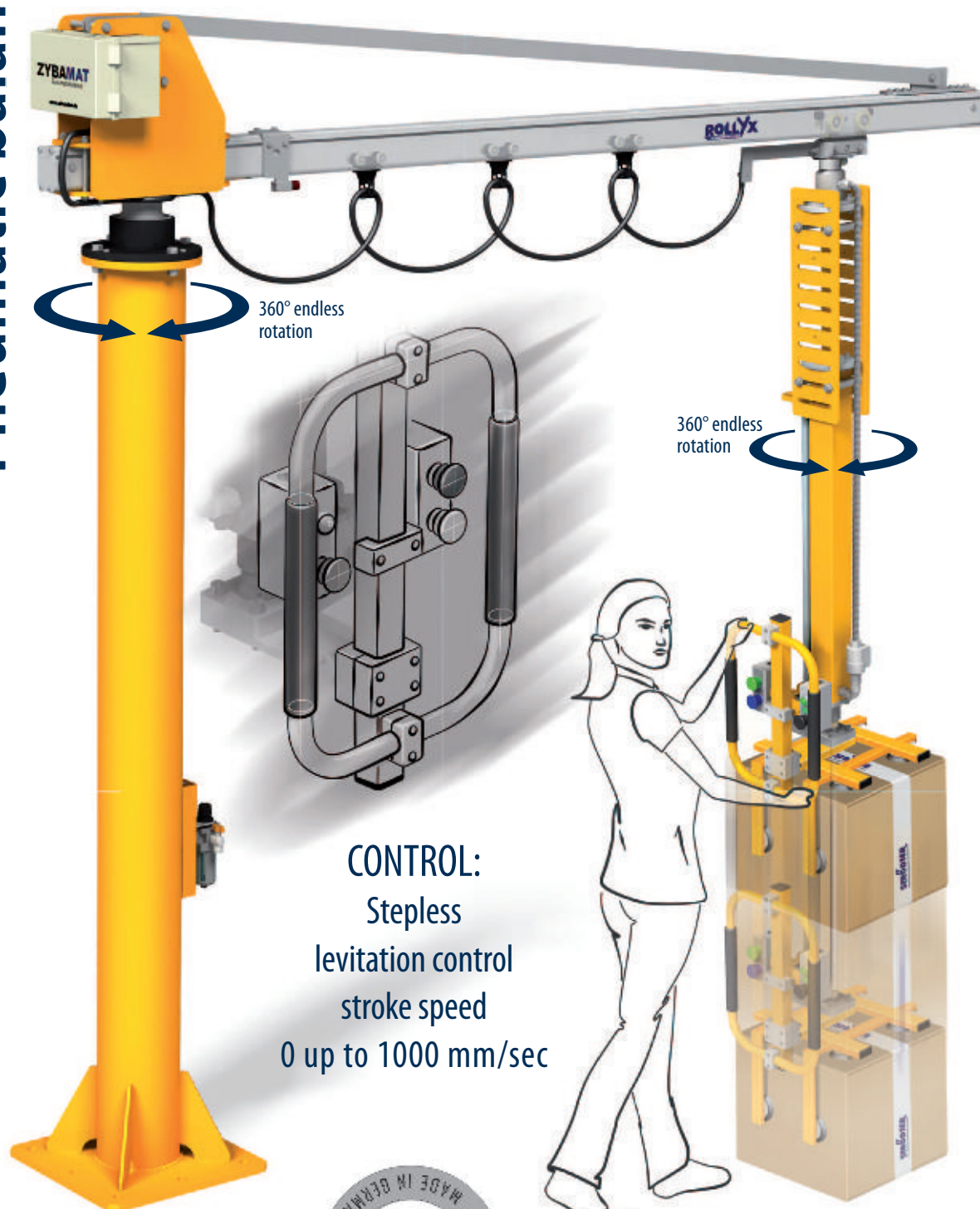


# ZYBAMAT

Pneumatic balancer

We get loads floating on air.



**STRODTER**  
Handhabungstechnik GmbH

## Floating handling

	Page
■ Floating handling	1-2
■ Precise handling	3-4
■ ZYBA-MAT	5-6
■ Load ranges	7-8
■ Assembly versions	9-10
■ Floor-mounted, suspended column	11-12
■ Versions for mounting on girders or walls	13
■ Rail designs	14
■ Accessories	15
■ Mounting	16
■ Maximum benefit	17-18
■ Operation handrail and controls	19-20
■ Stainless steel versions	21-22
■ Gripper technologies	23-24
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■ Application example      for suspended transport	27-28
■ Application example      for suspended transport	29-30
■ Application example      for suspended transport	31-32
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■ Smooth-running rail system	35
■ Info Strödter sales program	36
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■ Project sheet and request form	39

# Floating handling of load weights

We have made it our task to ease your handling of loads.

**ZYBA-MAT** provides you with a rather weightless handling of construction components and products.

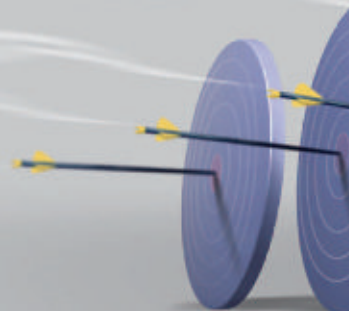
You can efficiently move all your product parts inside production plant and dispatch.

**PRECISELY  
FLOATING**



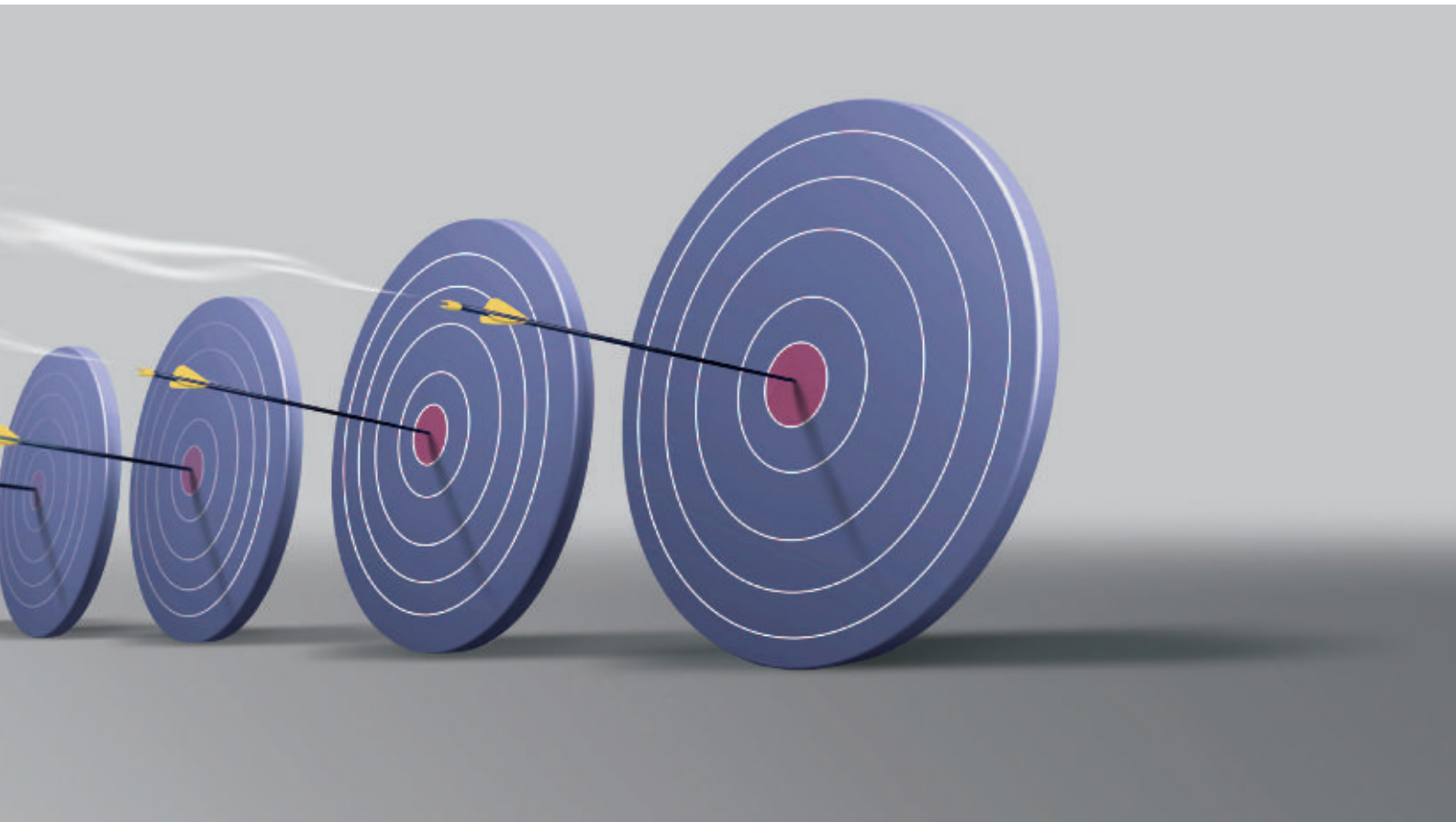
# PRECISE HANDLING OF LOAD WEIGHTS

ON TARGET  
PINPOINT



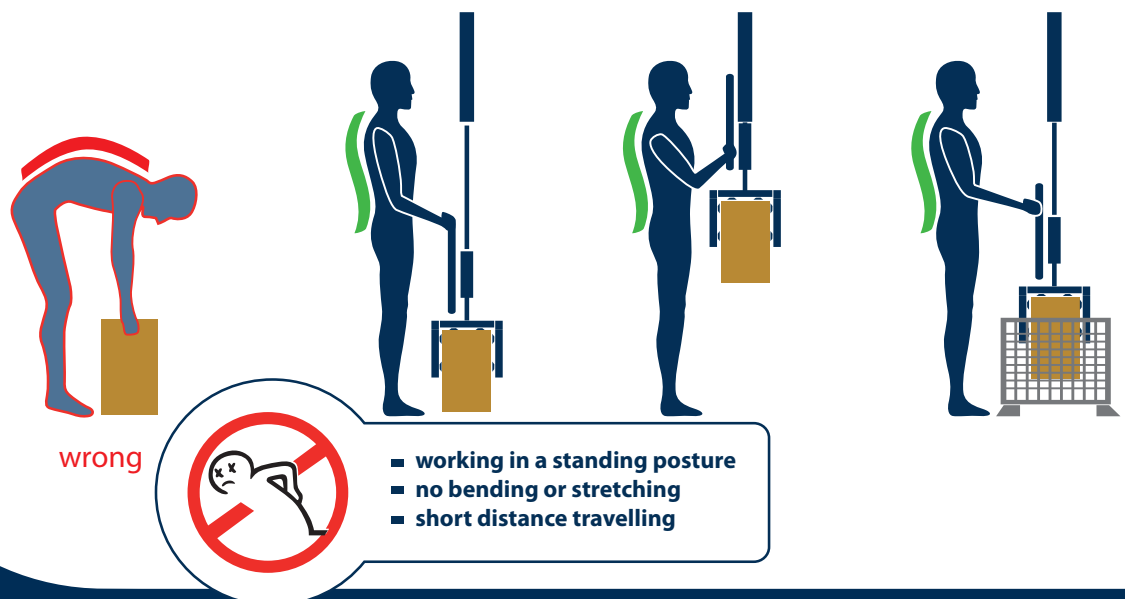
**Accurate handling is no coincidence.**

**You'll always be precisely accurate  
with ZYBA-MAT.**



# ZYBA-MAT

- For more **than 35 years** we have developed handling equipments for various industries. Be it an individual device or a complete assembly line.
- **ZYBA-MAT ZP** is a hand-operated telescopic manipulator with pneumatic float-type control. Parts are lifted in floating condition with variable speed, sensitively and gently. The standard version consists of a pneumatically driven lifting axis with a rotating bearing (360° endless) to be attached to a rail carriage as well as to a flange to connect load handling tools (mechanical hook or fork, pneumatic grippers, lifting magnets, vacuum grippers)
- Operation handrail must be selected in accordance with the work area and working heights.
- The operation handrail and float-type control allow lifting and transportation of parts in upright and back-friendly posture.  
**ZYBA-MAT** assists operator's flexibility, quickness as well as sensitiveness.
- **The BENEFIT**
  - Improved working conditions**  
Higher efficiency due to fatigue-proof working. Gentle on spine and back muscles, prevents disease-related downtimes. Lowers rate of absence from work with lasting effect and promotes motivation of employees.
  - Higher productivity and quality enhancement**  
Quick and gentle transport and movement of parts out of production or for shipment.  
Lower operating costs (less energy demand)  
Economically favourable, technically at the very front.

