



# Mechspace Pro

# Handle eccentric loads

## Easy to manoeuvre and smooth

Mechspace Pro is pneumatic moment absorbing manipulator for loads up to 150 kg and a moment up to 1500 Nm. Mechspace Pro is easy to manoeuvre and provides ergonomic freedom of movement within a large working area.

## Beneficial moment absorbing capacity

The moment absorbing features gives important advantages for complex material handling operations, and for gripping and rotation of eccentric loads.

## Impressive reach and flexibility

Mechspace Pro is the natural choice where the working reach is of high importance, as for example when the operator is working under a protruding roof, inside a vehicle or in a working area with restricted accessibility. Pillar-mounted Mechspace Pro 70P can also be equipped with a mobile footplate for easy repositioning by forklift truck.

## Several pneumatic versions

Each type of material handling requires its pneumatic solution. Mechspace Pro is available in several standard versions: counterbalanced for 1 or 2 loads, or in a pilot control version for balancing of varying loads in combination with an external control unit.

## Standard vs. Automotive

Mechspace Pro is available in two pneumatic variants.

The standard version is the natural solution for material handling and lifting technique within the general industry.

For more demanding environments where increased reliability is required, such as in assembly processes in the automotive industry, we offer a variant Automotive using impulse signals via bistable valves for load switching.

## Many areas of applications

Typical application areas for Mechspace Pro is handling of components and various forms of assembly work in the manufacturing and automotive industries.

”

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movomech pro. serie

## Overview

### Mechspace Pro 70/70P/150/150P

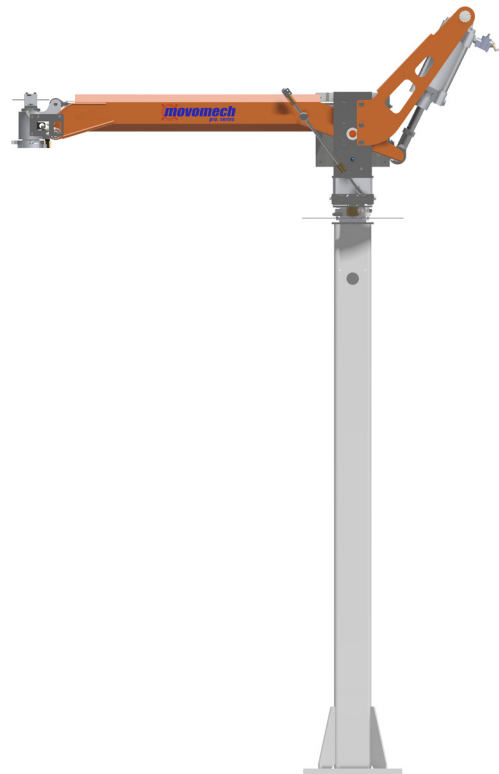
Technical data		70 / 70P	150 / 150P	Mechspace Pro	
Max load <sup>1</sup>	kg	70	150	Media	air, non-lubr. (40 µm) <sup>2</sup>
Max moment <sup>1</sup>	Nm	500	1500	Noice level	<70 dB (A)
Stroke SL	mm	900	1250	Work temperature	5-40°C (indoor use)
Max tare weight	kg	100 / 195	200 / 330		
Air consumption	l <sub>n</sub> /cycle	8	16		
Work pressure	bar	5 (4-7)	6 (5-7)		

<sup>1</sup> See load table

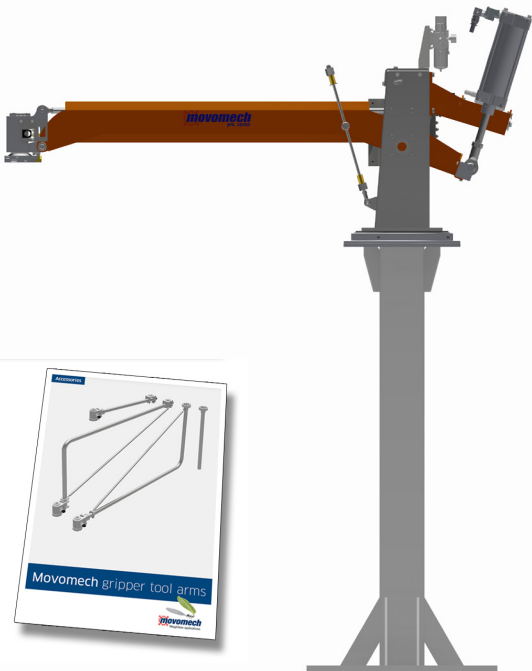
<sup>2</sup> To MS Pro: 0,01 µm, FRL unit is included



Mechspace Pro 70



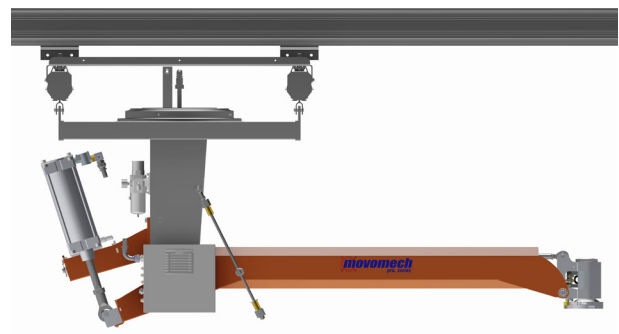
Mechspace Pro 70P



Mechspace Pro 150P



See also Movomech's selection of gripper tool arms for Mechspace Pro.



Mechspace Pro 150

# Pneumatics and load charts

## Balanced 2-weight

Handling of one balanced load; with an external actuator the operator selects "Load" or "Without load".

## Balanced 3-weight

Handling of two balanced loads; with external actuator the operator selects "Load 1", "Load 2", or "Without load".

