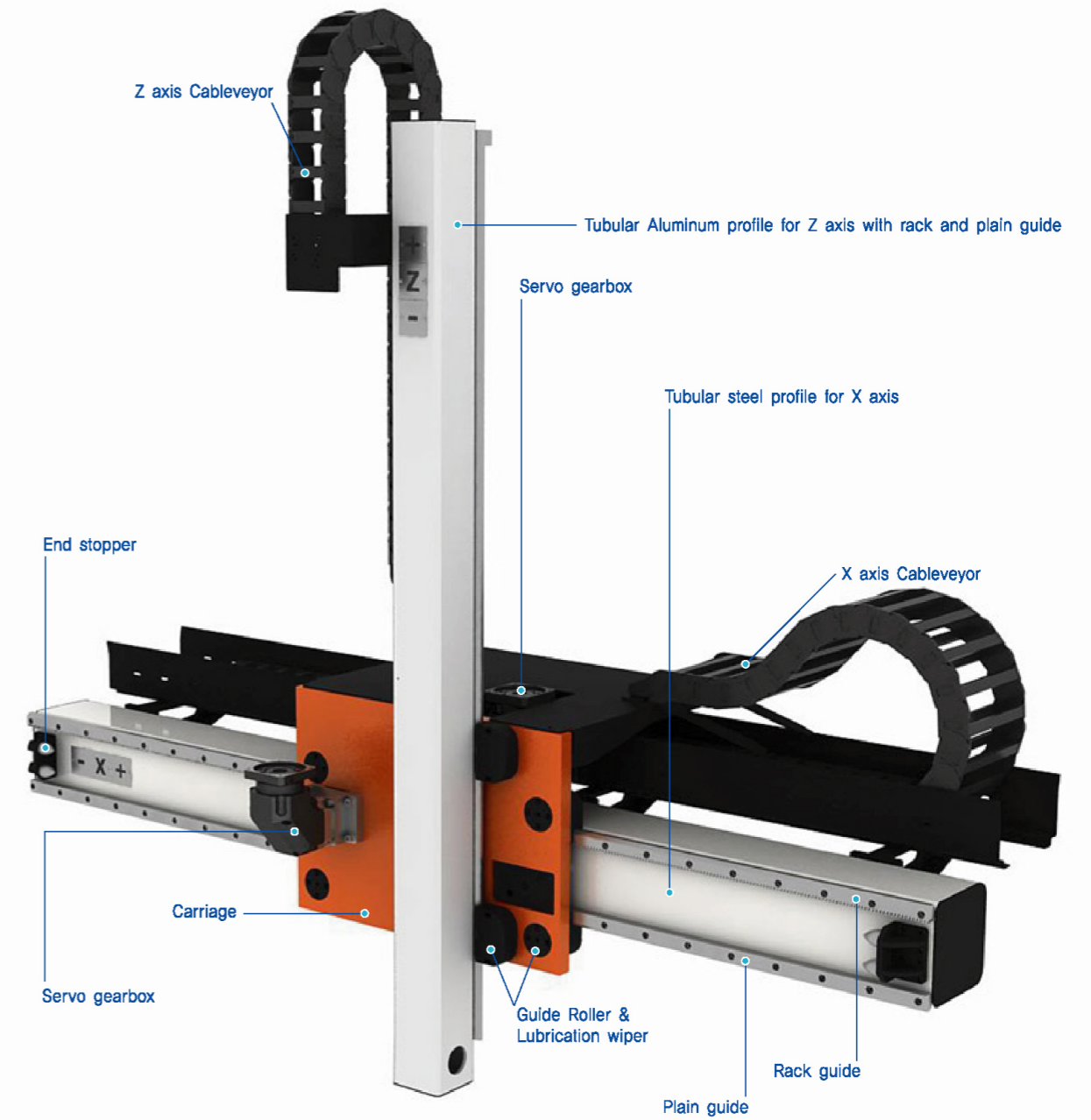


Type TL



구분 / Module Type	가반하중 범위 / Payload range [kg]								
	20	40	60	100	120	150	200	300	
TL - 1	████████████████████								
TL - 2			████████████████████						
TL - 3				████████████████████					

Type TL

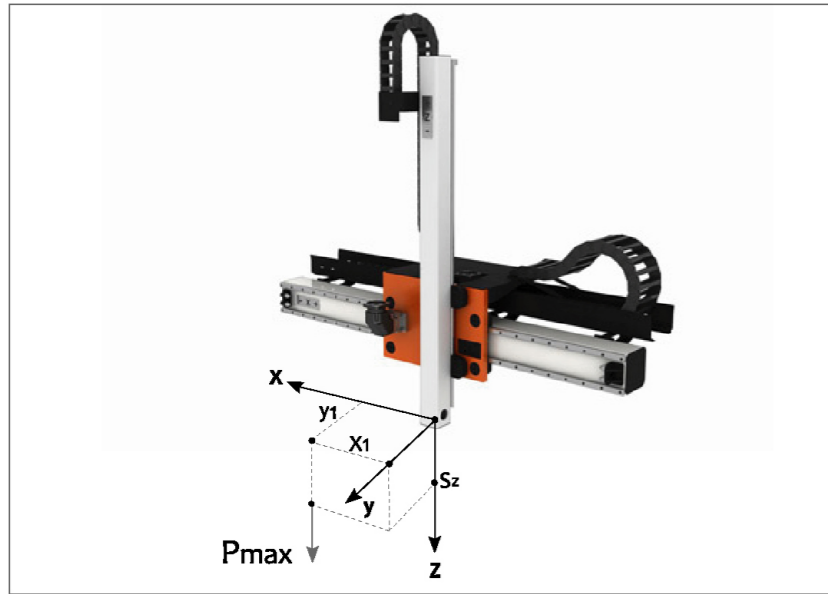


TL

○ 제품치수 및 사양 | Dimension and specification

2축 리니어모듈 | 2 axis linear module

기술자료 TL-1 | Technical data TL-1



Pmax = 60kg

Pmax [kg] : 최대허용가능 가반하중
Permissible max. payload

Peff [kg] : 유효 가반하중(그립퍼 포함)
Effective payload (incl. gripper unit)

