



## ICE-Trade sa

International Conveyor Equipment & Trading

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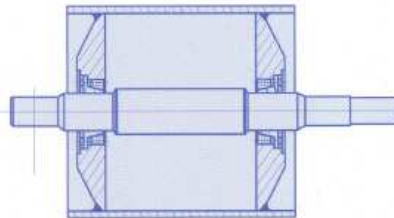
[www.ice-trade.com](http://www.ice-trade.com)

## ICE-Trade Pulley's

### Axle / flange executions

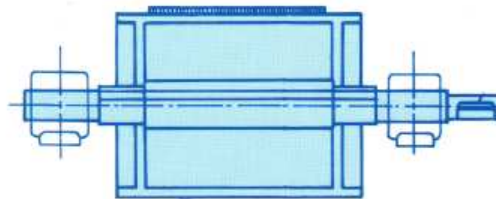
#### Cone clamp

- this is the **only** system which allows axle exchange in case of shaft damage
- the cone clamp can take up an enormous torque and is therefore suitable for all pulley's



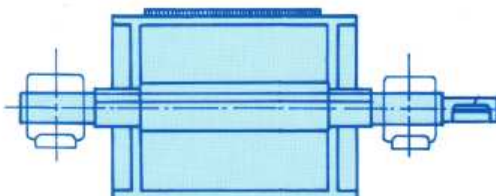
#### Welded axle

- the cheapest shaft / flange version is the welded axle
- big disadvantage is that the molecule structure of the axle changes during welding which can cause shaft breaking when over-tensions appear



#### Shrink fit flange, our specialty !!

- the best alternative for a welded axle is the shrunken flange on the shaft
- the hole in the flange has a smaller diameter, with a tolerance, than the axle
- by heating up the flange, the hole is expanding
- after installing the flange on the shaft and letting it cool down the flange is unmovable fixed on the axle
- this does not change the structure of the shaft and is therefore the best alternative for welded axles



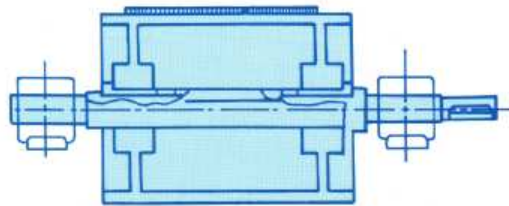


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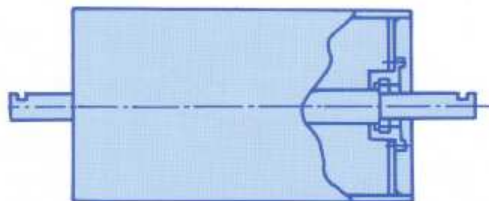
### Key Axle / flange

- older system, which needs more machining and is therefore expensive
- the axle is not exchangeable, because of contact corrosion and rust
- once installed it's fixed forever ....



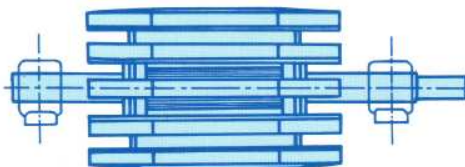
### UCFC Bearing

- for pulley's which do not allow installation of standard bearing blocks because the installation is too narrow, or there is no place for
- the UCFC bearing is bolted on the flange



### Elevator pulley

- execution with or without a double cone inside



### Axle materials

- depending the effort on the axle, the axle material is chosen
- shafts are designed with generous fillet radii between changes of section and fine finish to achieve minimum tension and avoid stress raisers





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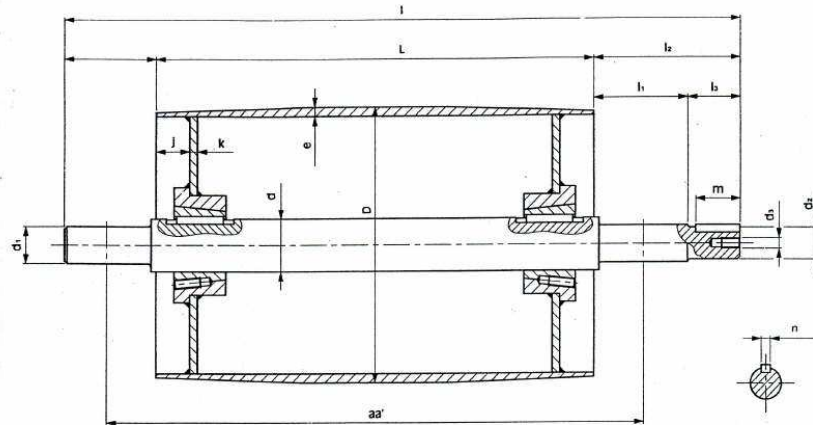
## Pulley tube

