technical

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simple yoke pulley for rope

ref.: **T 6078 GB** rev.: date: **Sept 07** page: 1/2

Applications

DD simple yoke pulleys are return pulleys for rope dedicated to slow applications. They permit lifting or rope deviation - without limit on use height or distance

They can be suspended to a fixed or mobile anchorage point with the right strength corresponding to the required load.

DD pulleys are fitted with a swivel hook which ensures good positioning of the pulley regarding the rope.

Description





A hook with safety latch is installed on the DD pulleys to ensure a quick and safe attachment.

DD pulley is a non opening block: rope is installed by pulling one of its end between bearing flanges. Important height of bearing flanges permits easy installation of the rope and ensures space for splice.

The cast iron sheave is rotation free.

Dimensional characteristics

WLL* on suspension kg	WLL* on a leg kg	Ro	ope Ø	Sheave ext. Ø	Bottom of groove Ø	Groove Ø	Hook bowl to top	Overall width	Weight kg	Ref.
0		min	max	E	F	G	н	K		
250	125	15	17	80	63	18	191	55	0,8	D040D
500	250	17	19	100	80	20	236	65	1,8	D042D
1000	500	23	25	160	131	25	68	76	3,4	D046D

* Working Load Limit



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simple yoke pulley for rope

Technical characteristics

- Ultimate load is 4 times the working load limit (WLL).
- Zinc bichromated coating.

Non-conform uses

- NEVER USE FOR PERSONNEL LIFTING.
- Always use suitable rope (size, length and capacity)
- Strictly forbidden to either be under or to walk under the load.
- The block should be regularly inspected (priory checking: parts correctly assembled, no excessive movement, no excessive wearing or corrosion, no deformation, no weld corrosion or cracking, free rotating sheave).
- Prior to using the block, check for proper position and locking of the snatch block.
- Never use a block with a hook as headfitting without ensuring that the safety latch is correctly operated and free from deformation.
- For lifting operations, the user must refer to the safety rules and regulations applicable to this issue.
- The operator is not authorised to release the rope or leave equipments out of control when a load is hanged up on a pulley.
- Never install a Charlet return pulley as a hook block on lifting equipments (crane, hoist, ...).

Calculation of loading of a snatch blocks

The maximum Working Load Limit (WLL) written on the side of the block is the maximum load that should be exerted on the block and its connecting fitting.

This total load value F varies with the angle (α) between the incoming and departing lines to the block. The following table indicates the factor to be multiplied by the line pull to obtain the total load F on the block.



Angle α	Effort applied on suspension "F"					
0°	winch WLL x 2					
15°	winch WLL x 1,98					
30°	winch WLL x 1,95					
45°	winch WLL x 1,85					
60°	winch WLL x 1,73					
90°	winch WLL x 1,41					
120°	winch WLL x 1					
150°	winch WLL x 0,52					
180°	winch WLL x 0					

Always ensure : F < pulley WLL F < anchoring point resistance.



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DE

sheet

rope building site pulley

Applications

Rope building site pulley D039E is a manual return pulley for rope, with 22 to 30 mm diameter.

It permits manual lifting - without limit on use height (limit on height only depends on length of the rope) - of compacts loads, safe (ensure that nothing can fall during lifting), with 40 kg weight maximum (for example: seals of mortar/sand/rubbish/painting...).

The polyamide sheave (\emptyset = 200 mm) is rotation free. It resists to corrosion and permits lightness of the pulley.

The wide upper hook can easily be hanged on any suspension points and particularly on tubes of a scaffolds.

DE pulley is fitted with a swivel hook which ensures good positioning of the pulley regarding the rope.





Description

A hook with safety latch is installed on the DE pulleys to ensure a quick and safe attachment. In case of use on scaffold tubes ensure tube is fitted with a stop point in order to avoid the pulley slips out of its hanging point.

Mechanical resistance of anchorage point of a contractor's pulley D039E must at least accept 80 kg.

DE pulley is a non opening block: rope is installed by pulling one of its end between bearing flanges. Important height of bearing flanges permits easy installation of the rope and ensures space for splice. Sheaves polyamide: nylatron.



Dimensional characteristics

	WLL* on a leg ka	Rope Ø		Out. Sheave Ø	Hook bowl to top	Overall thick.	Weight ka	Ref.
		min	max	E	н	K	-	
	40	22	30	200	370	68	1,6	D039E
1	* Working La	ad Lim	nit				Dimensi	ions in mm



WLL on leg is the maximum weight that can be lifted with a DE pulley.