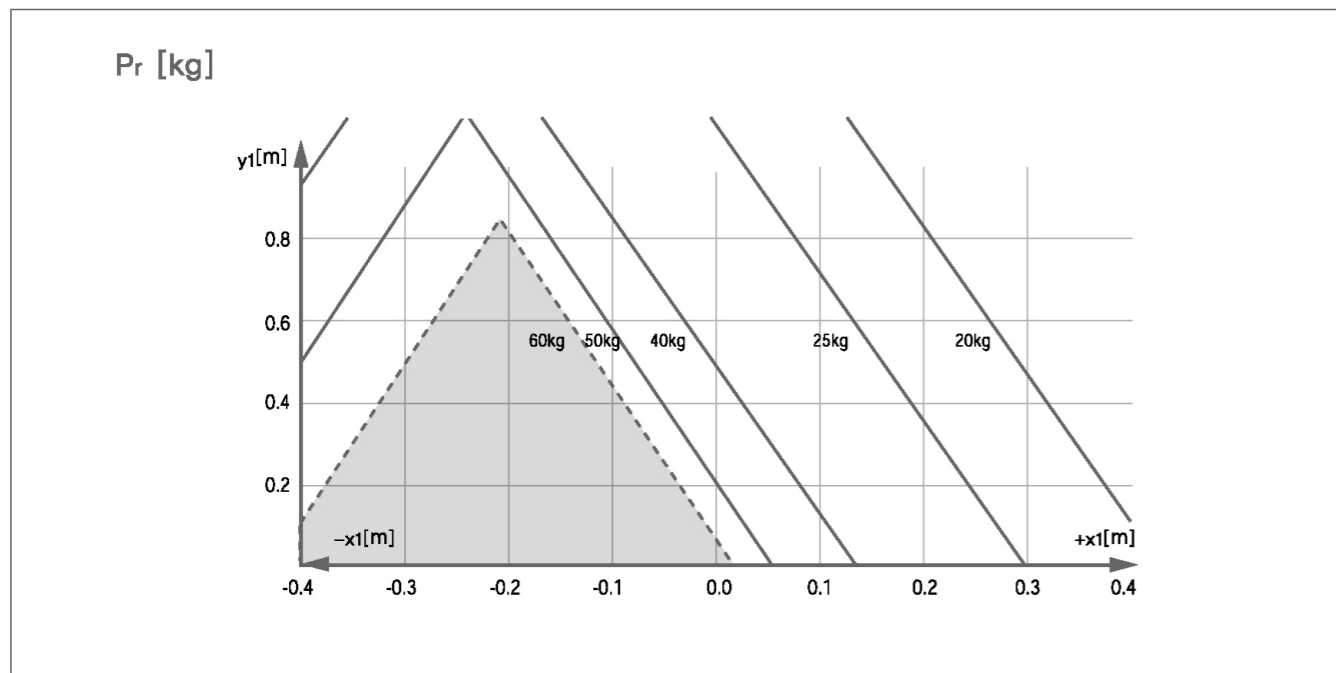
Sz [mm] : 행정거리(Z축)
Stroke(Z axis)

그립퍼 포함 / Including gripper

$$P_{eff} \leq P_{max} \quad [kg]$$

- case 1: sz < 1m Pmax = Pr [kg]
 - case 2: sz > 1m Pmax = Pr - (sz - 1.0) · 21 [kg]
- Peff ≤ Pmax [kg]

허용가반하중범위 | Payload range for loading position



2축 리니어모듈 | 2 axis linear module

주요 구성부품 | Key component

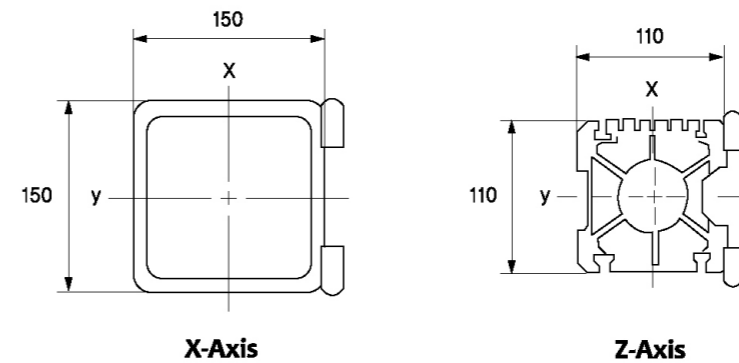
No.	Description	Type	Unit weight	See page
1	가이드 롤러 / Guide roller	GR G 20	0,5 kg	24p
2	윤활 와이퍼 / Lubrication wiper	LW G 20	0,05 kg	28p
3	플레인 가이드 / Plain guide	MPG G 20	3,9 kg/m	20p
4	랙 가이드 / Rack guide	MRG G 20 (X axis)	3,8 kg/m	16p
		MRG G 20 H (Z axis)	3,8 kg/m	16p
5	감속기 / Gearbox	AFR075	6,4 kg	32p

부품상세사양은 부품카타로그를 참조하십시오.
Please refer to the component catalogue regarding detailed component specification

가반하중 및 작동사양 | Payload and drive data

Axis		X axis			Z axis		
		20	40	60	20	40	60
유효가반하중 / Effective payload	[kg]	20	40	60	20	40	60
공칭속도 / Nominal speed	[m/s]	2.6	2.6	2.6	2.6	2.6	2.6
최대가속도 / Max. acceleration	[m/s ²]	5	4	3.5	12	10	6
감속비 / Gearbox ratio	[-]	3:1	3:1	3:1	3:1	3:1	3:1
모터속도 / Motor speed	[rpm]	4500	4500	4500	4500	4500	4500
반복정밀도 / Repeatability	[mm]	±0.05					

굽힘 및 비틀림 저항 | Axis bending and torsion



Axis	Material	Standard	Unit weight(kg/m)	Ix(cm ⁴)	Iy(cm ⁴)	It(cm ⁴)
X	R50	ISO 3304	58,5	2589	2387	3272
Z	AlMg0,7Si	ISO 6361	21	900	800	340