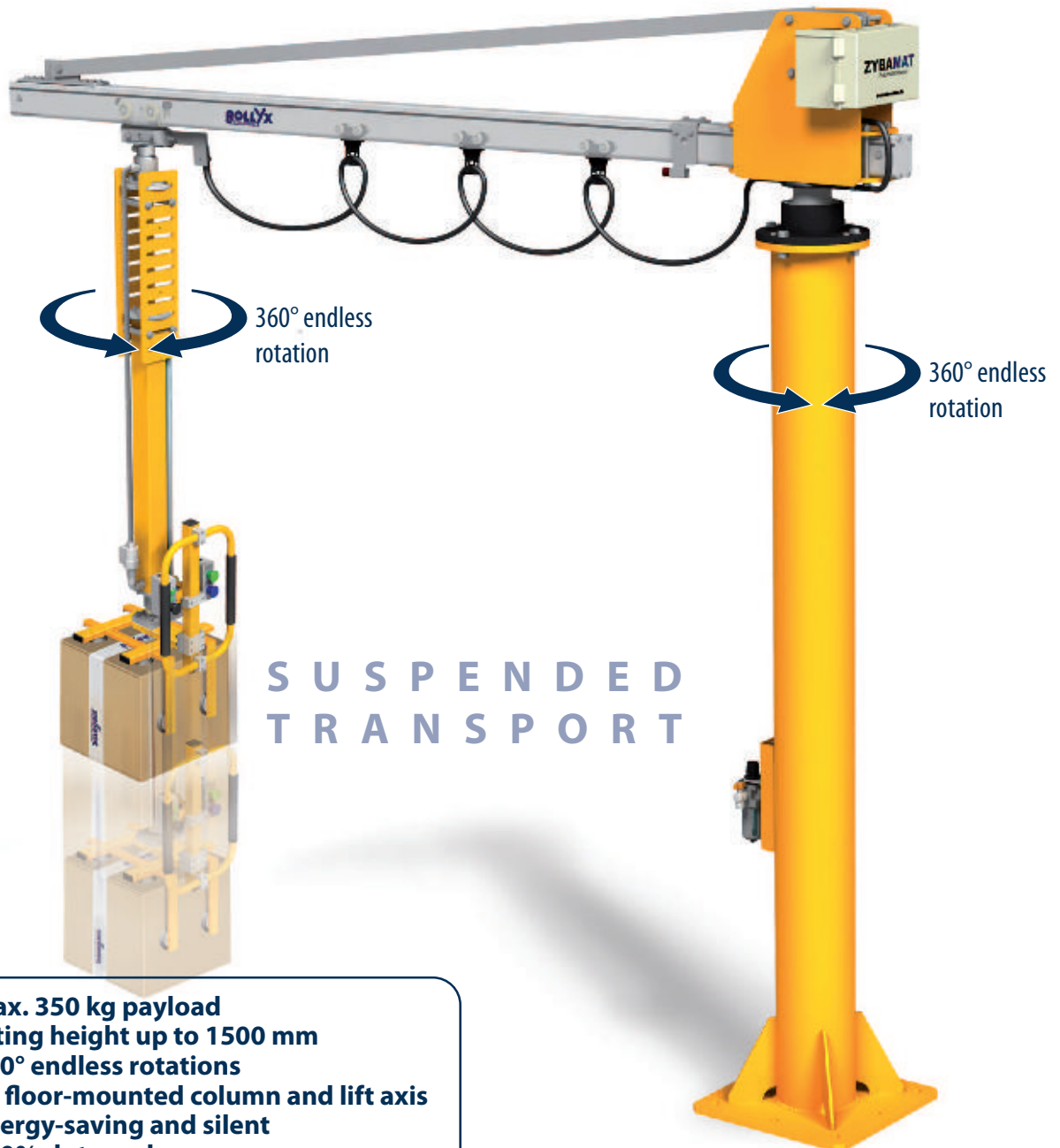




- Hoisting speed up to 1 m/s
- Fast positioning
- Quickly travelling in the plane

24 hours  
**NEVER  
TIRED**

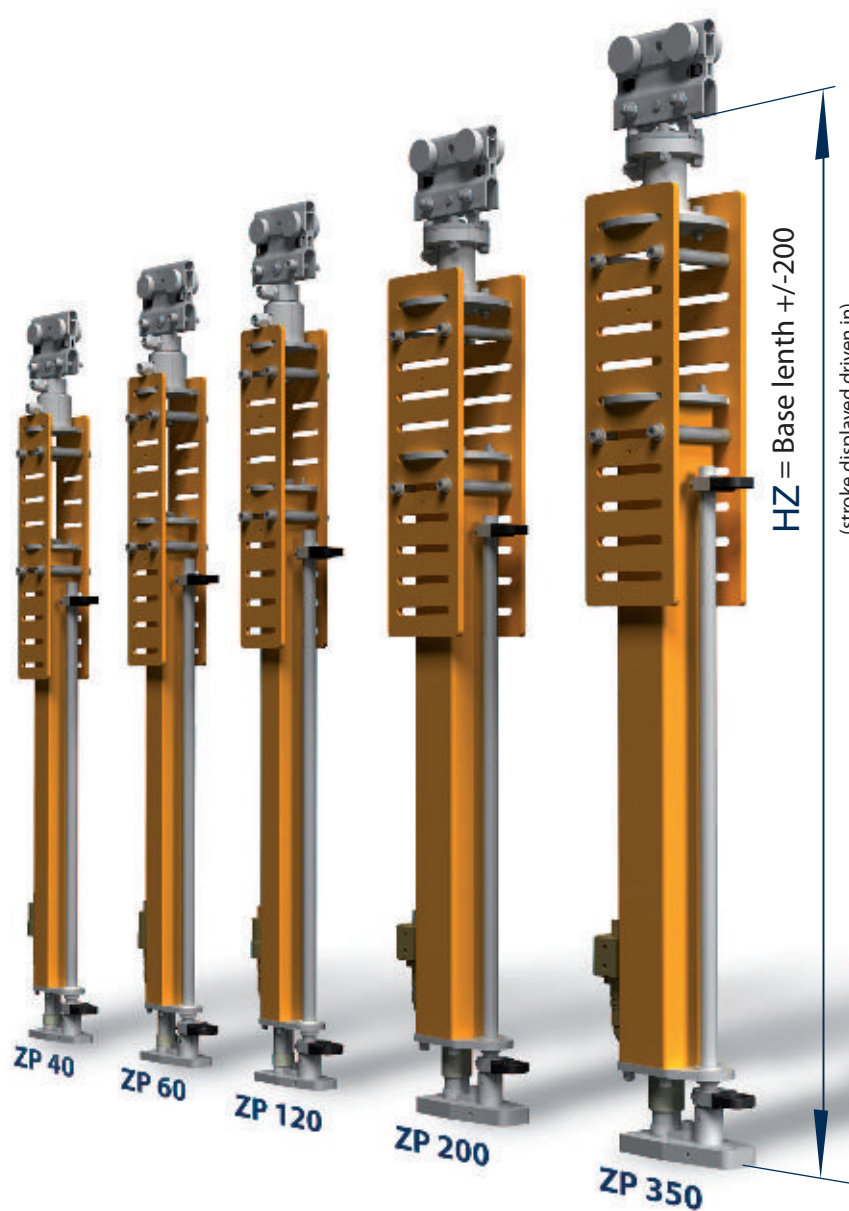
NEVER OUT OF BREATH



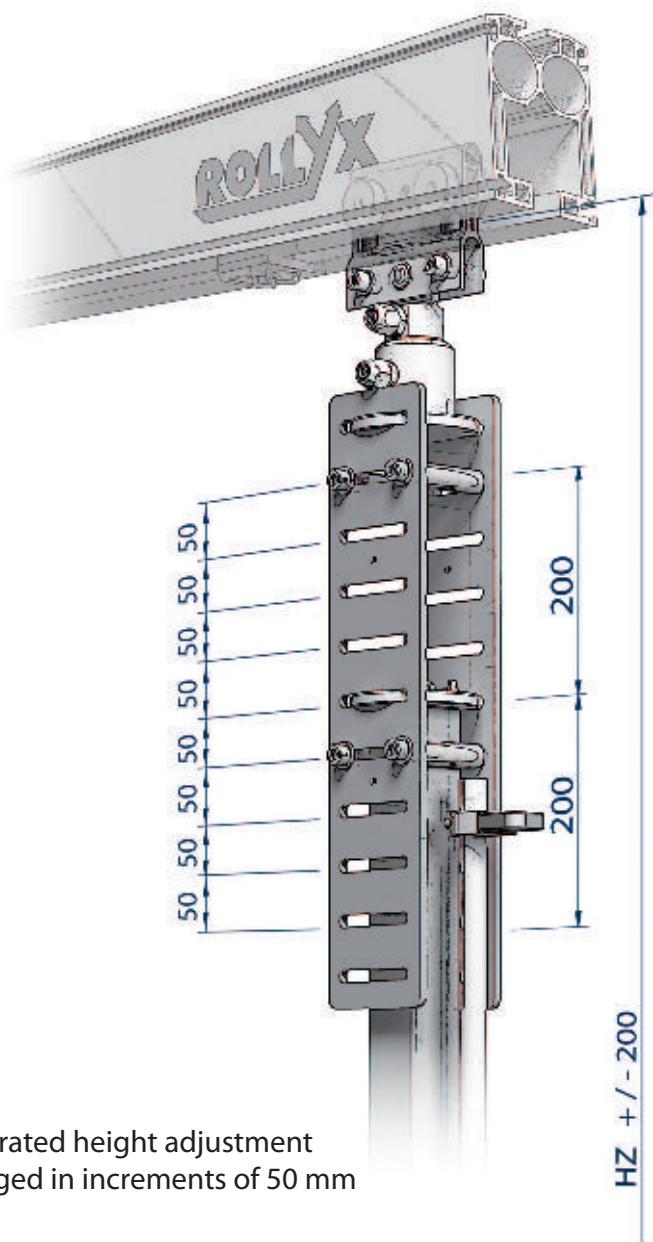
- max. 350 kg payload
- lifting height up to 1500 mm
- 360° endless rotations at floor-mounted column and lift axis
- energy-saving and silent
- 100% duty cycle
- wear resistant
- low cost

## Model type Load type

TYPE	Size Load weight + weight of gripper	Load weight in kg	Weight of gripper in kg
ZP 40	up to 40 kg		
ZP 60	up to 60 kg		
ZP 120	up to 120 kg		
ZP 200	up to 200 kg		
ZP 350	up to 350 kg		







Integrated height adjustment  
9-staged in increments of 50 mm



**We get loads floating on air.**

#### ZYBA-MAT versions

Type	Stroke (mm)	HZ (mm)
Standard	400	1060 ±200
	600	1260 ±200
	800	1460 ±200
Special	1000	1660 ±200

Further types available on request

Stroke (Z2) =  
Distance between  
Bottom edge of component part  
(lowest position)  
and  
Bottom edge of component part  
(highest position)  
(see page 11)

