C.T.S.

GUIDE LINEARI - LINEAR GUIDES - GLISSIERES LINEARES

USE

CTS linear guides can be used for all the applications. Working dry and without lubrication (wheels have already inside lubrication as in standard bearings), our linear guides are suitable whether in dusty environment or in particular places where routine maintenance is difficult.

Following are some fields where our guides usually are used:

- machines for textile industry
- packaging machines, bottling machines
- machines for catering industry
- machines for woodworking, plastic and marble working (cutting machines, flanging machines, fixtures for drilling and milling)
- machines for plasma arc cutting, laser cutting and waterjet
- sandblasting systems, high pressure washing and painting systems
- automatic welding systems
- moving boxes in and out tank in galvanic systems
- special effects systems for TV

Some particular applications that C.T.S. has realized successfully are:

- opening and closing in vertical of a bank of gates (dimensions: 2m high, 11m length, 1100 Kg weight) in drying paper furnace.
- 48 m linear guide moving machine for sail sewing
- guides with chain for lifting handicap people
- up and down stroke for aeronautic seat testing
- electric opening and closing yacht window
- up and down in hidden closure for plasma screens used by TV troupe
- going out daily of a freezer from a kiosk.

CHECKS AND CONTROLS

To plan a right moving system, C.T.S. uses a special calculating program which only needs information required by questionnaire on page 37 linear guides catalogue (in the following page you can find the printing of calculation example).

Studying an application, C.T.S. projects and realizes a new system based on customer engineering data as part sizes, weight, speed and positioning accuracy.

Our calculations allow a right choice of guide size according to transmission driving.

By particular software always in evolution, based on machines applied mechanics, C.T.S. can check:

- guide life in working hours or kilometres covered
- right size of driving belt or chain
- right mating pinion-rack, verifying wear and breaking
- right size of gearbox
- guide and profile flexion

Positioning accuracy is function of various factors like load speed, load position in relation to trolley, acceleration and type of gearbox used. By them depends the stiffness of the offered system.

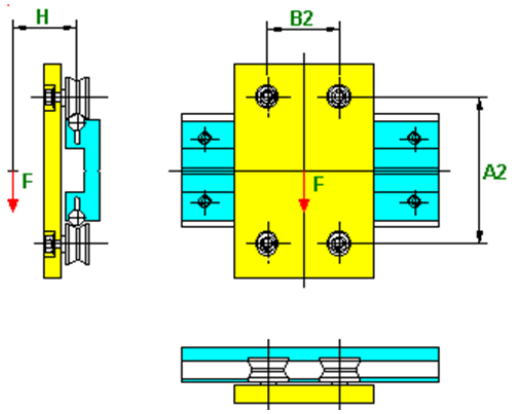
An high positioning accuracy required by customer is often the cause of over sizing, even if the load is not very heavy or big. The direct consequence is the increasing of costs.

In our questionnaire we request a description of the work the guide will have to make with a sketch, so in this way we can realize the use of the guide and advise customer for right assembling.

On following pages there are several solution examples for different kind of moving systems.

In conclusion we recommend to fill in our questionnaire for a last check of our engineering department. Without it our company can not assume the responsibility for possible malfunctions post-selling, caused by a not right sizing of guides.

APPLICATION EXAMPLE



Type of guide

○	AD 106	Dc =	53,00
○	AD 208	C =	6050,00
○	AD 208 R	P =	1215,67
○	AD 210		
○	AD 312		
◉	AD 316		
○	AD 416		
○	AD 416 R		
	AD 420		

F =	500	N
A2 =	140	mm
B2 =	100	mm
H =	100	mm

Stroke =	2000	mm
n cycles =	3	per minute

Axial load on one wheel (Pa)	503,86	N
Radial load on one wheel (Pr)	415,91	N
Theory life (L10)	123,26	10^6 rev.
Theory life in meters (L10m)	20523,30	Km
Theory life in hours (L10h)	28504,59	h
wheel rpm (n)	72,07	min^{-1}

Type of system: **AD 416** Result: **SYSTEM CONFIRMED**

X SYSTEM

EXAMPLES

Particular applications for X moving systems are the following:

Drawings 00-AS-278 and 00-AS-215

Motion by rack, good when it's required little dimensions or when the stroke is over than 7 m

Drawings 06-AS-631 and 00-AS-695

Motion by chain, used for high temperature of work or when there is ah high load to lift

Drawing 01-AS-788

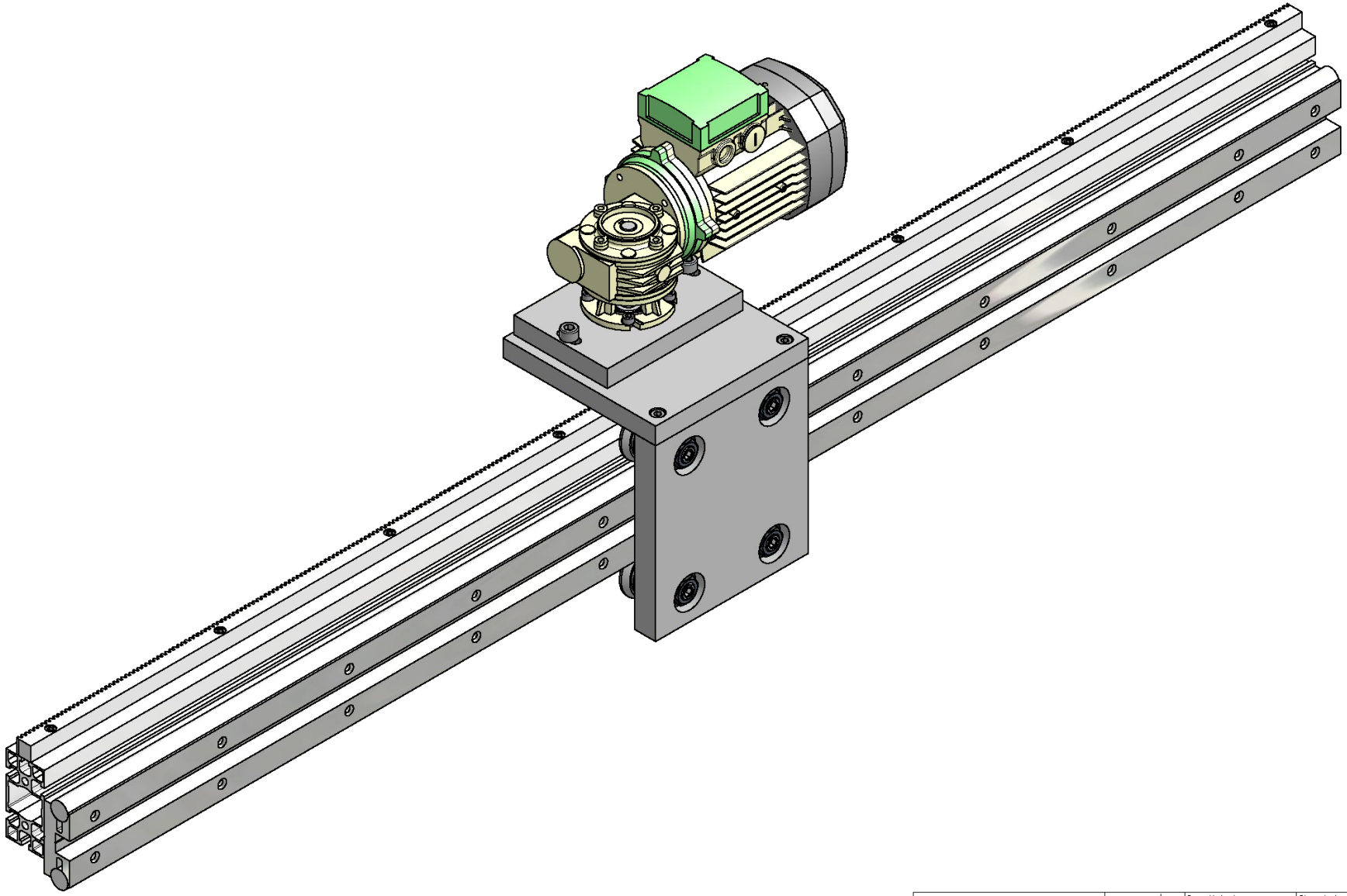
Motion by ball screw or trapezium screw

Drawings 01-AS-235 and 00-AS-235

Parallel assembling for linear guides with rack

Drawing 00-AS-788

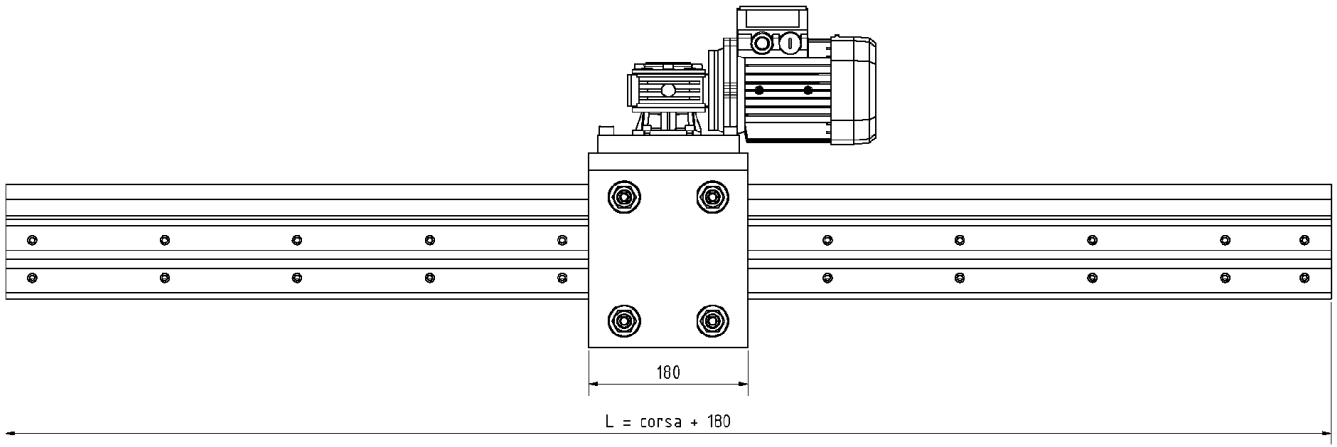
Double guide moved by ball screw to have a good stiffness with load overhanging and to have a fairly good positioning accuracy

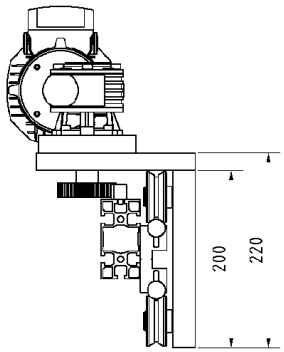


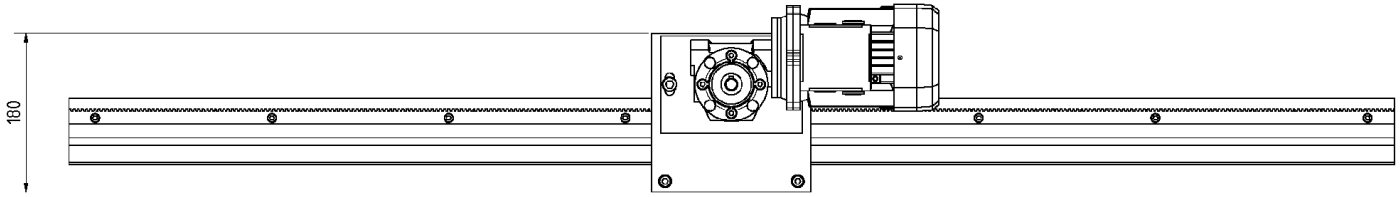
G.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4	
	N° disegno: 00-AS-278	Scala: 1:3	Data: 03/11/2010	Rev: 0

Titolo

GUIDA AD416 CON CREMAGLIERA







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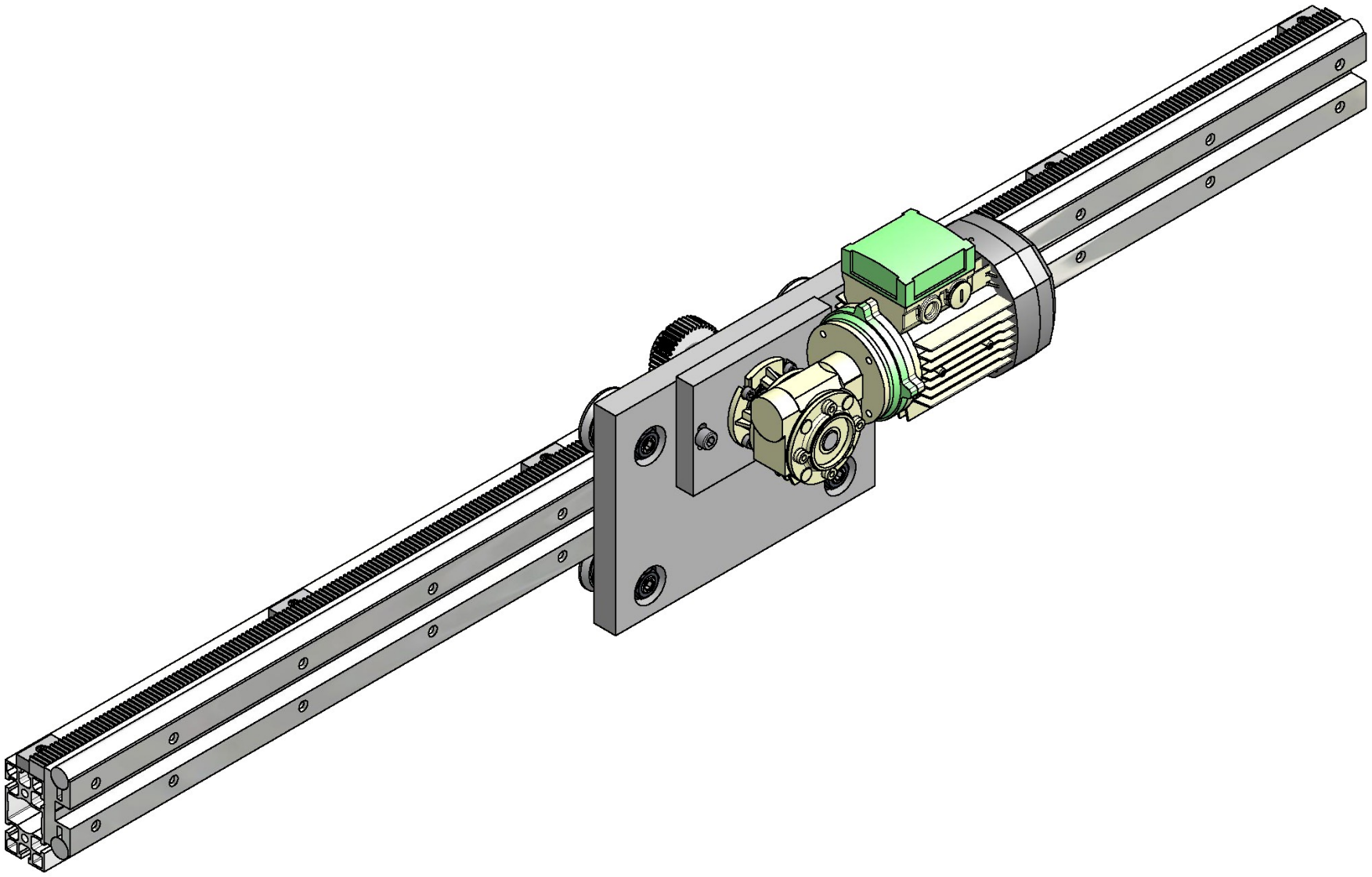

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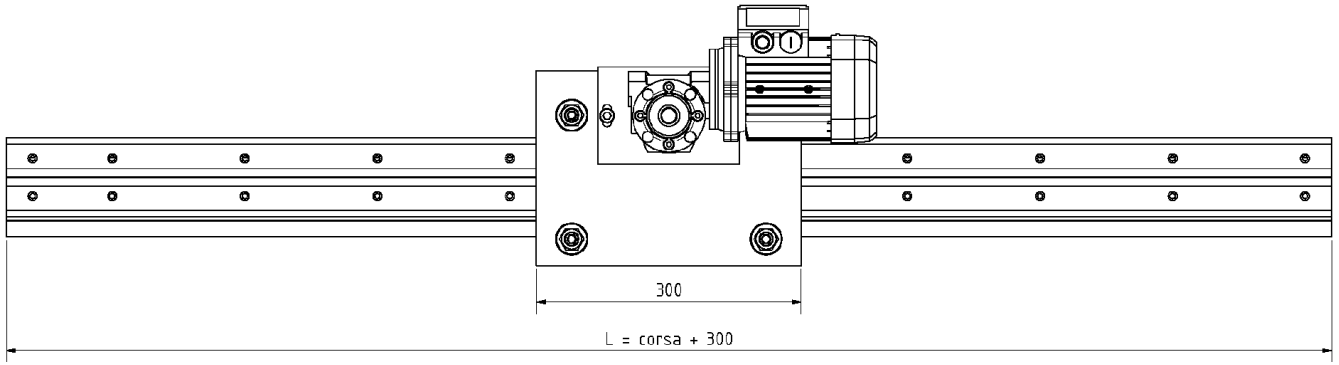

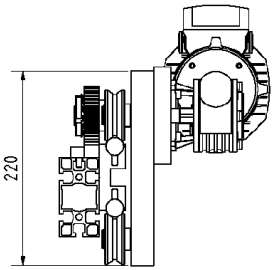

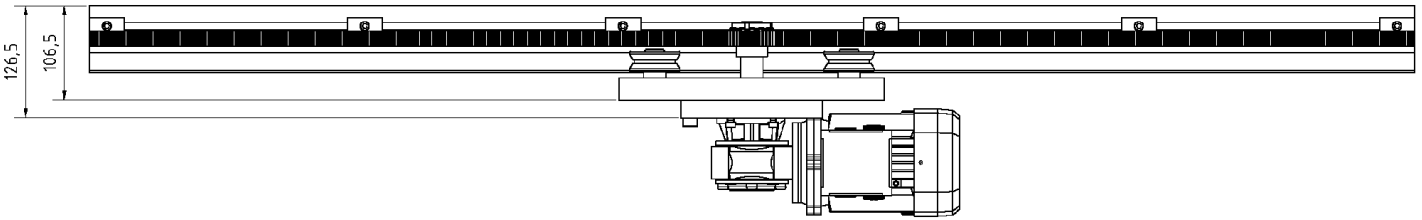

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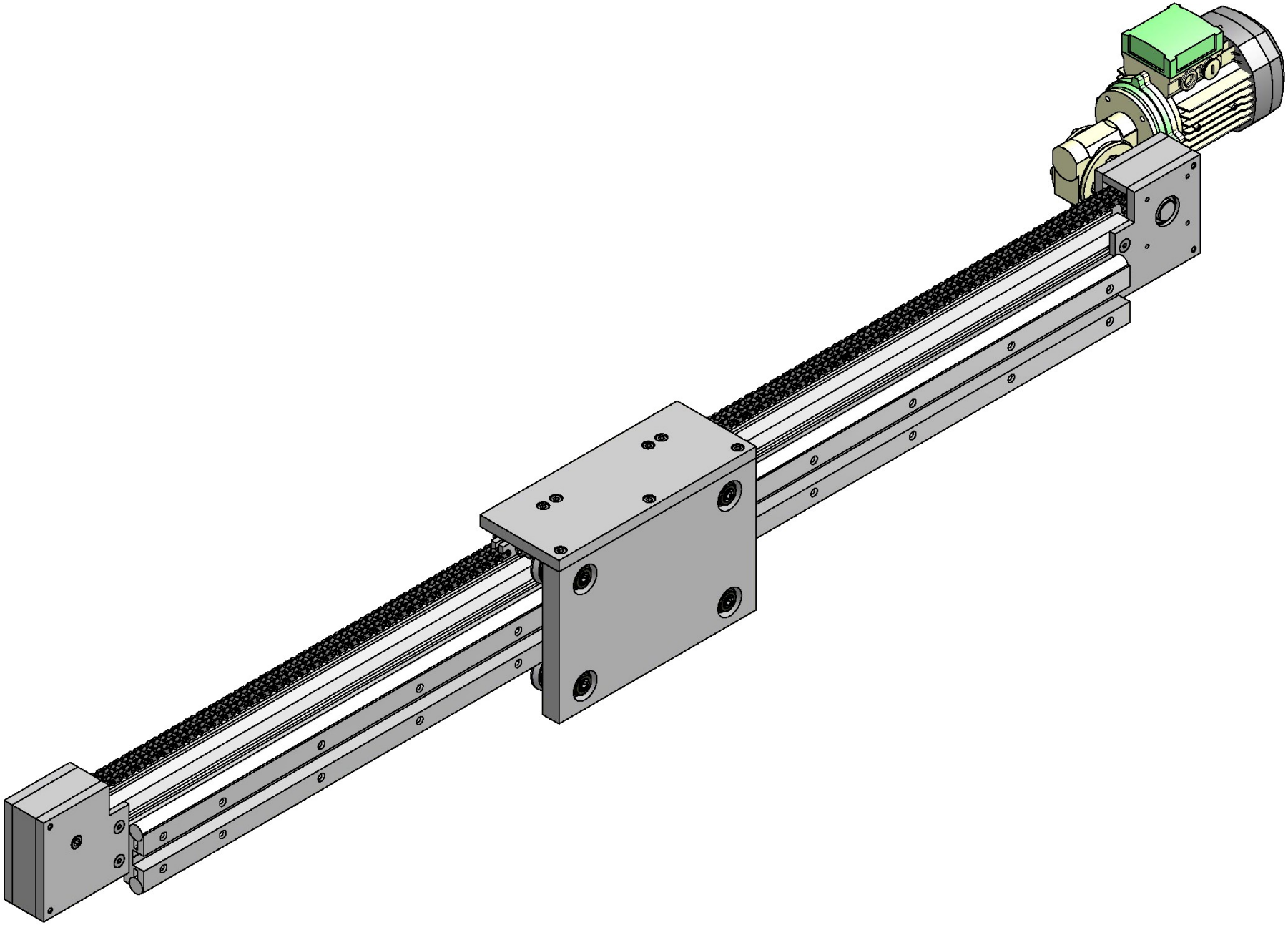

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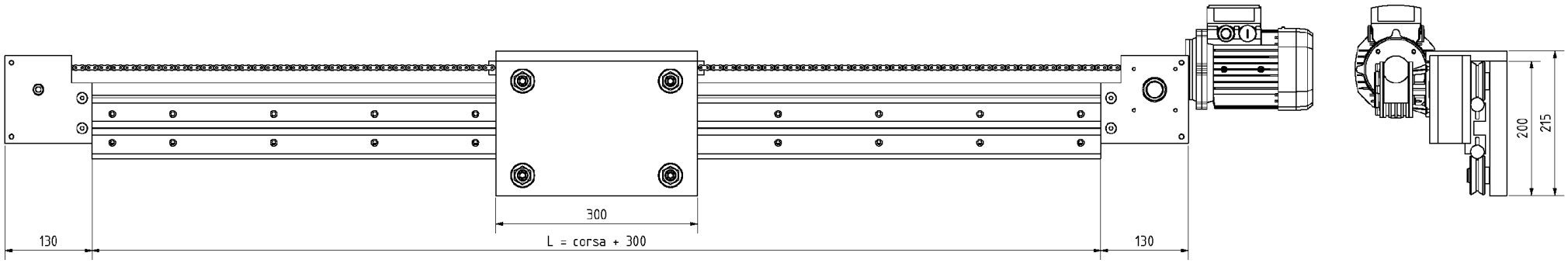
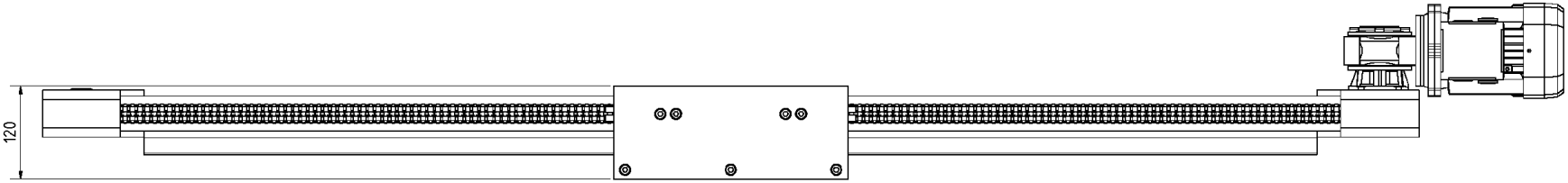
	N° disegno: 06-AS-631	Scala: 1:4	Data: 07/03/2013	Rev: 0

Titolo

GUIDA AD416M LAT A CATENA DOPPIA 3/8"





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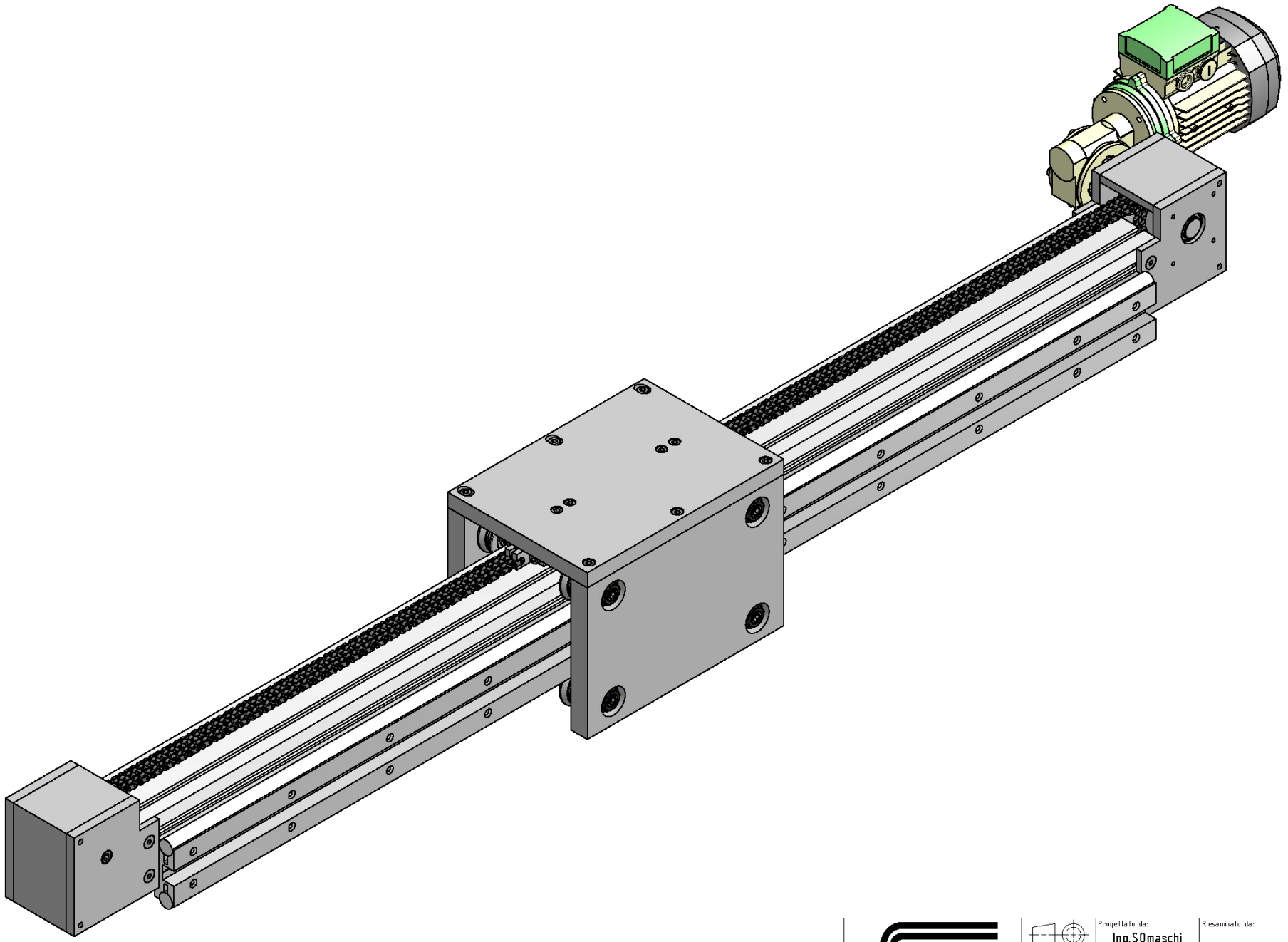
Titolo

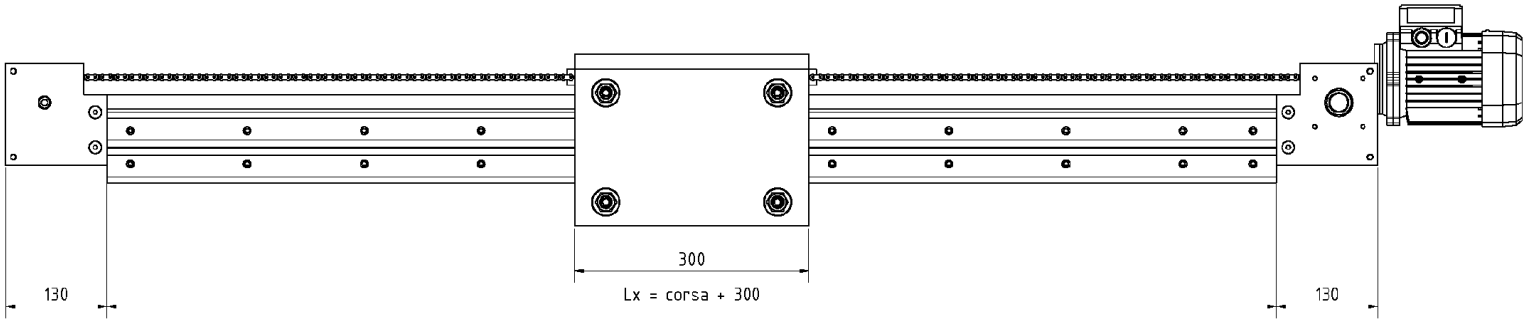
GUIDA AD416M LAT CON CATENA DOPPIA 3/8"

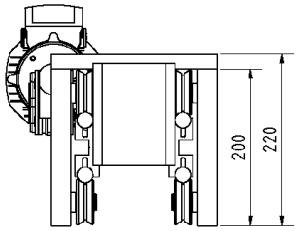


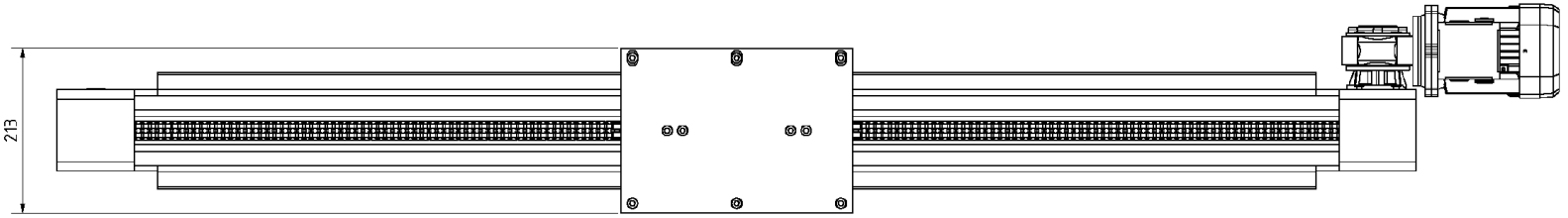
G.T.S.		Progettato da: Ing.SOmaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-695	Scala: 1:4	Data: 20/07/2009	Rev: 0

Titolo

DOPPIO AD416M CON CATENA DOPPIA 3/8"







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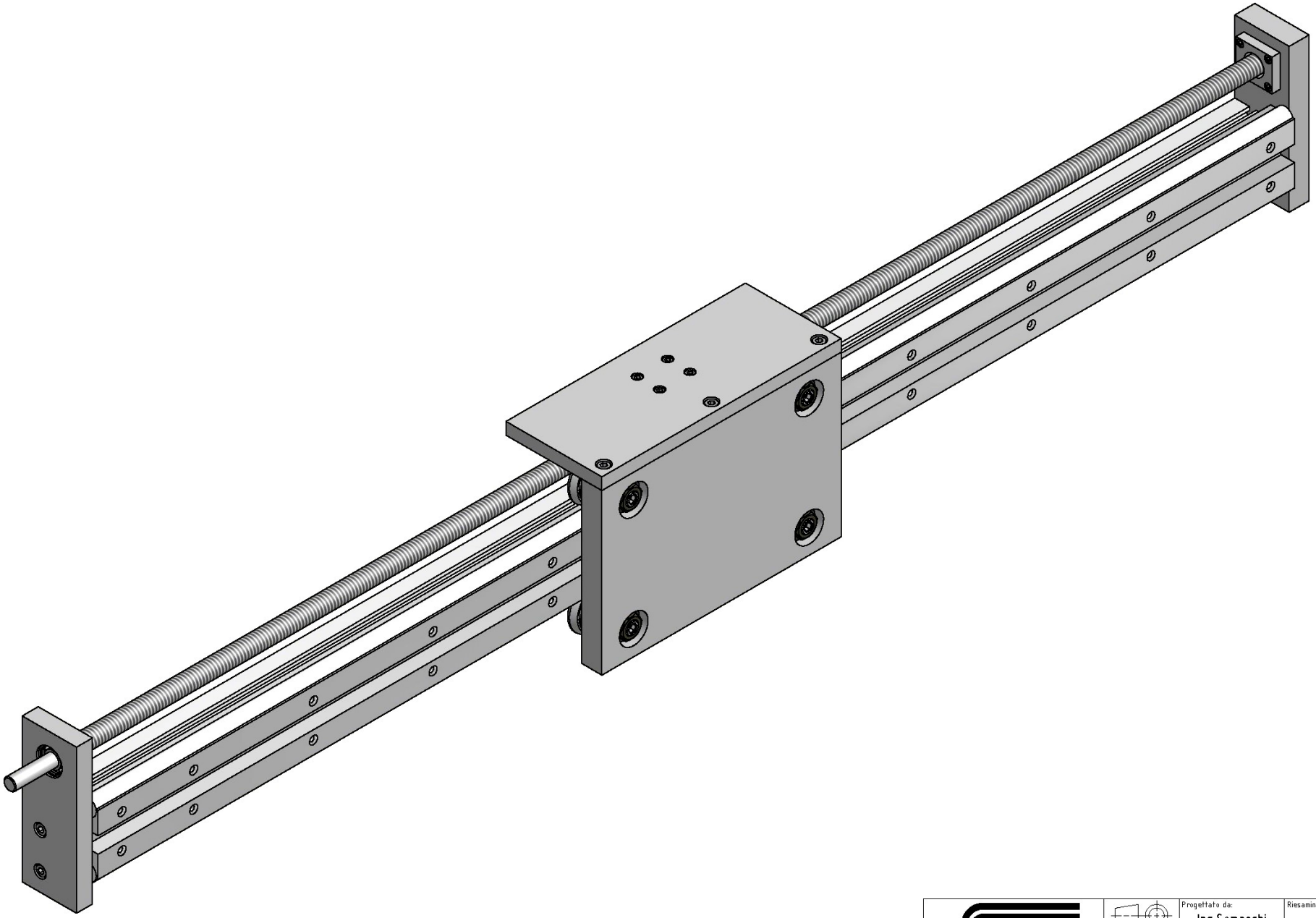
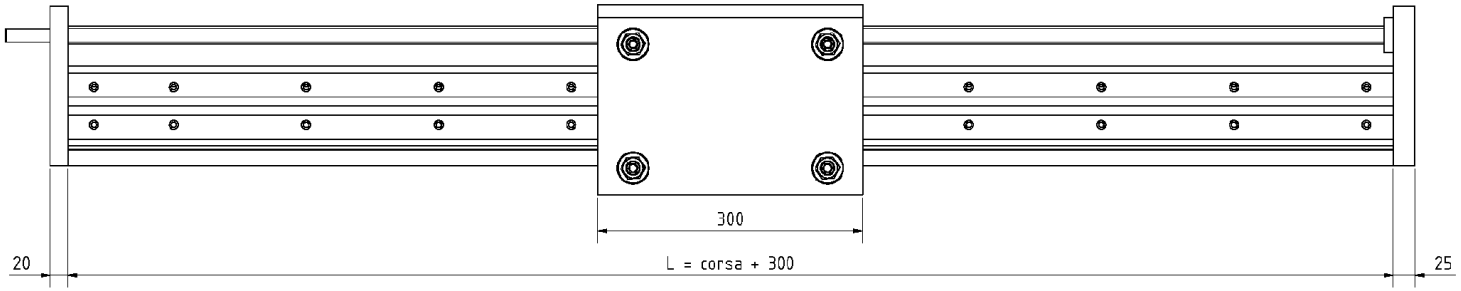
Titolo: DOPPIO AD416M CON CATENA DOPPIA 3/8"

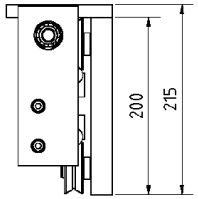


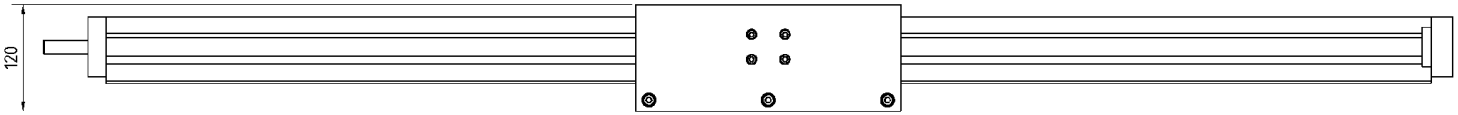
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-788	Scala: 1:3	Data: 29/04/2011	Rev: 2

Titolo

GUIDA AD416 CON VITE TRAPEZIA 20x4







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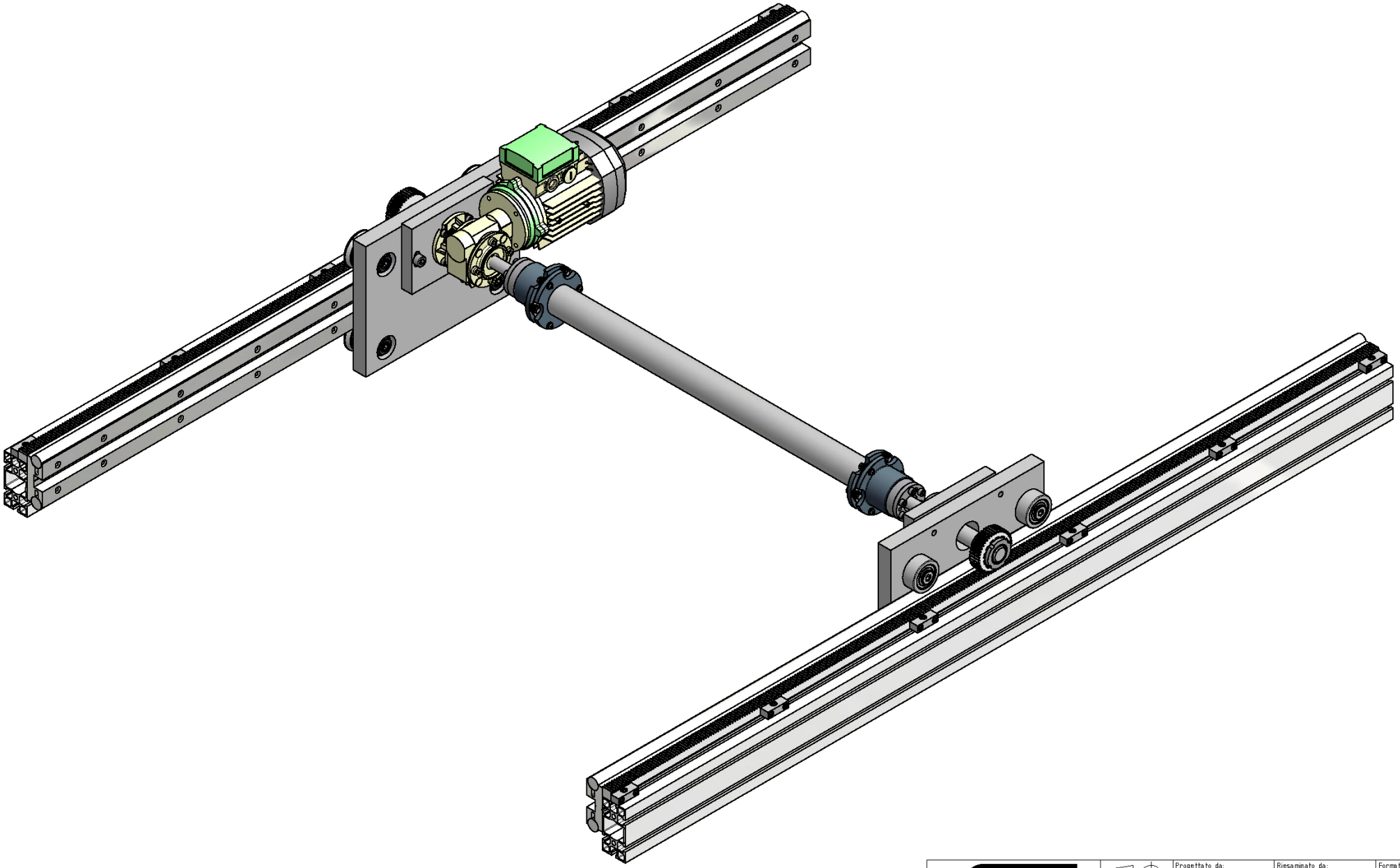
Titolo

GUIDA AD416 CON VITE TRAPEZIA 20x4



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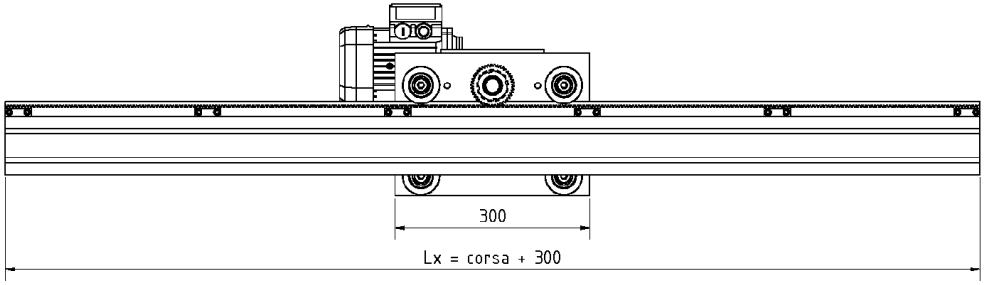
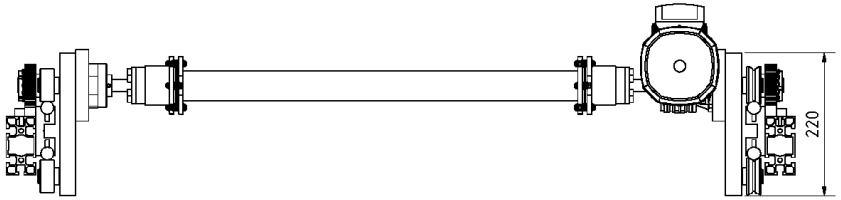
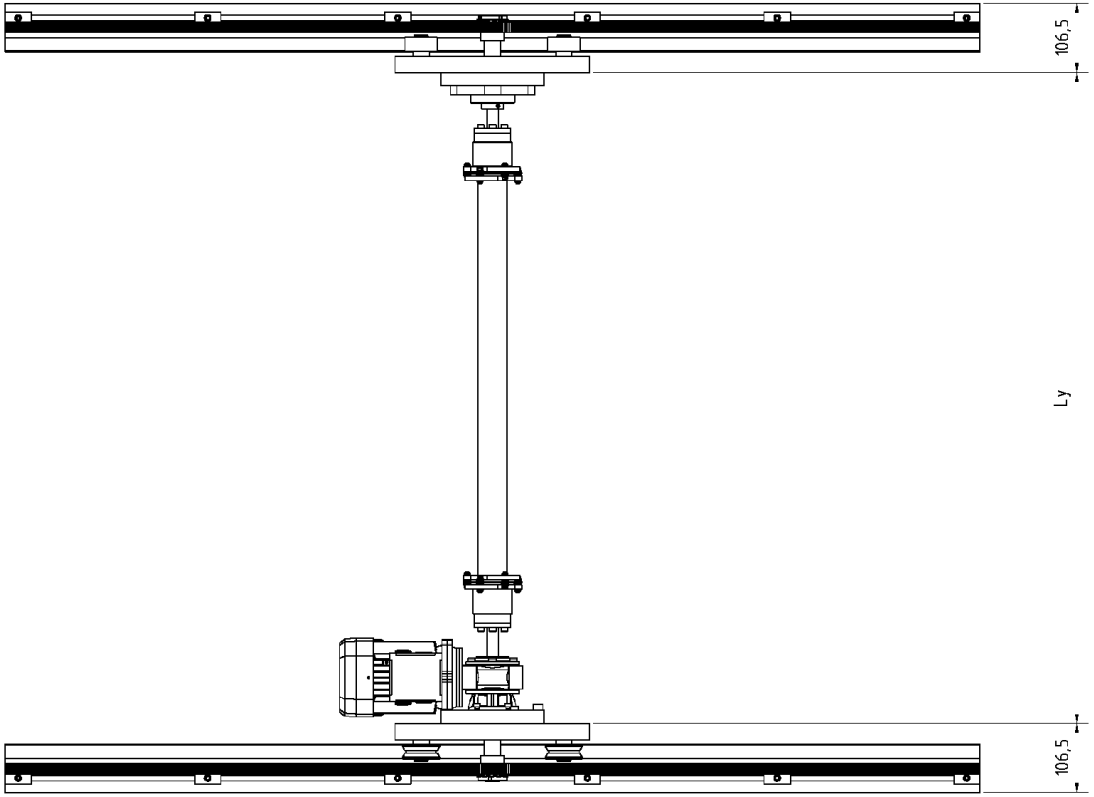
Titolo

SISTEMA PARALLELO CON AD416 A CREMAGLIERA







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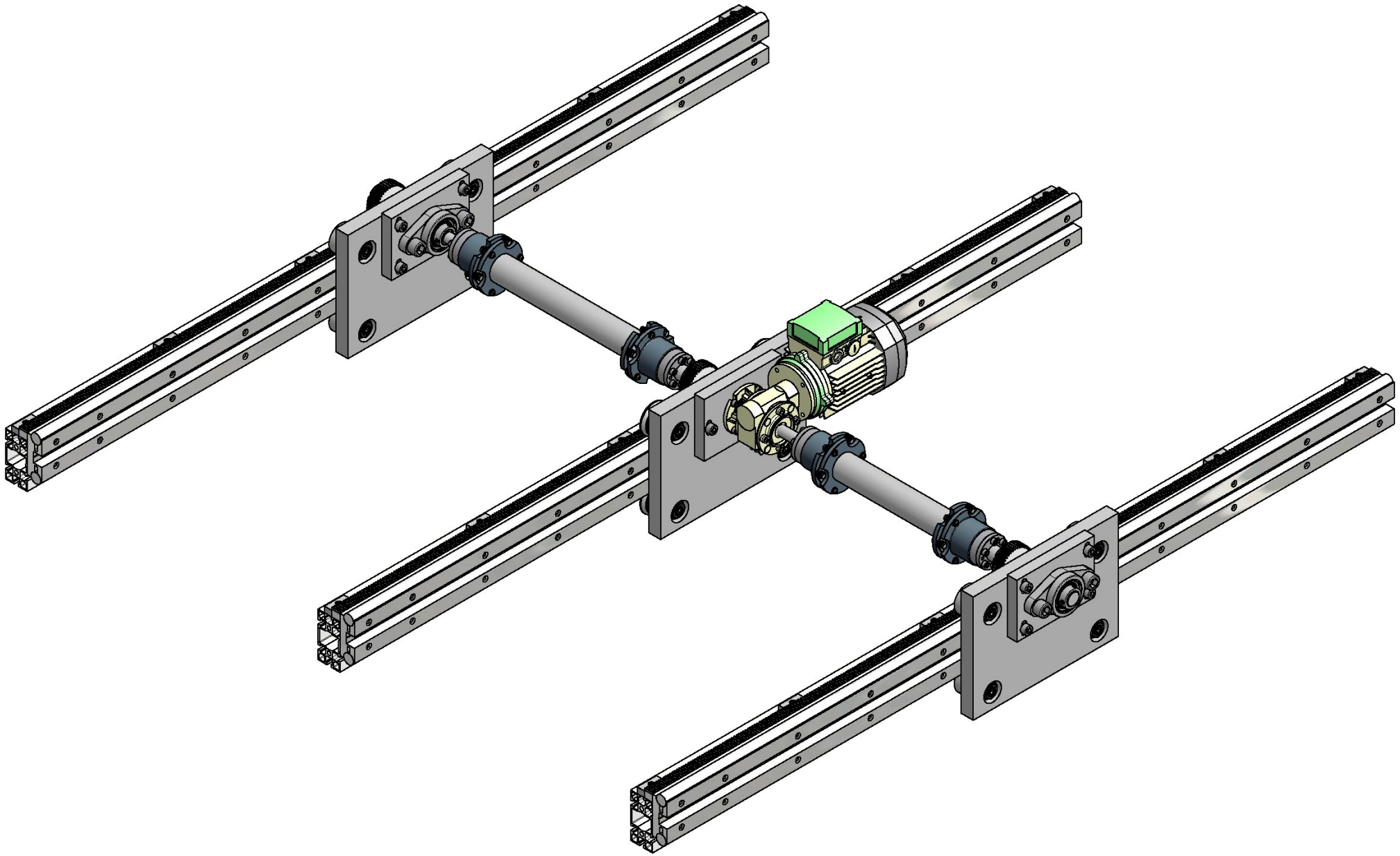
Titolo: SISTEMA PARALLELO CON AD416 A CREMAGLIERA



