

TSL

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

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Options

- **Automatic lubricating unit**

To minimize maintenance work and increase availability, automatic lubricating units are optionally available for the linear guides and rack drive, either separately or in combination.

- **Additional carriage**

In order to mount a second robot, thereby increasing flexibility and performance, an additional carriage can be integrated on the track (TSL1000SD or larger).

- **Range limitation**

For precise definition of the effective working range of the robot, range limitations can be defined for 2 or 3 zones for the TSL1000SD and 2, 3 or 4 zones for the TSL2000SD/TSL4000SD.

- **Holders for supply components**

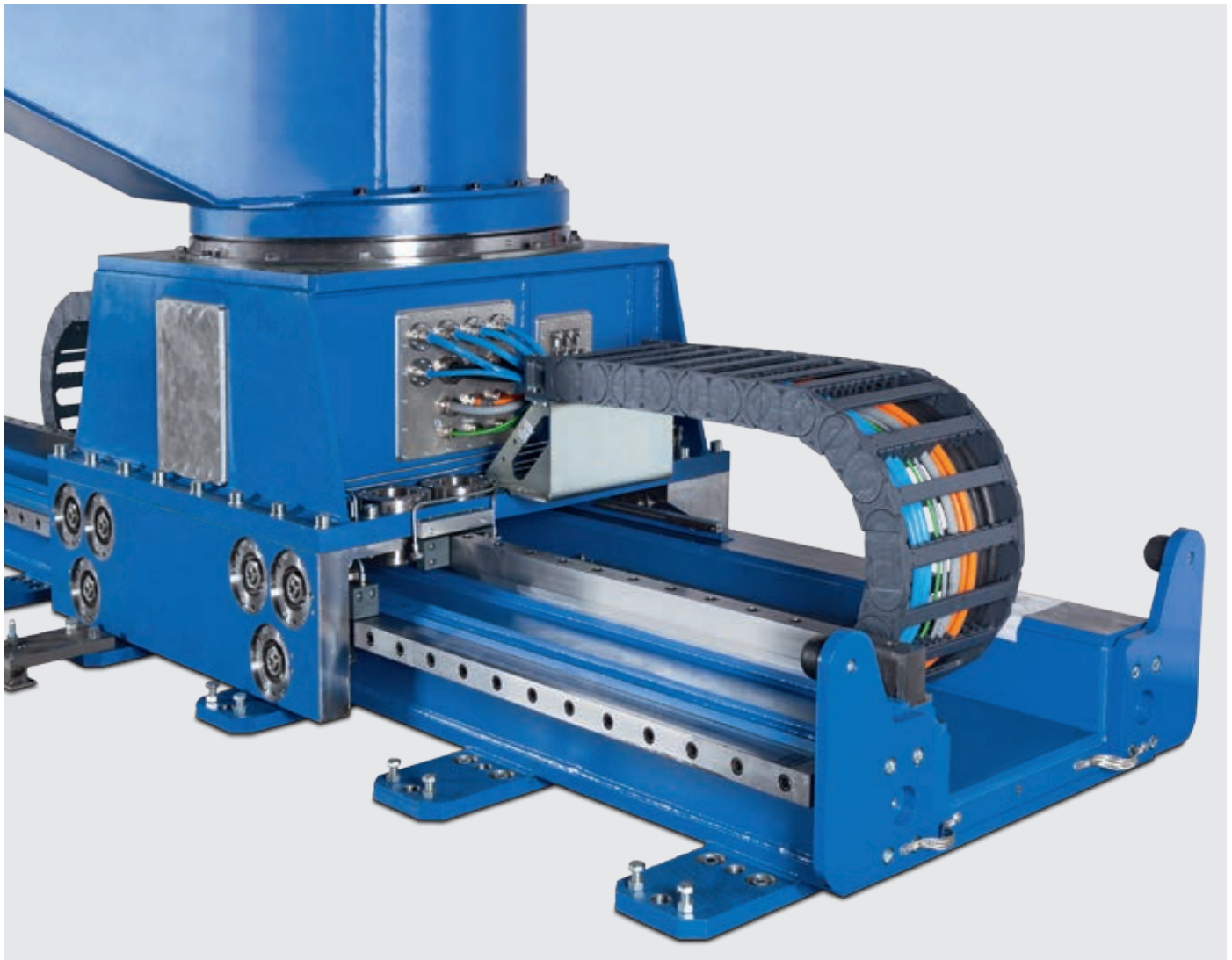
In order to install additional components, such as weld current controllers, wire drums or other application-specific equipment directly in the application system, various holders and mounts can optionally be provided on the carriage.