DE

Technical characteristics

- Ultimate load is 4 times the working load limit (WLL).
- Zinc coating.

Non-conform uses

- NEVER USE FOR PERSONNEL LIFTING.
- Always use suitable rope (size, length and capacity)
- Strictly forbidden to either be under or to walk under the load.
- The block should be regularly inspected (priory checking: parts correctly assembled, no excessive movement, no excessive wearing or corrosion, no deformation, no weld corrosion or cracking, free rotating sheave).
- Prior to using the block, check for proper position and locking of the snatch block.
- Never use a block with a hook as head fitting without ensuring that the safety latch is correctly operated and free from deformation.
- For lifting operations, the user must refer to the safety rules and regulations applicable to this issue.
- The operator is not authorised to release the rope or leave equipments out of control when a load is hanged up on a pulley.
- Never install a Charlet return pulley as a hook block on lifting equipments (crane, hoist, ...).

Calculation of loading of a snatch blocks

The maximum loading on suspension of the block varies with the angle (α) between the incoming and departing lines to the block. The following table indicates the factor to be multiplied by the loaded line to obtain the total load F on the block.



Angle α	Effort applied on suspension "F"
0°	load x 2
15°	load x 1,98
30°	load x 1,95
45°	load x 1,85
60°	load x 1,73
90°	load x 1,41
120°	load x 1
150°	load x 0,52
180°	load x 0

Always ensure :

F < anchoring point resistance. For a D039E pulley, maximum loading on suspension is 80 kg.





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DB

Poulistop

Applications

Poulistop is a non-opening return pulley for hemp or textured polypropylene rope, with 20 to 26 mm diameter.

It permits manual lifting - without limit on use height (limit on height only depends on length of the rope) - of compacts loads, safe (ensure that nothing can fall during lifting), with 40 kg weight maximum (for example: seals of mortar/sand/rubbish/painting...).

Poulistop sheave ($\emptyset = 250$ mm) is designed with a trapezoidal profile which limits sliding of the rope. It is also fitted with an <u>exclusive safety</u> <u>catch</u> which mechanically stops rotation of the sheave on laying down direction: operators can release between 2 tractions on the rope and lift loads in safe conditions.

The swivel wide upper hook can easily be hanged on any suspension points (particularly on tubes of a scaffolds) and ensures good positioning of the pulley regarding the rope.



Description

A sticker on each **Poulistop** indicates the side on which the load must absolutely be located in order to ensure good functioning of the safety catch. The **Poulistop** braking device only allows the operator to make a brake during lifting or laying down of loads.



• <u>During lifting of a load</u>: **Poulistop** naturally blocks the sheave to avoid fall of the load in case of release of the rope. To reverse rotation of the sheave, the operator must have a light traction on the rope so that to swing the safety locking catch on the sheave.

• <u>During laying down of the load</u>: stop of the **Poulistop** sheave requires operator action, slowly pull on the rope and then and let it go back until the sheave is blocked.

A hook with safety latch is installed on the pulley to ensure a quick and safe attachment. In case of use on scaffold tubes ensure tube is fitted with a stop point in order to avoid the pulley slips out of its hanging point.

Mechanical resistance of anchorage point of a **Poulistop** must at least accept 80 kg.

This pulley is a non opening block: the rope is installed by pulling one of its end between bearing flanges. Important height of flanges permits easy installation of the rope and ensures space for splice.

Technical characteristics

- Ultimate load is 4 times the working load limit (WLL).
- Coating : blue painting.







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Poulistop

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WLL on leg*	Rope Ø		Out. Ø	Width Hook top		Overall thickness	Weight kg	Ref.
rg	min.	max.	Е	L	н	K		
40	20	26	250	255	465	70	6,8	D035B
Working Load Limit Dimensions in mm								

Working Load Limit

WLL on leg is the maximum weight that can be lifted with a **Poulistop**.

Non-conform uses

- **NEVER USE FOR PERSONNEL LIFTING.**
- Always use suitable rope (size, length and capacity)
- Strictly forbidden to either be under or to walk under the load.
- The block should be regularly inspected (priory checking: parts correctly assembled, no excessive movement, no excessive wearing or corrosion, no deformation, no weld corrosion or cracking, good functioning of braking of the sheave).
- Prior to using the block, check for proper position and locking of the snatch block.
- Never use a block with a hook as head fitting without ensuring that the safety latch is correctly operated and free from deformation.
- For lifting operations, the user must refer to the safety rules and regulations applicable to this issue.
- The operator is not authorised to release the rope or leave equipments out of control when a load is hanged up on a pulley.
- Never install a Charlet return pulley as a hook block on lifting equipments (crane, hoist, ...).

