

Translation of the original instructions

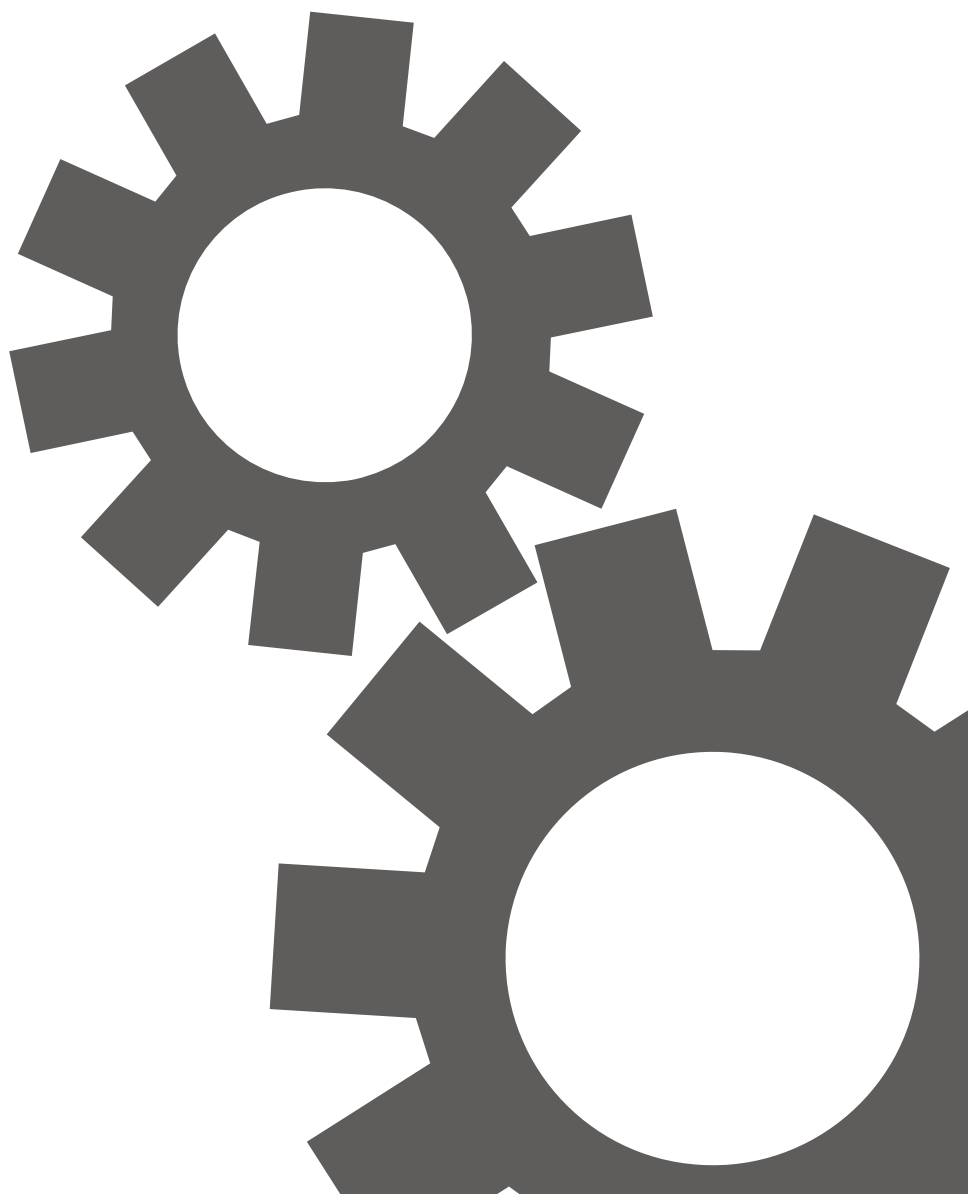
Rover C

6.40, 6.40 Edge, 6.50, 6.65, 6.50 Edge, 6.65 Edge, 9.40, 9.50, 9.50 Edge, 9.65, 9.65 Edge, 9.85 Edge, 6.50 WMS, 6.65 WMS

Processing centre

Instructions for transport and installation

Extracted from the machine user manual



6.0

5801A0449 ENGLISH

Serial number

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B Transport

The machine can be dispatched using various forms of transport (road, rail, sea, air), and the method is usually agreed with the customer at the time of purchase. The machine is divided into a number of parts for transport purposes, and this appendix contains a list of the parts to be dispatched (see page [337](#)).

B.1 Parts to be transported

For transport, the machine has to be disassembled into the parts indicated in the following paragraphs.

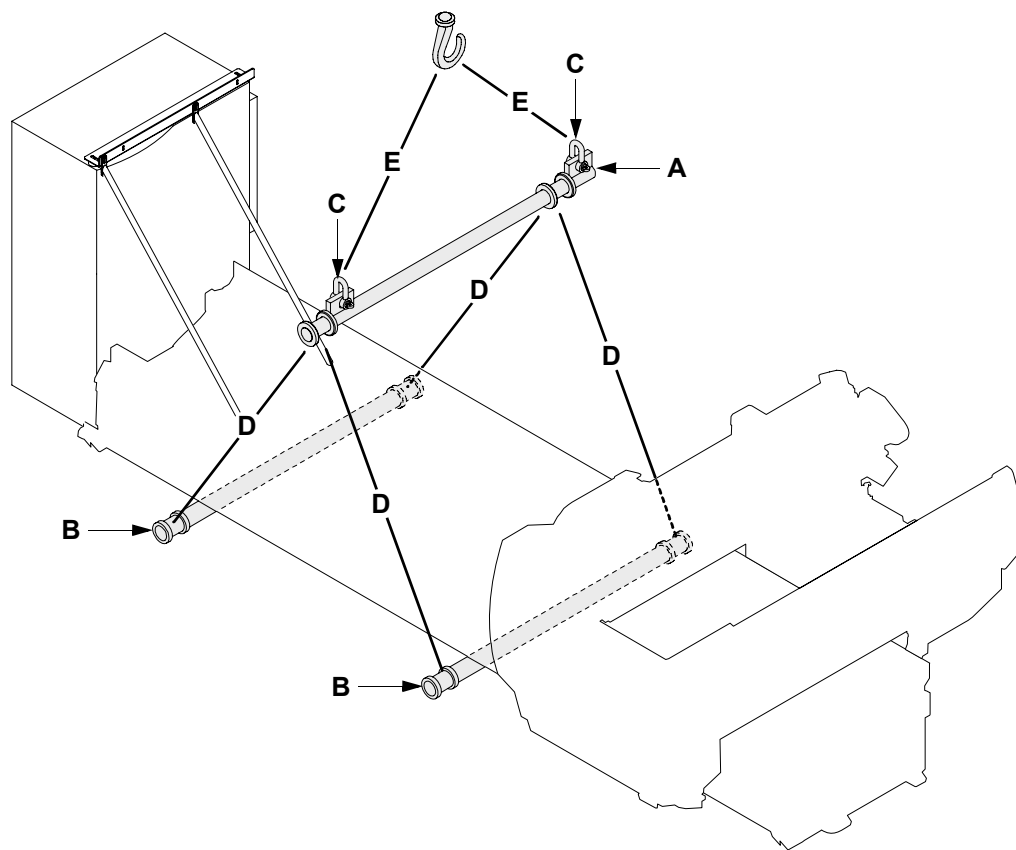
B.2 Unloading the machine

-  **Lifting and transfer operations necessary to unload the machine and position it in its final location must be carried out by staff in possession with the necessary technical training, according to the indications here below.**
-  **Use machinery and equipment (bars, ropes, etc.) of adequate capacity and length when carrying out lifting operations. Before lifting each component, remove fixings (nails, rope ...) placed on the means of transport to prevent movement during transportation.**
-  **Before removing the machine from the container or truck, make some trial lifts to evaluate its perfect balance. If the machine is not perfectly balanced, adjust the lifting devices.**

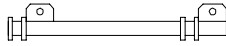
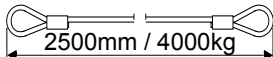
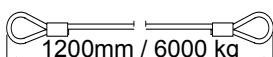
After unloading the main structure, remove the boards and vibration damper plates located under the base, as described on page [342](#).

Lifting the machine

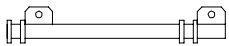
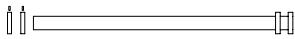
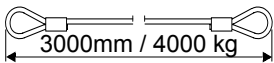
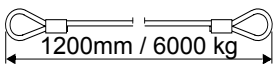
To lift the main structure of the machine use the method illustrated below. No particular procedures are necessary to lift the remaining parts.



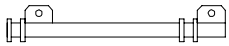
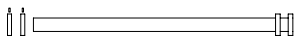
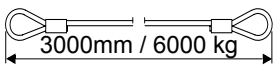
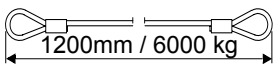
ROVER C 6.40, 6.40 Edge, 6.50, 6.50 Edge, 6.50 WMS, 6.65

Material	Quantity	Supplied
A 	1	yes
B 	2	yes
C 	2	no
D  2500mm / 4000kg	4	yes
E  1200mm / 6000 kg	2	no

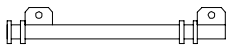
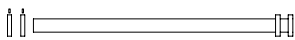
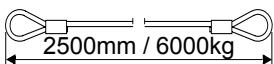
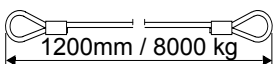
ROVER C 9.40, 9.50

Material	Quantity	Supplied
A 	1	yes
B 	2	yes
C 	2	no
D 	4	yes
E 	2	no

ROVER C 9.65, 9.85 Edge, 9.50 Edge, 9.65 Edge

Material	Quantity	Supplied
A 	1	yes
B 	2	yes
C 	2	no
D 	4	yes
E 	2	no

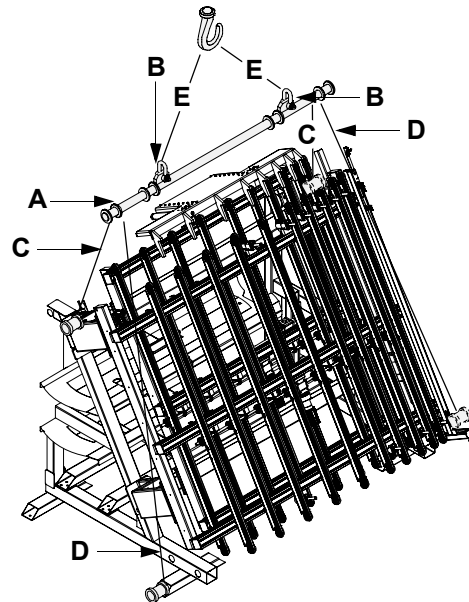
ROVER C 6.65 Edge, 6.65 WMS

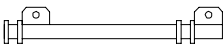
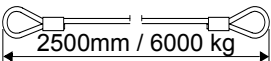
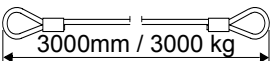
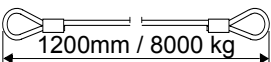
Material	Quantity	Supplied
A 	1	yes
B 	2	yes
C 	2	no
D 	4	yes
E 	2	no



