

# PFEIFER Lifting Technology: Here you will find everything related to lifting and turning heavy loads.



PFEIFER SEIL- UND HEBETECHNIK GMBH

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# **Lifting and Turning Devices**



# **Coil handling**

### Coil turnover hook

#### with form-fit safety latch

For 90° turning, transportation and placement of strapped and form stable strip steel rings. The strip steel ring is gripped at its internal diameter and positively secured at the outside diameter by an adjustable lifting arm.





SWL					Dimensio	ons in mm					Weight	Reference no.
kg	A <sub>min</sub>	A <sub>max</sub>	В	D <sub>max</sub>	Н	М	N	V	W	Х	approx. kg	
500	25	60	650	600	1071	80	65	57	34	16	12	238570
1000	25	100	750	700	1203	80	65	57	34	16	15	238571
2000	50	200	750	700	1321	80	80	57	34	16	43	238572
3000	95	200	800	750	1490	100	100	115	50	22	100	238573
3500	100	230	800	750	1560	100	100	115	50	22	100	238574

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D max. = maximum winding thickness of the strip steel ring

A min. = minimum width of the strip steel ring;  $\dot{A}$  max. = maximum width of the strip steel ring

### **Coil Storage System**

To ensure proper and safe storage of slit coils of all kinds. Consisting of a trough-shaped storage unit and support posts to safeguard against tipping. Storage space can be expanded as required. Can be screwed to the factory floor. For slit coils with widths of 90 mm to 200 mm

The support posts can be pivoted outwards to make it easier to reposition them. 8 x anti-support posts are included in the delivery





SWL			Dimensions in mm			Weight	Reference no.	
kg	В	D <sub>min</sub>	D <sub>max</sub>	L	R	approx. kg		
20000	1320	700	1800	2000	84	460	235358	

### Internal wire coil grab

Mechanically operated triple-arm lifting grab, closes under load, with automatic hold-open device.

For transport of form stable, strapped wire coils, reinforcing steel coils, etc. with vertical axis.

Lever design, with load-dependent clamping force. Gripping pads in toothed design for safe transport

Automatic hold-open device

Suspension eye for suitable single hook according to DIN 15401





SWL					Dimensio	ns in mm					Weight	Reference
kg	A <sub>min</sub>	A <sub>max</sub>	С	Н	J <sub>min</sub>	J <sub>max</sub>	V	W	Х	Y	approx. kg	no.
3000	550	700	230	960	510	630	105	82	35	20	110	252265
5000	600	900	270	1130	575	745	105	82	35	20	235	252263



# **Coil hooks**





C-hook, 28 to, with storage stand



C-hook, with pin suspension



C-hook, 17,5 to with suspension ring









With 4/4 prong, i.e. the coil is supported by the prong in its full width. When charging in the load centre of gravity (centre of 4/4 prong), the coil prong orientates into a safety inclination of approx. 3-5° to the top. With ground inner radii for avoiding dangerous notch stresses With safety cam to protect the coil from sliding



With counterweight for a horizontal position of the prong when unloaded



With suspension eye for single crane hooks acc. to DIN15401

Also possible with suspension ring

### **Product options**



Suspension for twin hook acc. to DIN 15402

With 3/4 prong: the coil prong can be reduced to a maximum of 75 % of the coil width

Design without safety cam

For narrowest coil storage

Round protection cover for sensitive loads



With protection cover at the vertical inner side of the hook





**Storage stand** for tilt-free storage. Acc. to BGR 500, C-hooks and attachment devices must be stored in a way that they cannot tilt, fall down or slide



Automatic compensation between loaded and unloaded position at max. load centre of gravity



# **Telescope Coil Grabs**





Coil grab 48 to, suspension by sliding bolt with roller guiding and moveable coil supports



Coil grab 32 to with slewing drive and twin hook suspension



Grab for cable reels 14 to, gripping range from 950 to 2120 mm



Coil grab 34 to with slewing drive, light sensors, search of coil eye and protection cover at the inner side of the grab legs









patented

With cut-off lids for switching off the grab leg movement safely - displayed by signal lamps on the body when the load is positioned correctly.

Also possible by light sensors!