### Standard dimensions

ø D	133	159	219	245	300	324	355	406	508	609	712	812
thickness e	4	4,5	5,9	6,3	7,1	7,1	8,0	8,8	11	12,5	12,5	14
k	10	10	10	10	10	10	10	10	15	15	15	15
j	40	40	40	40	50	50	50	60	70	70	70	70

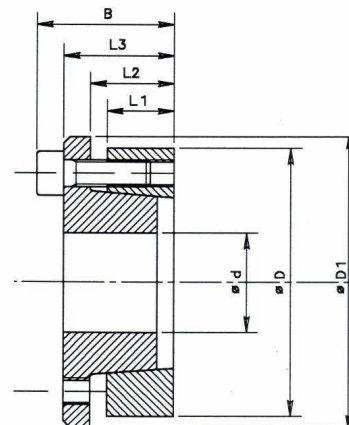
Other dimensions: on request.

Please note that the above diameters are without machining the tube !



The above pulley has the Vecobloc system, which is also available.  
This older system is a combination of the key axle and a bikon system.  
Nowadays we install a Cone Clamp instead of the Vecobloc system for the following reasons :

- less machining hours
- axle remains exchangeable



The Cone Clamp, shaft-to-hub connection.

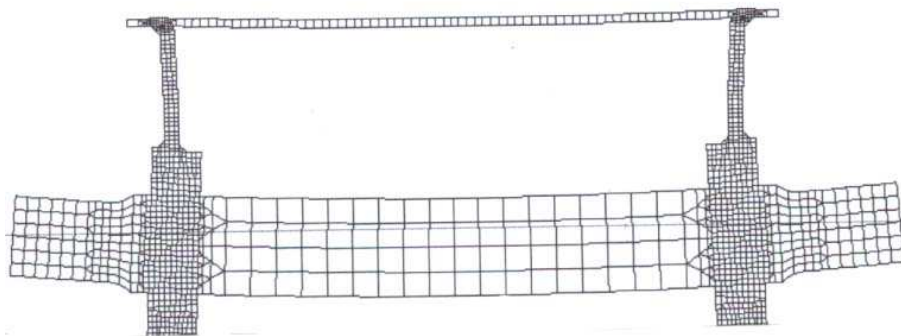


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Besides the standard tube size for pulley's we are able to produce other dimensions on request.

We use the CAD system to design the pulleys and the computer program Castor, to calculate the forces in the finished elements of the pulley.