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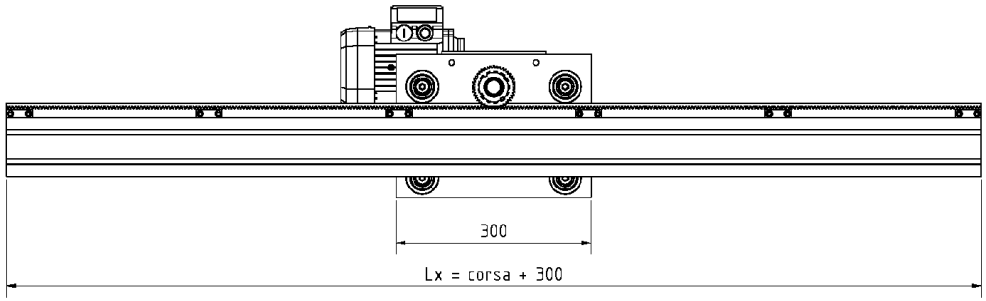
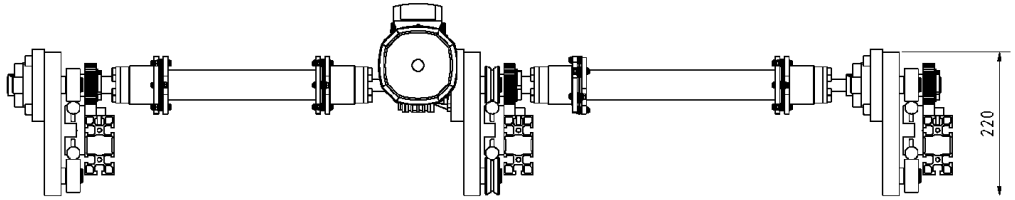
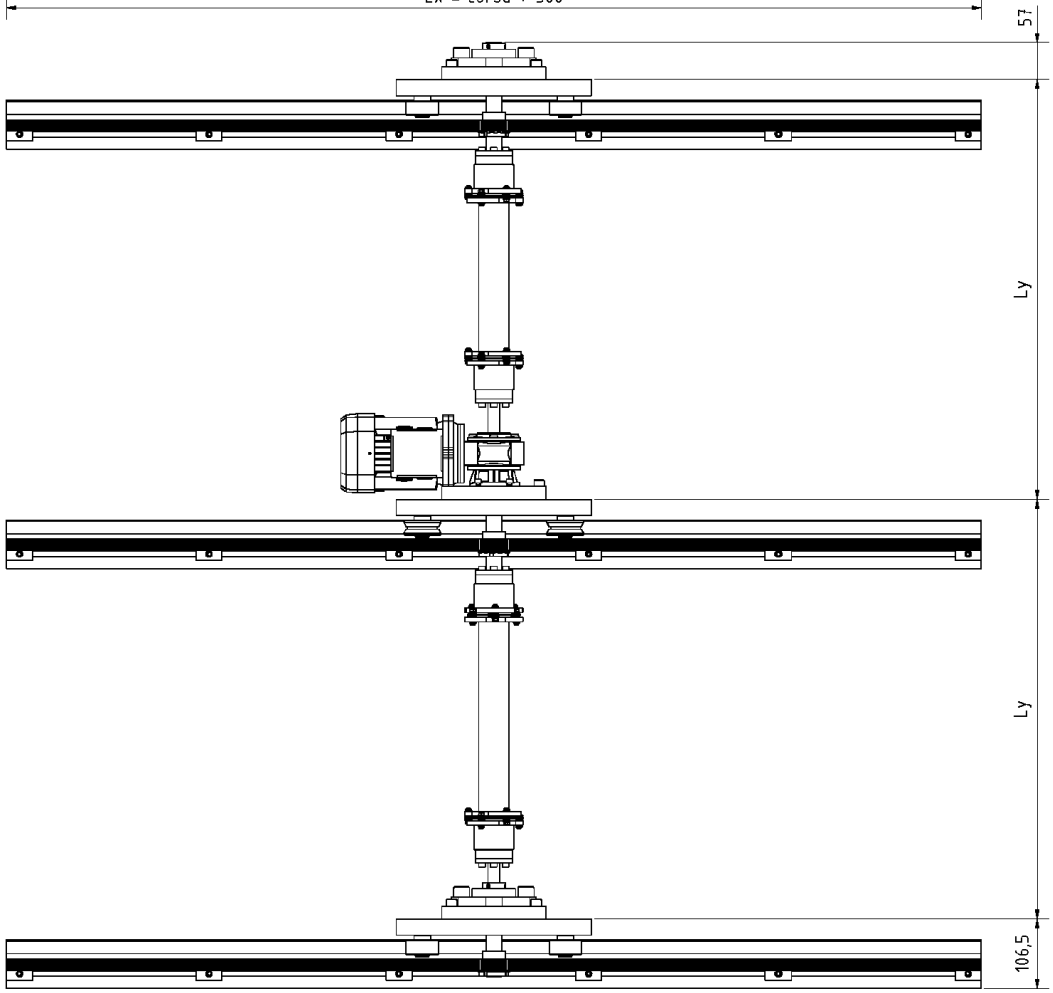
Titolo

SISTEMA PARALLELO CON 3 AD416 A CREMAGLIERA







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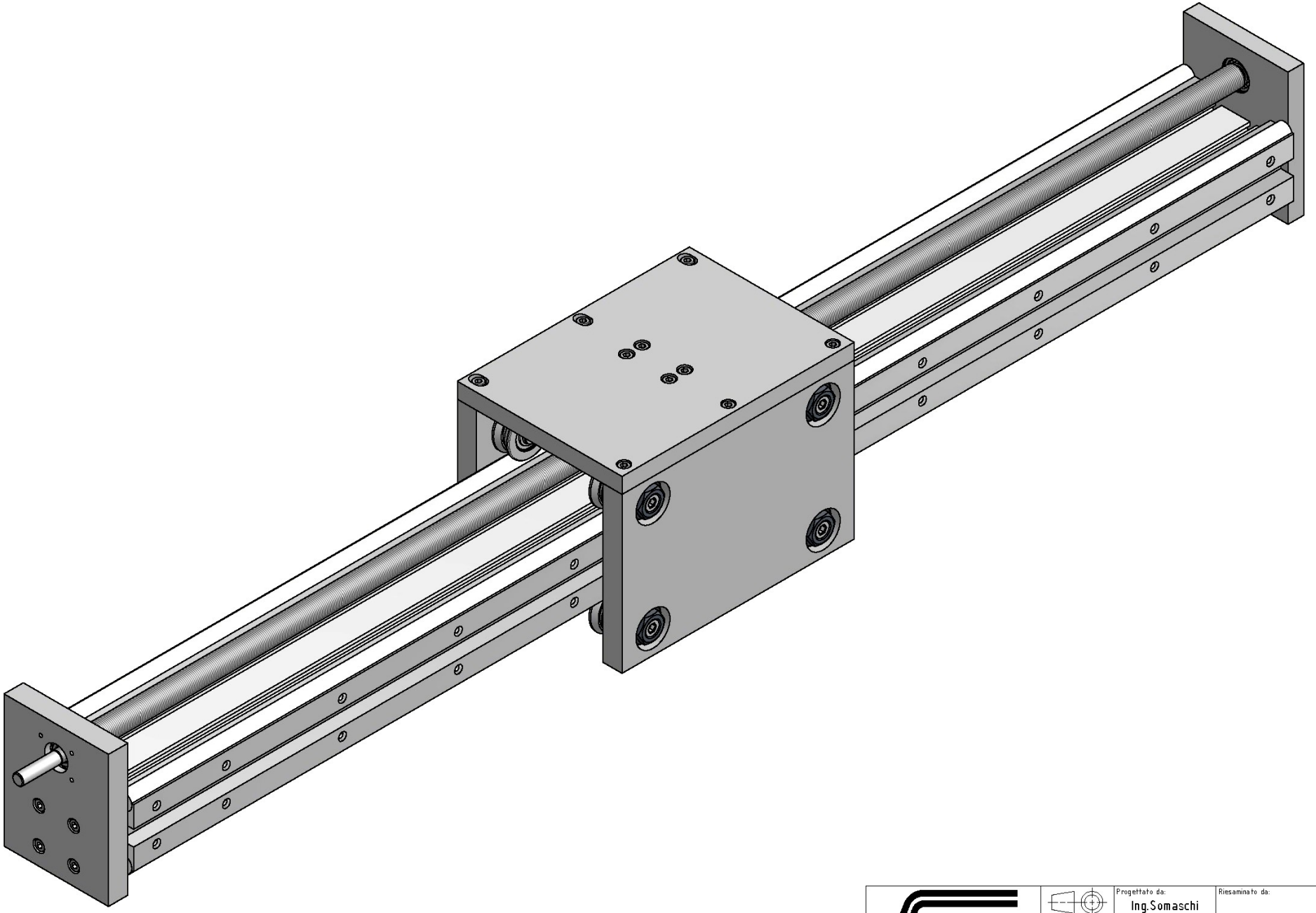
Titolo

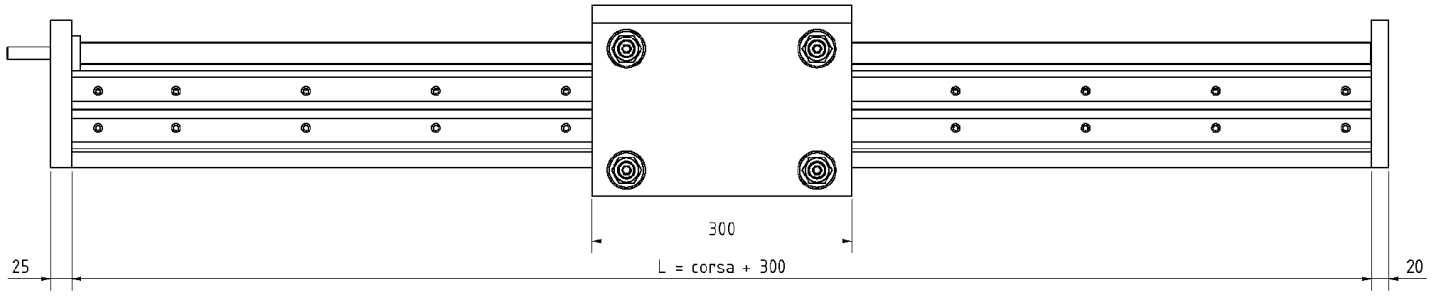
SISTEMA PARALLELO CON 3 AD416 A CREMAGLIERA

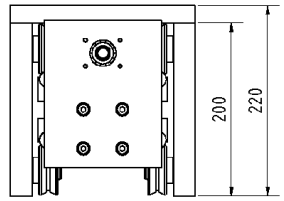


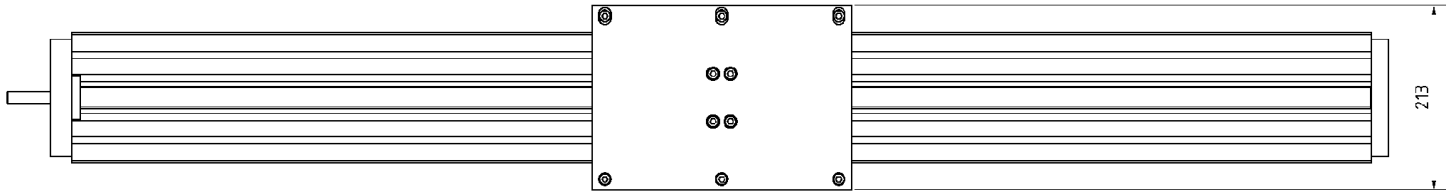
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3
	N° disegno: 00-AS-788	Scala: 1:3	Data: 22/06/2012	Rev: 0

Titolo

DOPPIO AD420 CON 90x90 E VITE RC 20x10







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	N° disegno: 00-AS-788	Scala: 1:6	Data: 22/06/2012	Rev: 0

Titolo

DOPPIO AD420 CON 90x90 E VITE RC 20x10

EXAMPLES

Particular applications for X moving systems are the following:

Drawing 00-AS-182

Double guide moved by belt to have a good stiffness with load overhanging and to have a fairly good positioning accuracy

Drawing 04-AS-388

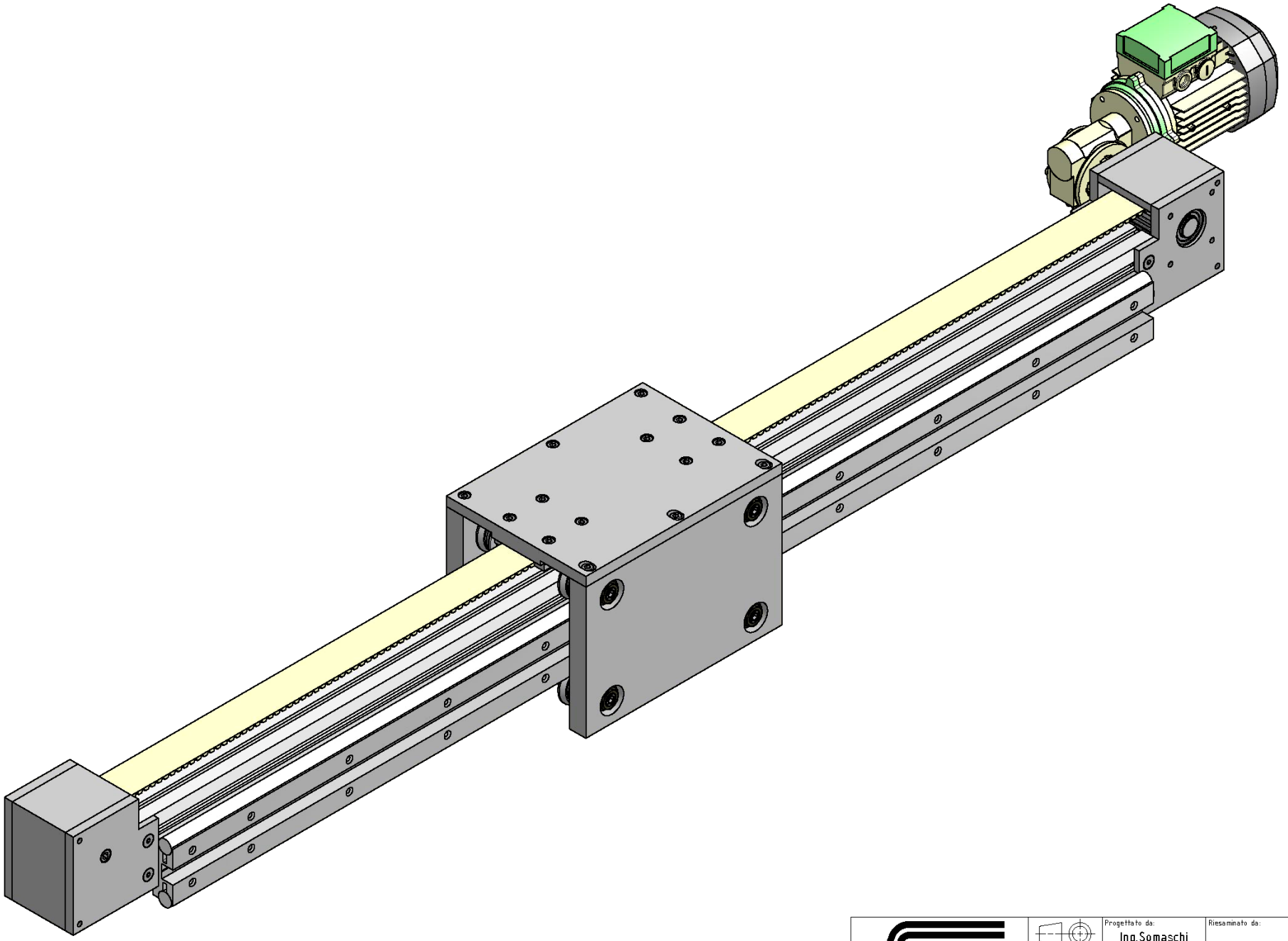
Motion by toothed belt, used for long strokes and high speed as alternative to rack and pinion

Drawing 00-AS-873

Motion with 2 toothed belts, used for moving 2 trolleys wuth separate movements

Drawing 00-AS-321

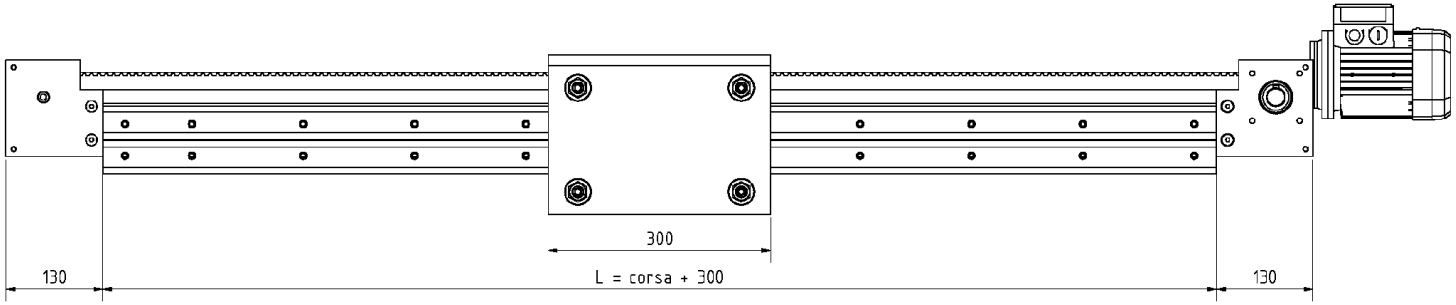
Example of manual block of the trolley by friction screw driven by hand grip

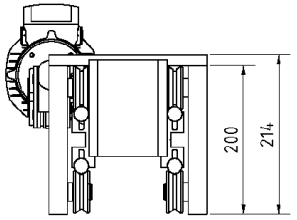


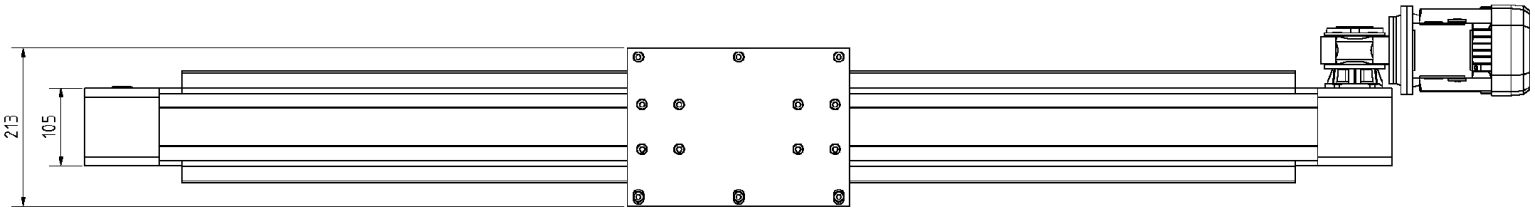
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-182	Scala: 1:4	Data: 31/05/2010	Rev: 0

Titolo

DOPPIO AD416M / AD420M







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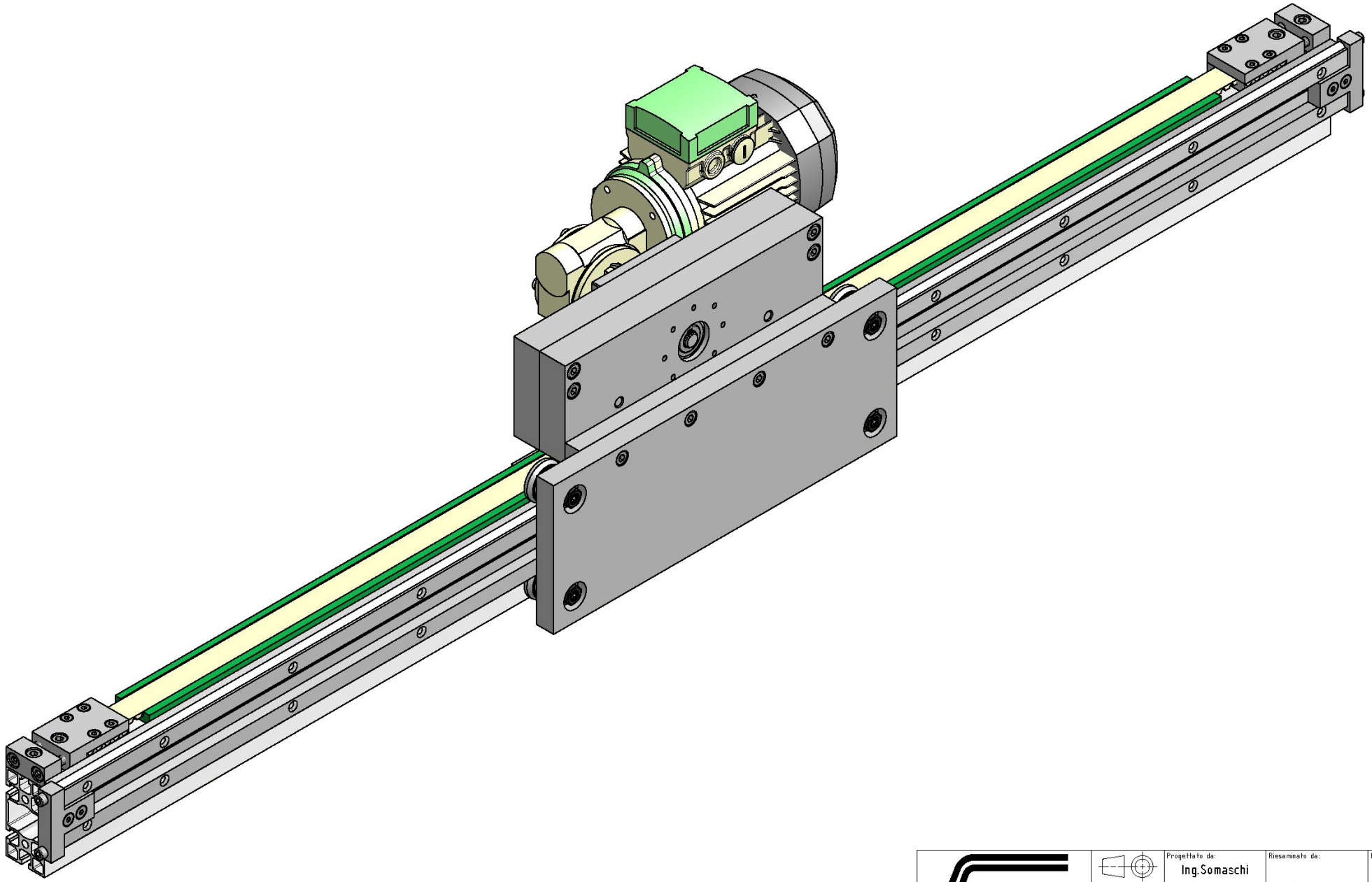
Titolo: DOPPIO AD146M / AD420M



G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3
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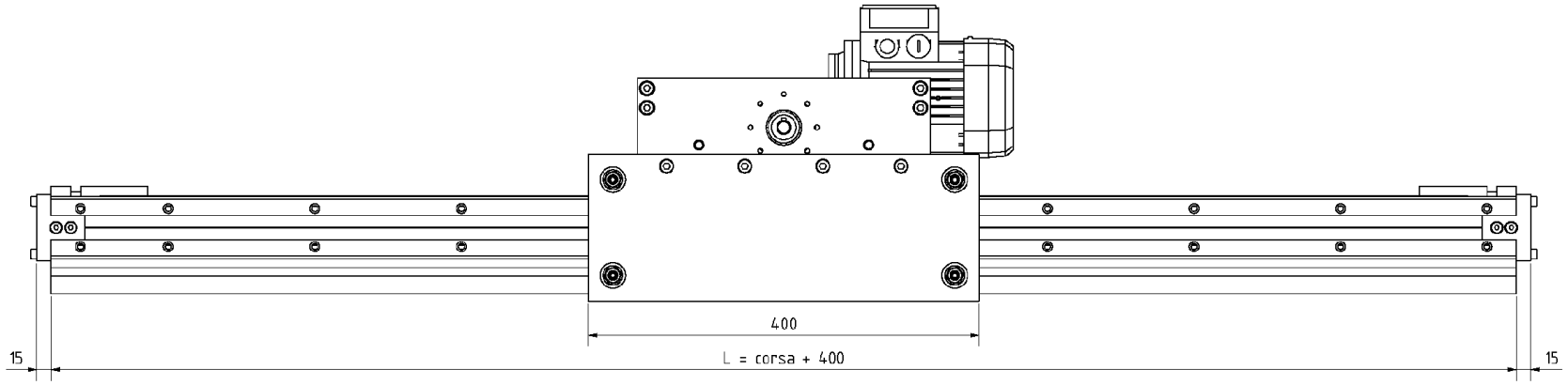
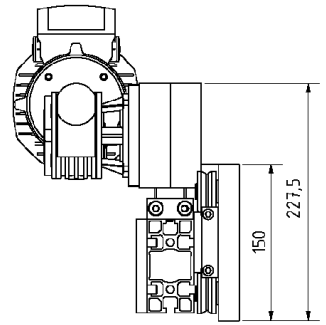
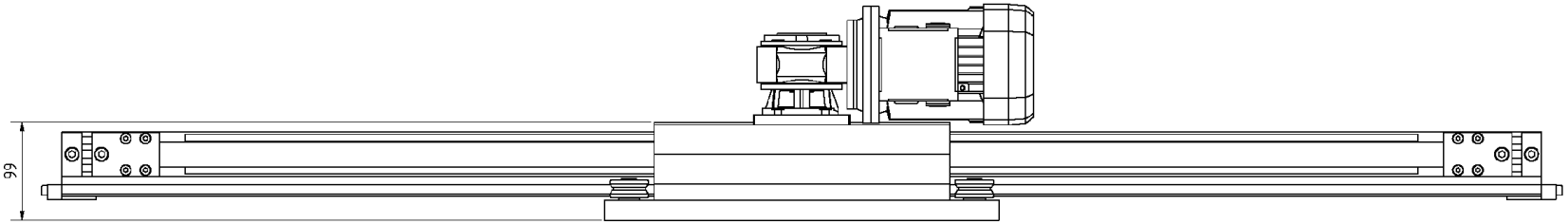
Titolo

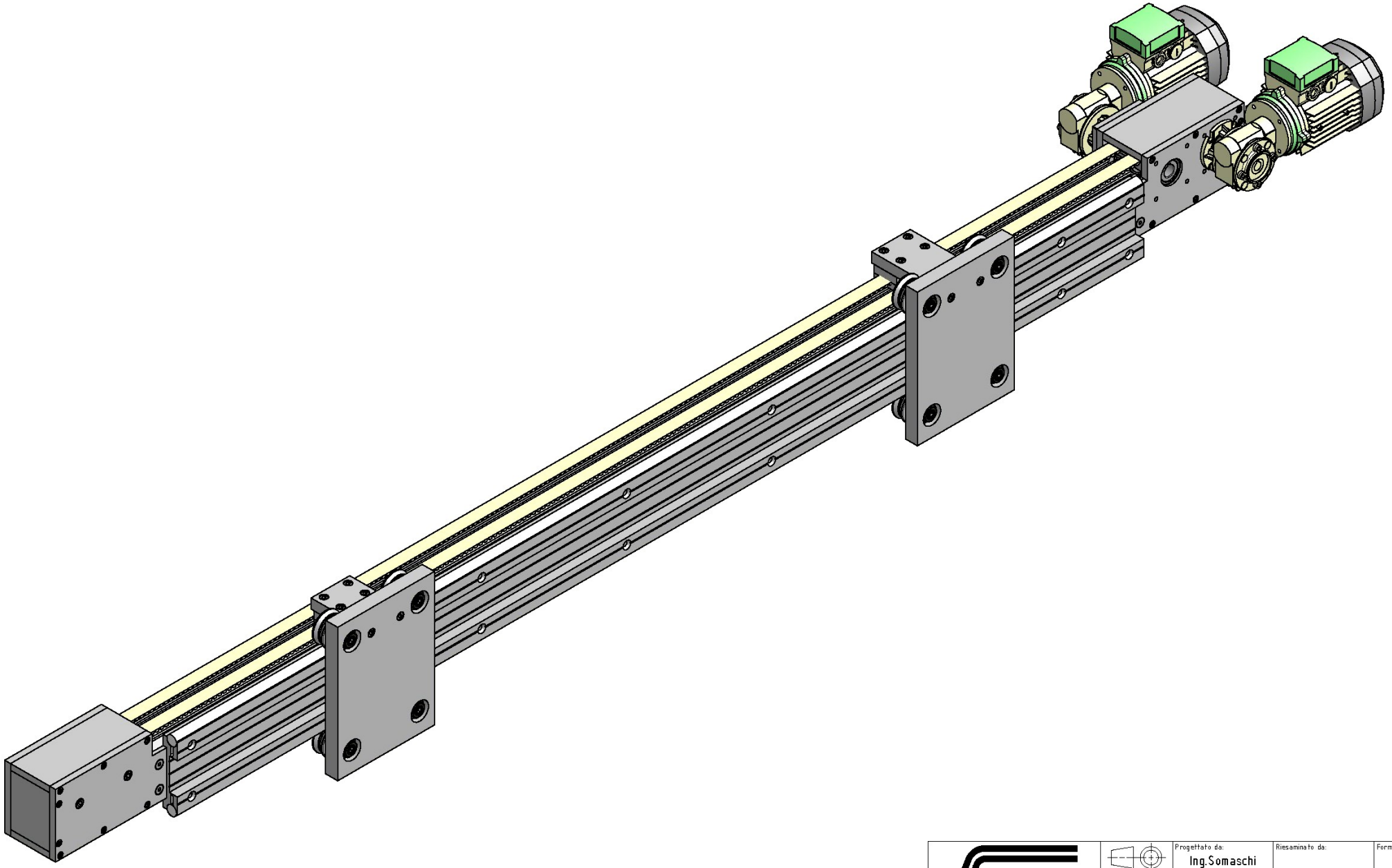
GUIDA AD210M LAT CON TMZ







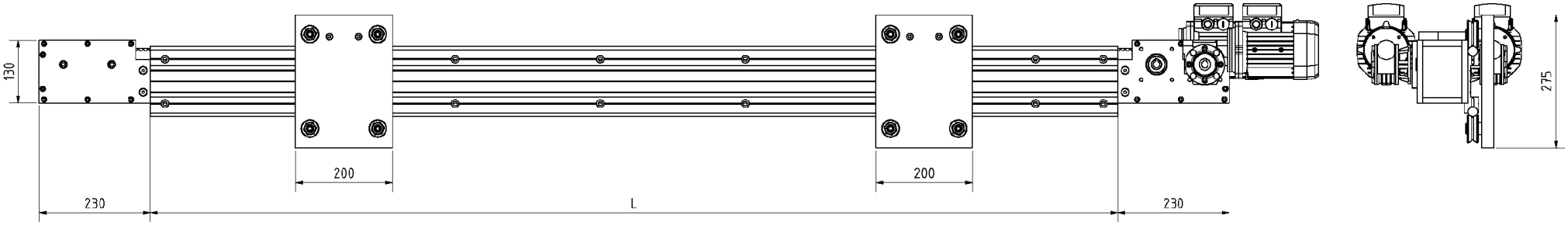
B.T.S.	Progettato da: Ing.Somaschi	Riesaminato da		Formato: A3
	N° disegno: 04-AS-388	Scala: 1:2	Data: 04/04/2013	Rev: 0
Titolo: GUIDA AD210M LAT CON TMZ				

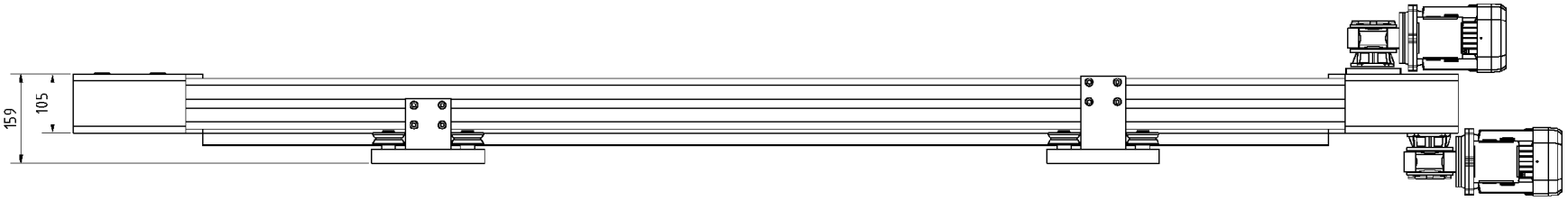


B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-873	Scala: 1:5	Data: 08/11/2011	Rev: 0

Titolo

GUIDA AG416M LAT CON DOPPIA MOTORIZZAZIONE

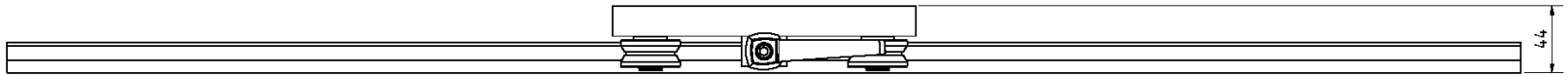


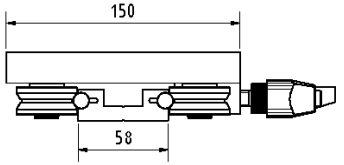


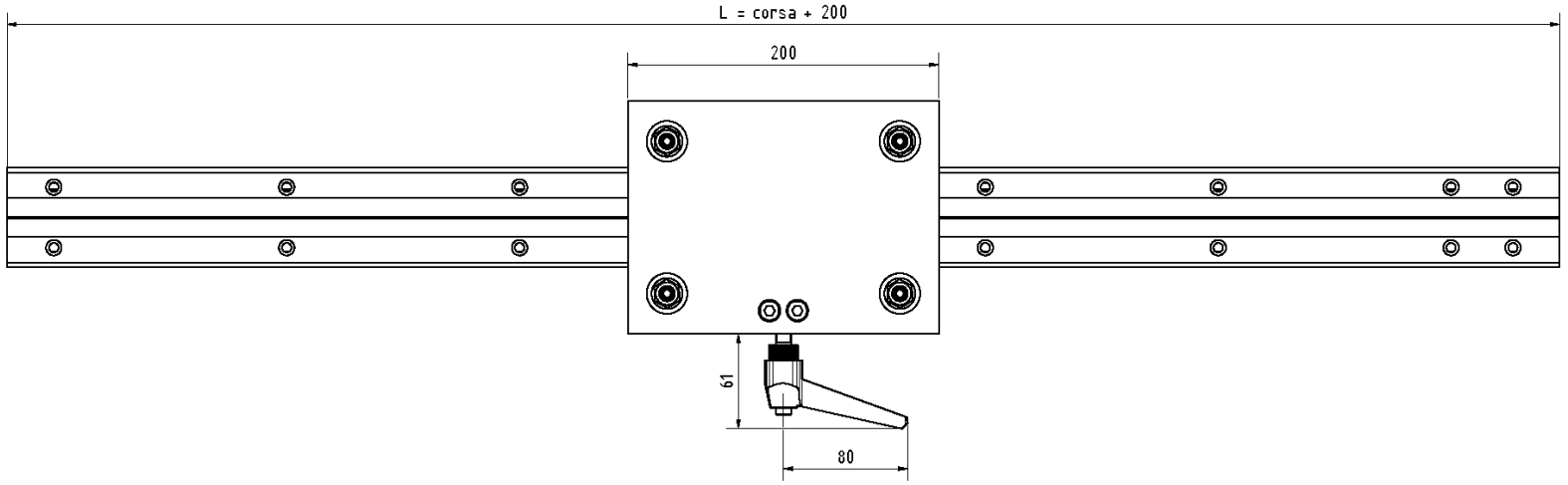
G.T.S.	Progettato da: Ing.Somaschi	Riesaminato da		Formato: A4
	N° disegno: 00-AS-873	Scala: 1:8	Data: 08/11/2011	Rev: 0

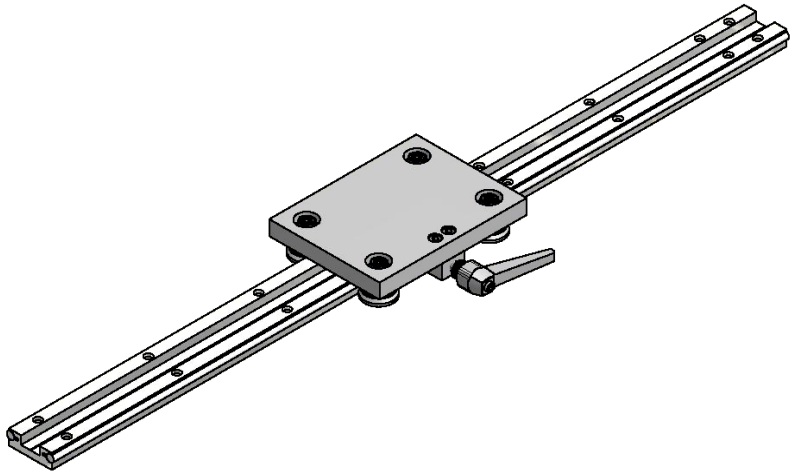
Titolo

GUIDA AG416M LAT CON DOPPIA MOTORIZZAZIONE









B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-321	Scala: 1:3	Data: 03/11/2010	Rev: 0

Titolo

GUIDA AD210 CON MANETTINO FERMA CARRELLO

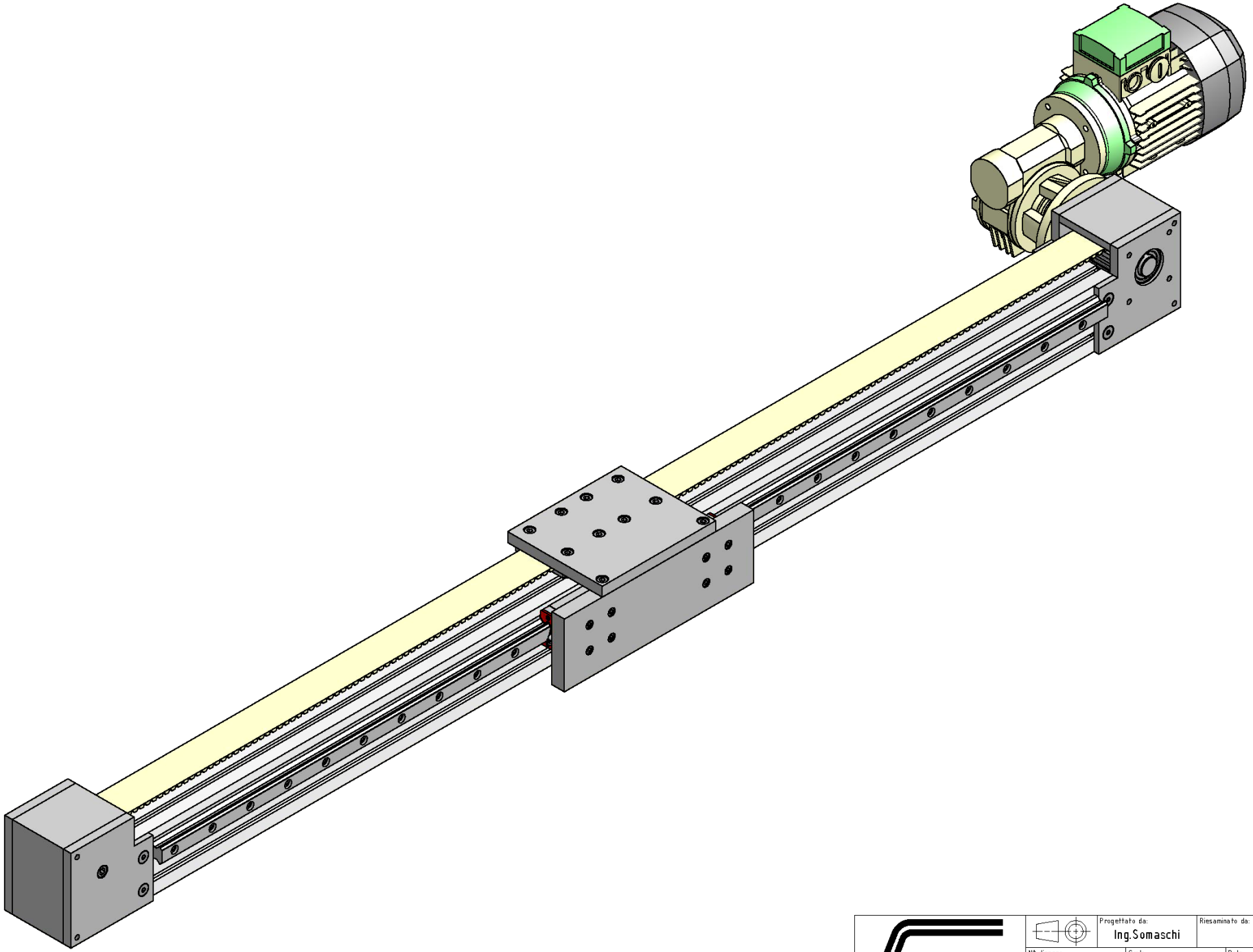
X SYSTEM WITH HIWIN LINEAR GUIDEWAYS

EXAMPLES

Particular applications for X moving systems are the following:

Drawing 05-AS-749, 02-AS-554 and 08-AS-607

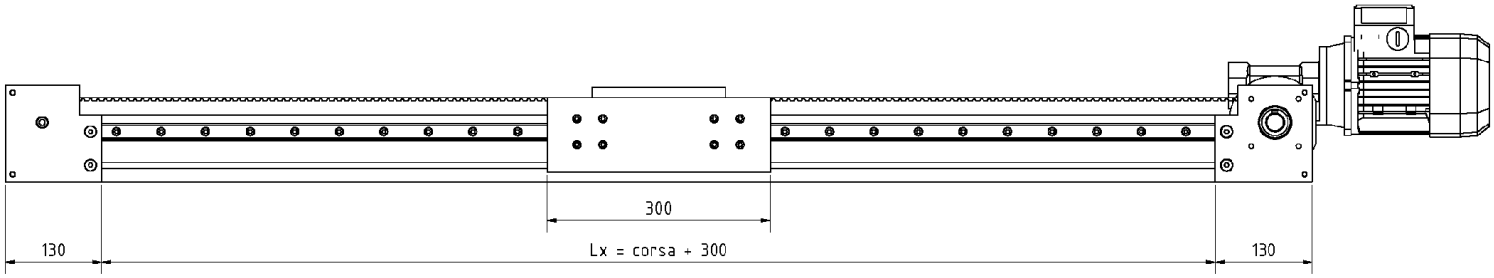
linear guides with balls (like Hiwin, THK, INA...) instead of wheels

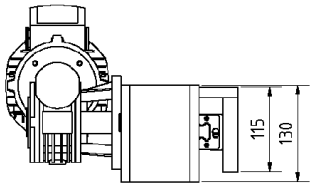


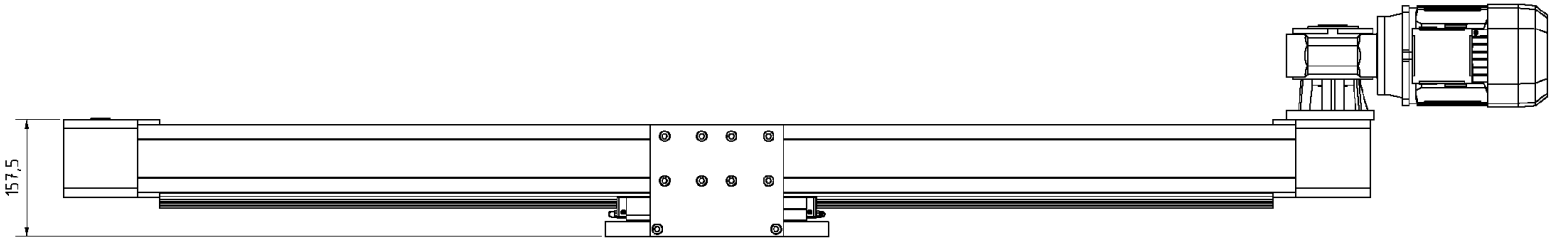
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3
	N° disegno: 05-AS-749	Scala: 1:4	Data: 30/01/2013	Rev: 0

Titolo

GUIDA A CINGHIA CON PATTINO HGH25-CA

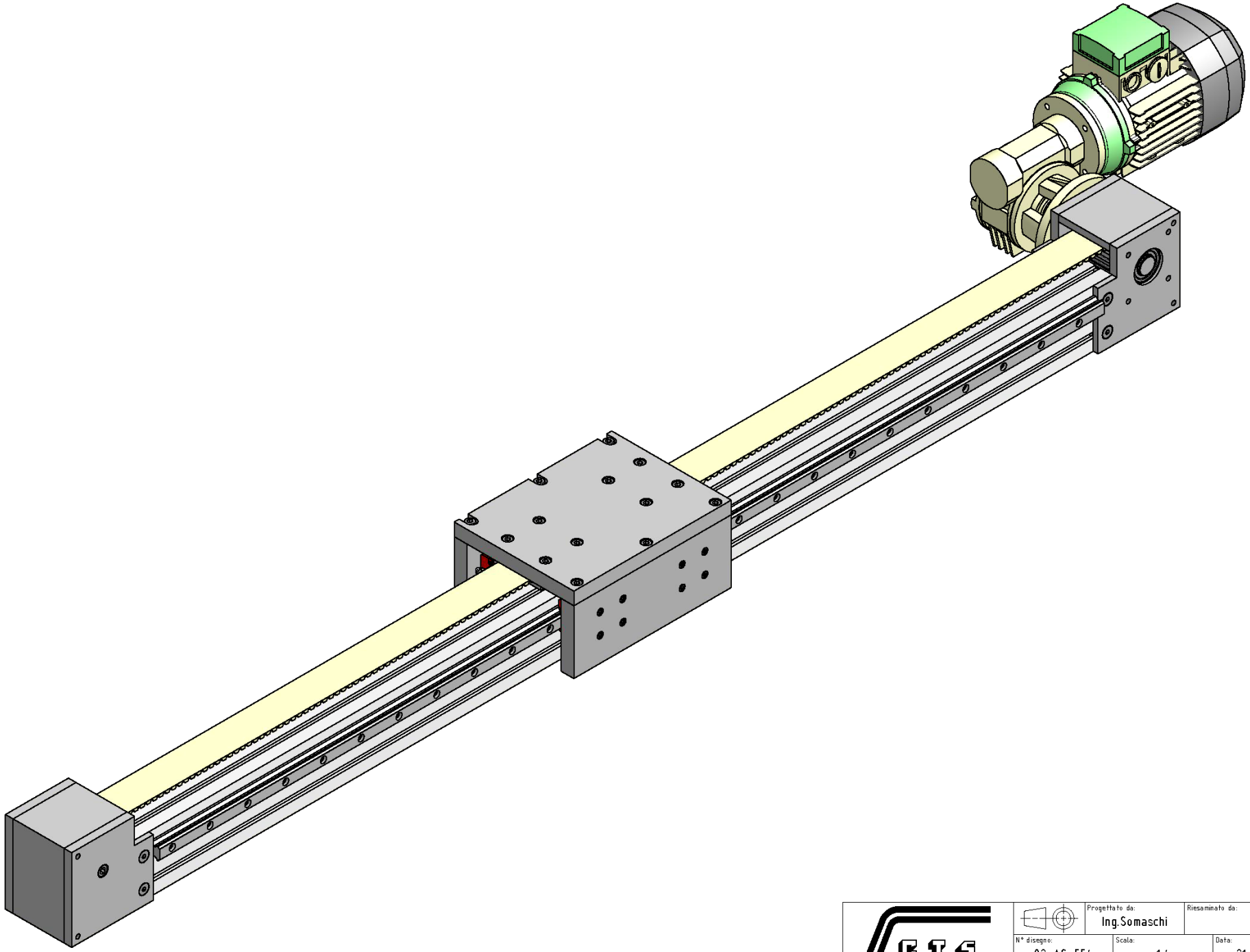






G.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:		Formato: A3
	N° disegno: 05-AS-749	Scala: 1:7	Data: 30/01/2013	Rev: 0

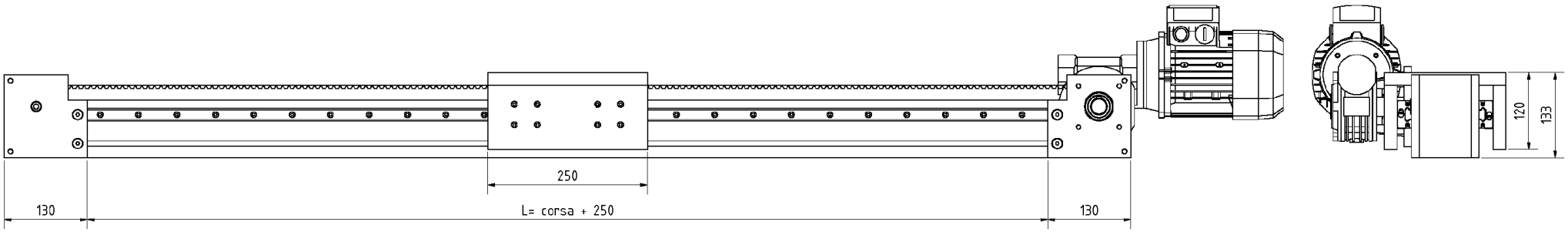
Titolo: SISTEMA PARALLELO CON PATTINI HGH25-CA