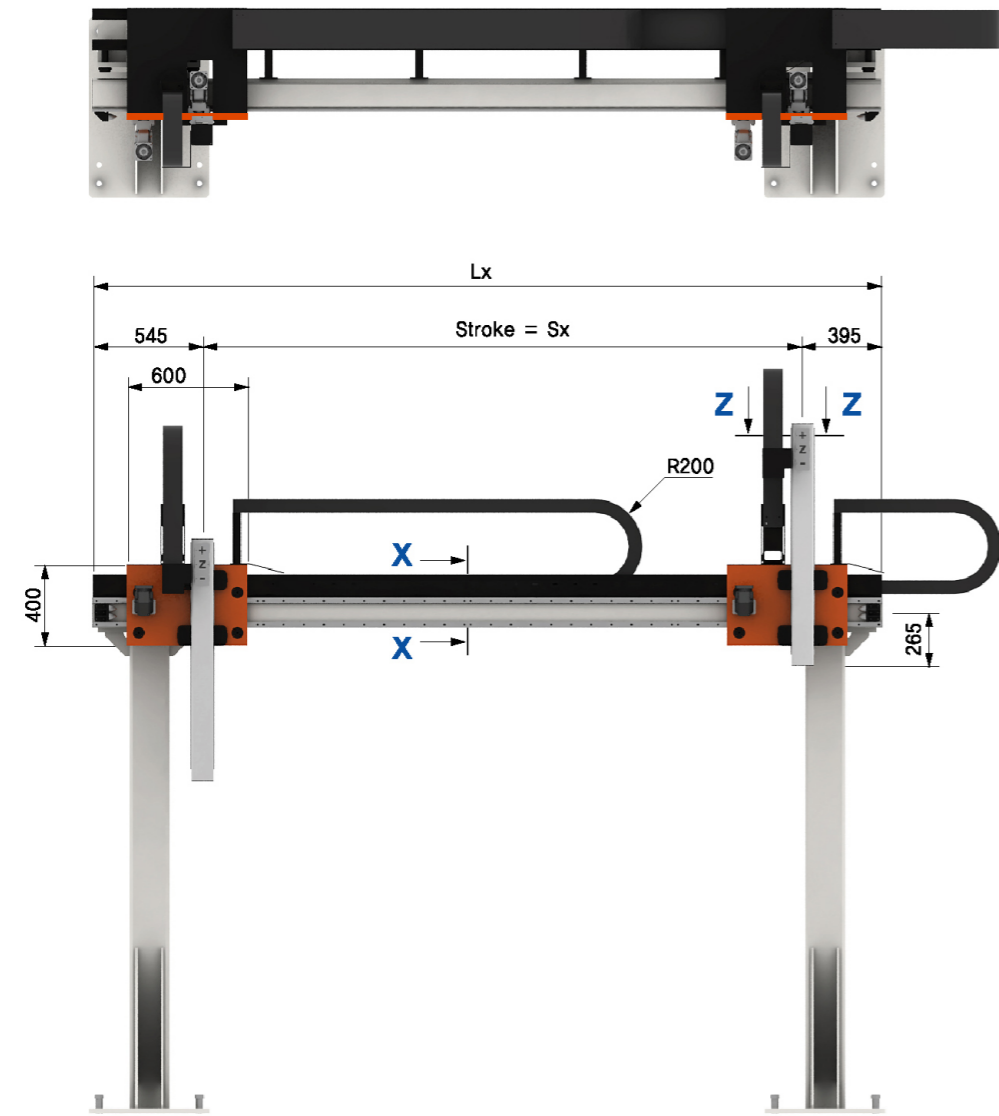
*가이드 부착시 / Guide assembly



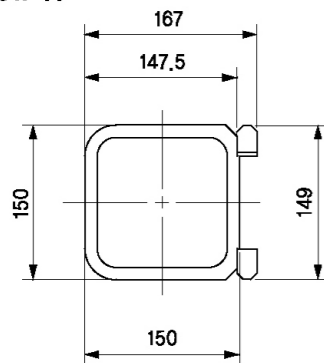
○ 제품치수 및 사양 | Dimension and specification

2축 리니어모듈 | 2 axis linear module

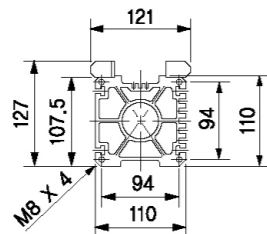
치수 TL-1 | Dimensions sheet TL-1



■ View X



■ View Z



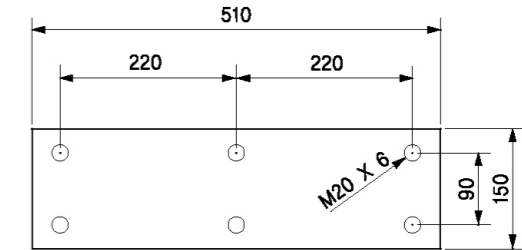
	max.(mm)
Lx	30940
Sx	30000
Lz	1740
Sz	1000