- **Cable carrier**

The integrated cable carrier can optionally be mounted on the left or right.

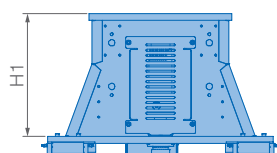
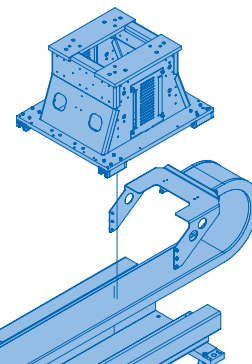
- **Special applications**

Variants for special applications (painting, coating) or special dimensions are available on request.

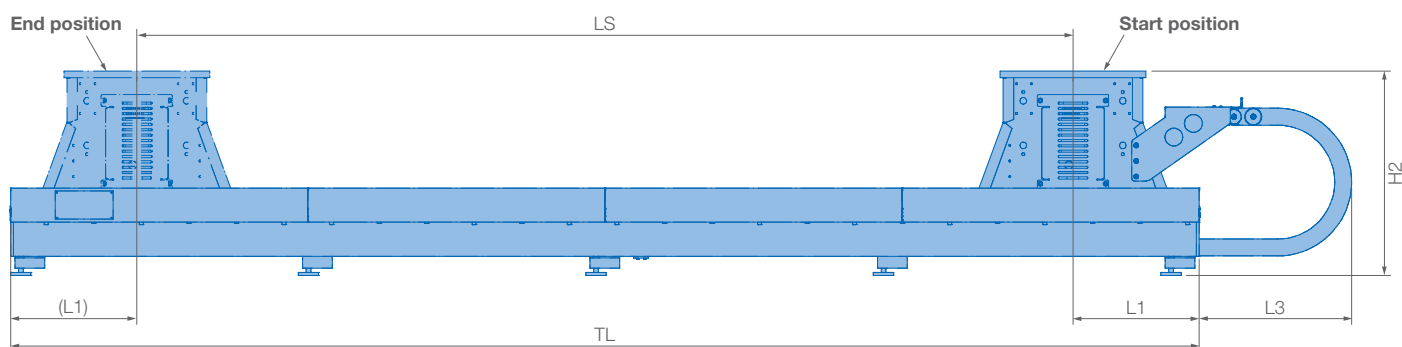
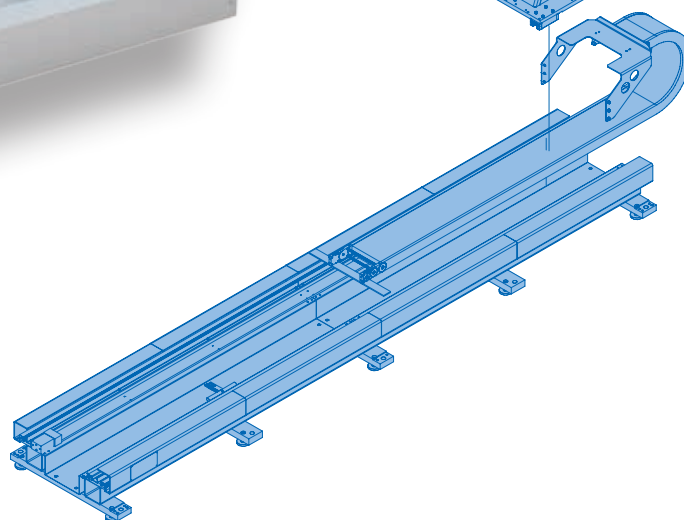