LED signal lamps on the body show the operative status to the operator

Suspension by sliding bolt, suitable for

a single hook acc. to DIN 15401



Safe handling of coils -

that's our strong

point!

preventing unintentional opening under load - displayed by signal lamps on the



Completely wired with electrical control in the switch box and with plug for the connection to your crane facilities





sistently adhere to the latest regulations EN and DIN as well as to the current prescriptions of

the BGR.



When developping, designing and manufacturing, we con-

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Solid, torsion-resistant steel body in case design. The lifting legs are driven by an endless, high-tensile roller chain on sliding guides in longitudinal direction.

The innovative restraint system with integrated crusher zone for your load!



# **Product options**



Integrated slewing gear for positioning the load with or without slewing range limitation. Upon request, with positional limit switch to cut the slewing movement off before limit stop.





Foldable pads for lifting tightly stored coils.

For cramped space conditions!



Telescopable pads for extending the grab opening to additonal small load dimensions, such as slit coils



Suspension for twin hook acc. to DIN 15402 or direct reeving in case of automatic operation



Impact protection at the inner sides of the grab legs. In order to reduce damage at the coils, there is an impact protection from polyurethane (similar to Secutex or Vulkollan) screwed at the inner side of the grab legs or safety rails.

Exchangeable supports from aluminium or plastic on the pads of the grab







Weighing device to determine the coil weight



**Grab leg drive by electric motor** with cylindrical gearing and high-tensile trapezoidal spindle.



**Detection of coil eye by sensors.** Search of coil eye in order to position the grab leg pads correctly. All in all 3 light barriers (sender-receiver-sender) are integrated and activated by a multiplexer. This enables absolutely safe detection of the inner coil opening



Front-end rollers integrated in the coil supports. Polyurethane protection rollers at the inner side of the grab legs so that sensitive cutting edges are not damaged when lowering the coil grab.



**Storage stand** with ladder and maintenance platform. Design in solid steel construction with ladder, grid platform and option for fixation on the floor.

#### All our lifting devices conform to the

**CE regulations** – with us, you're on the safe side! With the CE marks on our products we confirm to keep to all the relevant safety prescriptions of the Machinery Directive 2006/42/EG and we conduct the conformity evaluation

procedure. We certify these methods by the technical documentation including the necessary risk assessment.









# **Sheet Lifters**



### **Product advantages**



Electromechanical grabs for the safe and fast handling of your sheet stacks



Grab leg drive by roller chain or spindle drive unit

Applicable for various stack sizes by extendable and adjustable pads

Also in compact design in narrowest spaces

High operational safety by load safety device and other safety equipment

- Solid design for high number of load cycles
- Individual planning acc. to customer requirements



With horizontal slewing drive and adjustable supporting pads by electric motor



Manually telescopable supporting pads



Design without slewing drive with hydraulically adjustable pads



Design with horizontal slewing drive, impact protection and laser pointers for positioning the grab







Extra-large telescoping range of the outer supporting pads for long sheets



The load safety device prevents unintentional opening of the grab under load



With telescopable pads activated hydraulically or by an electric motor



When the legs approach the stack, cut-off lids or light sensors switch off the grab leg movement.



**Product options** 



Swivelling pads for reducing the necessary space between the sheet stacks



Design with horizontal slewing drive for easy positioning of the sheet stacks

Solid design with welded guiding house with two adjustable grab legs as well as telescopable supporting pads



# **Positioners**



#### **Product advantages**

For turning over most diverse loads gently!

Turn large and bulky goods rapidly and extremely safe from the horizontal to the vertical posisiton or vice versa

This is the end to slings and chains, which often damage the sensitive load edges, as well as sometimes adventurous and dangerous methods for turning the load.

Especially small need of space as loading and unloading is made from the same side



As the load is turned over in its centre of gravity, there are hardly any overturning moments, therefore the turnover process is extremely safe and gentle to the load.



Positioner 6 to for coils up to a diameter of 1700 mm and a width of 800 mm



Positioner 5 to with protection cover for coils up to a diameter of 1800 mm



Positioner 6 to for coils up to a diameter of 1200 mm and a coil width of 700 mm



Positioner 6 to for palletised slit coils up to a diameter of 1600 mm and a width of 700 mm





The PFEIFER turnover table consists of a base frame with a swivelling axis. At this axis, the support table is fixed. If the axis is swivelled by 180°, the load turns by 90°, the centre line of the swivelling axis running through the load centre of gravity. Thus, elaborate safety technique becomes needless.