TL-1

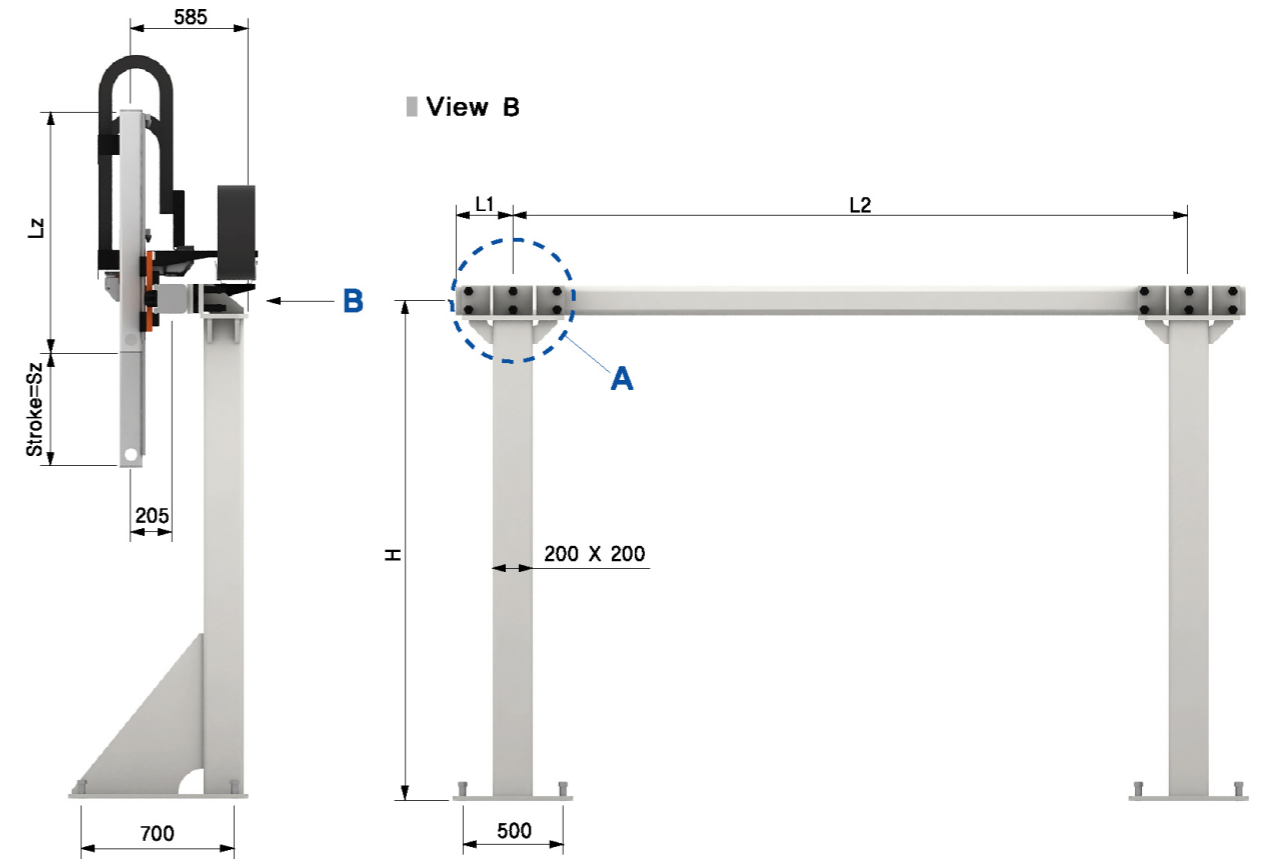
2축 리니어모듈 | 2 axis linear module

치수 TL-1 | Dimensions sheet TL-1

■ View A



■ View B

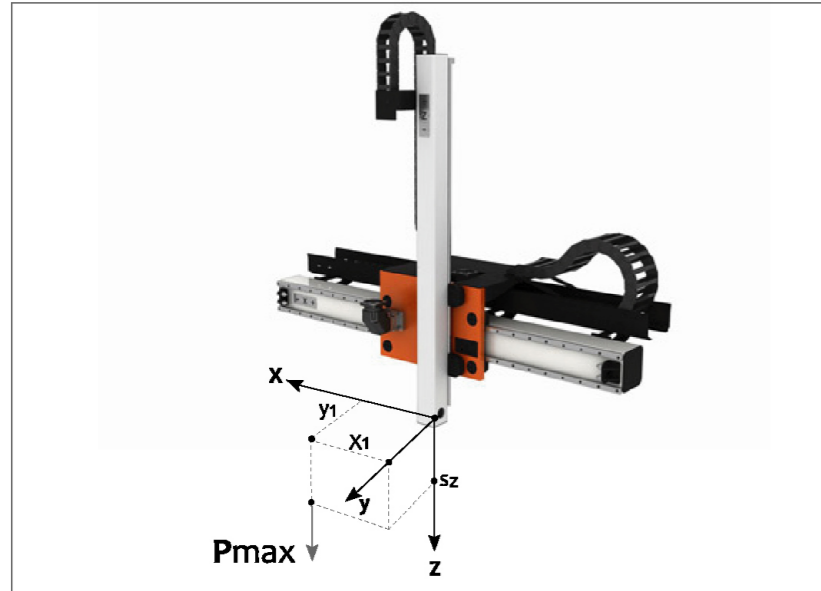


	min.(mm)	max.(mm)
L1	300	1500
L2	600	8000
H	900	3500

○ 제품치수 및 사양 | Dimension and specification

2축 리니어모듈 | 2 axis linear module

기술자료 TL-2 | Technical data TL-2



$P_{max} = 150kg$

P_{max} [kg] : 최대허용가능 가반하중
Permissible max. payload

P_{eff} [kg] : 유효 가반하중(그립퍼 포함)
Effective payload (incl. gripper unit)

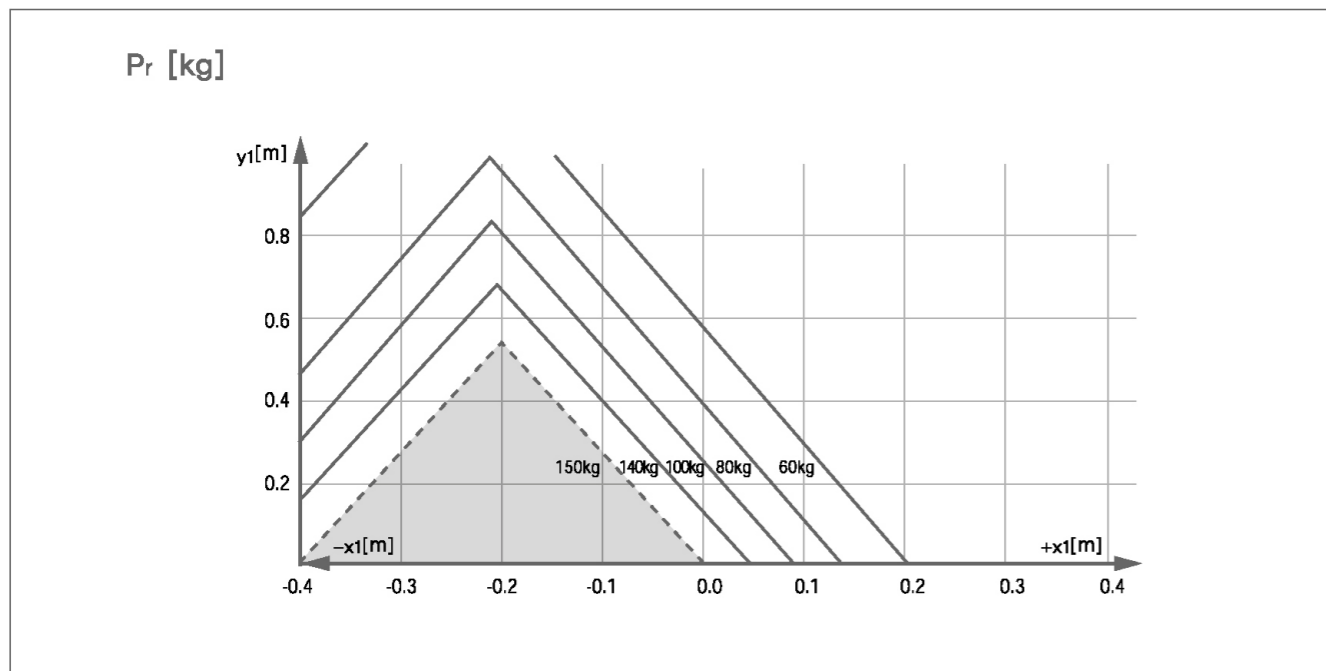
S_z [mm] : 행정거리(Z축)
Stroke(Z axis)

그립퍼 포함 / Including gripper

$P_{eff} \leq P_{max}$ [kg]

- case 1: $s_z < 1m$ $P_{max} = P_r$ [kg]
 - case 2: $s_z > 1m$ $P_{max} = P_r - (s_z - 1,2) \cdot 24$ [kg]
- $P_{eff} \leq P_{max}$ [kg]