The equipment supplied must not be used for other machines or other purposes.

loading/unloading transfer and Flexstore magazine

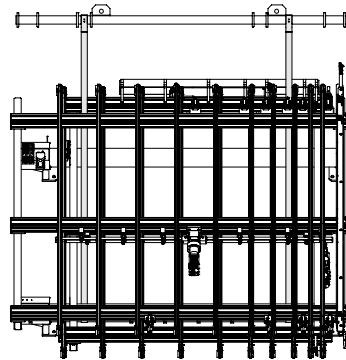
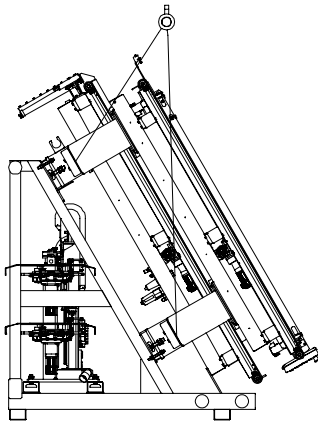


Material	Quantity	Supplied
A 	1	yes
B 	2	no
C  2500mm / 6000 kg	2	yes
D  3000mm / 3000 kg	2	no
E  1200mm / 8000 kg	2	no

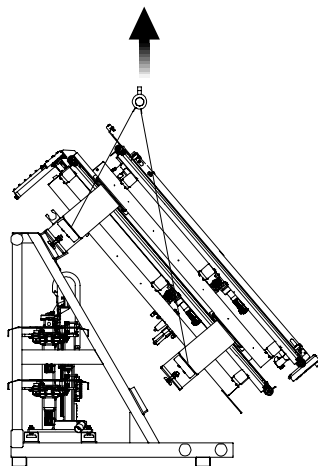
Lifting of the loading/unloading transfer

To lift the loading/unloading transfer, proceed as follows.

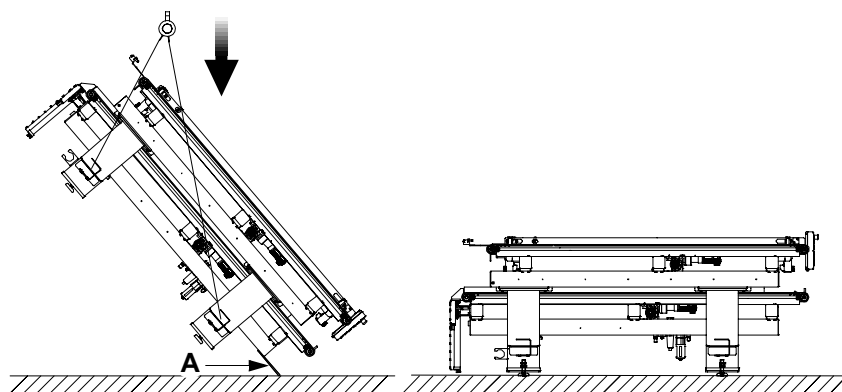
1. Secure the loading/unloading transfer belts according to the figure.



2. Loosen the screws that secure the loading/unloading transfer to the transportation stand.
3. Lift the loading/unloading transfer



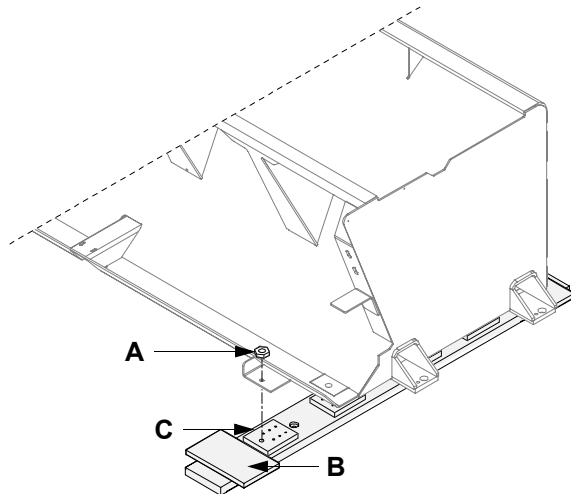
4. Unload the loading/unloading transfer on the ground resting it on the bracket **A**.



5. Remove the bracket.

Removal of the boards and vibration damper plates

Before resting the main structure on the ground, unscrew the nuts **A** and remove the wooden boards **B** and the vibration damper plates **C** from under the base.



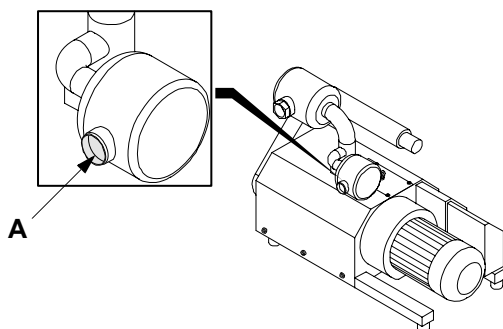
C Installation

This appendix contains indications for the installation of the machine.

C.1 Warnings regarding machine installation

Before proceeding, please read the following warnings carefully:

- The area in which the machine is installed must be properly illuminated, ventilated, of adequate size and fitted with connections for the various supply systems (electrical, pneumatic, etc.). In this regard, see the paragraph “[Machine layout, connection points and working dimensions](#)” on page 344. The systems to which the machine is to be connected and the environment in which it is to be installed must comply with the requirements indicated on page 358.
- The machine cannot be installed in explosive environments.
- Assembly, levelling and connection of the machine must be carried out exclusively by the Service Centre staff. Do not remove the packing, open any cases of material, or above all turn the machine on without the consent of trained, experienced staff. Should the safety seals on the boxes of accessories be tampered with, the manufacturer will not be liable for any missing objects.
- Check the plug **A** of the Busch Mink pump air filter has been removed; if not, remove it immediately.



C.2 Machine layout, connection points and working dimensions

The following illustrates the machine layout with the connection points to the power supply networks and the working dimensions.

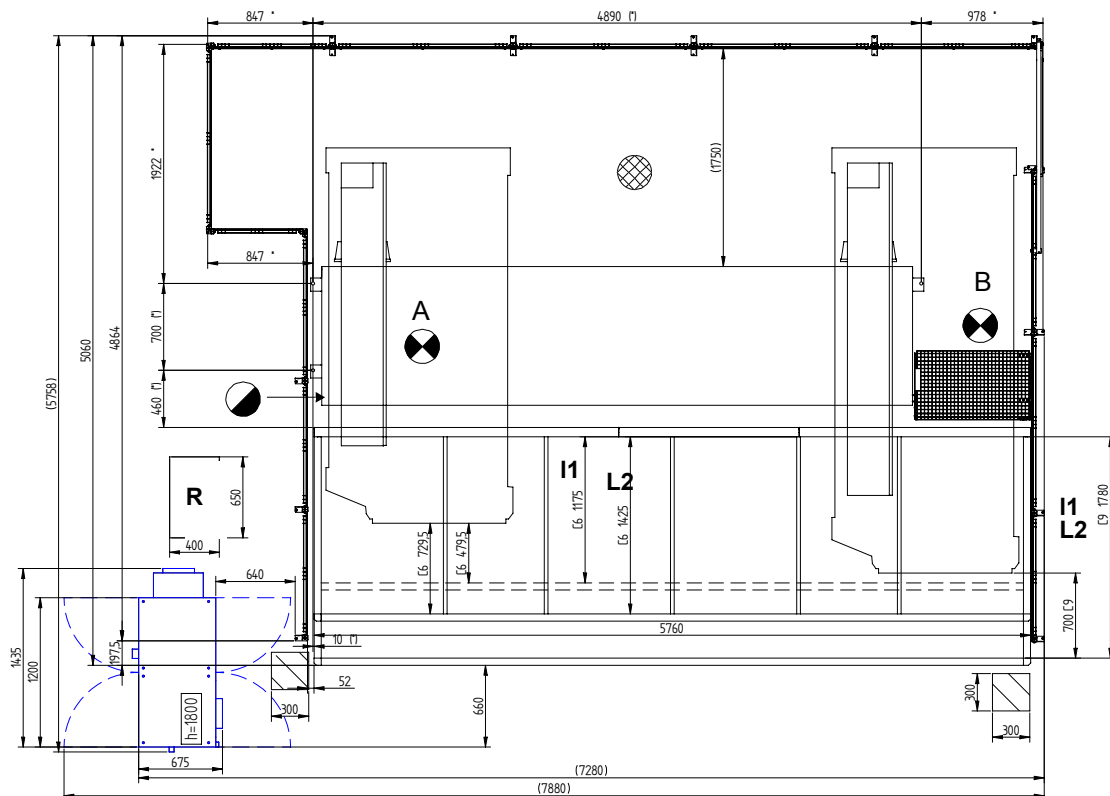
The data relevant to the dimensions and to the positioning of the various items supplied separately from the machine (electrical cabinet, vacuum pump, projectors, etc.) are shown in the sections following the layout of the machine.