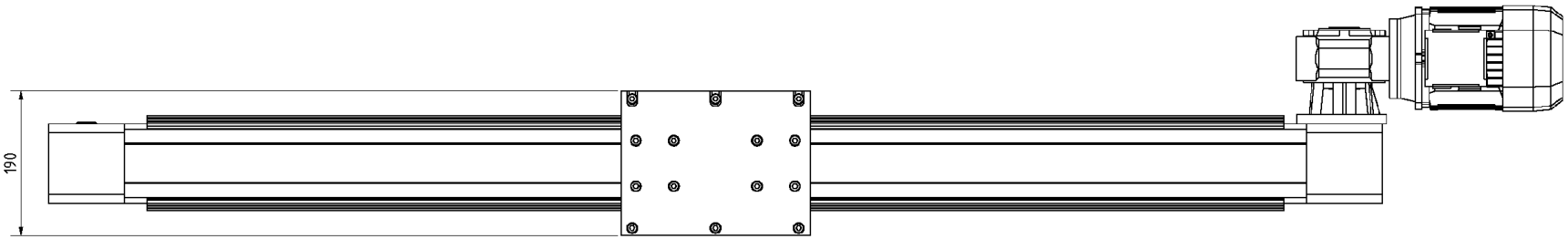


G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 02-AS-554	Scala: 1:4	Data: 21/12/2010	Rev: 0

Titolo

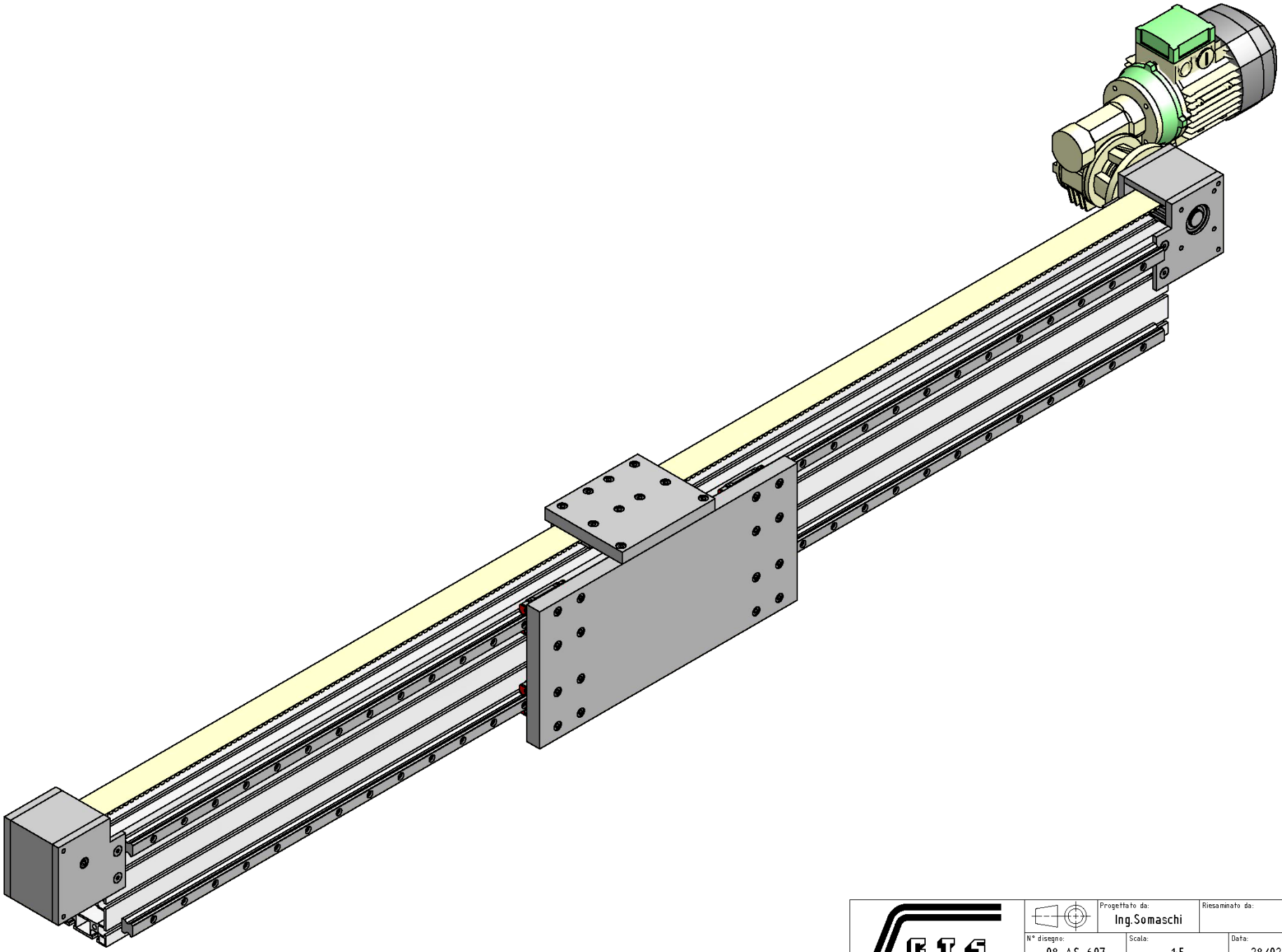
GUIDA A CINGHIA CON DOPPI PATTINI HGH20-CA





B.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:		Formato: A4
	N° disegno: 02-AS-554	Scala: 1:5	Data: 21/12/2010	Rev: 0

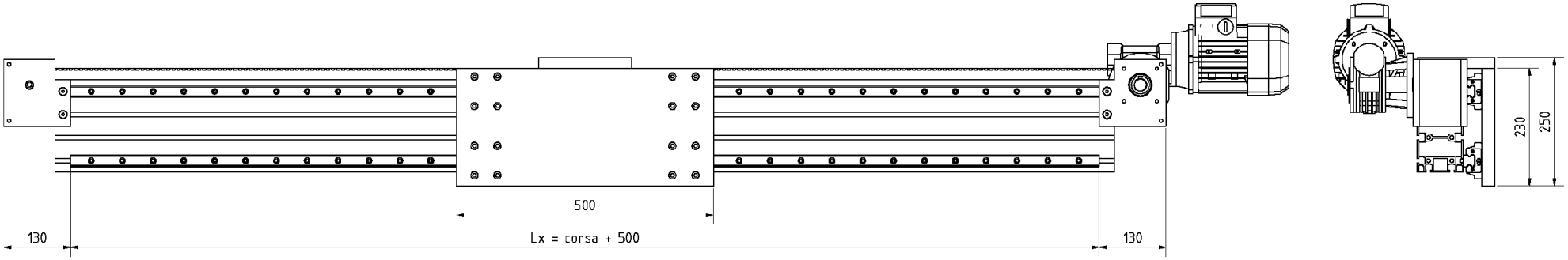
Titolo: GUIDA A CINGHIA CON DOPPI PATTINI HGH20-CA

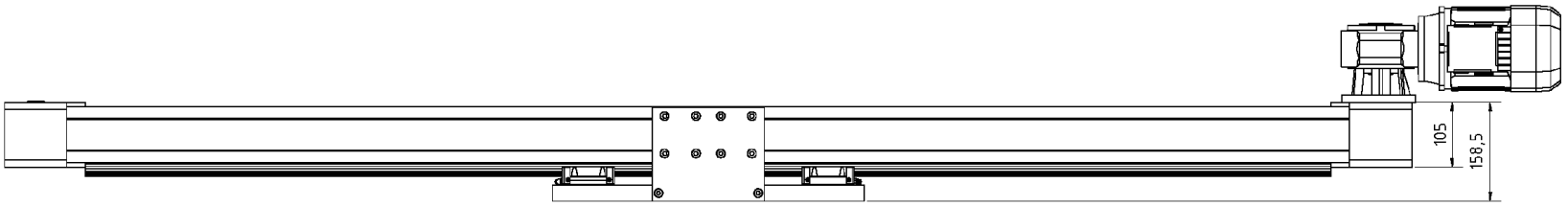


G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3
	N° disegno: 08-AS-607	Scala: 1:5	Data: 28/02/2013	Rev: 0

Titolo

GUIDA CON PATTINI HGW25-CA E PROFILO 90x180





B.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3	
	N° disegno: 08-AS-907	Scala: 1:10	Data: 28/02/2013	Rev: 0

Titolo: GUIDA CON PATTINI HGW25-CA E PROFILO 90x180

X-Z SYSTEM

Drawing 00-AS-250

LIGHT VERSION WITH AD210 GUIDES

WORKING CONDITIONS

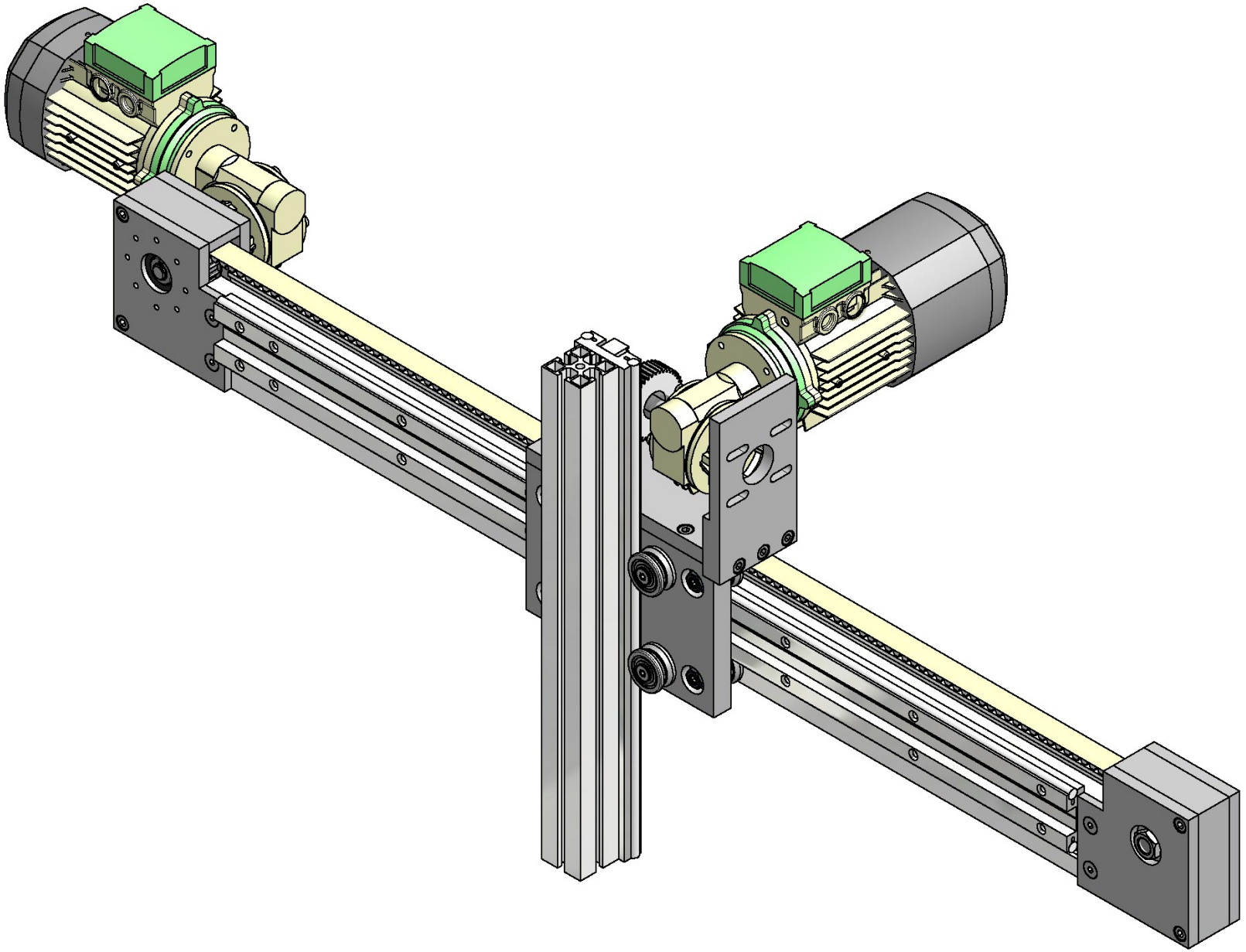
Maximum vertical stroke:	300 mm
Maximum load:	15 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belt
Vertical:	pinion and rack

NOTE

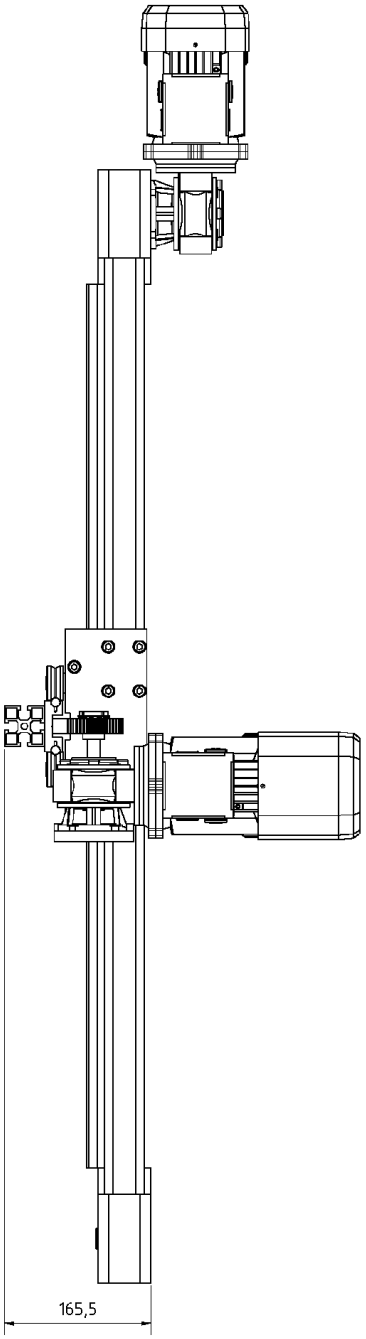
For vertical stroke till 500 mm we can strengthen the system with double guide on horizontal axis to hold up possible vibrations of vertical axe

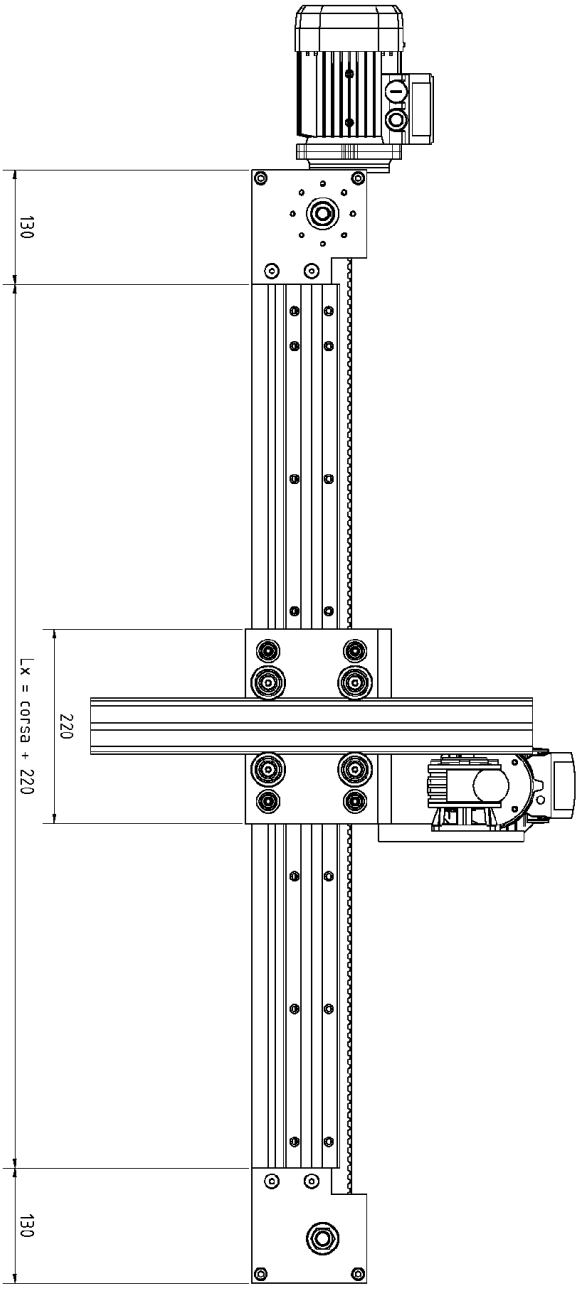


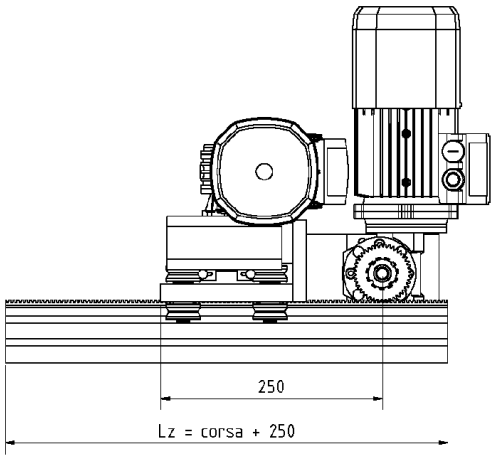
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-250	Scala: 1:3	Data: 03/11/2010	Rev: 0

Titolo

SISTEMA X-Z CON AD210M LAT







Titolo

SISTEMA X-Z CON AD210M LAT

N° disegno:	00-AS-250
Progettato da:	Ing.Somaschi
Scala:	1:6
Disegnato da:	
Data:	03/11/2010
Formato:	A4
Rev:	0

X-Z SYSTEM

Drawing 01-AS-246

MIDDLE-LIGHT VERSION WITH AD416 GUIDES

WORKING CONDITIONS

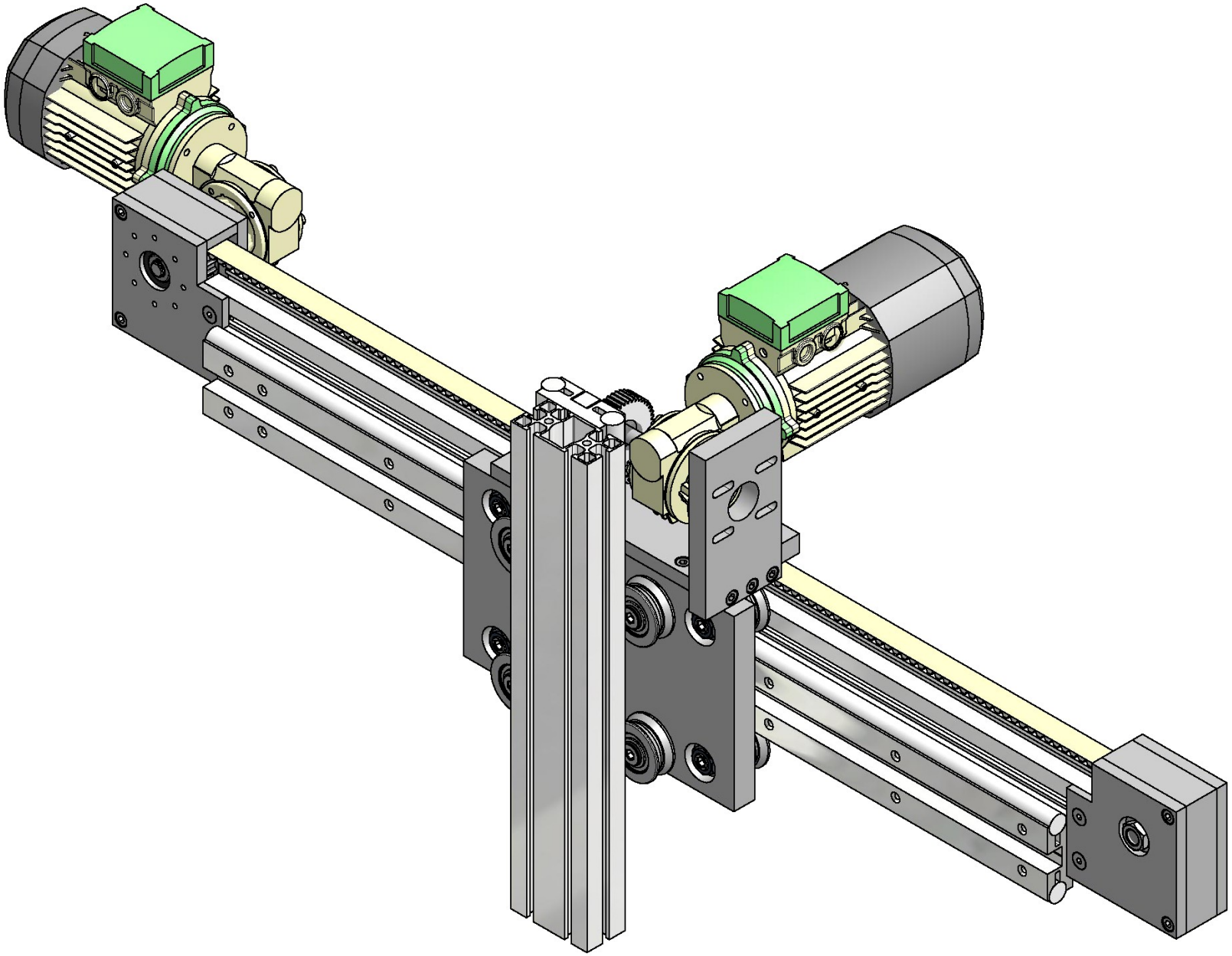
Maximum vertical stroke:	300 mm
Maximum load:	30 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belt
Vertical:	pinion and rack

NOTE

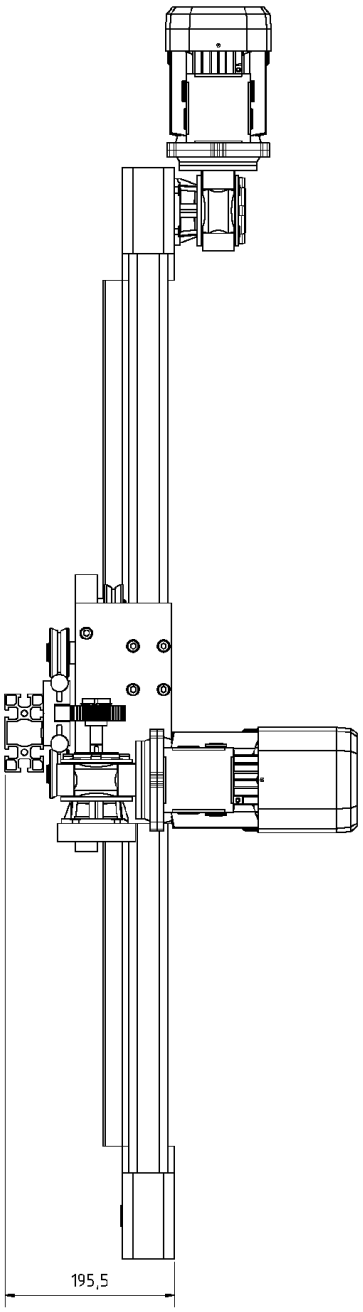
For vertical stroke till 500 mm we can strengthen the system with double guide on horizontal axis to hold up possible vibrations of vertical axe

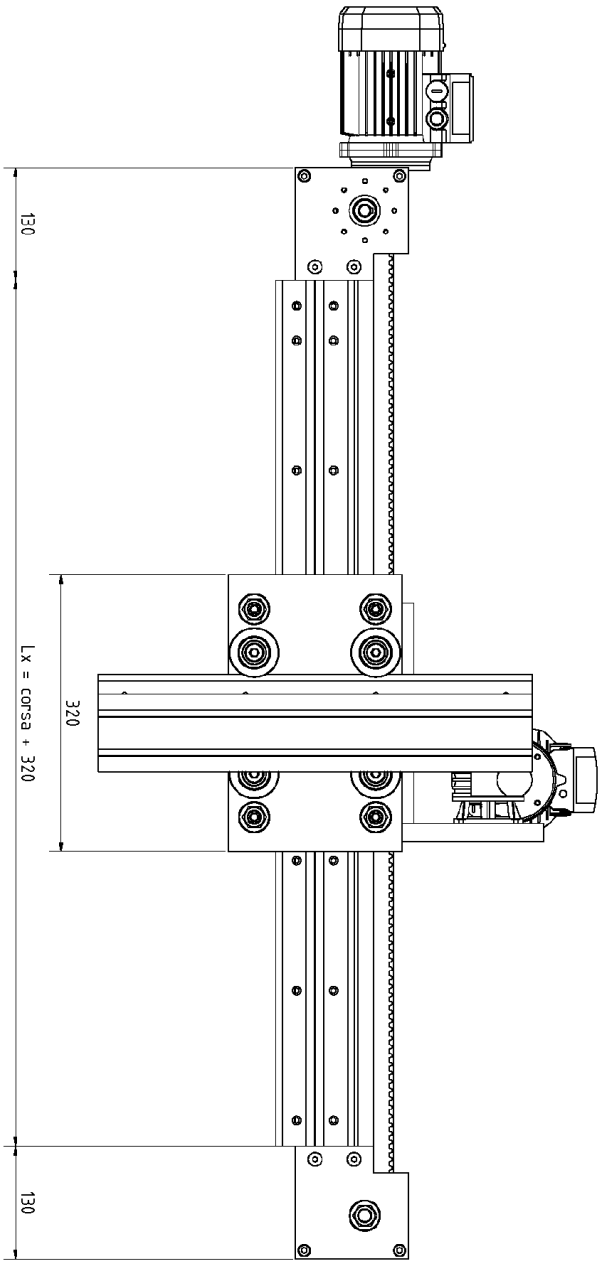


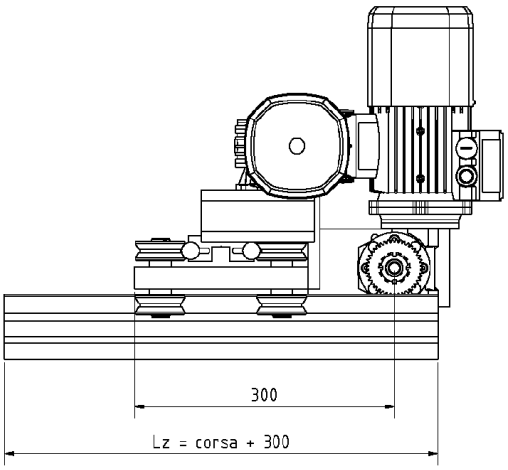
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-246	Scala: 1:3	Data: 03/11/2010	Rev: 0

Titolo

SISTEMA X-Z CON AD416M LAT







Titolo: SISTEMA X-Z	N° disegno: 01-AS-246	Progettato da: Ing.Somaschi	Disegnato da:	Formato: A4
	Scala: 1:6			
	Data: 03/11/2010			
	Rev: 0			

X-Z SYSTEM

Drawing 00-AS-157

MIDDLE VERSION WITH AD416 GUIDES

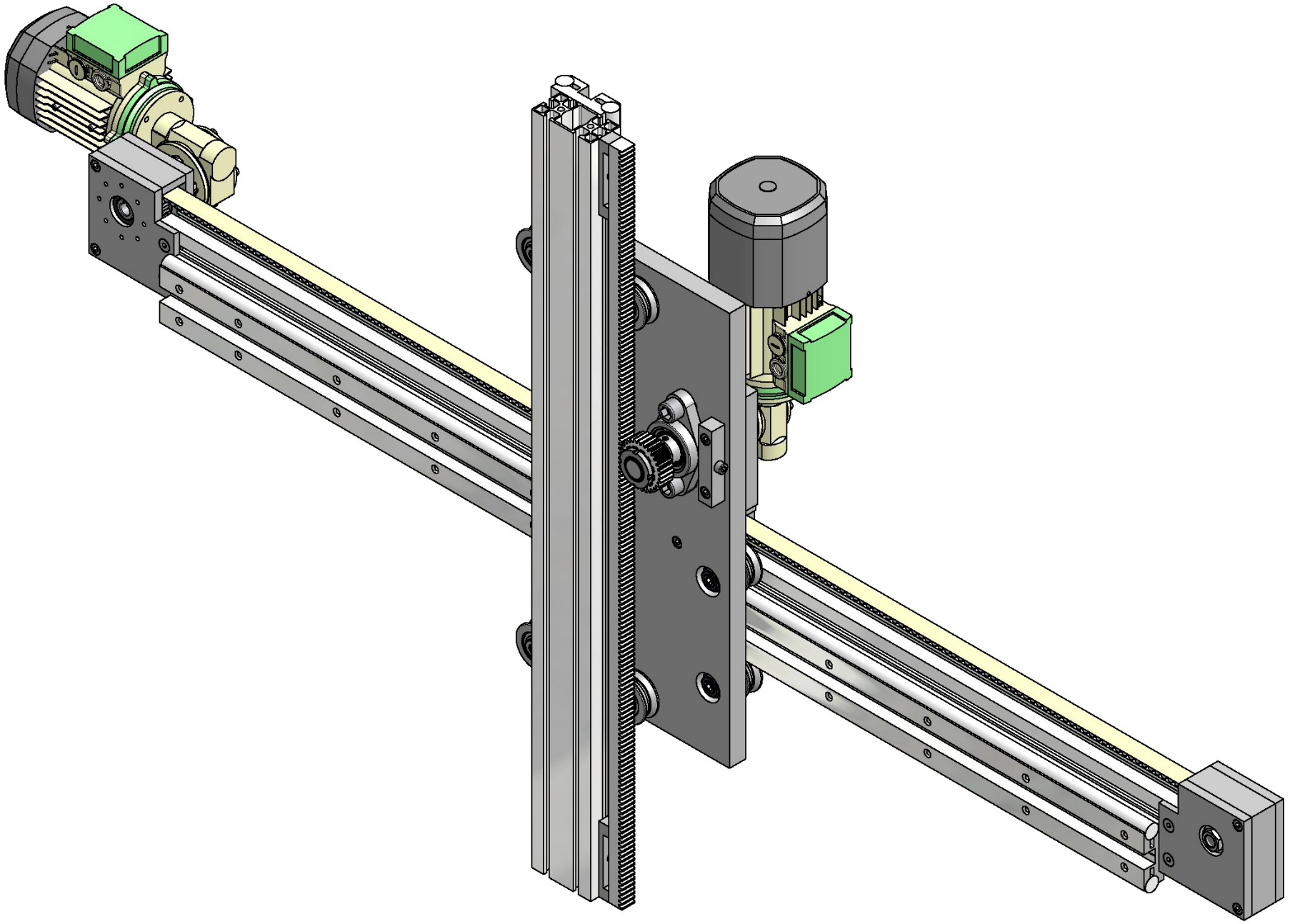
WORKING CONDITIONS

Maximum vertical stroke:	1200/1500 mm
Maximum load:	50 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belt
Vertical:	pinion and rack

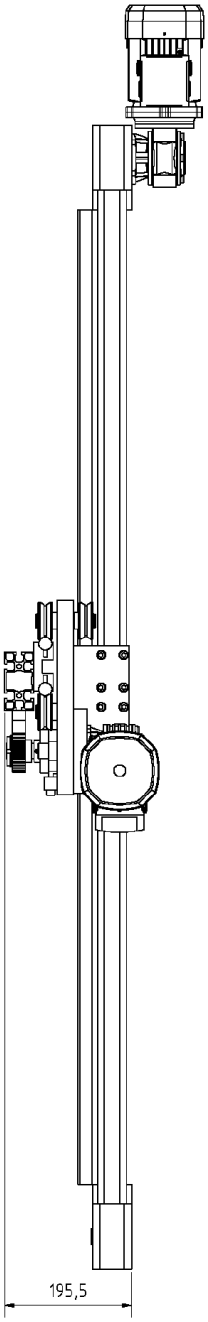
NOTE

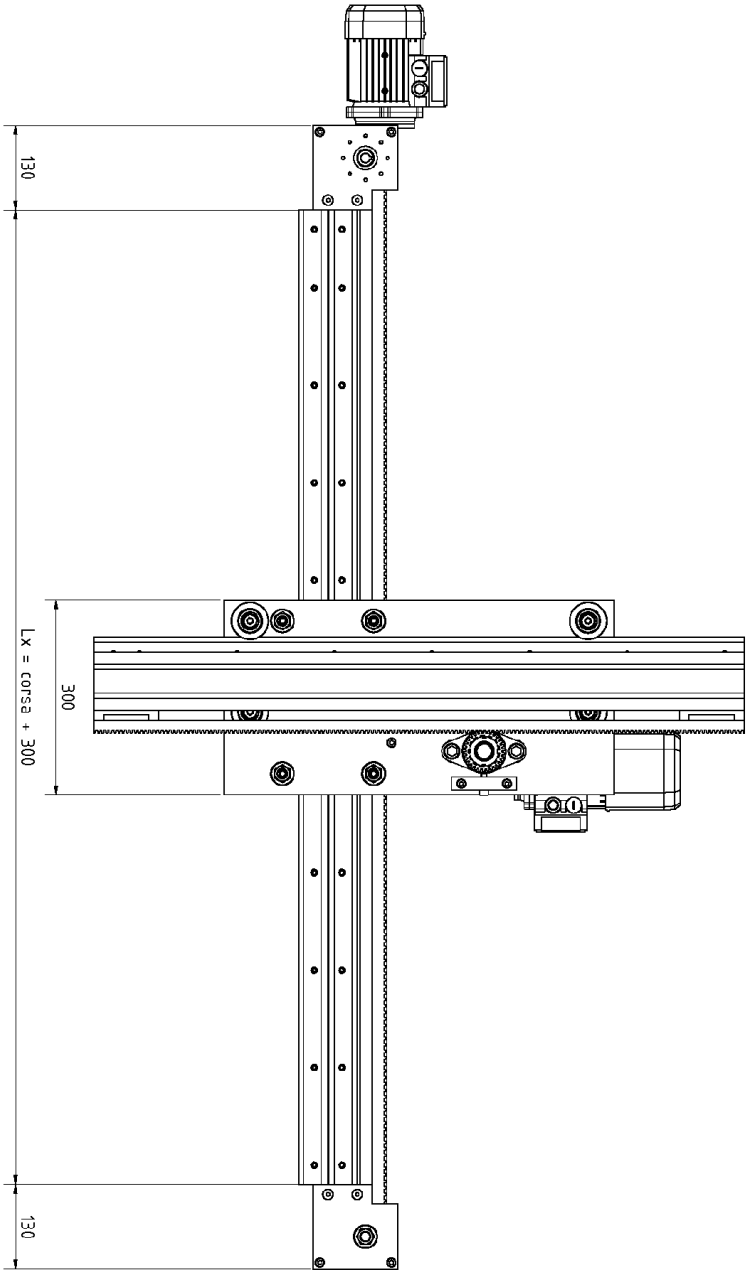


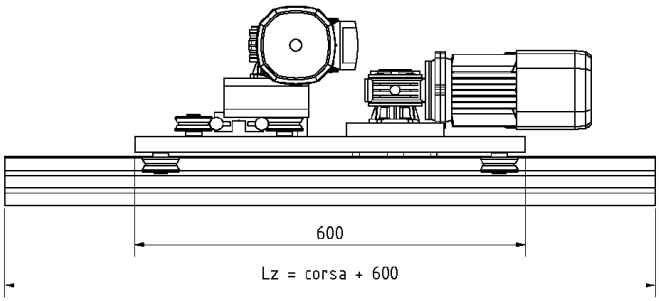
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-157	Scala: 1:4	Data: 10/05/2010	Rev: 0

Titolo

SISTEMA X-Z CON AD416M LAT







Titolo:

SISTEMA X-Z CON AD416M LAT

N° disegno:	00-AS-157
Scala:	1:8
Data:	10/05/2010
Rev:	0
Progettato da:	Ing.Somaschi
Ridisegnato da:	
Formato:	A4

X-Z SYSTEM

Drawing 02-AS-197

MIDDLE-HEAVY VERSION WITH AD416 GUIDES

WORKING CONDITIONS

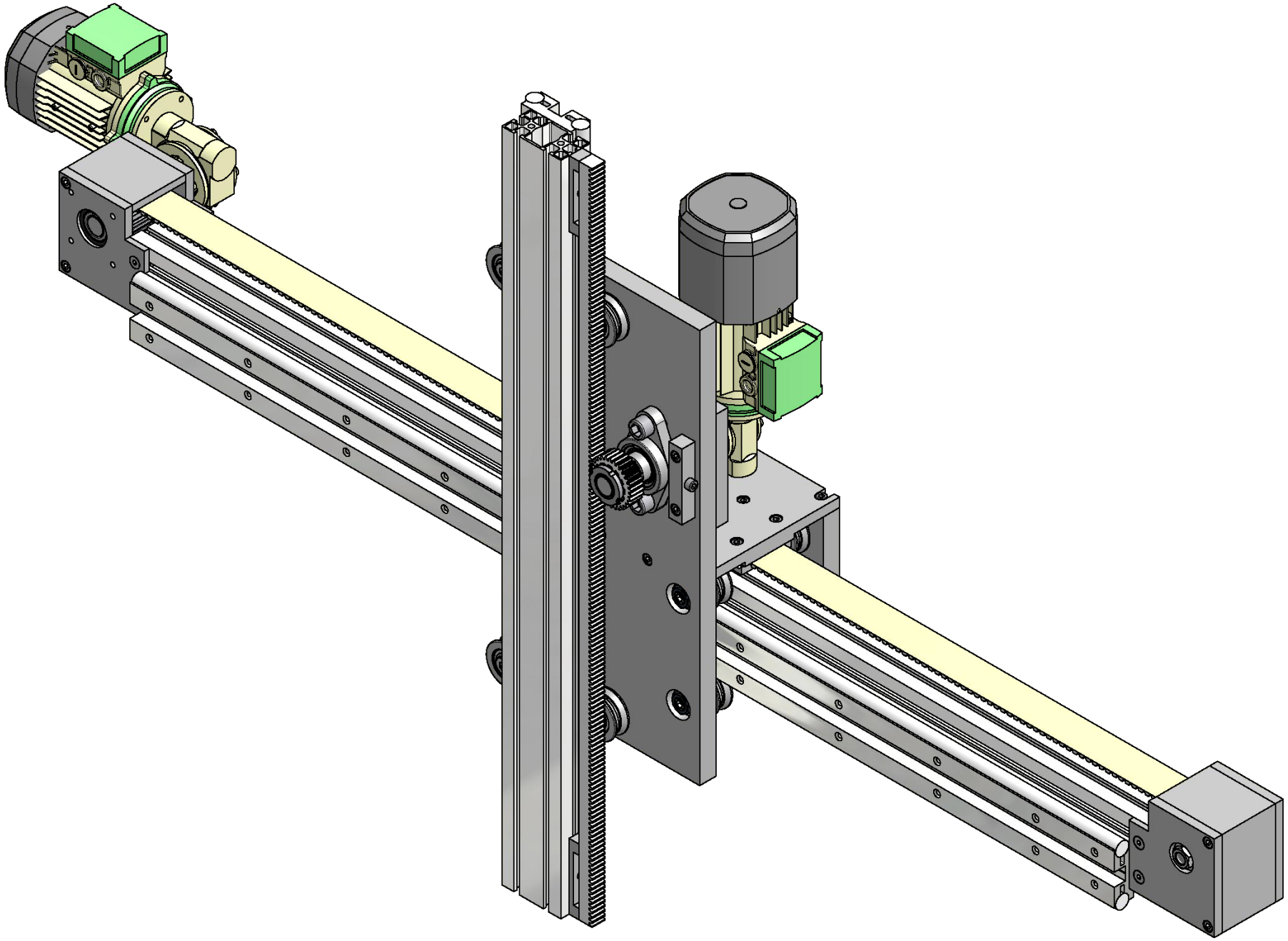
Maximum vertical stroke:	1200/1500 mm
Maximum load:	70/80 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belt
Vertical:	pinion and rack

NOTE

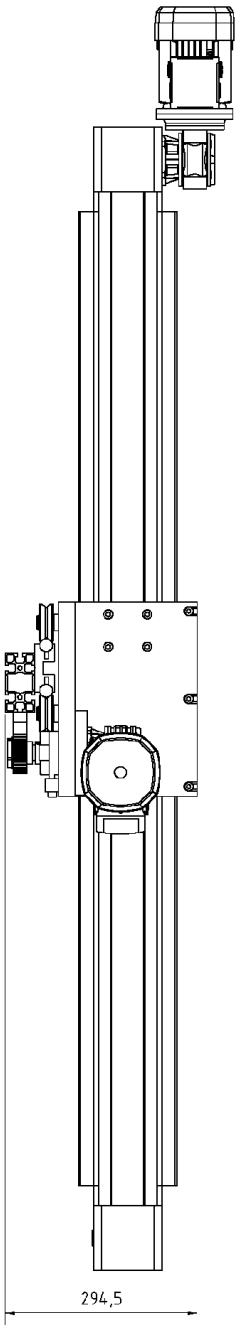
In case it's necessary an higher accuracy we advise you to use this system with a maximum load of 50 Kg

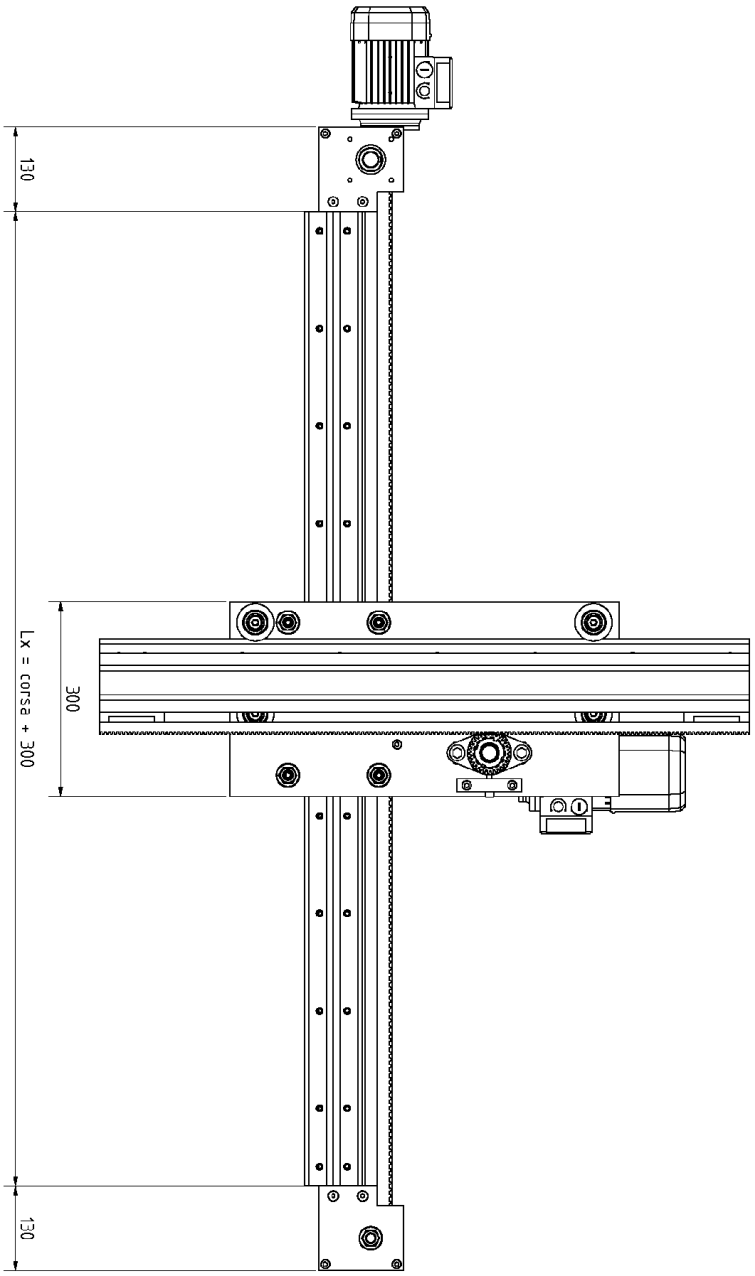


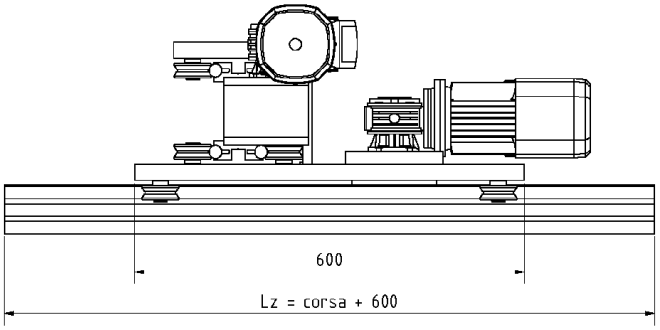
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 02-AS-197	Scala: 1:4	Data: 14/10/2010	Rev: 0

Titolo

SISTEMA X-Z CON DOPPIO AD416M







Titolo

SISTEMA X-Z CON DOPPIO AD416M

N° disegno:	02-AS-197
Scala:	1:8
Data:	14/10/2010
Rev:	0
Progettato da:	Ing.Somaschi
Disegnato da:	
Formato:	A4

X-Z SYSTEM

Drawing 01-AS-268

HEAVY VERSION WITH AD416 GUIDES

WORKING CONDITIONS

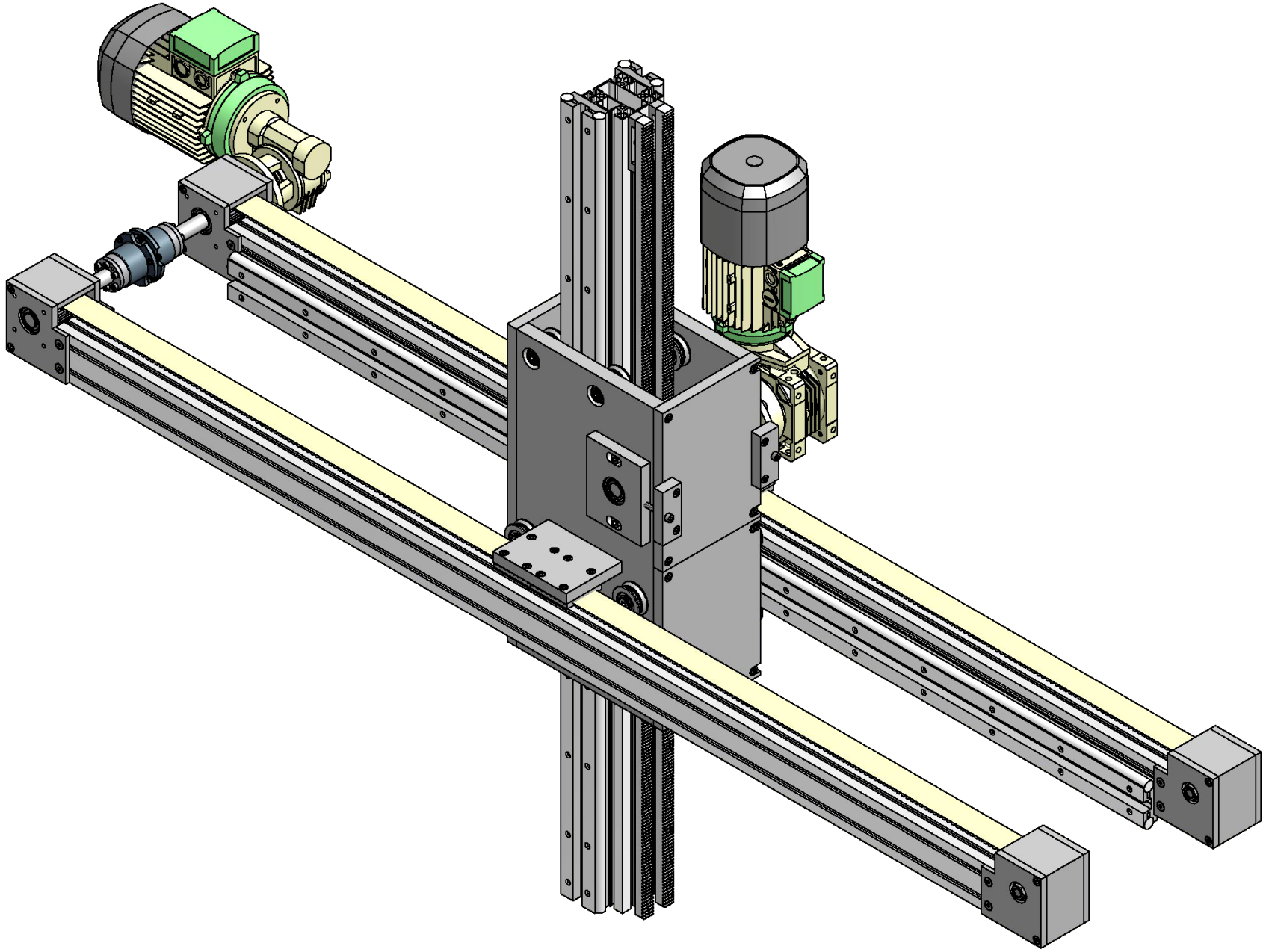
Maximum vertical stroke:	2000/2500 mm
Maximum load:	150 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belt
Vertical:	pinion and rack