허용가반하중범위 | Payload range for loading position



TL-2

2축 리니어모듈 | 2 axis linear module

주요 구성부품 | Key component

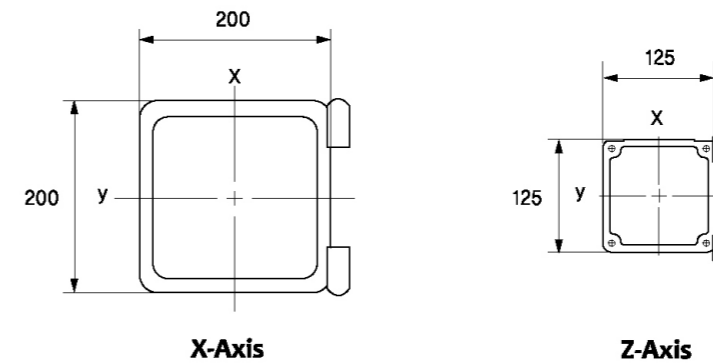
No.	Description	Type	Unit weight	See page
1	가이드 롤러 / Guide roller	GR G 25	1,1 kg	25p
2	윤활 와이퍼 / Lubrication wiper	LW G 25	0,13 kg	29p
3	플레인 가이드 / Plain guide	MPG G 25	5,7 kg/m	21p
4	랙 가이드 / Rack guide	MRG G 25 (X axis)	5,2 kg/m	17p
		MRG G 25 H (Z axis)	5,2 kg/m	17p
5	감속기 / Gearbox	AFR100	13,9 kg	33p

부품상세사양은 부품카타로그를 참조하십시오.
Please refer to the component catalogue regarding detailed component specification

가반하중 및 작동사양 | Payload and drive data

Axis		X axis			Z axis		
유효가반하중 / Effective payload	[kg]	60	100	150	60	100	150
공칭속도 / Nominal speed	[m/s]	3	3	3	3	3	3
최대가속도 / Max. acceleration	[m/s ²]	5	4	3,5	10	7,5	5
감속비 / Gearbox ratio	[-]	3:1	3:1	3:1	3:1	3:1	3:1
모터속도 / Motor speed	[rpm]	3000	3000	3000	3000	3000	3000
반복정밀도 / Repeatability	[mm]	±0,05					

굽힘 및 비틀림 저항 | Axis bending and torsion



Axis	Material	Standard	Unit weight(kg/m)	$I_x(cm^4)$	$I_y(cm^4)$	$I_t(cm^4)$
X	R50	ISO 3304	80,5	6536	6106	8208
Z	AlMg0,7Si	ISO 6361	24	1510	1250	1300

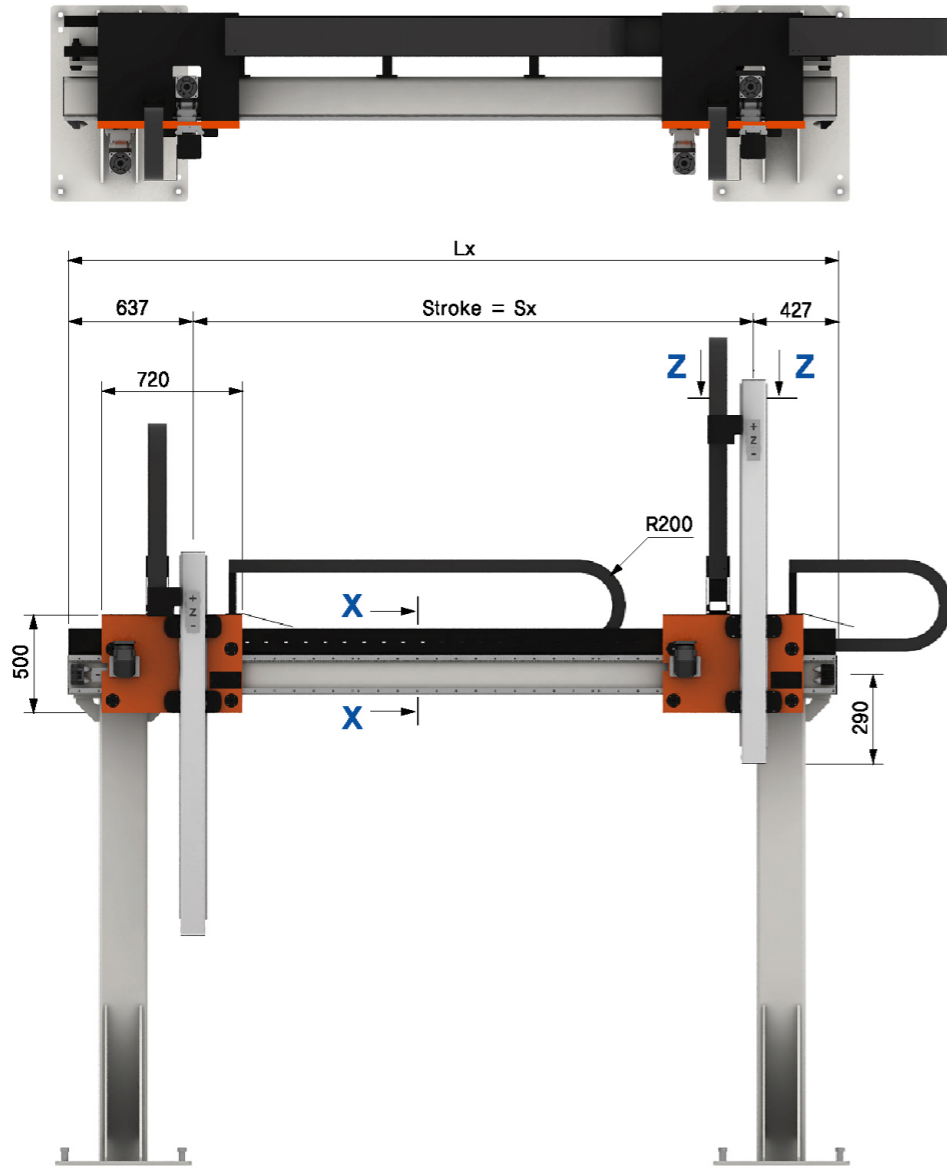
*가이드 부착시 / Guide assembly



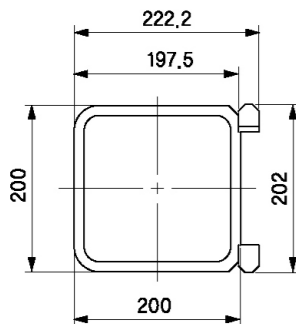
○ 제품치수 및 사양 | Dimension and specification

