Contents

DMG MORI design

11-6-360 Layouts, Installation, Connections and Transport 'DMF 360-11' (*linear*)

Update as of series 5077

DMF 360-11

DMG MORI design

Legend: L/D layout - length / depth, W - width, H clear installation height,

G installation weight *3): with max load for workpieces/clamping means, tools, operating media in the machine with 5 axes

Std. installation height: **3.2 m** ; differs with option: signal light: **3.5 m;** [Weights swarf conveyors or ICS – paper-type filter with cooling water separately]

*3) Weight G for machine without option B-axis (approx. -350 kg) and integrated C axis (approx. 500 kg) up to 850 kg of the weight accounts for, for 2nd C-axis approx. + 350 kg or more bodies in addition note

	Magazine type	Additional options		Installation area		Weight
DMF 360	Number of pockets			L/D – depth [m]	W - width [m]	G *3) [approx.kg]
SK 40 / HSK-A63	**30 pockets**	[incl. chip conveyor as std.]		6.88	12.98	41 100
		with ICS BFS 600 / 980 and/or hydr. clamping unit		7.20 / 7.91	12.98	
	60 pockets					41 520
	120 pockets					42 260
SK 50 / HSK-A100	**30 pockets**					41 220
	60 pockets	[incl. chip conveyor as std.]		6.88	12.49	42 760
		with ICS BFS 600 / 980 and/or hydr. clamping unit		7.20 / 7.91	12.49	
	120 pockets					43 440

Note on external options:

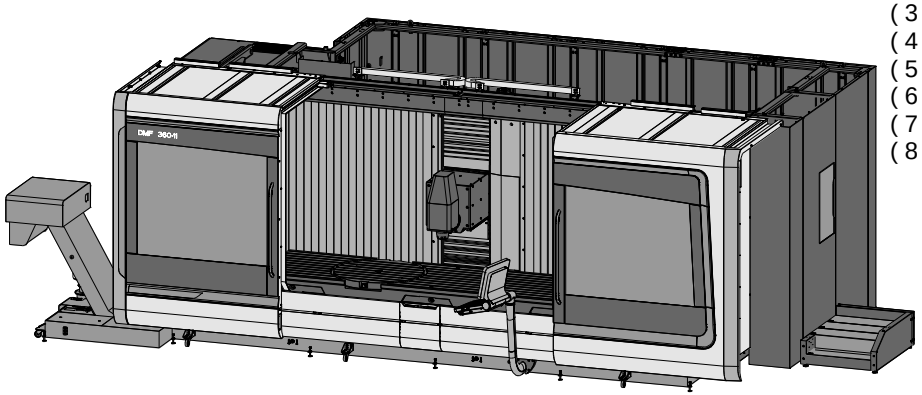
	Width x Depth x Height
Hydraulic clamping unit	1060 x 800 x 1400
ICS band-pass filter 600l	1523 x 1435 x 1845
Band-pass filter 980 l	1960 x 1820 x 1845

CAUTION ! Additionally, escape routes and safety areas must be observed in accordance with local regulations, laws and instructions.

Notes on individual layout details

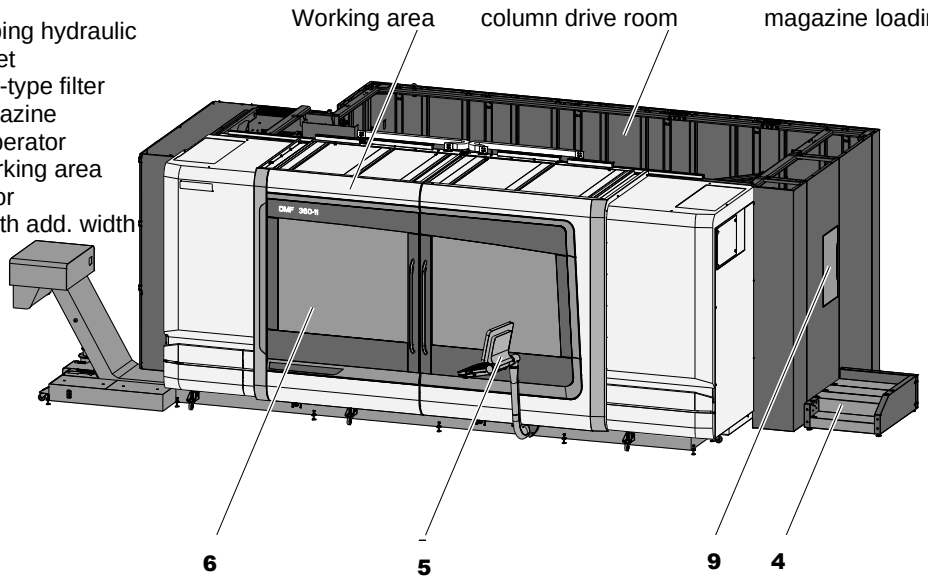
Machine views

Front: 30 tool pockets

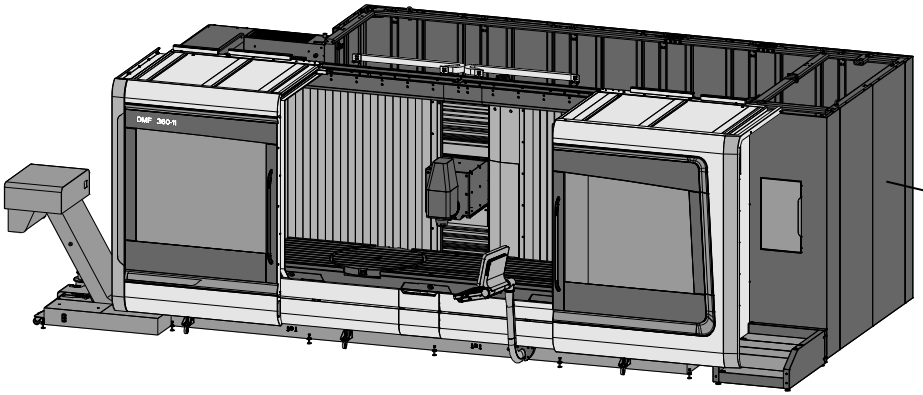


(1) option clamping hydraulic
(2) media cabinet
(3) option paper-type filter
(4) support magazine
(5) consol for operator
(6) 2x doors working area
(7) chip conveyor
(8) magazine with add. width

Front: 30 tool pockets **with Chip conveyor** [in standard]

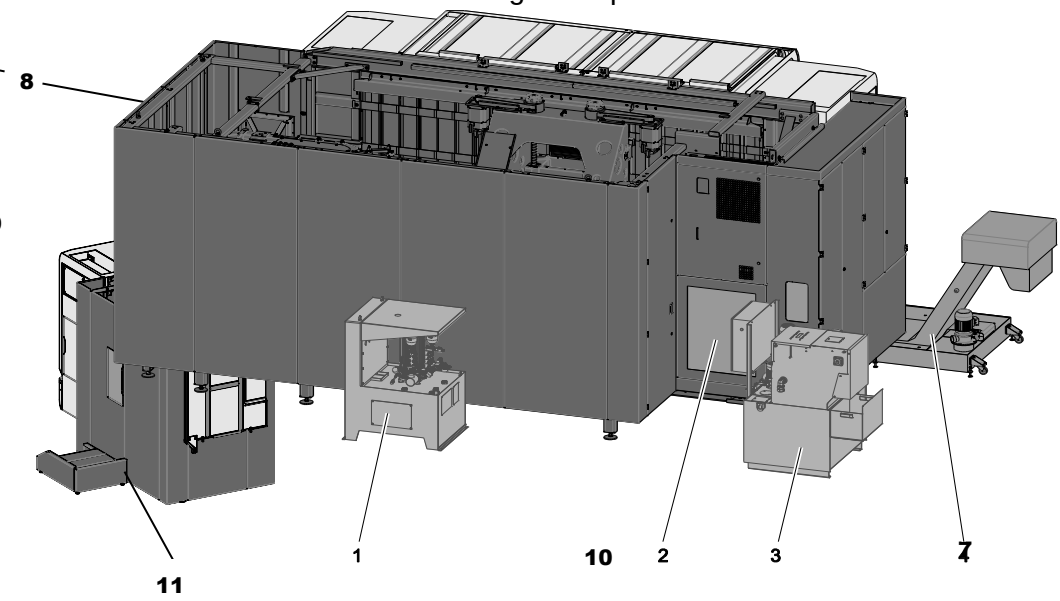


Front: 60-120 tool pockets



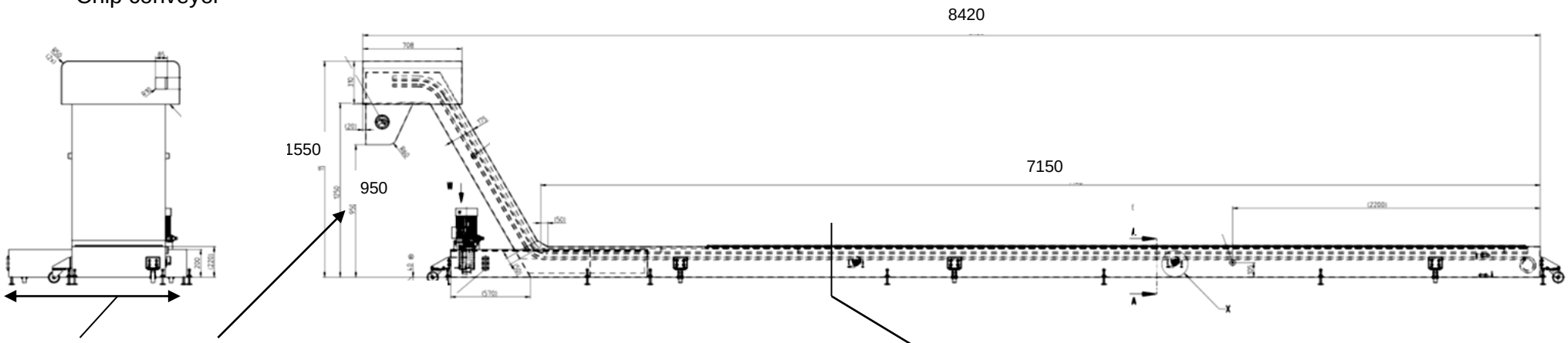
(9) magazine loading
(10) service door column drive door
(11) option Part. wall – parking place

Back side – viewing with options:



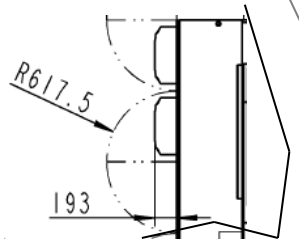
Layout notes

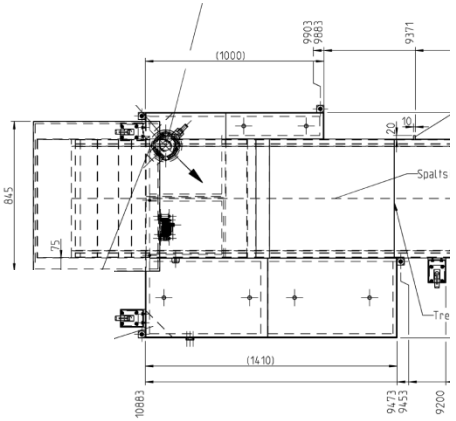
- Chip conveyor

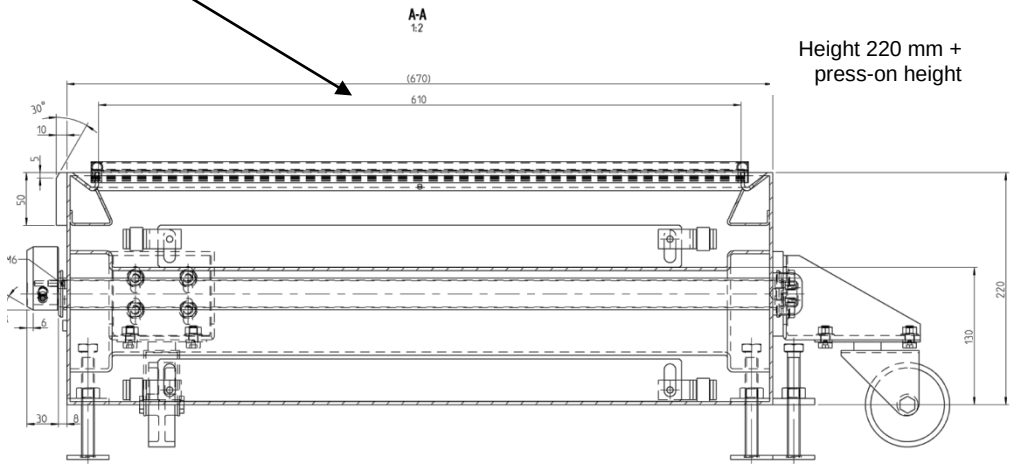


- Control cabinet cooling unit

  Standard: 1x,
  with options 2x







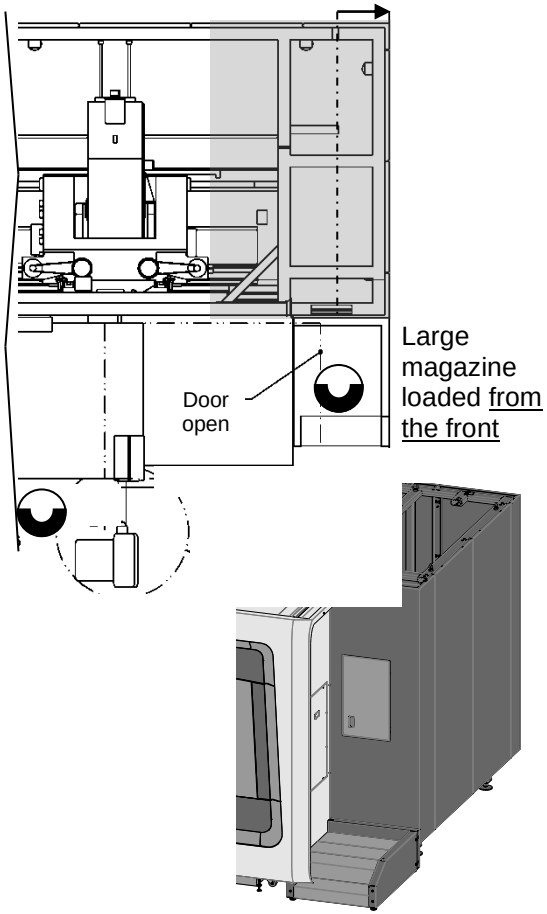
Options influencing the layout dimensions:

- Changed dimensions for **tool magazines**:

  60 + 120 po. with SK50 / HSK-A100

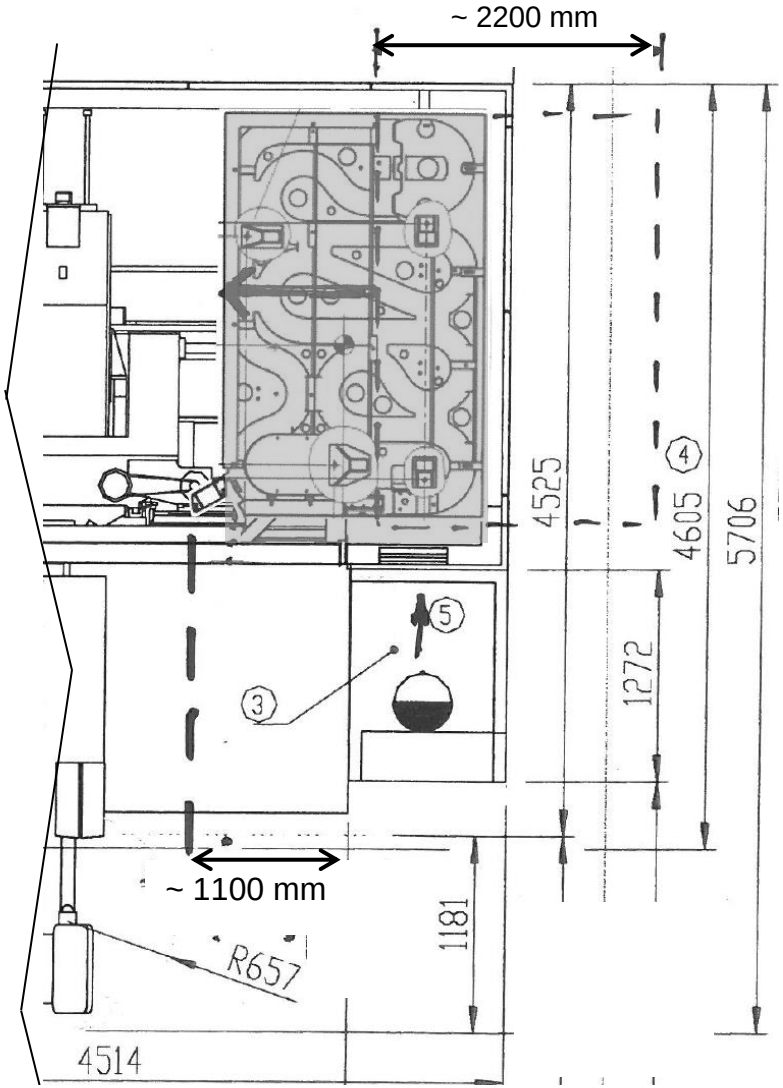
  Magazine is connected during commissioning as separate installation element [increased installation width + 500 mm]

  The magazine pushed into the machine from the right by approx. 1100 mm. At the time of machine installation, this requires a clearance of > 2.2 m. [This must also be taken into account for service works]



Large magazine loaded from the front

Image from the right without metal cladding:



Options influencing the layout dimensions:

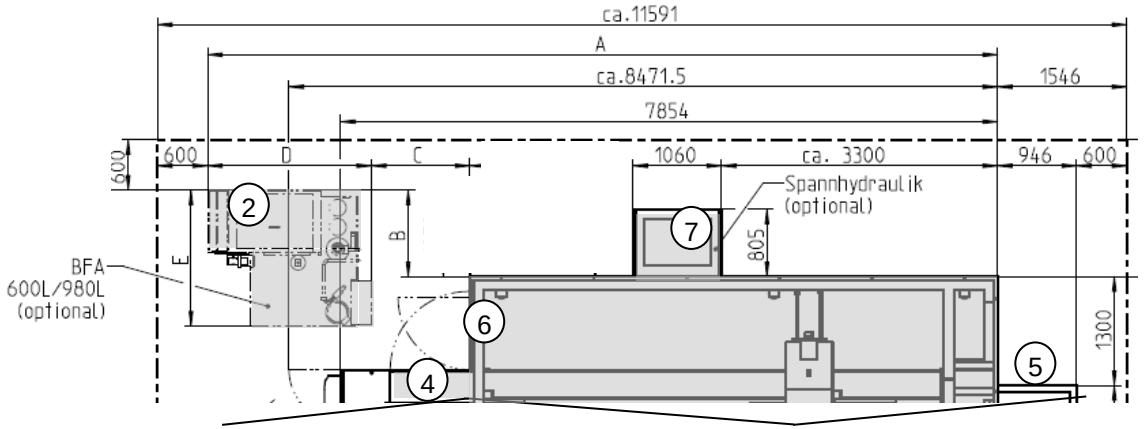
- BFS – band-pass filter system for ICS (2) in different sizes

A - option-dependent ISO 40 / ISO 50

BFS	600 l	980 l
A	9136	9445
B	321	1035
C	1304	1177
D / L	1523	1960
E / T	1340	1625
H	1845	1845

B…E = Layout dimensions

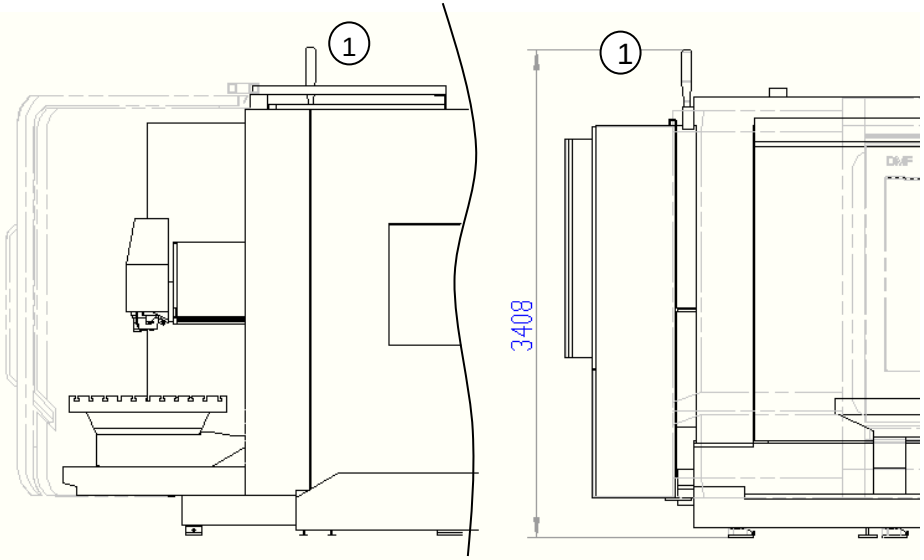
L/D/H = BFS dimensions



For details → see chap. 15-2

- Optional signal light (1), front view

Side view / front view



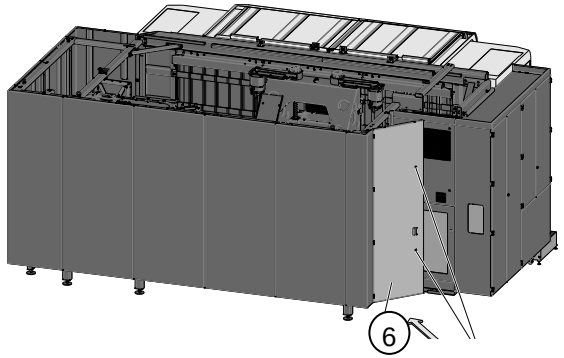
- Hydraulic clamping system:

Hydraulic unit (5) positioned

separately behind the machine

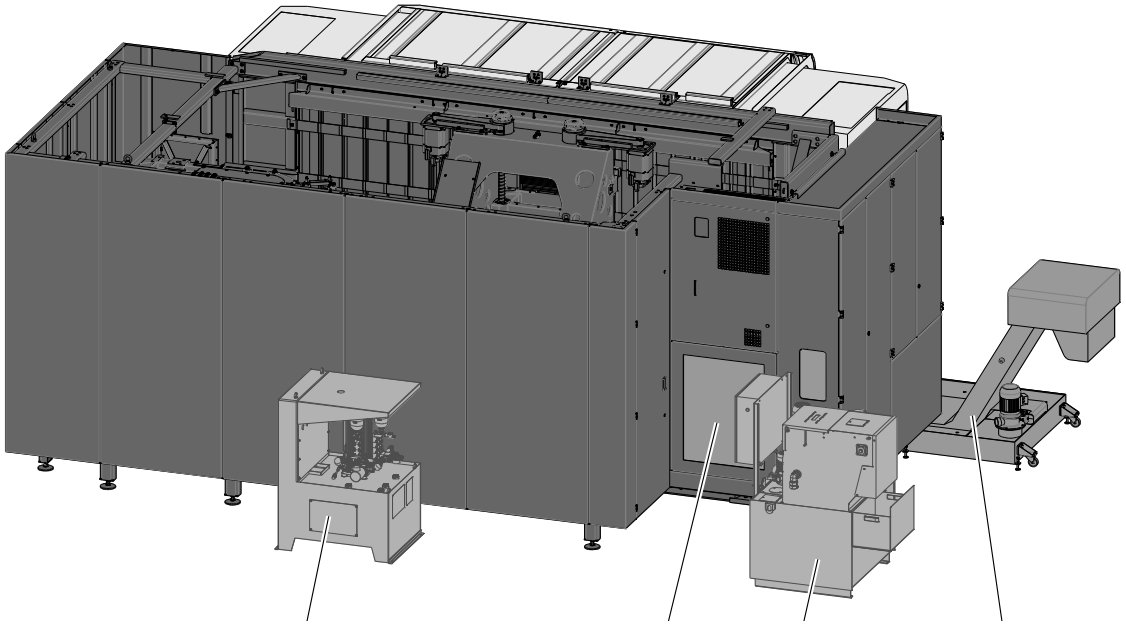
- Entry to column area:

Service door on backside (6):

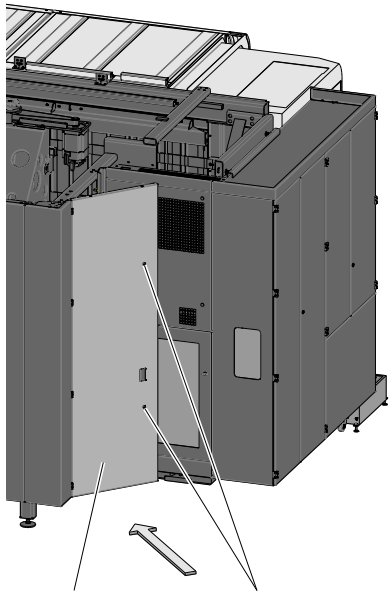


(6) Console for tool loading
(7) Traveling column service door
(2) Cooling unit for control cabinet

