# echna Shaft Clamping System

Contents	Page
Introduction	122
Typical Applications	123
Tensioning Unit - Dimensions	124
Pintle Point & Fixed Pintle - Dimensions	125
How to Order	125



# Shaft Clamping System (Easylock)



The Uhing-easylock<sup>®</sup> is fitted with a clamping ring which is increasingly offset to the shaft with which it engages in response to axial or tensioning forces, so creating an increasing friction contact. The greater the tensioning force, the greater the clamping effect of the ring.

As the roll or spool is held firmly between the fixed cone and the clamping cone, braking moments are able to be transmitted from the shaft to the roll or spool. The machine can thus be quickly stopped if a fault occurs.







# lechna SHAFT CLAMPING SYSTEM

## Applications



Packaging



Winding



Tensioning of Spools

#### Fast, safe, reliable

- Shortest possible changeover times
- Suitable for static applications
- Modular system ensures simple adaptation to the task at hand
- No tools required
- Single handed operation
- High tensioning forces on a plain round greaseless shaft



Driven Shaft



Tensioning of Rolls

- Suitable for use with driven shafts
- Simple transmission of braking moments to the roll or spool, emergency stop secure
- Compact, symmetrical design
- Maintenance free
- Resistant to vibration

## **Optional Positive Release**

If the Easylock is locked against a spool with the tensioning wheel fully turned back, then removal could be difficult if the spool expands during winding.

With the positive release option the Easylock does not grip the shaft until you have turned the tensioning wheel forward. This ensures you always have space to unwind the tensioning wheel in cases where the spool expands.

The positive release option is available for shaft diameters 22-40mm.



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## Operation

## **1** - Tensioning

Turn the tensioning wheel forwards by approx. 2 to 3 rotations. Press locking ring and tensioning wheel apart before sliding onto shaft (see sketch).

Push the clamping pintle up against the roll.

Set the desired tension by turning the tensioning wheel.

## 2 - Releasing

Reduce the clamping pressure by turning the tensioning wheel in the opposite direction.

Press locking ring and tensioning wheel apart and pull the clamping pintle off the shaft.





## **Types and Dimensions**

Tensioning Unit S







\* If the clamping pintle cannot be released immediately, turn the tensioning wheel backwards while simultaneously pushing against the roll.

The tensioning wheel and the locking ring must have been separated beforehand.

#### Please note:

The surface hardness required for the shaft is  $\geq$  55 HRC, tolerance in diameter h6 - h8, surface roughness Ra  $\leq$  0.35 µm. The shaft must not have any chemical or surface treatment.



Order Ref.	Ød	а	Øb	Øc	е	Øf	h	Tension (N)	Weight (kg)
ELIII-10-S00	10	42	90	52	15	52	2	400	0.23
ELIII-12-S00	12	45	90	52	15	52	2	500	0.21
ELIII-15-S00	15	42	90	52	15	52	2	700	0.23
ELIII-16-SOO	16	47	90	52	15	52	2	800	0.26
ELIII-20-S00	20	45	90	52	15	52	1	1000	0.25
ELIII-22-S00	22	45	90	52	15	52	1	1000	0.24
ELIII-25-S00	25	63.5	127	67	20	86	-	1800	0.72
ELIII-30-S00	30	63.5	127	67	20	86	-	2800	0.76
ELIII-35-S00	35	70.5	180	76	24	111	1	4000	1.50
ELIII-40-S00	40	70.5	180	76	24	111	1	5000	1.60