2축 리니어모듈 | 2 axis linear module

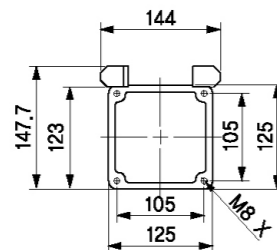
치수 TL-2 | Dimensions sheet TL-2



View X



View Z

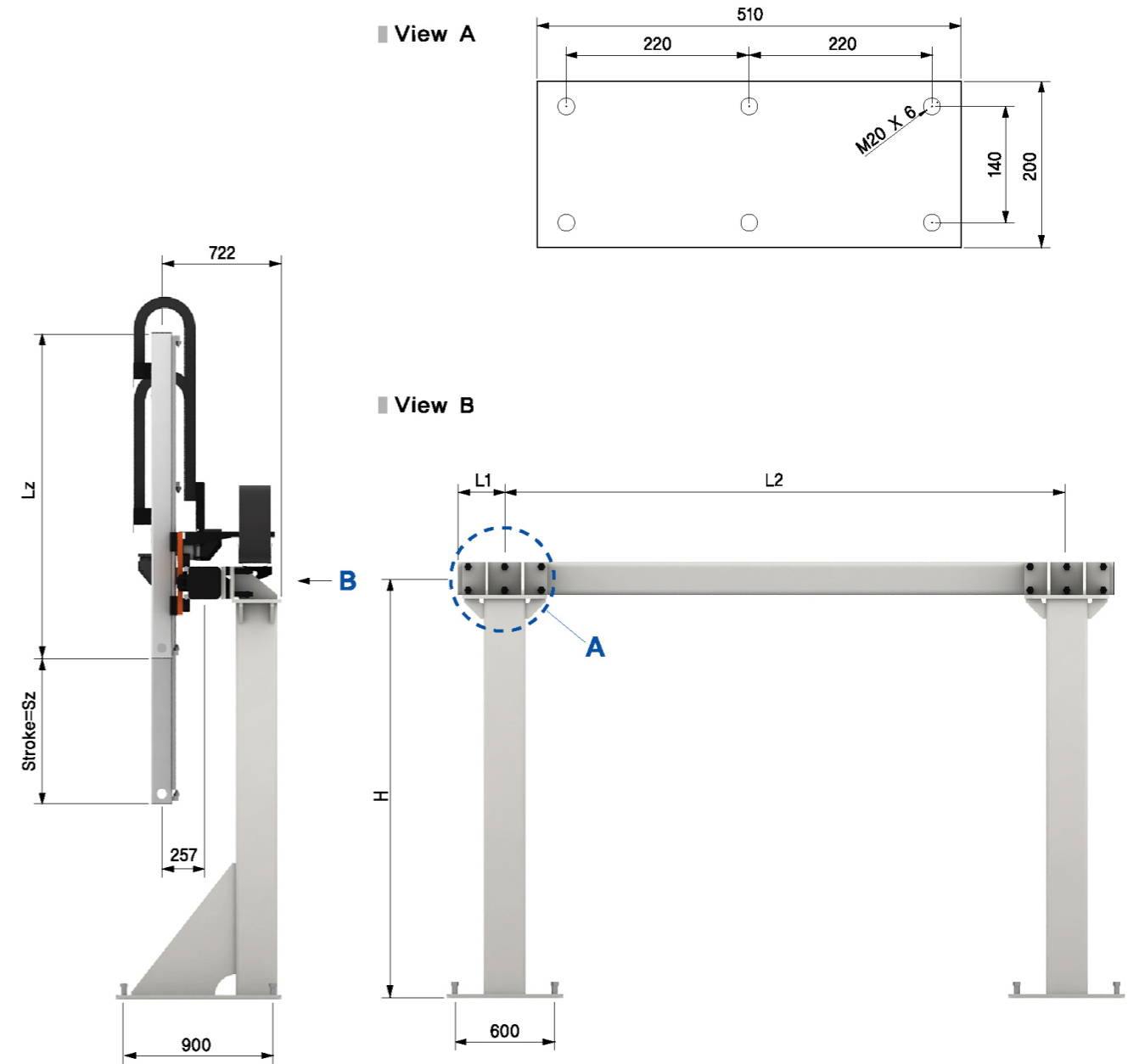


	max.(mm)
Lx	51064
Sx	50000
Lz	2040
Sz	1200

TL-2

2축 리니어모듈 | 2 axis linear module

치수 TL-2 | Dimensions sheet TL-2

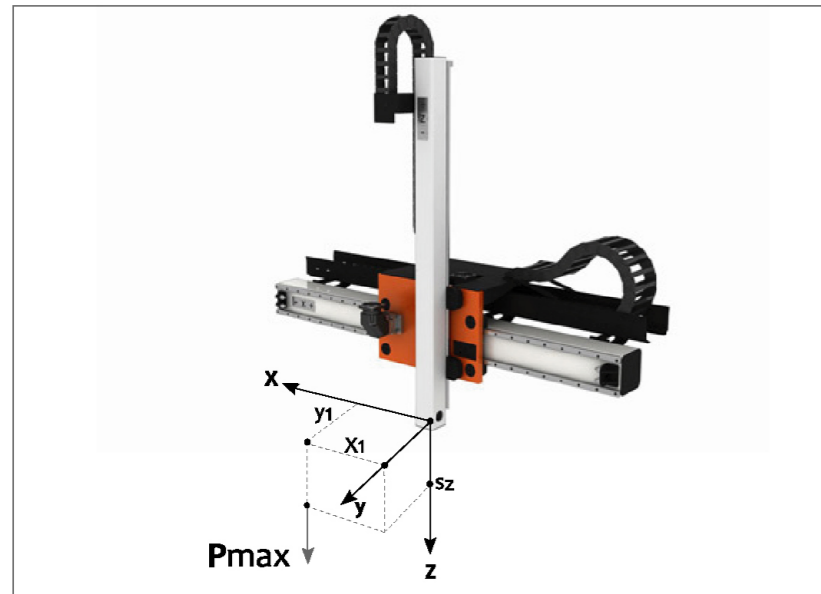


	min.(mm)	max.(mm)
L1	300	1500
L2	600	8000
H	900	3500

○ 제품치수 및 사양 | Dimension and specification

2축 리니어모듈 | 2 axis linear module

기술자료 TL-3 | Technical data TL-3



P_{max} = 300kg

P_{max} [kg] : 최대허용가능 가반하중
Permissible max. payload

P_{eff} [kg] : 유효 가반하중(그림퍼 포함)
Effective payload (incl. gripper unit)