TSL600SD

- Length 2 / 3 / 4 m
- Max. Payload 600 kg
- SIGMA V drive, 1,3 kW



Carriage, type B

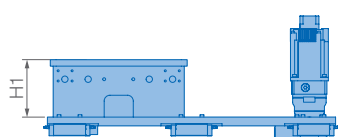
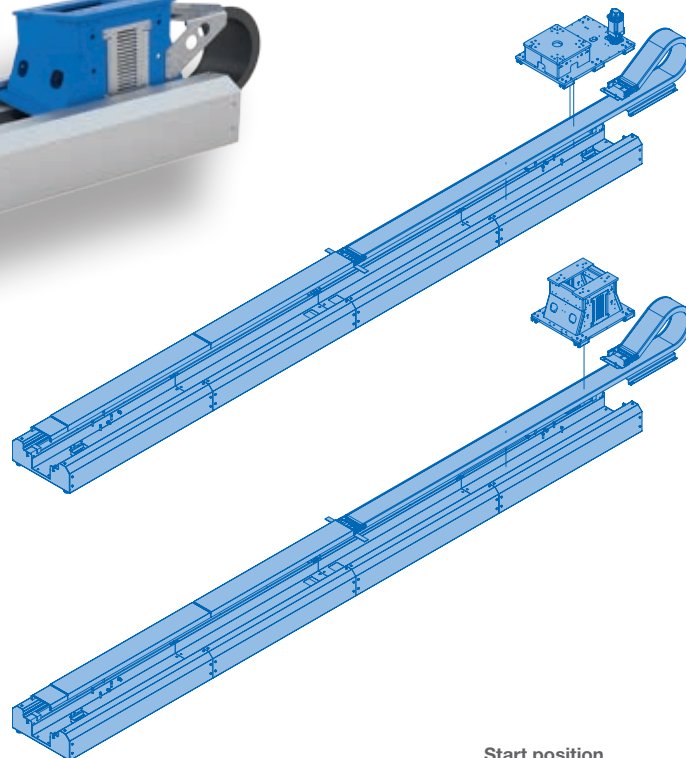


Track [m]	TSL600SD			
	TL [mm]	LS [mm]	L3 max. [mm]	Speed [m/sec.]
2	1999	1150	510	0 – 1.8
3	2999	2150	510	0 – 1.8
4	3999	3150	510	0 – 1.8

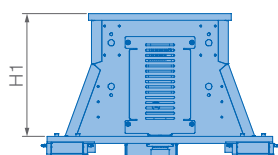
Type	Carriage			
	H1 [mm]	H2 [mm]	L1 [mm]	MOTOMAN robot DX200
B	420	H1+267	424.5	MA1440, MA2010, MH12, MH24
B	620	H1+267	424.5	
B	820	H1+267	424.5	
B	1020	H1+267	424.5	
B	1220	H1+267	424.5	
B	1420	H1+267	424.5	

TSL1000SD

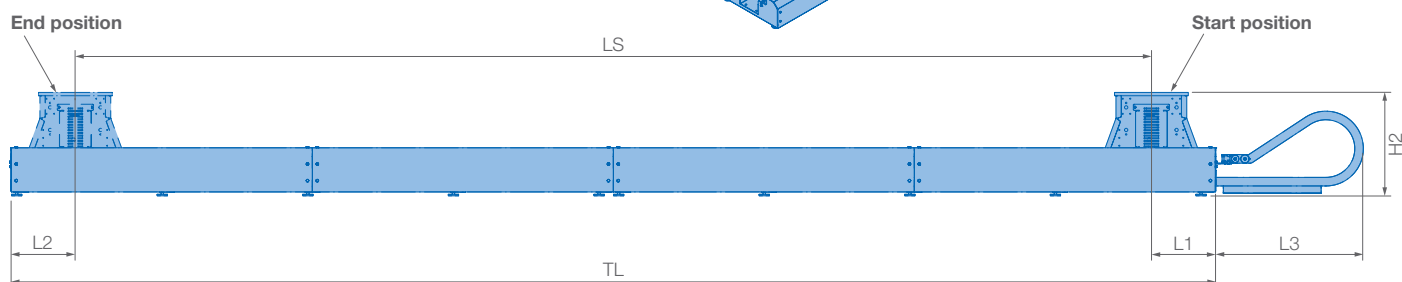
- Length 2 – 24 m
- Max. Payload 1000 kg
- SIGMA V drive, 1,3 kW



Carriage, type A



Carriage, type B

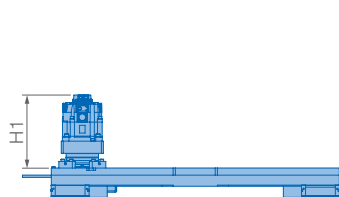
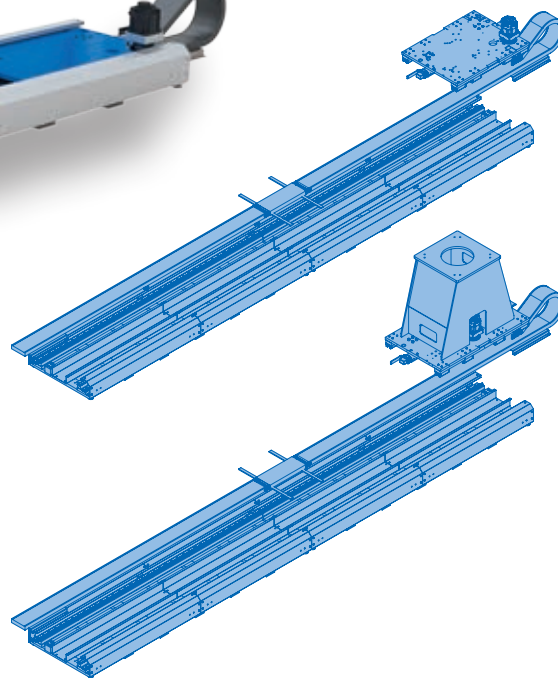