NOTE

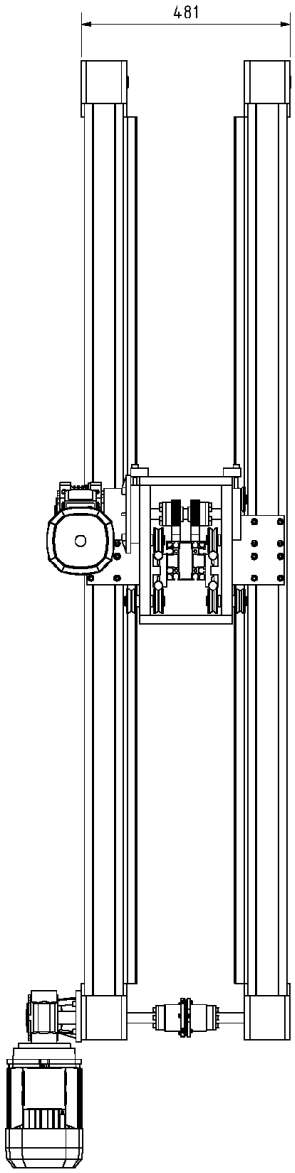
For heavier load we can change horizontal D20 guides with G20 guides

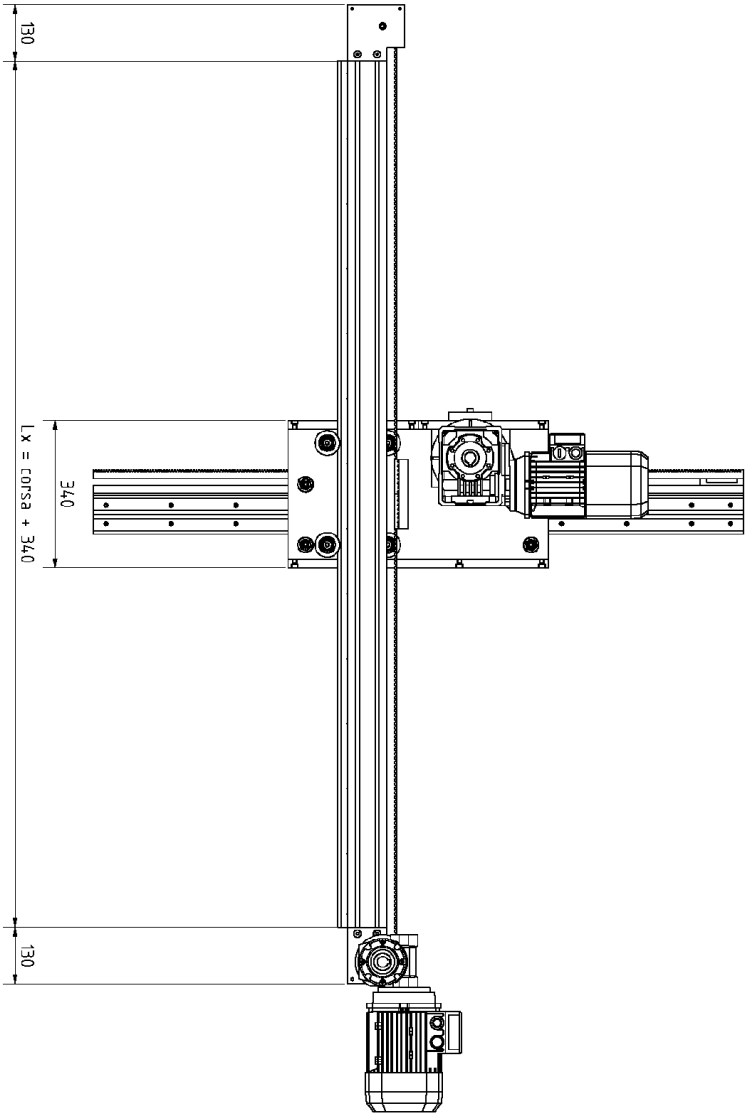


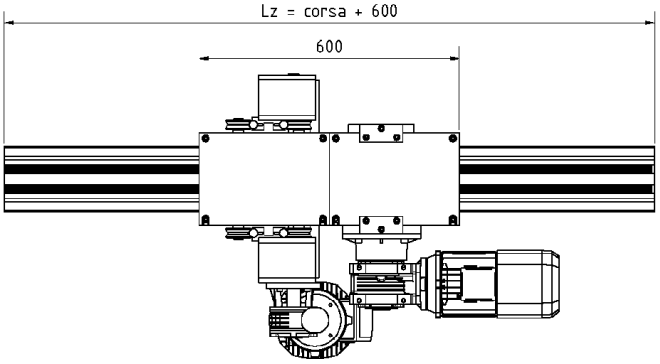
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-268	Scala: 1:4	Data: 31/03/2011	Rev: 0

Titolo

SISTEMA X-Z







Titolo:	SISTEMA X-Z
N° disegno:	01-AS-268
Progettato da:	Ing.Somaschi
Scala:	1:10
Disegnato da:	
Data:	31/03/2011
Formato:	A4
Rev:	0

X-Z SYSTEM

Drawing 00-AS-217

MIDDLE-HEAVY VERSION WITH AD416 GUIDES

WORKING CONDITIONS

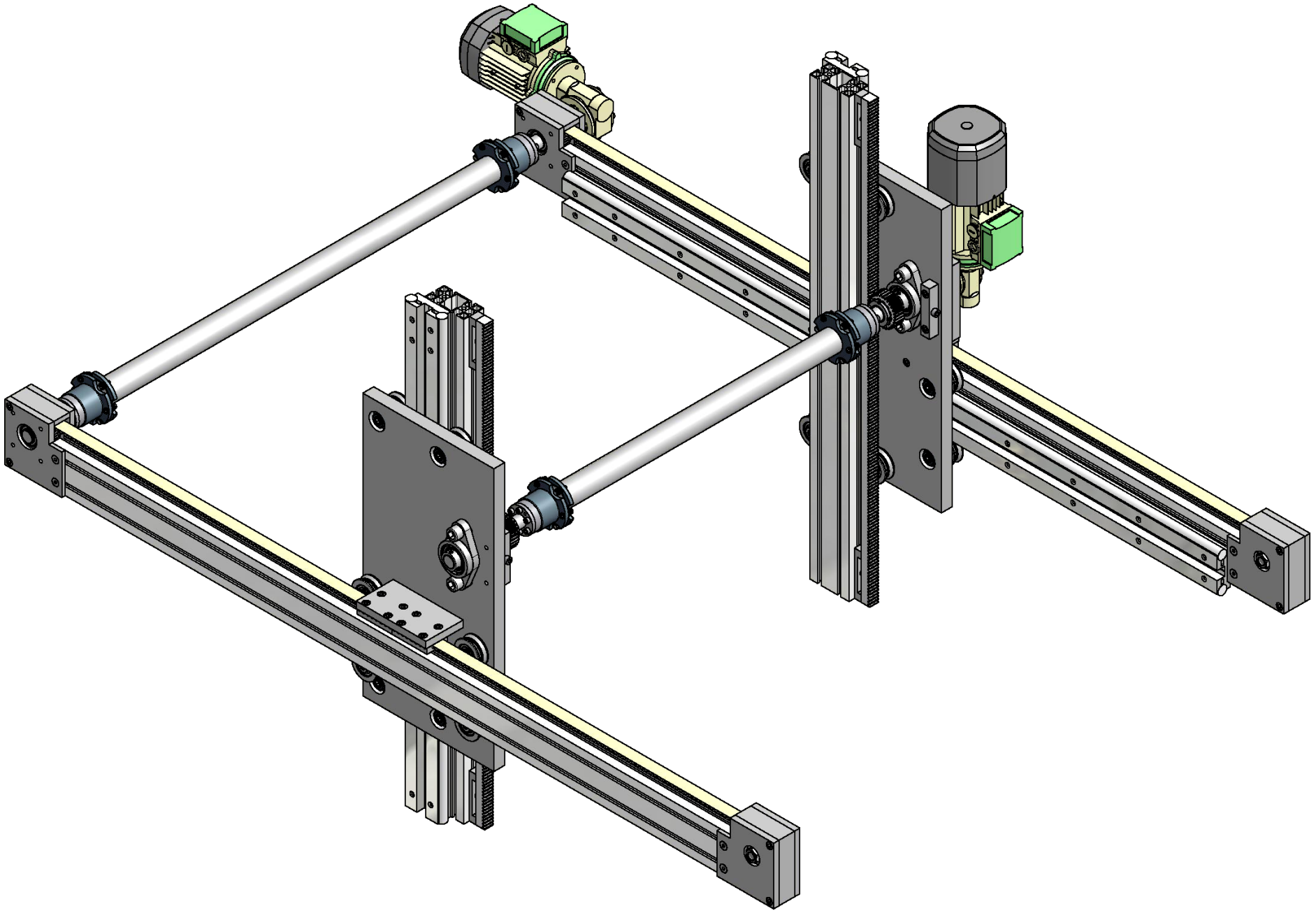
Maximum vertical stroke:	2000/2500 mm
Maximum bulky load:	100 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belts
Vertical:	double pinion and rack

NOTE

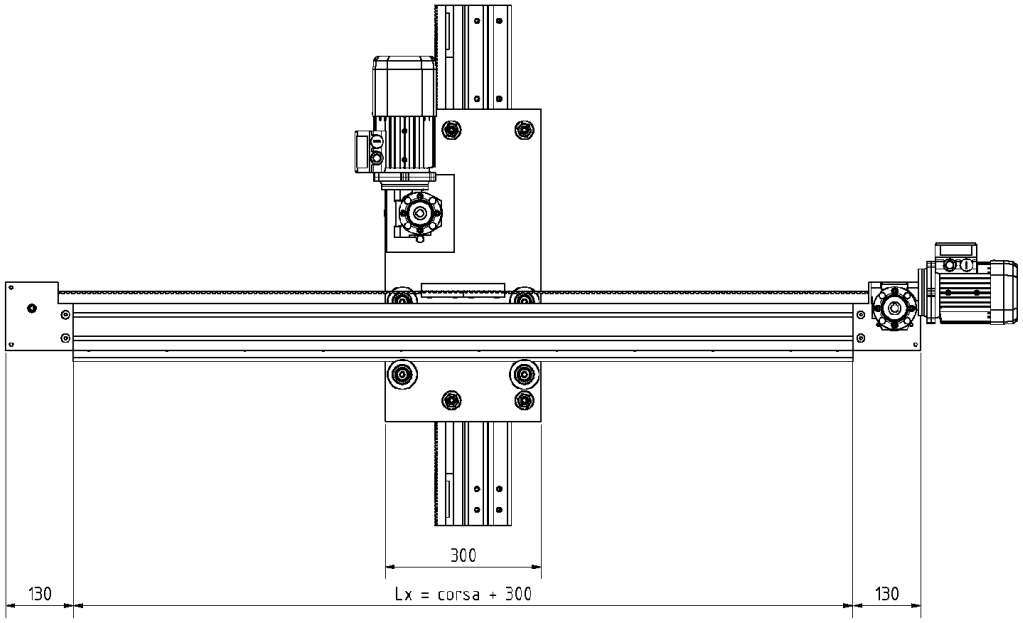
The stability of the big load is guaranteed by a double taking arm on vertical, moved by a single gearbox

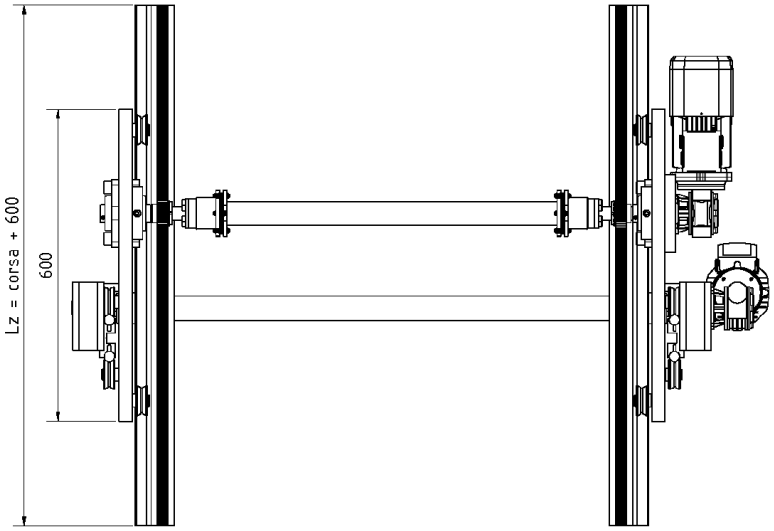


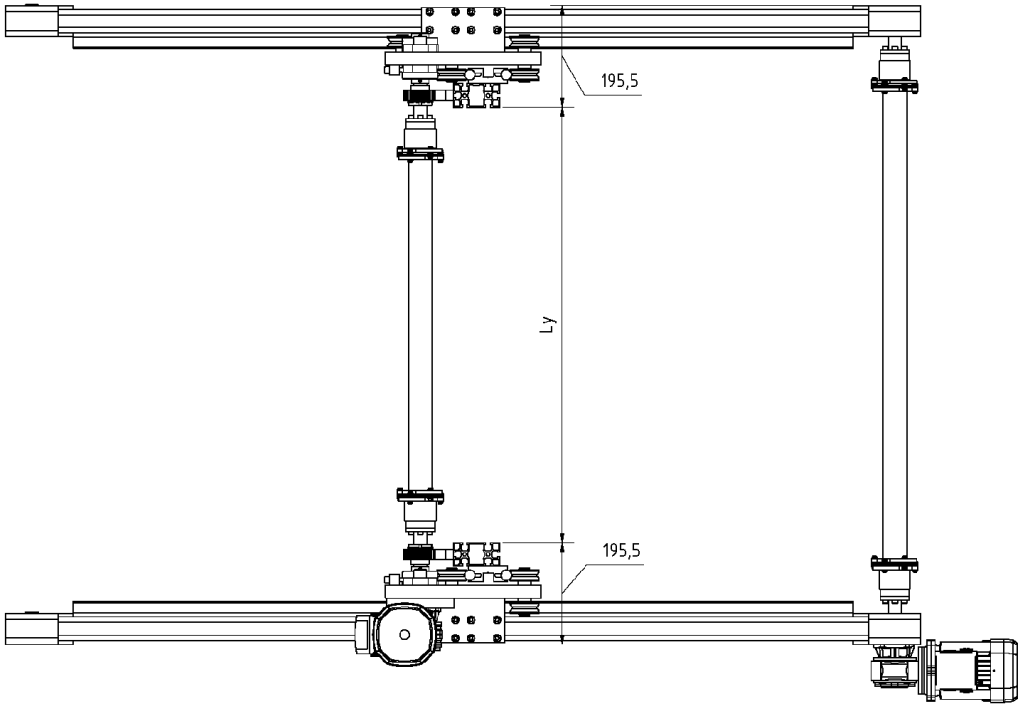
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-217	Scala: 1:6	Data: 03/11/2010	Rev: 0

Titolo

SISTEMA X-Z PARALLELO CON AD416M LAT







B.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:		Formato: A4
	N° disegno: 00-AS-217	Scala: 1:10	Data: 03/11/2010	Rev: 0

Titolo

SISTEMA X-Z PARALLELO CON AD416M LAT

X-Z SYSTEM

Drawing 00-AS-390

HEAVY VERSION WITH AD416/AG416 GUIDES

WORKING CONDITIONS

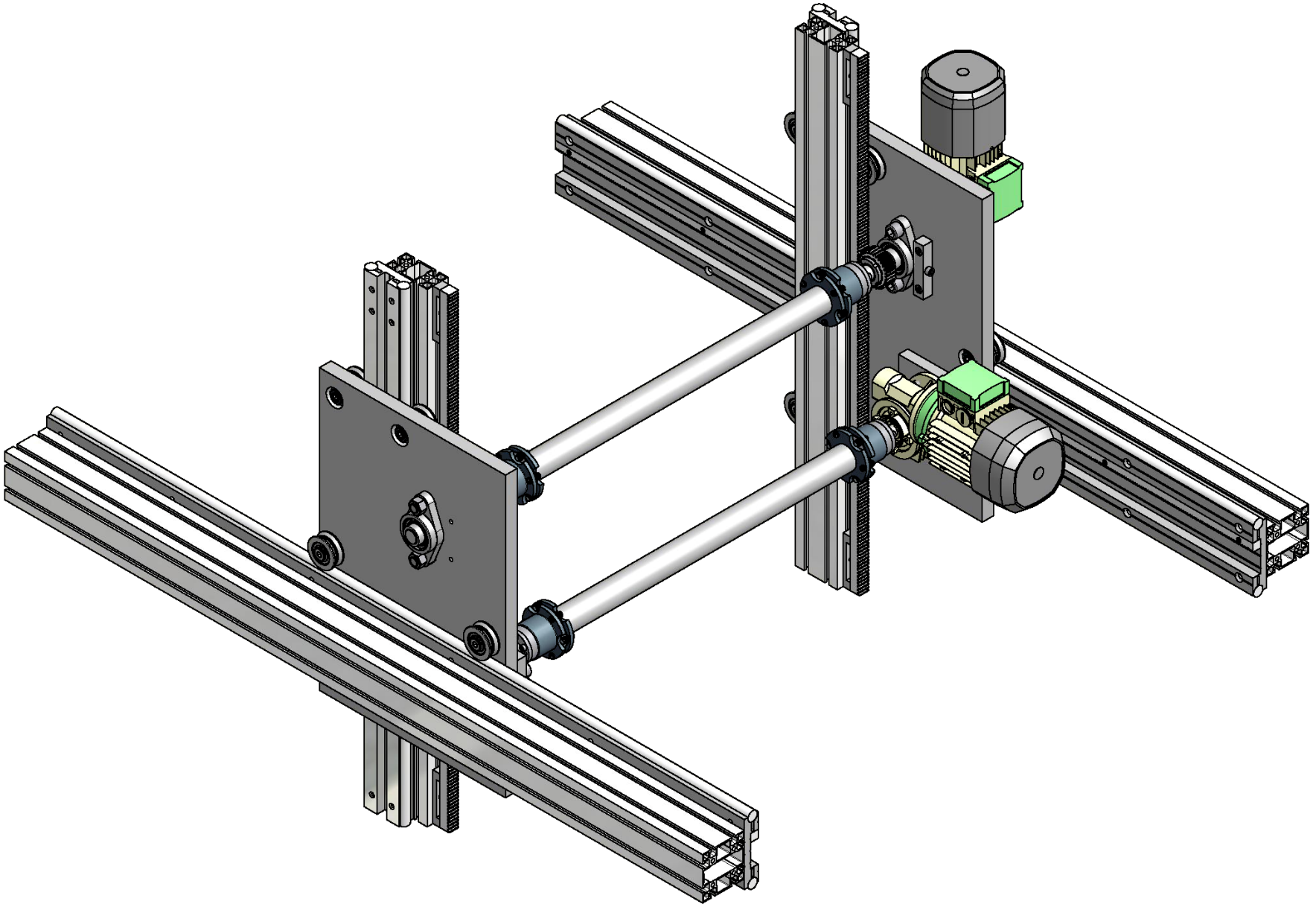
Maximum vertical stroke:	2000/2500 mm
Maximum bulky load:	150 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	double pinion and rack
Vertical:	double pinion and rack

NOTE

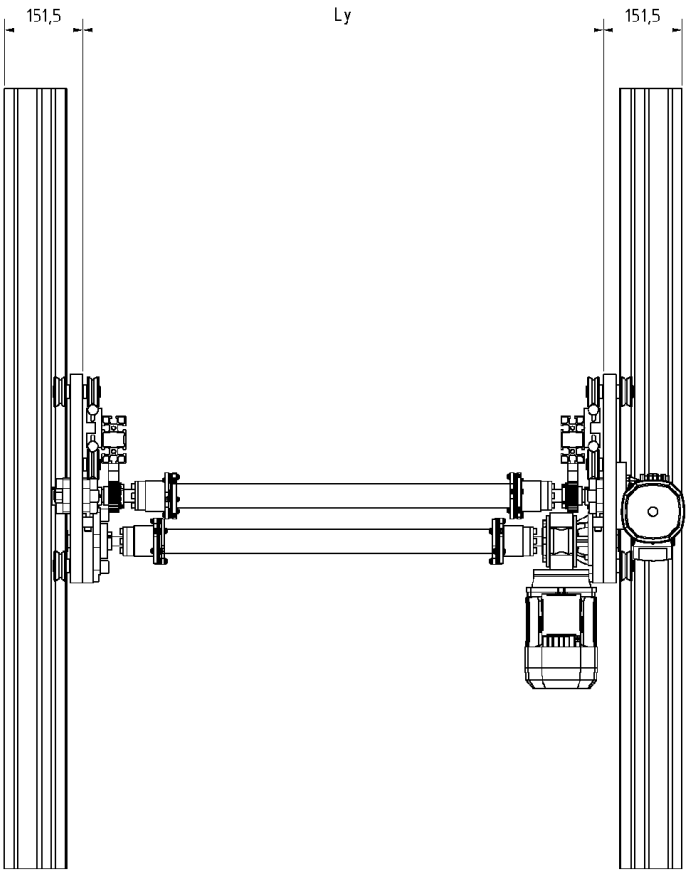
The stability of the big load is guaranteed by a double taking arm on vertical, moved by a single gearbox

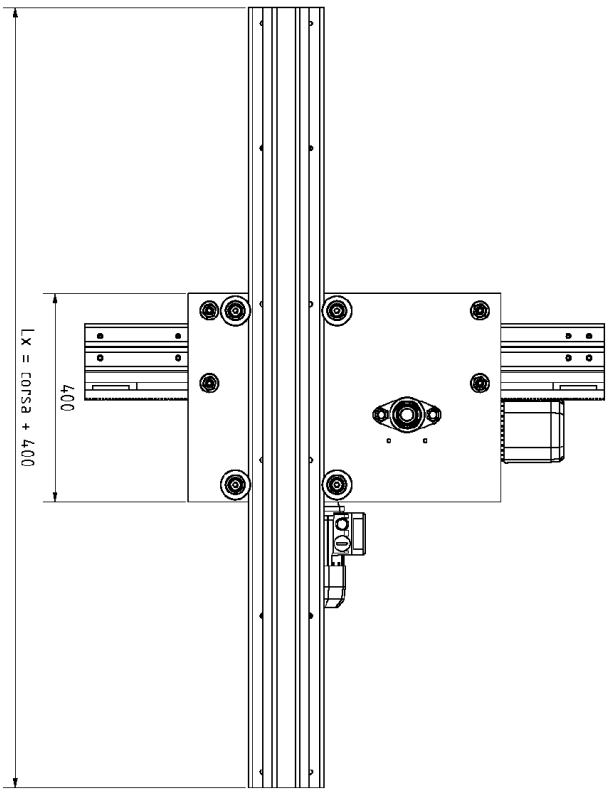


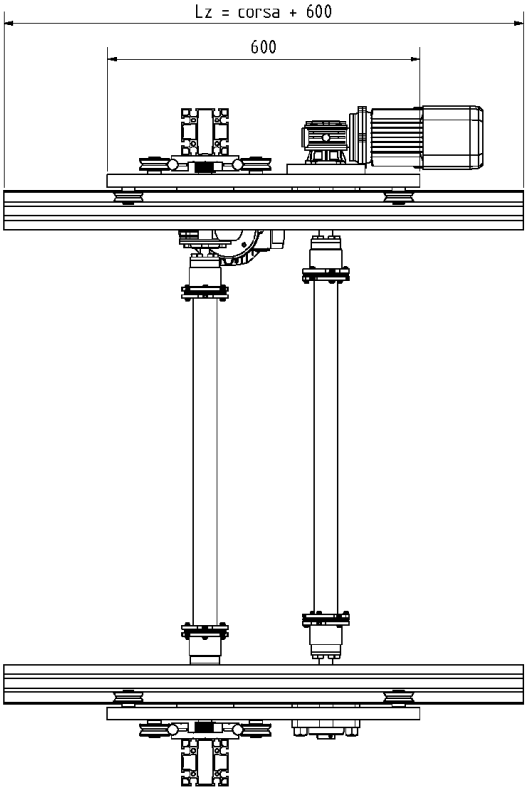
G.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4	
	N° disegno: 00-AS-390	Scala: 1:6	Data: 04/11/2010	Rev: 0

Titolo

SISTEMA X-Z PARALLELO CON AG416M LAT







Titolo

SISTEMA X-Z PARALLELO CON AG416M LAT

N° disegno:	00-AS-390
Scala:	1:10
Data:	04/11/2010
Rev:	0
Progettato da:	Ing.Somaschi
Disegnato da:	
Formato:	A4

X-Z SYSTEM

Drawing 00-AS-797

MEDIUM VERSION WITH AD210/416 GUIDES

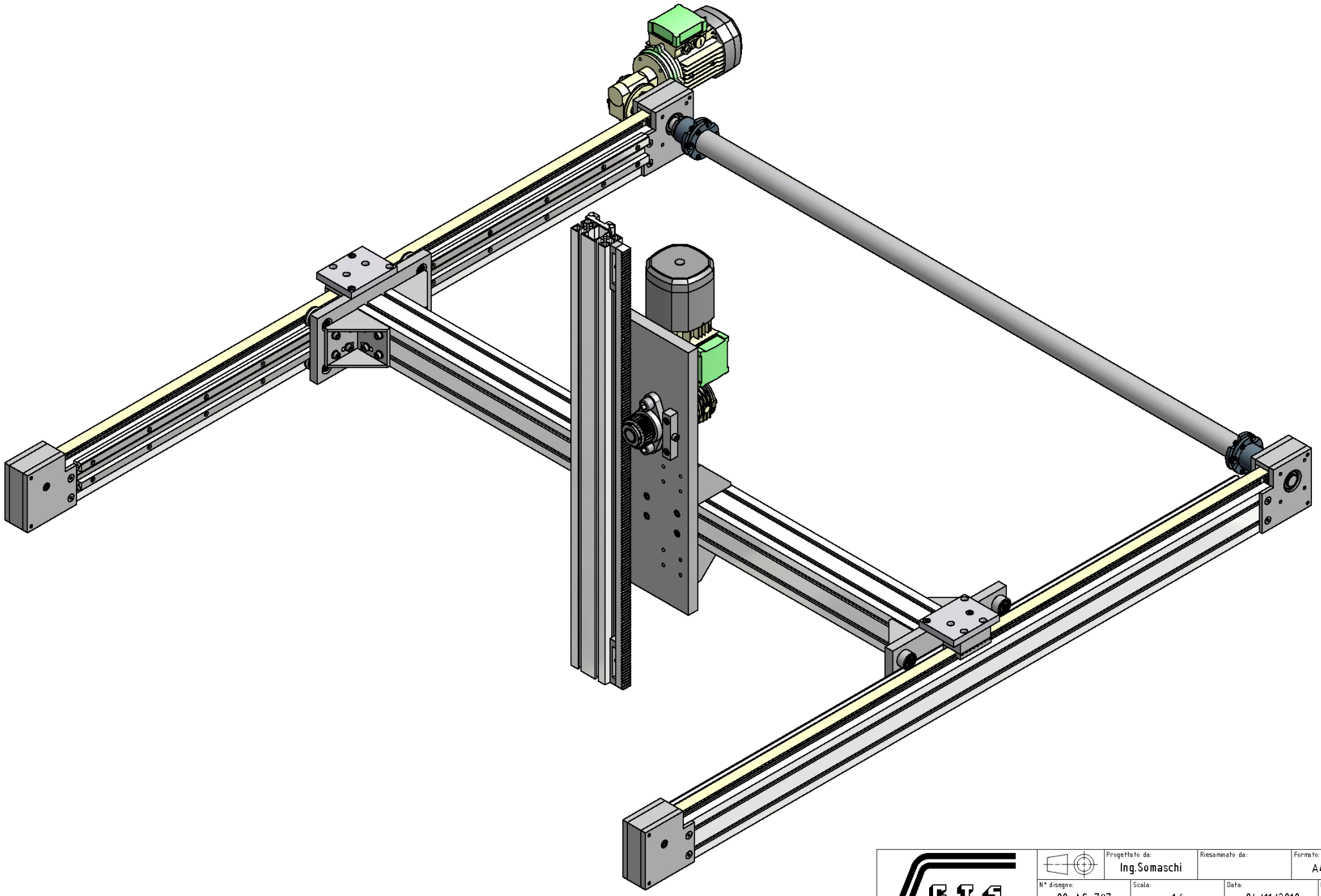
WORKING CONDITIONS

Maximum vertical stroke:	1200/1500 mm
Maximum bulky load:	60/70 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal:	belts
Vertical:	pinion and rack

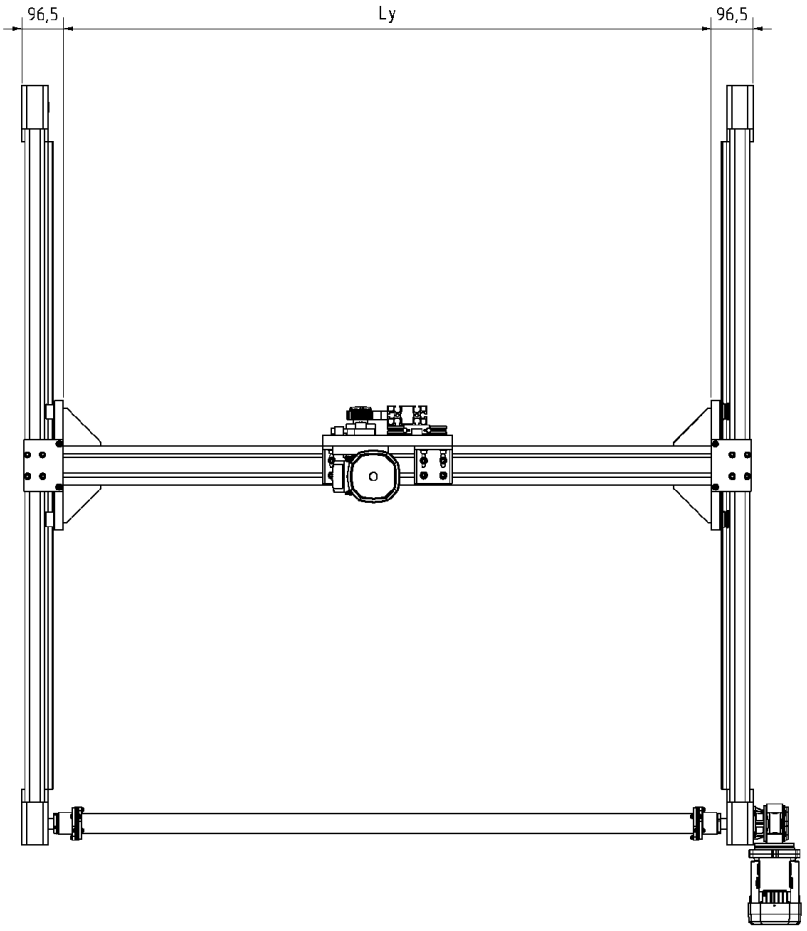
NOTE

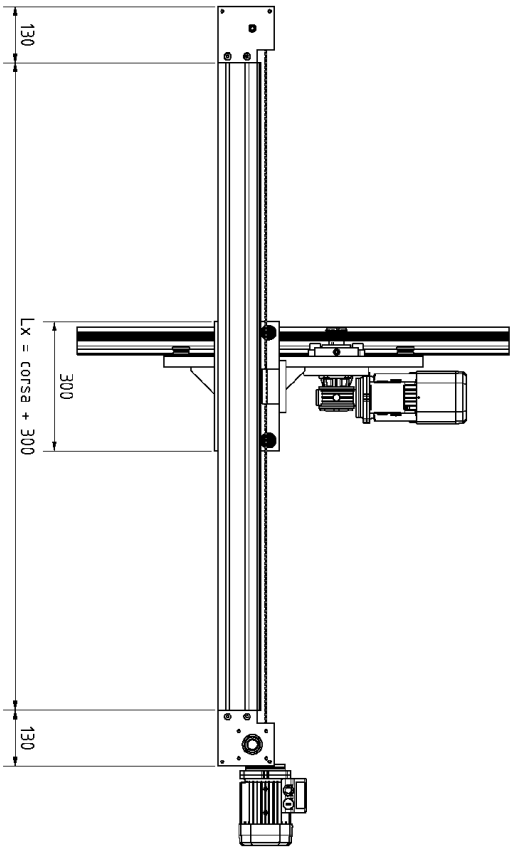


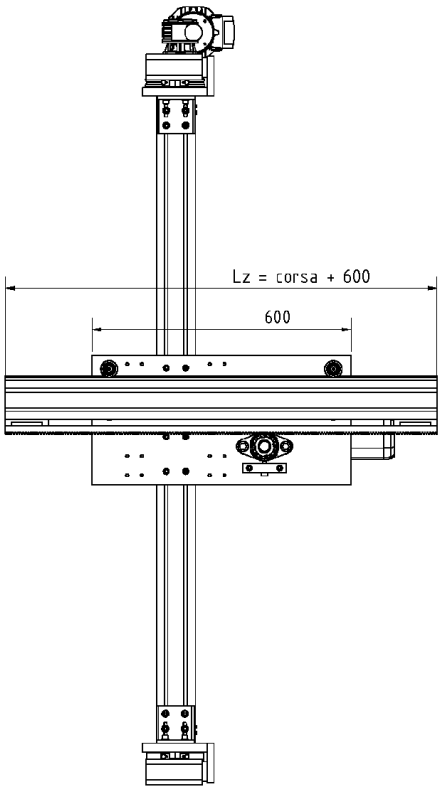
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-797	Scala: 1:6	Data: 04/11/2010	Rev: 0

Titolo

SISTEMA X-Z CON AD416M LAT







Titolo

SISTEMA X-Z CON AD416M LAT

N° disegno:	00-AS-797
Scala:	1:12
Data:	04/11/2010
Rev:	0
Progettato da:	Ing.Somaschi
Disegnato da:	
Formato:	A4

EXAMPLES

Particular applications for X-Z moving systems are the following:

Drawing 00-AS-293

Light version with double rack for motion

Drawings 00-AS-326 and 00-AS-355

X-Z moving system with X axe laid on the ground, and load lifting

Drawings 00-AS-170

X-Z system with quadruple vertical axe to move at the same time the part or some parts on more working stations

Drawing 01-AS-197

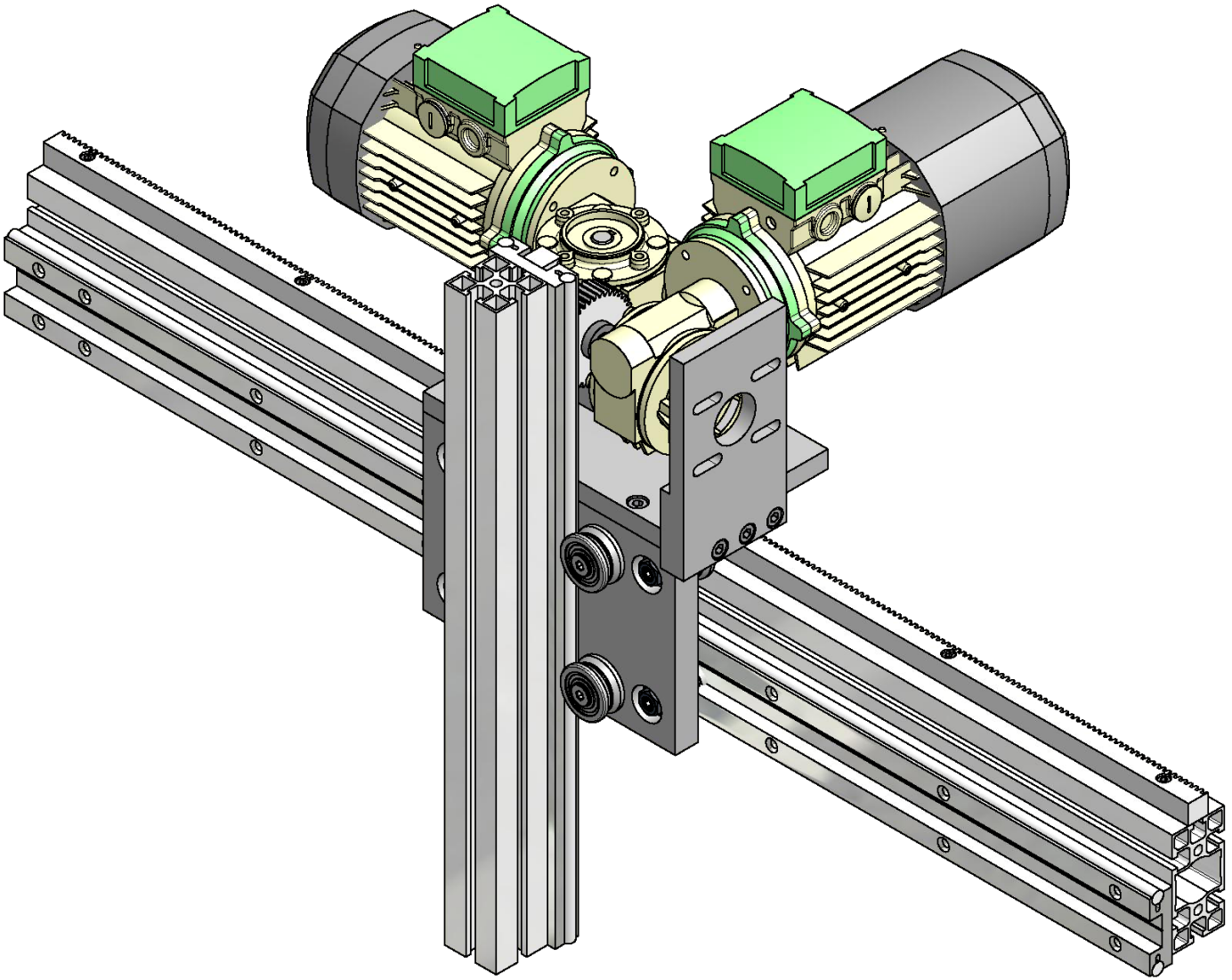
X-Z moving system especial for galvanic bath tank. The vertical arm is built with stainless steel pipe, stainless steel hexagonal bar and stainless steel rack. In this case we have changed aluminium with stainless steel to avoid the acid corrosion

Drawing 00-AS-203

Pick and place Z-X system for high-bay warehouse

Drawing 00-AS-632

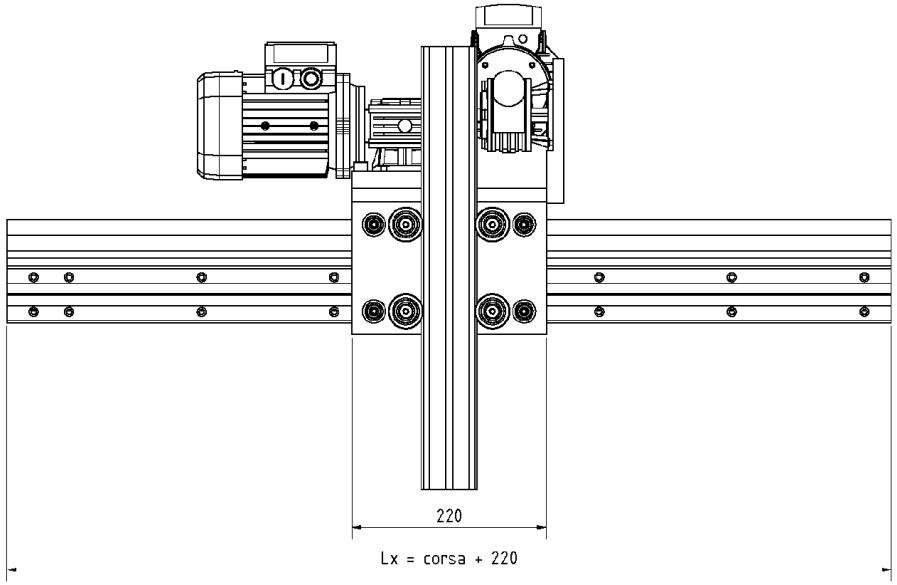
X-Z system with all toothed belts used for wall-mounted application

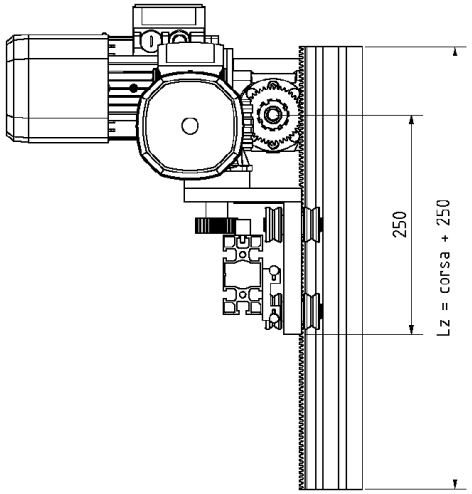


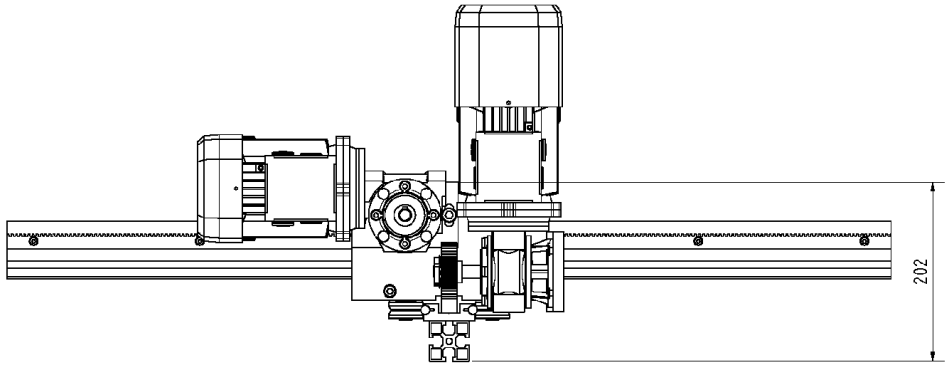
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-293	Scala: 1:3	Data: 04/11/2010	Rev: 0

Titolo

SISTEMA X-Z A CREMAGLIERA CON AD210

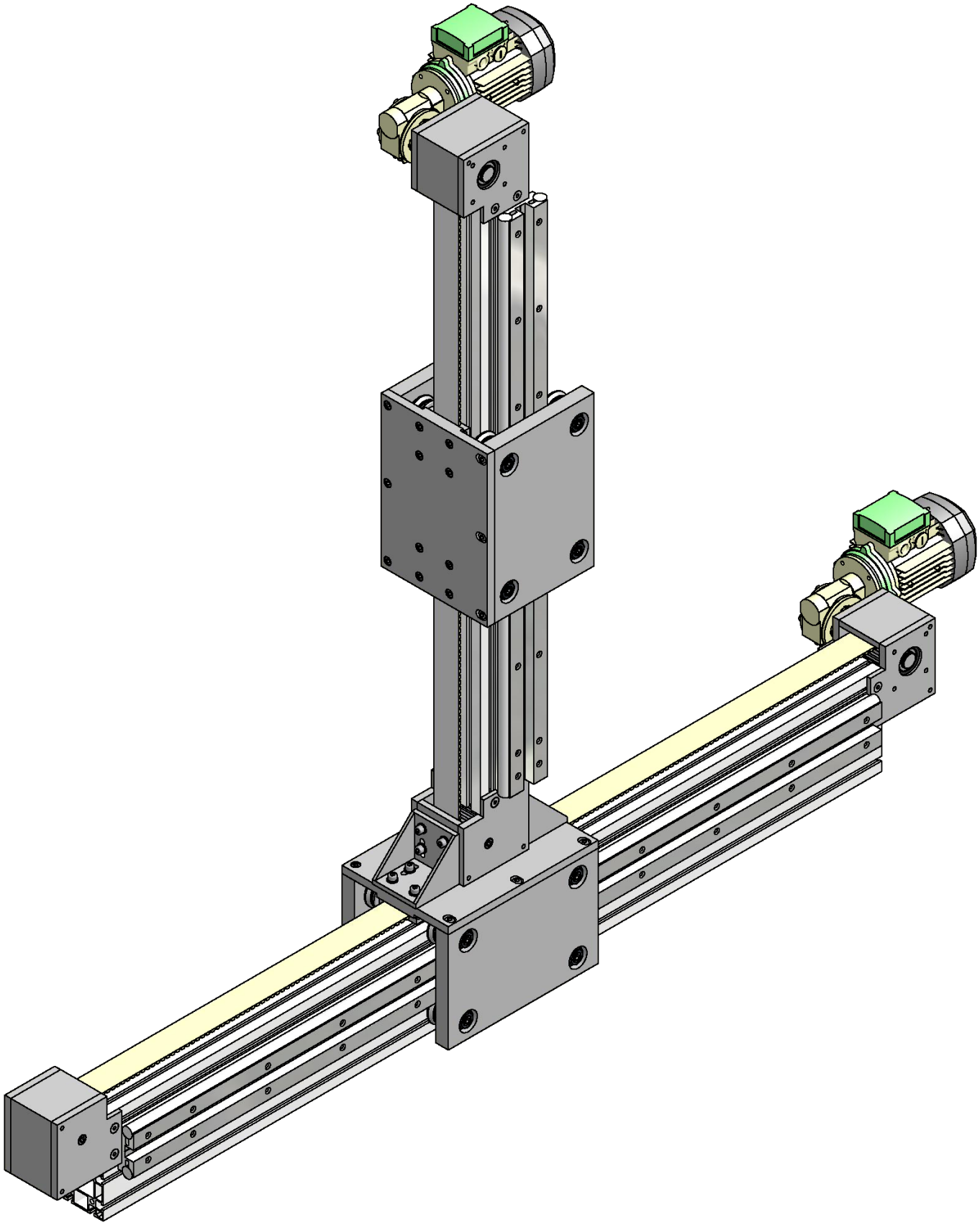






B.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:		Formato: A4
	N° disegno: 00-AS-293	Scala: 1:6	Data: 04/11/2010	Rev: 0

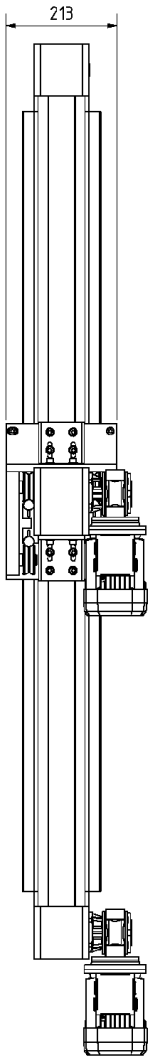
Titolo: SISTEMA X-Z A CREMAGLIERA CON AD210

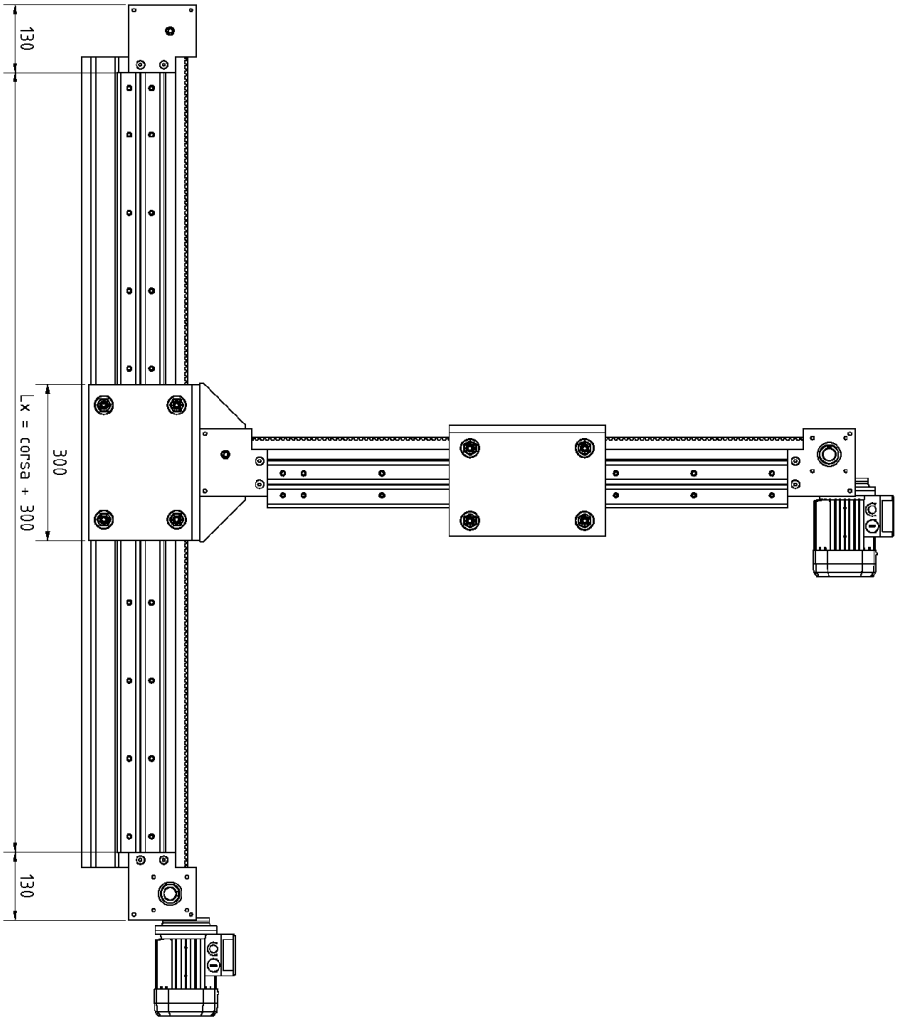


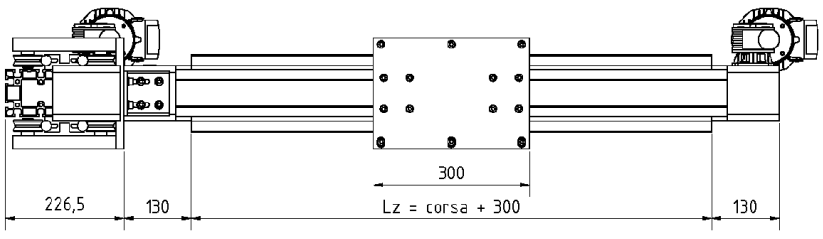
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-326	Scala: 1:5	Data: 04/11/2010	Rev: 0