View on the machine from the rear



Hydr. clamping unit | Media cabinet | Band-pass filter system | Chip conveyor

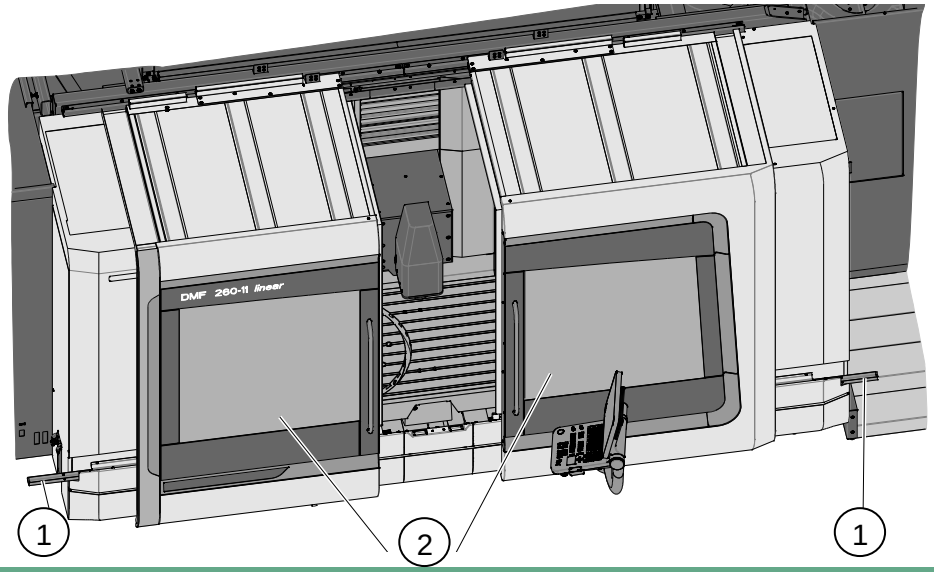


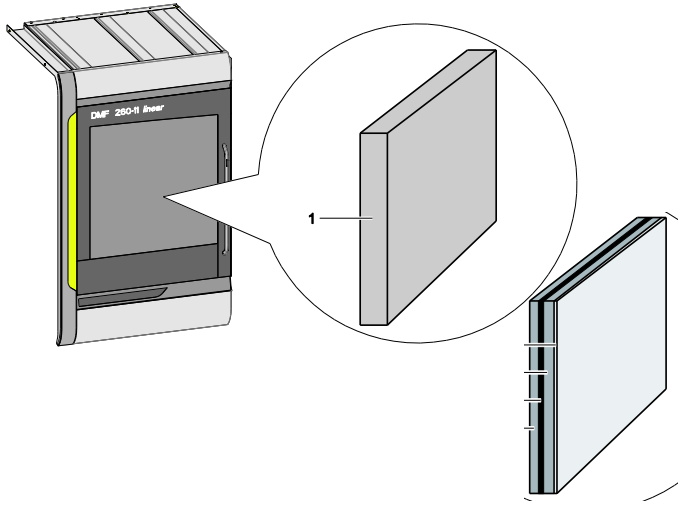
Maintenance door | Traveling-column area closure

Front view:

(1) Drip tray

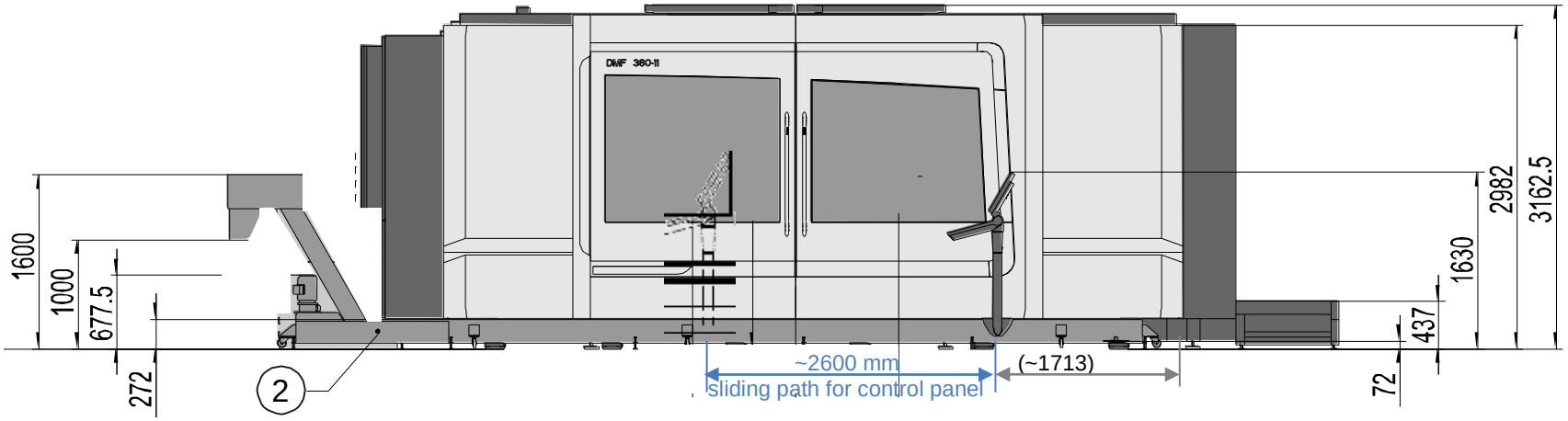
(2) Machining compartment doors with polycarbonate window or optionally with safety glass on the inside [included in case of FD option]





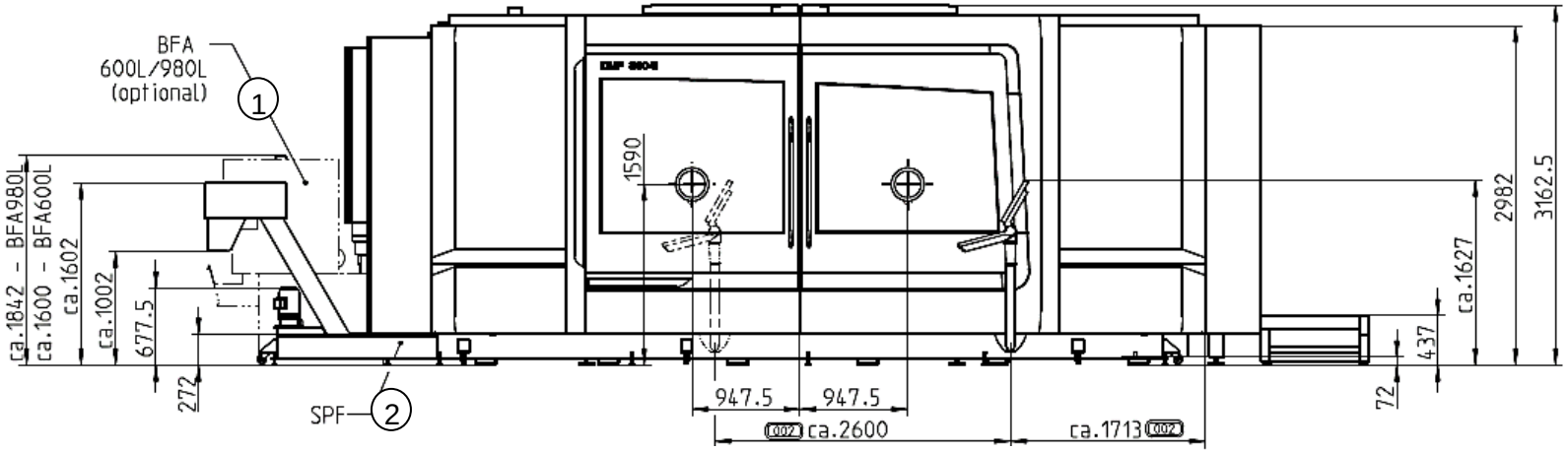
Basic machine version with 30 tool pockets

Front view **Basic version with chip conveyor as standard;** (layouts on the following pages)



(2) Chip conveyor
(1) Band-pass filter system

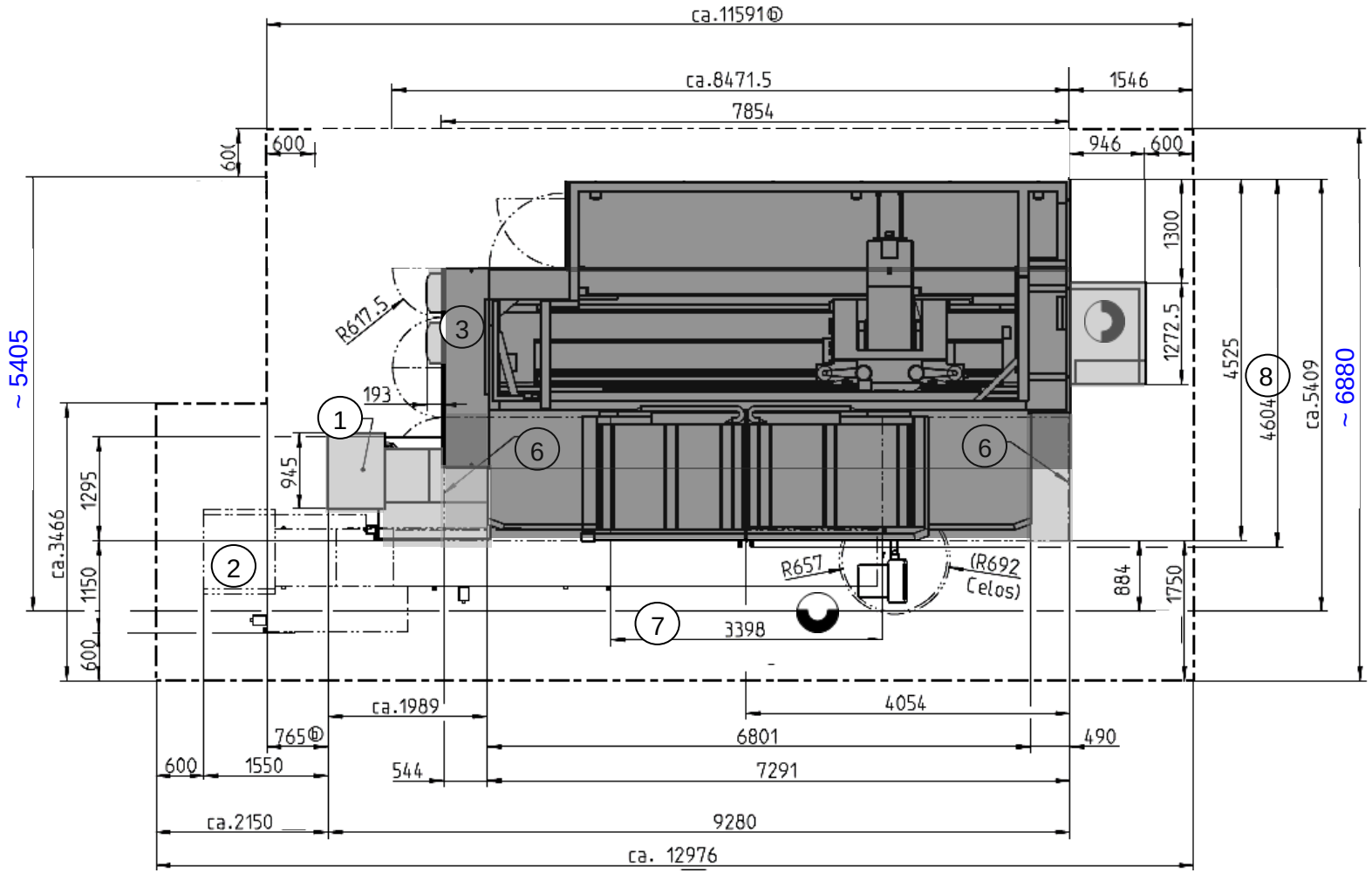
Version with options **[BFS] band-pass filter system for ICS; rotating inspection window 2x;**



sliding path for control panel

30-120 tool pockets ISO 40 and 30 pockets ISO 50

Machine **layout** **Basic version with chip conveyor**, active cooling unit for control cabinet



Legend

(1) The chip conveyor

(2) is pulled out to the left/front from below the machine for maintenance – approx. 1500 mm of clearance required in front of the machine