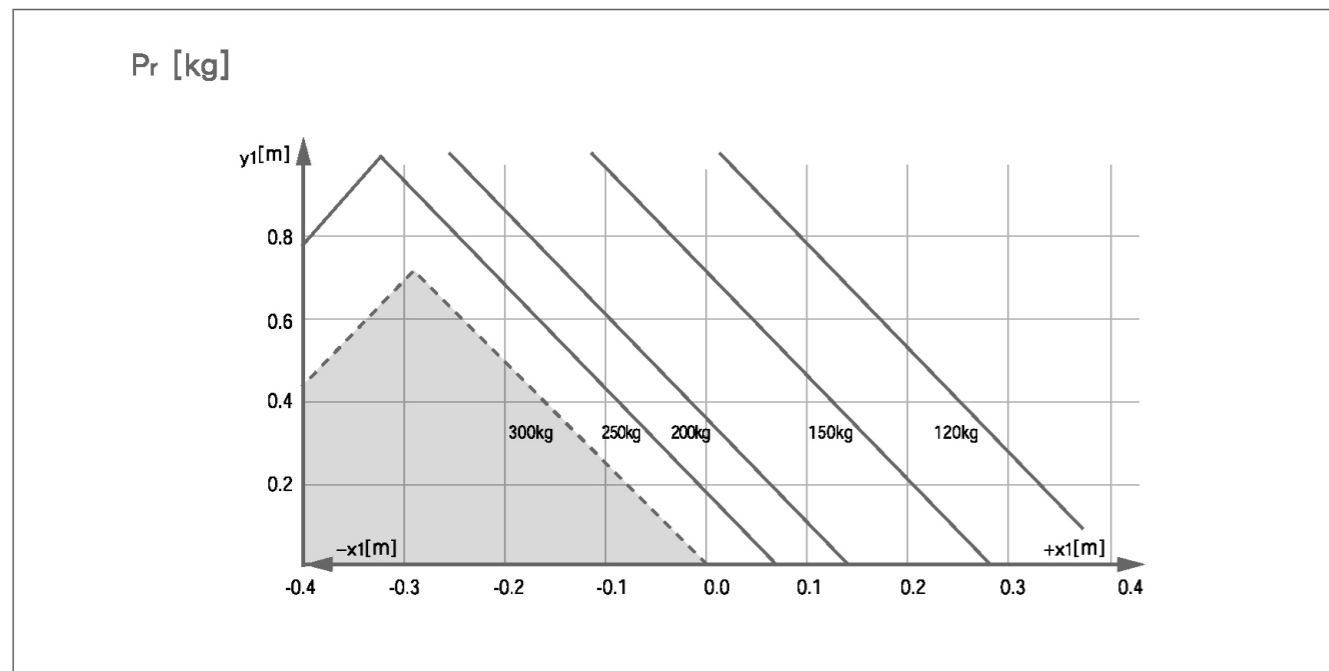
S_z [mm] : 행정거리(Z축)
Stroke(Z axis)

그림퍼 포함 / Including gripper

$$P_{eff} \leq P_{max} \quad [kg]$$

- case 1: $s_z < 1m$ $P_{max} = P_r$ [kg]
 - case 2: $s_z > 1m$ $P_{max} = P_r - (s_z - 1.6) \cdot 49$ [kg]
- $P_{eff} \leq P_{max}$ [kg]

허용가반하중범위 | Payload range for loading position



TL-3

2축 리니어모듈 | 2 axis linear module

주요 구성부품 | Key component

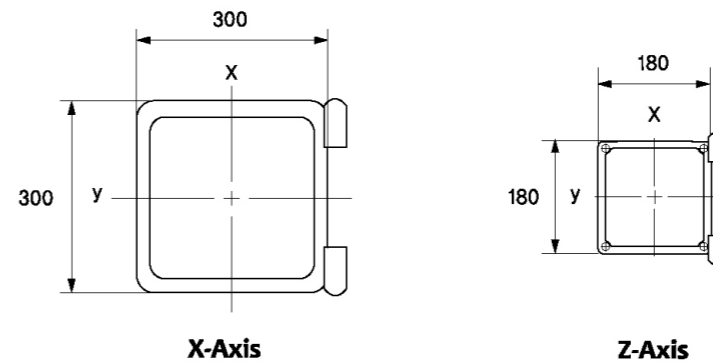
No.	Description	Type	Unit weight	See page
1	가이드 롤러 / Guide roller	GR G 35	2.8 kg	26p
2	윤활 와이퍼 / Lubrication wiper	LW G 35	0.26 kg	30p
3	플레인 가이드 / Plain guide	MPG G 35	11.3 kg/m	22p
4	랙 가이드 / Rack guide	MRG G 35 (X axis)	10.6 kg/m	18p
		MRG G 35 H (Z axis)	10.6 kg/m	18p
5	감속기 / Gearbox	AFR140	23.7 kg	34p

부품상세사양은 부품카다로그를 참조하십시오.
Please refer to the component catalogue regarding detailed component specification

가반하중 및 작동사양 | Payload and drive data

Axis		X axis			Z axis		
유효가반하중 / Effective payload	[kg]	120	200	300	120	200	300
공칭속도 / Nominal speed	[m/s]	3.3	3.3	3.3	3.3	3.3	3.3
최대가속도 / Max. acceleration	[m/s ²]	6	5	4	8	6	3
감속비 / Gearbox ratio	[-]	3:1	3:1	3:1	3:1	3:1	3:1
모터속도 / Motor speed	[rpm]	3000	3000	3000	3000	3000	3000
반복정밀도 / Repeatability	[mm]	±0.05					

굽힘 및 비틀림 저항 | Axis bending and torsion



Axis	Material	Standard	Unit weight(kg/m)	Ix(cm ⁴)	Iy(cm ⁴)	It(cm ⁴)
X	R50	ISO 3304	162.9	29967	27894	37622
Z	AlMg0,7Si	ISO 6361	48	6300	5280	5830