Titolo

SISTEMA X-Z CON DOPPIO AD416M







Titolo

SISTEMA X-Z CON DOPPIO AD416M

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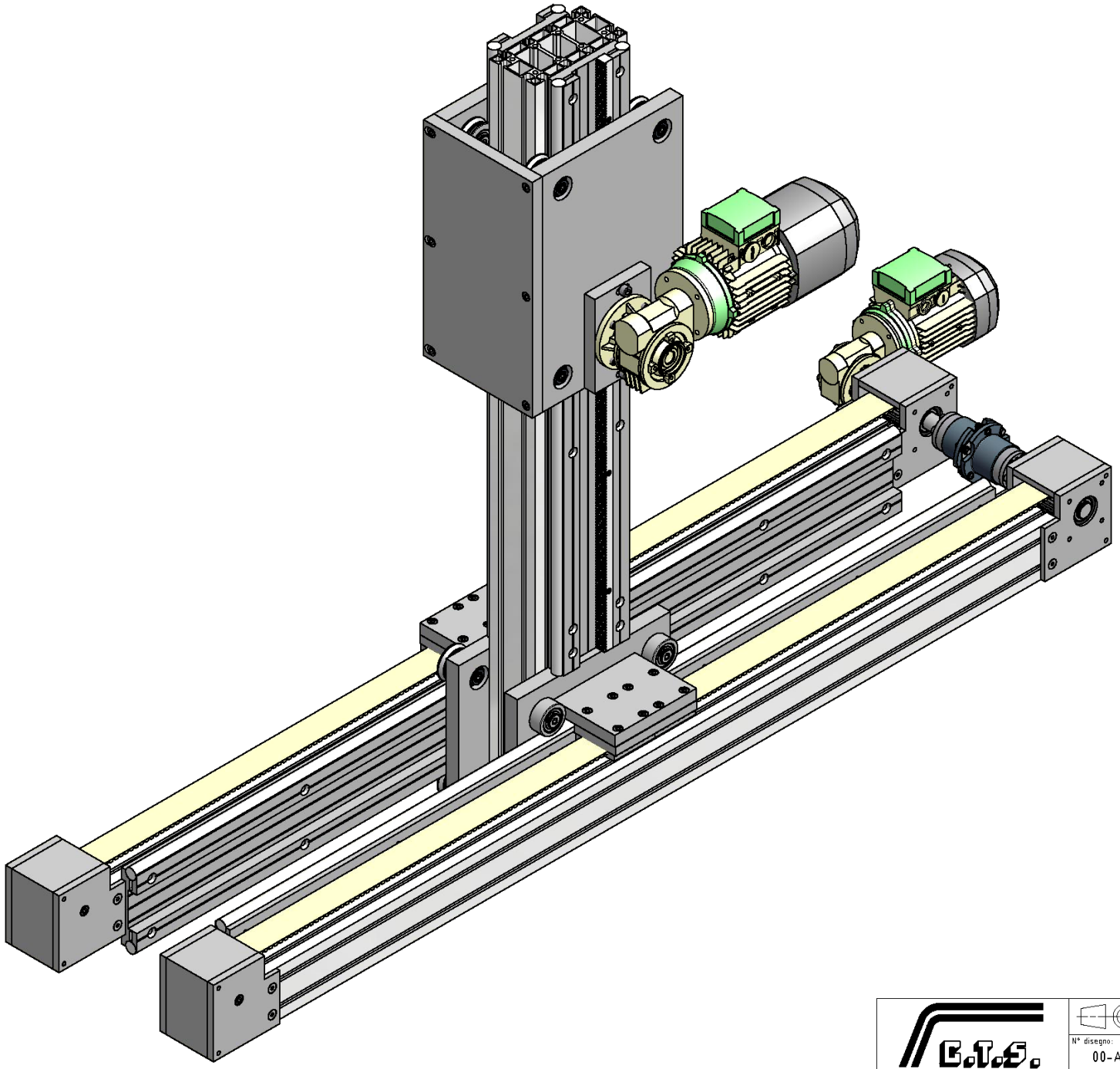
Progettato da:	Ing.Somaschi
Scala:	1:10
Ridisegnato da:	
Data:	04/11/2010
Formato:	A4
Rev:	0



B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
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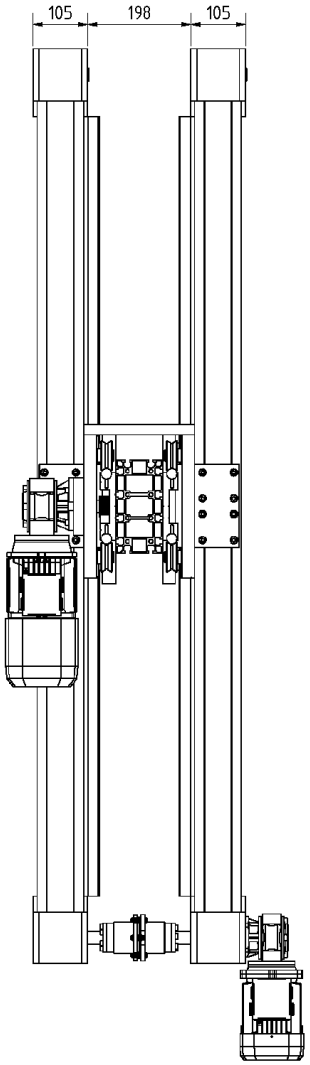
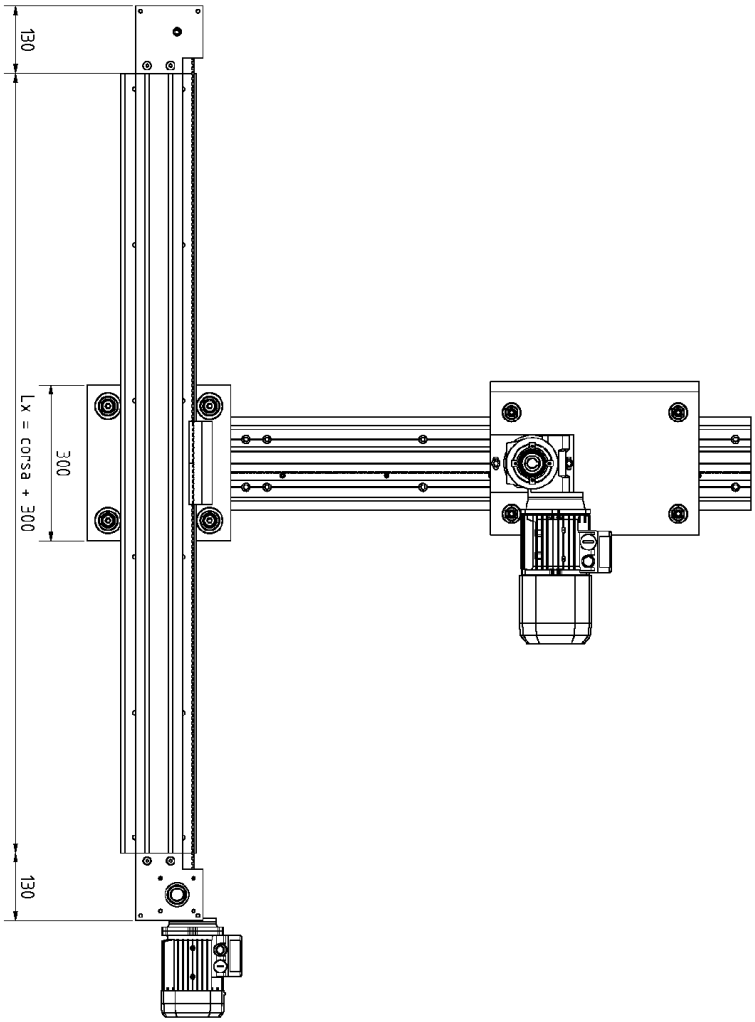
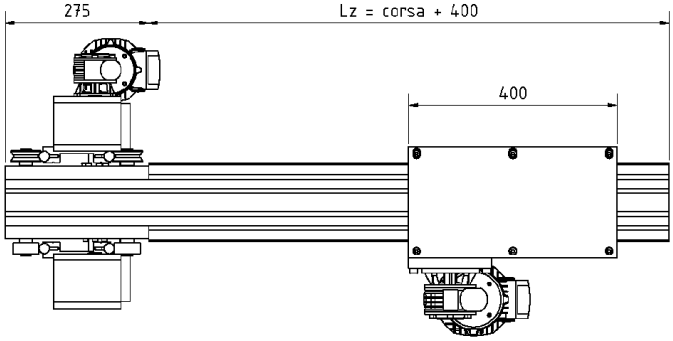
Titolo

SISTEMA X-Z CON AG416







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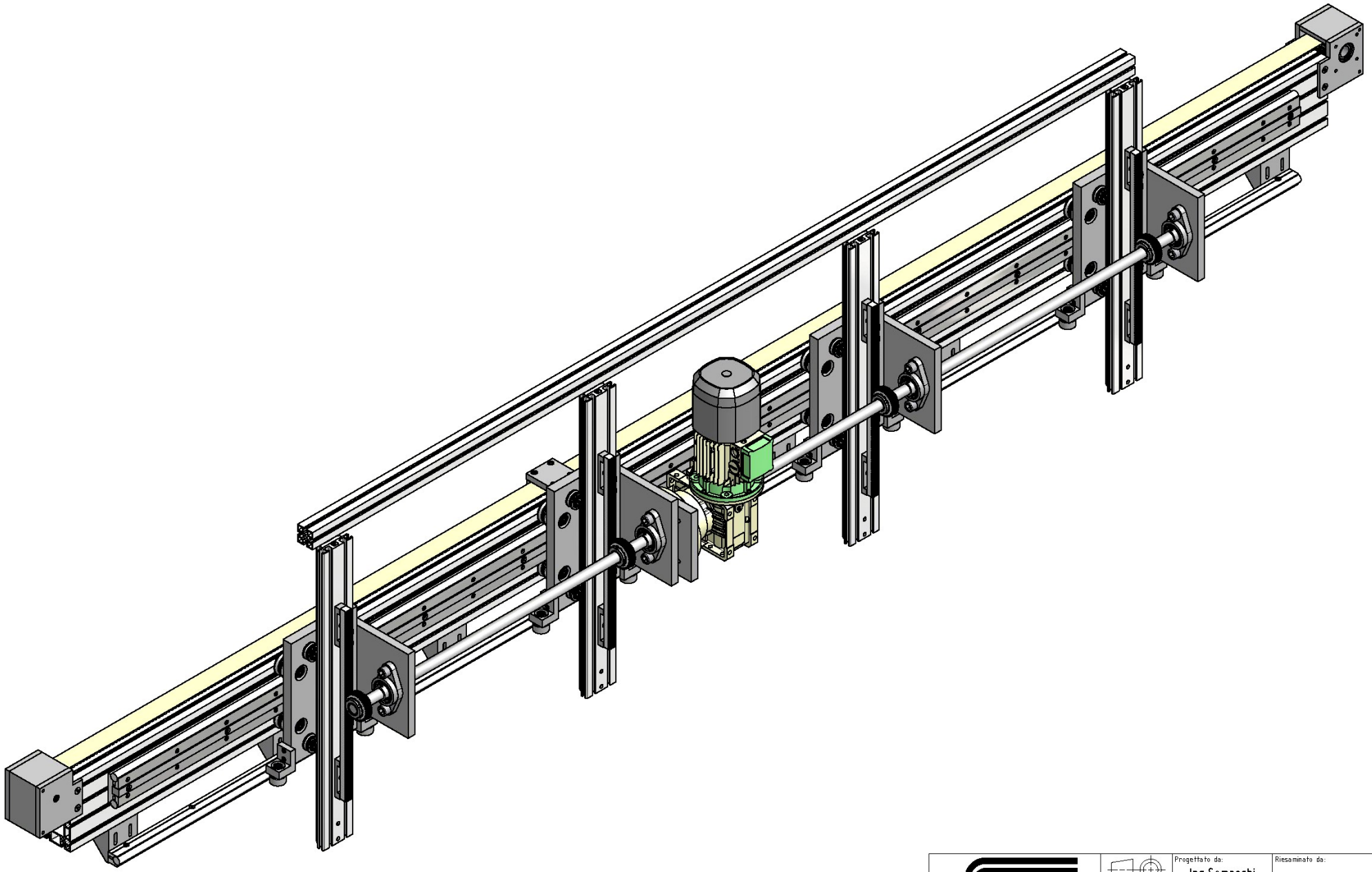
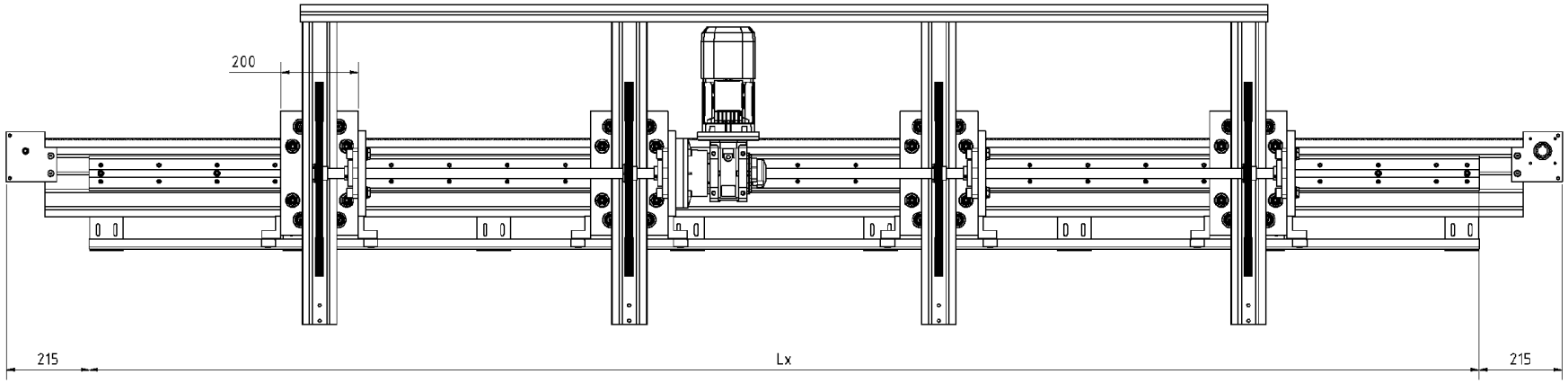
N° disegno	00-AS-355
Scala	1:10
Data	04/11/2010
Rev.	0
Progettato da	Ing.Somaschi
Disegnato da	
Formato	A4

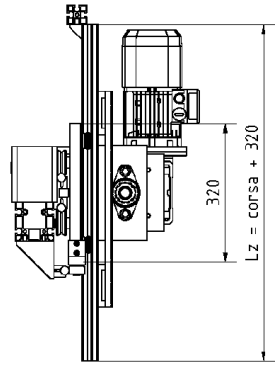


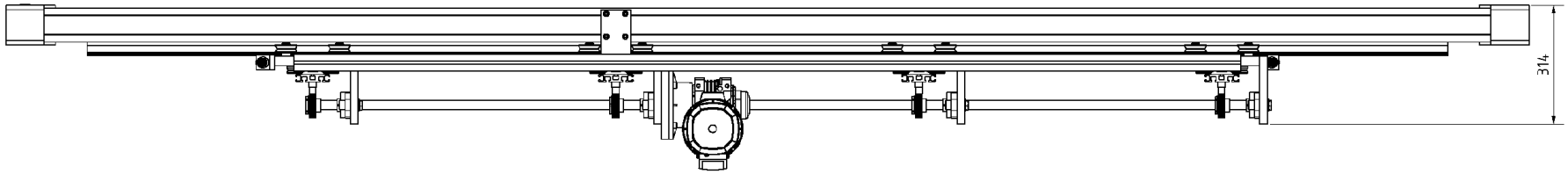
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-170	Scala: 1:8	Data: 31/03/2010	Rev: 0

Titolo

SISTEMA X-Z







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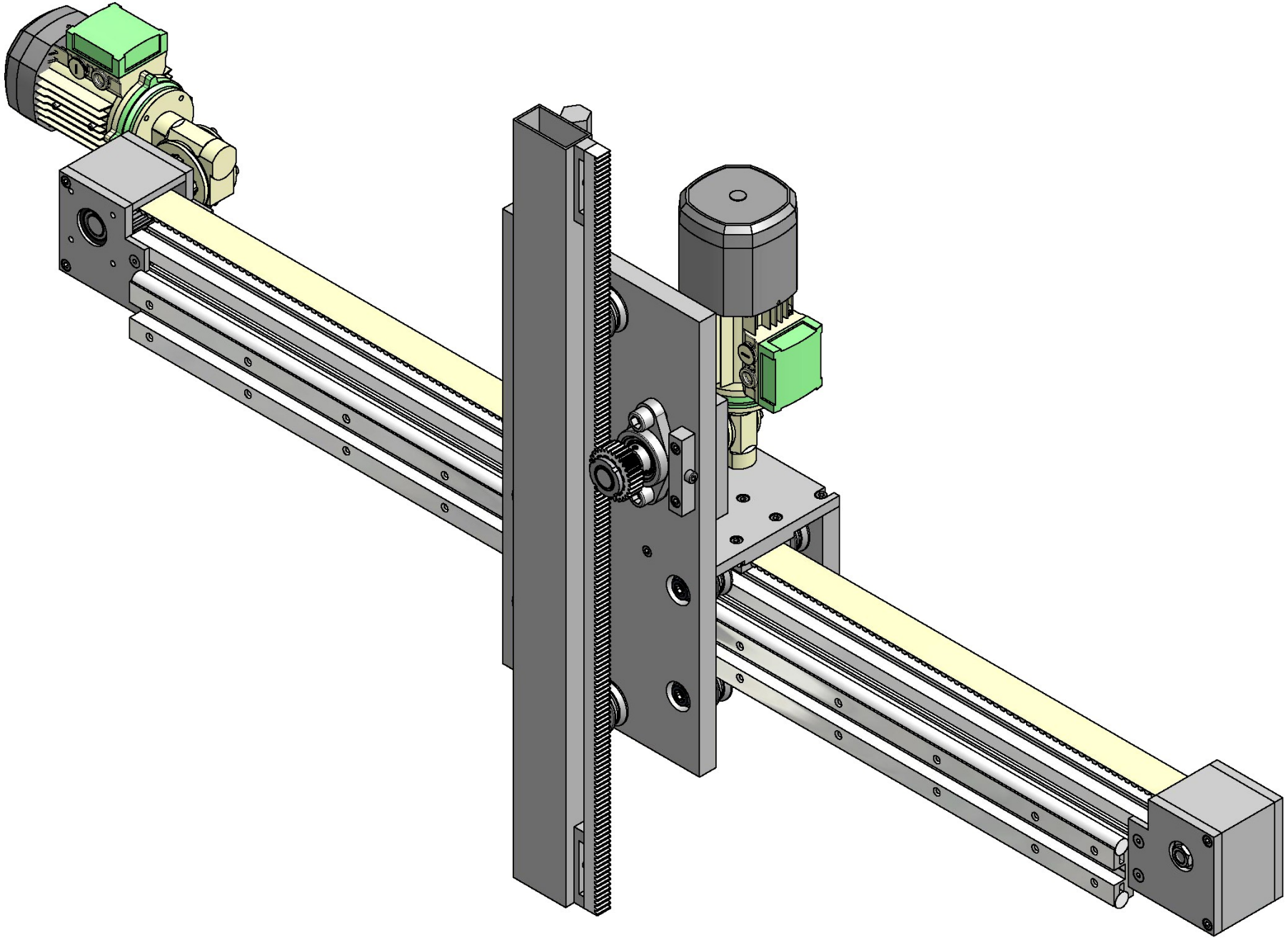
	N° disegno: 01-AS-170	Scala: 1:10	Data: 31/03/2010	Rev: 0
Titolo: SISTEMA X-Z				



G.T.S.	Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4	
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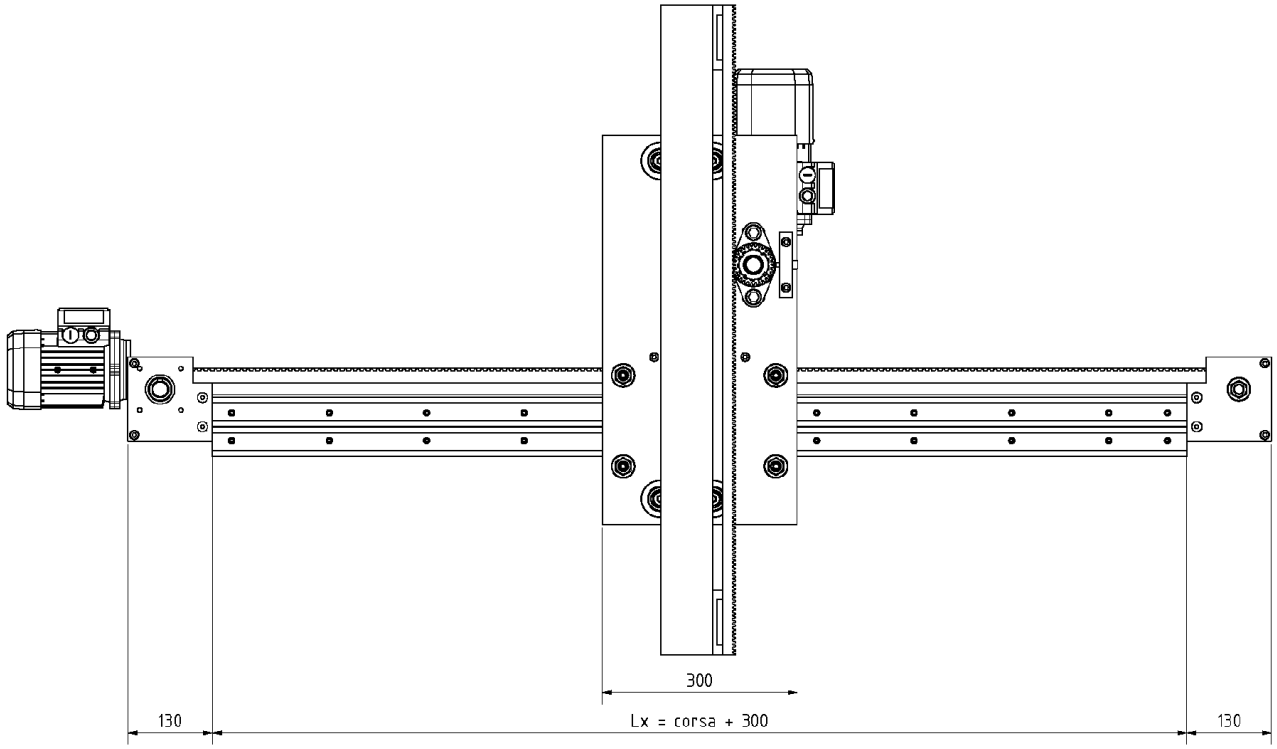
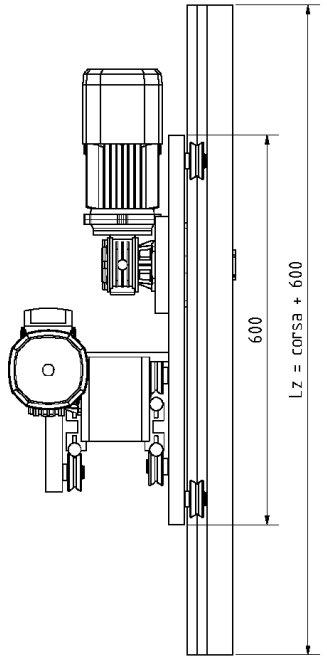
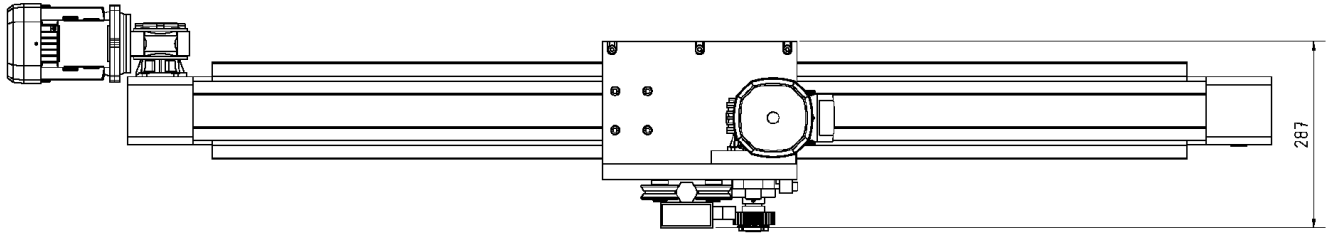
Titolo

SISTEMA X-Z CON DOPPIO AD416



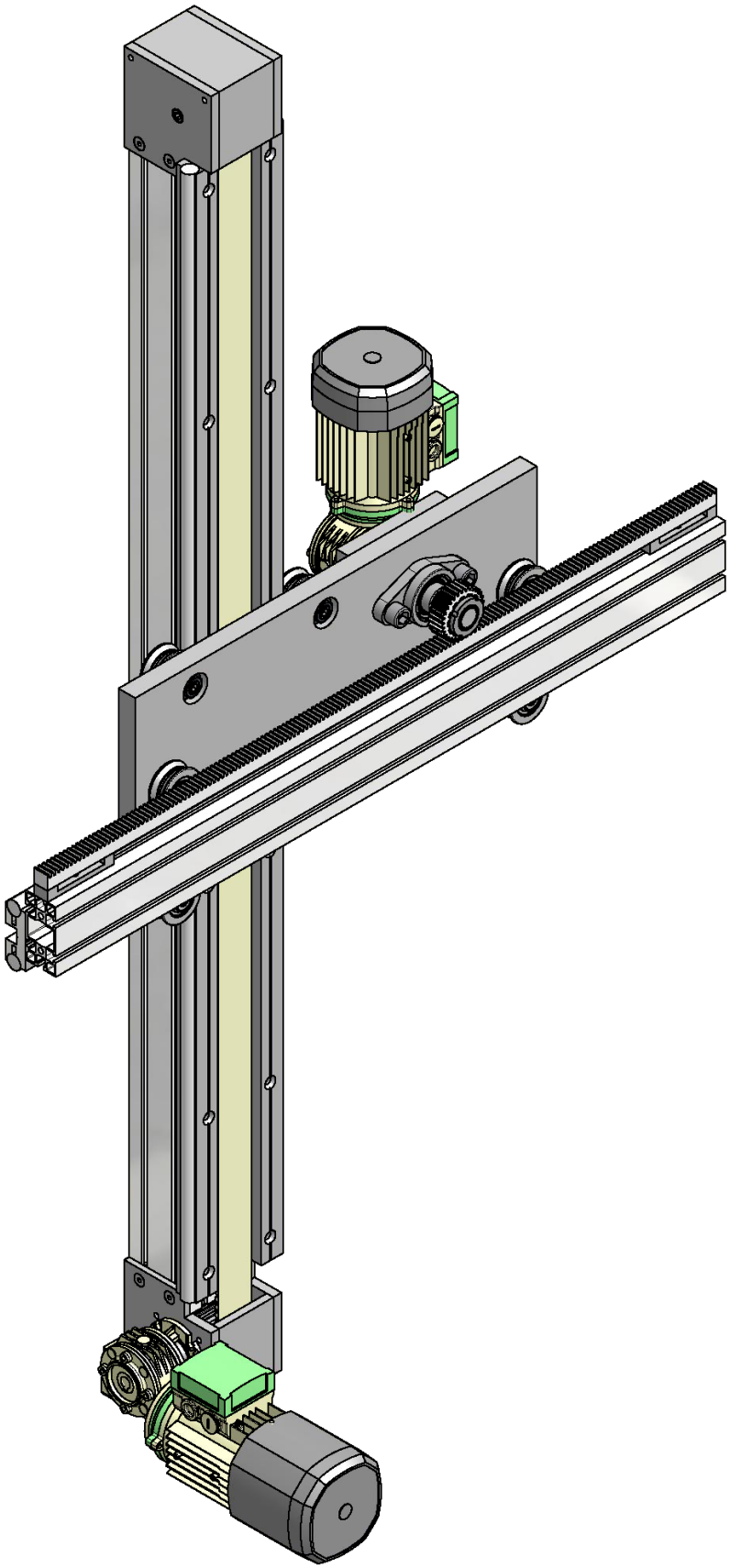




B.T.S.	Progettato da: Ing.Somaschi	Risanihato da		Formato: A4
	N° disegno: 01-AS-197	Scala: 1:8	Data: 04/11/2010	Rev: 0

Titolo

SISTEMA X-Z CON DOPPIO AD416



G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
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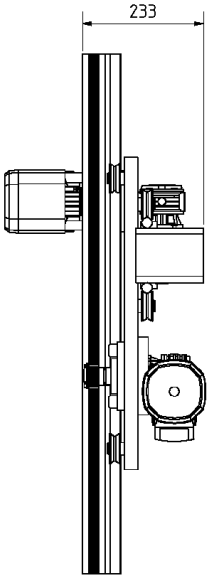
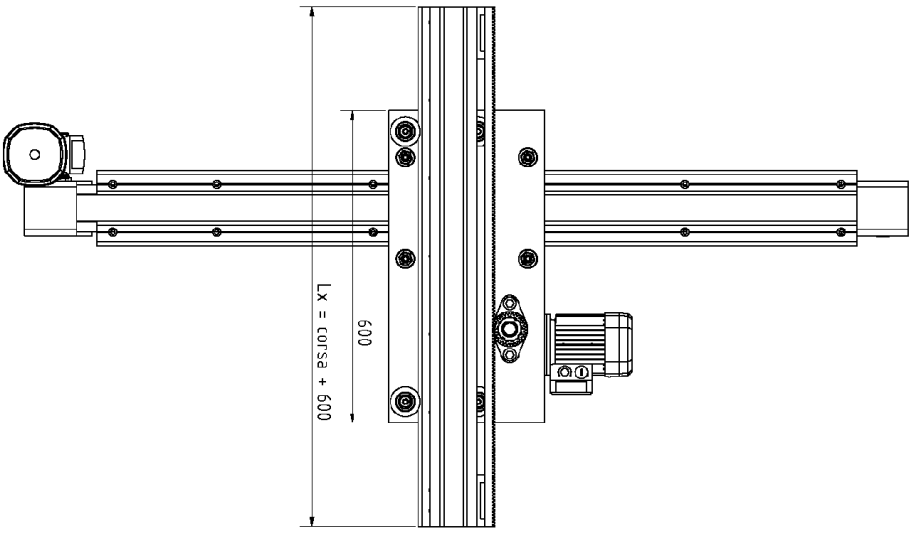
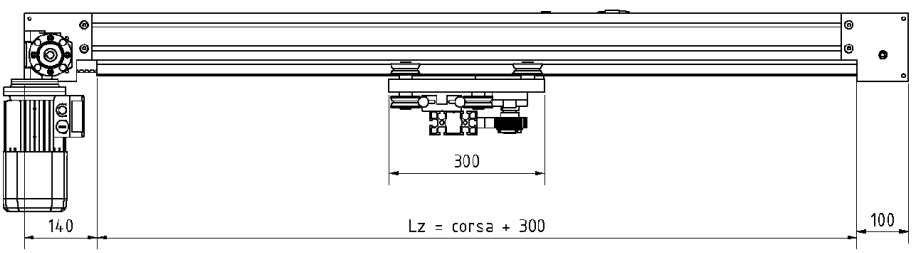
Titolo

SISTEMA X-Z CON AG416M







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Scala:	1:10
Data:	04/11/2010
Rev:	0
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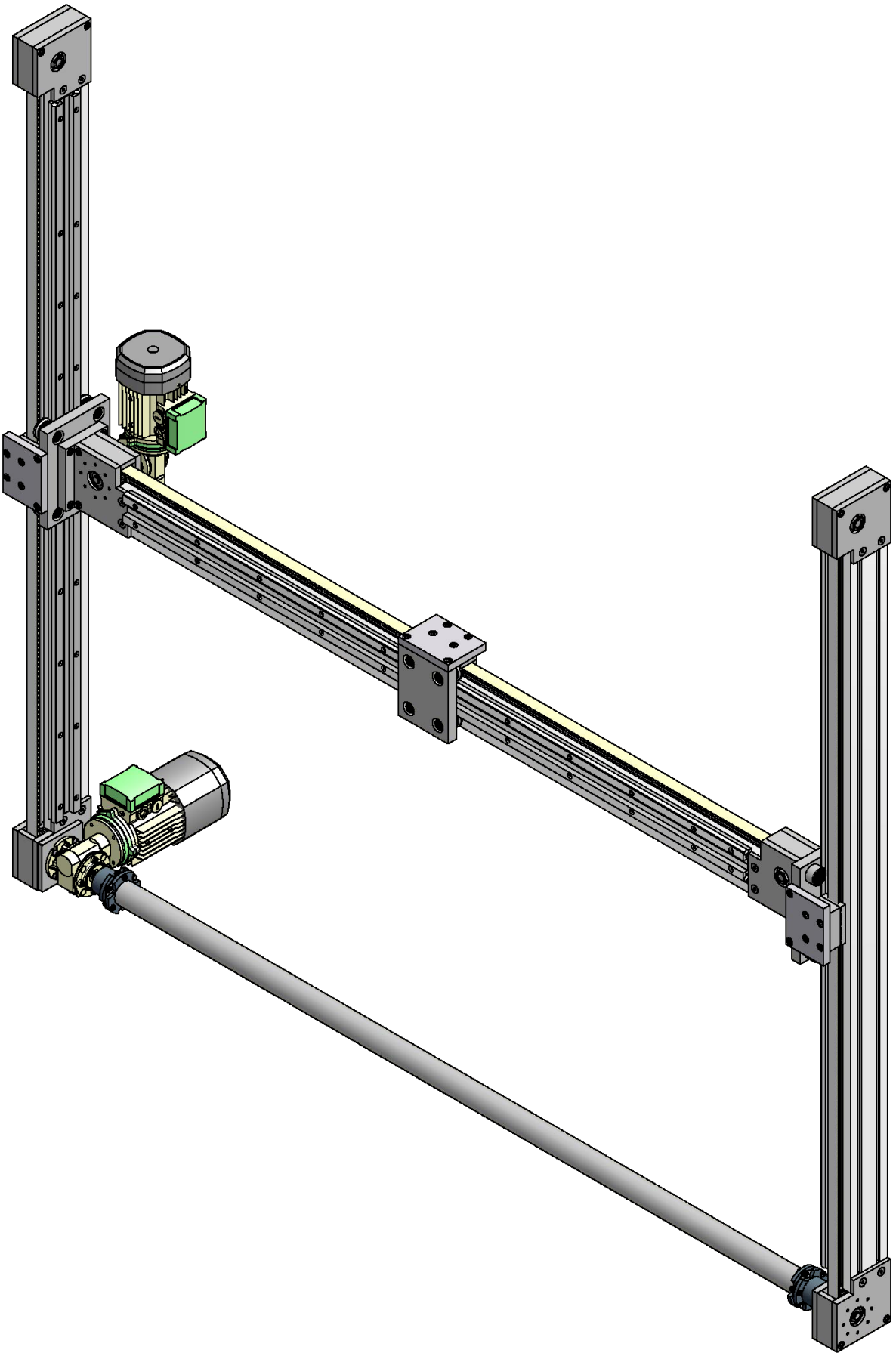
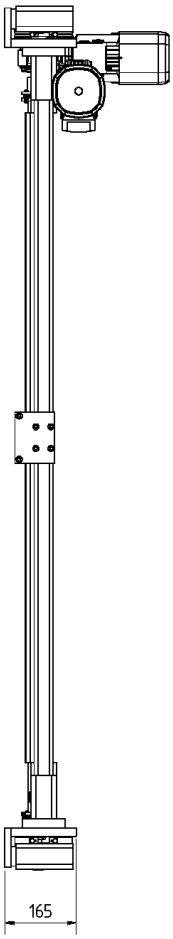
Disegnato da:	
Formato:	A4

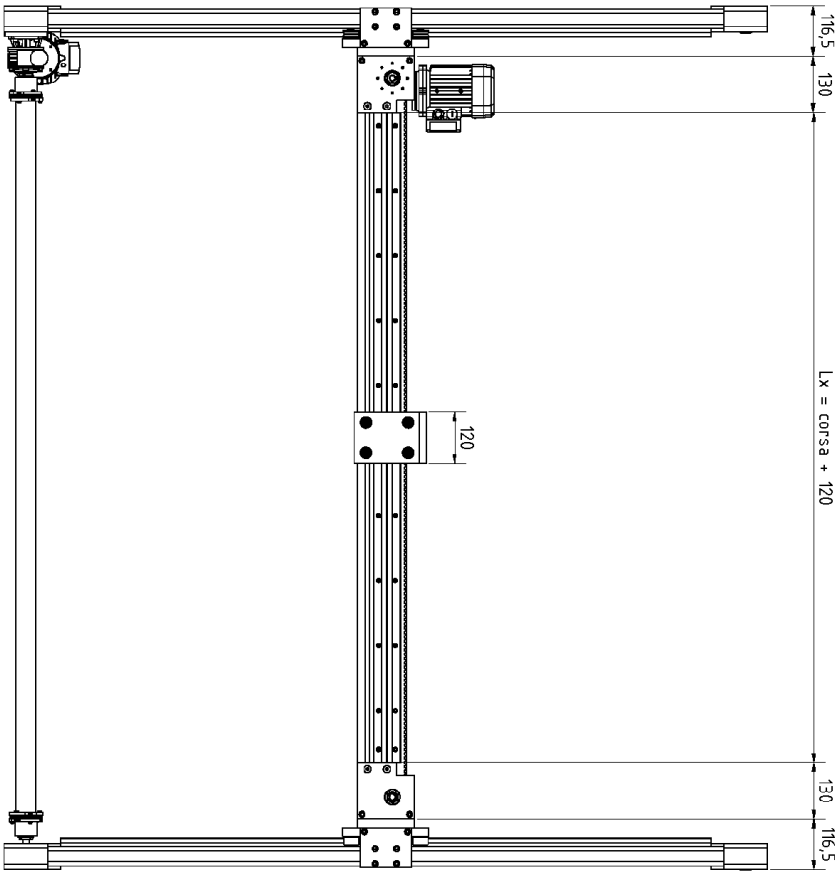


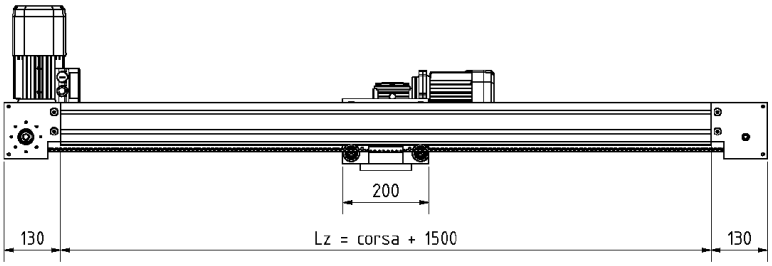
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-632	Scala: 1:7	Data: 28/06/2010	Rev: 0

Titolo

SISTEMA X-Z







Titolo

SISTEMA X-Z

N° disegno:	00-AS-632
Scala:	1:12
Data:	28/06/2010
Rev:	0
Progettato da:	Ing.Somaschi
Ridisegnato da:	
Formato:	A4

X-Y SYSTEM

EXAMPLES

Particular applications for X-Y moving systems are the following:

Drawings 00-AS-212 and 00-AS-275

The first solution is generally used when they want to move a tool or an equipment working on a locked part, while the second is used when the tool or equipment is locked and the motion is for the part

Drawing 01-AS-261

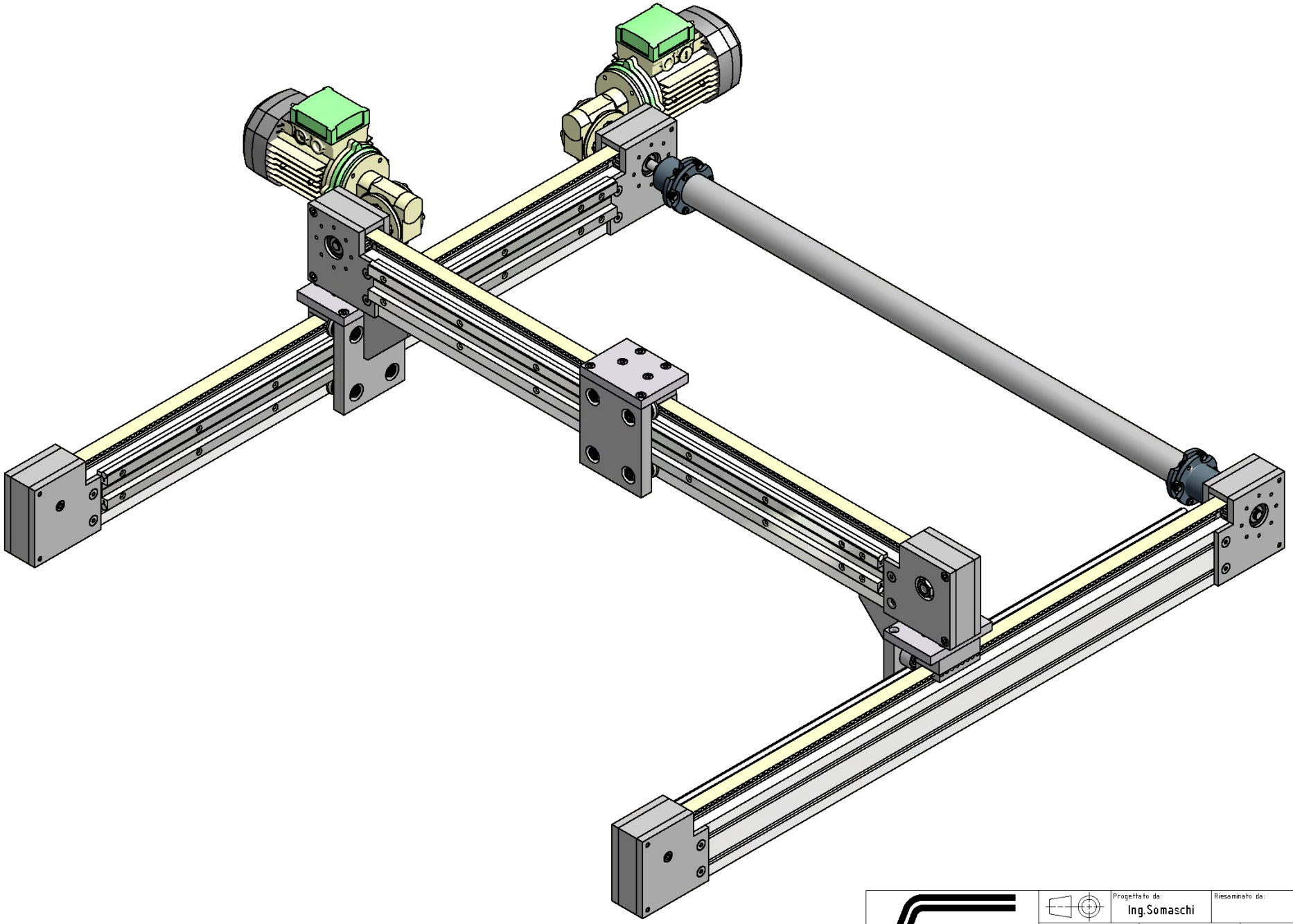
The double guide on transversal axe can move heavy load with high stiffness

Drawing 01-AS-824

Solution for moving bulky load or big working plans

Drawing 02-AS-245

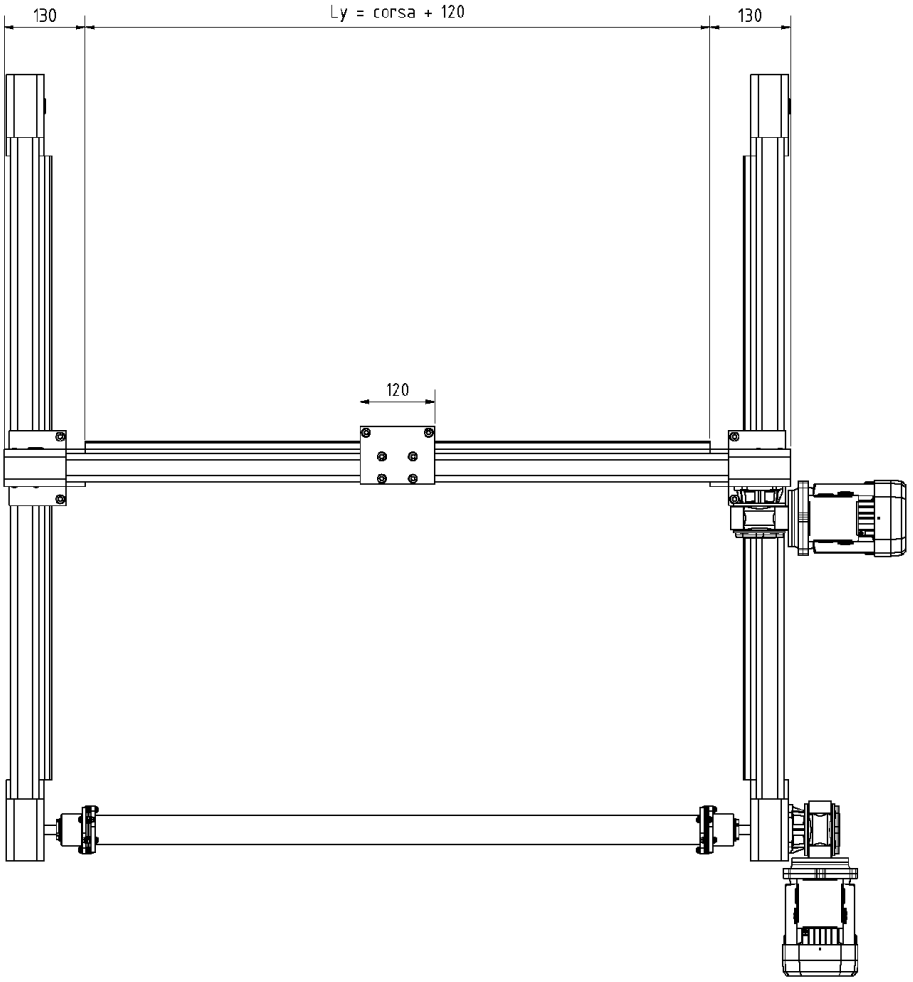
Motion with Y axe overhanging. The length of the arm determinates the value of the load charged on the trolley

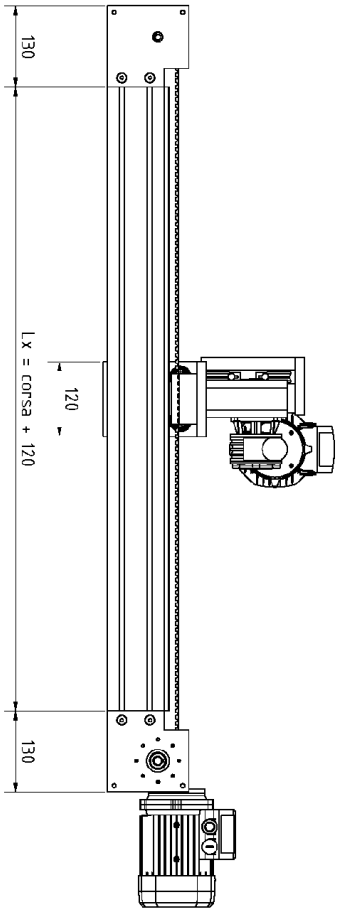


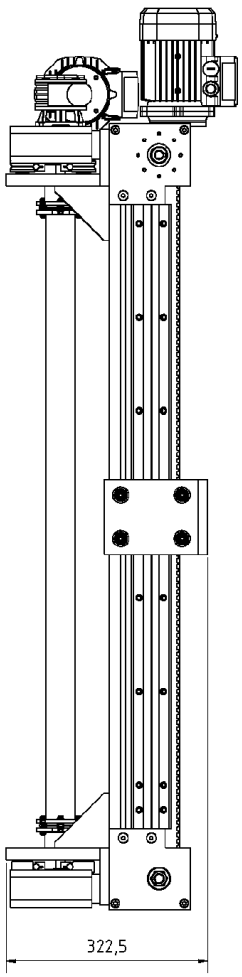
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-212	Scala: 1:5	Data: 18/12/2009	Rev: 0