### **Pulley execution**

- steel
- stainless steel
- according customers specification



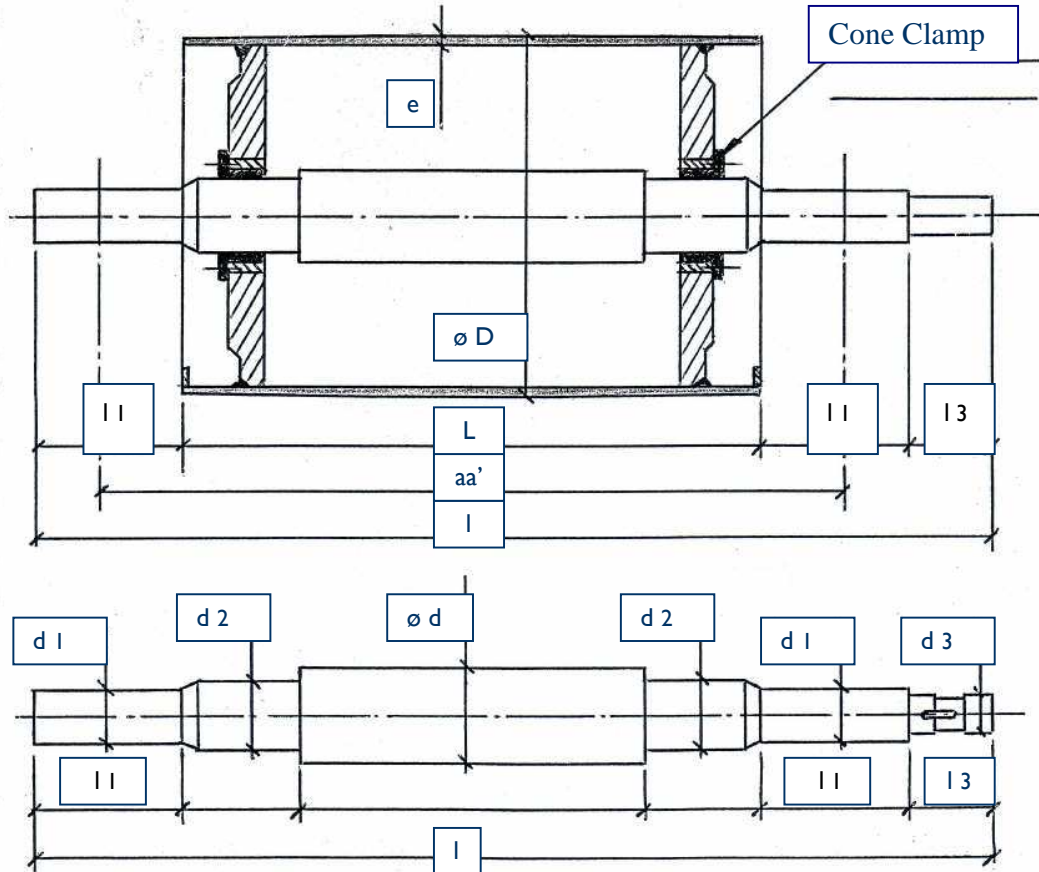
Pulley with shrink fit flange



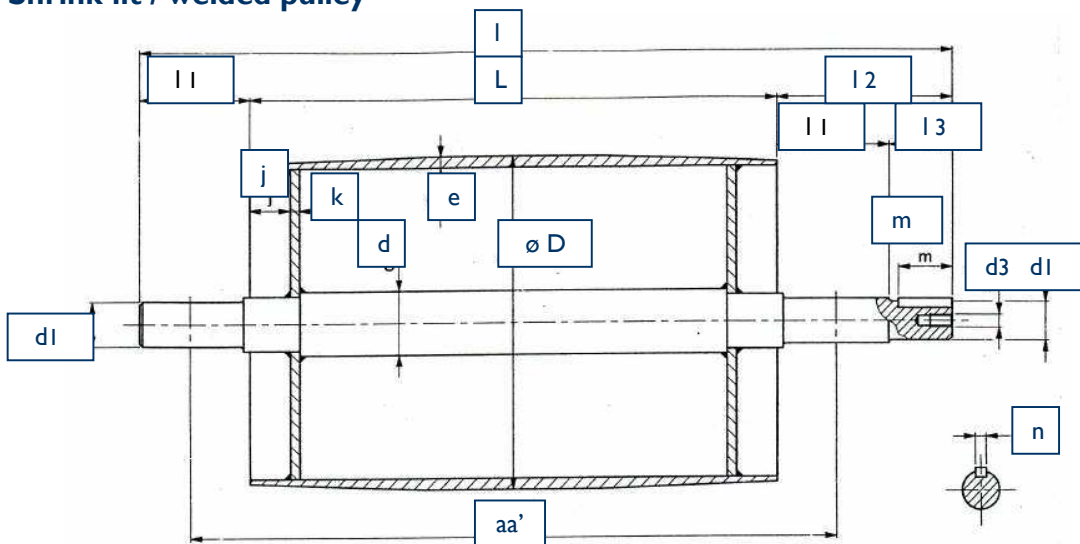
Drum with cone clamp

**Dimensions**

**Pulley with Cone Clamps**



**Shrink fit / welded pulley**





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## Inquiry information

### Type of pulley

drive		*
tail		*
snub		*
tension		*
other		*

### Pulley tube

ø D		
L		
crowned	yes / no	*
cylindrical	yes / no	*
e		
j		
k		

### Axle dimensions

ø d	
ø d1	
ø d2	
ø d3	x
l	
l1	
l2	
l3	
m	
n	
aa'	
cone clamp	*
welded	*
shrunk	*
UCFC	*
other	*

### Bearing blocks

brand	SKF	*
type		
bearing n°		

### Pulley lagging

Shore	
diamond	
smooth	
thickness	
hot / cold vulcanized	
other	

For the different qualities of pulley lagging please consult the separate data sheet.