Track [m]	TSL1000SD				
	TL [mm]	LS Carriage type A [mm]	LS Carriage type B [mm]	L3 max. [mm]	Speed [m/sec.]
2	2006	935	1150	510 (660*)	0 – 1.8
4	4006	2935	3150	510 (660*)	0 – 1.8
6	6006	4935	5150	510 (660*)	0 – 1.8
8	8006	6935	7150	1003	0 – 1.8
10	10006	8935	9150	1003	0 – 1.8
12	12006	10935	11150	1003	0 – 1.8
14	14006	12935	13150	1003	0 – 1.8
16	16006	14935	15150	1003	0 – 1.8
18	18006	16935	17150	1003	0 – 1.8
20	20006	18935	19150	1003	0 – 1.8
22	22006	20935	21150	1003	0 – 1.8
24	24006	22935	23150	1003	0 – 1.8

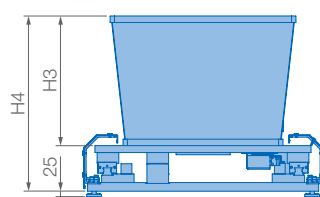
Type	Carriage			
	H1 [mm]	H2 [mm]	L1 [mm]	MOTOMAN robot DX200
A	197	H1+270	785,5	MA1440, MA2010, MH12, MH24, MH50 II, MH50-20 II, MH50-35 II, MH80II, MS80WII, MPL80II
B	420	H1+267	428	
B	620	H1+267	428	
B	820	H1+267	428	MA1440, MA2010, MH12, MH24, MH50 II, MH50-20 II, MH50-35 II
B	1020	H1+267	428	
B	1220	H1+267	428	
B	1420	H1+267	428	MA1440, MA2010, MH12, MH24

TSL2000SD

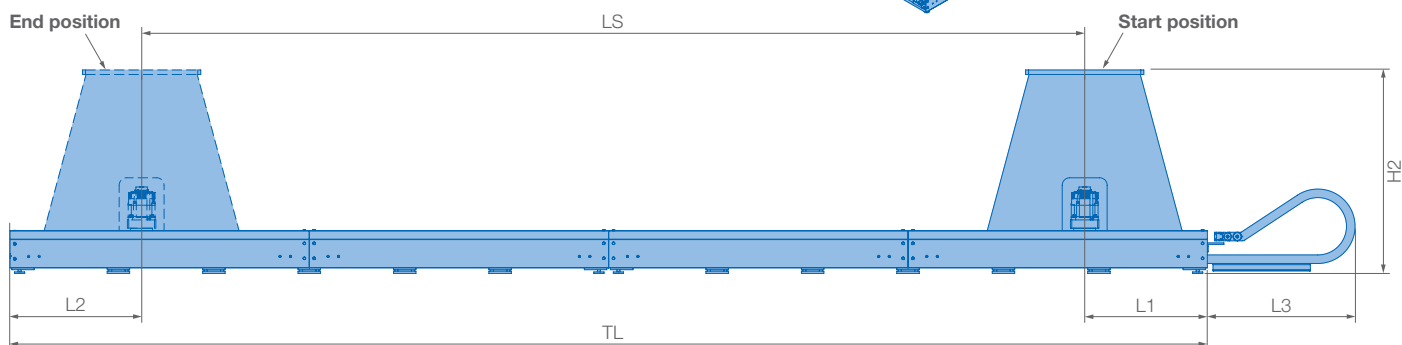
- Length 6 – 24 m
- Max. Payload 2000 kg
- SIGMA V drive, 3,0 kW