Titolo

SISTEMA X-Y CON AD210M LAT



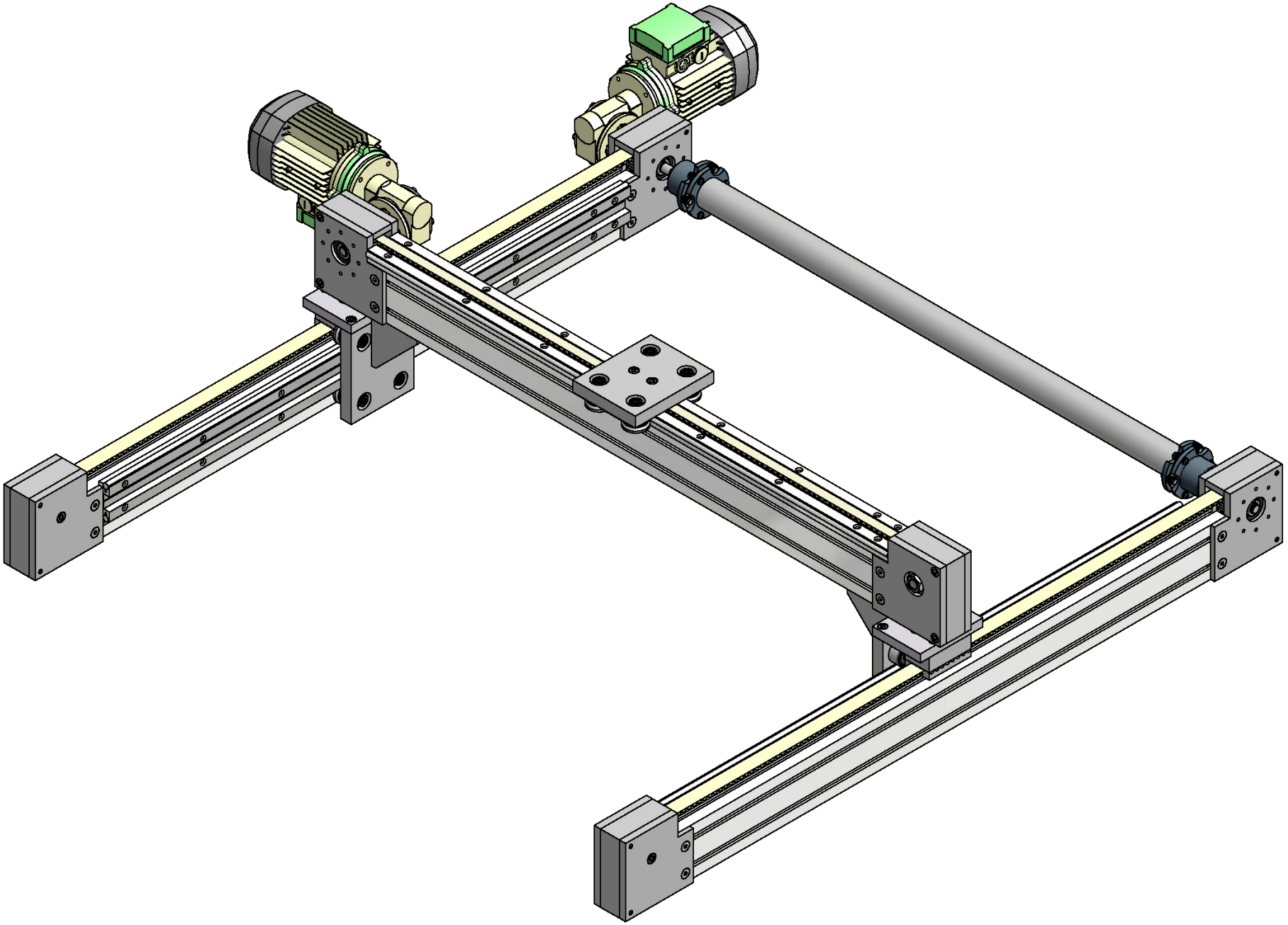




Titolo

SISTEMA X-Y CON AD210M LAT

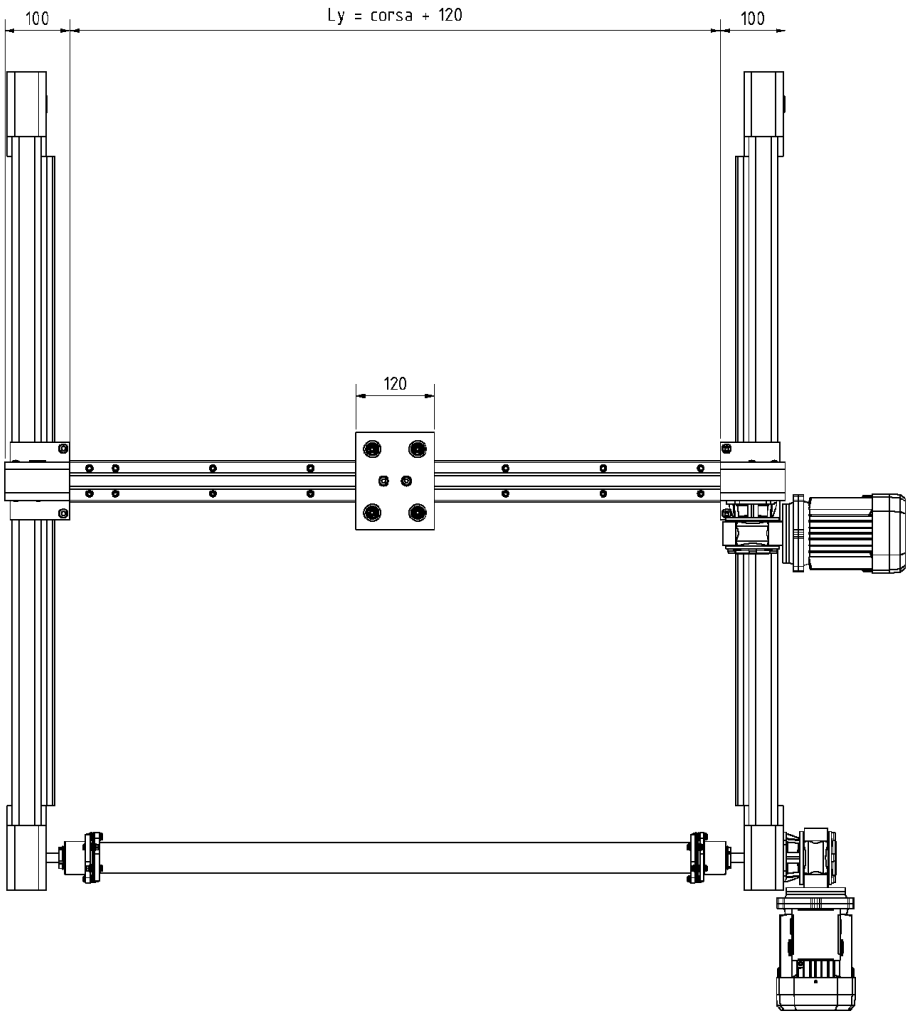
N° disegno:	00-AS-212
Progettato da:	Ing.Somaschi
Scala:	1:8
Disegnato da:	
Data:	18/12/2009
Formato:	A4
Rev:	0

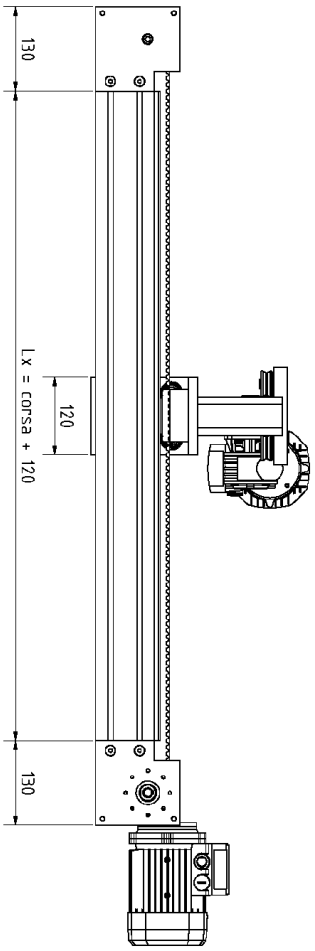


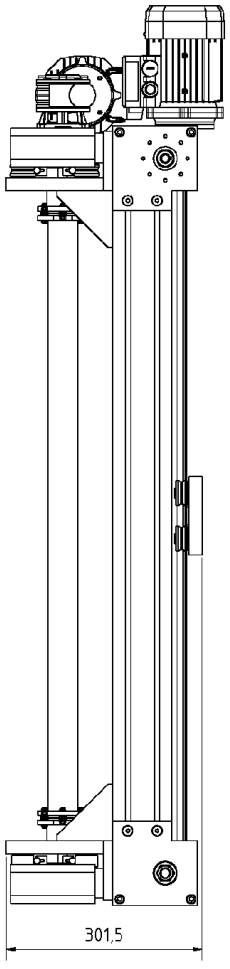
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-275	Scala: 1:5	Data: 04/11/2010	Rev: 0

Titolo

SISTEMA X-Y CON AD210M



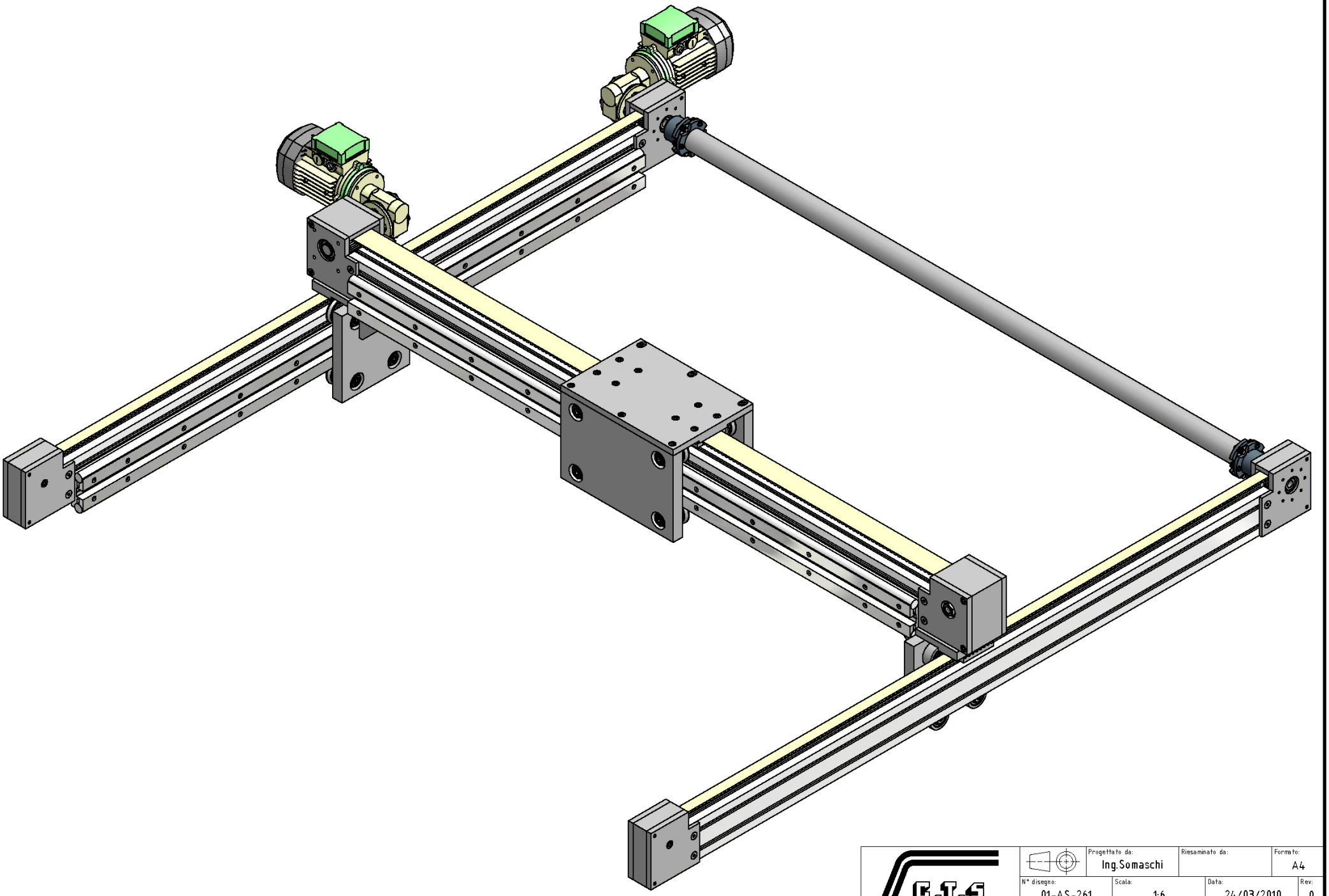




Titolo

SISTEMA X-Y CON AD210M

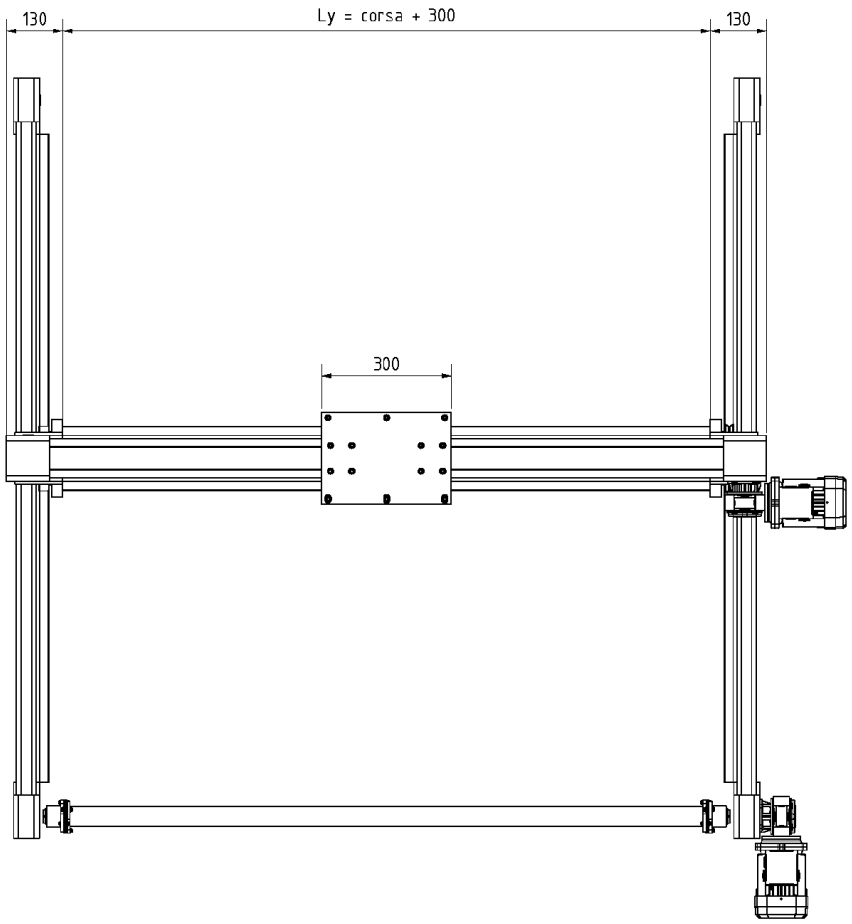
N° disegno:	00-AS-275
Scala:	1:8
Data:	04/11/2010
Rev:	0
Progettato da:	Ing.Somaschi
Disegnato da:	
Formato:	A4

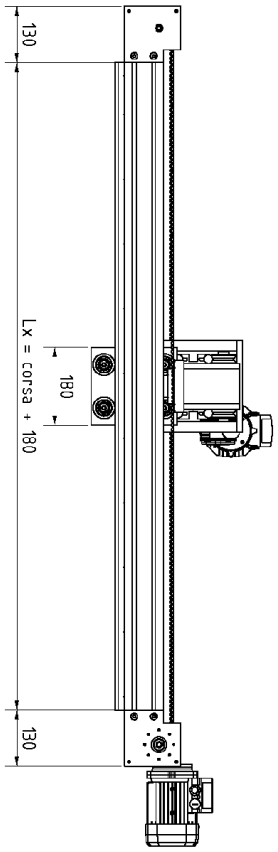


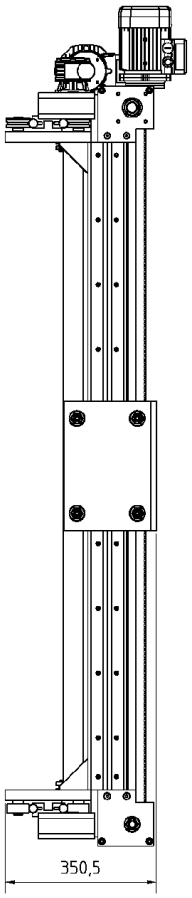
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-261	Scala: 1:6	Data: 24/03/2010	Rev: 0

Titolo

SISTEMA X-Y CON DOPPIO AD416



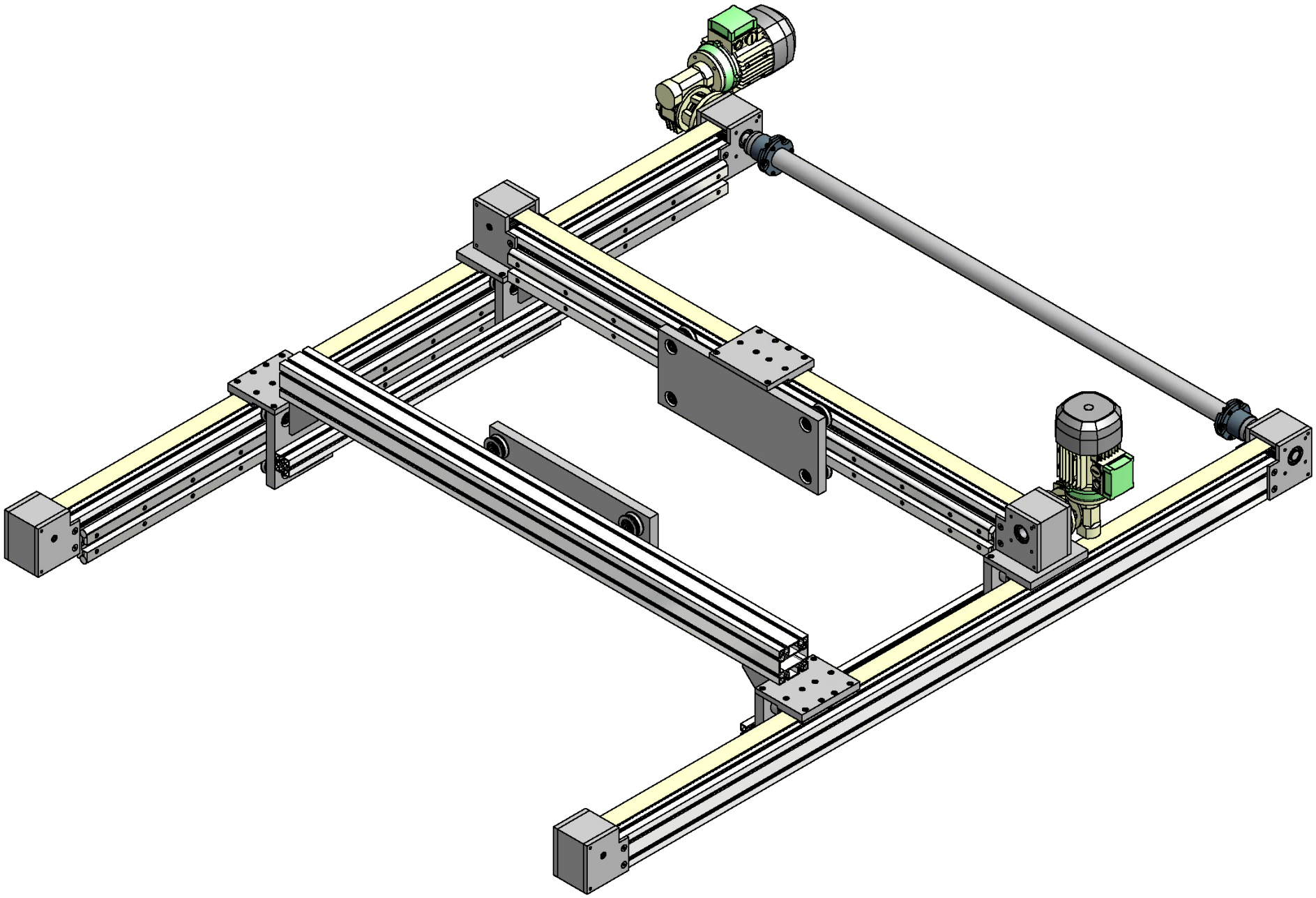




Titolo

SISTEMA X-Y CON DOPPIO AD416M

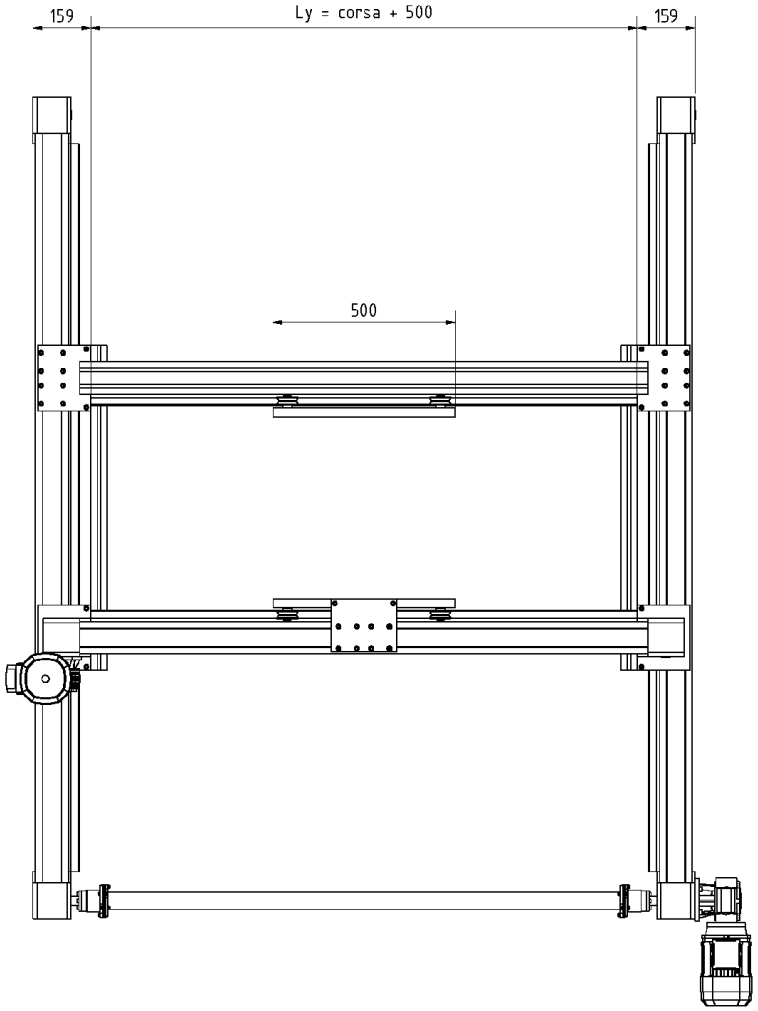
N° disegno: 01-AS-261	Progettato da: Ing Somaschi	Disegnato da:	Formato: A4	Rev: 0
Scala: 1:12				
Data: 24/03/2010				

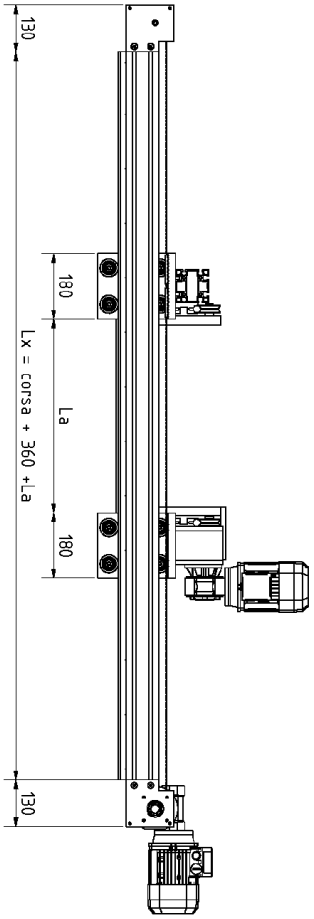


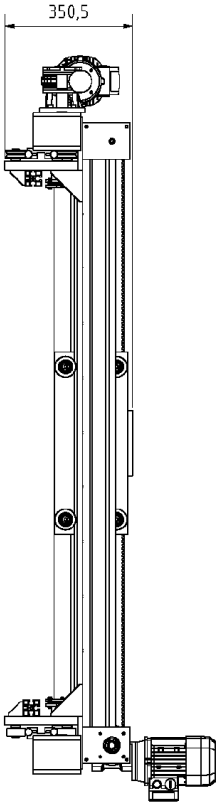
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-824	Scala: 1:8	Data: 24/06/2010	Rev: 0

Titolo

SISTEMA X-Y



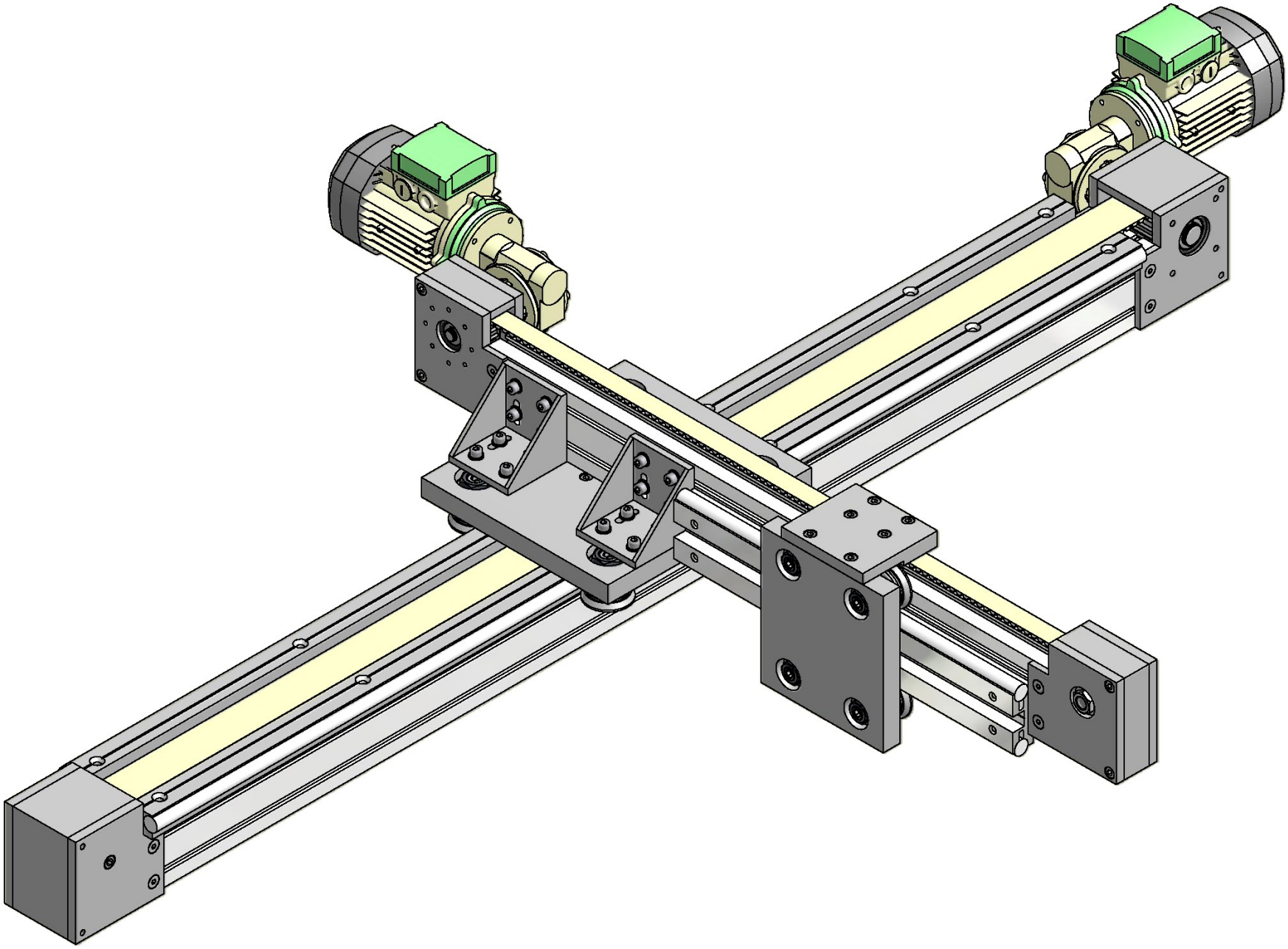




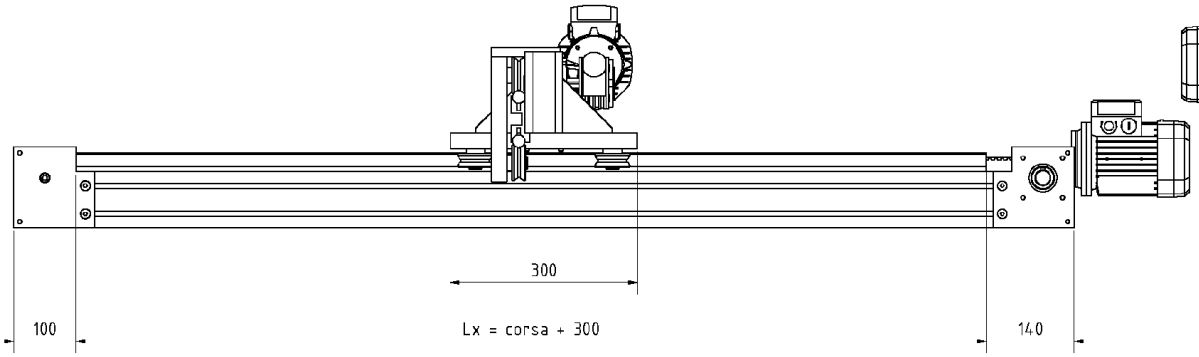
Titolo

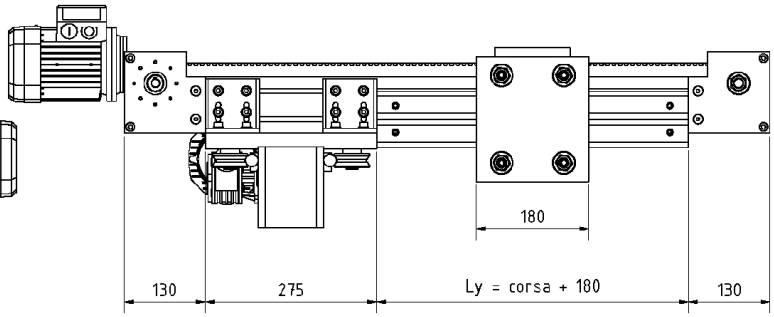
SISTEMA X-Y

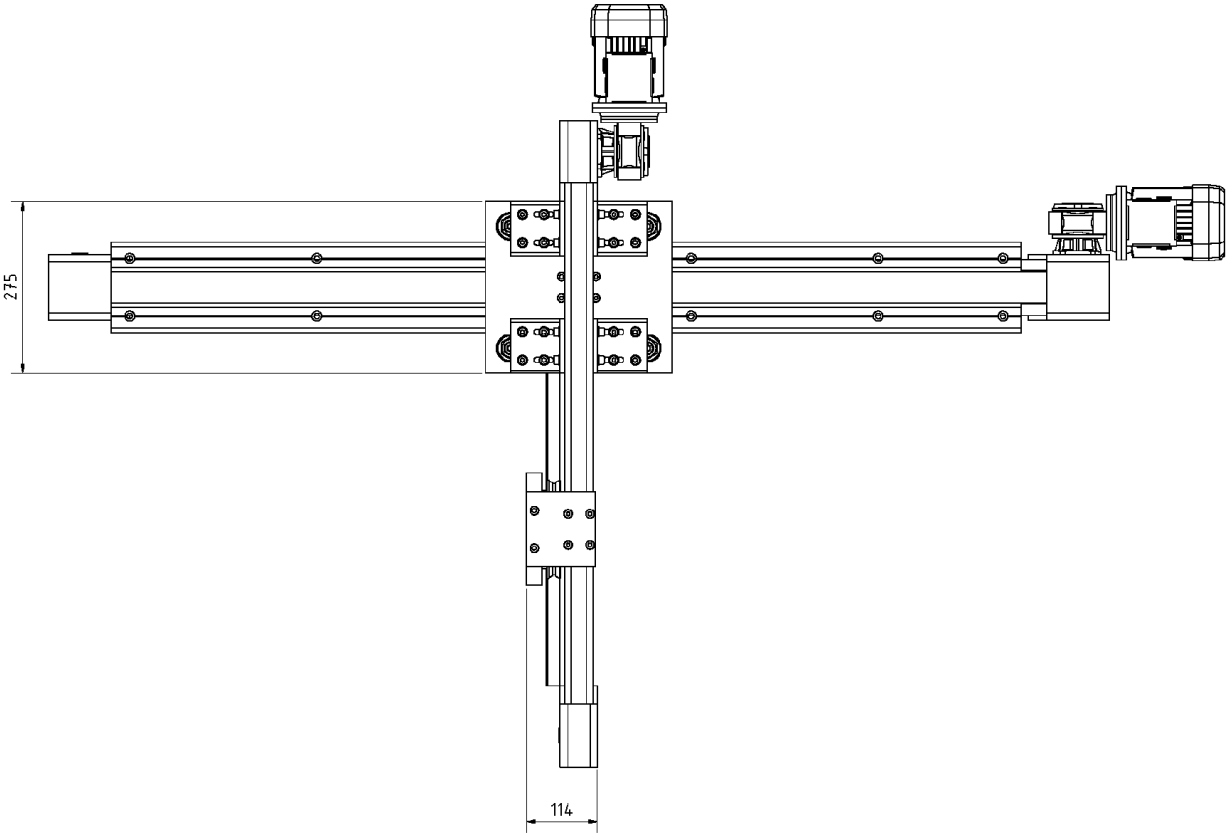
N° disegno:	01-AS-824
Progettato da:	Ing.Somaschi
Scala:	1:15
Disegnato da:	
Data:	24/06/2010
Formato:	A4
Rev:	0



G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 02-AS-245	Scala: 1:4	Data: 26/11/2009	Rev: 0
Titolo: SISTEMA X-Y				







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	N° disegno: 02-AS-245	Scala: 1:8	Data: 26/11/2009	Rev: 0
Titolo: SISTEMA X-Y				

X-Y-Z SYSTEM

Drawing 02-AS-210

LIGHT VERSION WITH AD210 GUIDES

WORKING CONDITIONS

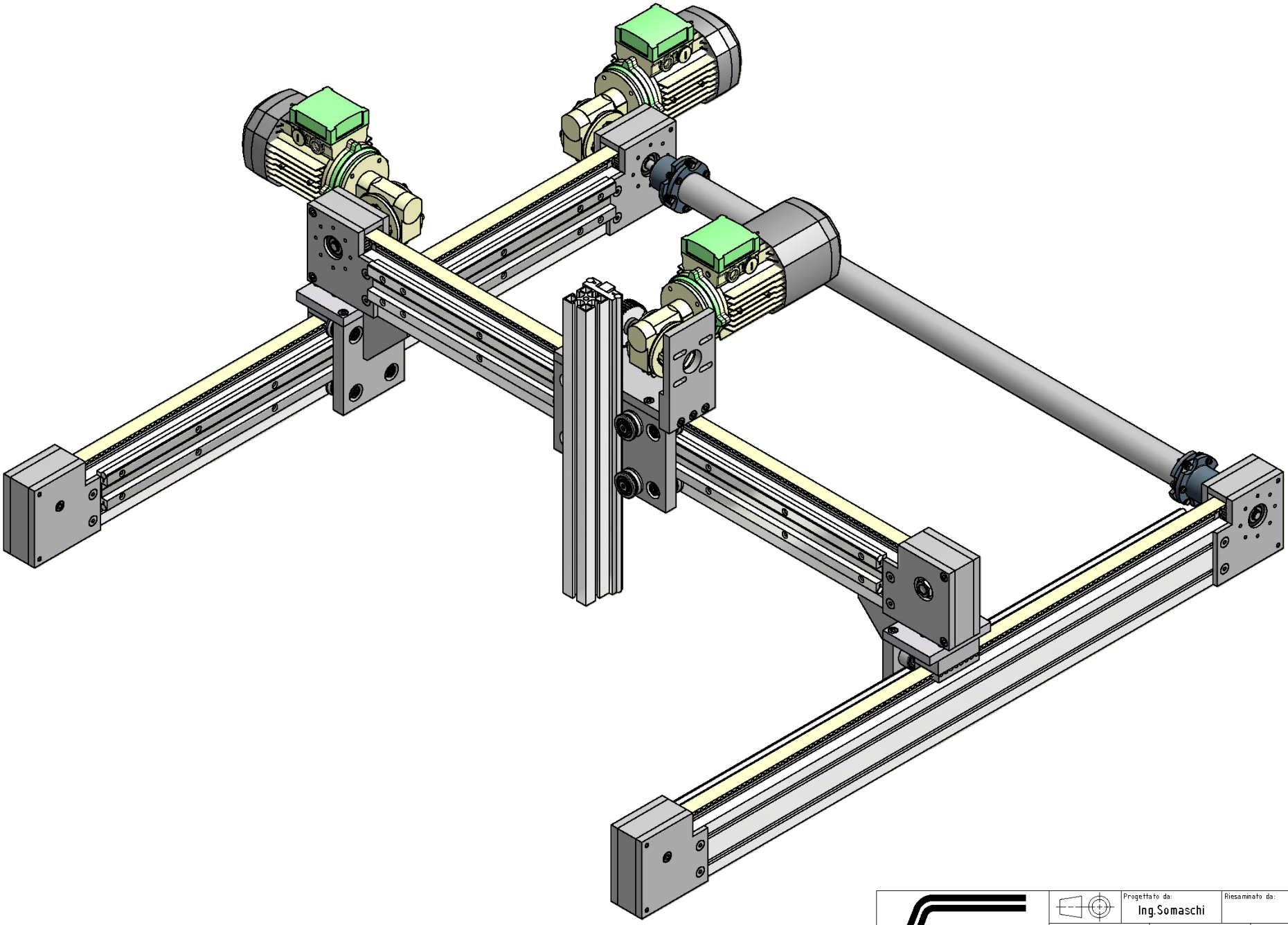
Maximum vertical stroke:	300 mm
Maximum load:	15 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal X-axis:	belt
Horizontal Y-axis:	belt
Vertical:	pinion and rack

NOTE

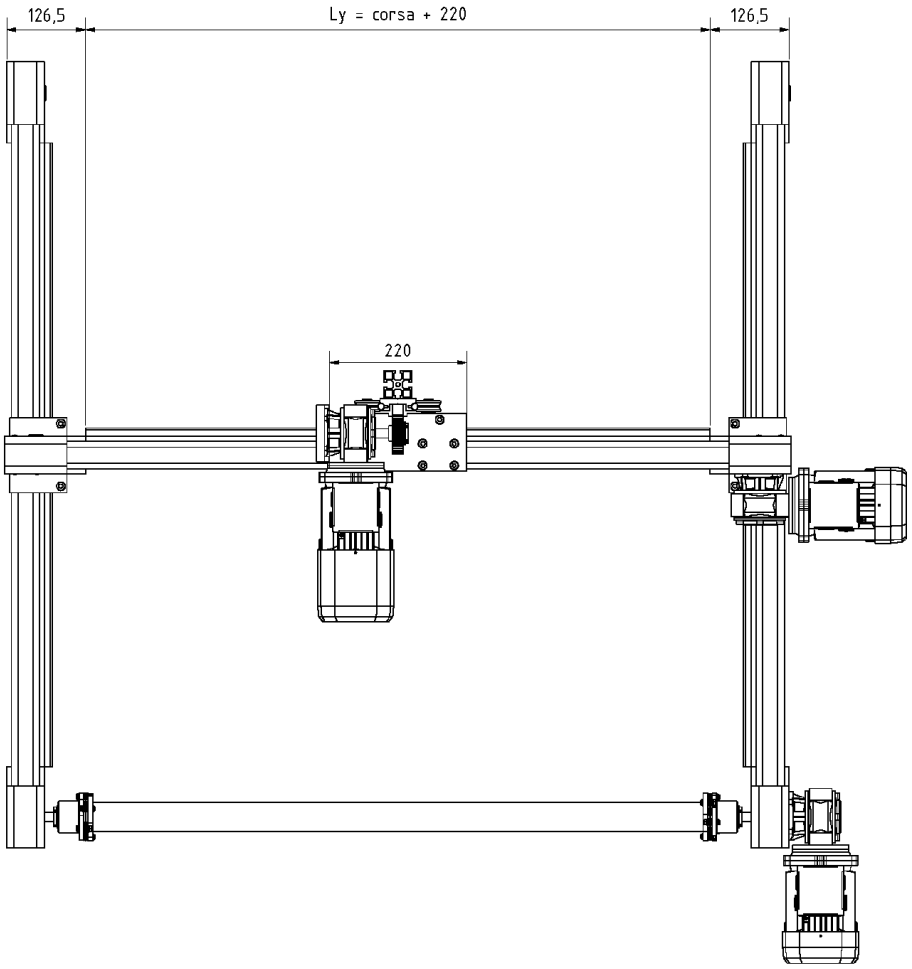
For vertical stroke till 500 mm we can strengthen the system with double guide on transversal Y axe to hold up possible vibrations of vertical axis

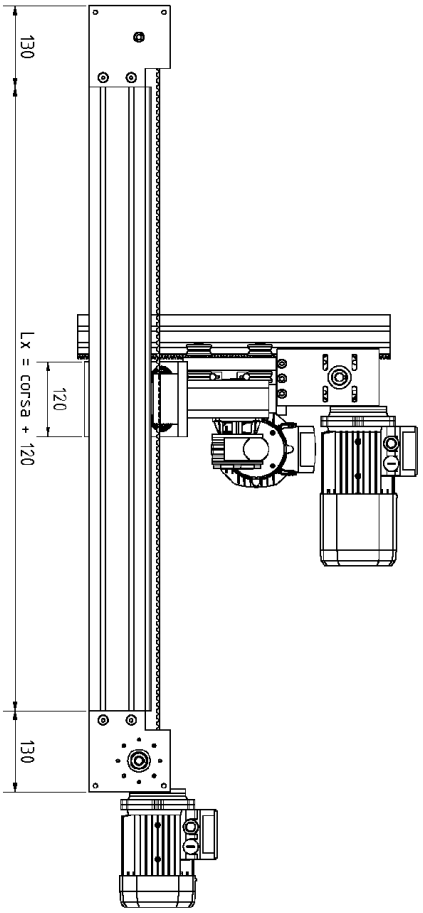


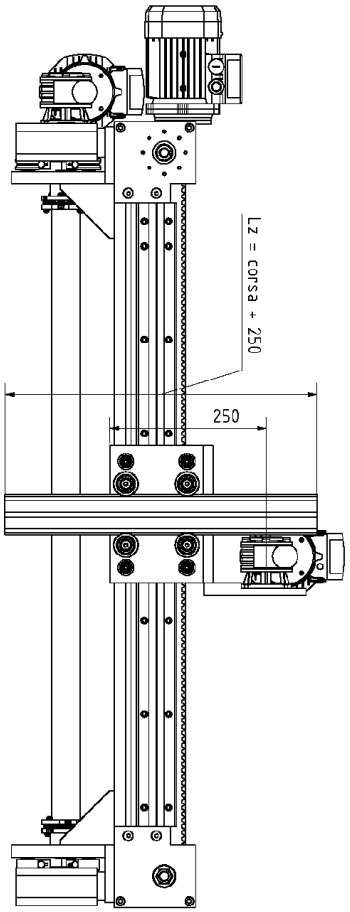
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 02-AS-210	Scala: 1:5	Data: 11/12/2009	Rev: 0

Titolo

SISTEMA X-Y-Z CON AD210M LAT







Titolo

SISTEMA X-Y-Z CON AD210M LAT

N° disegno: 02-AS-210	Progettato da: Ing.Somaschi		
Scala: 1:8		Disegnato da:	
Data: 11/12/2009			Formato: A4
Rev: 0			

X-Y-Z SYSTEM

Drawing 00-AS-262

MIDDLE-LIGHT VERSION WITH AD416 GUIDES

WORKING CONDITIONS

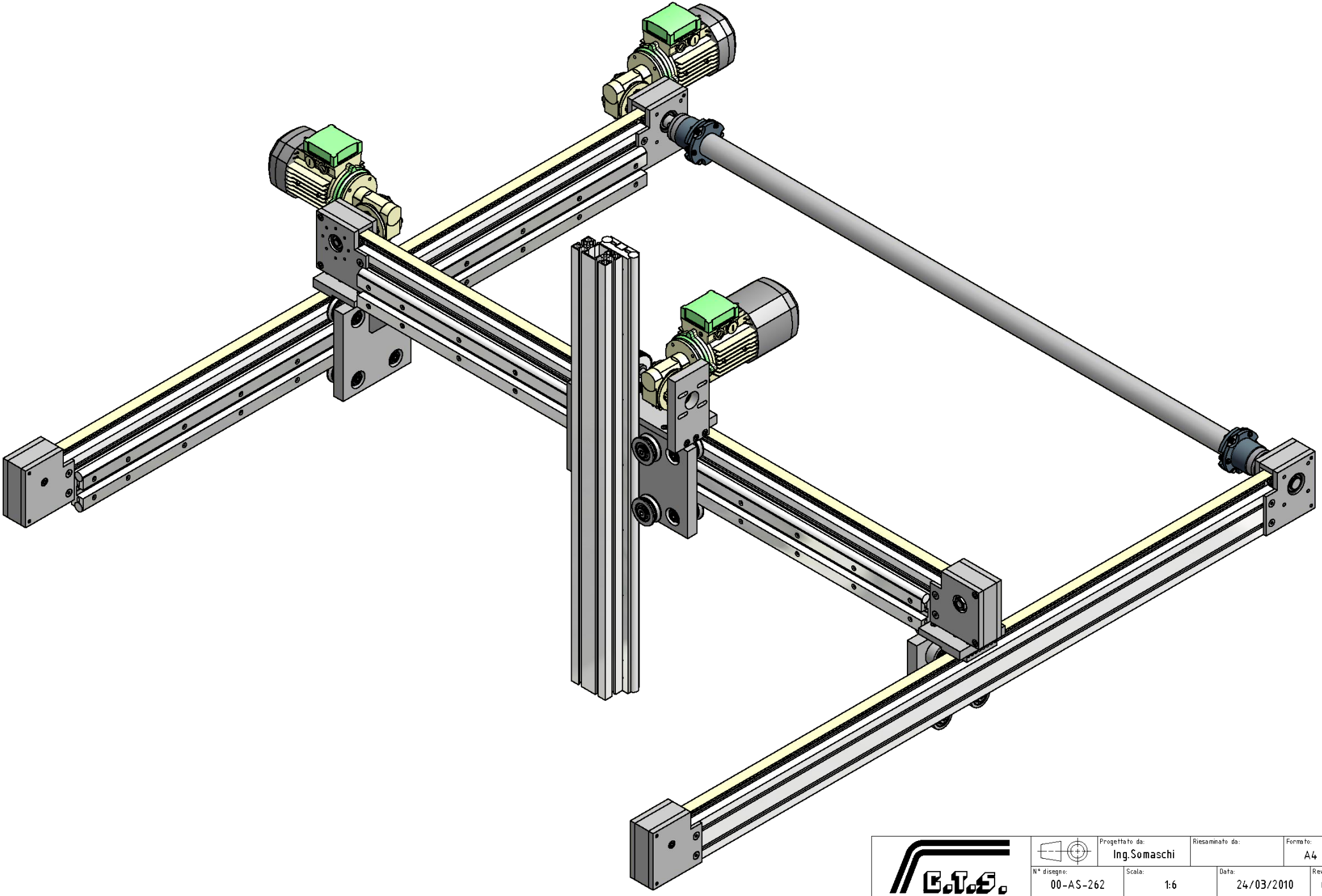
Maximum vertical stroke:	300 mm
Maximum load:	30 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal X-axis:	belt
Horizontal Y-axis:	belt
Vertical:	pinion and rack

NOTE

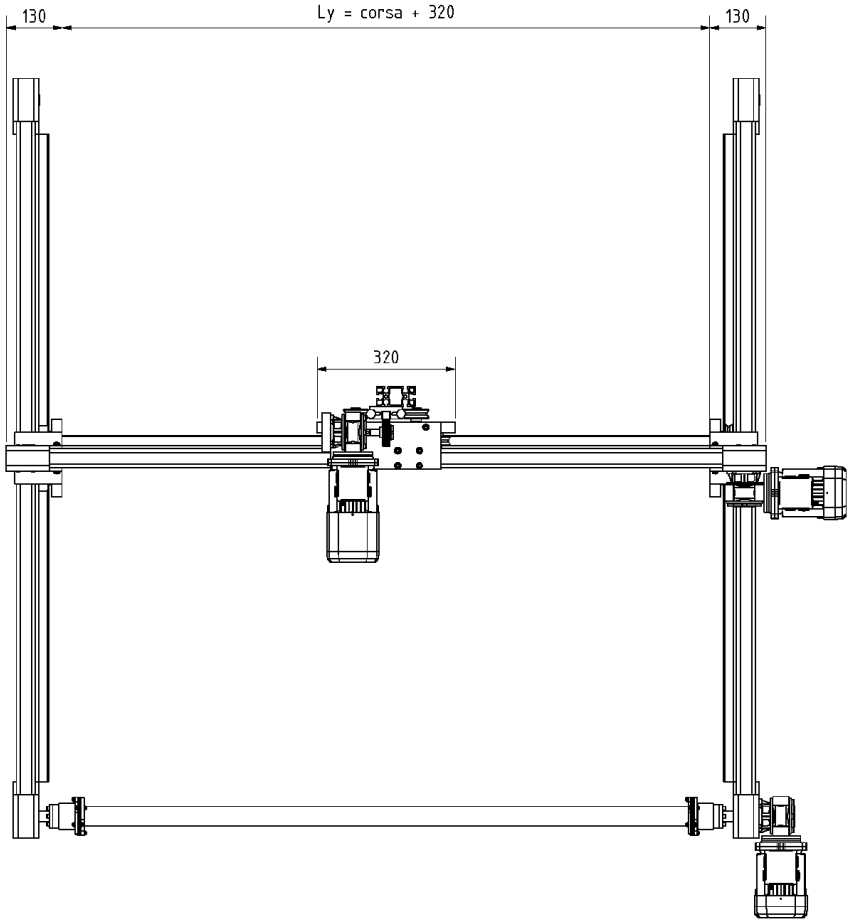
For vertical stroke till 500 mm we can strengthen the system with double guide on transversal Y axe to hold up possible vibrations of vertical axis