Ask for our standard models!



The device is supplied completely ready to operate with a plug for the connection to your power supply (400 V - 50 Hz).



#### frequency converter for smooth start and stop.

control.



During the turnover process, a flashlight is activated for displaying the load movement.





Adaption of the support table to shape and dimension of the load

Operation (forward turning, reverse

turning, emergency stop) by radio

In order to turn the load gently, the turnover table is equipped with a

Modification package



Lifting possibility for the transport of the unloaded turnover table by fork lifters



Protection covers at the faces of the table surface

Protection package



For unpacking and packing loads on a pallet. Clearances in the table surface for loading and unloading the turnover table by means of a fork lift truck or C-hook



# **Turnover tables**



### **Product applications**



Adapter for separating steel sheets for the inspection of single sheets



Turnover table on a mobile rail vehicle



Turnover table 10 to with horizontal slewing equipment



Turnover table with clearances in the

support table

Lifting and turning devices



# Turnover table INVERTO



### General conditions of usage

- Slings and chains that often damage the load are not required!
- Adventurous and dangerous methods sometimes used to turn loads become redundant.
- Large and Bulky Loads can be turned quickly and safely without using a crane.



# **Product applications**



Suitable for Coils, injection and other moulds



and for many other loads!

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#### **INVERTO 8**

new!

#### **INVERTO 15**

**INVERTO 30** 

SWL kg 8000 SWL kg 15000 SWL kg 30000	SWL	Turning Time	Table Top I x b x h	Cut-Out Width	Weight	D-(		
	kg	approx. sec.	<b>i</b>	mm	approx. kg	Reterence no.		
	8000	35	1300×1000×1300	300	1300	1200	258129	
	-						·	
	SWL	Turning Time	Table Top I x b x h	Cut-Out Width	Table Height	Weight	Reference no	
	kg	approx. sec.		mm		approx. kg		
	15000	35	1500×1200×1500	400	830	2300	259925	
	(	I			· -··	1	r	
		lurning	lable lop	Cut-Out	lable			
SWI	SWL	Time	lxbxh	Width	Height	Weight	Poforonco no	
	kg	approx. sec.		mm		approx. kg	11616161166 110.	
	30000	60	2000×1500×2000	500	1100	4800	261309	

# **Basic equipment**

With one of the two mandatory Safety Packets: Fence with Safety Photo Sensor or Safety Switch Rail





Optional with 1 Cut-Out (centric)



Optional with 2 Cut-Outs (centric)

# **Product options**

Prism Support















Spring Cable Reel



INVERTO 8 with Safety Switch Rail Capacity 8000 kg Table Top with 1 Cut-Out With Prism Support and PU-Overlay

Example



# **Pulley blocks**





Pulley block with double hook acc. to DIN 15402



Pulley block 20 to



Pulley block 25 to



Pulley block 32 to



### **Product options**



Safety catches are generally prescribed. However, there are often considerable difficulties in activating the catches when attaching or taking the load out of the crane hook. This is extremely facilitated by the electromechanic safety catch. The catch at the load hook is activated by an electric cylinder. Activating the catch is possible in any hook position and during slewing movement.

Also with safety latch activated by spring resistance!





Limitating the slewing angle is reasonable when certain positons must be reached during taking up or down the load. It is however indispensable, when there is a load lifting device with electric supply.



Unlimited slewing range



Welded pulleys with roller bearing



Pulley block with battery power: the two battery blocks can be exchanged easily; with digital display of voltage and rest running time; approx. 1000 load cycles per charging.







Without slewing gear by electric motor



Exact weighing with compact construction size: The weighing equipment works precisely. A digital load display can be applied at the pulley block.



# **Spreader beams**

### Spreader beam for fork lift applications

- Fork lifter spreader beams made from fine-grained structural steel for heavy-duty applications
- Load suspension via central, swivel-eye, safety load hook (not for swivelling under load), option available with ball-bearing safety load hook for swivelling under load (extra charge)
- Locked onto the prongs by two tommy screws with ball-and-socketjointed compression discs
- With set-down legs at the side for easy pickup by the fork lift prongs and safe and compact storage

Modular spreader beams for particular lifting and transport processes. For slipping onto fork prongs or for direct pickup by the fork lift truck. Solid design made from steel section with welded pockets for fork lift prongs.