Machine layout

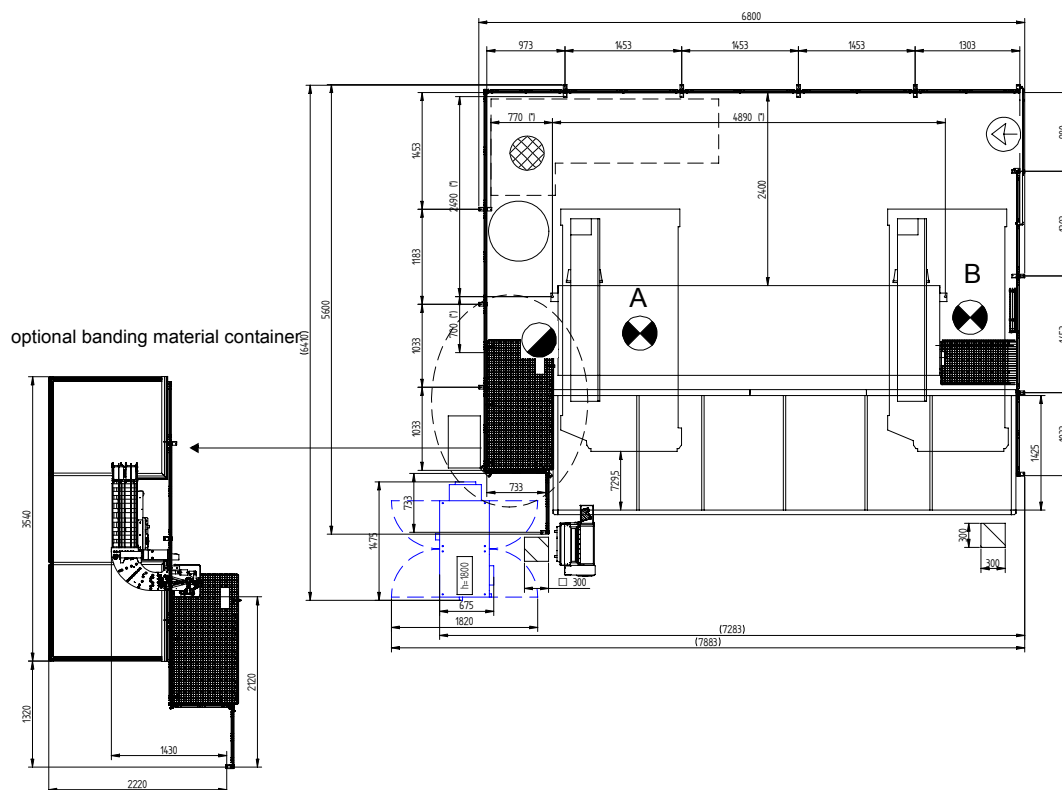
1. [Rover C 6/9 .40 ATS layout](#), page 345
2. [Rover C 6.40 ATS Edge layout](#), page 346
3. [Rover C6/9 .50 ATS Layout](#), page 346
4. [Rover C 6/9 .50 Edge layout](#), page 347
5. [Rover C6/9 .65 ATS layout](#), page 347
6. [Rover C 6/9 .65 Edge layout](#), page 348
7. [Rover C 9.85 Edge ATS layout](#), page 348
8. ["Rover C6/C9 .40/.50/.65 with BH31 layout"](#), page 349
9. ["Rover C6.50 WMS layout"](#), page 349
10. ["Rover C6.50 WMS layout with loading/unloading transfer"](#), page 350
11. ["Rover C6.50 WMS layout with Flexstore magazine"](#), page 350
12. ["Rover C6.50 layout prepared for WMS"](#), page 351
13. ["Rover C6.65 WMS layout"](#), page 351
14. ["Rover C6.65 WMS layout with loading/unloading transfer"](#), page 352
15. ["Rover C6.65 WMS layout with Flexstore magazine"](#), page 352
16. ["Rover C6.65 layout prepared for WMS"](#), page 353

Key

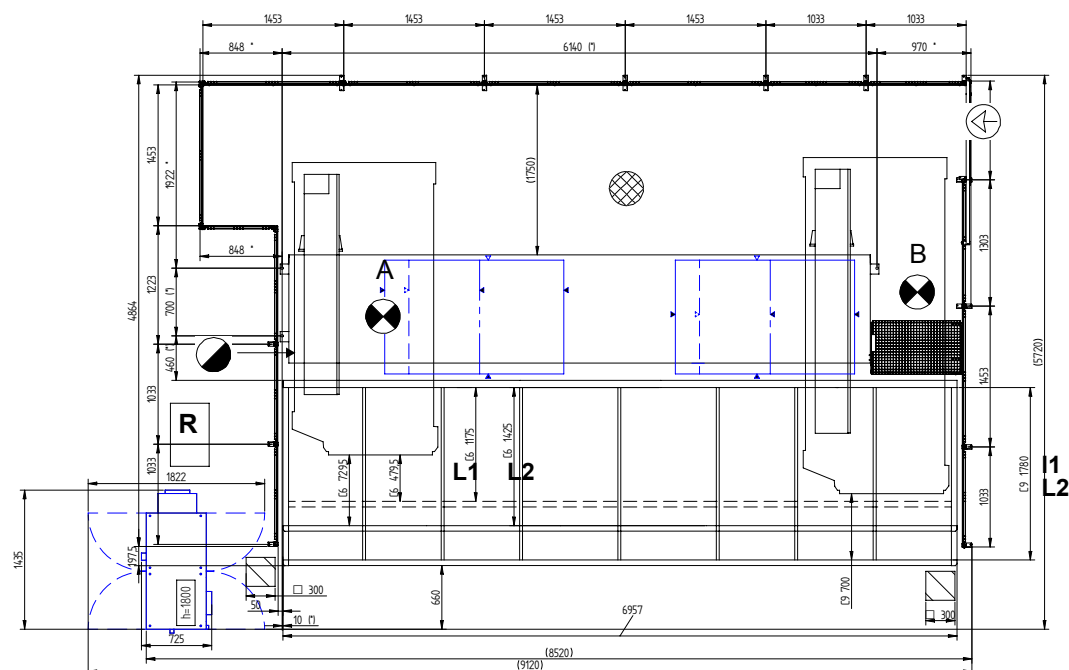
(*)	Position of bores anchoring the machine to the floor.
	Connection point to the compressed air system: 3/8"; pipe with min. internal diameter 15mm; minimum pressure 7.5 bar; height from the ground 500mm.
	Connection point for suction system. • A = main collector: diameter = 250 mm, conf. 1 and 2; 300 mm, conf. 3; height from the ground = 2840 mm, conf. 1 and 2, 3070 mm, conf. 3; • B = waste material container. • F = strip cutting unit. • R = refrigerator.
	Entrance gate.
	Location of the vacuum pump.
I1	Contact mat for non-EC version of machine.
L2	Contact mat for EC version of machine.