## Assembly method

**Type 1 Floor-mounted column**

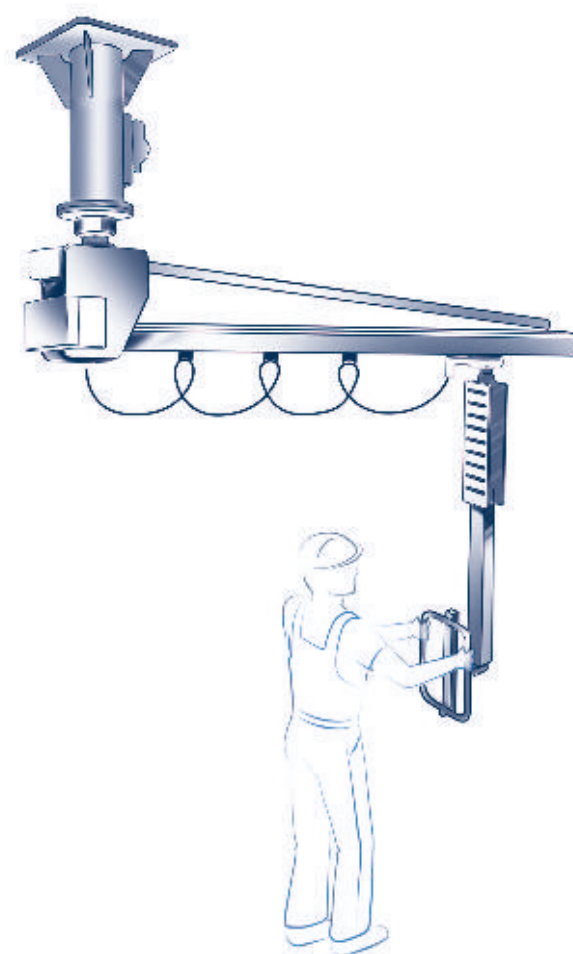
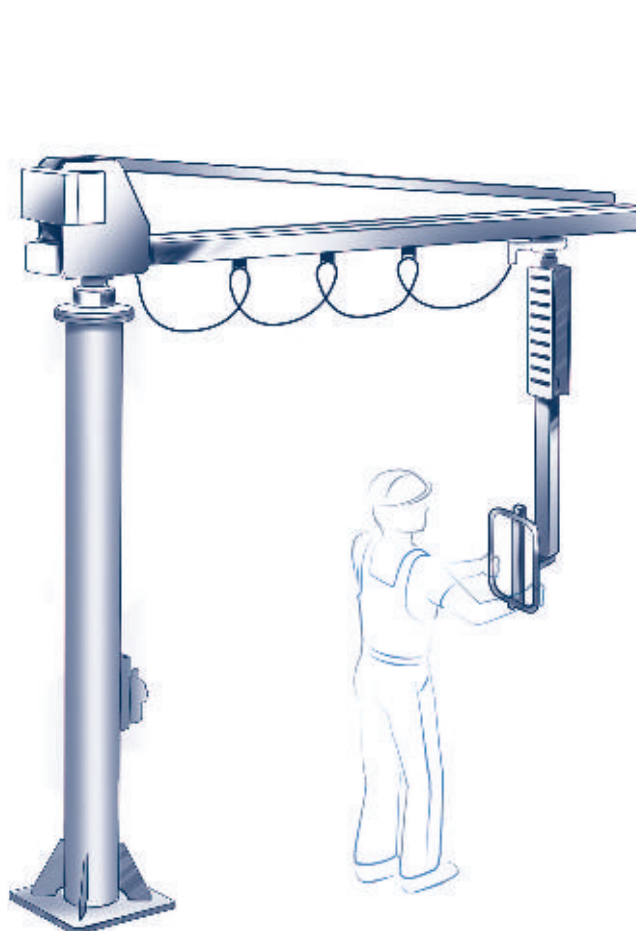


Scale diagram page 10

**Type 2 Ceiling-mounted column**



Scale diagram page 11

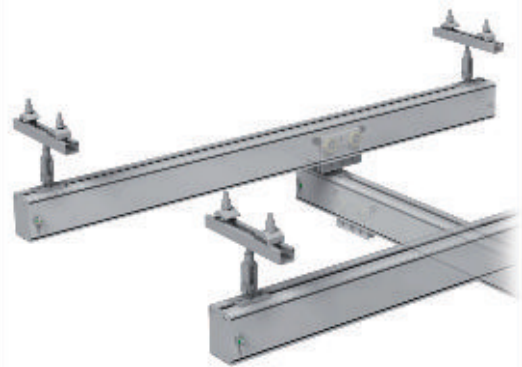


**Type 3 Wall-mounted**

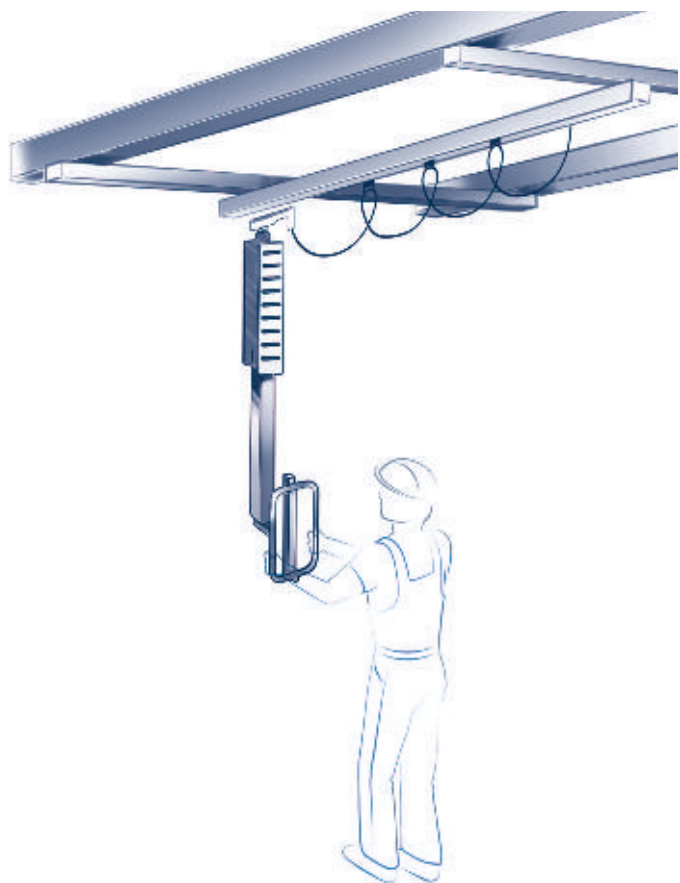
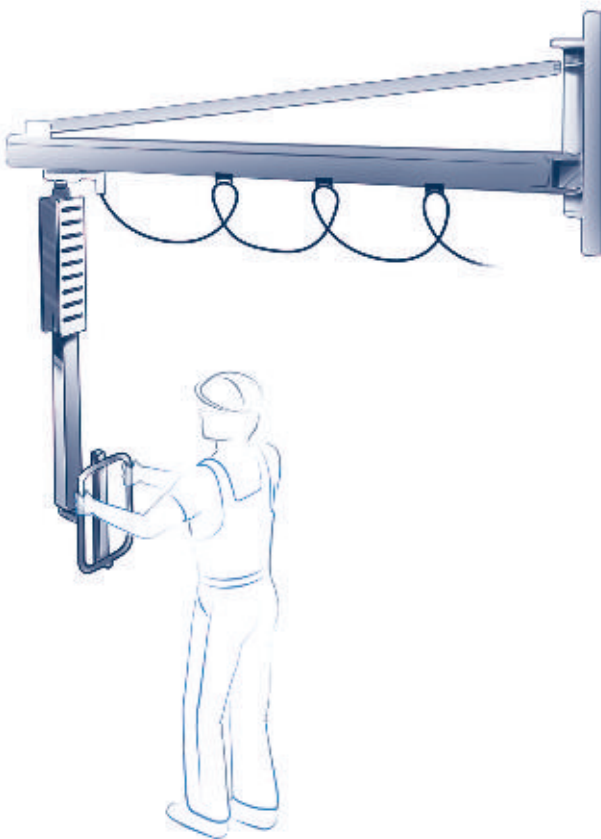


Scale diagram page 12

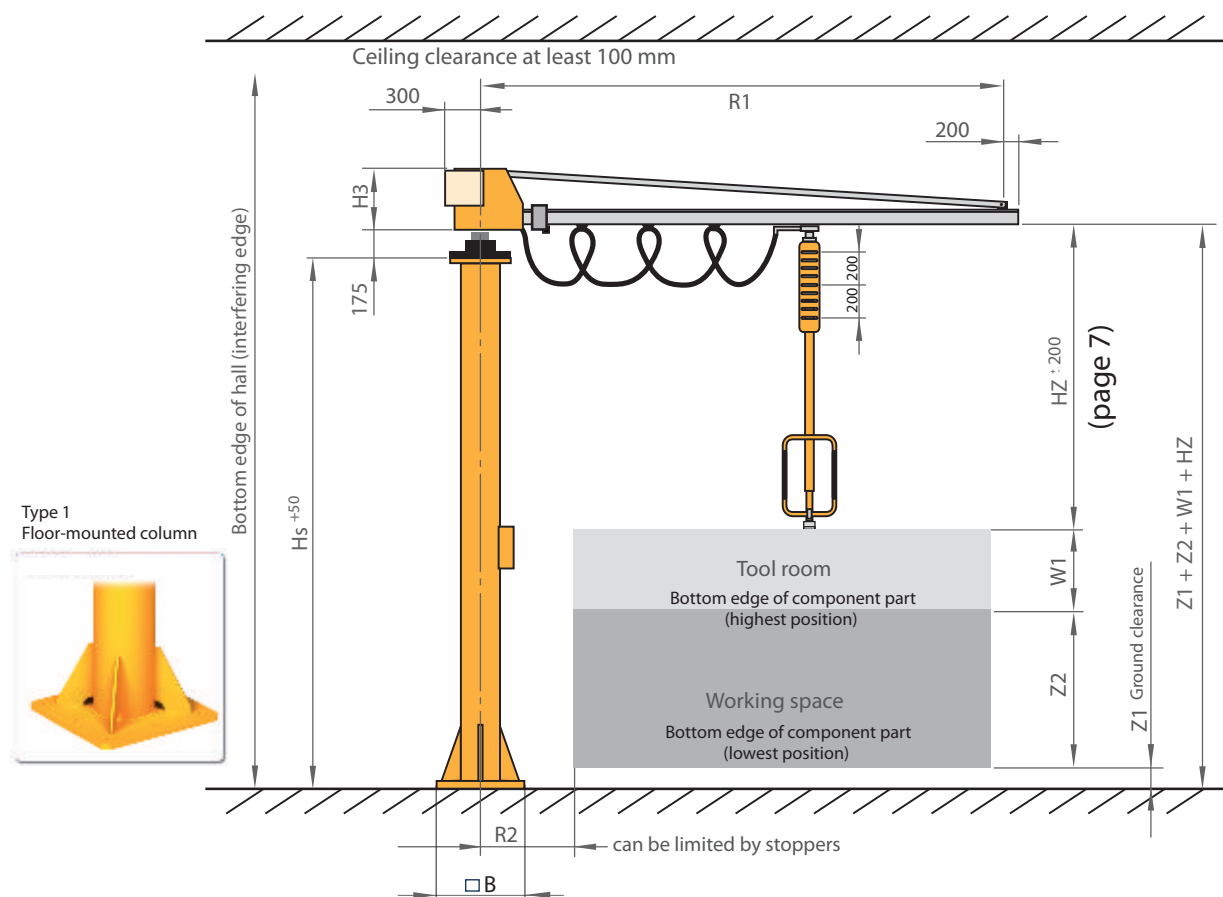
**Type 4 Rail-mounted**



Scale diagram page 13



## Floor-mounted column version



### Technical data

Ident.-no.	ZYBA-MAT		Working space		Dimensions		Profile
	Payload	Hoisting speed	Travel-distance				
	[kg]	[m/s]	[mm]		[mm]		
			R1	R2	H3	□B	X
ZP 40 D1	40	1	3000	500	450	500	SR100
ZP 40 D2	40	1	4000	500	450	500	SR100
ZP 40 D3	40	1	5000	600	450	600	SR100
ZP 40 D4	40	1	6000	600	450	600	SR100
ZP 40 S	40						
ZP 60 D1	60	1	3000	500	450	500	SR100
ZP 60 D2	60	1	4000	500	450	500	SR100
ZP 60 D3	60	1	5000	600	450	600	SR100
ZP 60 D4	60	1	6000	600	450	600	SR100
ZP 60 S	60						
ZP 120 D1	120	0,8	3000	600	450	600	SR150
ZP 120 D2	120	0,8	4000	600	450	600	SR150
ZP 120 D3	120	0,8	5000	700	450	800	SR150
ZP 120 D4	120	0,8	6000	700	450	800	SR150
ZP 120 S	120						
ZP 200 D1	200	0,6	3000	700	650	800	SR200
ZP 200 D2	200	0,6	4000	700	650	800	SR200
ZP 200 S	200						
ZP 350 D1	350	0,5	3000	700	650	800	SR250
ZP 350 D2	350	0,5	4000	700	650	800	SR250
ZP 350 S	350						
S = Special design							