SWL				Weight	Poforonao no			
kg	A	В	E	Н	S	approx. kg	nelelence no.	
1000	600	55	180	240	22	13,0	171247	
2500	600	60	180	265	25	25,8	171248	
5000	600	60	180	350	34	32,0	171249	
10000	950	70	210	365	53	100,0	171250	

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### Adapter for fork lift prong

Lightweight construction for use by fork lift prong, with central swivel-eye, safety load hook\* and clampable tommy screws

SWL kg	fork lift truck width x height mm	Weight kg	Reference no.
1000	125×50	4	181062

 $^{\star}$  = not for swivelling under load! Optional hook rotatable under load available against additional charge!

Also available with SWL 2 or 3 tonnes - please enquire.

### Spreader beam for big-bag containers

Cross-shaped spreader beam made from fine-grained structural steel in closed, hollow section design with four-point suspension for suspending the big-bag loops directly over the hollow section (= low overall height).









SWL			Dimensio	ons in mm			Weight	Poforonoo no
kg	А	F	Н	V	W	Х	approx. kg	Reference no.
1000	900	900	185	53	56	18	24	201872
2000	900	900	215	63	67	22	32	201873



# Adjustable spreader beams





Spreader beam for precast concrete parts



System spreader beam for multi-crane operation



Heavy-duty spreader beam 80 to carrying capacity



Spreader beam with suspension for double crane hook and set-down legs





With centric suspension suitable for a single hook acc. to DIN 15401. Design as flame-cut eye or high-tensile suspension ring



Adjusting the necessary working length manually by hanging the adjustment straps into the grids by means of the handles



The adjustment straps are equipped with one **swivel safety hook each** (non-rotatable under load). At the adjustment straps there are **lateral flame-cut hooks**. Here you can place wire ropes or lifting belts.

Diagonal pull Diagonal pull possible up to 4.5 into the lateral hook!

### **Product options**



Spreader beam suspension for **twin** hook acc. to DIN 15402



**Storage stand** or alternatively set-down legs welded or screwed to the spreader beam



Adjustable crane hook suspension



Also as torsion-proof hollow-section design for extremely long loads



### Adjustable spreader beams Alpha

- Easy and well-established construction form at universal fields of application
- Attachment of most diverse loads possible by attachment points manually adjustable in pre-defined grids
- With suspension for single hook acc. to DIN 15401 and to the load by two adjustable swivel safety hooks
- Miscellaneous attachment options for belts or chains, diagonal pull possible up to 45°
- Designed acc. to DIN 13155 for 20000 load cycles or higher upon request

Multi-adjustable spreader beam for handling different loads.

**Optionally Available:** Flame-cut Suspension Eye, Screwable Set-down Legs, Lugs for Suspension via Double Stranded Chain Sling, Central Lug with Bore as an additional Attachment Point



SWL		Dimensio	ons in mm		Weight Beference no		Single Crane				
kg	A <sub>max</sub>	A <sub>min</sub>	К	S	approx. kg		Н	V	W	ØX	till No.
1000	1000	400	150	22	25	215445	533	120	70	14	4
1000	1600	700	150	22	30	215446	533	120	70	14	4
1000	2500	1000	150	22	38	215447	533	120	70	14	4
1600	1600	800	200	22	35	215448	564	120	70	14	4
1600	2500	900	200	22	47	215449	564	120	70	14	4
1600	3150	1150	200	22	55	215450	564	120	70	14	4
2500	2000	800	200	22	56	259913	641	140	80	16	5
2500	3000	1000	200	22	84	259967	641	140	80	16	5
2500	4000	1200	200	22	113	215453	641	140	80	16	5
4000	2500	1000	250	23	143	215454	740	135	75	18	5
4000	4000	1000	250	23	174	215455	840	135	75	18	5
6300	3000	1000	250	28	179	259969	880	160	90	23	6
6300	4000	1000	250	28	215	215458	880	160	90	23	6
10000	4000	1000	250	35	385	215460	1202	200	110	33	10
10000	5000	1500	250	35	470	215461	1202	200	110	33	10
10000	6000	1500	250	35	555	259971	1202	200	110	33	10
16000	4000	1000	400	43	430	215463	1380	260	140	36	16
16000	5000	1500	400	43	530	215464	1380	260	140	36	16
20000	3000	1000	250	53	690	259973	1610	260	140	36	16
20000	4000	1000	250	53	790	259974	1610	260	140	36	16

Also Manufactured to Customer Requirements!