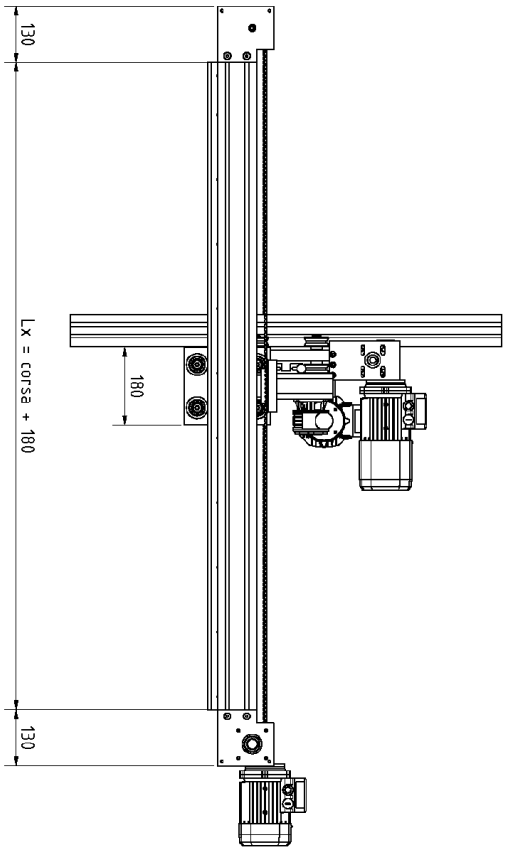


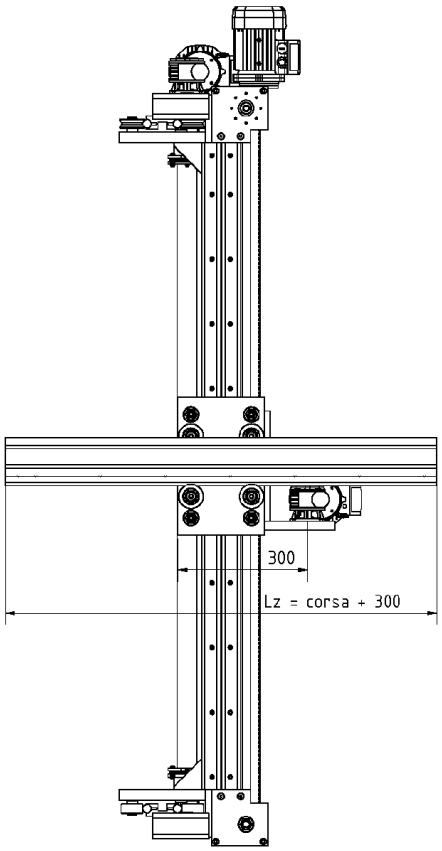
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-262	Scala: 1:6	Data: 24/03/2010	Rev: 0

Titolo

SISTEMA X-Y-Z CON AD416M LAT







Titolo	
	SISTEMA X-Y-Z
N° disegno:	00-AS-262
Progettato da:	Ing.Somaschi
Scala:	1:12
Disegnato da:	
Data:	24/03/2010
Formato:	A4
Rev:	0

X-Y-Z SYSTEM

Drawing 00-AS-205

MIDDLE-HEAVY VERSION WITH AD416 GUIDES

WORKING CONDITIONS

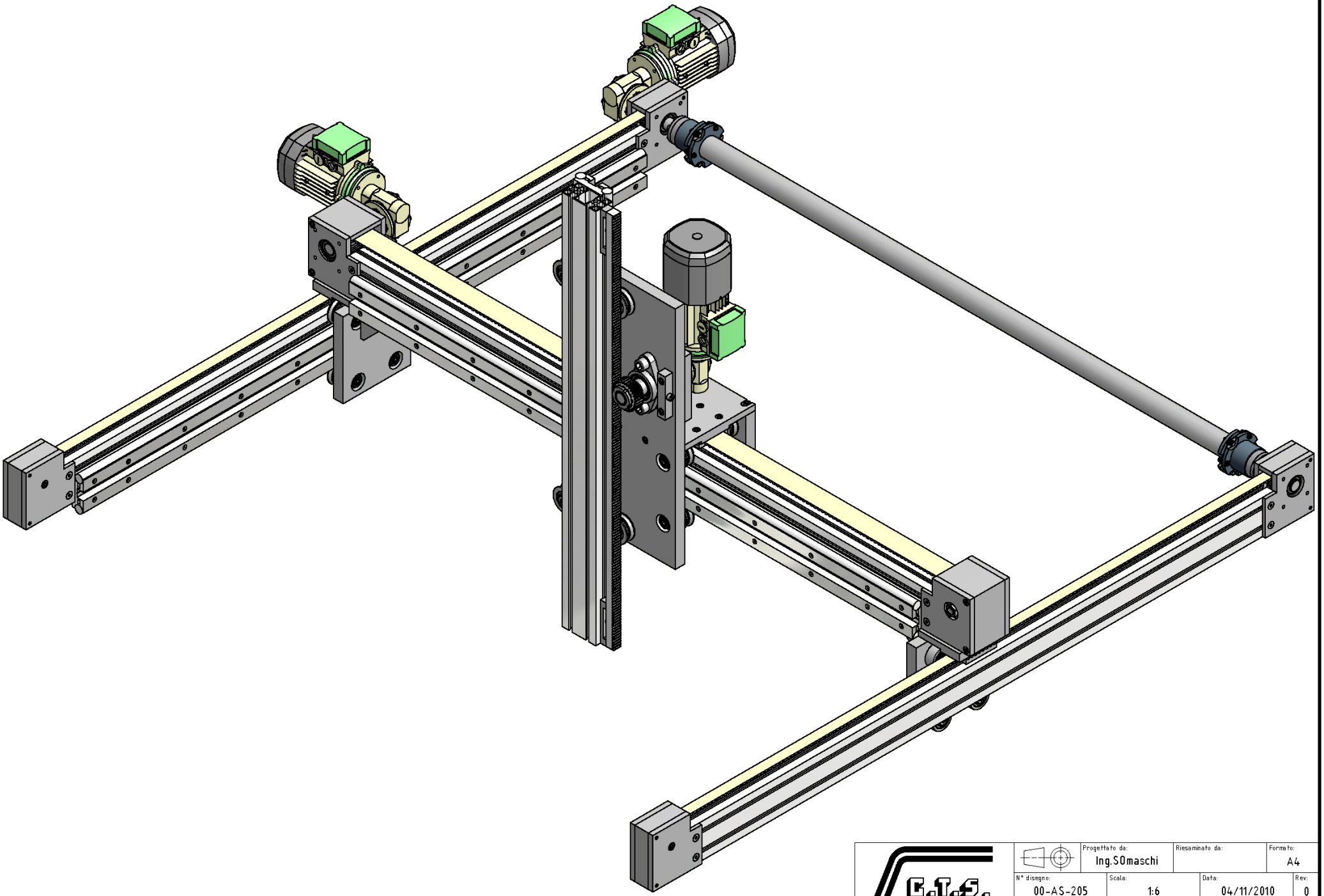
Maximum vertical stroke:	1200/1500 mm
Maximum load:	70/80 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION

Horizontal X-axis:	belt
Horizontal Y-axis:	belt
Vertical:	pinion and rack

NOTE

If the application needs an higher accuracy we advise to use this system with a maximum load of 50 Kg



G.T.S.		Progettato da: Ing.SOmaschi	Riesaminato da:	Formato: A4
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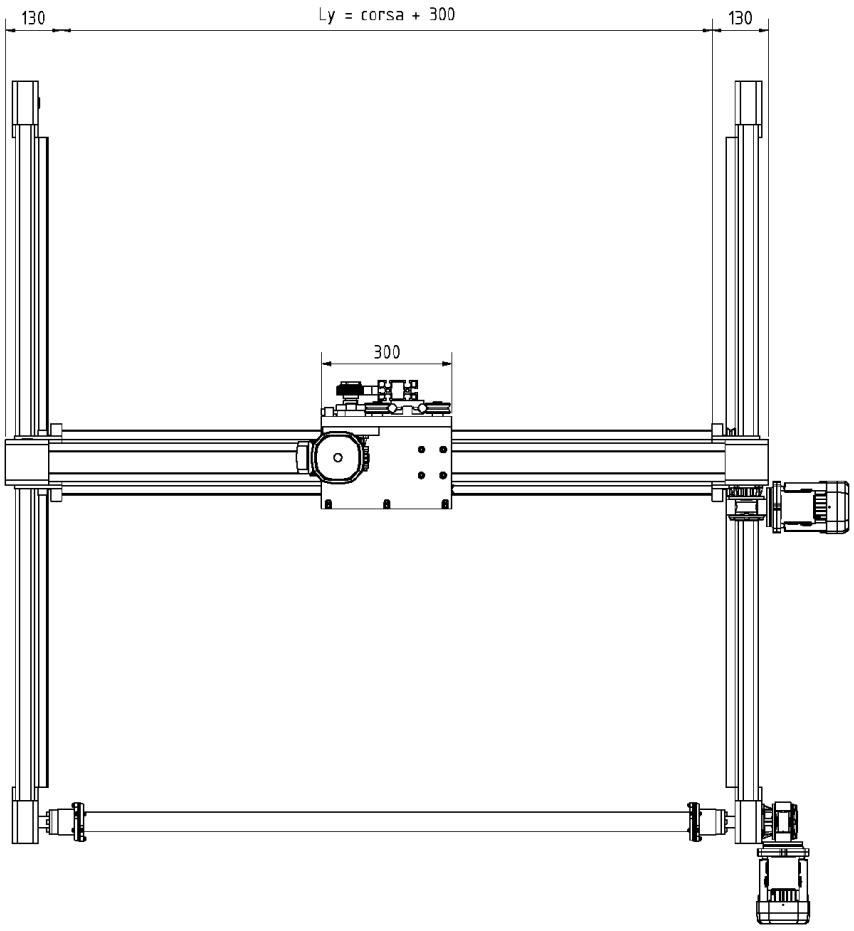
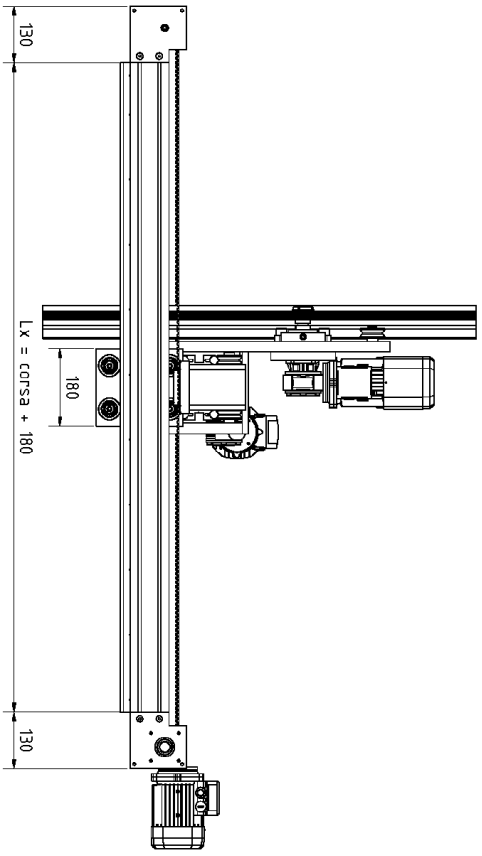
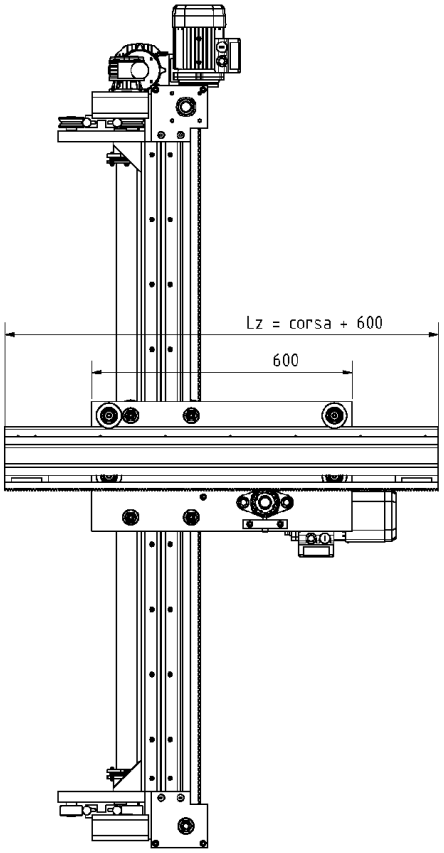
Titolo

SISTEMA X-Y-Z CON DOPPIO AD416M







Titolo

SISTEMA X-Y-Z CON AD4.16M LAT

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Progettato da:	Ing.Somaschi
Scala:	1:12
Disegnato da:	
Data:	04/11/2010
Formato:	A4
Rev:	0

X-Y-Z SYSTEM

Drawing 00-AS-272

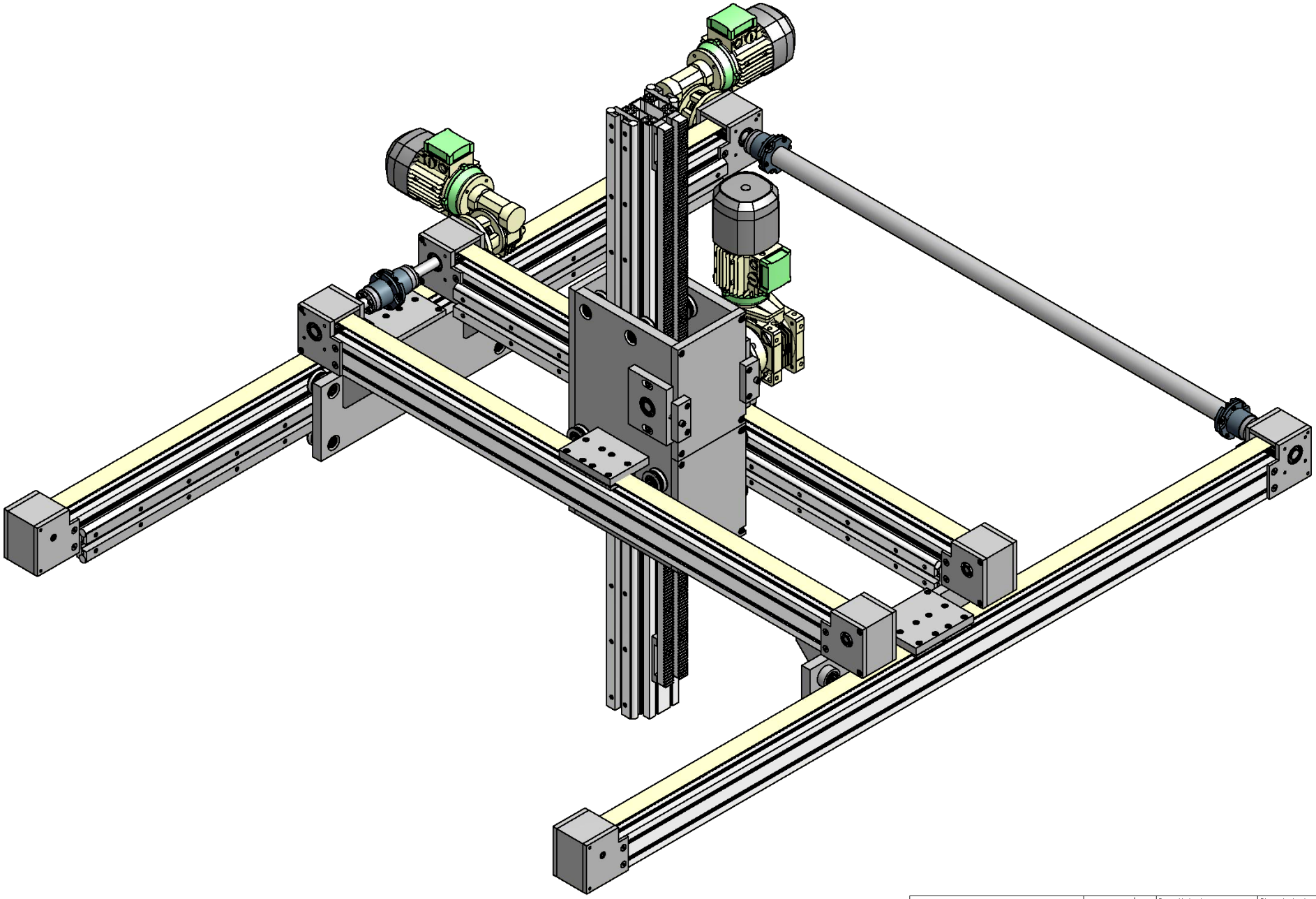
HEAVY VERSION WITH AD416 GUIDES

WORKING CONDITIONS	
Maximum vertical stroke:	2000/2500 mm
Maximum load:	150 Kg
Positioning accuracy:	+/- 0,5/1 mm (with worm gearboxes)
	+/- 0,1 mm (with epicyclical gearboxes)

TRANSMISSION	
Horizontal X-axis:	belt
Horizontal Y-axis:	belt
Vertical:	pinion and rack

NOTE

For heavier load we can change horizontal D20 guides with G20 guides



G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
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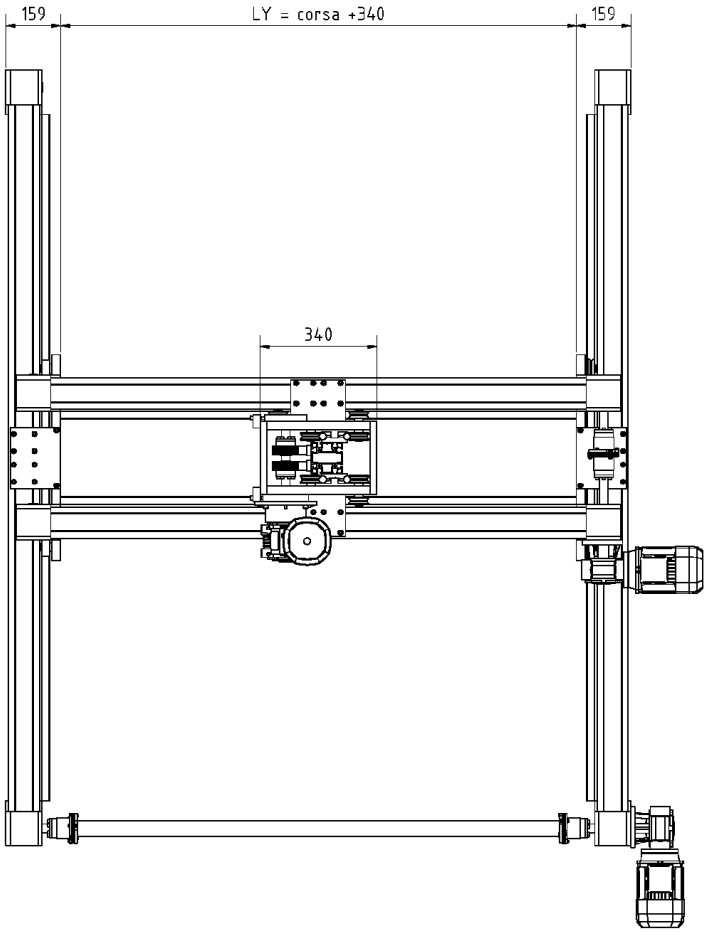
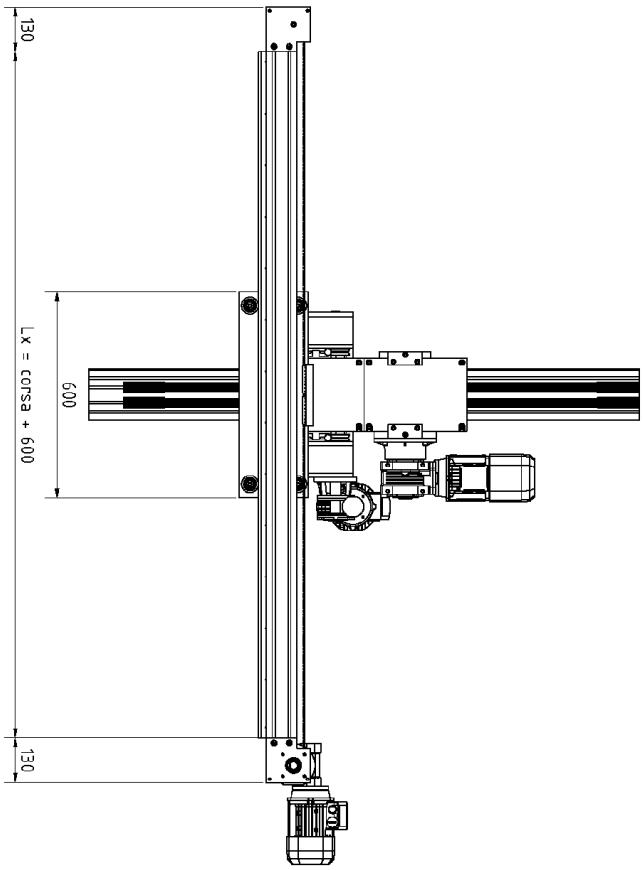
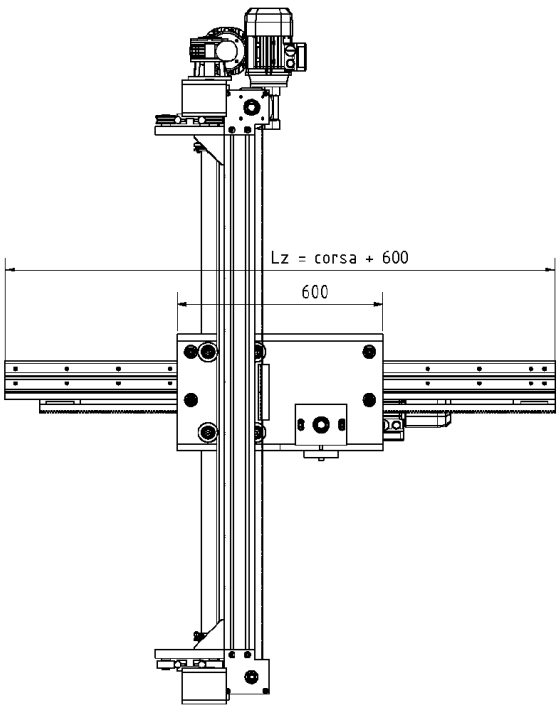
Titolo

SISTEMA X-Y-Z







Titolo

SISTEMA X-Y-Z

N° disegno:	00-AS-272
Scala:	1:15
Data	21/06/2012
Rev:	0
Progettato da:	Ing.Somaschi
Presentato da	
Formato:	A4

X-Y-Z SYSTEM

EXAMPLES

Particular applications for X-Y-Z moving systems are the following:

Drawing 00-AS-338

X-Y-Z system built to move long bundles of flexible pipe.
The motion of the two trolleys on transversal axis permits the approach and the departure of the taking pliers, motion based on the length of the bundle to move

Drawing 01-AS-424

Motion of light load on three axis leaving the working plan very free. The overhanging load and the use of only one guide for X axis doesn't allow the movement of heavy load

Drawing 00-AS-339

Middle-heavy motion with rack on all axis.
The rack on horizontal axe is necessary for strokes longer than 7 m

Drawing 01-AS-798

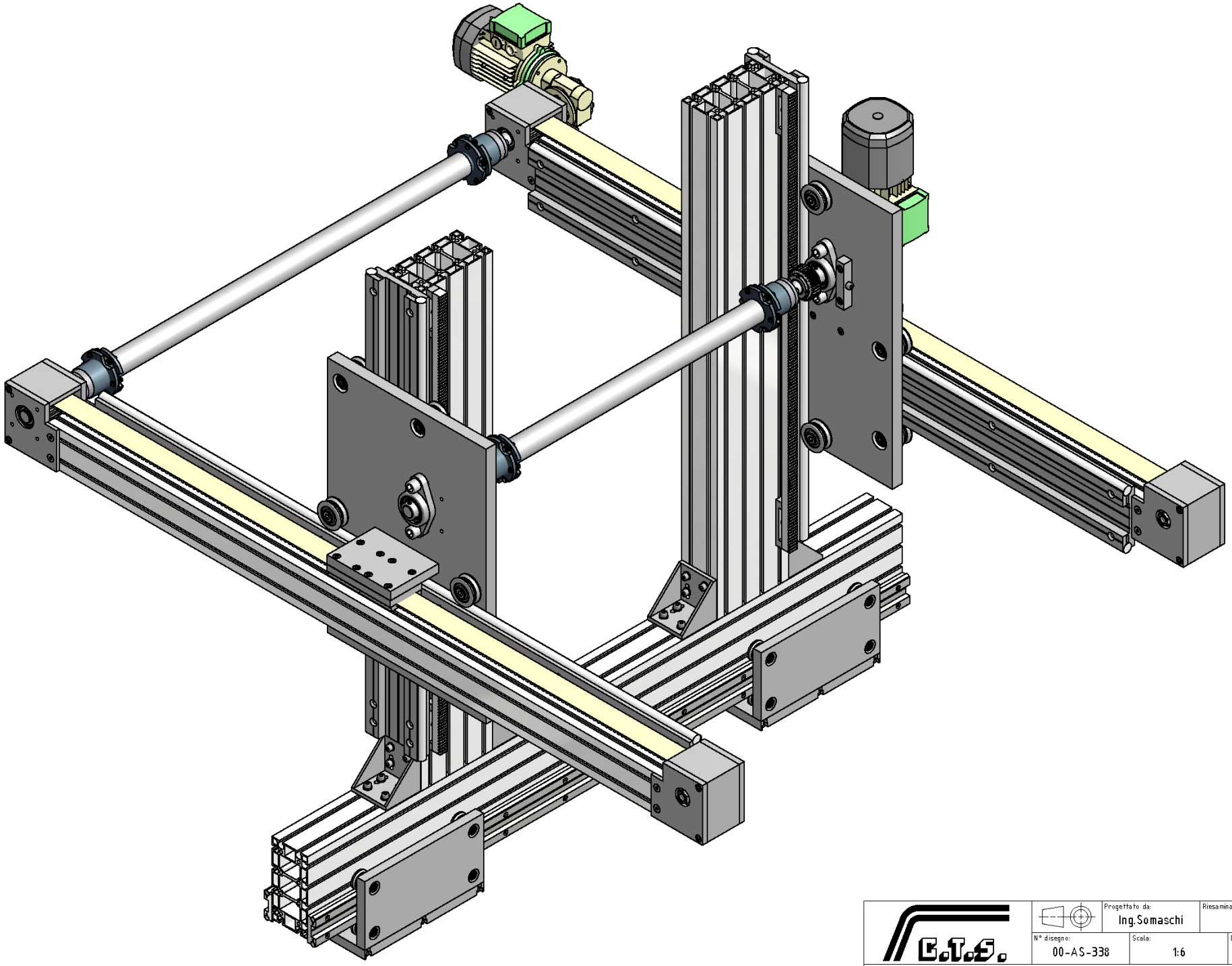
Middle-heavy motion with double vertical axe for bulky loads

Drawing 00-AS-566

X-Y-Z system used to work object with tools (miling, drilling...) made with soft materials like plastic, wood...

Drawing 01-AS-650

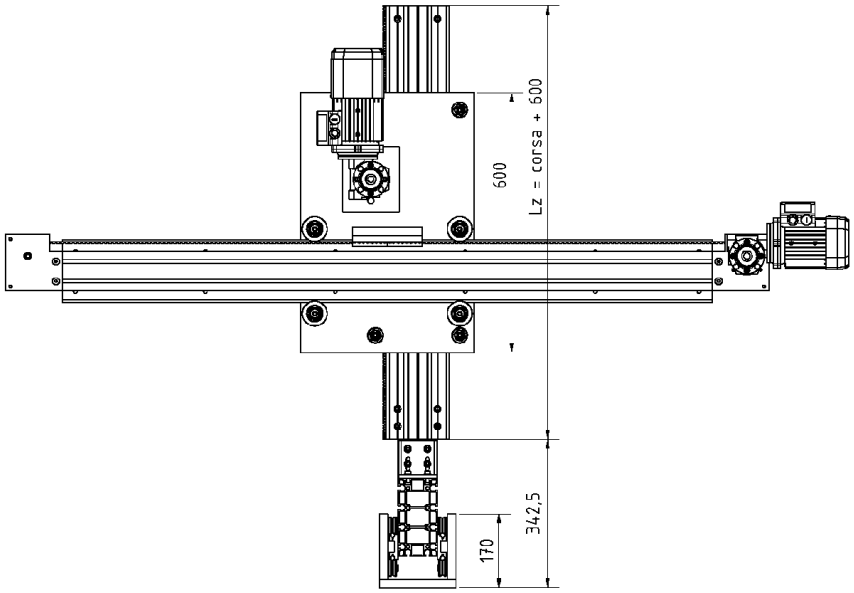
X-Z system with all toothed belts used for wall-mounted application

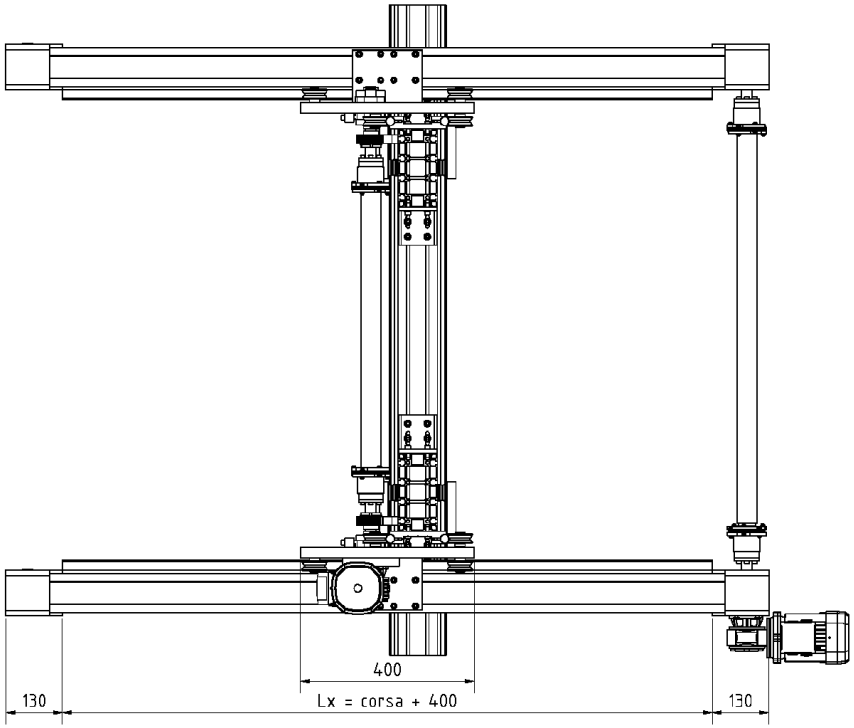


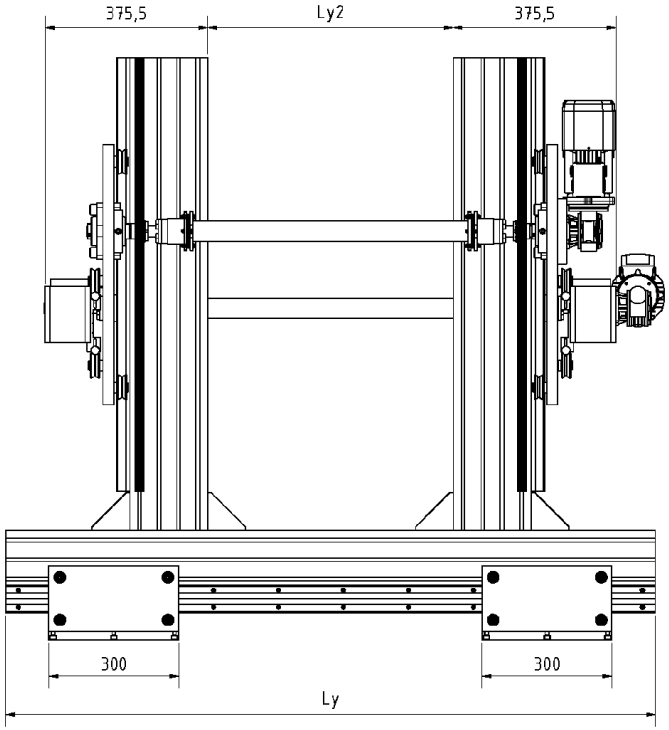
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-338	Scala: 1:6	Data: 05/11/2010	Rev: 0

Titolo

SISTEMA X-Y-Z







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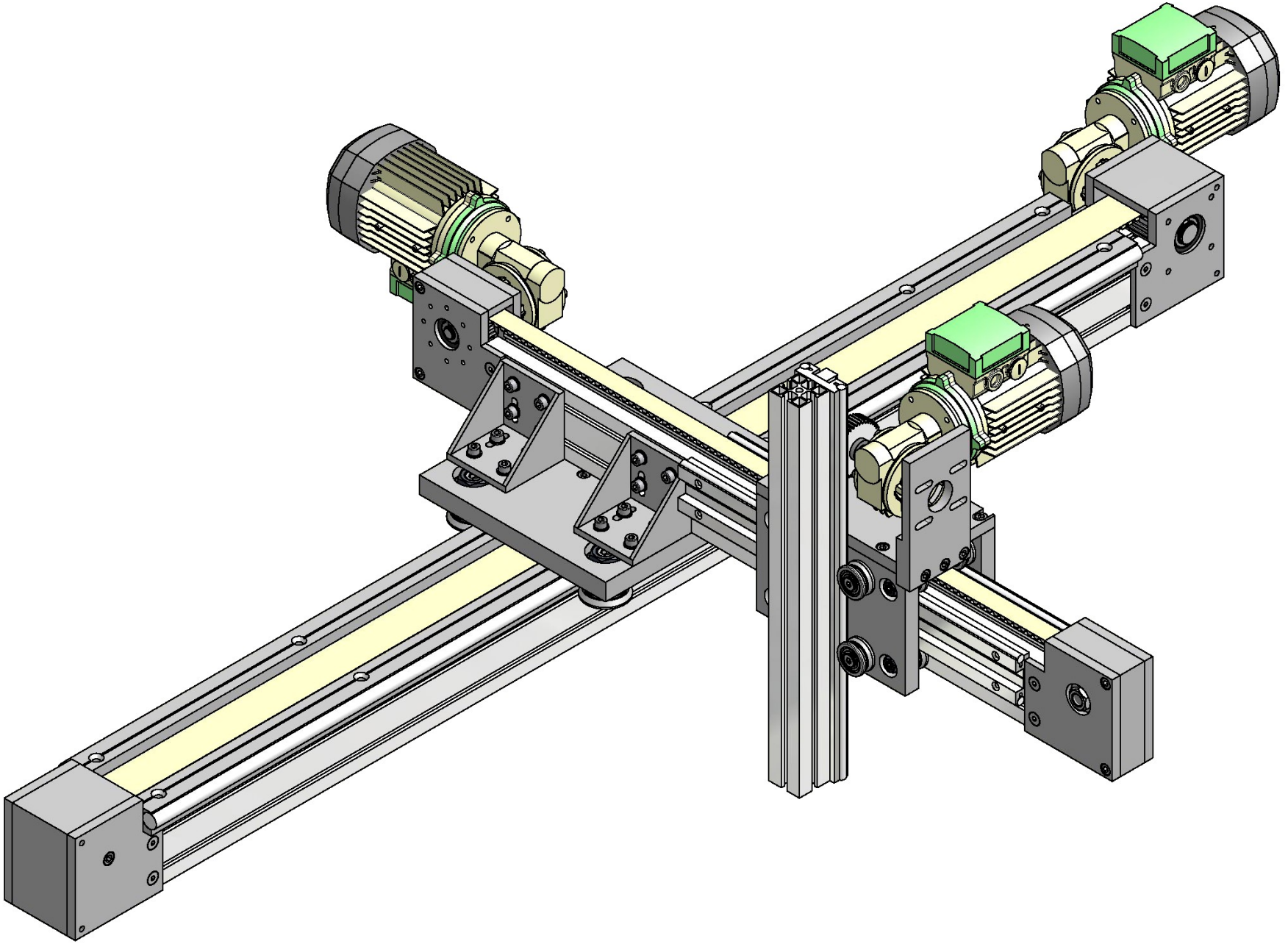
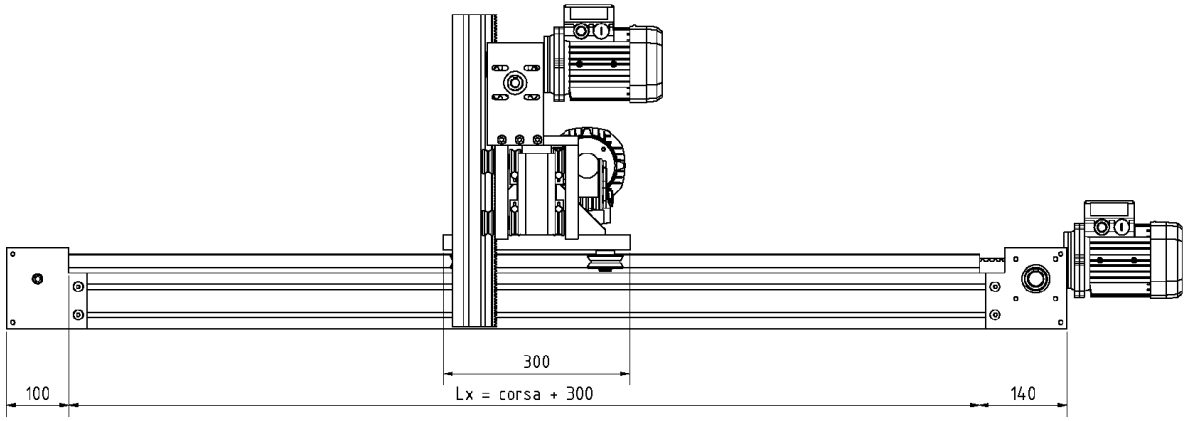
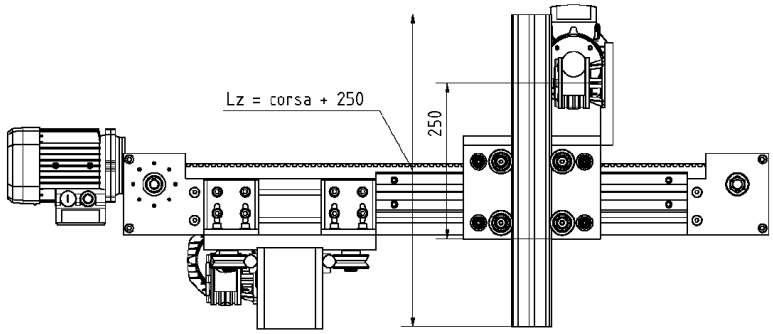


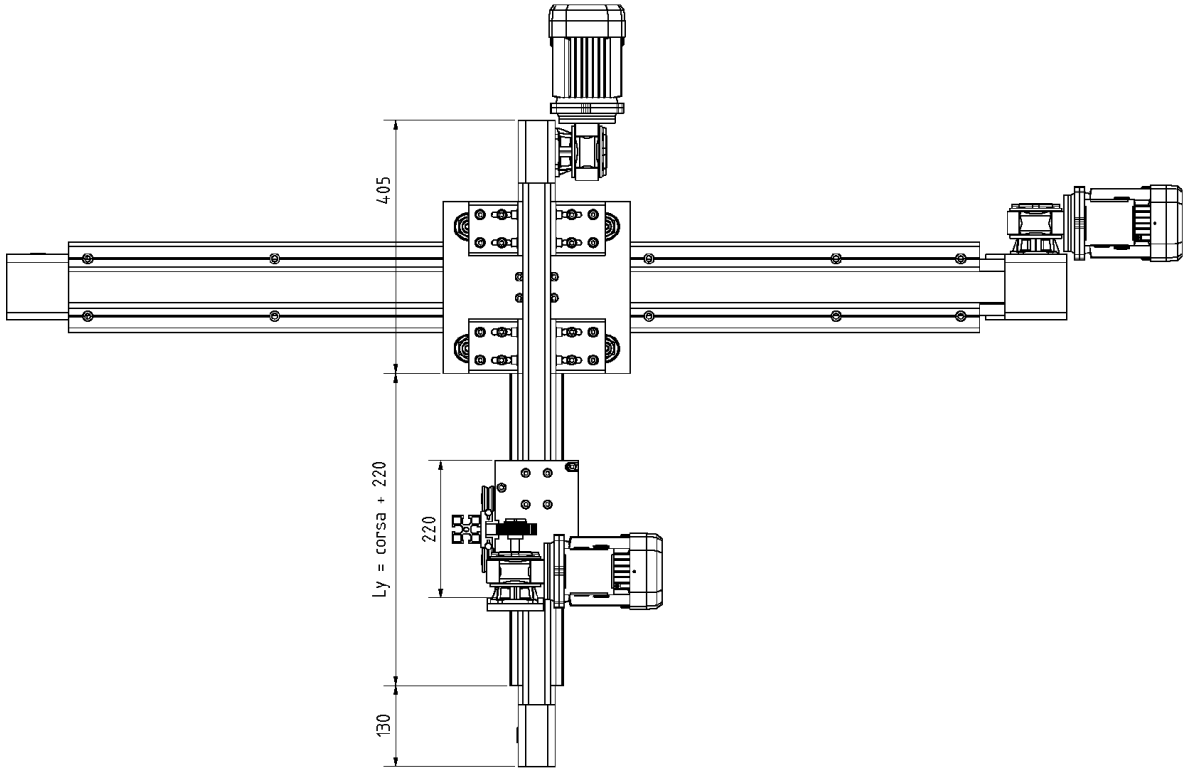
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-424	Scala: 1:4	Data: 05/11/2010	Rev: 0

Titolo

SISTEMA X-Y-Z







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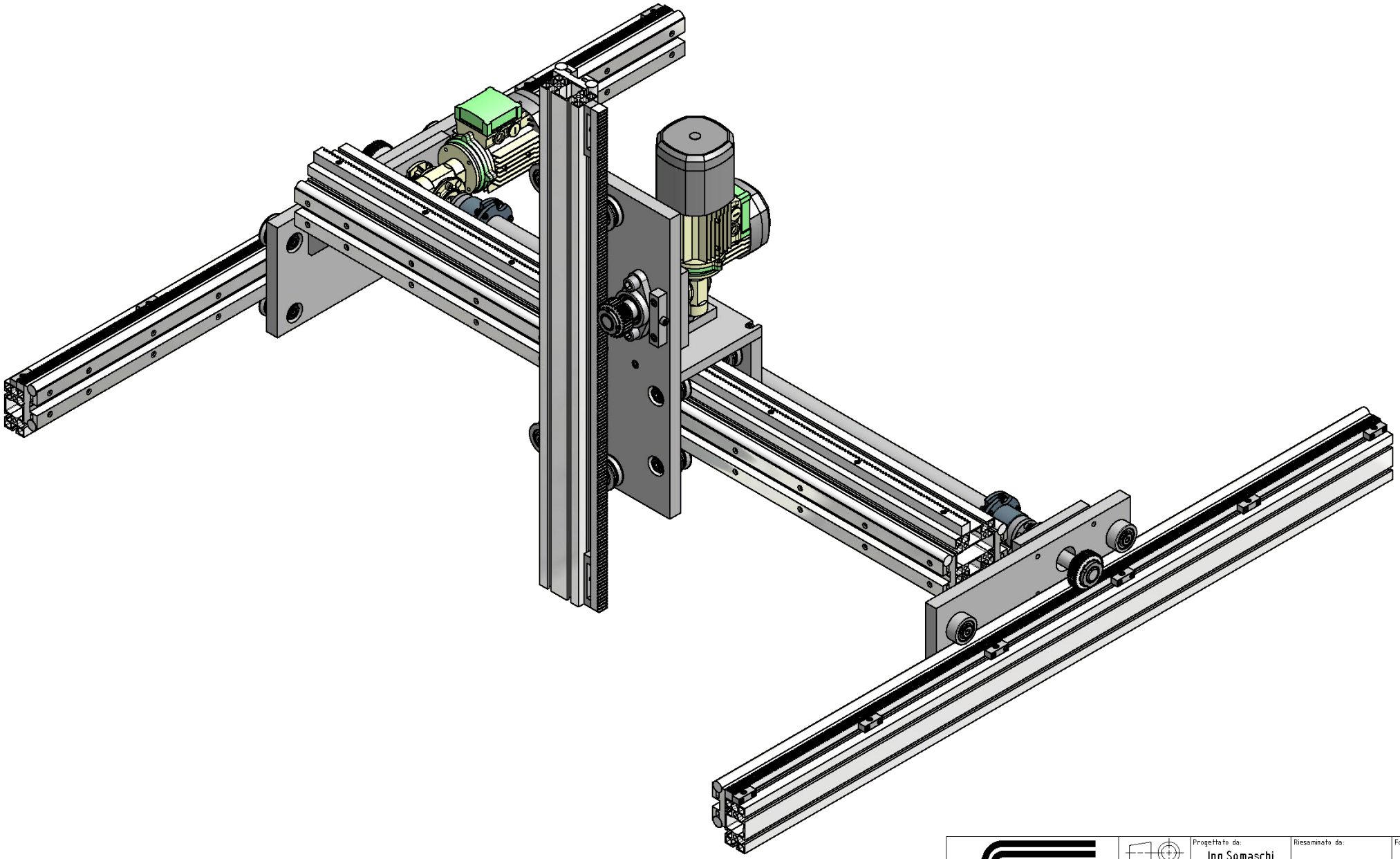
	N° disegno: 01-AS-424	Scala: 1:8	Data: 05/11/2010	Rev: 0

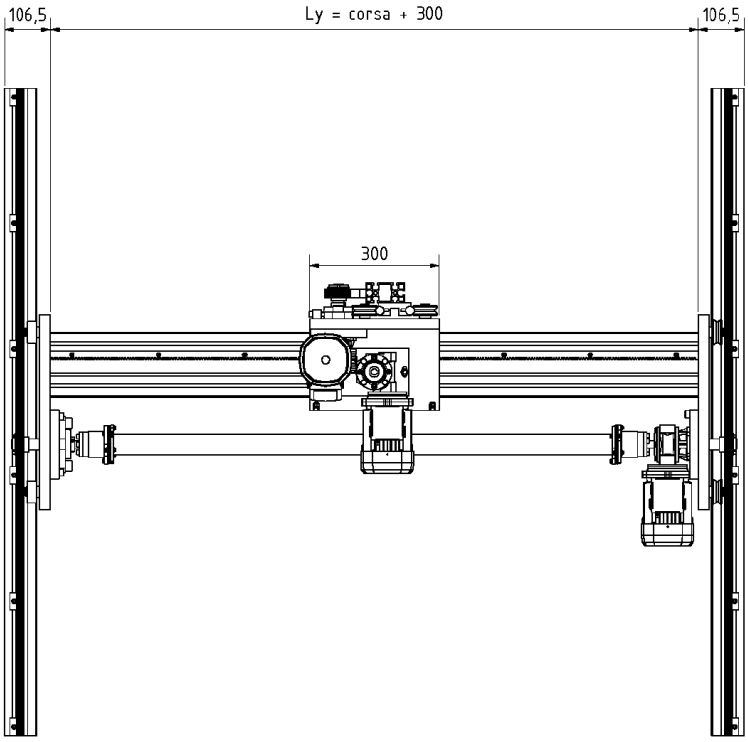
Titolo: SISTEMA X-Y-Z

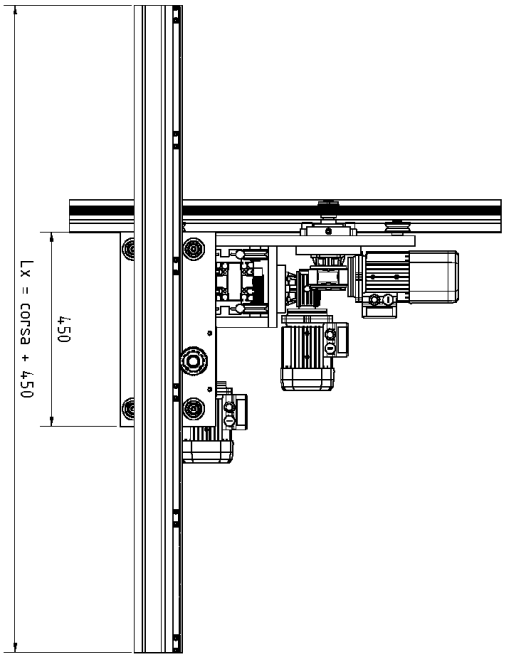


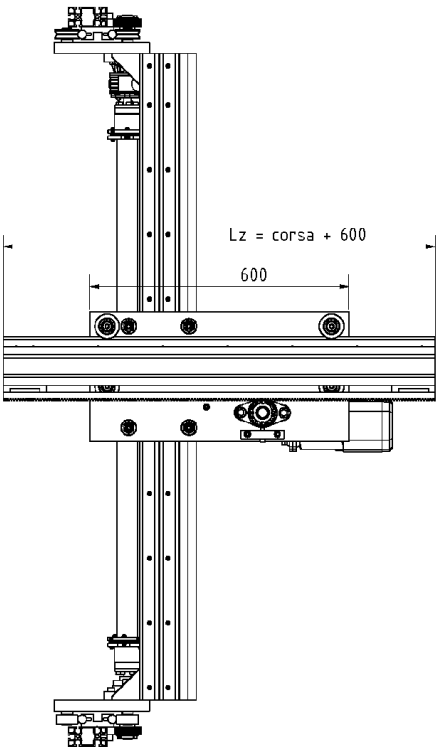
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-339	Scala: 1:6	Data: 05/11/2010	Rev: 0