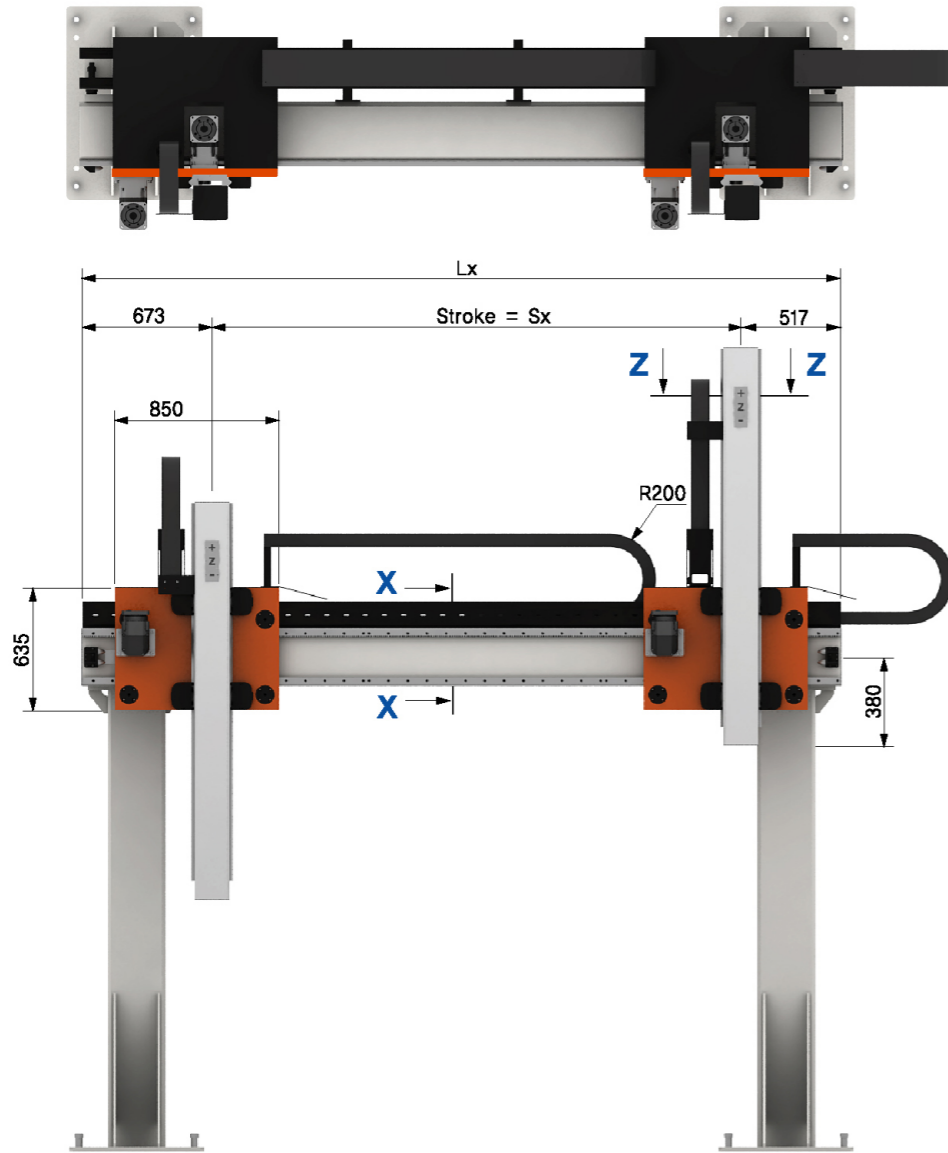
*가이드 부착시 / Guide assembly



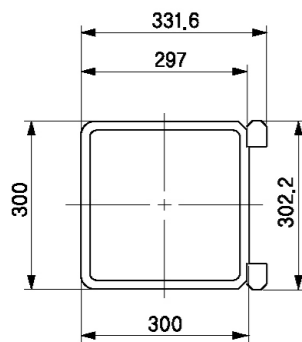
○ 제품치수 및 사양 | Dimension and specification

2축 리니어모듈 | 2 axis linear module

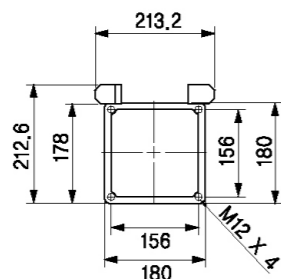
치수 TL-3 | Dimensions sheet TL-3



■ View X



■ View Z

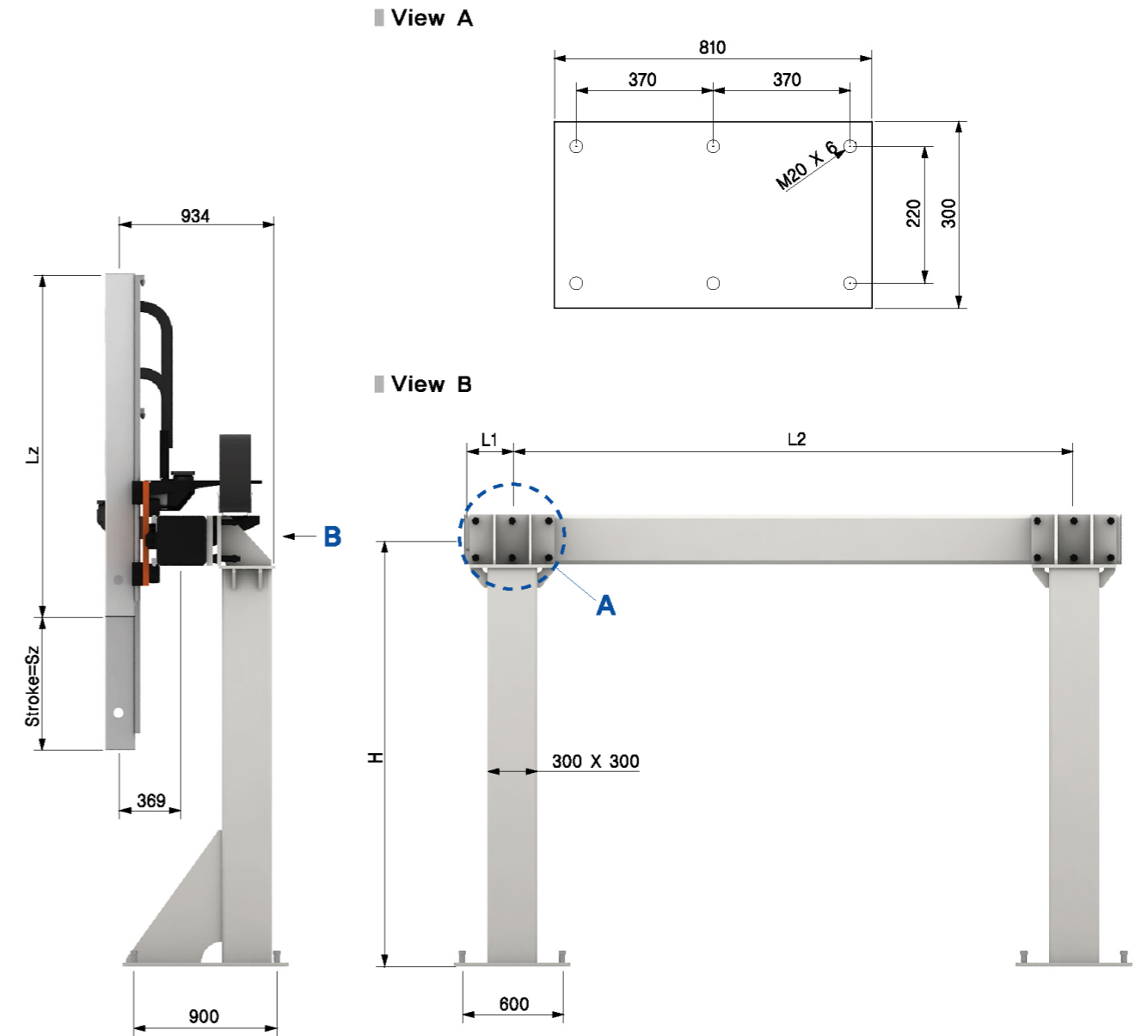


	max.(mm)
Lx	81190
Sx	80000
Lz	2575
Sz	1600

TL-3

2축 리니어모듈 | 2 axis linear module

치수 TL-3 | Dimensions sheet TL-3



	min.(mm)	max.(mm)
L1	400	2000
L2	800	1000
H	1000	4000