Rover C 6/9 .40 ATS layout

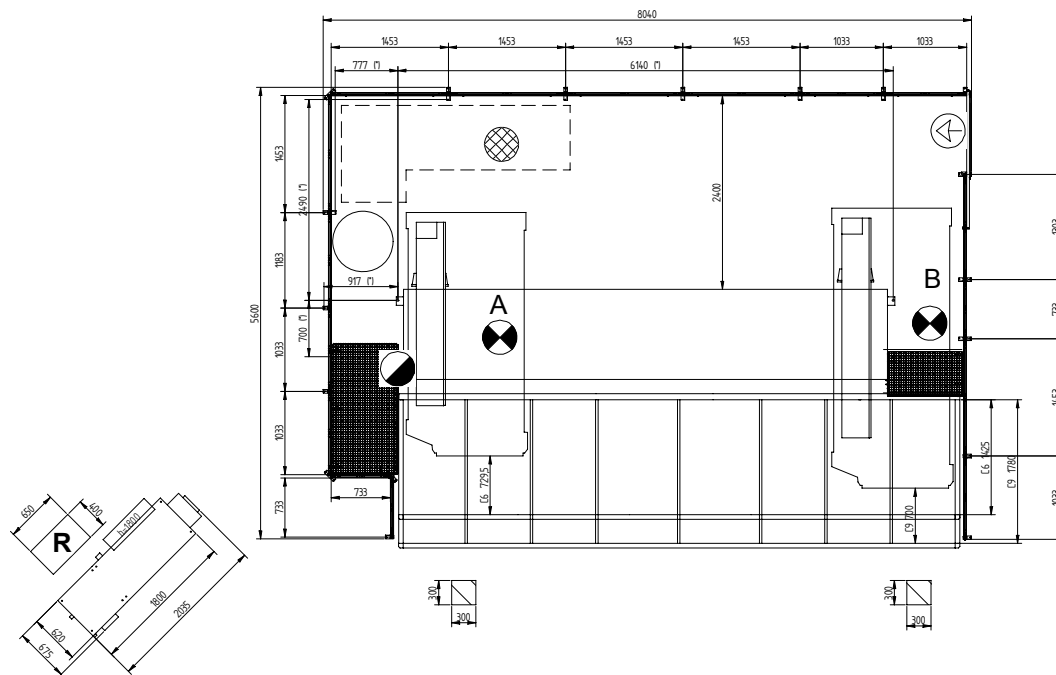
Rover C 6.40 ATS Edge layout



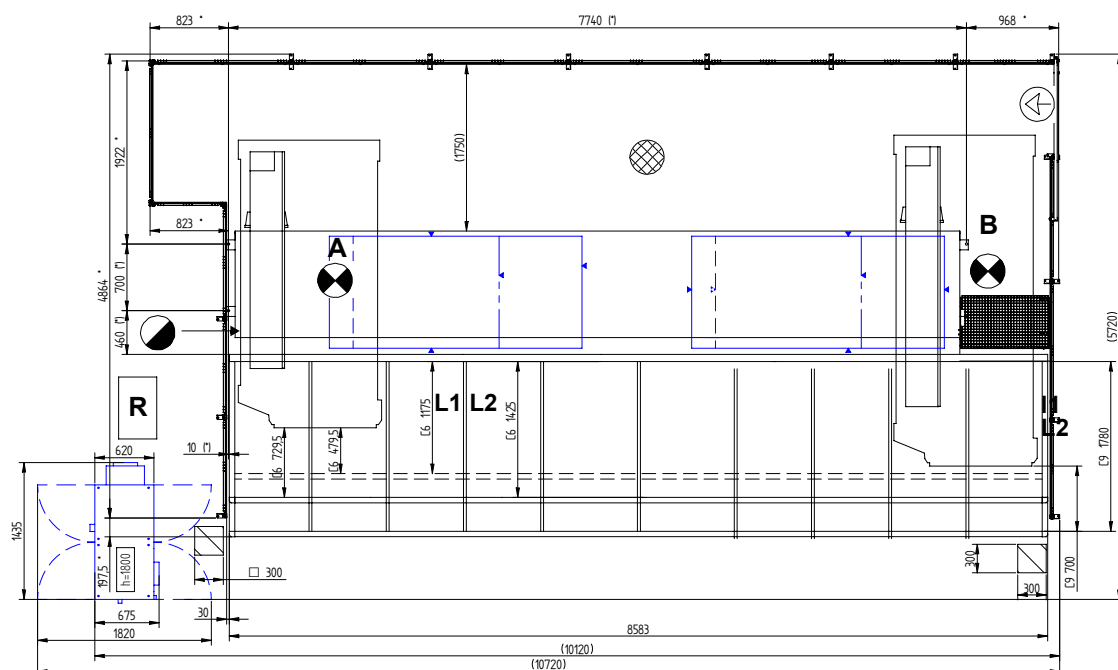
Rover C6/9 .50 ATS Layout



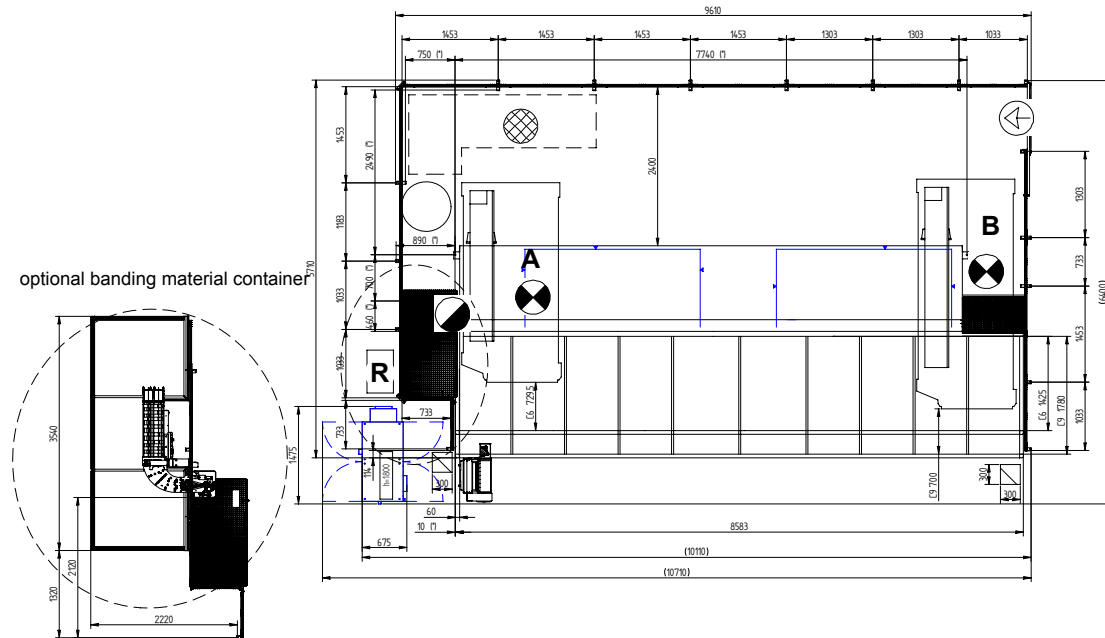
Rover C 6/9 .50 Edge layout



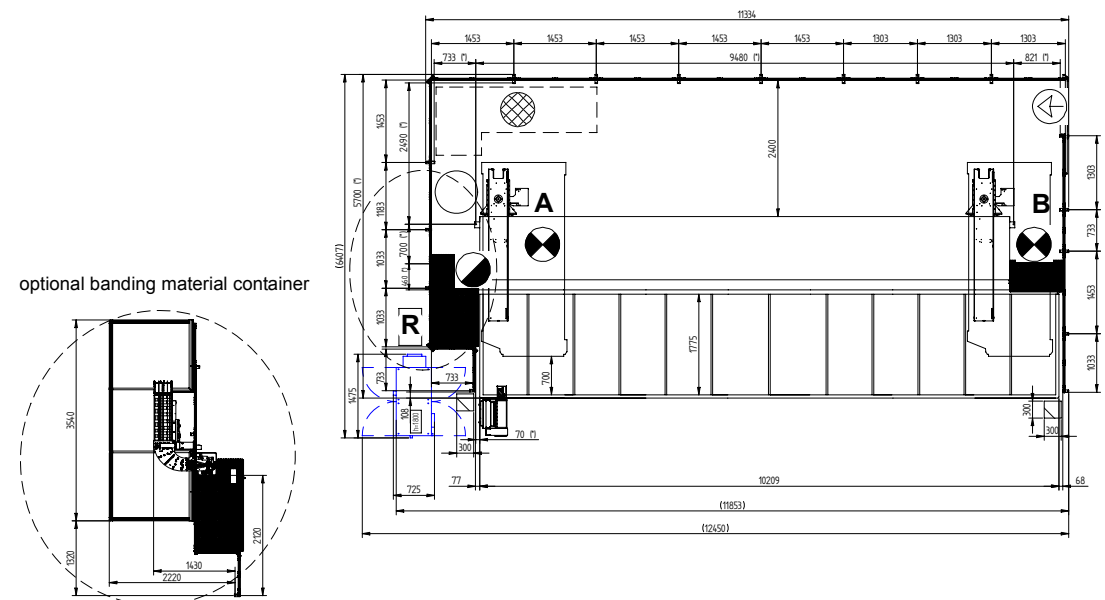
Rover C6/9 .65 ATS layout



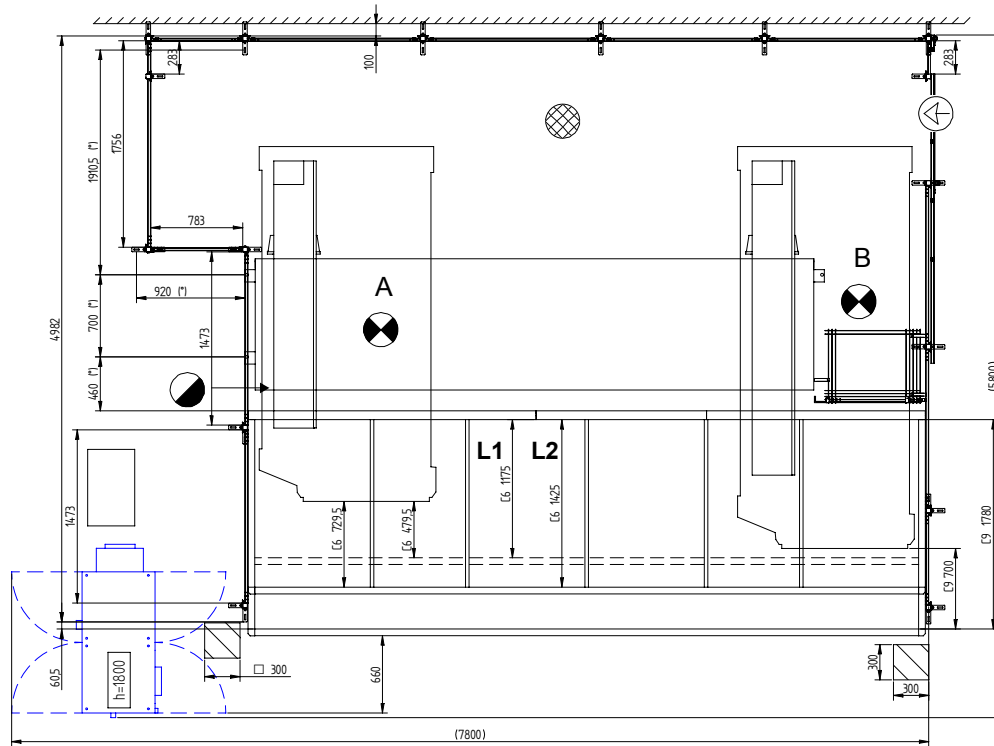
Rover C 6/9 .65 Edge layout



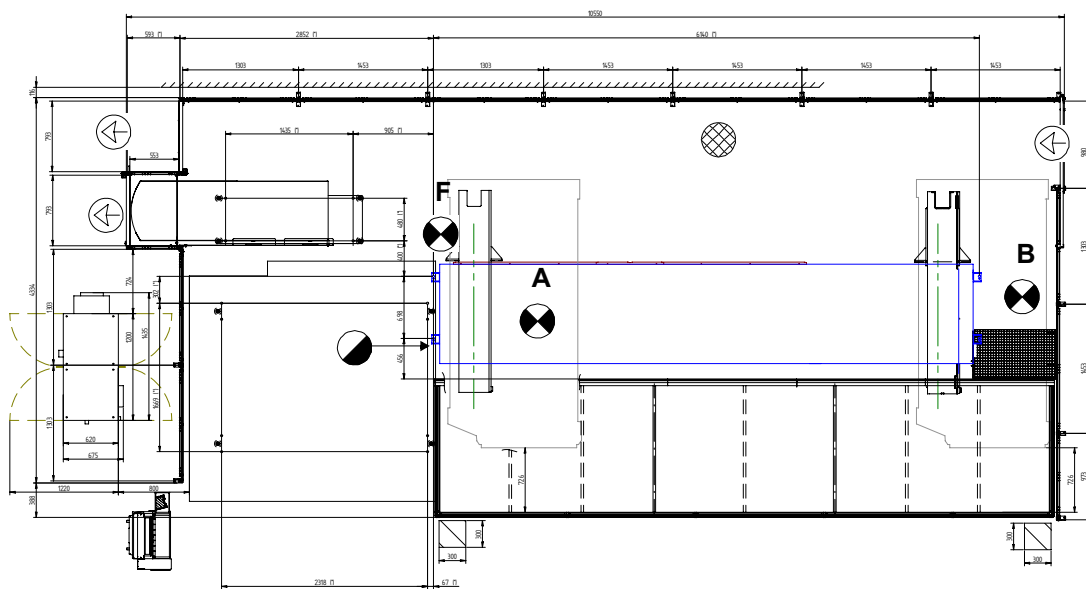
Rover C 9.85 Edge ATS layout



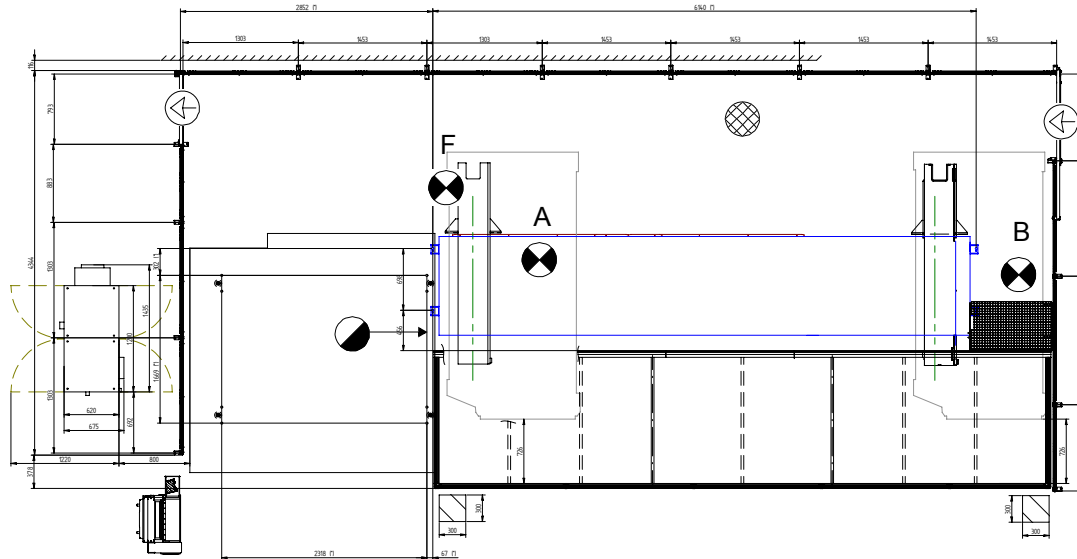
Rover C6/C9 .40/.50/.65 with BH31 layout