## Dimensions for connection of Pintle Points (K) to Tensioning Units (S)

	Order Ref.	Øa	Øa <sup>G7</sup>	Øc	d	е	f	Øg	Øh	α (max.)	k (min.)	р	
<del>, , †</del>	ELIII 10-S00	30	37	<b>40.3</b> <sup>+0.1</sup>	2.7	<b>2.5</b> <sup>-0.2</sup>	<b>7.0</b> <sup>-0.1</sup>	37	2	35°	5	0.5x45°	
↑	ELIII 12-S00	30	37	<b>40.3</b> <sup>+0.1</sup>	2.7	<b>2.5</b> <sup>-0.2</sup>	<b>7.0</b> <sup>-0.1</sup>	37	2	<b>30</b> °	5	0.5x45°	
Øc Øc	ELIII 15-S00	<b>38</b> -1	42	45.3 <sup>+0.1</sup>	2.7	<b>2.5</b> <sup>-0.2</sup>	9.0	42	2	<b>70</b> °	3	0.5x45°	
	ELIII 16-S00	47	52	55.3 <sup>+0.1</sup>	4.0	<b>2.5</b> <sup>-0.2</sup>	9.5	52	2	30°	6	1.5x45°	
	ELIII 20-S00	<b>46</b> <sup>+0.5</sup>	52	55.3 <sup>+0.1</sup>	4.0	<b>2.5</b> <sup>-0.2</sup>	9.5	52	2	55°	7	1.5x45°	
ļļļ	ELIII 22-S00	<b>46</b> <sup>+0.5</sup>	52	55.3 <sup>+0.1</sup>	4.0	<b>2.5</b> <sup>-0.2</sup>	9.5	52	2	55°	7	1.5x45°	
ł	ELIII 25-S00	<b>57</b> <sup>+1</sup>	65	68.3 <sup>+0.1</sup>	<b>2.7</b> <sup>-0.3</sup>	<b>2.5</b> <sup>-0.2</sup>	7.0	65	2	25°	11	0.5x45°	
	ELIII 30-S00	<b>64</b> <sup>+1</sup>	72	<b>79.0</b> <sup>+0.2</sup>	4.3	<b>4.5</b> <sup>+0.1</sup>	12.0	72	4	<b>60</b> °	6	0.5x45°	
	ELIII 35-S00	<b>73</b> <sup>+1</sup>	85	<b>91.6</b> <sup>+0.1</sup>	4.7	<b>4.5</b> <sup>+0.1</sup>	13.0	85	4	45°	10	0.5x45°	
	ELIII 40-S00	<b>70</b> <sup>+1</sup>	100	<b>107.0</b> <sup>+0.1</sup>	7.1	<b>4.5</b> <sup>+0.1</sup>	18.0	100	4	45°	5	0.5x45°	
	All dimensions in mm												

# echna Shaft Clamping System

## Pintle Point K







Order Ref.	Ød	n <sub>max.</sub>	Order Ref.	k	ØI	Øm	Weight (kg)	Order Ref.	k	ØI	Øm	Weight (kg)
ELIII-10-K	10	12	60	33	13	47	0.03	61	33	29	64	0.13
ELIII-12-K	12	12	60	37	13	54	0.07	61	37	28	69	0.17
ELIII-15-K	15	12	60	37	16	54	0.06	61	37	30	69	0.16
ELIII-16-K	16	16	60	42	21	59	0.08	61	38	38	77	0.19
ELIII-20-K	20	16	60	42	21	59	0.07	61	38	45	85	0.27
ELIII-22-K	22	16	60	42	23	63	0.08	61	38	45	85	0.27
ELIII-25-K	25	18	60	42	30	74	0.12	61	41	56	98	0.42
ELIII-30-K	30	18	60	50	35	89	0.22	61	50	60	115	0.64
ELIII-35-K	35	20	60	59	40	105	0.34	61	59	65	129	0.90
ELIII-40-K	40	23	60	69	45	117	0.54	61	65	88	159	1.71

All dimensions in mm

## **Fixed Pintle F**





Order Ref:	Ød	а	Øb	SW	Order Ref.	f	Øg	Øh	Weight (kg)	Order Ref.	f	Øg	Øh	Weight (kg)
ELIII-10-F	10	10	32	3	70	33	11	47	0.12	71	33	29	64	0.20
ELIII-12-F	12	10	32	3	70	33	13	54	0.14	71	37	28	69	0.25
ELIII-15-F	15	12	40	4	70	37	16	54	0.20	71	37	30	69	0.28
ELIII-16-F	16	12	40	4	70	42	21	59	0.27	71	38	38	77	0.39
ELIII-20-F	20	12	45	4	70	42	21	59	0.27	71	38	45	85	0.44
ELIII-22-F	22	12	45	4	70	42	23	63	0.27	71	38	45	85	0.43
ELIII-25-F	25	12	50	4	70	42	30	74	0.35	71	41	56	98	0.63
ELIII-30-F	30	12	56	4	70	50	35	89	0.49	71	50	60	115	0.91
ELIII-35-F	35	12	63	4	70	59	40	105	0.75	71	59	65	128	1.31
ELIII-40-F	40	14	70	5	70	69	45	117	1.14	71	65	88	158	2.32

All dimensions in mm

## How to Order



#### Notes

• Items can be ordered separately or in combinations, as required.

• The O-Ring is always part of the pintle point.

• Maximum operating temperature 80°C.

• Other sizes upon request.

• The torque between shaft and roll/spool is transmitted through the fixed pintle only.