S = Special design

dimension changes to be reserved

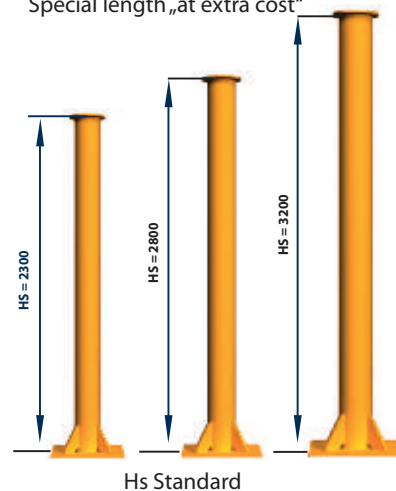
### Vertical column range

#### Hs calculation

$$Hs = Z1 + Z2 + W1 + HZ - 175 \text{ mm}$$

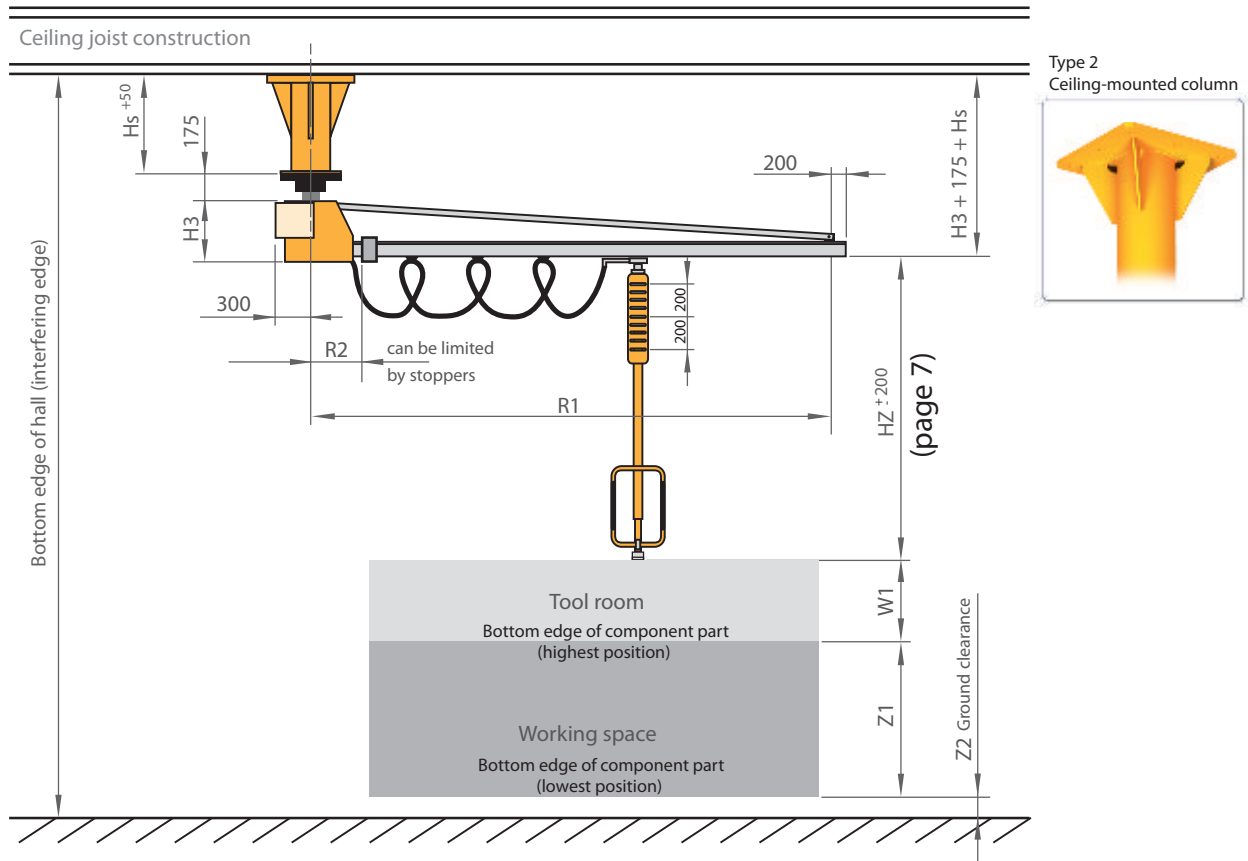
(select a standard length, note: Hs + 200 mm)

Special length „at extra cost“



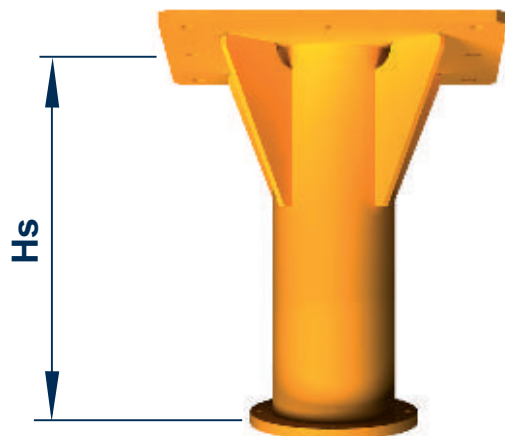
Hs Standard

# Suspended column version



Corresponding dimensions to be taken from the table on page 11

Range (Hs calculation)  
Ceiling-mounted column  
 $Hs = \text{Bottom edge of hall} - (Z1 + Z2 + W1 + HZ + H3 + 175)$



**Standard colouration**  
RAL 1006 (maize yellow)

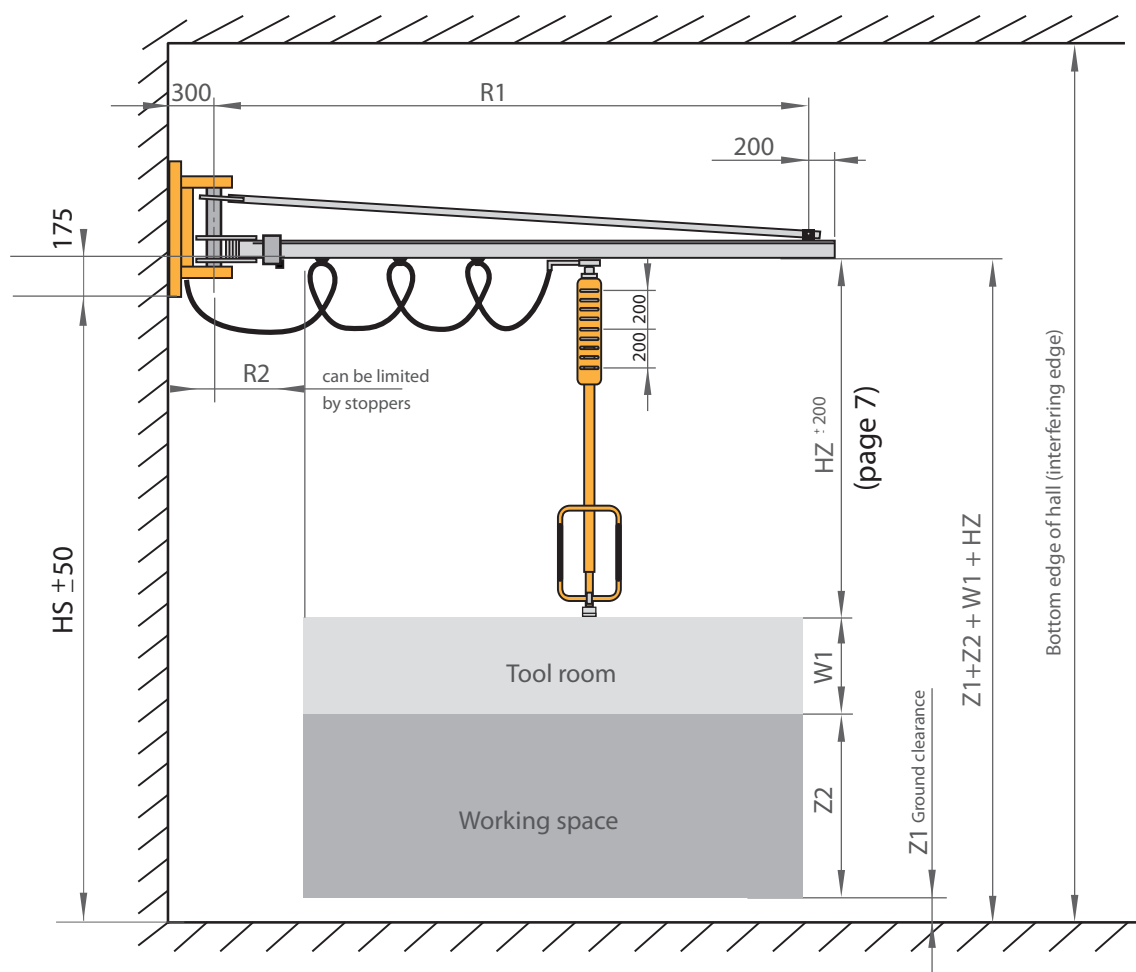


Further colours available at extra cost.

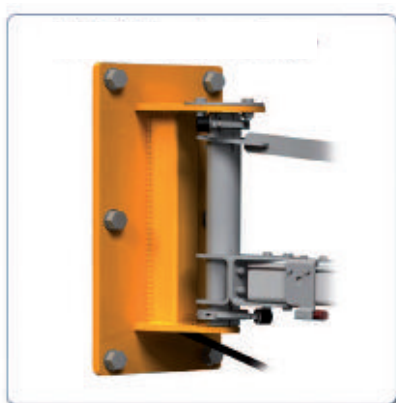
**Rail:** clear anodized aluminium

Also available in stainless steel,  
e.g. for the food industry -  
see page 21-22

## Girder- or wall-mounted



Corresponding dimensions to be taken from the table on page 11.

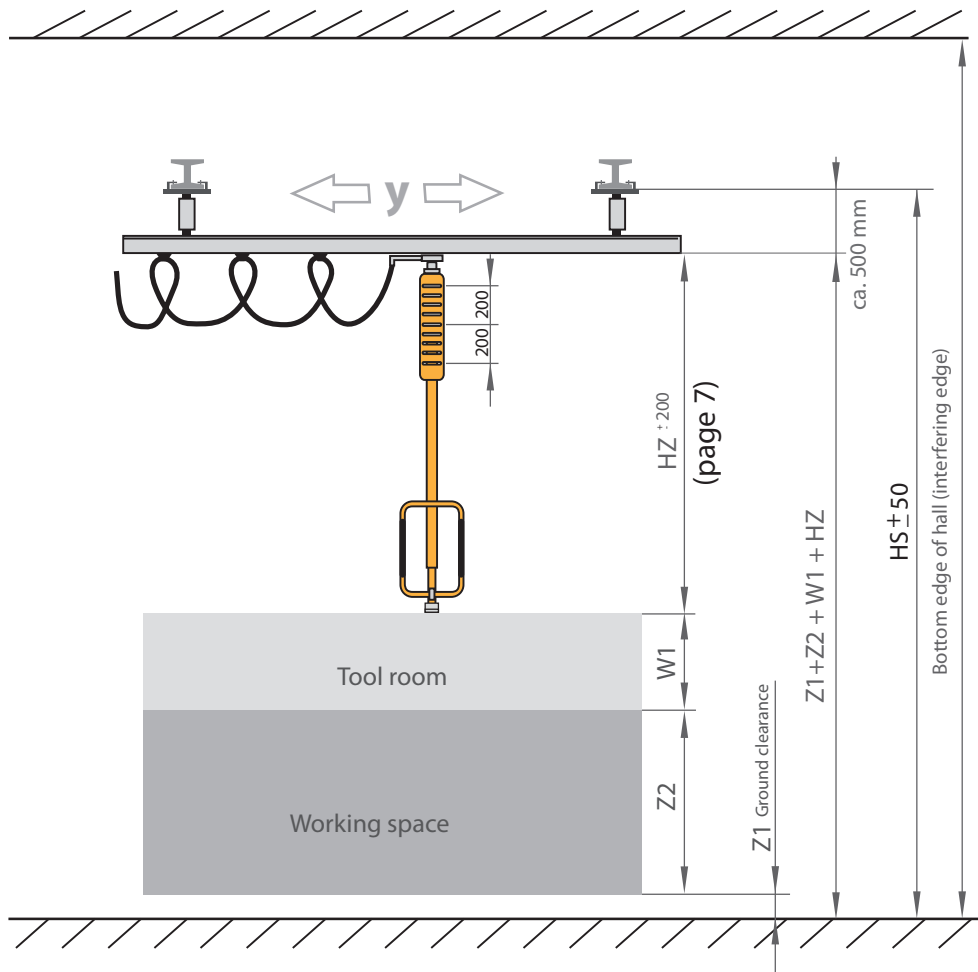


Type 3  
Wall assembly

$H_s = (Z1+Z2+W1+HZ)-175$   
Bottom edge of hall =  $H_s + \text{min. } 600$



# Rail-mounted

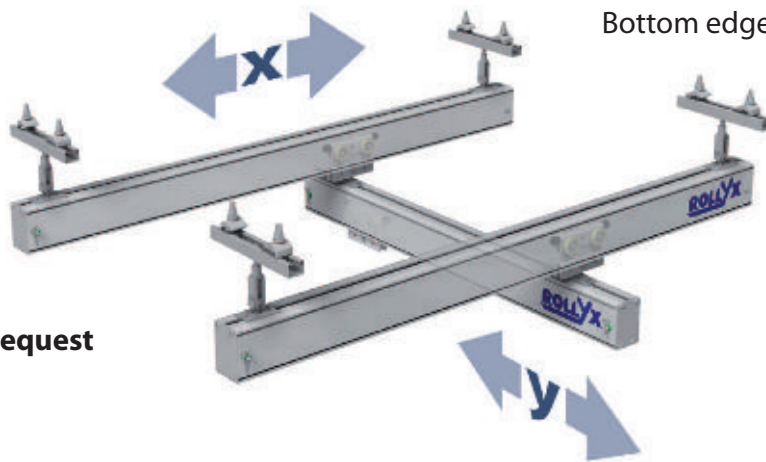


Corresponding dimensions to be taken from the table on page 11.