Titolo

SISTEMA X-Y-Z



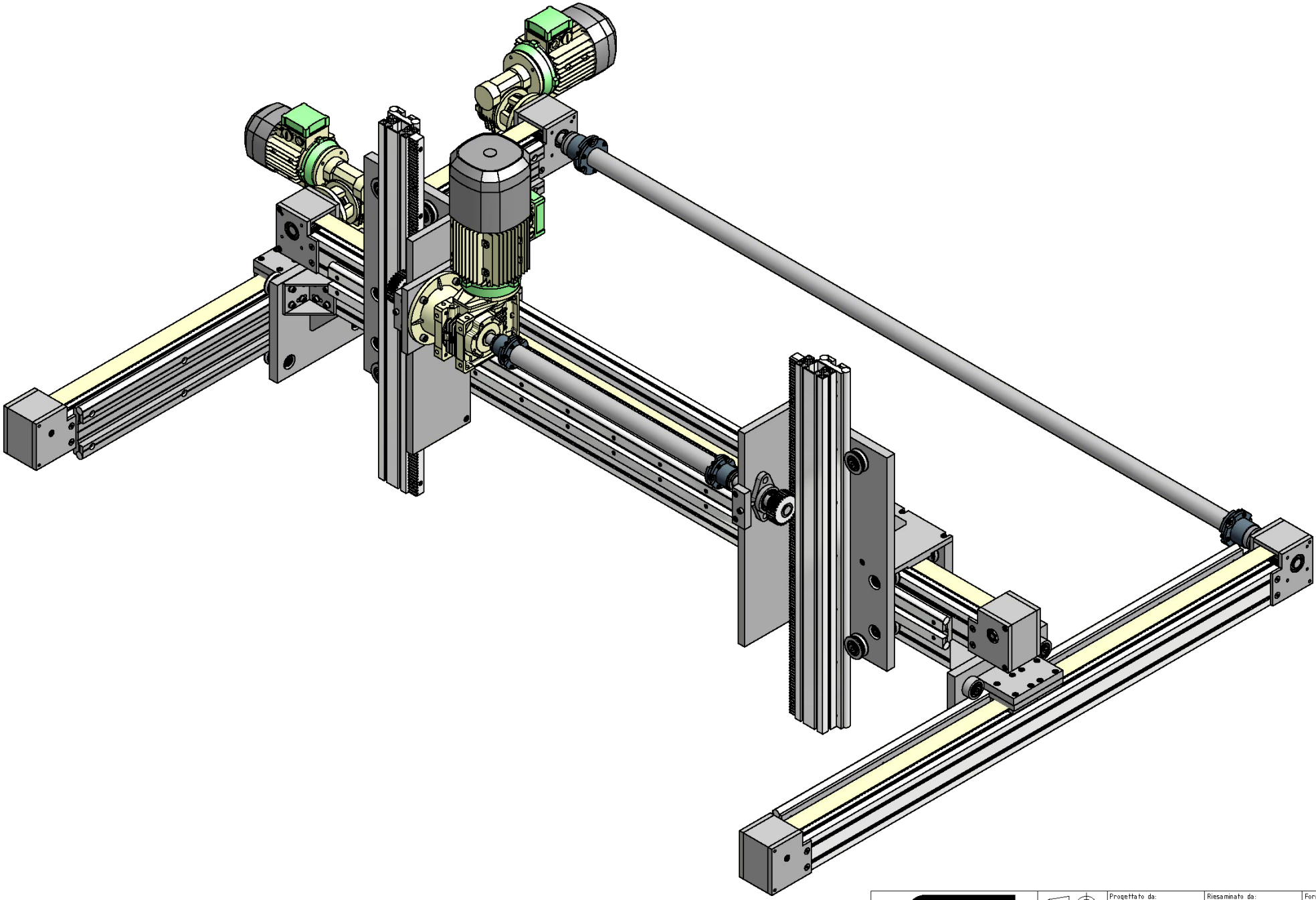




Titolo

SISTEMA X-Y-Z

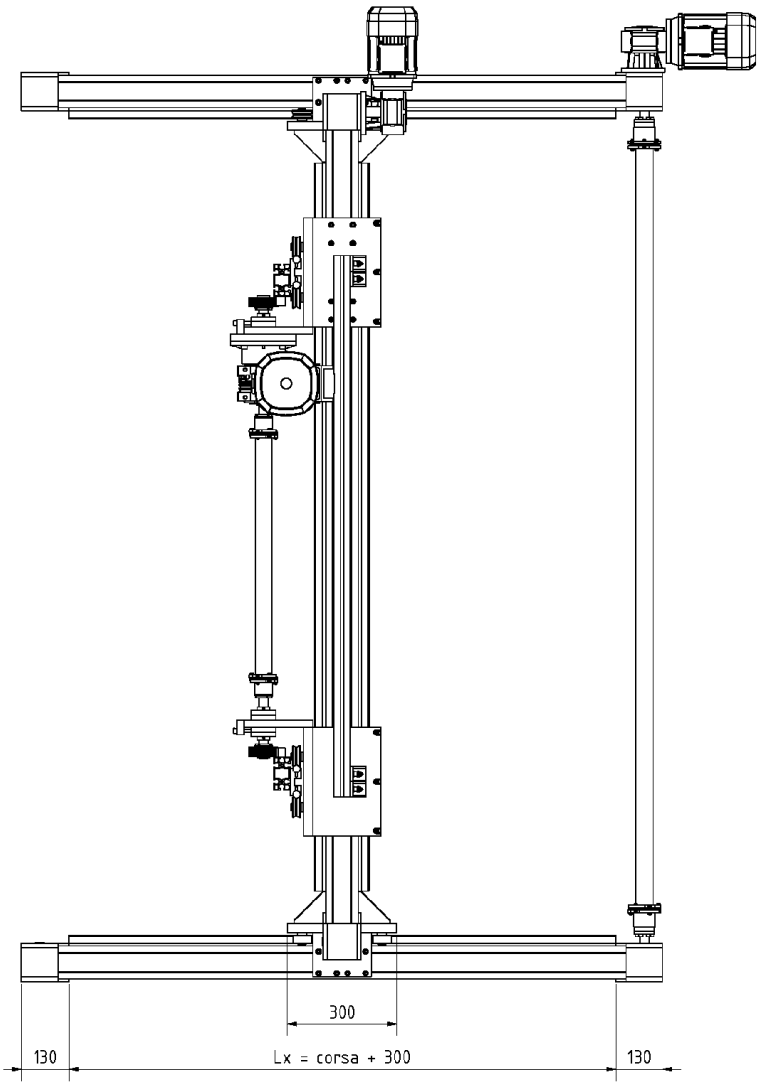
N° disegno:	00-AS-339
Scala:	1:12
Data	05/11/2010
Rev:	0
Progettato da:	Ing.Somaschi
Ridisegnato da:	
Formato:	A4

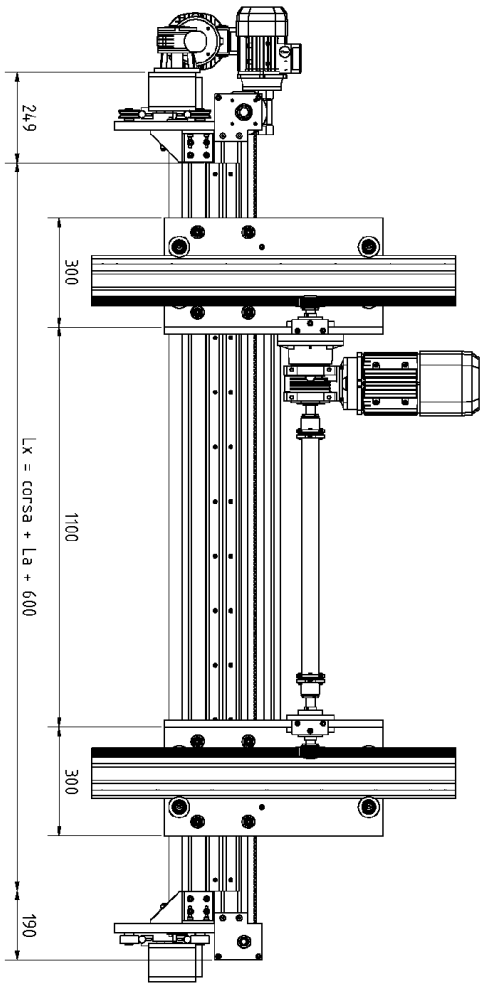


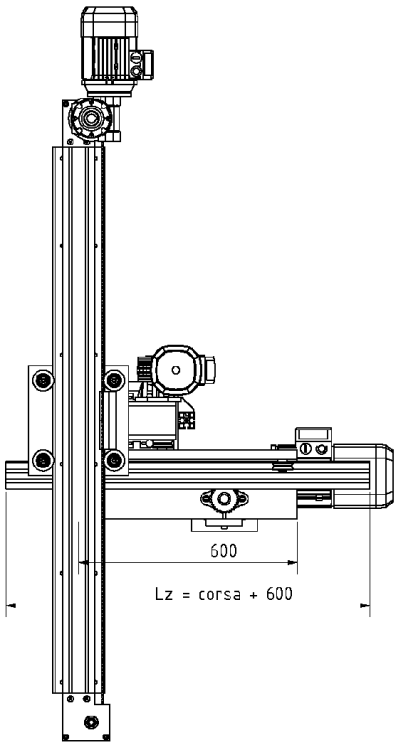
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 01-AS-798	Scala: 1:8	Data: 13/01/2010	Rev: 0

Titolo

SISTEMA X-Y-Z



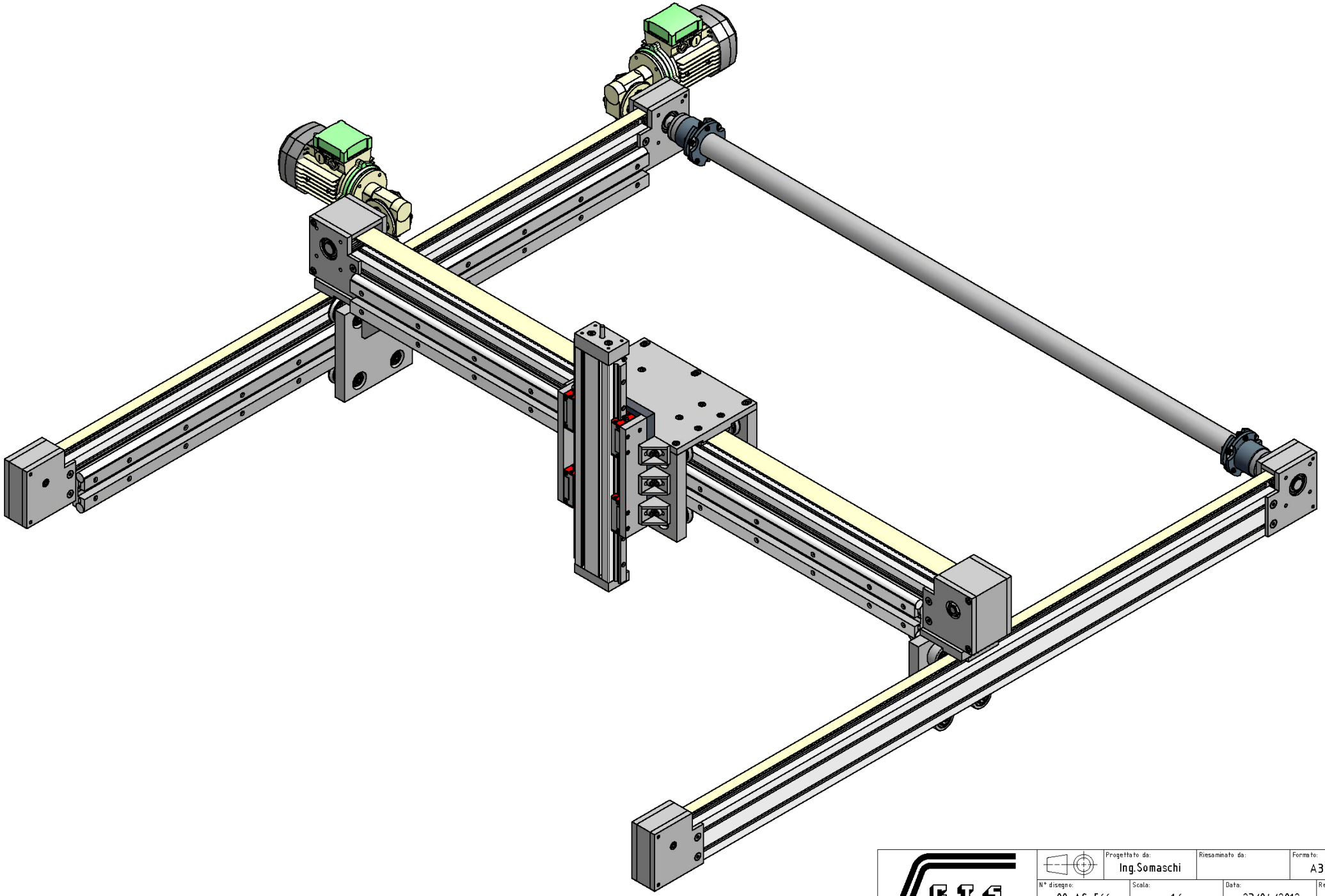




Titolo

SISTEMA X-Y-Z

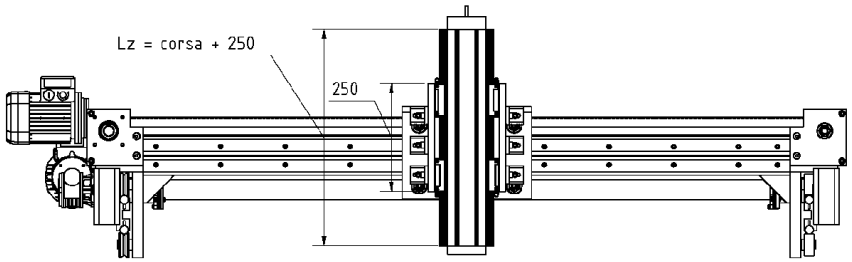
N° disegno:	01-AS-798
Scala:	1:25
Data	13/01/2010
Rev:	0
Progettato da:	Ing.Somaschi
Presentato da	
Formato:	A4

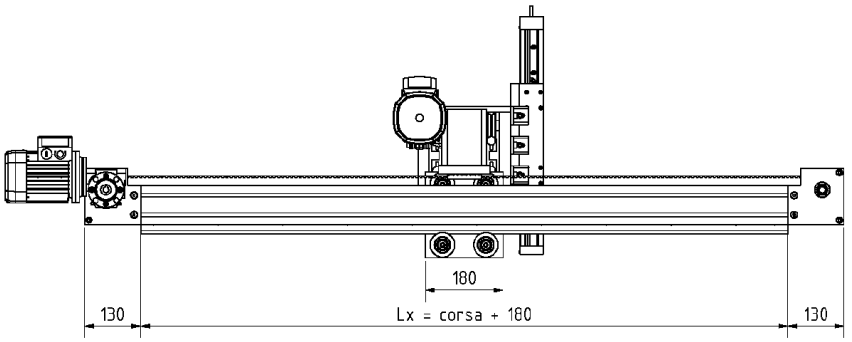


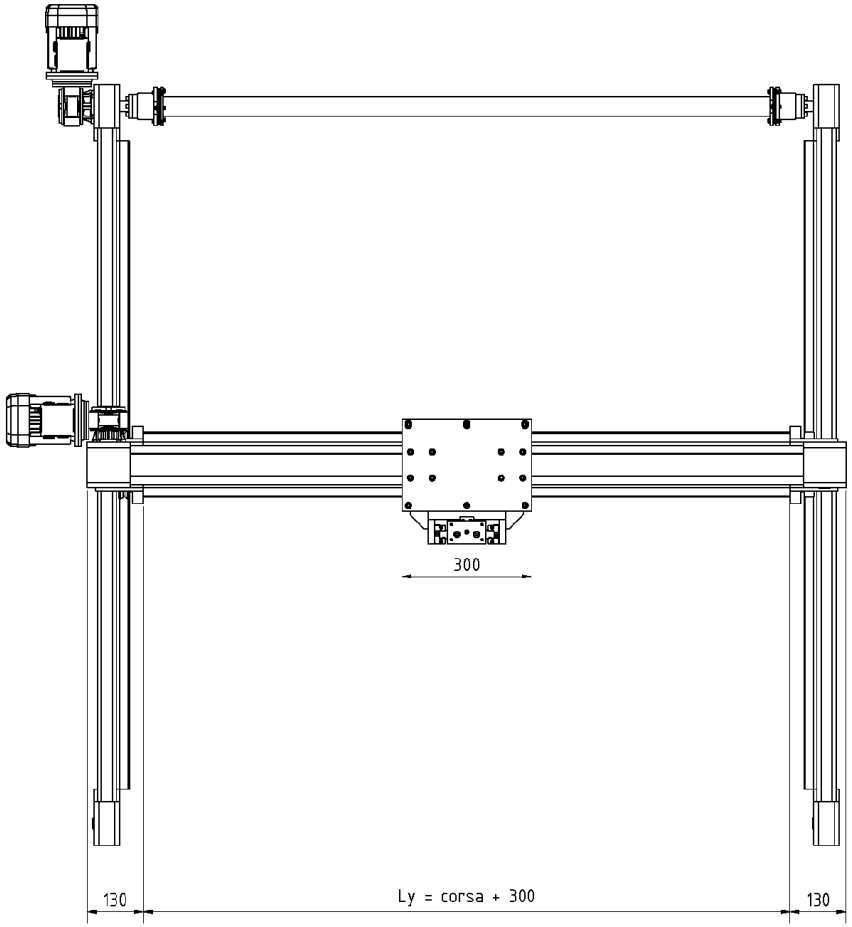
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3
	N° disegno: 00-AS-566	Scala: 1:6	Data: 23/04/2012	Rev: 0

Titolo

SISTEMA X-Y-Z



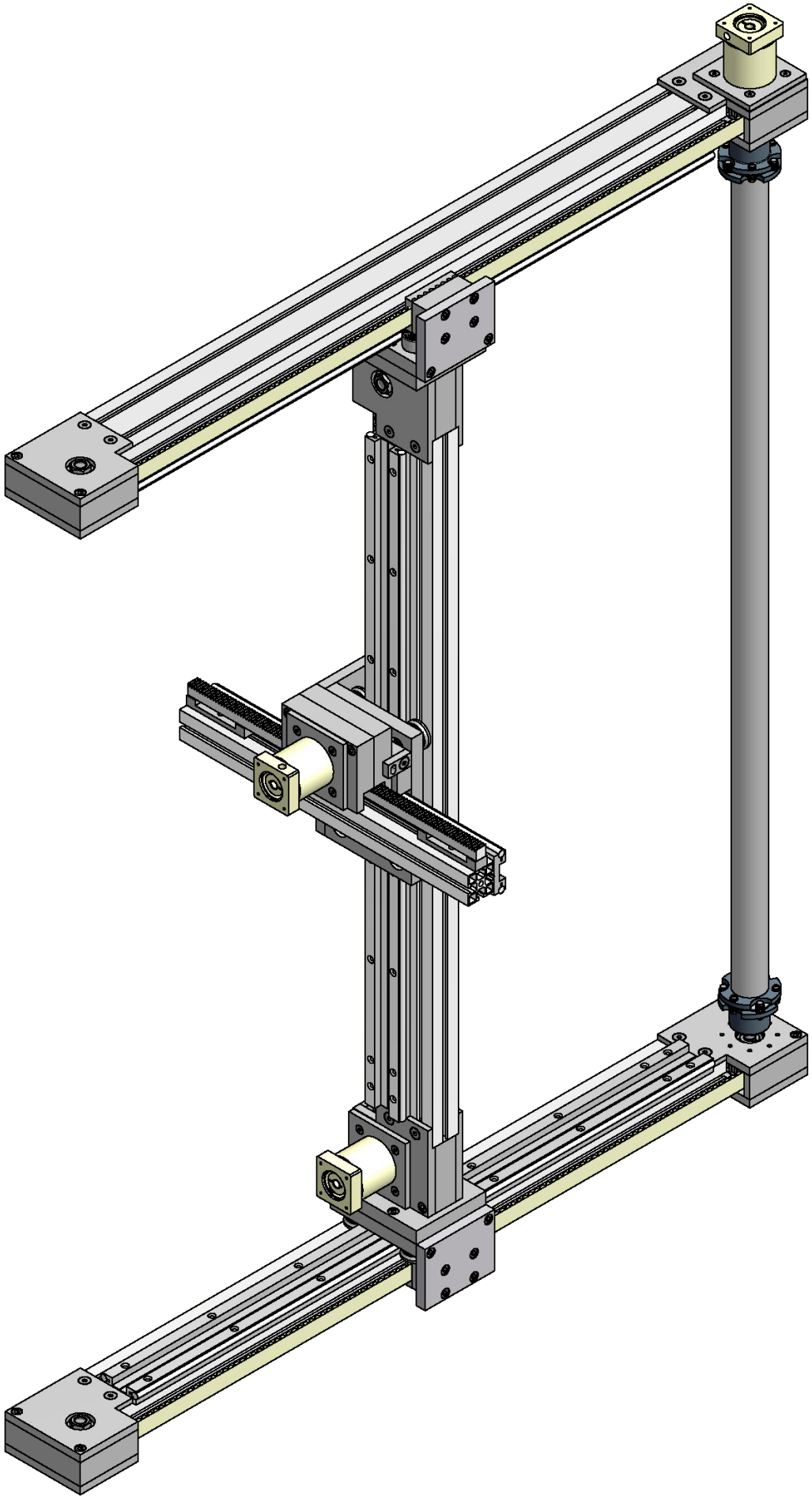




G.T.S.	Progettato da: Ing.Somaschi	Riesaminato da		Formato: A3
	N° disegno: 00-AS-566	Scala: 1:12	Data: 23/04/2012	Rev: 0

Titolo

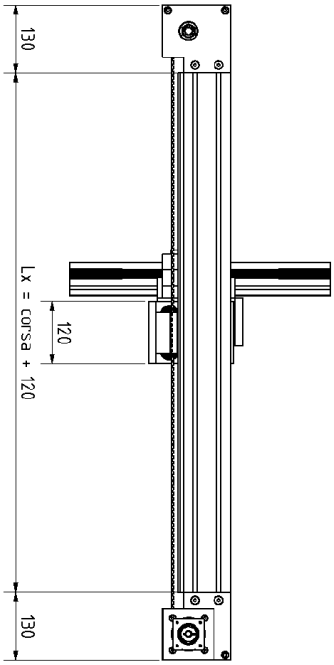
SISTEMA X-Y-Z

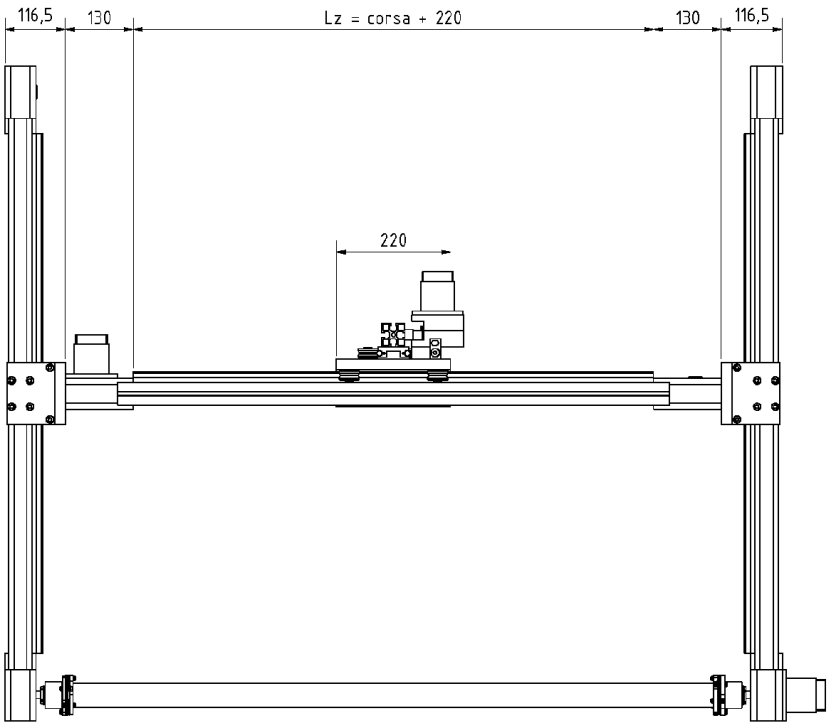


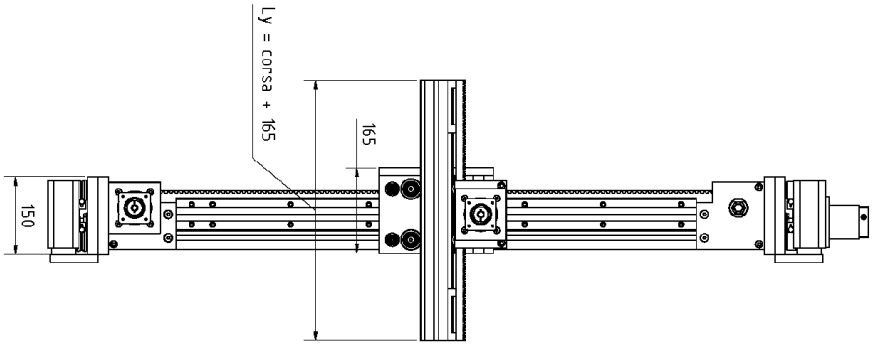
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A3
	N° disegno: 01-AS-650	Scala: 1:3	Data: 11/07/2012	Rev: 0

Titolo

SISTEMA X-Y-Z





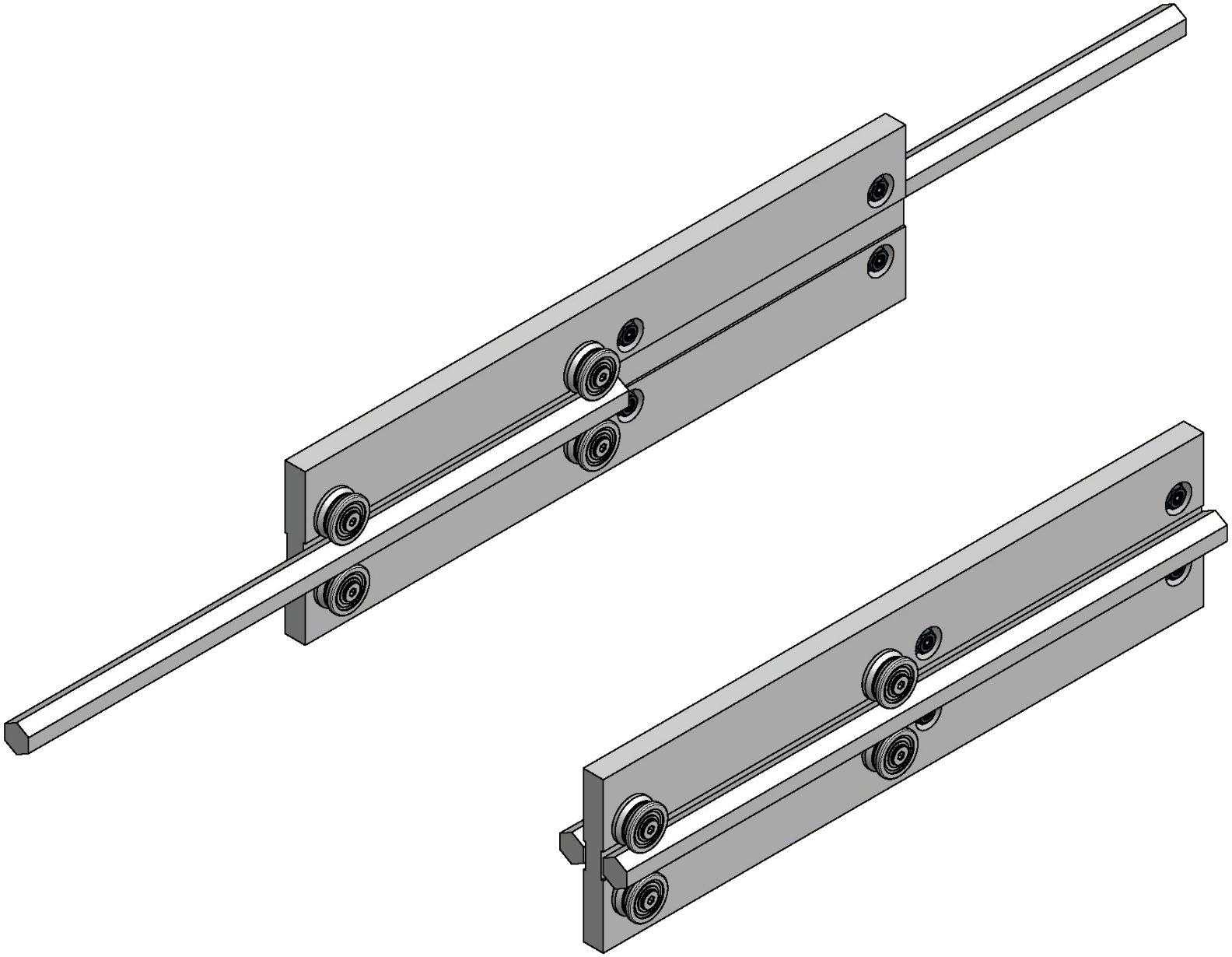


Titolo:	SISTEMA X-Y-Z
N° disegno:	01-AS-650
Progettato da:	Ing.Somaschi
Scala:	1:10
Disegnato da:	
Data:	11/07/2012
Formato:	A3
Rev:	0

EXAMPLES

Drawings 00-AS-161 and 00-AS-166

Telescopic guides are built especially for movement of particular working plan that have to disappear, or for opening and closing of heavy drawers.
The use of standard guides or hexagonal bars is function of the disposal space and of the application cost



G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
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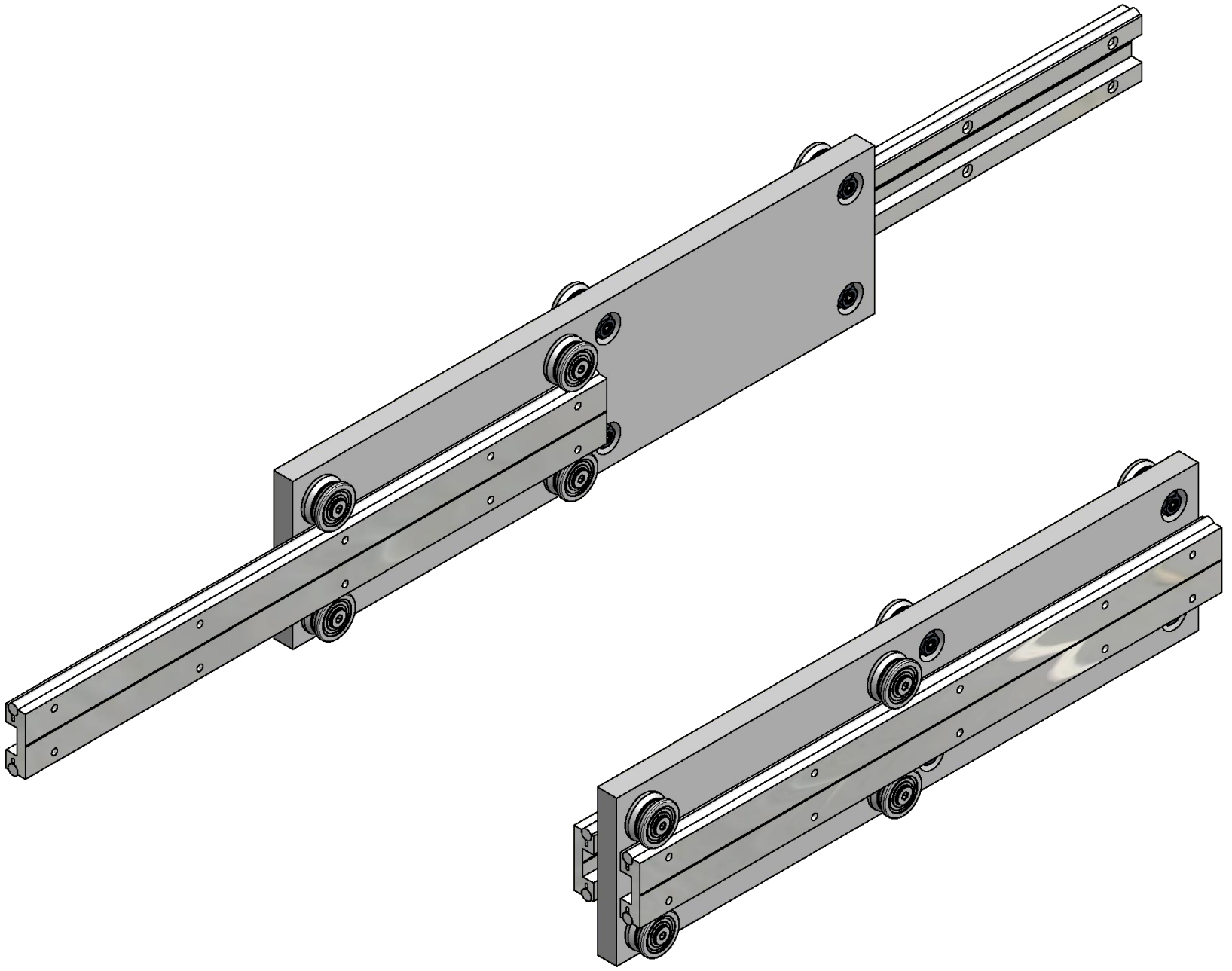
Titolo

SISTEMA TELESCOPICO CON AD210



B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-166	Scala: 1:3	Data: 05/11/2010	Rev: 0

Titolo

SISTEMA TELESCOPICO CON AD210

RECIPROCATOR

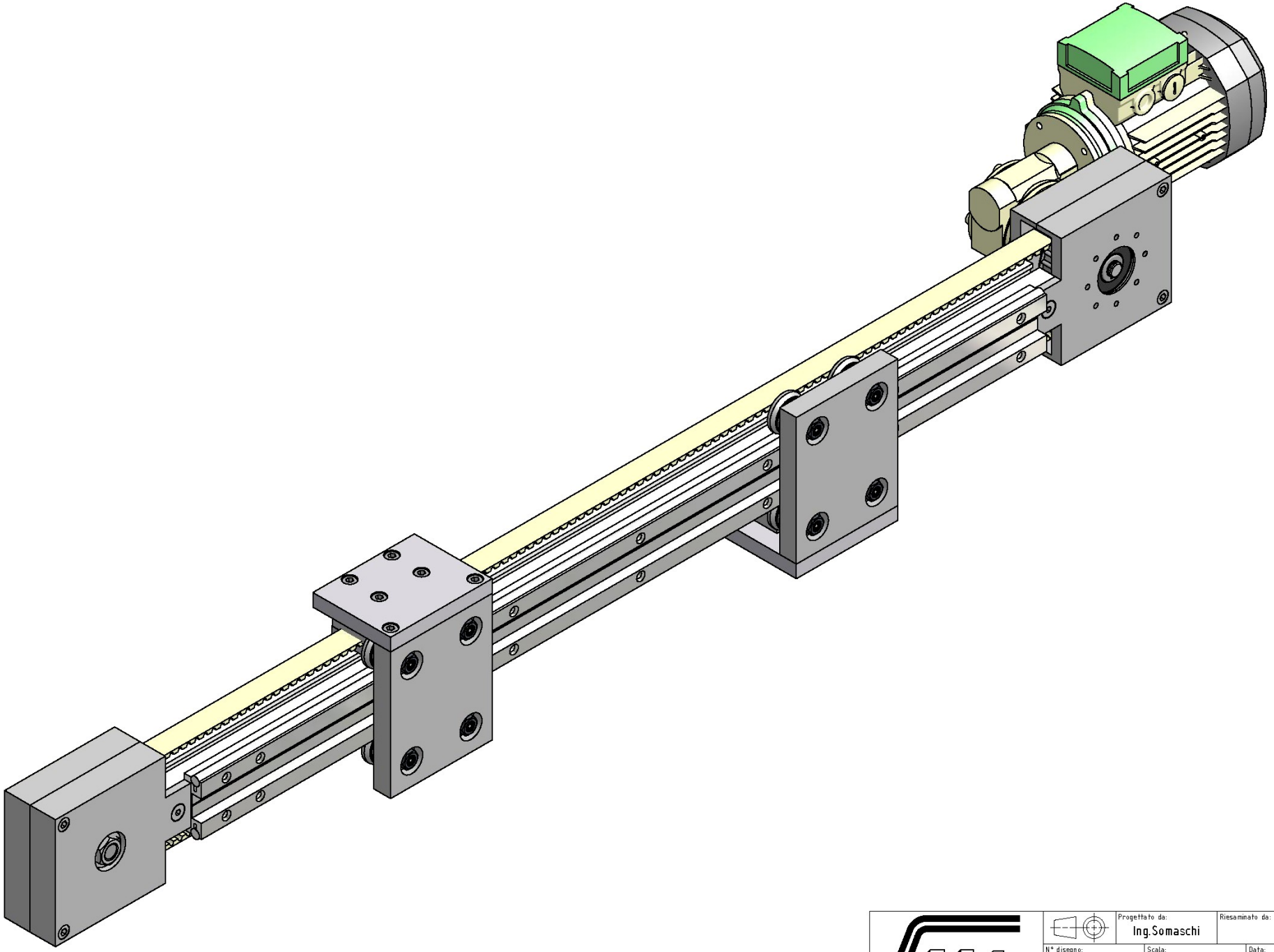
Drawing 00-AS-169

LIGHT VERSION WITH AD210 GUIDES

This type of reciprocator is used when is necessary to open or close two objects at the same time, for example in taking pliers and in security doors.

In this system both sides of the belt are uncovered, so we can fix one trolley on one side of the belt and other trolley on other side.

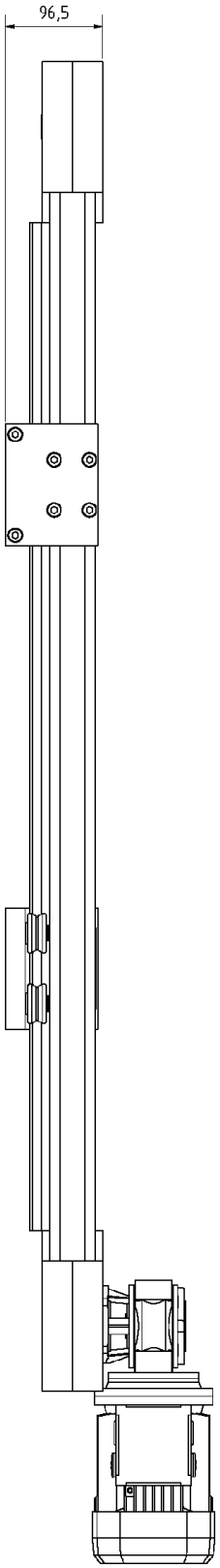
NOTE

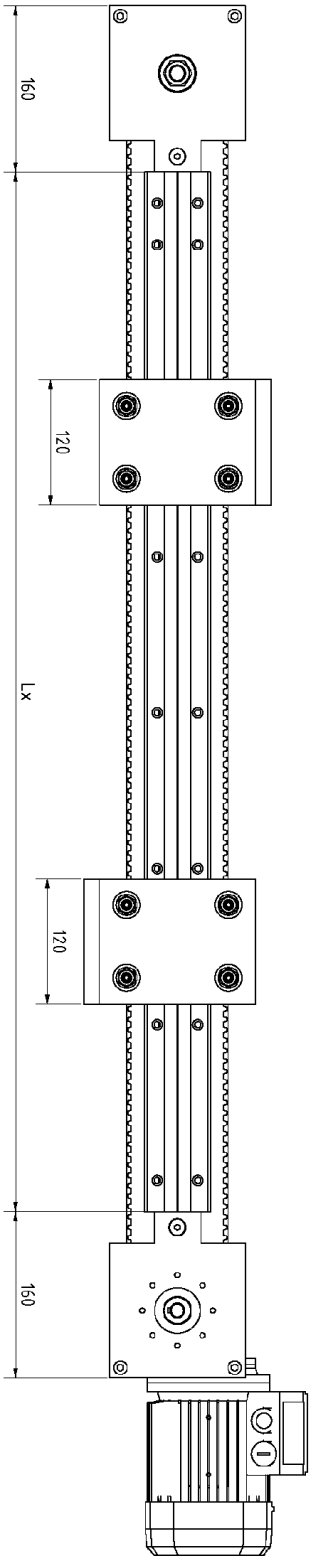


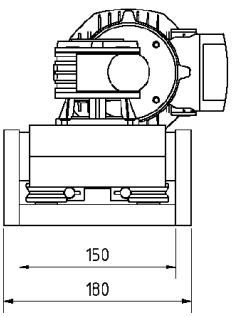
B.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-169	Scala: 1:3	Data: 05/11/2010	Rev: 0

Titolo

RECIPROCATORE CON AD210M LAT







Titolo

RECIPROCATORE CON AD210M LAT

N° disegno:	00-AS-169
Scala:	1:5
Data	05/11/2010
Rev:	0
Progettato da:	Ing.Somaschi
Disegnato da:	
Formato:	A4

RECIPROCATOR

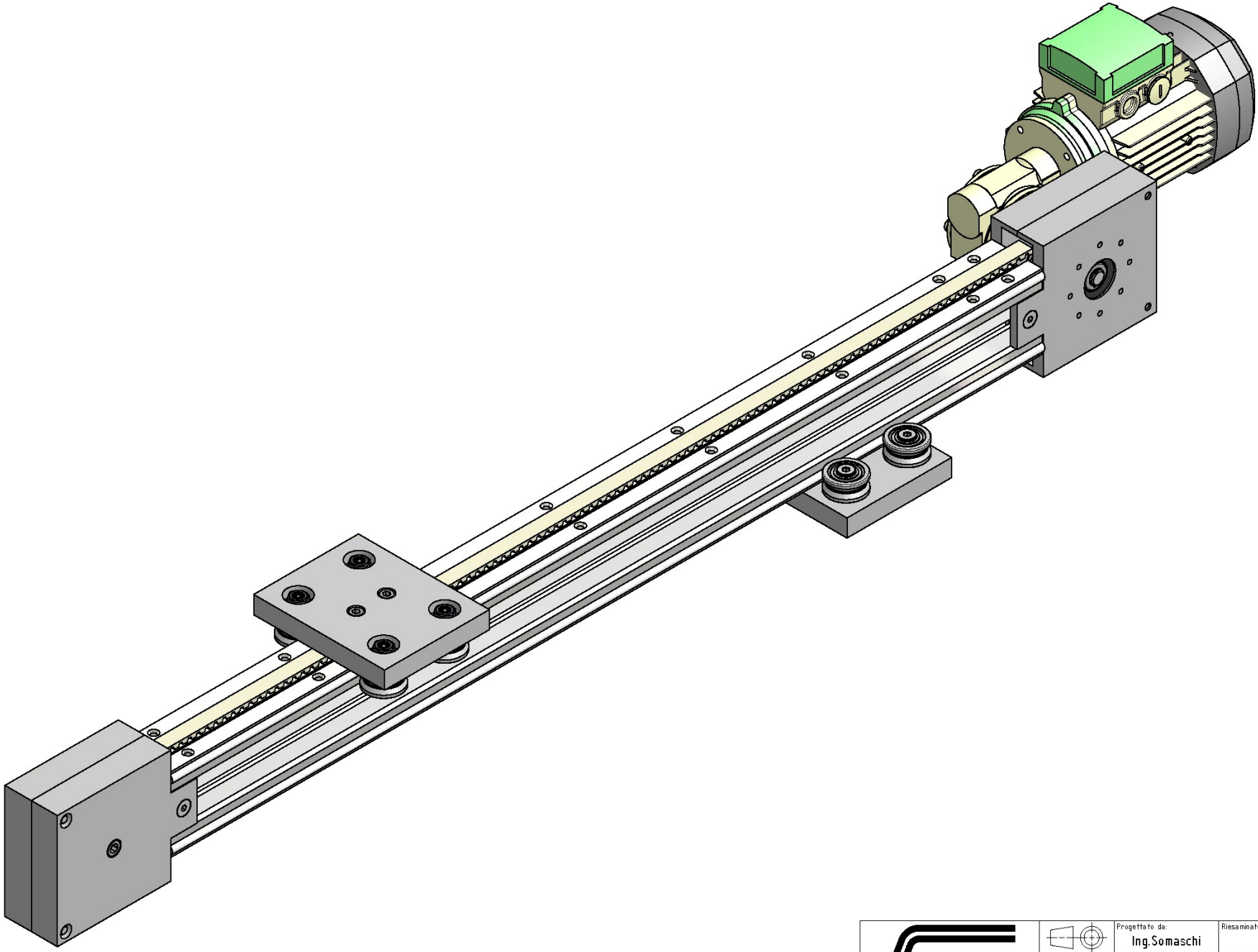
Drawing 00-AS-165

LIGHT VERSION WITH AD210 GUIDES

This type of reciprocator is usually used for automatic spraying plants, sandblasting plants and high pressure washing plants where high speeds are required with sudden motion reverses on vertical.

On one trolley is fixed the nozzle, on the other is fixed a counterweight to balance the motor work.

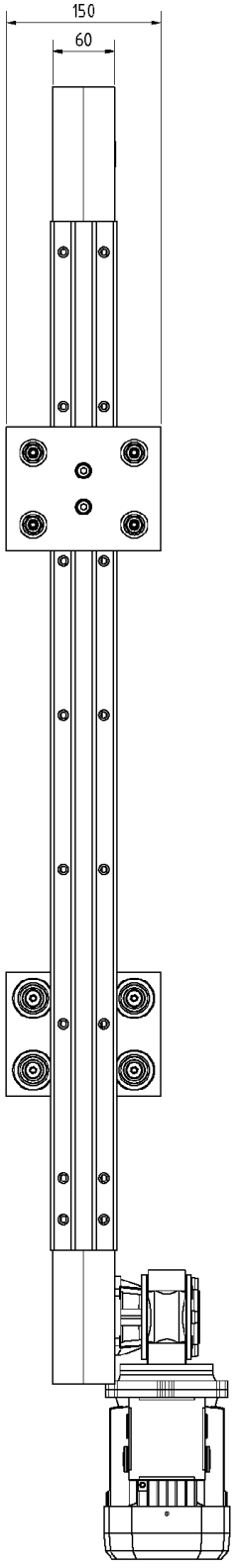
NOTE

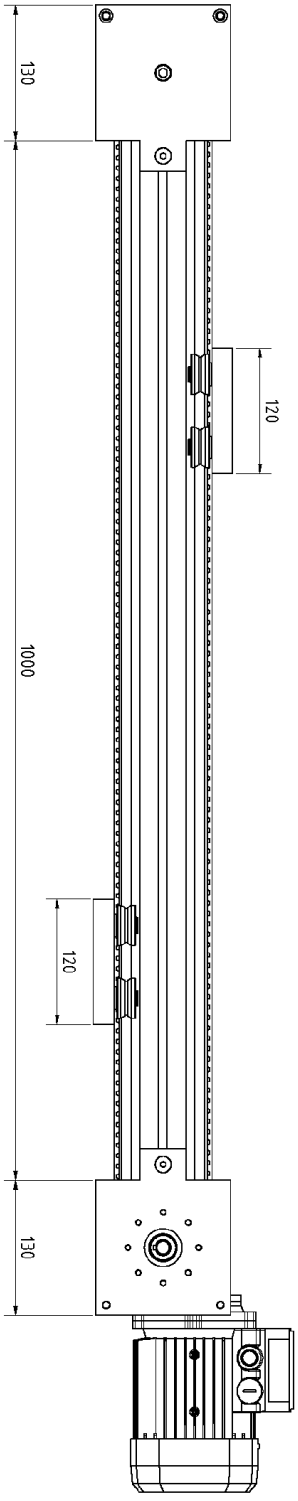


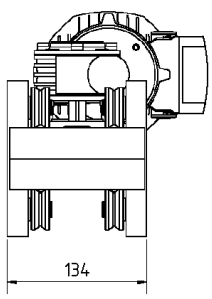
G.T.S.		Progettato da: Ing.Somaschi	Riesaminato da:	Formato: A4
	N° disegno: 00-AS-165	Scala: 1:3	Data: 05/11/2010	Rev: 0

Titolo

RECIPROCATORE CON AD210M







Titolo

RECIPROCATORE CON AD210M

N° disegno:	00-AS-165
Scala:	1:5
Data	05/11/2010
Rev:	0
Progettato da:	Ing.Somaschi
Ridisegnato da:	
Formato:	A4