Carriage, type A



**Carriage, type A
with pedestal**

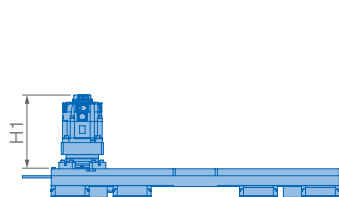
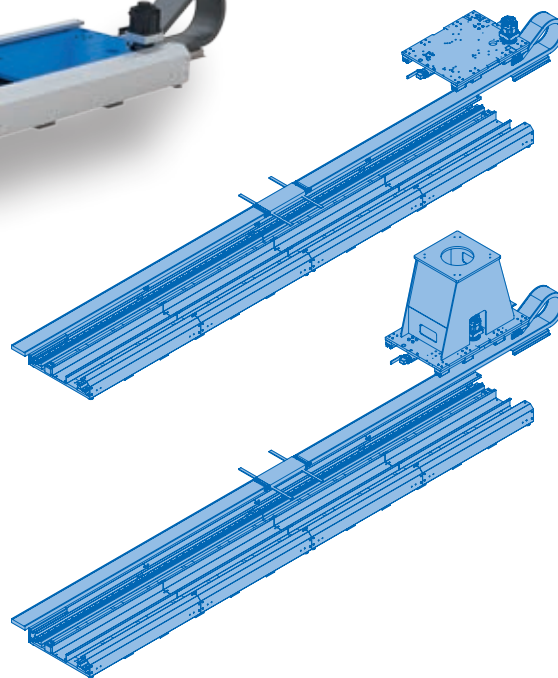


Track [m]	TSL2000SD					
	TL [mm]	LS Carriage type A [mm]	L1 max. [mm]	L2 max. [mm]	L3 max. [mm]	Speed [m/sec.]
6	6000	4660	845	495	519	0 – 1.8
8	8000	6660	845	495	994	0 – 1.8
10	10000	8660	845	495	994	0 – 1.8
12	12000	10660	845	495	994	0 – 1.8
14	14000	12660	845	495	994	0 – 1.8
16	16000	14660	845	495	994	0 – 1.8
18	18000	16660	845	495	994	0 – 1.8
20	20000	18660	845	495	994	0 – 1.8
22	22000	20660	845	495	994	0 – 1.8
24	24000	22660	845	495	994	0 – 1.8

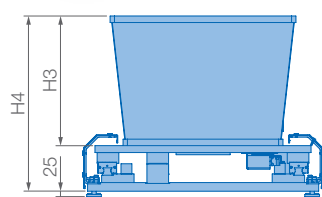
Type	Carriage				MOTOMAN robot DX200
	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	
A	330	236	—	—	MS165, MS210, MH180, MH180-120, MH225, MH280 II, MPL100 II, MPL160 II
A Pedestal 250	330	486	250	461	ES165RD II, ES200RD II, MS165, MS210, MH180, MH180-120 MH225, MH280 II, MPL100 II, MPL160 II
A Pedestal 400	330	636	400	611	
A Pedestal 600	330	836	600	811	

TSL4000SD

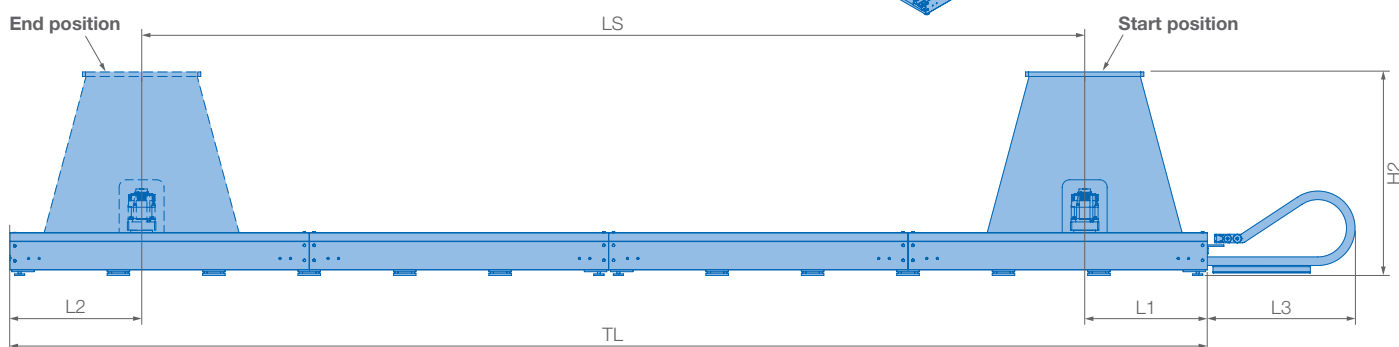
- Length 6 – 24 m
- Max. Payload 4000 kg
- SIGMA V drive, 3,7 kW