(3) Control cabinet

(6) Open machining compartment doors

(7) Max. door opening

(8) with door gripper

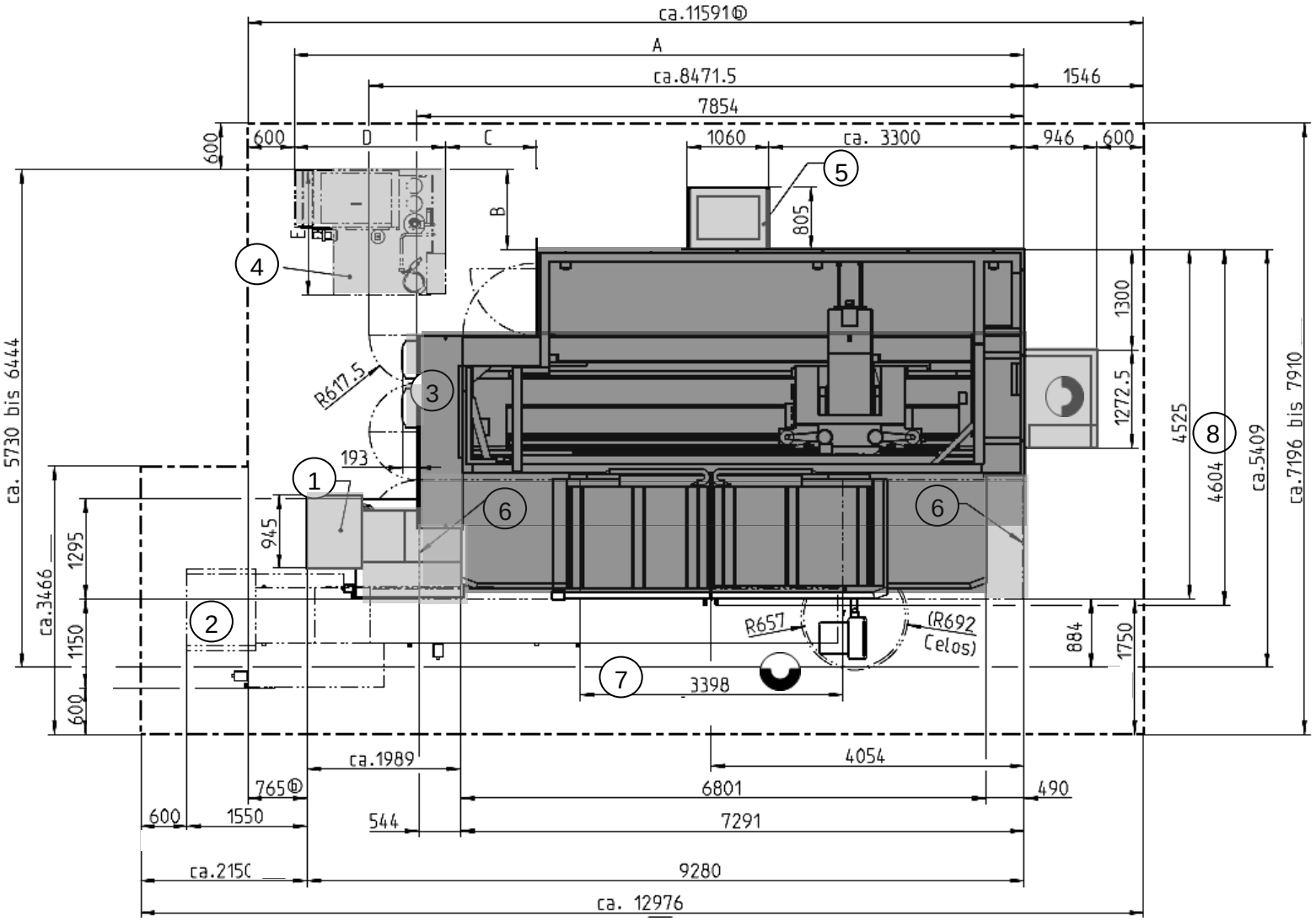
ca. 600, approx. - approximate min. requirements for escape routes

- - - - Required space

Operator position

Machine **layout** with various options **Band-pass filter** for ICS – **BFS 600 / 980 ltr.**

30-120 tool pockets ISO 40 and 30 pockets ISO 50



BFS	600 l	980 l
A	9136	9445
B	321	1035
C	1304	1177
D / L	1523	1960
E / T	1340	1625
H	1845	1845

Legend

(1) The chip conveyor

(2) is pulled out to the left/front from below the machine for maintenance – approx. 1500 mm of clearance required in front of the machine

(2) Control cabinet with cooling unit

(6) Open machining compartment doors

(7) Max. door opening

(8) with door gripper

Options:

(3) Band-pass filter system for optional ICS

(4) Cooling unit for option FD turning table

(5) Hydr. clamping unit

ca. 600, approx. - approximate min. requirements for escape routes

- - - - Required space

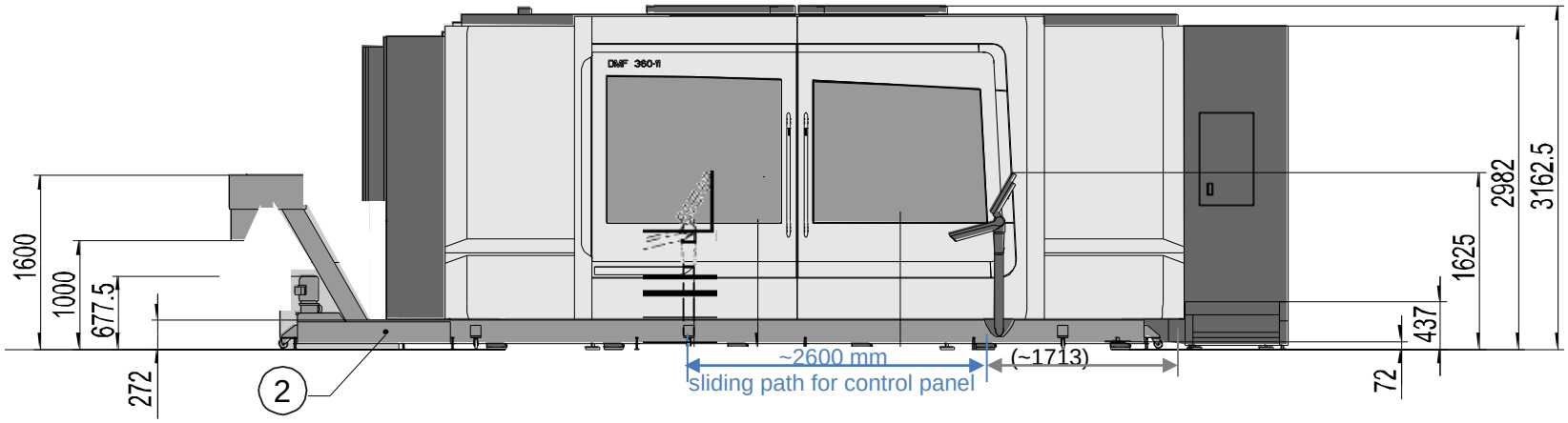
Operator position

Machine **layout**

[blank page]

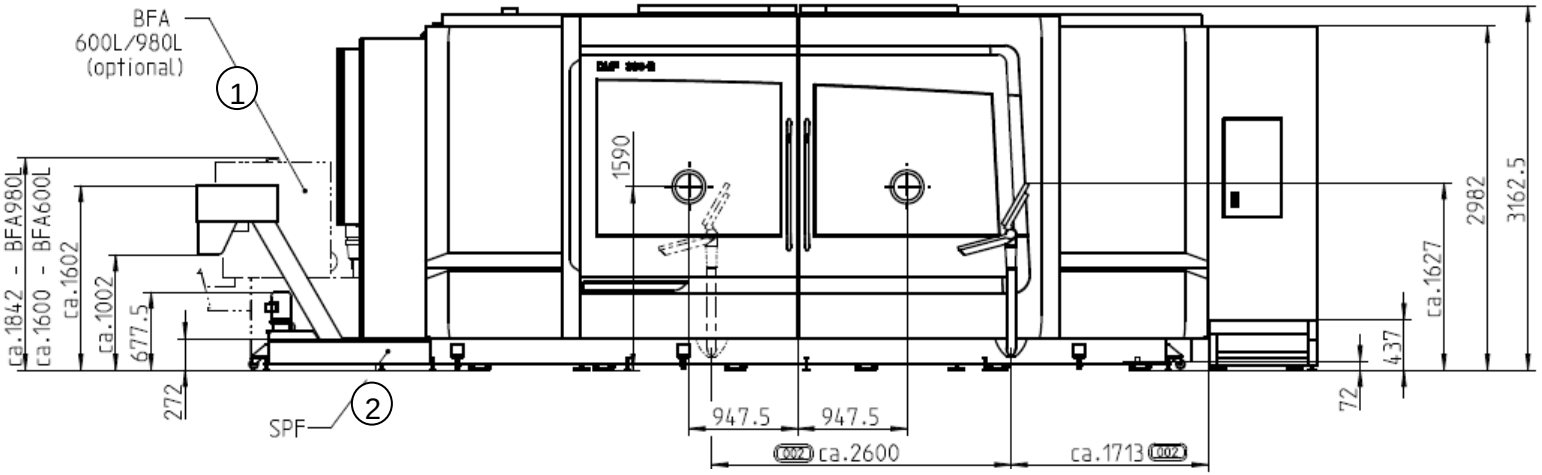
60 / 120 tool pockets ISO 50

Front view **Basic version with chip conveyor as standard;** (layouts on the following pages)



(2) Chip conveyor (1) Band-pass filter system

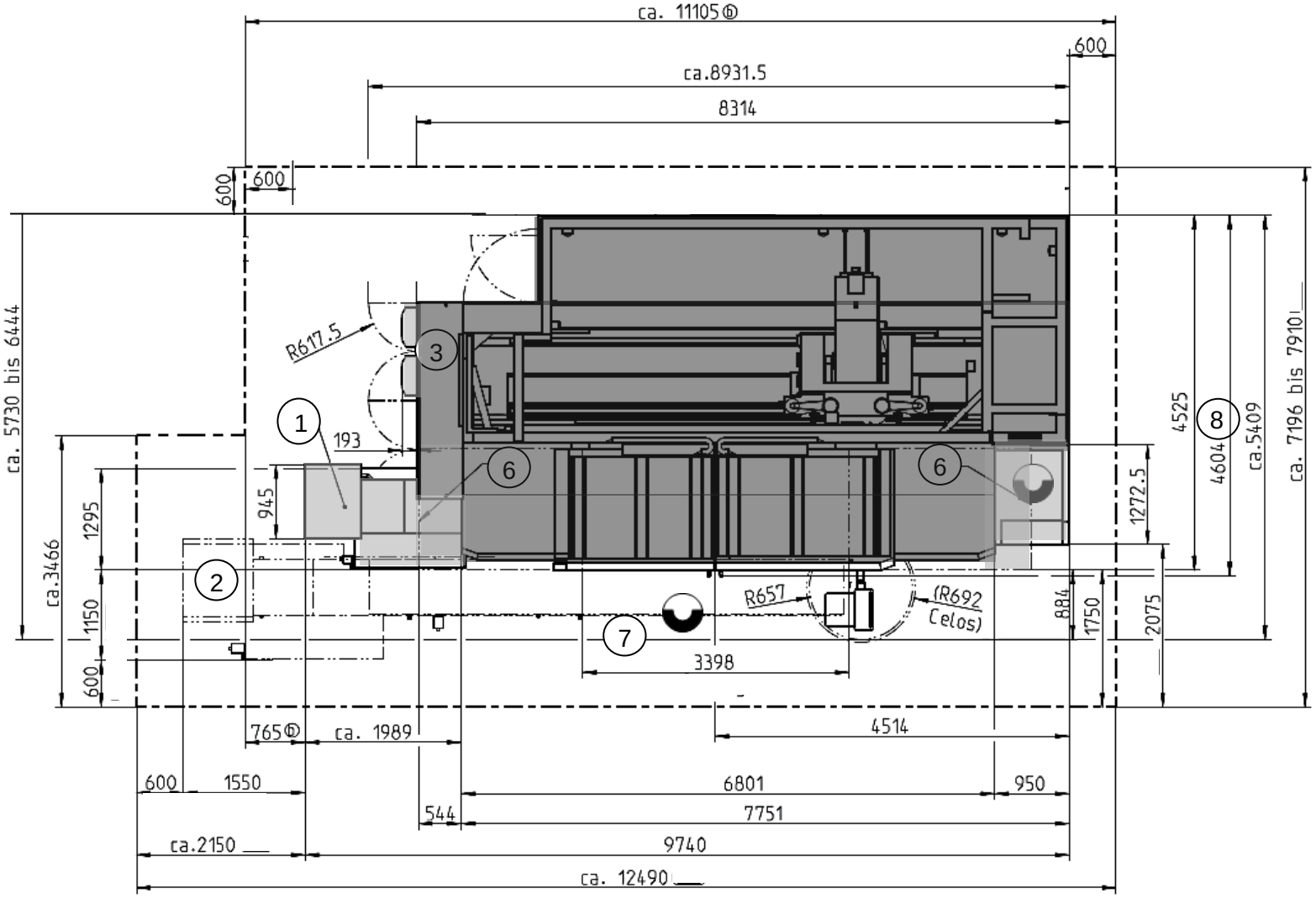
Version with options **[BFS] band-pass filter system for ICS; rotating inspection window 2x;**



sliding path for control panel

60 / 120 tool pockets ISO 50

Machine **layout** with **chip conveyor,** active cooling unit for control cabinet



Legend

(1) The chip conveyor

(2) is pulled out to the left/front from below the machine for maintenance – approx. 1500 mm of clearance required in front of the machine