## Slow speed function

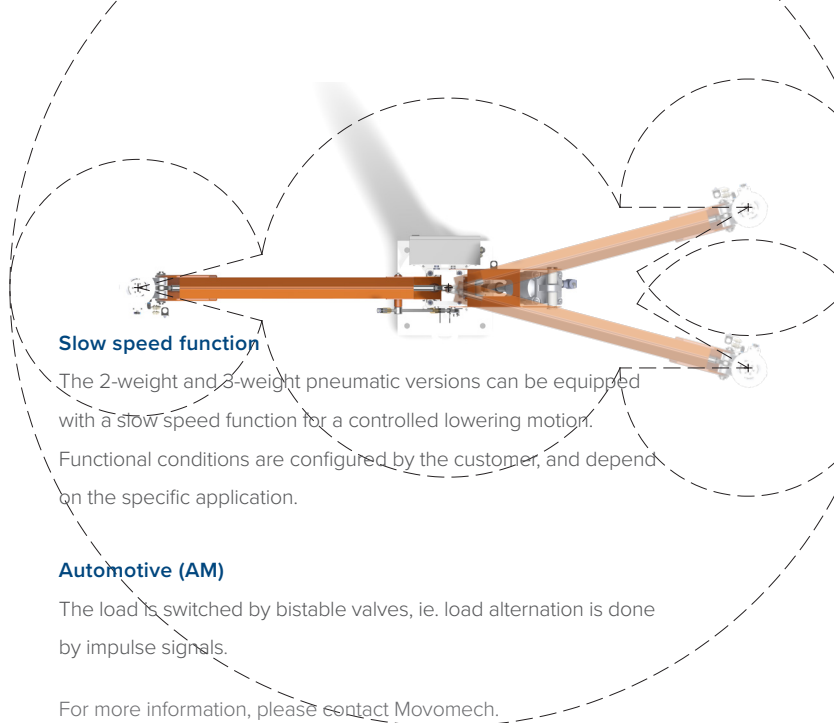
The 2-weight and 3-weight pneumatic versions can be equipped with a slow speed function for a controlled lowering motion.

Functional conditions are configured by the customer, and depend on the specific application.

## Automotive (AM)

The load is switched by bistable valves, ie. load alternation is done by impulse signals.

For more information, please contact Movomech.



## Load table

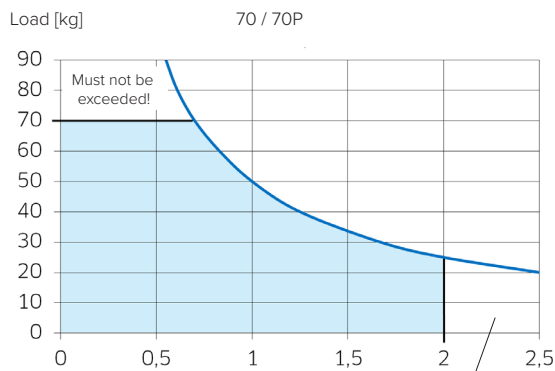
Max load depends on incoming work pressure according to:

Work pressure (bar)	4	5	5,5	6	7
Max load (kg)	70/70P	50	60	65	70
Max load (kg)	150/150P	100	150	150	150

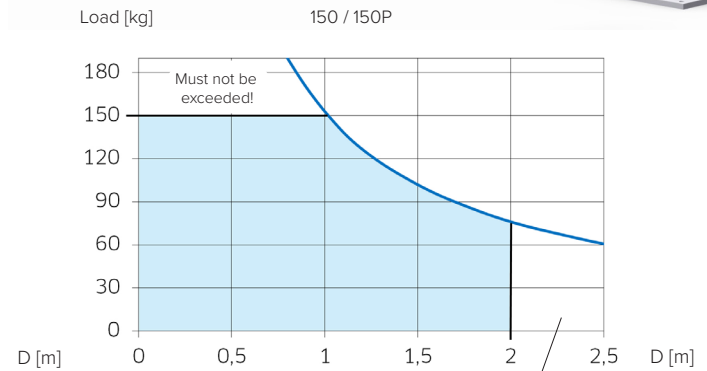
## Load diagram

Mechspace Pro can work with loads within the shaded graphics area for each model.

- Max moment  $M_{max}$  at tool adapter.
- Max load  $m_{max}$  at the tool adapter: includes tool arm, gripper tool and handled object.

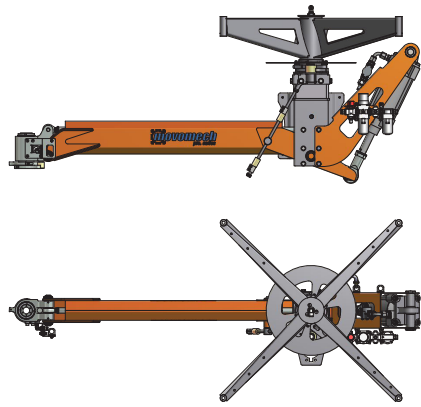


Not recommended due to unpredictable dynamic loads. Contact Movomech for advice.

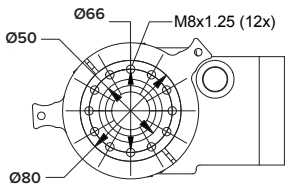


Not recommended due to unpredictable dynamic loads. Contact Movomech for advice.