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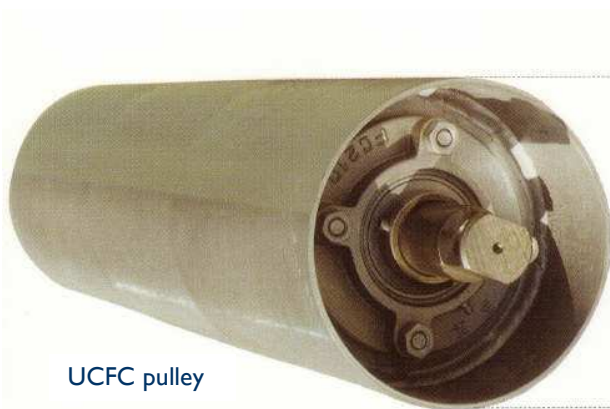
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### Pulley calculation

Calculation of all the tensions of the finished elements of the pulley.

For calculation of the dimensions of the pulley, axle, drum end discs and the welding we need the following information :

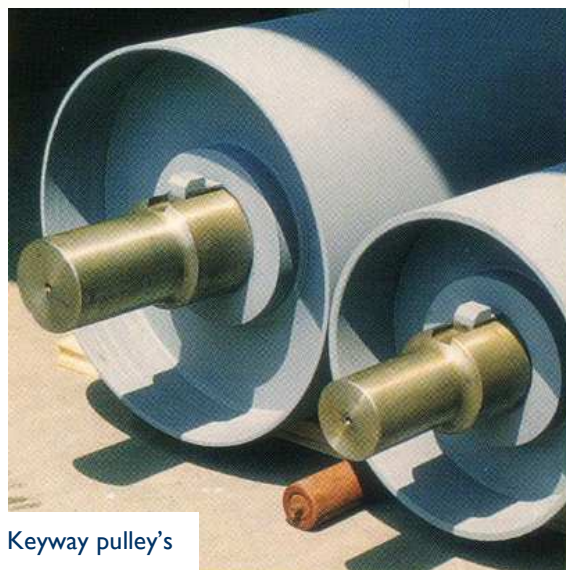
installed kW	
RPM	
belt speed	m/s
belt width	mm
tonnage / h.	
pulley diameter	mm
type of pulley	



UCFC pulley



Shrink fit drums ready for sea freight



Keyway pulley's

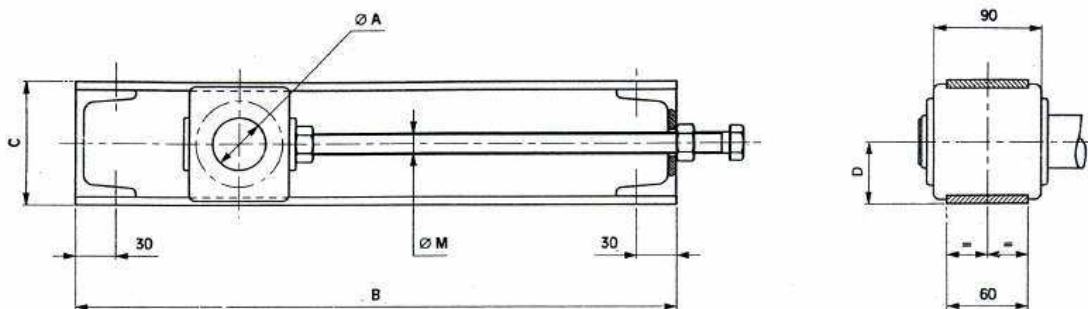


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**Pulley Tension Systems LD**