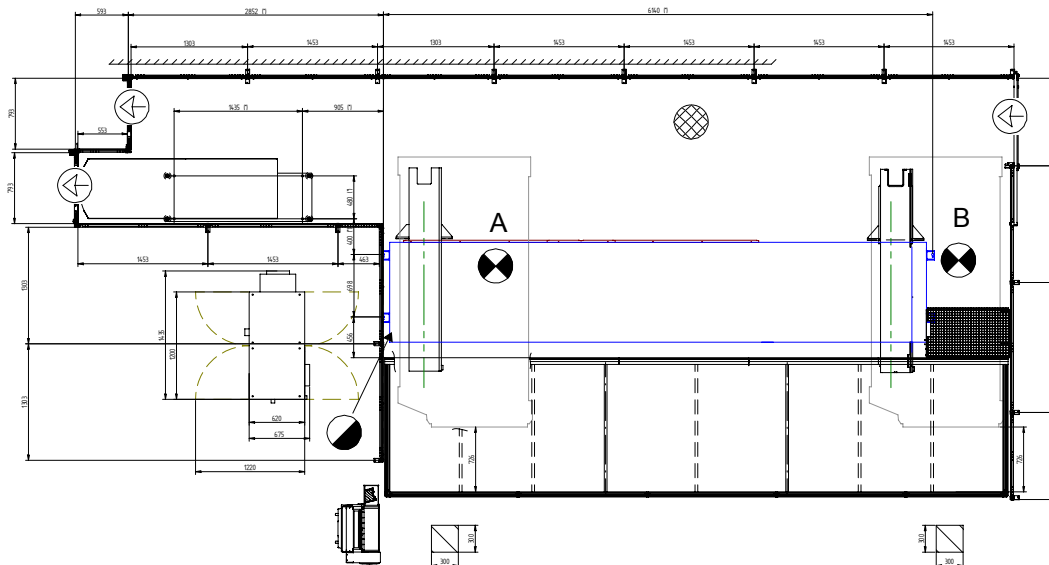
Rover C6.50 WMS layout

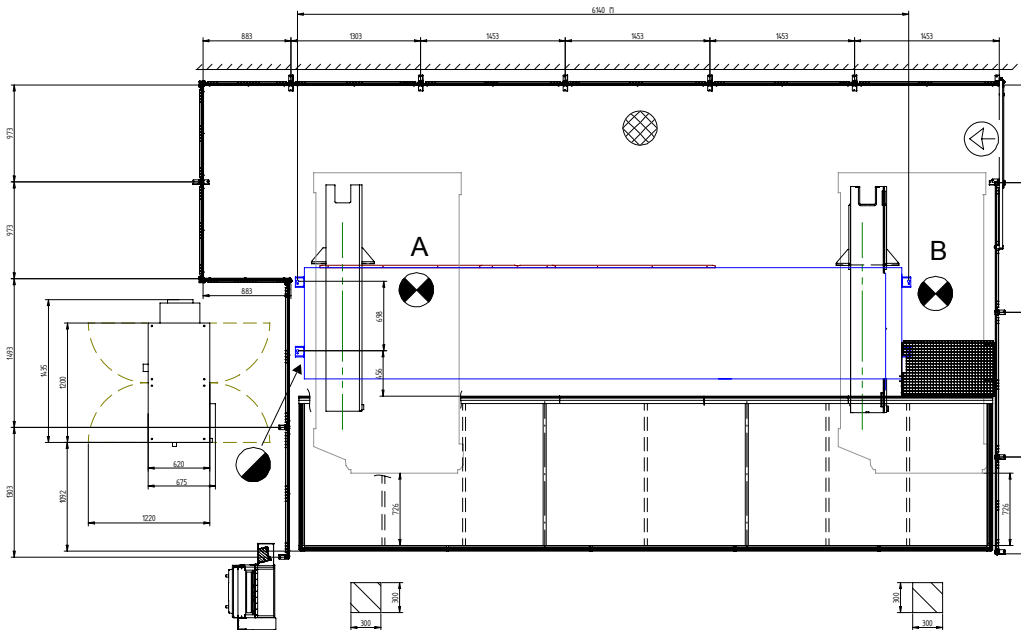
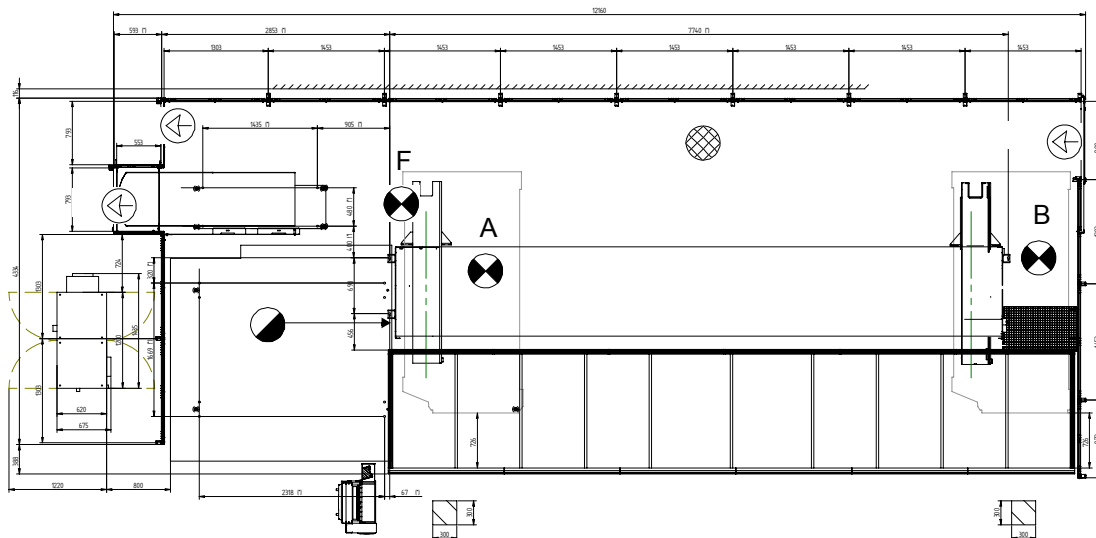


Rover C6.50 WMS layout with loading/unloading transfer

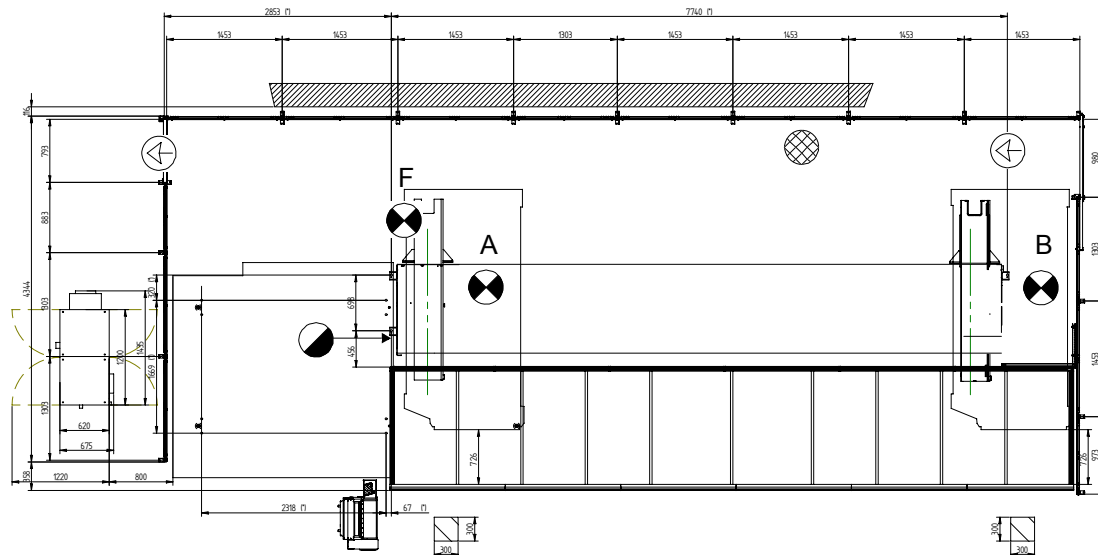


Rover C6.50 WMS layout with Flexstore magazine

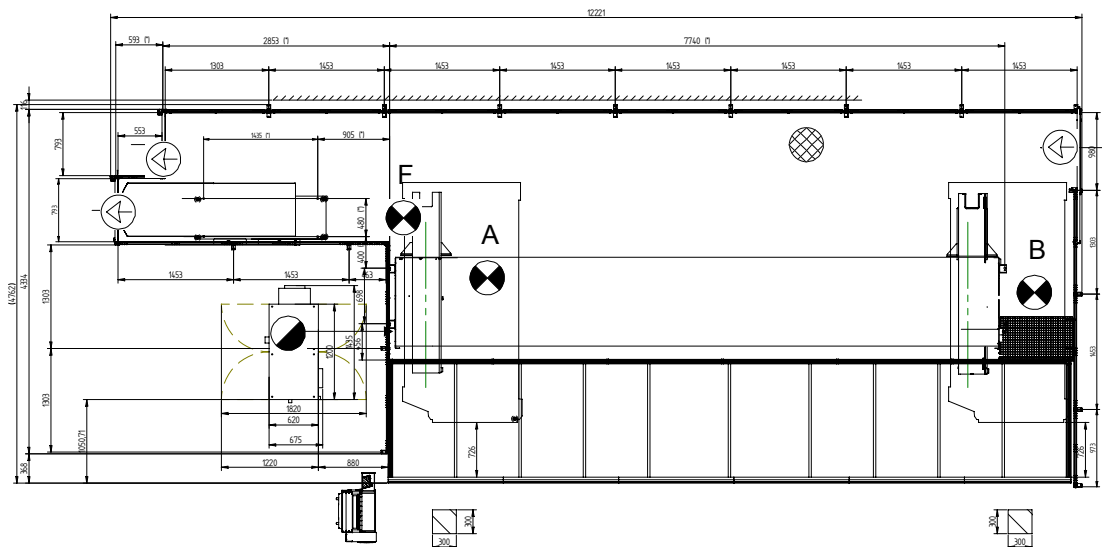


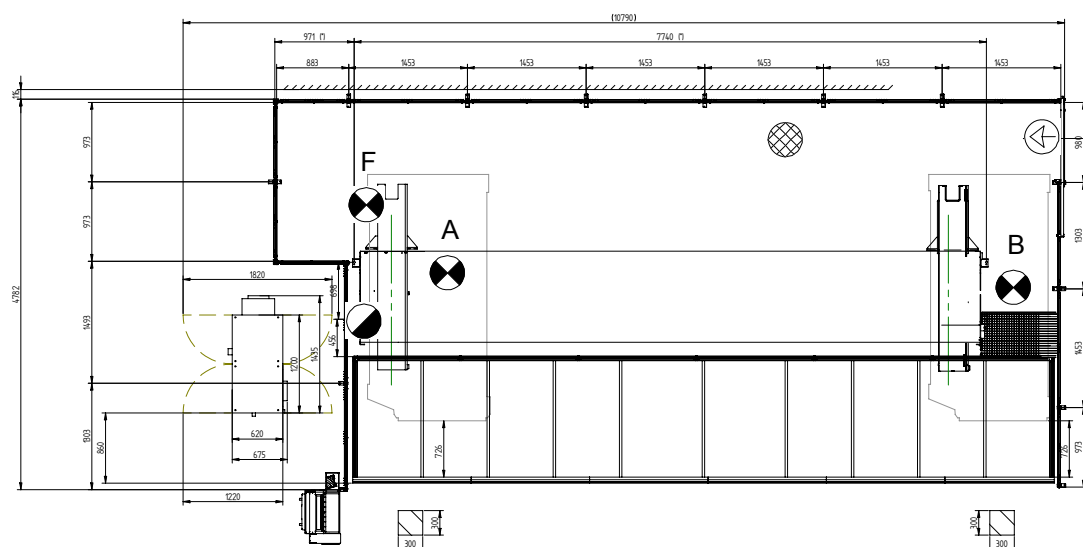
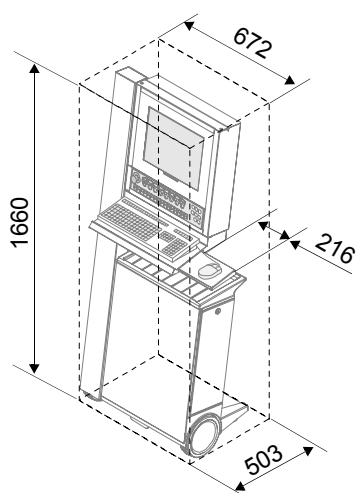
Rover C6.50 layout prepared for WMS**Rover C6.65 WMS layout**