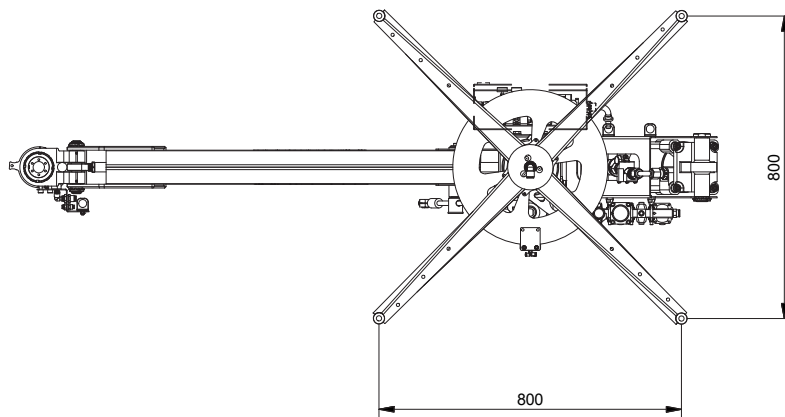
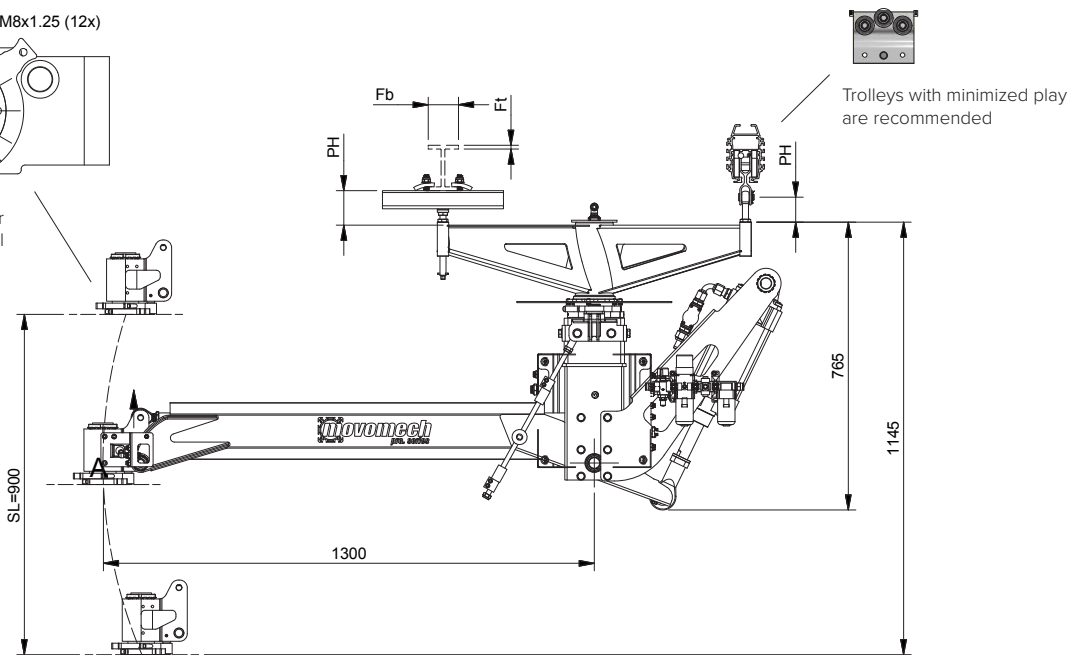
# 70



- 70 kg**<sup>1</sup> Max load
- 500 Nm** Max moment
- 900 mm** Stroke SL
- 0-330°**<sup>2</sup> Rotation
- 0-330°**<sup>2</sup> Front rotation
- 8 l<sub>n</sub>/cycle**<sup>3</sup> Air consumption
- 5 (4-7) bar** Work pressure
- 40 μm**<sup>4</sup> Filtration rate
- 100 kg** Max tare weight



Interface to gripper tool



### 1 + 2 + 3 + (4) + (A/B) : Mechspace Pro 70 specification

#### Load table

Work pressure (bar)	4	5	5,5	6	7
Max load (kg)	50	60	65	70	70

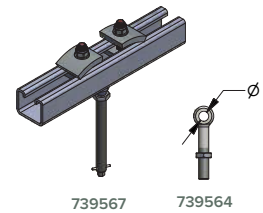
<sup>1</sup> See load table and load diagram p. 5.

<sup>2</sup> 0-360° with rotation stops removed.

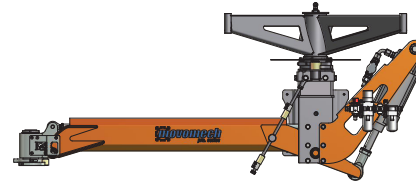
<sup>3</sup> With max load and 5 bar.

<sup>4</sup> To Mechspace Pro: 0,01 μm, FRL unit is included.

1. Suspensions	Ø (mm)	Ft <sub>max</sub> (mm)	Fb (mm)	PH (mm)	#
Eye bolt suspension (4x)	16 H7	-	-	65±10	739564
Fixed suspension (4x)	-	10	55-220	100±20	739567



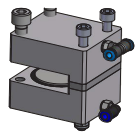
2. Base model	#
Mechspace Pro 70	738947



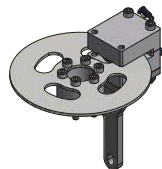
3a. Outbalanced pneumatics	#
2-weight	741330
2-weight AM	741331
2-weight + slow speed function	741332
2-weight AM + slow speed function	741333
3-weight	741334
3-weight AM	741335
3-weight + slow speed function	741336
3-weight AM + slow speed function	741337

3b. Pilot control pneumatics	#
Pilot control	741338
Pilot control + slow speed function	741339

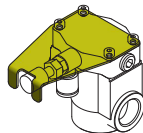
AM: Automotive



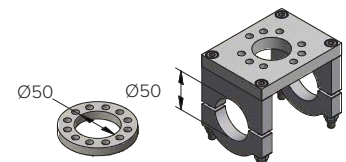
743155



741300



741803



739804

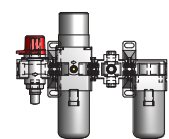
739590

A. Options	#
Upper brake	743155
Front brake	741300
Kit for manual pressure release *	741803

B. Tool brackets	#
Clamp bracket for tube **	739590
Weld-on bracket for tube **	739804

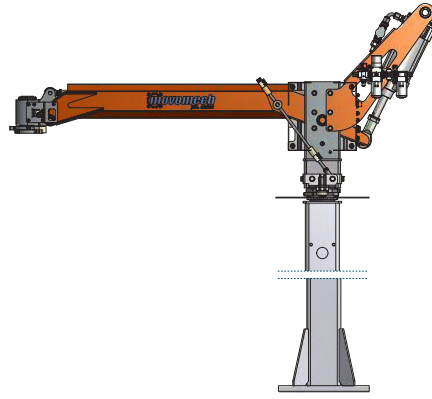
\* Facilitates venting of Mechspace Pro prior to repair and maintenance work. Mechspace Pro 70 : quantity= 1 pc.