$$H_s = Z1 + Z2 + W1 + HZ + 500$$

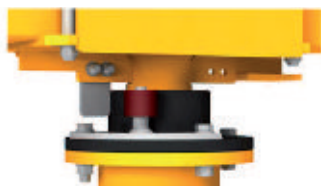
$$\text{Bottom edge of hall} = H_s + 300$$

Design on request



## Accessories

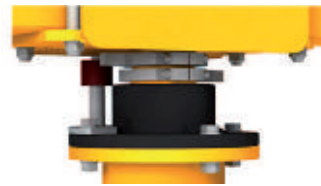
### Pivot bearing



**Option 2.1\***  
max. 350°  
with fixed angled  
limit stop



**Option 2.3**  
360°  
Endless rotation



**Option 2.2\***  
max. 320°  
with two infinitely adjustable angle  
limits, e.g. to driveways and  
interfering edges

#### \* Protection of power lines

Vantages:

- unrestricted work space around vertical or suspended column, and thus shorter action space for the machine operator
- more working space and flexible use

### Brakes



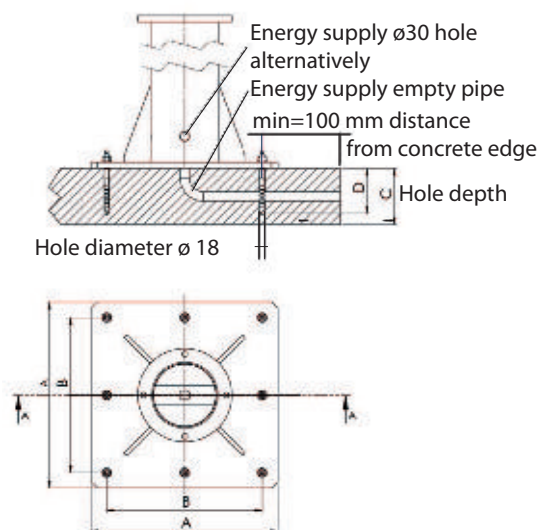
**Option 1.1**  
Disc brake  
Vertical column



**Option 1.2**  
Chassis brake

# Mounting

## Mounting on concrete floor



Version

Dimensions	A1	A2
	ZP40 to ZP120	ZP200 bis ZP350
A	600 x 600	800 x 800
B	500 x 500	700 x 700
C	min 180	min 250
D	150	150

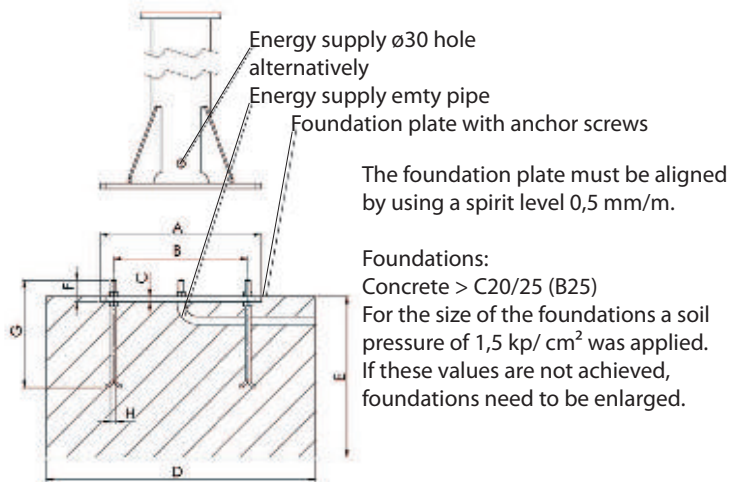
All measurements in mm

Concrete with reinforcement > C20/25 (B25)

(not saturated with oil or separating means)

Dynamic-connection anchor

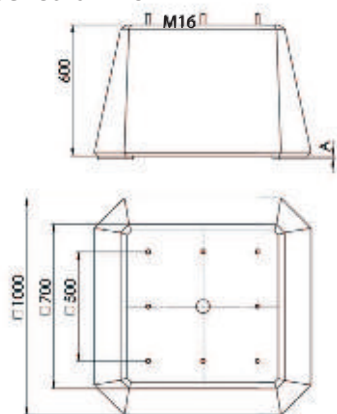
## Mounting on foundation



Version

Dimensions	A3	A4
	ZP40 to ZP120	ZP200 to ZP350
A	600 x 600	800 x 800
B	500 x 500	700 x 700
C	20	20
D	1000 x 1000	1200 x 1200
E	800	800
F	80	80
B	400	400
H	20	20

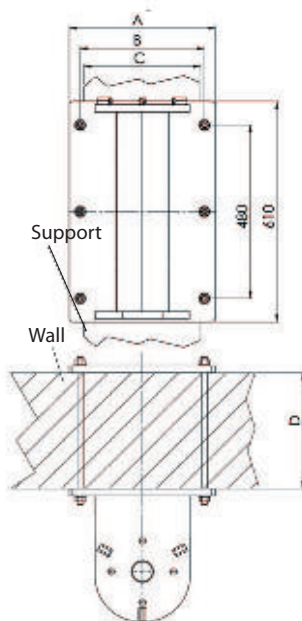
## Base for free-standing installation of steel columns



Versions

Dimensions	A5	A6
	ZP40 to ZP120	for forklift and pallet truck transport
A	5	100

## Girder- and wall-mounting



Versions

Dimensions	A7	A8
	ZP40 to ZP120	ZP200 to ZP350
A	B+60=	B+60=
B	C+18=	C+18=
C (Column width)		
D (Column thickness) (Wall thickness)		

## FORCE EFFICIENTLY USED

Man is restricted in his lifting strength and not designed to be subject to stress over long periods. Number and size of parts to be held is limited by his two hands.

**ZYBA-MAT** compensates these drawbacks and substantially increases efficiency

- **higher payload**
- **higher rate of parts to take up per cycle**
- **higher volume of large-scale and bulky workpieces**

Second to none is the man with his skills by combining seeing, perceiving, sensitivity and responsibility for his acting. ZYBA-MAT forms the perfect symbiosis of man and machine.

# MAXIMUM BENEFIT

ZYBA-MAT enables you to handle load weights up to 350 kg without effort.



## Operation handrail and control systems at choice



Type  
**S1**

### Operation handrail Automatic scales with varying load weights

This control system is adapted to handle either individual or mass production parts of different kinds and load weight. In fractions of a second the respective load weight of every picked part is automatically calculated and the weight compensation (balance) is adjusted accordingly. The control unit detects the weight of the entire weight range from zero to maximum load weight.



Type  
**S2**

### Operation handrail Combi Balance Control with control dial for constant load weights

This control system is suitable to handle mass production parts of same kind for constant load weights. In combination with a gripping tool the pre-adjusted weight compensation (balance) is switched on automatically after gripping. First, one-time setting of balance in accordance with parts weight is effected.



Type  
**S3**

### Operation handrail Combi Balance Control with twist grip for constant load weights and additional increase of load up to 30 kg

This control system is designed for handling of mass production parts of either constant or changing load weights. **In combination with the load handling device the pre-set** weight compensation (balance) is automatically switched on after gripping. Balance is once set to the smallest load weight. By means of the twist grip additional, higher load weight (up to 30 kg) may be set steplessly. By the way, the twist grip can also be used as servo control for lifting and lowering.



## Mechanic gripping device

### Type M

e.g. for hooks, forks, etc.

#### Combinable dimensions:

Length **L**: 315 mm  
450 mm  
600 mm

Breadth **B**: 260 mm  
450 mm



## Pneumatic clamping device

### Type P

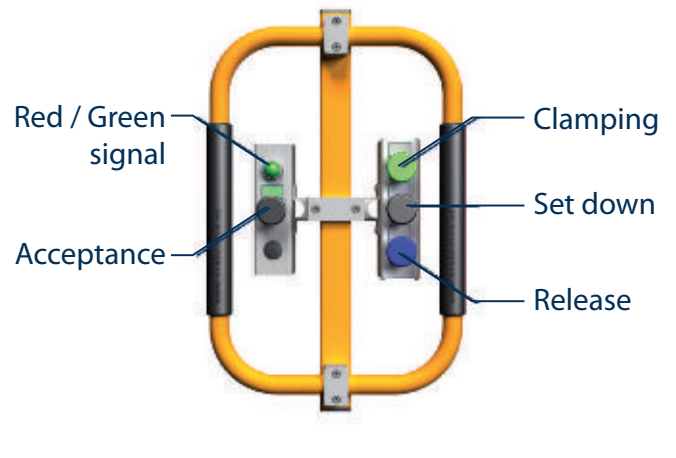
e.g. for parallel, arbor, vacuum, magnetic clamping units