(3) Control cabinet

(6) Open machining compartment doors

(7) Max. door opening

(8) with door gripper

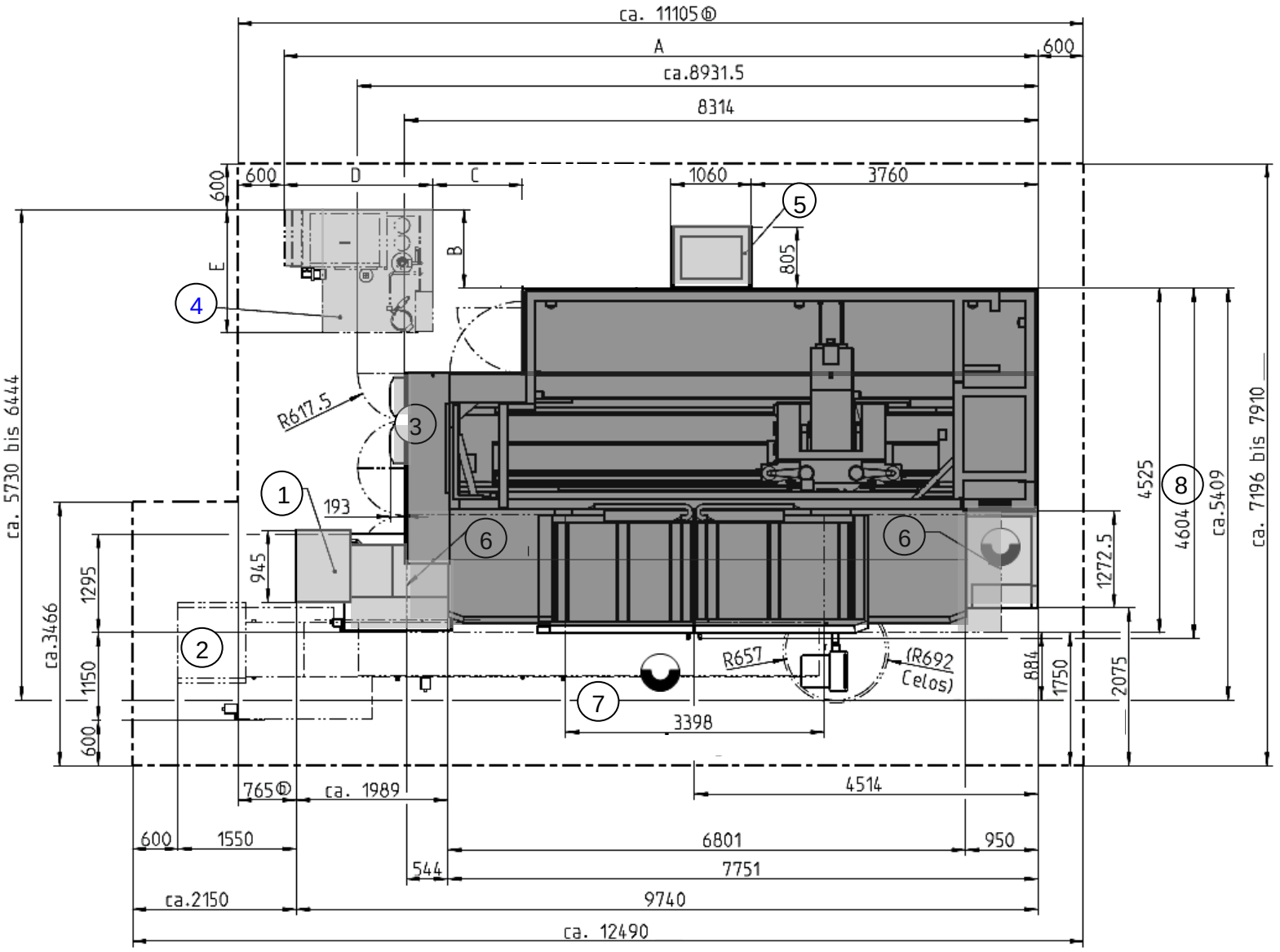
ca. 600, approx. - approximate min. requirements for escape routes

- - - - Required space

Operator position

60 / 120 tool pockets ISO 50

Machine **layout** with options **Band-pass filter** for ICS – **BFS 600 / 980 ltr.**



BFS	600 l	980 l
A	9600	9910
B	321	1035
C	1304	1177
D [L]	1523	1960
E [T]	1340	1625
[H]	1845	1845

Legend

(1) The chip conveyor

(2) is pulled out to the left/front from below the machine for maintenance – approx. 1500 mm of clearance required in front of the machine

(2) Control cabinet with cooling unit

(6) Open machining compartment doors

(7) Max. door opening

(8) with door gripper

Options:

(3) Band-pass filter system for optional ICS

(4) Cooling unit for option FD turning table

(5) Hydr. clamping unit

ca. 600, approx. - approximate min. requirements for escape routes

- - - - Required space

Operator position

Overview for machine connections

Machine with ball screws [standard] and options

Compressed air connection:

6.5 ... 8 bar / required performance of the customer's system:

Standard 35 standard m^3/h [600 l/min]

(Peak value which is only reached for a short time)

+ optional air blast - additional consumption

20 standard m^3/h [330 l/min]

Mains connection of machine: **TN-S power supply system**

3-L / N / PE / 400 V (± 10 %), 50 Hz (± 2 %)

depending on spindle type and whether without / with internal coolant supply [ICS]:

from series 4987

4A version differentiated by equipment

(include B axis)

Main spindle Speed / 4A	Pre-fuse	Rated current	Rated power		Pre-fuse	Rated current	Rated power
'ISO 40'motor sp.:	A slow	A	kVA		A slow	A	kVA
8,000 ... 150Nm	**80**	61	42		**80**	69	48
15,000 ... 111Nm	**80**	59	41		**80**	67	46
20,000 ... 130Nm	**100**	84	58		**100**	92	64
15,000 ... 200Nm	**100**	97	67		**125**	112	78
'ISO 50'motor sp.:							
12,000 *5).288Nm	**100**	97	67		**125**	105	73
12,000 *5). 430Nm	**160**	124	86		**160**	132	91

with optional '**ICS** up to 40/80 bar'

Connection for vertical head – approximate reduced:

je Spindel	~	- 8	- 6		~	- 8	- 6

Detailed general information can be found in → Chapter 17-8; extract:

- The power supply system of the customer must have a **neutral conductor N capable of being loaded.** Otherwise, a series transformer is required.
- The machine must **not** be connected to a power supply system with **RCD** (EN 50178, item 5.3.2.1.). Exception: The customer implements a 'circuit breaker sensitive to all types of current' (available for up to 63 A) for protection directly at the mains connection before the machine) !
- **The machine must be connected via a fixed connection. Due to EMC measures, there is leakage current / feedback to the power supply system.**
- The power supply for connecting the machine or parts of the machine must be a **TN-S power supply** with 3 conductors (L1, L2, L3) and a neutral conductor (N) as well as a protective conductor (PE).
- If the operating voltage of **400 V AC** is not within the **limits of +/-10%** (i.e. between 360 and 440 V AC), a series transformer is required for the machine.

5A version differentiated by equipment

(include B axis + C axis)

Main spindle Speed / 5A	Pre-fuse	Rated current	Rated power		Pre-fuse	Rated current	Rated power
'ISO 40'motor sp.:	A slow	A	kVA		A slow	A	kVA
8,000 ... 150Nm	**80**	68	47		**100**	76	52
15,000 ... 111Nm	**80**	66	46		**80**	74	51
20,000 ... 130Nm	**125**	90	63		**125**	98	68
15,000 ... 200Nm	**125**	110	76		**125**	118	82
'ISO 50'motor sp.:							
12,000 *5). 288Nm	**125**	103	72		**125**	111	77
12,000 *5). 430Nm	**160**	130	90		**160**	138	96

with optional '**ICS** up to 40/80 bar'

*5) change from series 5098 / 5101 up to 12 000 rpm - approx. August '20

The connection for each automation is not included.

Machine with dynamic package [linear X drive] and options

Compressed air connection: / Mains connection of machine: → see previous page

TN-S power supply 3-L / N / PE / 400 V (± 10 %), 50 Hz (± 2 %)

depending on spindle type and whether without / with internal coolant supply [ICS]:

4A version – *linear* [opt.] differentiated by equipment (include B axis)

Main spindle Speed / 4A	Pre-fuse	Rated current	Rated power		with optional 'ICS up to 40/80 bar' Pre-fuse	Rated current	Rated power
'ISO 40'motor sp.:	A slow	A	kVA		A slow	A	kVA
8,000 … 150Nm	**200**	153	106		**200**	161	112
15,000 … 111Nm	**200**	158	109		**200**	165	114
20,000 … 130Nm	**200**	175	121		**200**	183	127
15,000 … 200Nm	**200**	194	134		**250**	204	141
'ISO 50'motor sp.:							
12,000 *5). 288Nm	**200**	187	130		**200**	196	136
12,000 *5). 430Nm	**250**	214	148		**250**	224	155

5A version – *linear* [opt.] differentiated by equipment (include B axis + C axis)

Main spindle Speed / 5A	Pre-fuse	Rated current	Rated power		with optional 'ICS up to 40/80 bar' Pre-fuse	Rated current	Rated power
'ISO 40' motor sp.:	A slow	A	kVA		A slow	A	kVA
8,000 … 150Nm	**200**	158	109		**200**	165	114
15,000 … 111Nm	**200**	163	113		**200**	171	118
20,000 … 130Nm	**200**	180	125		**200**	187	130
15,000 *5). 200Nm	**200**	199	138		**250**	207	143
'ISO 50' motor sp.							
12,000 … 288Nm	**200**	192	133		**250**	200	139
12,000 *5). 430Nm	**250**	219	152		**250**	227	157

*5) change from series 5098 / 5101 up to 12 000 rpm - approx. August '20

Detailed general information can be found on the previous page and in → chapter 17-8.

- With **loadable neutral conductor N**
- Do **not** connect to a power supply system **with RCD**!
- **The machine must be connected via a fixed connection.**
- **TN-S power supply** with 3 conductors (L1, L2, L3) and a neutral conductor (N) as well as a protective conductor (PE).
- Operating voltage **400 V AC** not within the the **limits of +/-10**.

The connection for the individual automation is not included

Extract from the references to the installation conditions [see also section 17.5]

Room temperature	+15 ... +35 °C
Relative humidity	20 ... 75 %

The machine accuracy strongly depends on external thermal influences. A constant room temperature is decisive! Direct exposure to sunlight, strong air draft, vibrations cause by external units and accumulation of heat should be avoided.
The **highest accuracy** is reached in the temperature range of +20 to +23 °C.

Foundation

A continuous base plate made of reinforced concrete is required. As a guideline, at least the quality and C25/30 according to DIN EN 206-1 are recommended.

However, in any case, the installation surface, by a structural engineer, must be checked and released in compliance with the dynamic overall load.

Note:

The centre of gravity shifts through the process of the machine slides within the travel paths and through the workpiece weight.

The installation conditions can have a more or less strong influence on the dynamic behavior at the machining site (tool - workpiece). Ground vibrations must not affect the accuracy and function of the machine.

The relative deflection (deviation from the straight line) must not exceed a maximum value of 0.075 mm. The foundation must not have expansion joints, cracks, cable shafts or other interruptions in the coverage area of the entire system. The footprint must be in an evenness of +/- 2mm. When laying the foundation, it must be borne in mind that this material disappears over a more or less long period of time, i.e. changes its dimensions as a result of the curing process. This effect may require readjustment of the machine at the expense of the machine operator.

The foundation serves as a defined surface for the alignment of the machine and ensures uniform load discharge into the ground. It must absorb the loads caused by the machine and the machining forces without inadmissible deformations or displacements within the machine.

The following weights must be taken into account

- The maximum set-up weight of the machine
- The max weight
    - of tool and accessory cabinets including contents
    - From workpieces and fixtures
    - From people
    - From means of transport
    - From other facilities in the immediate vicinity of the machine

Basement ceilings, floor ceilings

If the machine is to be placed on basement ceilings, floors or other load-bearing structures, the following must be observed:

A structural planner (structural engineer) experienced in construction dynamics must check that

whether the load-bearing design is capable of absorbing the effects of the mass forces of the machine (loading)

Soil vibrations

Ground vibrations or violent vibrations must not affect the function and accuracy of the machine

CAUTION ! Note that the center of gravity is shifted by the weight of the workpiece and the distances traveled.

