text{portata} + 200$

$L1 = (L - ((Nb - 1) \times 500)) / 2$

#### Asta

$< 3200 = 1$

$< 6400 = 2$

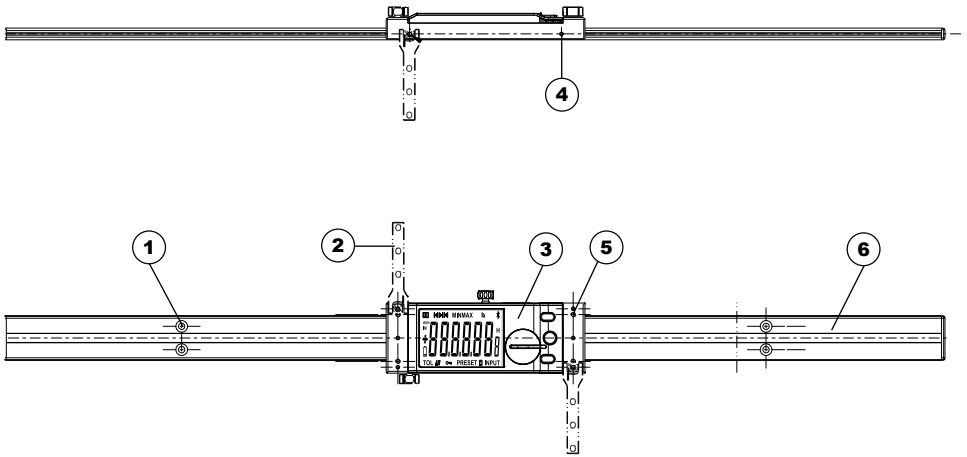
$< 9600 = 3$

### 4. Raccomandazione d'installazione

- Allineare la scala nell'asse della macchina.
- Il cursore della scala ULD4 deve scorrere liberamente
- In caso di montaggio verticale, garantire l'orientamento del dispositivo mobile (balestra flessibile verso l'alto)
- La tensione di molla a balestra



## 1. Descripción del instrumento



1. Puntos de fijación
2. Dispositivo de desplazamiento
3. Módulo electrónico (ver 681.279.05)
4. Posiciones de fijación lateral
5. Posiciones de fijación frontal
6. Pértiga principal

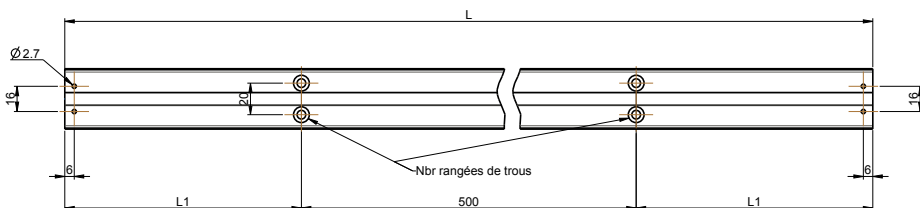
## 2. Especificaciones

Instrumento	ULD4 1000	ULD4 1500	ULD4 2000	ULD4 2500	ULD4 3000
Capacidad de medición	0-1120mm	0-1620mm	0-2120mm	0-2620mm	0-3120mm
Dimensiones externas (C)	1306mm	1806mm	2306mm	2806mm	3306mm
Nb de hileras de hoyos	3	4	5	6	7
Errore max.	60 µm	90 µm	120 µm	150 µm	200 µm
Repetibilidad	20 µm (con constante fuerza de medición)				
Peso	1.2	1.5	1.8	2.2	2.5
Velocidad máxima de desplazamiento	2.0 m/s				
Sistema de medida	Sylvac Inductive System (patentado)				
Temperatura de trabajo	+5 a +40° C (-10 a +45° C)				
Compatibilidad electromagnética	según EN 61326-1				
Especificación IP (segundo IEC60549)	módulo electrónico : IP67				
Coefficiente de dilatación	Acero 11.5µm / ° C/m				

### 3. Construcción

#### Guía de las varillas en acero inoxidable templado

#### Regla de medida sobre base acero



Versión	L	L1	Nb de hileras de hoyos	Pértiga(s)
600mm / 24"	800	150	2	1 x 800
800mm / 32"	1000	250	2	1 x 1000
1000mm / 40"	1200	300	2	1 x 1200
1200mm / 48"	1400	200	3	1 x 1400
1500mm / 60"	1700	350	3	1 x 1700
1700mm / 70"	1900	200	3	1 x 1900
2000mm / 80"	2200	350	4	1 x 2200
2500mm / 100"	2700	350	5	1 x 2700
3000mm / 120"	3200	350	6	1 x 3200
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6700mm / 264"	6900	200	14	3 x 2300
7600mm / 299"	7800	400	15	3 x 2600
9400mm / 370"	9600	300	19	3 x 3200

#### Fórmula

$$L = \text{gama} + 200$$

$$L1 = (L - ((\text{Nb} - 1) \times 500)) / 2$$

#### Pértigas

$$< 3200 = 1$$

$$< 6400 = 2$$

$$< 9600 = 3$$

### 4. Recomendación de instalación

- Bien alinear la regla con el eje de la máquina
- El carro de la regla ULD4 debe deslizarse libremente
- En caso de montaje vertical, cuidado con la orientación del dispositivo de desplazamiento (lámina flexible hacia arriba)
- Tensión de la lámina de resorte









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[www.sylvac.ch](http://www.sylvac.ch)

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