\*\* Tube Ø50 is not included.

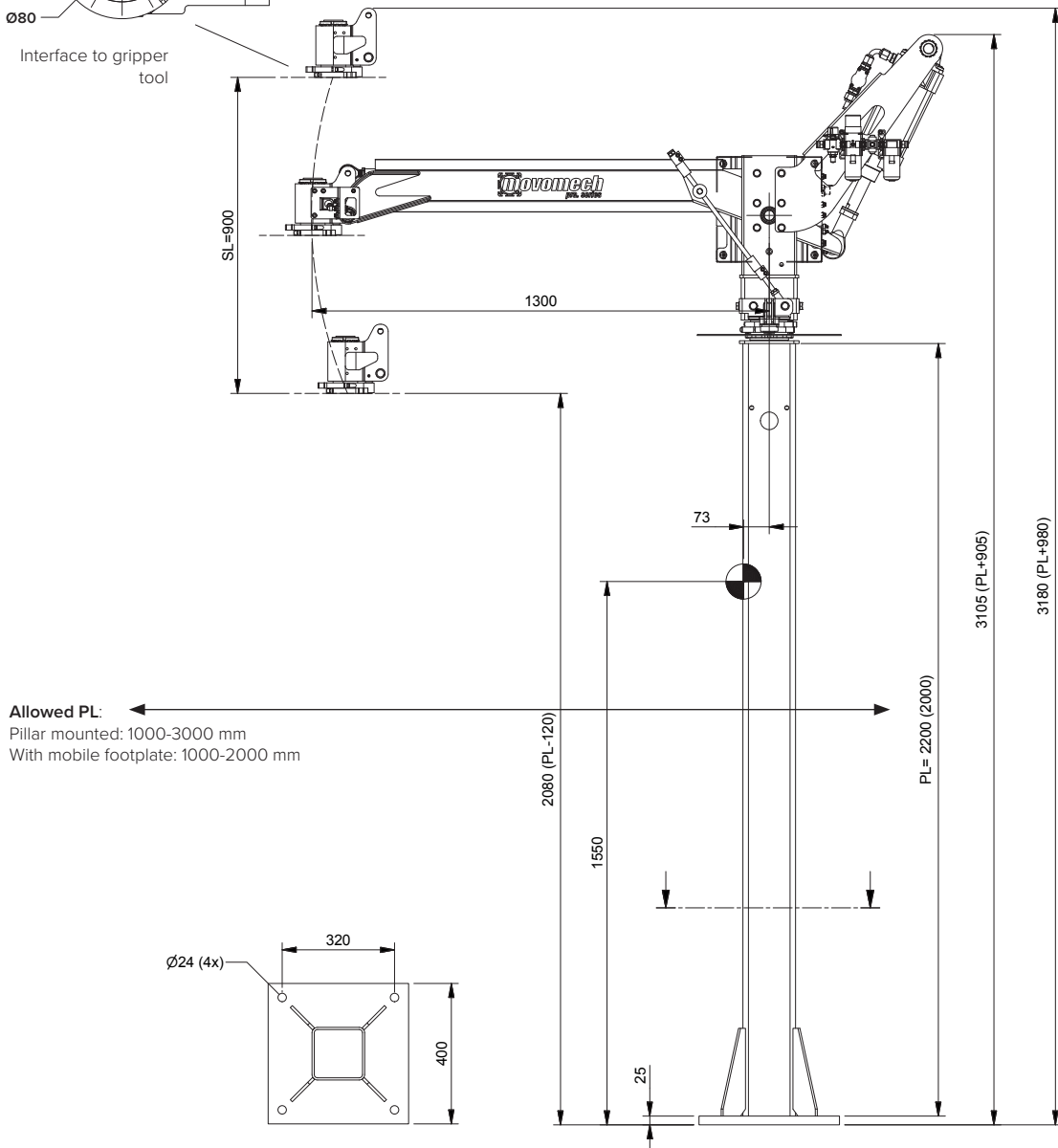
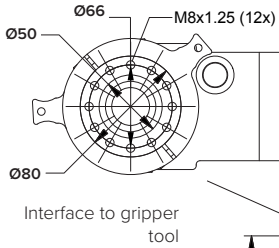


FRL unit 0,01 µm is included.

# 70P



- 70 kg**<sup>1</sup> Max load
- 500 Nm** Max moment
- 900 mm** Stroke SL
- 0-330°**<sup>2</sup> Rotation
- 0-330°**<sup>2</sup> Front rotation
- 8 l<sub>n</sub>/cycle**<sup>3</sup> Air consumption
- 5 (4-7) bar** Work pressure
- 40 μm**<sup>4</sup> Filtration rate
- 100 kg** Max tare weight
- 2200**<sup>5</sup> Pillar length PL



**Allowed PL:**  
 Pillar mounted: 1000-3000 mm  
 With mobile footplate: 1000-2000 mm

## 1 + 2 + 3 + (4) + (A+PL) + (B/C/D) : Mechspace Pro 70P specification

### Load table

Work pressure (bar)	4	5	5,5	6	7
Max load (kg)	50	60	65	70	70

<sup>1</sup> See load table and load diagram p. 5.