The mentioned requirements are a prerequisite for commissioning and for any warranty

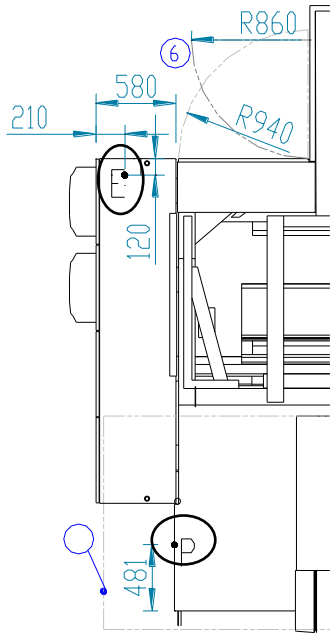
Installation weights

Machine without cladding **35,100 kg** Metal cladding ~2,800 kg

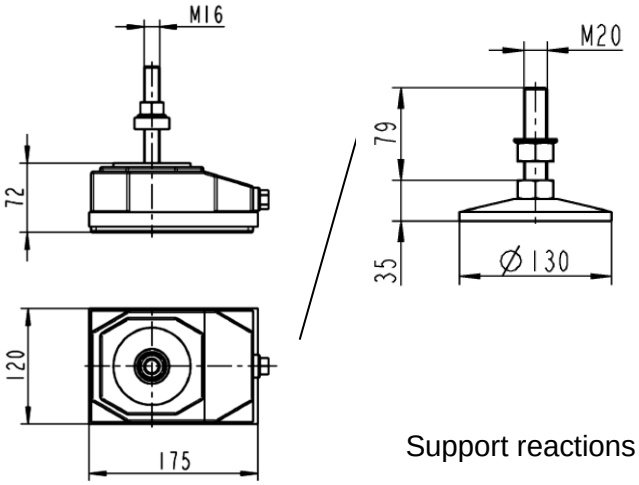
4 / 5 axis 850 kg = ~ 38,150 kg net with 30 TMG

Magazine Type / Pockets		Machine Net	Magazine assignment	Lubri cants	Coolant	Workpieces max.	Installation weight	
30	pcs.	~35 100	120	100	460	4 000	**41 100**	kg
60	pcs.	+ 300	240				**41 520**	kg
120	pcs.	+ 800	480				**42 820**	kg
ISO40							**Total**	
30	pcs.	~35 100	240	100	460	4 000	**41 220**	kg
60	pcs.	+ 1 300	480				**42 760**	kg
120	pcs.	+ 1 500	960				**43 440**	kg
ISO 50							**Total**	

Notes: **Connection above floor** approx. 700 mm from below
(Take additional cable length into account!):
( ) Opened machining compartment door
(6) Service door



A … M Machine support elements

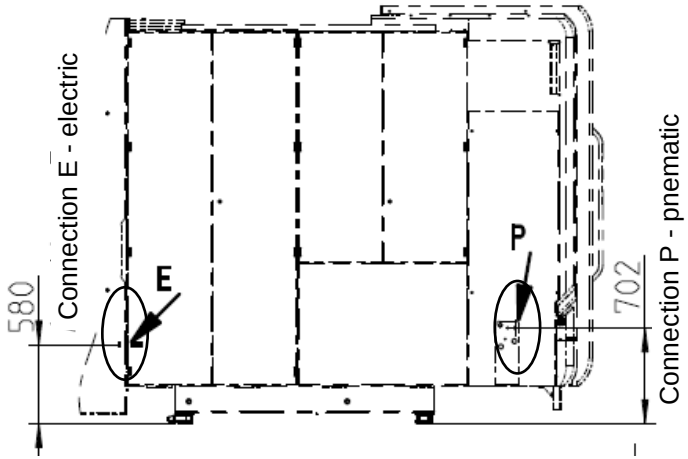


Support element accessories

N, O, P - Support elements for rear metal cladding

Q … V - Support elements for magazine option

Support reactions → next page



Support reactions SK 40 and HSK-A63, all magazines,
and 30 tool po. magazine for SK 50 / HSK-A100:

Example of minimal requirements, to be checked by customer's structural engineer !!

Foundation slab dimensions

Foundation / installation requirements / machine feet ← previous page

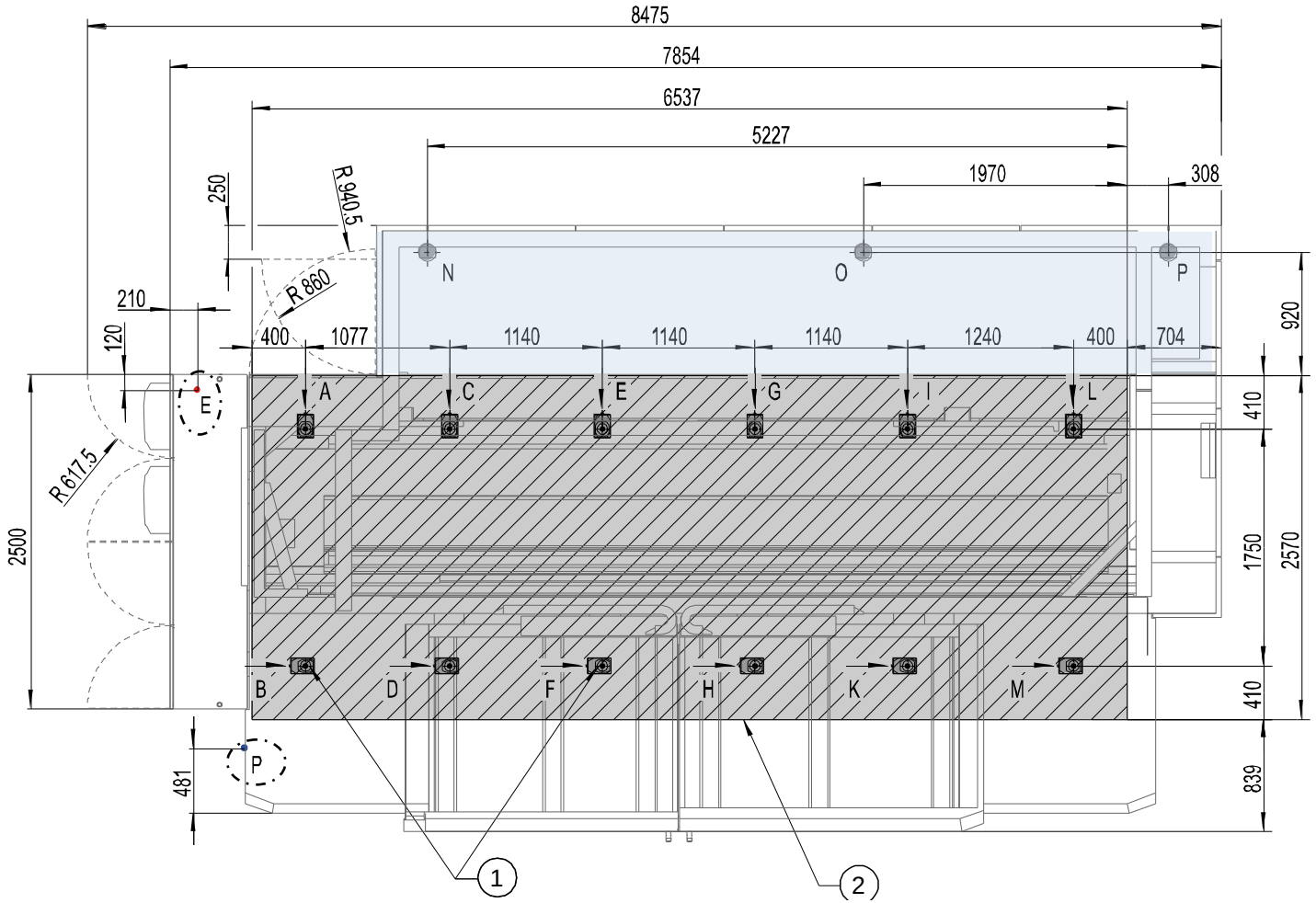
Legend
- E: Mains connection
- P: Compressed air connection
- → Pos. of the setscrews

[Connection above floor → see page before]

For removal, the chip conveyor [ChC] is moved slightly to the left and then to the front towards the operator (approx. 1500 mm of clearance required).

(1) Min. foundation slab without parting lines!

(2) Machine support elements with leveling feet



Position	Load
A, L	**111 kN**
B, M	**71 kN**
C, E, G, I	61 kN
D, F, H, K,	36 kN
Rear metal cladding	
N	4 kN
O	3 kN
P	5 kN

Due to the center of gravity of the workpiece weight and the movements of the slides with max. acceleration, load on the machine supports increases and decreases **dynamically** by up to **+/- 20 kN**

The bottom plate is to be clarified by the customer engineer!

A continuous base plate made of reinforced concrete is required.
As a guideline, at least the quality and C25/30 according to
DIN EN 206-1 are recommended.

However, in any case, the installation surface, by a structural engineer, must be checked and released in compliance with the dynamic overall load.

Support reactions SK 50 / HSK-A100 only for magazine with 60/120 tool pockets:

Example of minimal requirements, to be checked by customer's structural engineer !!

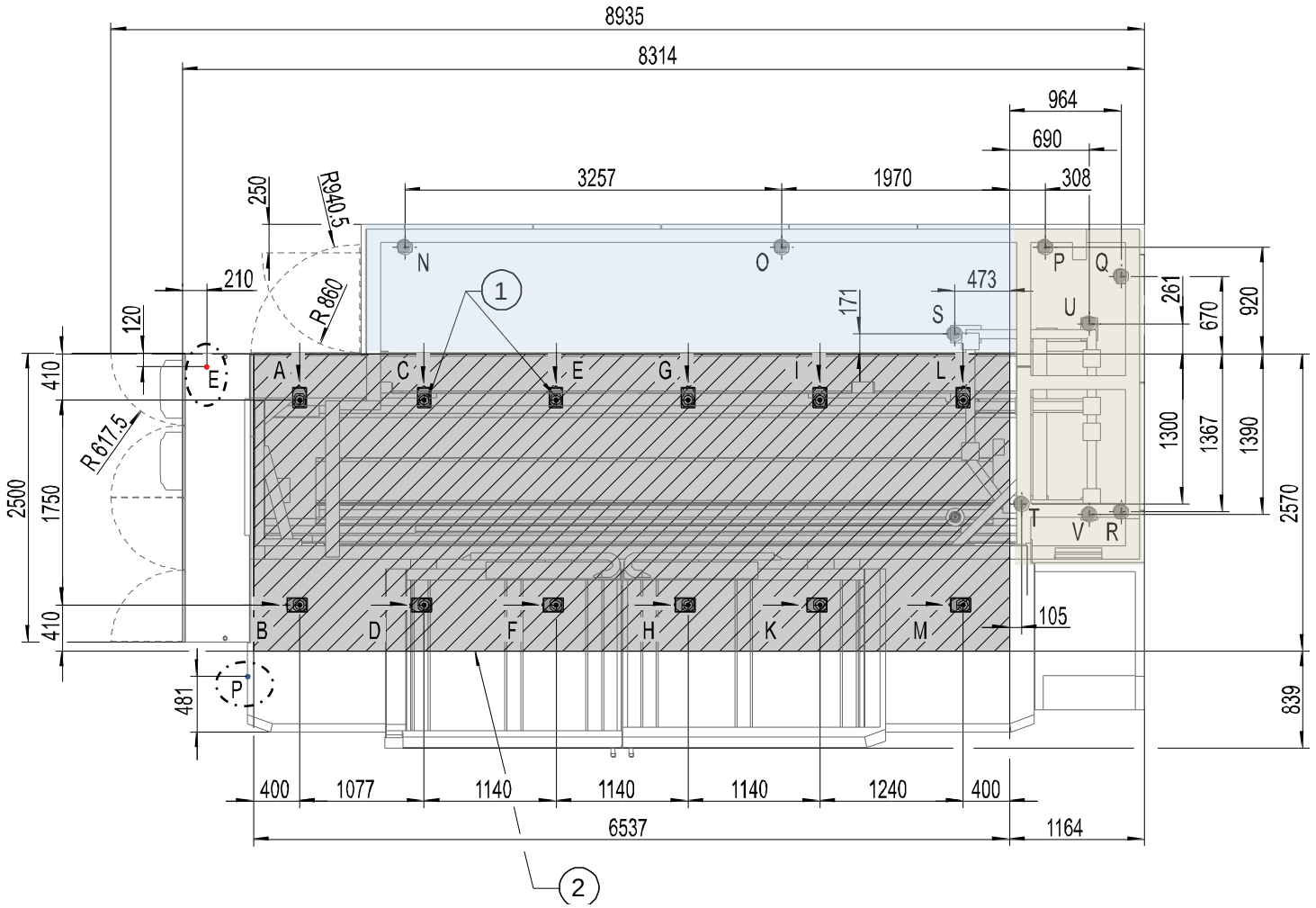
Foundation slab dimensions

Foundation / installation requirements / machine feet ← above

Legend
E Mains connection
P Compressed air connection
→ Pos. of the setscrews
[Connection above floor → see page before]

(2) Min. foundation slab without parting lines!
(1) Machine support elements with leveling feet

For removal, the chip conveyor [ChC] is moved slightly to the left and then to the front towards the operator (approx. 1500 mm of clearance required).



Position	Load
A, L,	**111 kN**
B, M,	**71 kN**
C, E, G, I	61 kN
D, F, H, K,	36 kN
Rear metal cladding	
N, O, P	…5 kN
Magazine with cladding	
Q, R, S, T, U, V	…5 kN

Due to the center of gravity of the workpiece weight and the movements of the slides with max. acceleration, load on the machine supports increases and decreases **dynamically** by up to **+/- 20 kN**

The bottom plate is to be clarified by the customer engineer!

A continuous base plate made of reinforced concrete is required.
As a guideline, at least the quality and C25/30 according to
DIN EN 206-1 are recommended.

However, in any case, the installation surface, by a structural engineer, must be checked and released in compliance with the dynamic overall load.

Transport dimensions and weights

Since this Sales Manual does not refer to specific series the Planning and Transport Instructions available with the order confirmation shall have priority.