Red / Green signal

Acceptance

Clamping

Release



#### Combinable dimensions

Length **L**: 450 mm  
600 mm

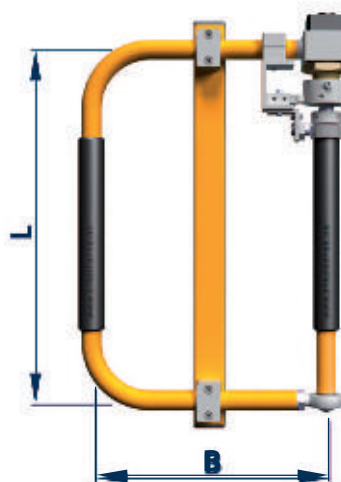
Breadth **B**: 260 mm  
450 mm



#### Combinable dimensions

Length **L**: 600 mm

Breadth **B**: 260 mm  
450 mm



Red / Green signal

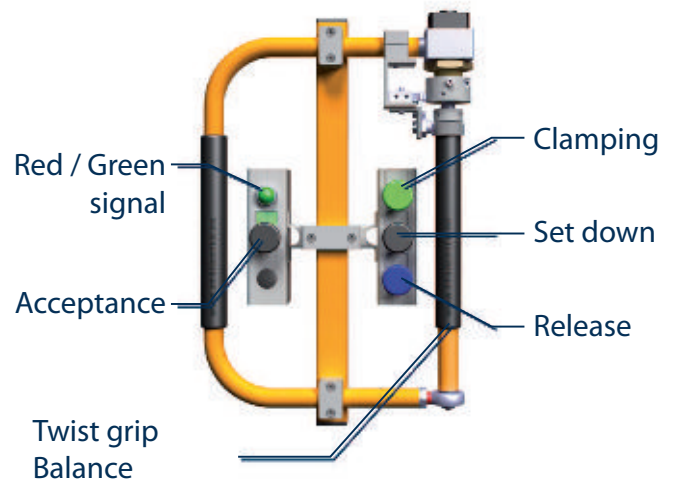
Acceptance

Clamping

Set down

Release

Twist grip  
Balance



## Stainless steel version

for clean room, food and pharmaceutical industry

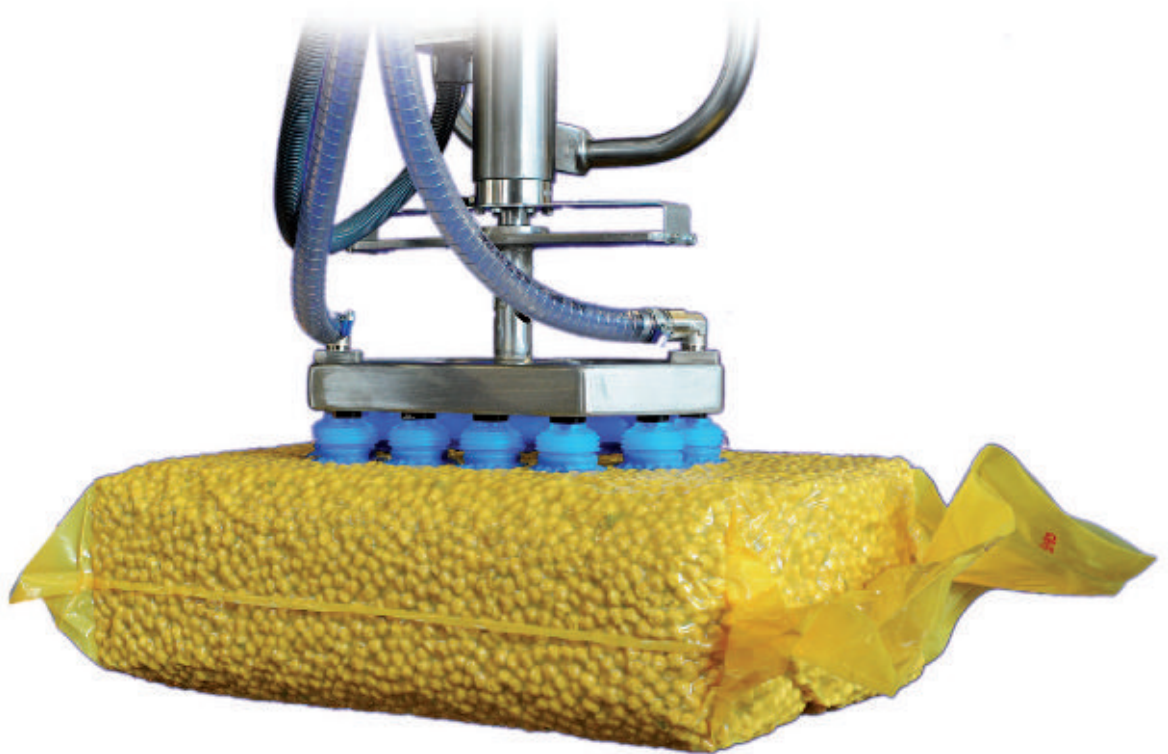
This **ZYBA-MAT** version was developed for clean rooms with low-particulate environment.

The device can be used in semiconductor manufacturing, e.g. for production of optical lenses as well as for aeronautics and astronautics technology.

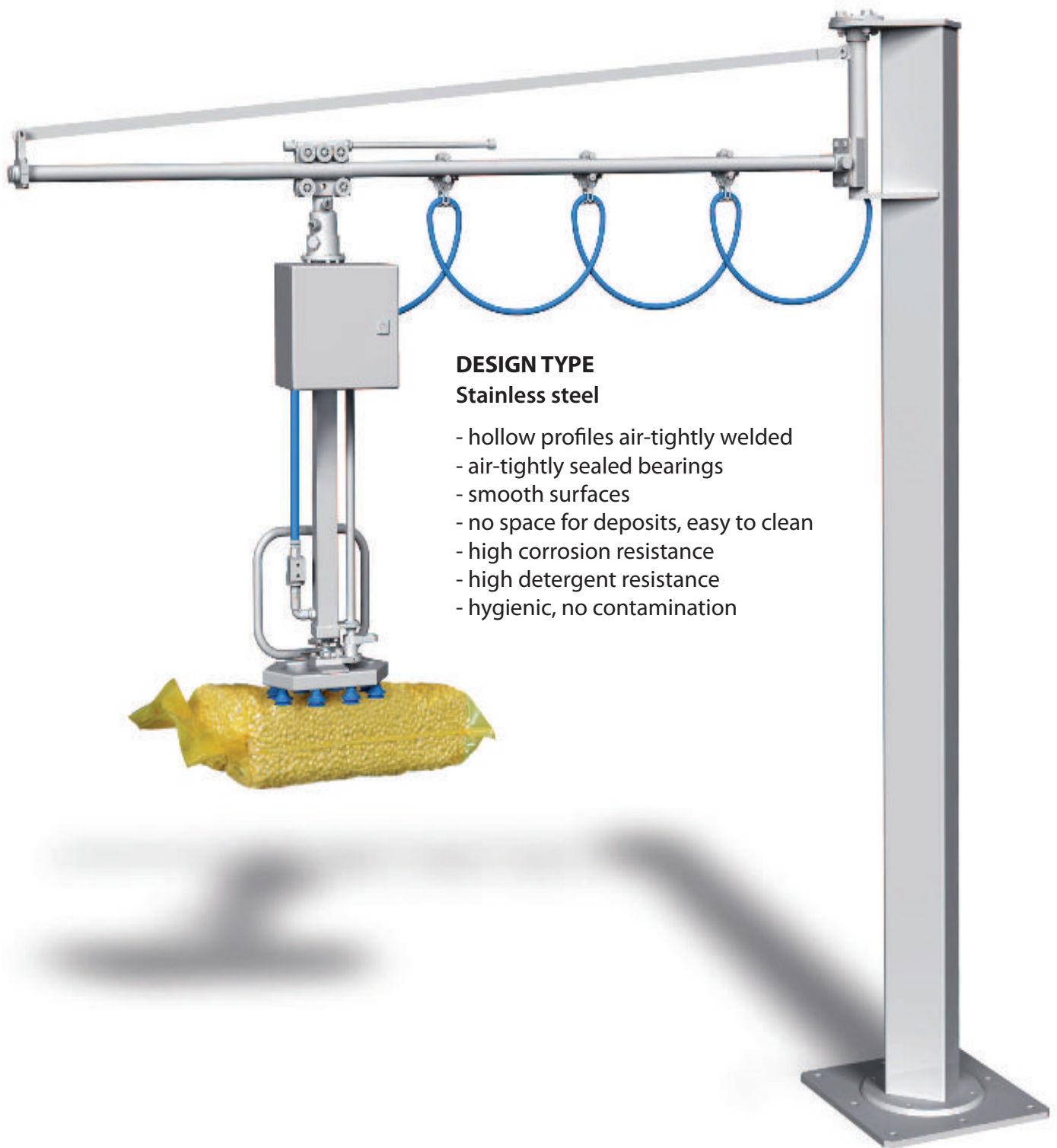
For the food and pharmaceutical sector the components have to comply with strict hygiene and cleanliness guidelines. They must be resistant to aggressive chemical cleaners.

For use in these areas, the stainless steel **ZYBA-MAT** is qualified.

Crane jib and floor-mounted column as well as alternative assembly versions as shown on page 11/12 can be delivered as stainless steel type and meet these requirements.



Example shows a vacuumed foil bag with hazelnuts.



#### **DESIGN TYPE**

##### **Stainless steel**

- hollow profiles air-tightly welded
- air-tightly sealed bearings
- smooth surfaces
- no space for deposits, easy to clean
- high corrosion resistance
- high detergent resistance
- hygienic, no contamination

## Gripper technologies



Fork-type tool with scales

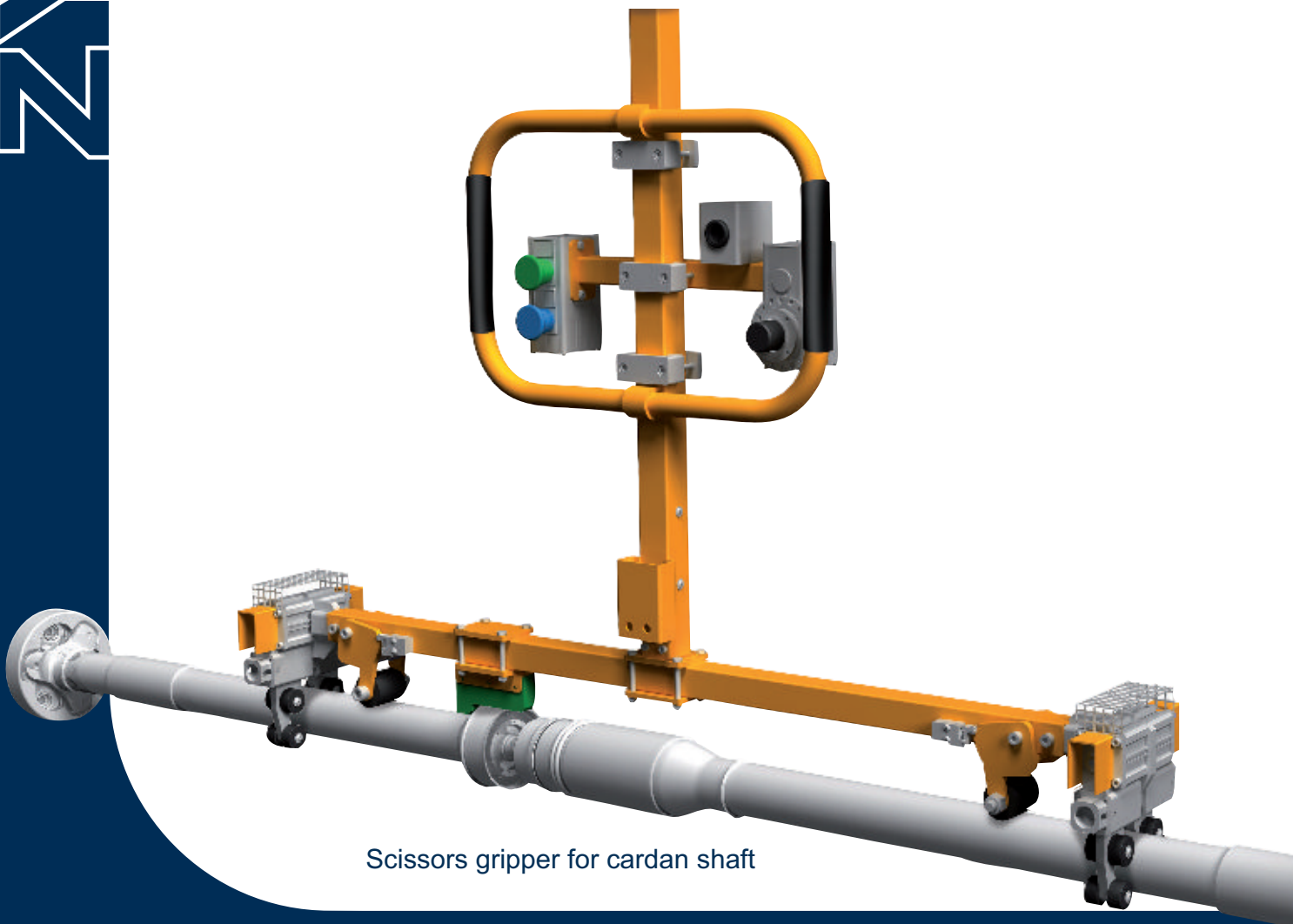


Scissors gripper for camshaft



3-jaws clamping unit

**We designed more than 3000 grippers for different applications. Please contact us and we will advise you on the best suitable gripper for your product.**