Calculation of loading of a snatch blocks

The maximum loading on suspension of the block varies with the angle (α) between the incoming and departing lines to the block. The following table indicates the factor to be multiplied by the loaded line to obtain the total load F on the block.



Angle α	Effort applied on suspension "F"					
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30°	load x 1,95					
45°	load x 1,85					
60°	load x 1,73					
90°	load x 1,41					
120°	load x 1					
150°	load x 0,52					
180°	load x 0					

Alwavs ensure:

F < anchoring point resistance

For a **Poulistop**, maximum loading on suspension is 80 kg.



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Lyon's Rope Block

Applications

The Lyon's rope blocks permits lifting or deviation, without height or distance limits (these limits depend only on the length of the rope / wire-rope)

The Lyon's blocks are composed in two parts :

• An upper block, equipped with a becket and destined to be installed on a anchoring point (fixed or mobile)

• A lower block on which the load to be lifted or deviated is installed

These 2 parts, assembled on a rope, constitute together a device which limits the work load.

The block's cast iron and nylon sheaves are rotation free. The block's suspension is fitted with a swivel hook with safety latch.





Description

The Lyon's rope blocks are delivered without a rope.

This device is a non opening block: the rope is installed by pulling one of its ends between bearing flanges. To finish the assembly, fix the end of the cords in a secure way (with a shackle for instance) at the becket of the upper hook.

The block with the becket (rep. 1) has to be placed on the anchorage point and the other block takes the load. (rep. 2)The blocks are equipped with a security latch for an easy and quick placement.

It is important to control if the anchoring point (fixed or mobile) of the upper part of the block meets the required minimum mechanical resistance and that it assures that the device can not slip out of its hanging point (translation stop).

Technical characteristics

- Ultimate load 4 times the Working Load Limit (WLL).
- Zinc bichromated coating as finishing.



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Moufles Lyonnaises

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Caractéristiques dimensionnelles

WLL* kg	Ø Rope / wire- rope	Number of sheaves	Ext .Ø Sheave	Hook bowl to top	Overall thickness	Flange's length	Weight/ pair kg	Ref.	
	Topo							(4)	
125	8	3	32	147	47	35	0,7	D080L())	
160	10	2	40	182	45	45	0,9	D082L ⁽¹⁾ D083L ⁽²⁾	
250	10	3	40	188	59	45	1,3	D085L ⁽¹⁾ D086L ⁽²⁾	
320	12	2	50	212	57	55	1,8	D088L ⁽¹⁾ D089L ⁽²⁾	
500	12	3	50	211	74	55	2,4	D091L ⁽¹⁾ D092L ⁽²⁾	
* Work	* Work Load Limit at lifting the block Dimensions in mm								



* Work Load Limit at lifting the block

⁽¹⁾ types with nylon sheaves / ⁽²⁾ types with cast iron sheaves

Unallowed utilisations

• NEVER USE FOR PERSONNEL LIFTING.

- The operator is not authorised to release the rope when a load is attached.
- It is strictly forbidden to either stand or walk under the load.
- Always use an appropriate rope (size, length and capacity)
- Always suspend the load at the block's side without the becket (rep. 2)
- Never use the rope block without a prior check of it's good state. (Pay special attention to : presence of all components, wobble and excessive clearance in the sheave and free rotation, no deformations)
- Never use the rope block without prior verification that the hook's security latch is present and in perfect state.
- Ensure that the load and the anchoring point of the device are aligned freely

• Charlet rope blocks allow operations with a high safety level. Make sure that the people in charge meet the safety requirements of these operations.

Determination of the load at the upper suspension

Mechanical resistance of the upper block's anchorage point must at least correspond to the WLL of the block's upper suspension :

Ref.	Sheave number	WLL of the lifting blocks (kg)	Load at the upper suspension (kg)
D080L	3 (nylon)	125	170
D082L	2 (nylon)	160	240
D083L	2 (fonte)	160	240
D085L	3 (nylon)	250	340
D086L	3 (fonte)	250	340
D088L	2 (nylon)	320	480
D089L	2 (fonte)	320	480
D091L	3 (nylon)	500	670
D092L	3 (fonte)	500	670