<sup>2</sup> 0-360° with rotation stops removed.

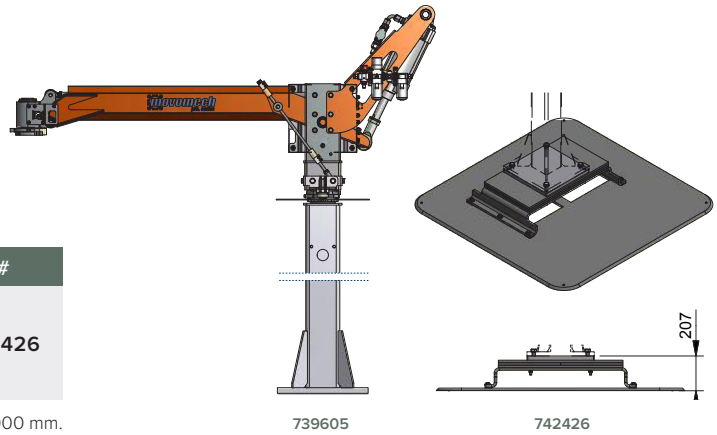
<sup>3</sup> With max load and 5 bar.

<sup>4</sup> To Mechspace Pro: 0,01 μm, FRL unit is included.

<sup>5</sup> Standard pillar length PL with mobile footplate: 2000 mm.



1. Base model		#
Mechspace Pro 70P		739605

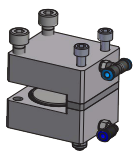


B. Mobile footplate	Weight (kg)	#
Mobile footplate 1480x1480	415	742426

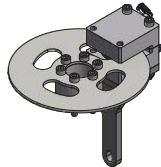
Standard pillar length PL with mobile footplate: 2000 mm.

3a. Outbalanced pneumatics		#
2-weight		741330
2-weight AM		741331
2-weight + slow speed function		741332
2-weight AM + slow speed function		741333
3-weight		741334
3-weight AM		741335
3-weight + slow speed function		741336
3-weight AM + slow speed function		741337

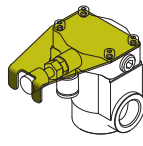
AM: Automotive



743155

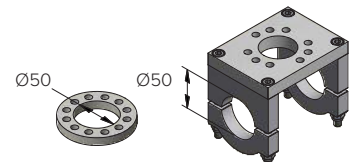


741300



741803

3b. Pilot control pneumatics		#
Pilot control		741338
Pilot control + slow speed function		741339



739804

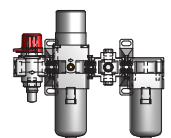
739590

C. Options		#
Upper brake		743155
Front brake		741300
Kit for manual pressure release *		741803

\* Facilitates venting of Mechspace Pro prior to repair and maintenance work. Mechspace Pro 70P : quantity = 1 pc.

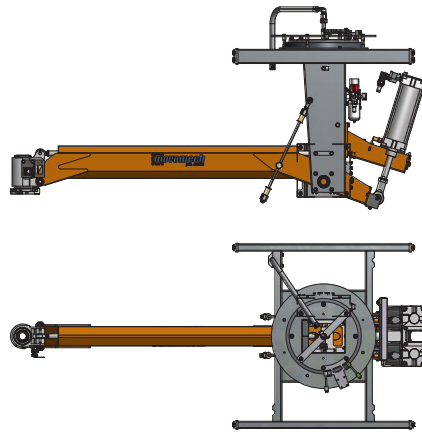
D. Tool brackets		#
Clamp bracket for tube **		739590
Weld-on bracket for tube **		739804

\*\* Tube Ø50 is not included.

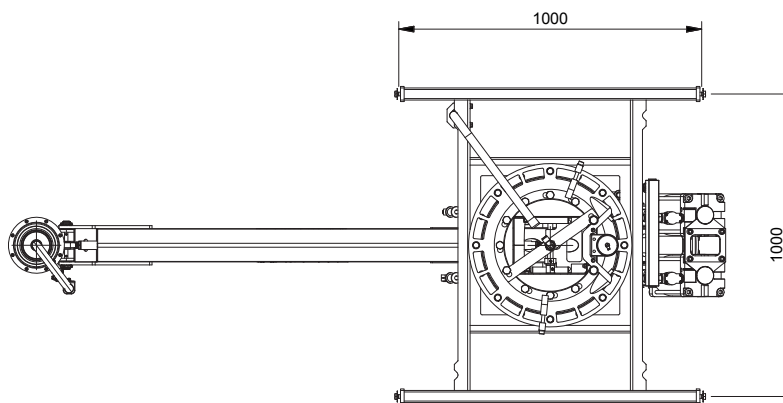
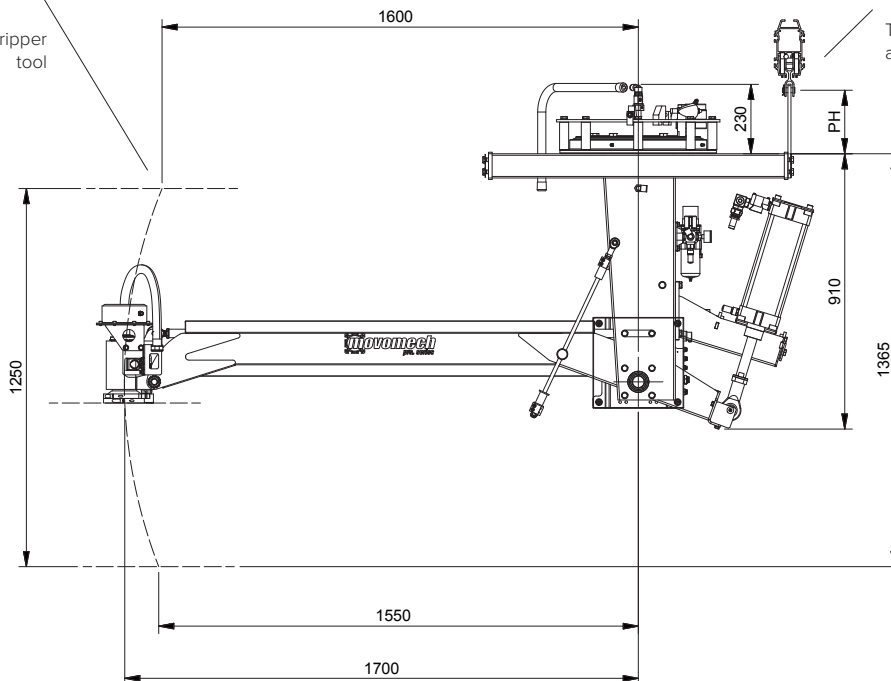
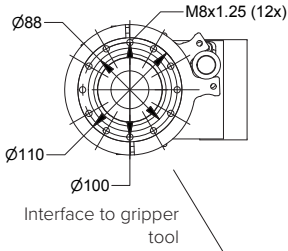