Scissors gripper for cardan shaft

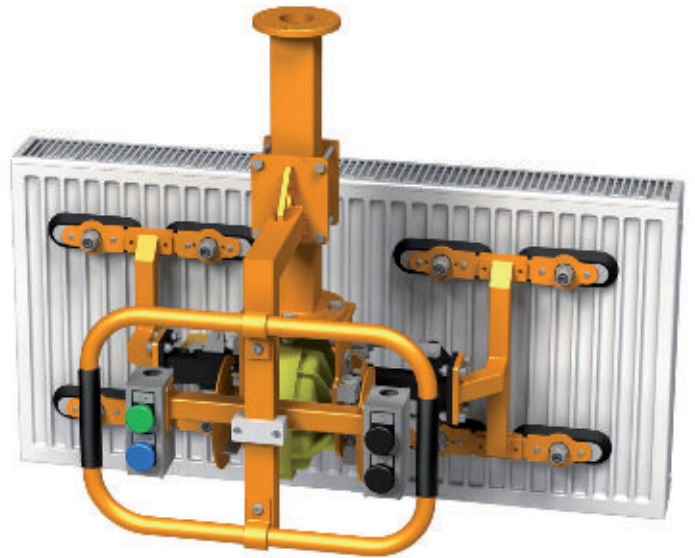




4-jaws gripper  
for 200-l drums



Hook exchange crossbeam  
with scales



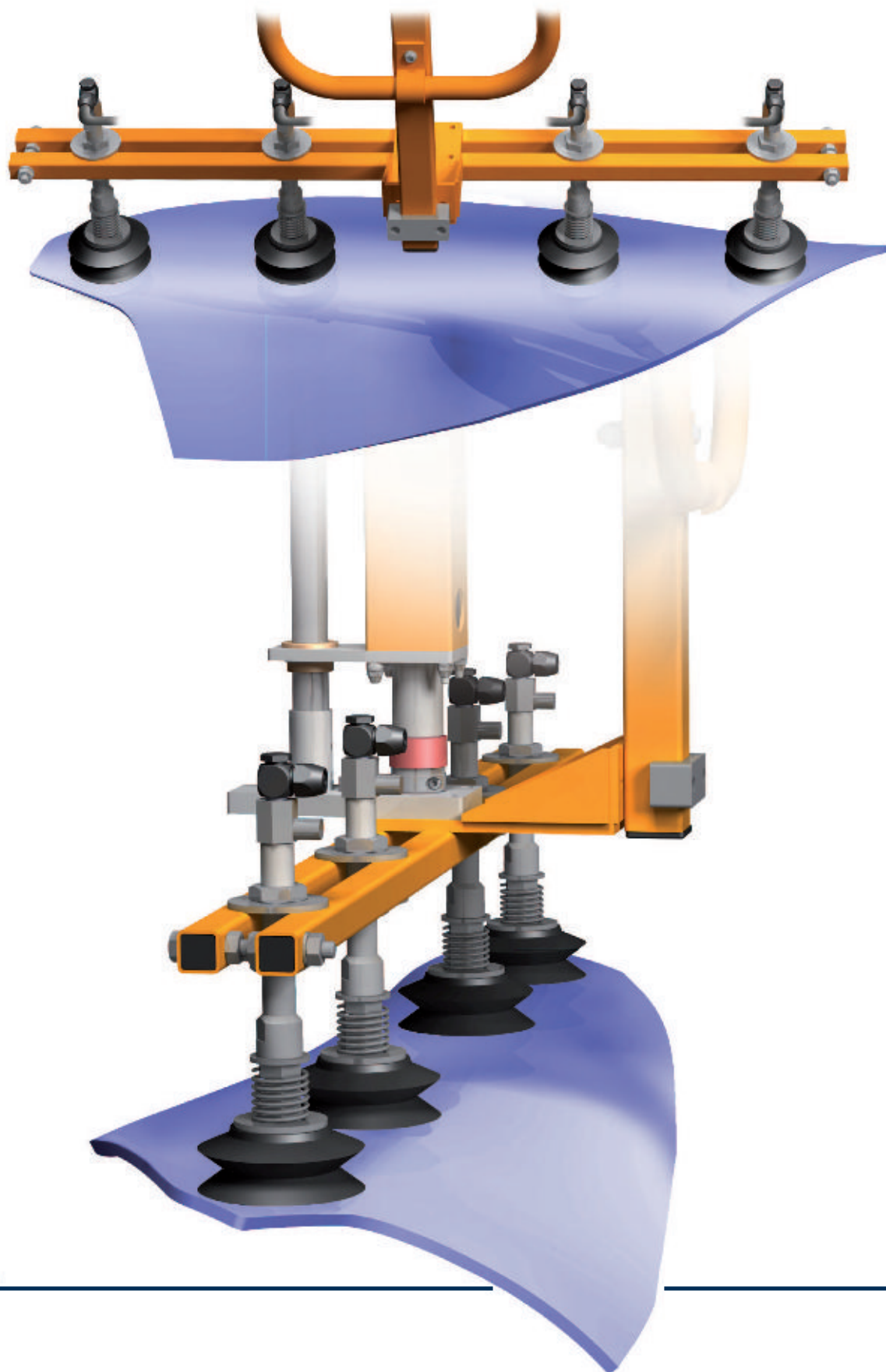
Vacuum crossbar  
with 90° swivel device for radiators



Handling  
of plowshares



## Function example for floating process







**We get loads floating on air.**

**The plowshare floats!**

Without physical strength the plowshare is raised, transported and moved throughout the room.

The operator may either lead the device via handrail or even by means of the plowshare directly.

This example is representative for ZYBA-MAT device technology.

**The advantage:**

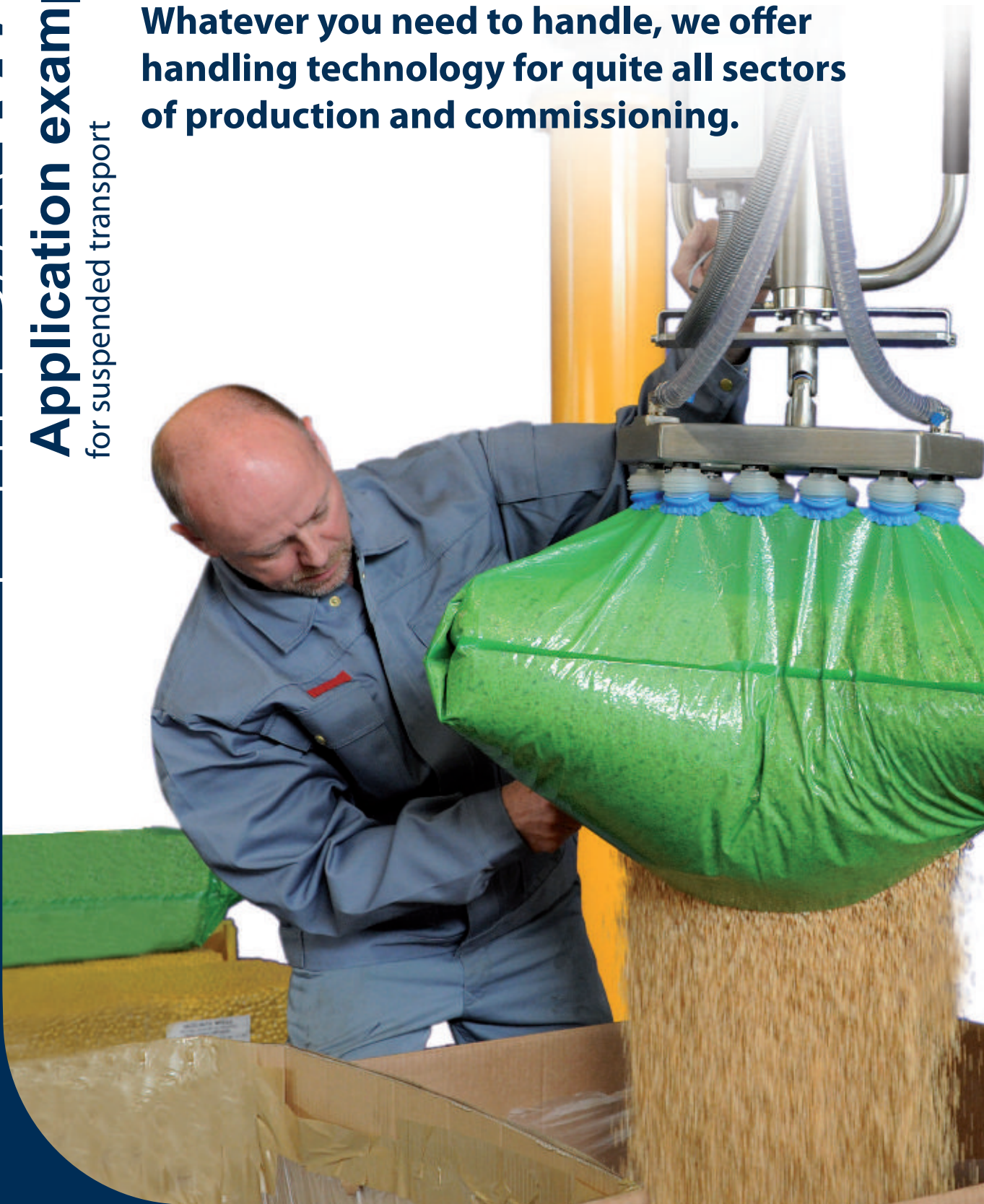
Moving parts floatingly is faster and more sensitive than motorised positioning via key control.