Transport dimensions 'net'

- without packaging/pallet, height without support feet;

Take additional sheet metal and casting tolerances of the cabin into account!

Demounted for transport: control unit + arm and MC door handles

[Update for series 4893]

Transport- L/D - Depth, W - Width, H - Height
G – Installation weight [kg]

Machine without packaging, without installation feet

Machine		with option		**L/D**	**B**	**H**	Weight
with magazine:		varying		[m]	[m]	[m]	G [kg]
30 pockets		SK40/HSK-63		\			35 100
60 pockets		SK40/HSK-63		3 460	8 280	3 100	35 400
30 pockets		**SK50/HSK-100**		/			35 100
120 pockets**		SK40/HSK-A63		3 770	"	"	35 900
60 pockets*		**SK50/HSK-100**		\			
120 pockets*		**SK50/HSK-100**		3 460	"	"	35 100

* Magazine transported separately

** Magazine protrudes from the rear of the machine by 315 mm

DMF 360-11
DMG MORI design

Machine transport dimensions

Unless otherwise agreed, the transport base (and box packaging) shall remain with the customer for disposal !

Packaged 'base / foil'

Machine				**L/D**	**B**	**H**	Weight
with magazine:				[m]	[m]	[m]	G (5A)
30 pockets		SK40/HSK-63		\			36 550
60 pockets		SK40/HSK-63		3 500	8 400	3 540	36 850
30 pockets		**SK50/HSK-100**		/			36 550
120 pockets**		SK40/HSK-A63		3 900	"	"	37 350
60 pockets*		**SK50/HSK-100**		\			36 550
120 pockets*		**SK50/HSK-100**		3 500	"	"	36 550

850 kg can be subtracted from the weight specification G (5A) for a machine without optional B axis (approx. 350 kg) and without integrated C axis (approx. 500 kg).

Transport of separate parts:

for rear metal cladding and chip conveyor [std.]

in case of additional options such as ICS unit, hydr. clamping unit, ext. cooling for the magazine ISO 50: right metal cladding

The customer must send the relevant items back to the supplier plant Seebach within one week and bears the costs for this transport!

(see also → last pages): Backhaul by the customer

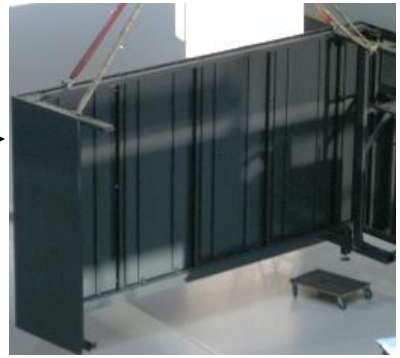
- **Transport traverse bars**
- **Metal rack** for metal parts/cladding if applicable

Wooden base and packing material must be disposed of by the customer

Separate packaging for optional chip conveyor BFS band-pass filter system or 'active cooling unit for spindle' (in tropical package / FD)

on pallet: ChC – chip conveyor [std.] ; rear wall metal rack ; [the control unit is removed and stored in the machining compartment]

Chip conveyor	[~ 1.9 t]	[L] D x W x H ...	9.50 x 1.50 x 1.90 m
Metal cladding of magazine	[0.4 t]	only SK50/HSK-A100	2.70 x 1.00 x 0.50 m
for rear side	[2,. t]	.....	6.42 x 1.70 x 3.30 m



Options separate 60/120 po. magazine [~2.0 t] only SK50/HSK-A100 3.00 x 2.30 x 1.60 m

→ See next page

Band-pass filter system for ICS	[650 kg]	.....	2.00 x 1.75 x 1.90 m
External cooling unit/trop. pack.	[620 kg]	....	1.20 x 0.80 x 1.10 m
Ext. cooling unit for FD option	[? kg]	....	1.20 x 0.81 x 1.90 m
Ext. - " - add. for tropical pack.	[? kg]	....	2.05 x 1.61 x 1.85 m
Hydraulic clamping unit	[400 kg]	....	1.20 x 0.80 x 1.70 m
Transport traverse bar	[1.95 t]	....	4.50 x 2.40 x 1.50 m

Transport by crane with crane traverse bar

Net transport height: Net machine height = 3.10 m [without packaging, without feet]

Min. height for crane hooks with traverse bars: 5.2 m + height of transport cart / roller

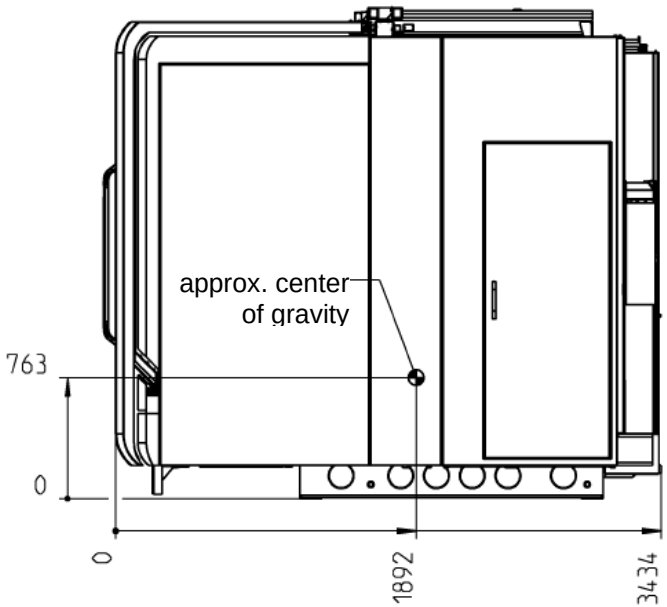
The transport of the machine [without packaging] is carried out via a traverse bar

– One attachment point: **40 t lifting force** [machine on wooden base]

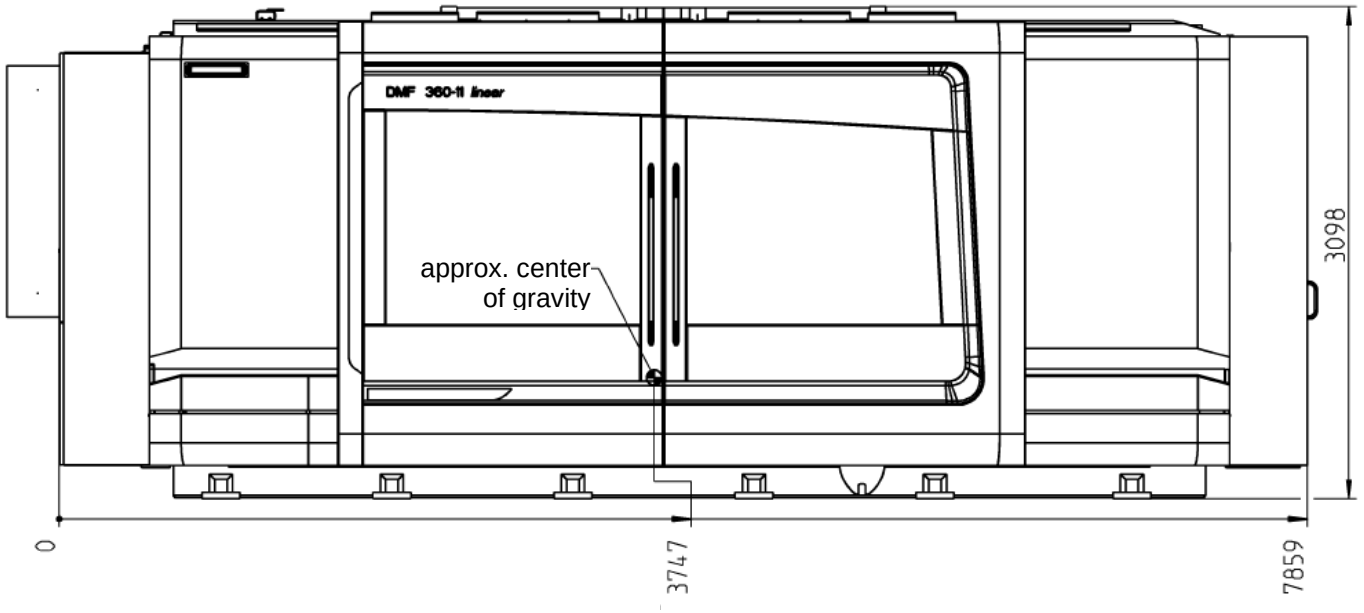
DECKEL MAHO does not assume any liability for personal injury and damage to property if the lifting tackles, lifting gear and auxiliaries specified by DECKEL MAHO are not used.

Dimensions without packaging

Side view



Front view



Procedure for transport by crane in accordance with the instructions for transport

In order to transport the machine on the customer's premises (without packaging), transport means and lifting tackles are required.

1 crane traverse bar as item on loan; different auxiliary elements which must be installed:

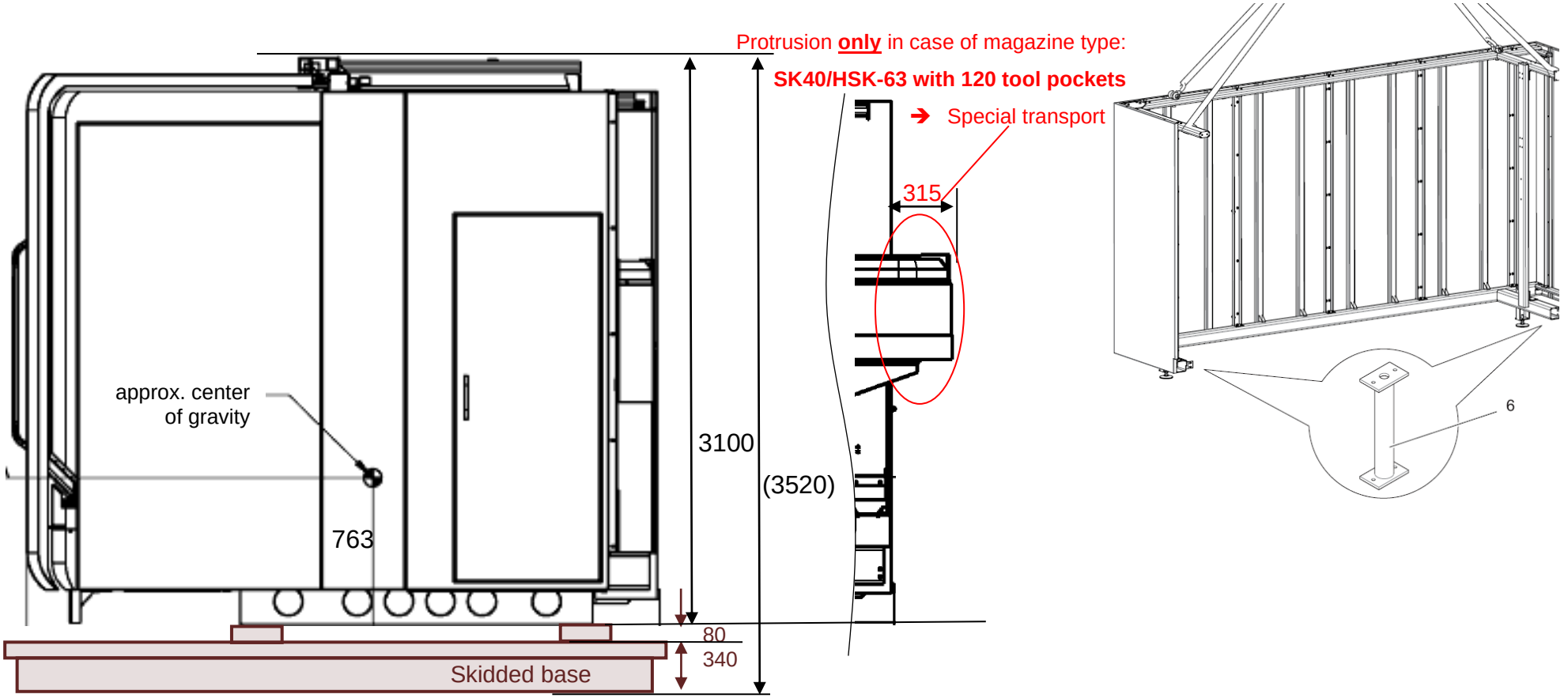
Transport means are items on loan. Thus, they must be sent back to the supplier plant at the expense of the customer immediately after transport of the machine!