FRL unit 0,01 µm is included.

# 150



- 150 kg**<sup>1</sup> Max load
- 1500 Nm** Max moment
- 1250 mm** Stroke SL
- 0-310°**<sup>2</sup> Rotation
- 0-330°**<sup>2</sup> Front rotation
- 16 l<sub>n</sub>/cycle**<sup>3</sup> Air consumption
- 6 (5-7) bar** Work pressure
- 40 μm**<sup>4</sup> Filtration rate
- 200 kg** Max tare weight



### 1 + 2 + 3 + (4) + (A) : Mechspace Pro 150 specification

#### Load table

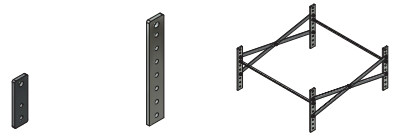
Work pressure (bar)	4	5	6	7
Max load (kg)	100	150	150	150

<sup>1</sup> See load table and load diagram p. 5.

<sup>2</sup> 0-360° with rotation stops removed.

<sup>3</sup> With max load and 6 bar.

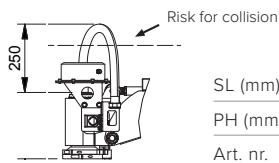
<sup>4</sup> To Mechspace Pro: 0,01 μm, FRL unit is included.



733835/37 740940/41 740943/45/47/49

	Height PH (mm)	Qty	c/c	#	#
Suspension PH 50	50	4	-	733835	733837
Suspension PH 90-210*	90-130-170-210	4	-	740940	740941
Suspension 4x PH 250-370*	250-290-330-370	1	1000	740943	740945
Suspension 4x PH 410-490*	410-450-490	1	1000	740947	740949
			Ø (mm)	16,5	20,5
			Fits trolley	AHB1/2	AHB3

\* Cut to selected suspension height PH.



When Mechspace Pro 150 is equipped with a front brake, the lifter must be lowered in order to avoid collision with the crane when utilizing a full stroke.

The table below gives the recommended suspension height PH as a function of the stroke SL.

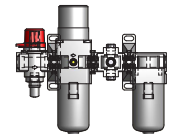
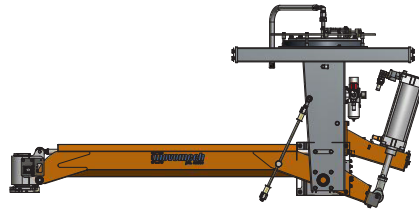
SL (mm)	0-1000	0-1040	0-1080	0-1120	0-1160	0-1200	0-1240	0-1250
PH (mm)	50	90	130	170	210	250	290	310
Art. nr.	733835/37	740940/41	740940/41	740940/41	740940/41	740943/45	740943/45	740943/45

## 2. Base model

#

Mechspace Pro 150

740700



FRL unit 0,01 µm is included.

## 3a. Outbalanced pneumatics

#

2-weight	741370
2-weight AM	741371
2-weight + slow speed function	741372
2-weight AM + slow speed function	741373
3-weight	741374
3-weight AM	741375
3-weight + slow speed function	741376
3-weight AM + slow speed function	741377

AM: Automotive

## 3b. Pilot control pneumatics

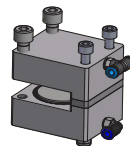
#

Pilot control	741378
Pilot control + slow speed function	741379

## A. Options

#

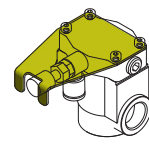
Upper brake	742708
Front brake	740755
Kit for manual pressure release *	741803