Rover C6.65 WMS layout with loading/unloading transfer

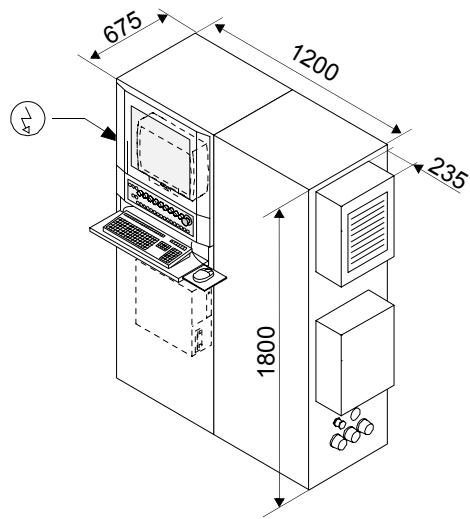


Rover C6.65 WMS layout with Flexstore magazine

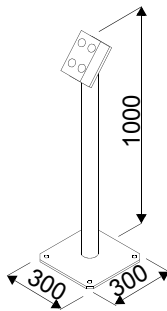


Rover C6.65 layout prepared for WMS**Overall dimensions of the console**

Electrical cabinet dimensions

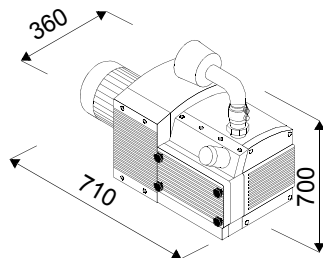


Working dimensions of the working area button pad

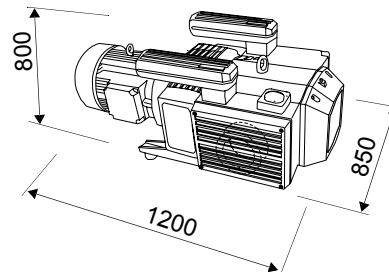


Vacuum pump dimensions

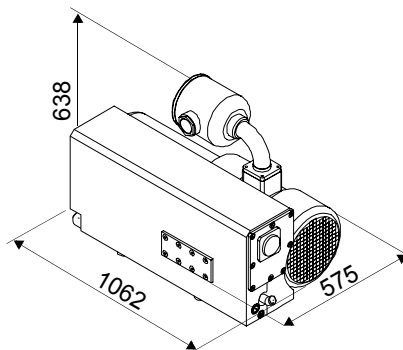
Becker Picchio 2200



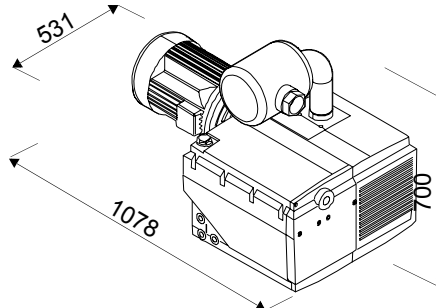
Becker VTLF2.250



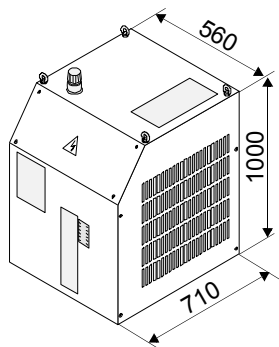
Busch 300



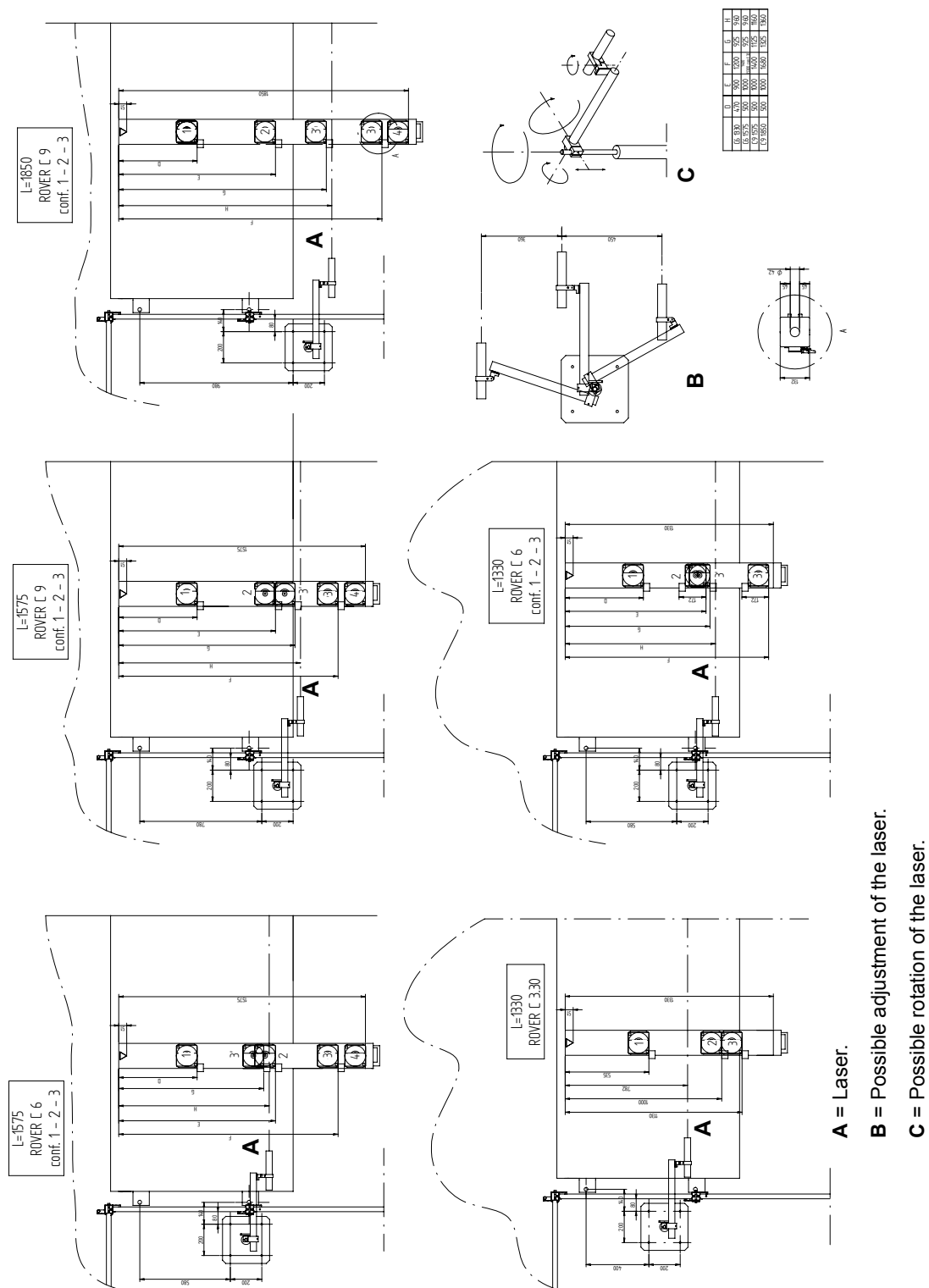
Becker U 4.250 SA/K



Working dimensions of the cooler

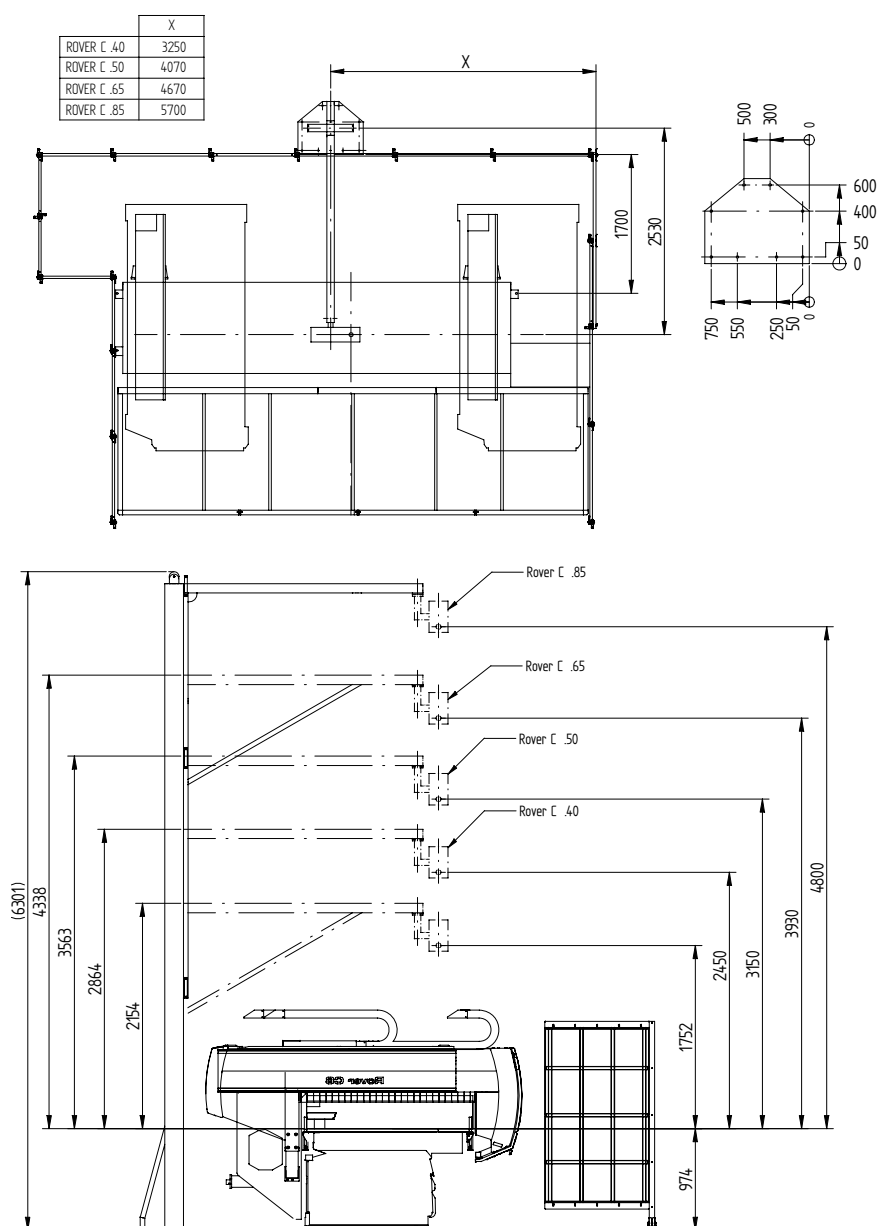


Laser alignment projector location layout



A second laser projector can be installed on the side opposite to the one installed, for pendular machining

Laser geometry projector layout



C.3 Installation area requisites

The following describes the essential requisites both for the various systems to which the machine will be connected and for the environment in which it is to be installed.