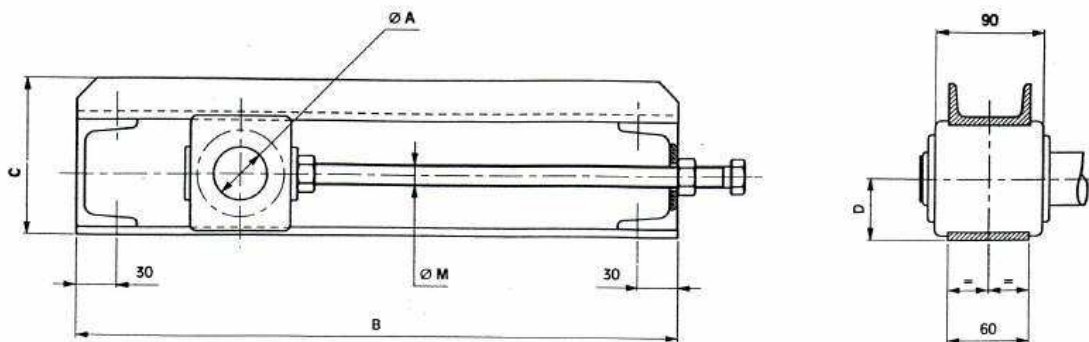
OT 121



standard version								
C	D	Ø M	Ø A	tension length	B min. - max.	C	D	Ø M
100	50	20	30	B - 200	400 - 1000	120	50	20
100	50	20	40	B - 200	400 - 1000	120	50	20
100	50	20	50	B - 200	400 - 1000	120	50	20
120	60	30	60	B - 200	400 - 1000	140	60	30
120	60	30	70	B - 200	400 - 1000	140	60	30

reinforced version

OT 122



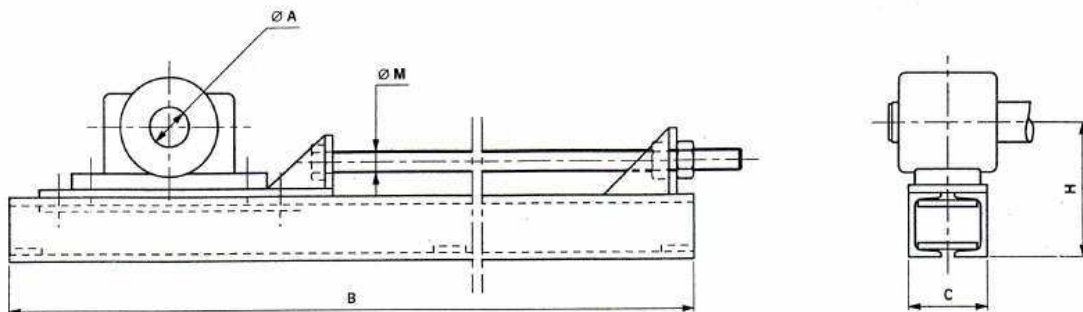


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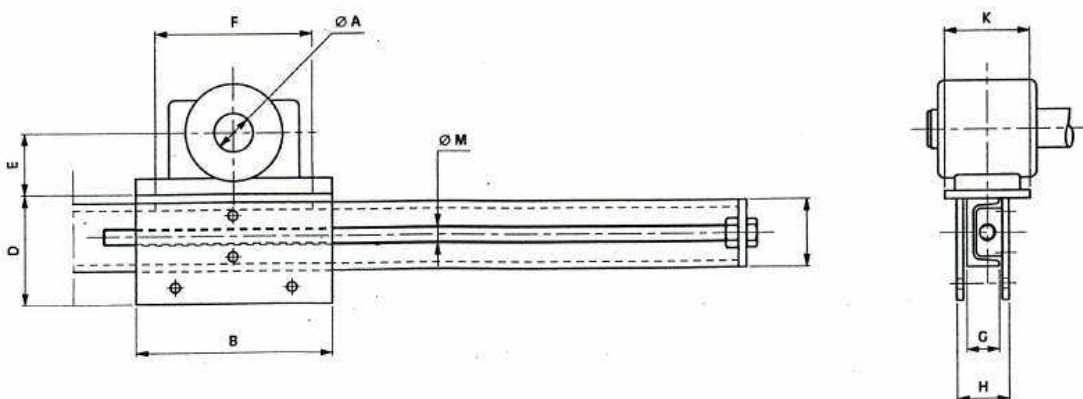
### Pulley Tension Systems HD

OT 130



Ø A	tension length min. - max.	B	C	H	Ø M
70	200 - 800	1400	125	215	30
80	200 - 800	1430	125	220	30
90	200 - 800	1470	130	232	30
100	200 - 800	1500	130	245	30

OT 140



Ø A	tension length min. - max.	B	D = C +	E	F	H = G +	K	Ø M
70	200 - 750	340	50	95	260	25	120	30
80	200 - 730	370	50	100	290	25	120	30
90	200 - 710	400	50	112	320	25	140	30
100	200 - 690	430	50	125	350	25	140	30

For further information, please contact us.