742708



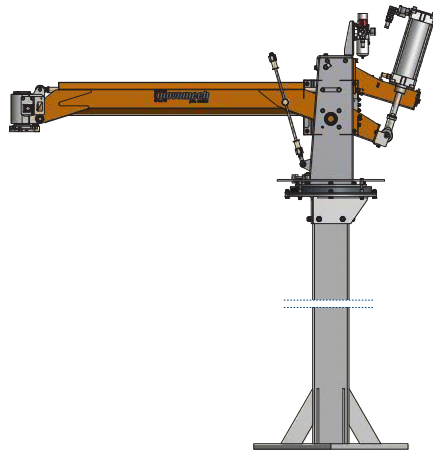
740755



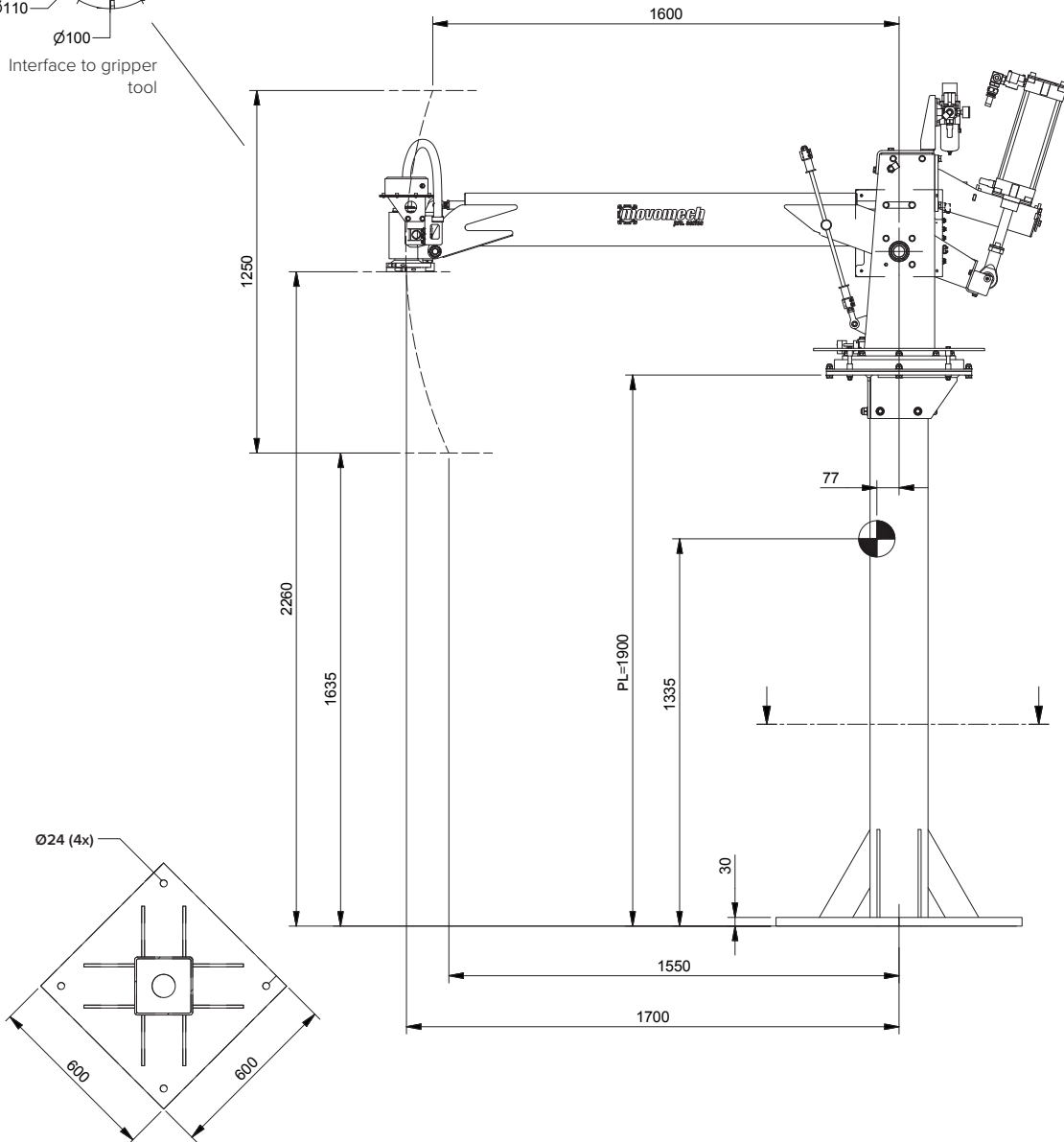
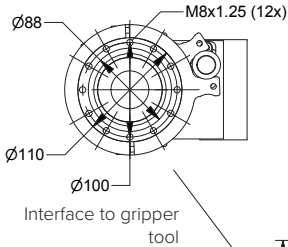
741803

\* Facilitates venting of Mechspace Pro prior to repair and maintenance work. Mechspace Pro 150 : quantity = 2 pcs.

# 150P



- 150 kg**<sup>1</sup> Max load
- 1500 Nm** Max moment
- 1250 mm** Stroke SL
- 0-310°**<sup>2</sup> Rotation
- 0-330°**<sup>2</sup> Front rotation
- 16 l<sub>n</sub>/cycle**<sup>3</sup> Air consumption
- 6 (5-7) bar** Work pressure
- 40 μm**<sup>4</sup> Filtration rate
- 330 kg** Max tare weight
- 1900 mm** Pillar length PL



**1 + 2 + 3 + (4) + (A+PL) + (B) : Mechspace Pro 150P specification**

### Load table

Work pressure (bar)	4	5	6	7
Max load (kg)	100	150	150	150

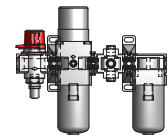
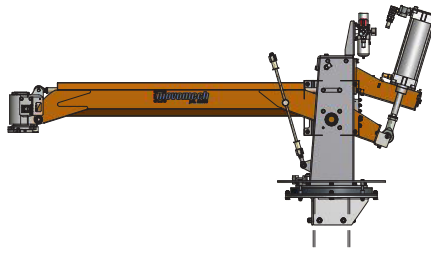
<sup>1</sup> See load table and load diagram p. 5.

<sup>2</sup> 0-360° with rotation stops removed.

<sup>3</sup> With max load and 6 bar.

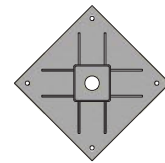
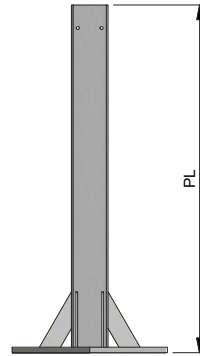
<sup>4</sup> To Mechspace Pro: 0,01 μm, FRL unit is included.

1. Base model		#
Mechspace Pro 150P		740705



FRL unit 0,01 µm is included.