Electric system requisites

The quality of the electric system must guarantee the essential requirements indicated in CEI 60204-1, IEC 204-1, unless otherwise agreed with the customer.

- Supply voltage: (see rating plate) with tolerance $\pm 10\%$
- Supply voltage frequency: (see rating plate) with tolerance $\pm 2\%$
- Maximum absorbed power: (see rating plate)
- Harmonic distortion: from second to fifth $< 10\%$ + from sixth to thirtieth $< 2\%$
- Three-phase supply voltage imbalance: $< 2\%$
- Voltage peaks: duration less than 1.5 ms and $< 200\%$ of supply voltage
- Voltage gaps: duration < 3 ms; period > 1 second
- Voltage drops: value $< 20\%$ of peak supply voltage; period > 1 second
- System to comply with standards: IEC 64-8, IEC 364

For mains voltages up to 400V, the machine's electrical cabinet can be connected to a point in the system with a short-circuit current of less than 10 kA R.M.S.(or 17 kA peak). For mains voltages greater than 415V the short circuit current at the connection point must be lower than 5 kA R.M.S. If the presumed short circuit current at the power supply point is greater, it must be restricted.

The machine's electrical equipment is not protected against atmospheric power surges.

The machine is not fitted with phase advancing capacitors.

Differential protection

No differential type protection is foreseen for the machine's electric system. The choice of differential protection must not contrast with current legal requirement, local regulations or the characteristics of the factory and machine electrical system.

Bear in mind the following machine characteristics to ensure you make the correct choice:

1. Electromagnetic disturbance protection devices (mains filter and screening) may produce high frequency leakage current and pulse leakage currents exceeding 30 mA.
The 30 mA differential switches may not guarantee continuous operation under all conditions.
2. The machine may be subject to earth faults even with direct current (IEC 755).
If this is not in contrast with local laws or the characteristics of the system, you are advised to fit differential switches with adjustable currents and trip times, of the type that are not influenced by high frequencies.

It is advisable to use differential switches that are highly resistant to pulse overvoltage caused by atmospheric conditions and manoeuvres (EN 61008-1), and wave tested 8/20 μs $> 1000\text{A}$ (VDE 0432 T2).

Power supply from local generator

If the electricity is supplied by a local generator rather than mains supply, the generator must guarantee the above indicated requisites for the electrical system, while taking also into account that the starting current for the vacuum pumps is 8 to 10 times the machine's specification plate current.

Electrical data of the machine with one 15 or 18 kW inverter for connection to the mains

Cons. = consumption; Fus. = fuses; Sect. = section.

Vacuum pump (m ³ /h)	Consumption KW	200V mains supply			220-230-240V mains supply		
		Cons. A	Fus. A	Sect. mm ²	Cons. A	Fus. A	Sect. mm ²
1 x 90	19	64.0	100	25	58.2	80	25-2
1 x 250	23	78.0	100	25	70.9	80	25-2
2 x 90	23	78.0	100	25	70.9	80	25-2
2 x 250	31	106.0	125	50	96.4	125	35-1
1 x 90 - 1 x 300	27	92.0	125	50	83.6	125	35-1
1 x 90 - 2 x 300	35	120.0	160	50	109.1	125	35-1
1 x 250 - 1 x 300	31	106.0	125	50	96.4	125	35-1
1 x 250 - 2 x 300	39	134.0	160	70	121.8	160	50-1/0
1 x 300	23	78.0	100	25	70.9	80	25-2
2 x 300	31	106.0	160	50	96.4	125	35-1
3 x 300	39	134.0	160	70	121.8	160	50-1/0

Cons. = consumption; Fus. = fuses; Sect. = section.

Vacuum pump (m ³ /h)	Consumption KW	380-400-415V mains supply			440-460-480V mains supply		
		Cons. A	Fus. A	Sect. mm ²	Cons. A	Fus. A	Sect. mm ²
1 x 90	19	32.0	63	16	29.1	50	16-4
1 x 250	23	39.0	63	16	35.5	50	16-4
2 x 90	23	39.0	63	16	35.5	50	16-4
2 x 250	31	53.0	63	16	48.2	60	16-4
1 x 90 - 1 x 300	27	46.0	63	16	41.8	60	16-4
1 x 90 - 2 x 300	35	60.0	80	16	54.5	60	16-4
1 x 250 - 1 x 300	31	53.0	63	16	48.2	60	16-4
1 x 250 - 2 x 300	39	67.0	80	16	60.9	80	16-4
1 x 300	23	39.0	63	16	35.5	50	16-4
2 x 300	31	53.0	63	16	48.2	60	16-4
3 x 300	39	67.0	80	16	60.9	80	16-4

Cons. = consumption; Fus. = fuses; Sect. = section.

Vacuum pump (m ³ /h)	Consumption KW	575-600V mains supply		
		Cons. A	Fus. A	Sect. mm ²
1 x 90	19	21.3	35	16-4
1 x 250	23	26.0	35	16-4
2 x 90	23	26.0	35	16-4
2 x 250	31	35.3	45	16-4
1 x 90 - 1 x 300	27	30.7	45	16-4
1 x 90 - 2 x 300	35	40.0	50	16-4
1 x 250 - 1 x 300	31	35.3	45	16-4
1 x 250 - 2 x 300	39	44.7	60	16-4
1 x 300	23	26.0	35	16-4
2 x 300	31	35.3	50	16-4
3 x 300	39	44.7	60	16-4

Electrical data of the machine with two 15 or 18 kW inverters for connection to the mains

Cons. = consumption; Fus. = fuses; Sect. = section.

Vacuum pump (m ³ /h)	Consumption KW	200V mains supply			220-230-240V mains supply		
		Cons. A	Fus. A	Sect. mm ²	Cons. A	Fus. A	Sect. mm ²
1 x 90	32	108.0	160	50	98.2	125	35-1
1 x 250	36	122.0	160	50	110.9	125	35-1
2 x 90	36	122.0	160	50	110.9	125	35-1
2 x 250	44	150.0	200	70	136.4	160	70-3/0
1 x 90 - 1 x 300	40	136.0	160	70	123.6	160	50-1/0
1 x 90 - 2 x 300	48	164.0	160	70	149.1	160	50-1/0
1 x 250 - 1 x 300	44	150.0	160	70	136.4	160	50-1/0
1 x 250 - 2 x 300	52	178.0	200	95	161.8	200	70-3/0
1 x 300	36	122.0	160	50	110.9	125	35-1
2 x 300	44	150.0	160	70	136.4	160	50-1/0
3 x 300	52	178.0	200	95	161.8	200	70-3/0

Cons. = consumption; Fus. = fuses; Sect. = section.

Vacuum pump (m ³ /h)	Consumption KW	380-400-415V mains supply			440-460-480V mains supply		
		Cons. A	Fus. A	Sect. mm ²	Cons. A	Fus. A	Sect. mm ²
1 x 90	32	54.0	80	16	49.1	70	16-4

Vacuum pump (m ³ /h)	Consumption KW	380-400-415V mains supply			440-460-480V mains supply		
		Cons. A	Fus. A	Sect. mm ²	Cons. A	Fus. A	Sect. mm ²
1 x 250	36	61.0	80	16	55.5	70	16-4
2 x 90	36	61.0	80	16	55.5	70	16-4
2 x 250	44	75.0	80	25	68.2	80	16-4
1 x 90 - 1 x 300	40	68.0	80	16	61.8	80	16-4
1 x 90 - 2 x 300	48	82.0	100	25	74.5	80	16-4
1 x 250 - 1 x 300	44	75.0	80	25	68.2	80	16-4
1 x 250 - 2 x 300	52	89.0	100	25	80.9	100	25-2
1 x 300	36	61.0	80	16	55.5	60	16-4
2 x 300	44	75.0	80	25	68.2	80	16-4
3 x 300	52	89.0	100	25	80.9	100	25-2

Cons. = consumption; Fus. = fuses; Sect. = section.

Vacuum pump (m ³ /h)	Consumption KW	575-600V mains supply		
		Cons. A	Fus. A	Sect. mm ²
1 x 90	32	36.0	50	16-4
1 x 250	36	40.7	50	16-4
2 x 90	36	40.7	50	16-4
2 x 250	44	50.0	60	16-4
1 x 90 - 1 x 300	40	45.3	60	16-4
1 x 90 - 2 x 300	48	54.7	60	16-4
1 x 250 - 1 x 300	44	50.0	60	16-4
1 x 250 - 2 x 300	52	59.3	80	16-4
1 x 300	36	40.7	50	16-4
2 x 300	44	50.0	60	16-4
3 x 300	52	59.3	80	16-4

Installed electrical power

The power output depends on the number and capacity of vacuum pumps as shown in the table. The minimum installed power indicated on the machine rating plate always comprises the power required for 2 vacuum pumps of 90 m³/h (or one of 250 m³/h), even if they are not present in the machine.

The power factor taken into account is 0.85.

Fuses

At the mains electricity connection point there must be safety protection in the form of fuses for the connection cable, for the cut-off switch and any autotransformer present. Uses GI/Gg type fuses for IEC regulations, or J type for UL and CSA (or equivalent) regulations. Fuse sizes are given in the table above.

The power supply cable, the electrical cabinet cut-out and any autotransformers can be protected by automatic switches. When selecting the type of automatic switch to be used, bear in mind the following conditions:

- The automatic switch thermal current must be calibrated to the same value as that of the cut-out.
- the magnetic current must be set to between 7 and 12 times the rated thermal current.
- the automatic switch must have a cut-out power exceeding the short circuit current at the point of installation.
- the current limited by the switch must be less than 10 kA (5 kA for voltages >415V) with a short circuit current equal to that at the installation point (see the switch limiting characteristics).

Connection cable

The mains connection cable must have a cross-section chosen according to the size of fuses, or automatic switches, and the length of the connection itself. Minimum and maximum cross section areas are given in the table above.

It is advisable for the cable to be shielded or fed through a metal conduit so as to reduce possible electromagnetic interference. The screening or metal raceway must be earthed.