#### **Optionally Available**

Addtional Price





# Spreader beams, longitudinally and laterally adjustable



#### **Product advantages**



System spreader beams for loads varying in lengths and widths





Four-point suspension of the load for high stability of shape and transport



Standard versions available from 2.5t 16t!

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With suspension for single hooks acc. to DIN 15401 and four adjustable eye hooks for the load



Individual manufacture acc. to customer's requirements!



Adjustable spreader beam with cross beams and 2-leg chain suspension



Adjustable spreader beam with cross beams with rope suspension for twin hooks



Adjustable spreader beam with cross beams for machinery components



Adjustable spreader beam with cross beams on top for low heights





Crosswise girders can be easily removed for space-saving storage and transport

Load attachment by four swivel hooks (non-rotatable under load)

Also possible with cross beams with joints!



With centric suspension suitable for a single hook acc. to DIN 15401. Design as flame-cut eye or alternatively by high-tensile suspension ring



Adjusting the necessary working length manually by placing the cross beams. The working width is adjusted by manual hanging the adjustement straps into the grids.

All our lifting devices conform to the CE regulations - with us, you're on the safe side! With the CE marks on our products we confirm to keep to all the relevant safety prescriptions of the Machinery Directive 2006/42/EG and we conduct the conformity evaluation procedure. We certify these methods by the technical

documentation including the necessary risk assessment.

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# Equalising spreader beams





Spreader beam with cross beams and compensation chain



Frame-shaped spreader beam for rectangular precast elements with compensation chain



Equalising spreader beam with adjustable suspension



Spreader beam with cross beams and compensation chain





With chain shortener, enabling to adapt the chain when not all the hooks are attached to the load. The shortener is positioned at the front end of the spreader beam.

# **Product options**



With adjustable suspension - manually or adjustable by an electric motor by irreversible spindle drive

Suitable for loads with asymmetric load distribution

Load attachment by eye sling hook (non-rotatable)

Fabrication acc. to individual customer requirements!

With rigid suspension by chain slings for loads with symmetric load distribution



# **Turnover spreader beams**



#### **Product advantages**



For turning and positioning bulky parts simply

Minimises the risk of injuries for your staff and the material stress of your crane to the greatest extent



Also available as single turning units!

Individual manufacture acc. to customer's

can be run through the driving rollers

Turnable endlessly, i.e. the connecting locks



Design with electric motor

Working length adjustable manually or by an electric motor

### **Product applications**



Turnover spreader beam with two rigid belt distances



Single turnover unit: electricity supply by batteries



requirements!

Design with adjustable units by electric motor



Heavy-duty design with chains for turning extremely heavy components



### **Product options**



With PU-coated lifting belts diminishing the sliding of the belts. Additional protection from sliding by enlarging the wrap angle by deflection rollers.

The connecting locks can be run through the driving rollers!





Turnover units with roller bearings for easy adjustment



Spreader beam in tube design for increasing the torsional strength



PU-coated belts for avoiding damage. The connecting locks are also available in coated design



Special connecting locks: can be opened easily and be run through the driving rollers of the turnover spreader beam



Design as single turnover units for double crane operation



With turnover units adjustable in pre-defined grids



# **Spreader beams**

Development, design and manufacture of spreader beams for individual loads, transport processes and crane systems.

- For loads of up to several 100 tonnes in weight.
- Fitted with all attachment devices on request.
- Load test and approval by an independent institute on request.

Frame-shaped spreader beam for transporting precast concrete elements of 45 t



Adjustable spreader beam for loads up to 180t with integrated load hooks



**Long-hook spreader beam** fitted with slewing gear for lifting and positioning loads up to 138t







**Pipe spreader beam** for transport of rotor blades for offshore wind turbines







Spreader beam for the transport of water turbines up to 250t

Spreader beams for loading locomotives



# **PFEIFER: Lifting equipment solutions**





### Our benefits for you:

- Confidence and experience – we have been occupying ourselves with job descriptions around lifting equipment for decades.

Individual advice – for

purchase of a lifting

during and after

equipment.

our customers before,

We are pleased to make an individual offer!

Highest safety standards – design and manufacture according to the current EN and DIN regulations.