2. Pillar		#
Pillar PL=1900		742900
Allowed PL: 1700-2400 mm		

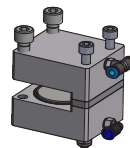


3a. Outbalanced pneumatics		#
2-weight		741370
2-weight AM		741371
2-weight + slow speed function		741372
2-weight AM + slow speed function		741373
3-weight		741374
3-weight AM		741375
3-weight + slow speed function		741376
3-weight AM + slow speed function		741377

AM: Automotive

3b. Pilot control pneumatics		#
Pilot control		741378
Pilot control + slow speed function		741379

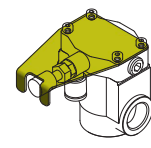
B. Options		#
Upper brake		742708
Front brake		740755
Kit for manual pressure release *		741803



742708



740755



741803

\* Facilitates venting of Mechspace Pro prior to repair and maintenance work. Mechspace Pro 150P : quantity = 2 pcs.

"Mechspace Pro is extremely easy to manoeuvre and provides ergonomic freedom of movement within a large working area."

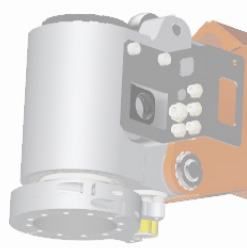
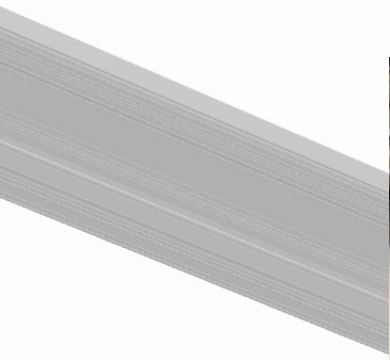


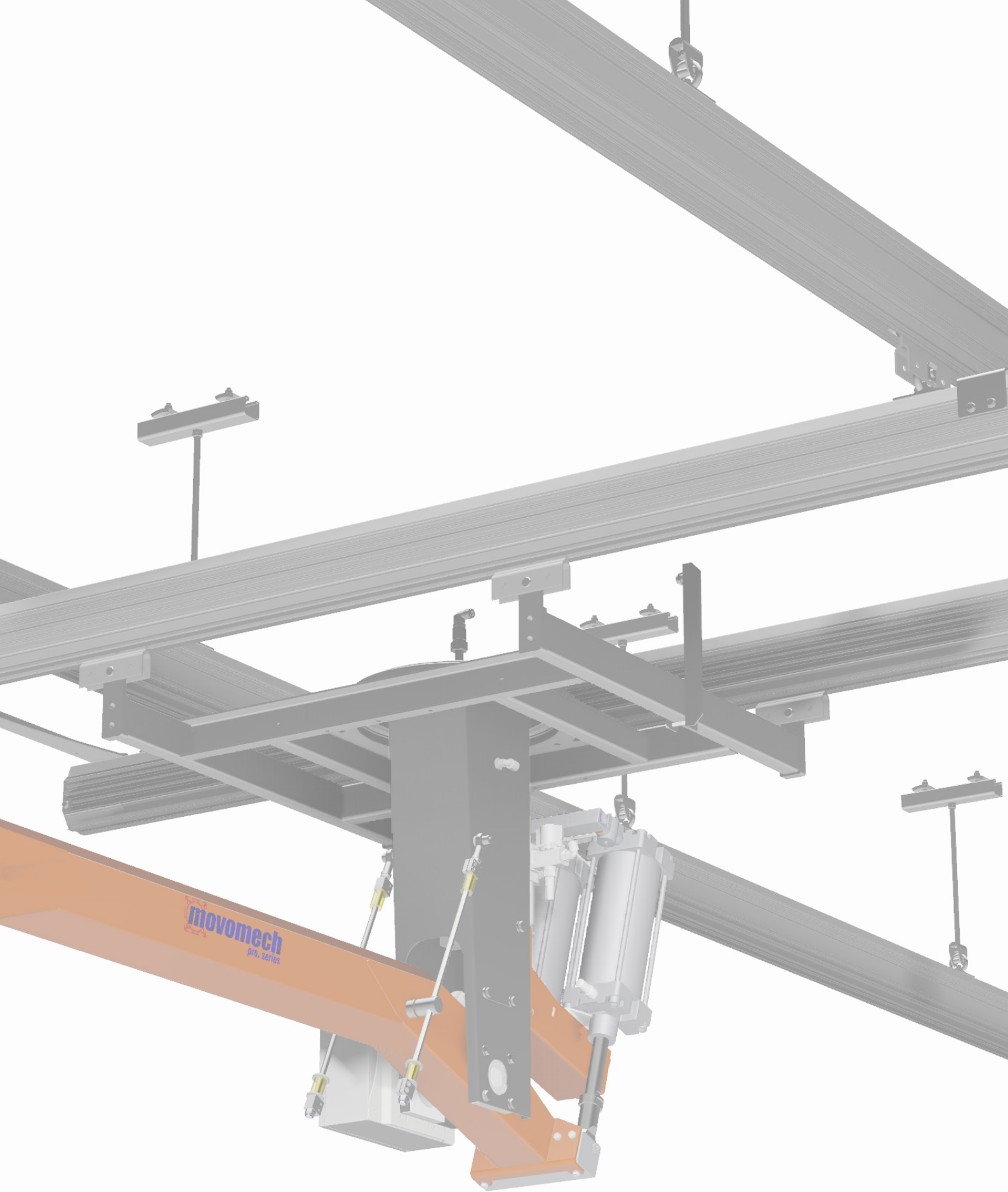
Mechspace Pro 150



Mechspace Pro 150P

"Mechspace Pro's moment absorbing features gives important advantages for complex material handling operations, and for gripping and rotation of eccentric loads."





**For more information,  
contact your sales representative**

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