Requisites for the compressed air system

- The compressed air system must guarantee a supply pressure of at least 7.5 bar.
- The machine consumes an average of approximately 400 NL/min of compressed air.
- According to standard ISO 8573-1, the compressed air admitted to the machine must satisfy the following cleanliness requirements:
 - Solids particles Class 7: Dimension < 40 micron; Concentration < 10mg/m³;
 - Humidity Class 4: Dew point temperature < 3°C;
 - Oil Class 4: Concentration < 5 mg/m³.

Suction system requisites

- The suction system must be permanently connected to the machine, must work with it and must continuously supply a minimum flow speed of 30m/sec.
- The static pressure at the connection point on the operating section (main collector) is:
Conf. 1/2 = 2800 Pa; Conf. 3 = 3000 Pa.
- The consumption of intake air, essential in order to adapt the system, is 5300 m³/h, for machines in configuration 1 and 2, and 7632 m³/h, for machines in configuration 3.
- A guillotine valve type device must be provided on the pipe connecting the suction system to the machine, so that the machine can be cut off when necessary from the main system. This valve must be in an easily accessible position and in full view of the operator.



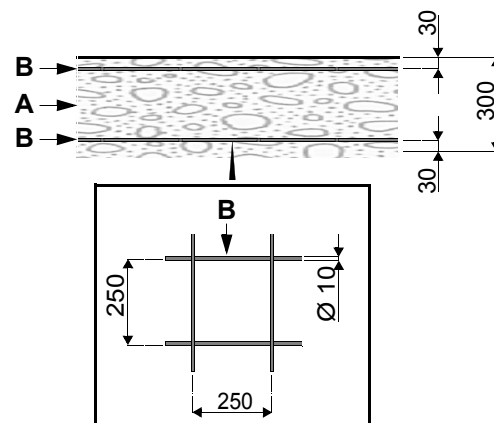
Insufficient system performance may damage health.

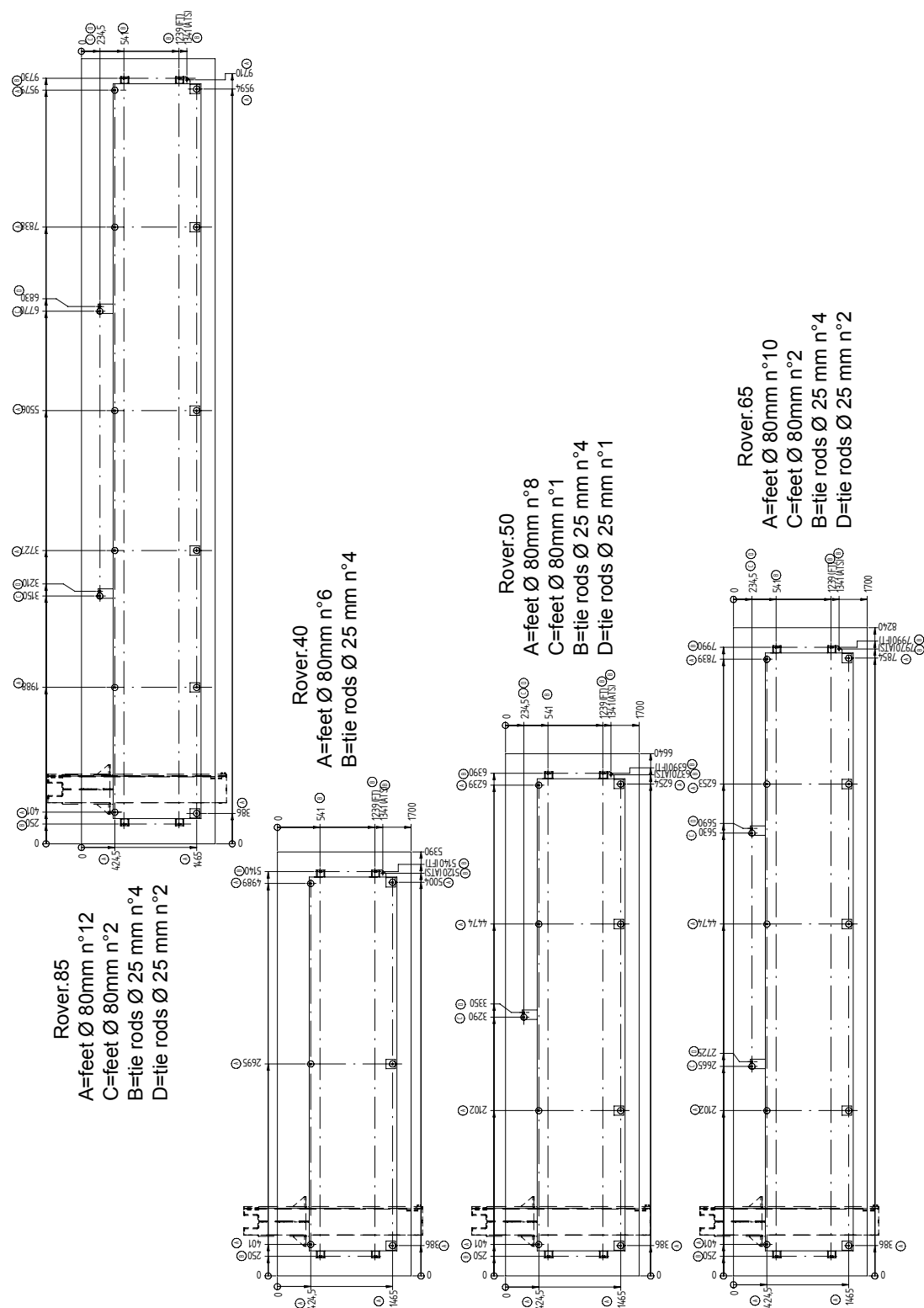
Requirements when anchoring the machine to the floor

Cross-section of flooring

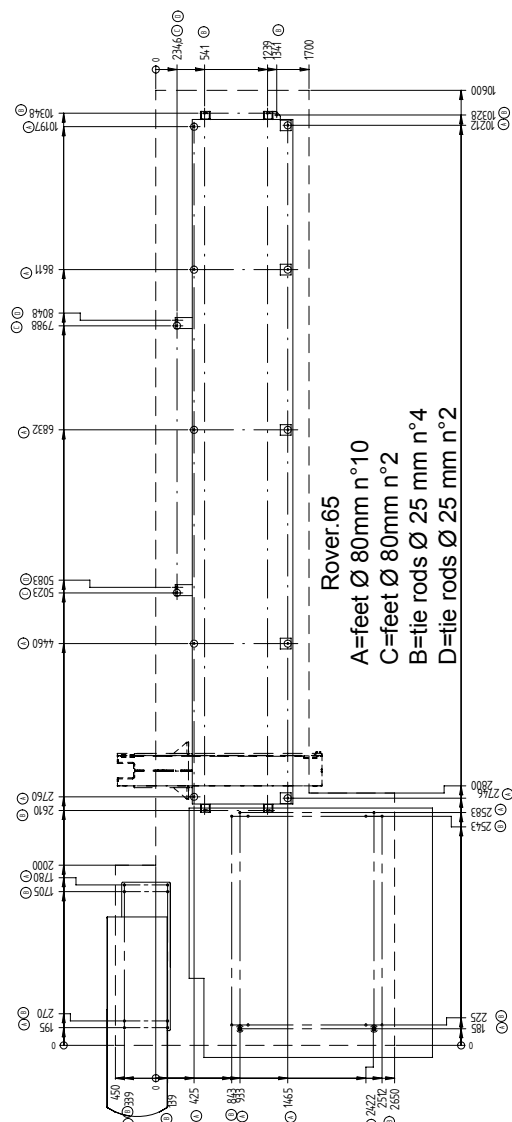
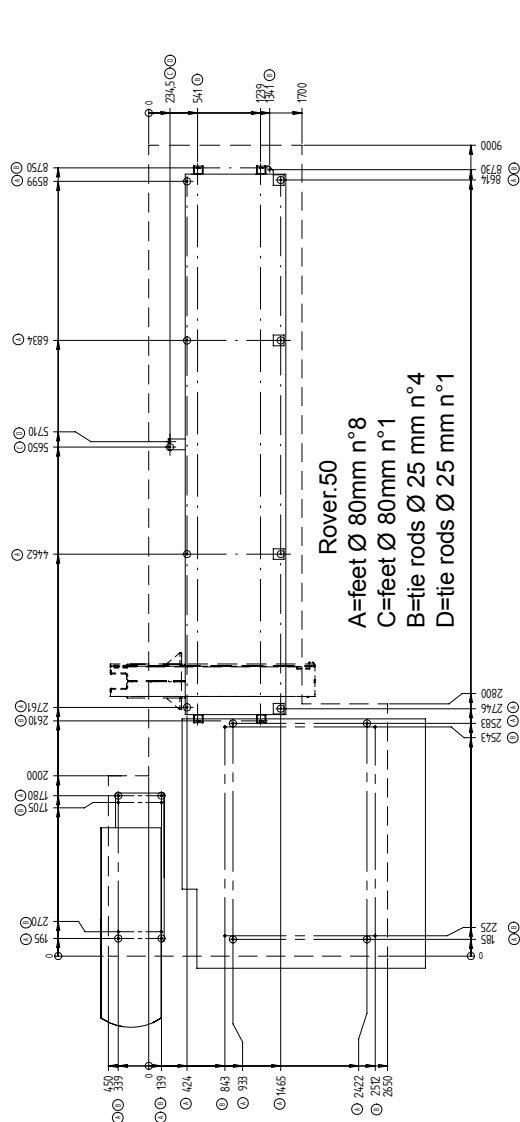
A - Concrete.

B - Grill.





NOTE: Do not use the feet C to level the machine.



NOTE: Do not use the feet C to level the machine.

Vertical forces

- Maximum static load on each side support foot: 2000kg.
- Maximum unitary static load on each side support foot: 6.5 N/mm².
- Maximum static load on each internal support foot: 1200kg.
- Maximum unitary static load on each internal support foot: 4 N/mm²
- Maximum dynamic load on each support foot: 150kg.
- Maximum unitary dynamic load on each support foot: 0.5 N/mm²
- Maximum static load created by tie rod on each side support foot: 2200kg.
- Maximum unitary static load created by tie rod on each side support foot: 7.2 N/mm²
- Maximum unitary load on each internal support foot: $(6.5 + 0.5) = 7$ N/mm²
- Maximum unitary load on each side support foot: $(4 + 0.5 + 7.2) = 11.7$ N/mm²

Horizontal forces

- Tangential dynamic load on each support foot: 240kg.

Levelling

- Maximum planar error of flooring: 25mm/m (not accumable).
- Maximum inclination of the floor in all directions: 0.4%.

Environmental requisites

- Temperature: from 0 to +40 °C
- Maximum relative humidity: 90% (without condensation)
- Maximum altitude: 1000m (unless agreed otherwise with the customer)



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