Handling of a plowshare

## Application examples for suspended transport

**STRODTER**  
Handhabungstechnik GmbH

**Whatever you need to handle, we offer  
handling technology for quite all sectors  
of production and commissioning.**



## Vacuum gripper for bags





## Application examples

for suspended transport

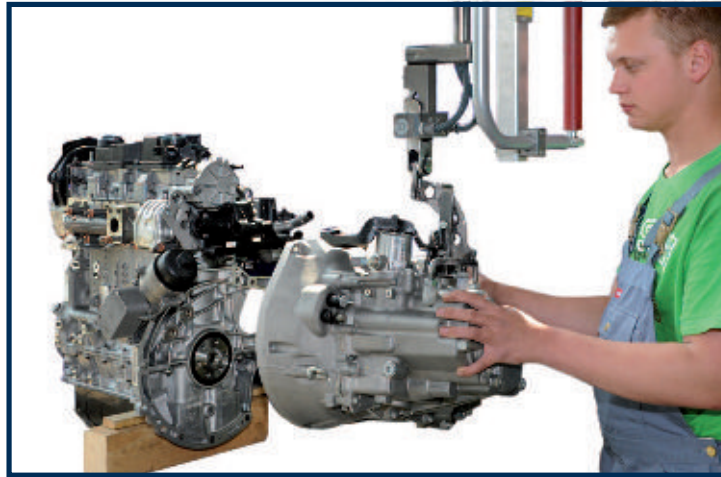




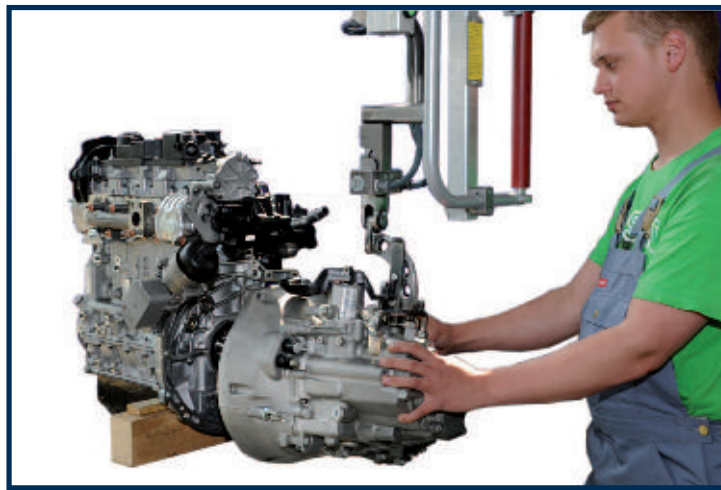
Universal vacuum gripper



## Application examples for suspended assembly

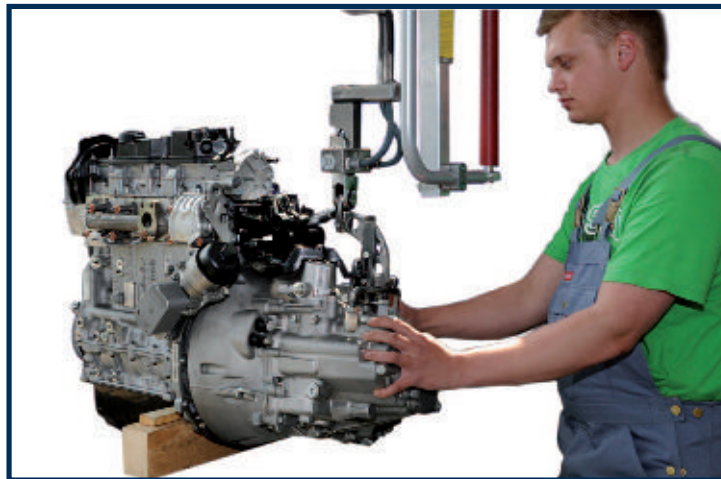


■ Floating guiding



■ Floating positioning

Handling  
and  
assembling  
engine  
and  
gearbox

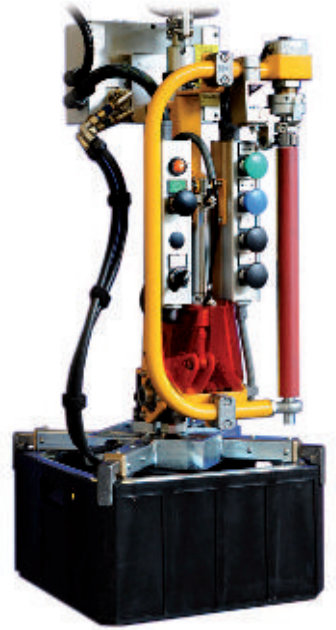
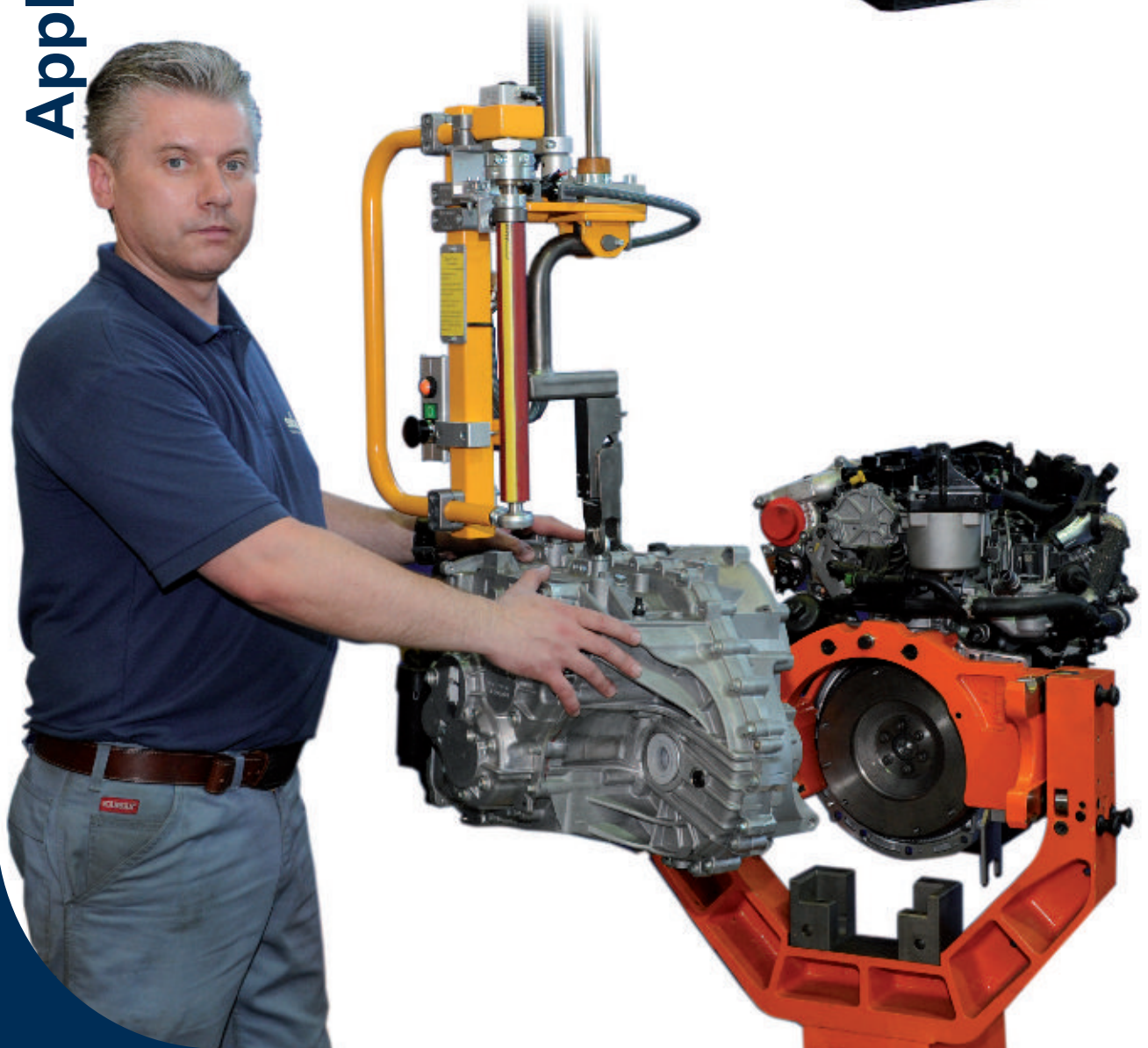


■ Floating and careful assembling

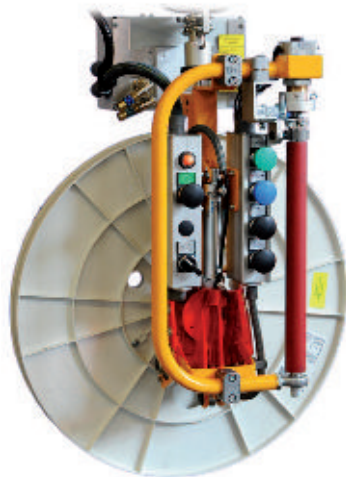




## Application examples







# ZYBA-MAT

## Smooth-running rail system



## Overview of brochures

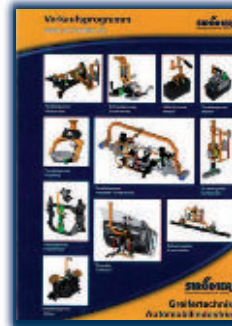
### Sales programs



Light Crane &  
Handling Technology



Gripper techniques  
General industry



Gripper techniques  
Automotive industry



ROLLYX - Aluminium  
Smooth-running rail system

### Brochures



VIGO-MAT



TELO-MAT



PI CO-MAT



PICO-MAT - Buckling arm  
rope balancer

### Catalogues



ROLLYX  
Planning & Projecting



Light Crane Systems



ROLLYX - Jib Crane

All documents are available in different languages.



We get loads floating on air.

## VISION ZYBA-MAT

„The ZYBA-MAT is the perfect lifting and transport device in a work process that avoids physical strains of human being.

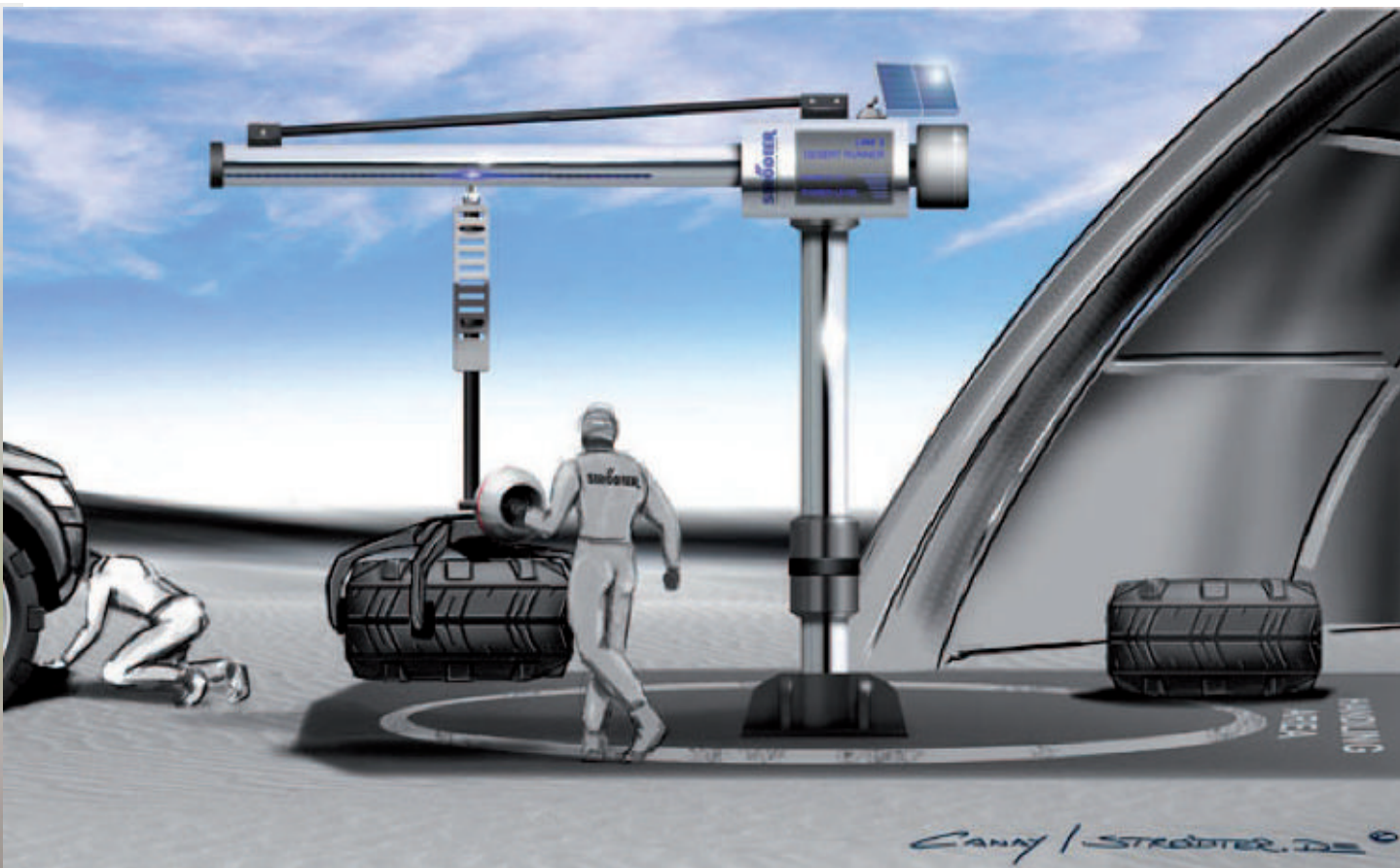
We thought about how the ZYBA-MAT can support the worker in his activities and still can protect him from dangers at his workplace.

Together with our developers and design department we have created a vision which showing the future of the Strödter handling technology.“

**„Employees are not replaceable.“**

(Wilhelm Strödter)





# We get loads floating on air!

For your individual offer just send this request form directly per fax to the following number: +49 (0) 23 85-9 21 21 -21.

## Project sheet and request form „ZYBA-MAT“

Please fill out this form in good readable BLOCK LETTERS. Thank you!

Client	Project											
Name/Department	Location											
Street	Inquiry Number	Date			.			.	2	0		
Postal code / City	Requested delivery date			.			.	2	0			
Country												
Contact person												
Phone												
Fax												
E-Mail												

Handling time / station times

in

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SEC.

How many units

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DAY

## Step by step to the ZYBA-MAT HANDLING SYSTEM

Assemble your system with this table.

1	ZYBA-MAT TYPE		ASSEMBLY-VERSION TYPE (Page 9-10)	Specifications for device selection (Page 11-14)					Technical data (Page 11)		
DELIVERY QUANTITY IN UNITS	PAYLOAD (Page 7)	WORKING STROKE Z2 (Page 8)		UKH	Z1		Z2		W 1*		
2	FLOOR-MOUNTED COLUMN (HS) (Page 11)	CEILING MOUNTED COLUMN (HS) (Page 12)	WALL FASTENING (Page 13)	RAIL-DESIGN (Page 14)	PIVOT BEARING-OPTION (Page 15)			BRAKE-OPTION (Page 15)		MOUNTING/MODEL (Page 16)	CONTROL-TYPE (Page 19)
					2.1	2.2	2.3	1.1	1.2		
3	HAND RAIL (Page 20)			COLOUR (Page 12)		STAINLESS STEEL MODEL (Page 21-22)		For construction of the gripper please specify:			
TYPE	L	B	STANDARD RAL 1006	SPECIAL (ADDITIONAL PRICE)	<input type="checkbox"/> DEVICES CAD DATA DXF			WITH SAMPLE	GRIPPER-TYPE NUMBER:		
					<input type="checkbox"/> DEVICES DRAWINGS						

\*W 1 = Values of orientation: vacuum gripping crossbar ca. 150 mm, parallel gripper ca. 200 mm, clamping unit ca. 250 mm, magnet ca. 150 mm, load hook ca. 200 mm  
The precise definition is carried out in the design layout.

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