Carriage, type B



Carriage, type B with pedestal



Track [m]	TSL4000SD					
	TL [mm]	LS Carriage type A [mm]	L1 max. [mm]	L2 max. [mm]	L3 max. [mm]	Speed [m/sec.]
4	4000	2660	845	495	519	0 – 1.8
6	6000	4660	845	495	519	0 – 1.8
8	8000	6660	845	495	994	0 – 1.8
10	10000	8660	845	495	994	0 – 1.8
12	12000	10660	845	495	994	0 – 1.8
14	14000	12660	845	495	994	0 – 1.8
16	16000	14660	845	495	994	0 – 1.8
18	18000	16660	845	495	994	0 – 1.8
20	20000	18660	845	495	994	0 – 1.8
22	22000	20660	845	495	994	0 – 1.8
24	24000	22660	845	495	994	0 – 1.8

Type	Carriage				
	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	MOTOMAN robot DX200
B	342	236	—	—	MS165, MS210, MH180, MH180-120, MH225, MH280 II, MH400, MH600, MPL100 II, MPL160 II, MPL300 II, MPL500 II, MPL800 II
B Pedestal 250	342	486	250	461	ES165RD II, ES200RD II, MS165, MS210, MH180, MH180-120, MH225, MH280 II, MH400, MH600, MPL100 II, MPL160 II, MPL300 II*, MPL500 II*, MPL800 II**
B Pedestal 400	342	636	400	611	
B Pedestal 600	342	836	600	811	

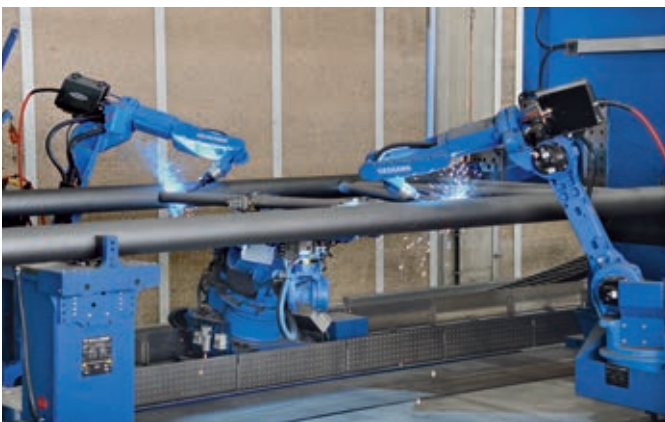
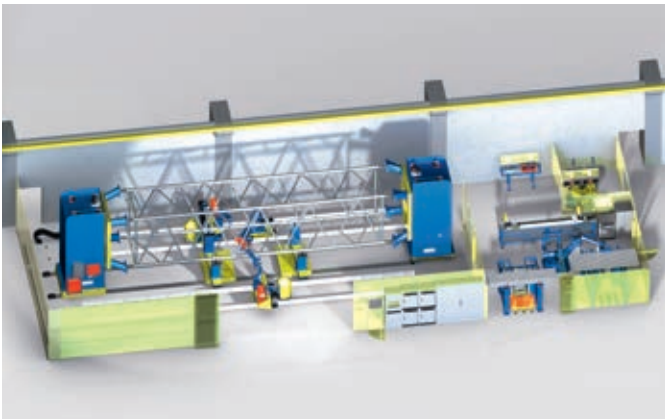
* Not for pedestal Type 600 ** Not for pedestal Type 400 and 600

Properties

- YASKAWA TSL series tracks extend the working range of MOTOMAN robots for all robotic joining processes and handling applications as well as applications with mechanical machine tools.
- All tracks are controlled by the DX200 controller as a fully-synchronized additional robot axis. Operation and programming are carried out using the teach pendant of the robot.
- The carriage, the guide blocks and the rack drive are optimally coordinated with the robots and their applications. TSL tracks feature outstanding YASKAWA product quality and are distinguished by their flexibility, precision and performance.

Application examples

- Automated production of building crane components by means of arc welding with MOTOMAN master/slave handling and welding robot and YASKAWA TSL track as fully-integrated additional robot axis.
- Loading and unloading of presses with MOTOMAN MH180 and YASKAWA TSL2000SD track as fully-integrated robot axis.



- Linked machine loading of CNC machine tools with YASKAWA SDA10 7-axis robot and TSL track.
- Variants for special applications (painting, coating) or special dimensions are available on request.



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