Skidded base

Side view - base/foil on skidded base..... ..... Separate transport of the metal cladding [for the rear of the traveling column]

Illustration for the magazine variants: SK 40 / HSK-A63 with 30 and 60 tool pockets; Part 2 → next page

SK 50 / HSK-A100: 30 tool pockets

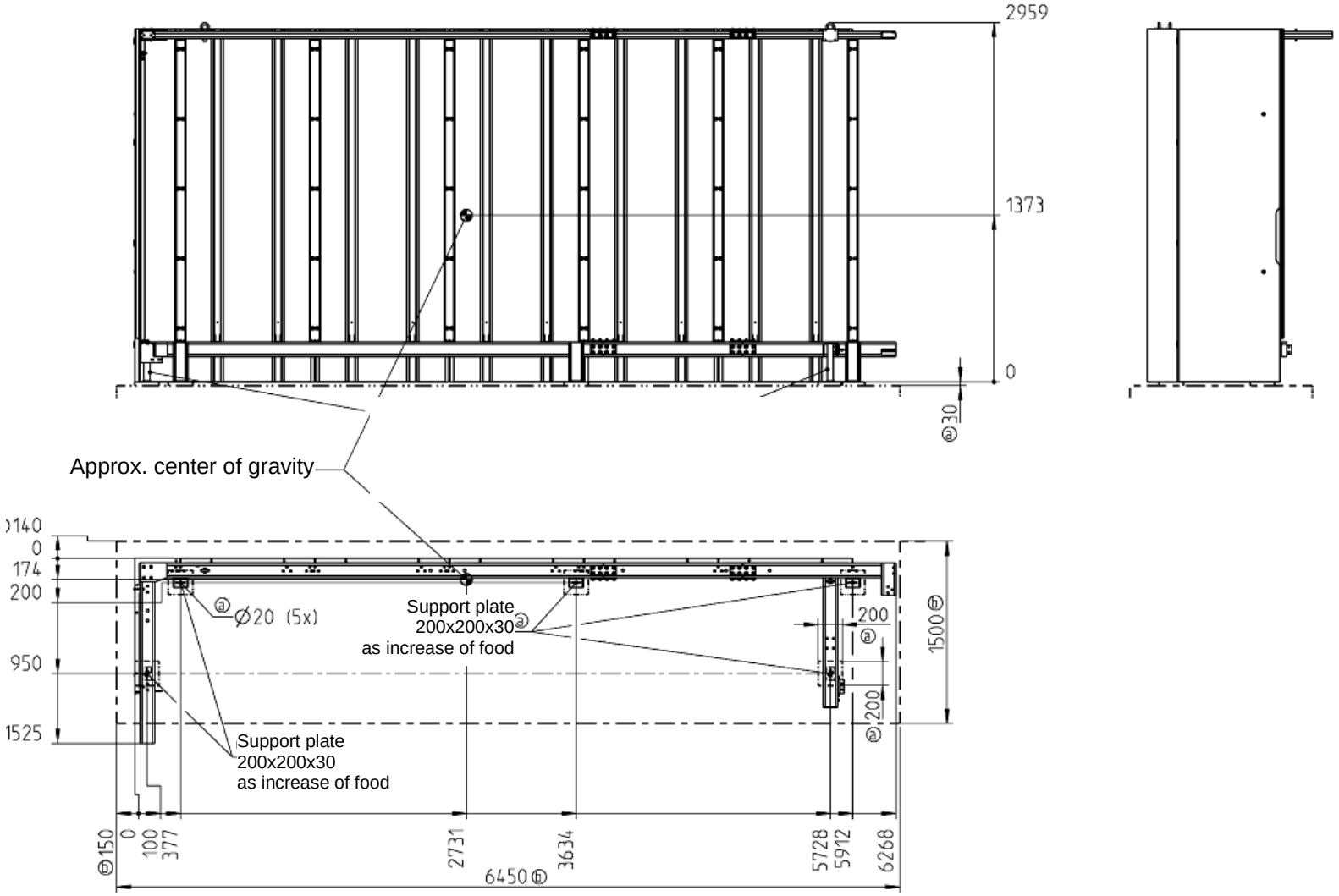


Additional transport parts Rear side

for rear wall cladding of the machine; supplied with separate accessories!

Dimensions on pallet **Surface** L x D: 6.42 x 1.70 m **height** 3.30 m [approx. 2.1 t]

Illustration (height without pallet 310 mm): [3050753]



Front view - without packaging

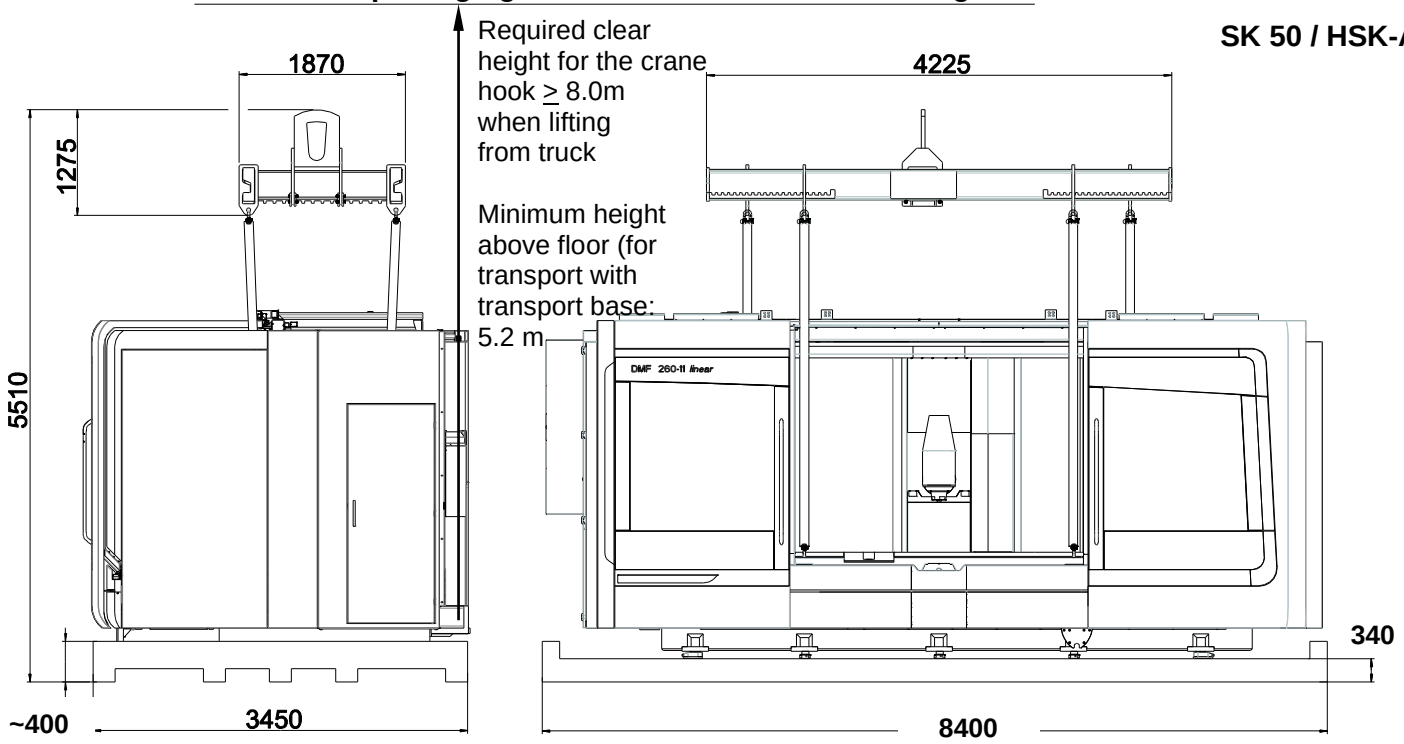
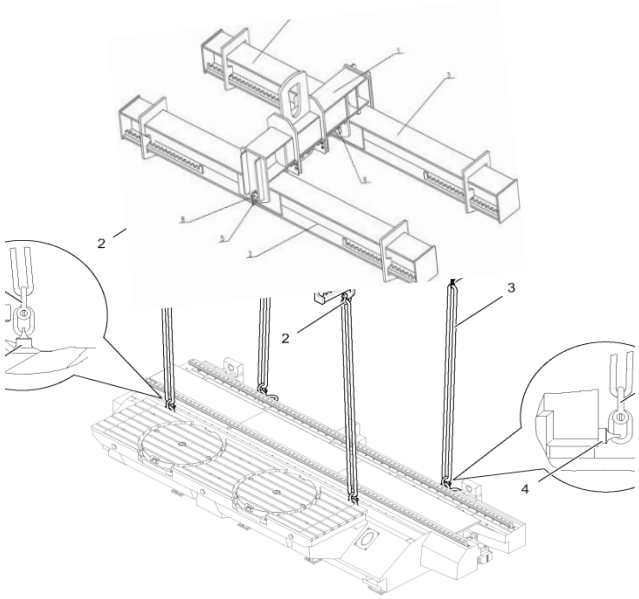


Illustration for the magazine variants:

SK 40 / HSK-A63 with 30 and 60 tool pockets;

SK 50 / HSK-A100: 30 tool pockets



Important note: The machine base frame is made of cast concrete. It is sensitive to bending, torsion, and point load, which occurs when installing car jacks (resulting in chips an cracks) !

A crane must be used when unloading the machine at its place of destination.

In the factory hall, the machine may alternatively be transported with large-scale air cushions or armored rollers! This may only be carried out on level floor by authorized and qualified personnel (contact a hauler).

When doing this, 'air cushions' must be used at the correct positions to lift the machine from the armored rollers in accordance with the mentioned notes.

It is imperative to use a crane and special transport traverse bars when loading the machine onto a truck or unloading it from a truck! The position of the traverse bar determines the connection points for the chains, which are routed through the machining compartment and the machine area (traveling column area) and hooked into the attachment positions. When lifting the machine, the machining compartment doors must be completely opened and locked in place.

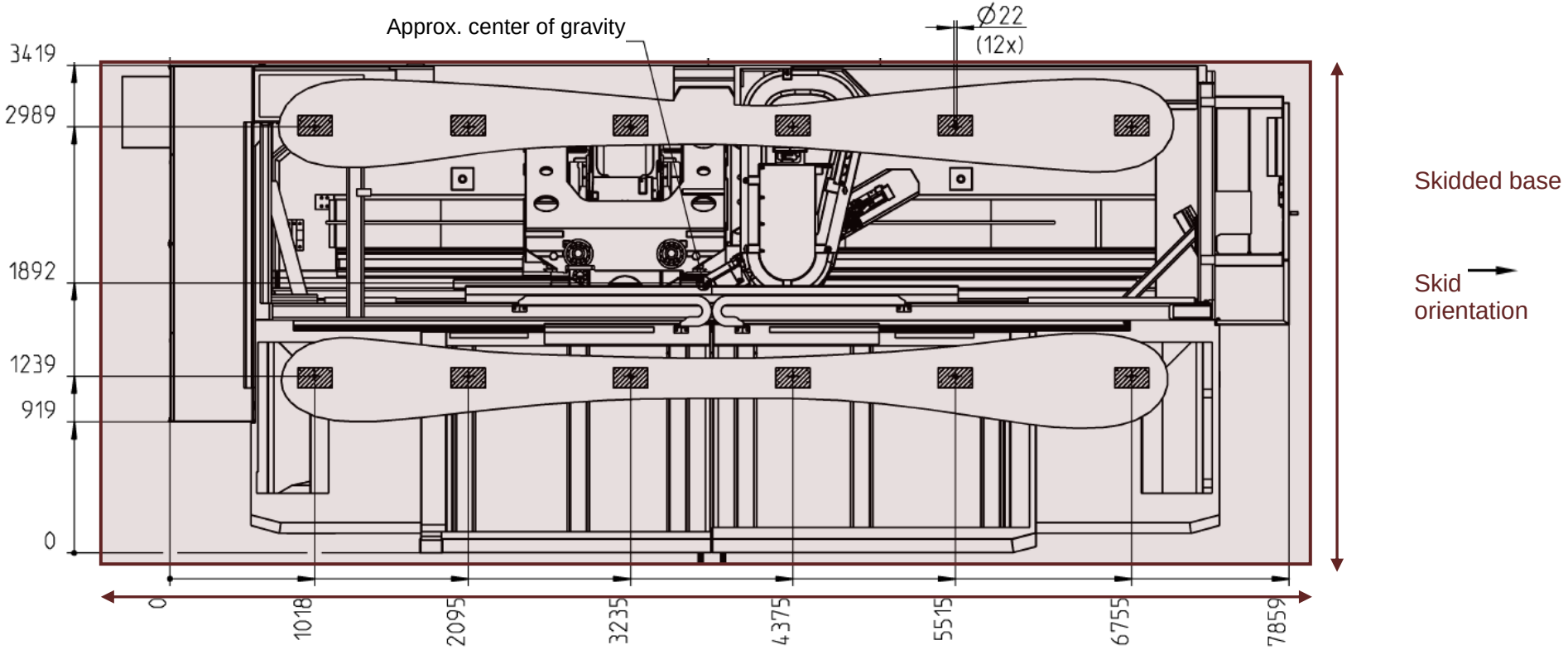
The weight of the crane traverse bars and, if applicable, the wooden transport base must be taken into account when selecting an appropriate crane!

DECKEL MAHO does not assume any liability for personal injury and damage to property if the lifting tackles, lifting gear and auxiliaries specified by DECKEL MAHO are not used. More detailed information provided with the 'Planning and Transport Instructions'.

Transport (by truck) - base/foil on skidded base **Magazine variants: SK 40 / HSK-A63 + SK 50 / HSK-A100**

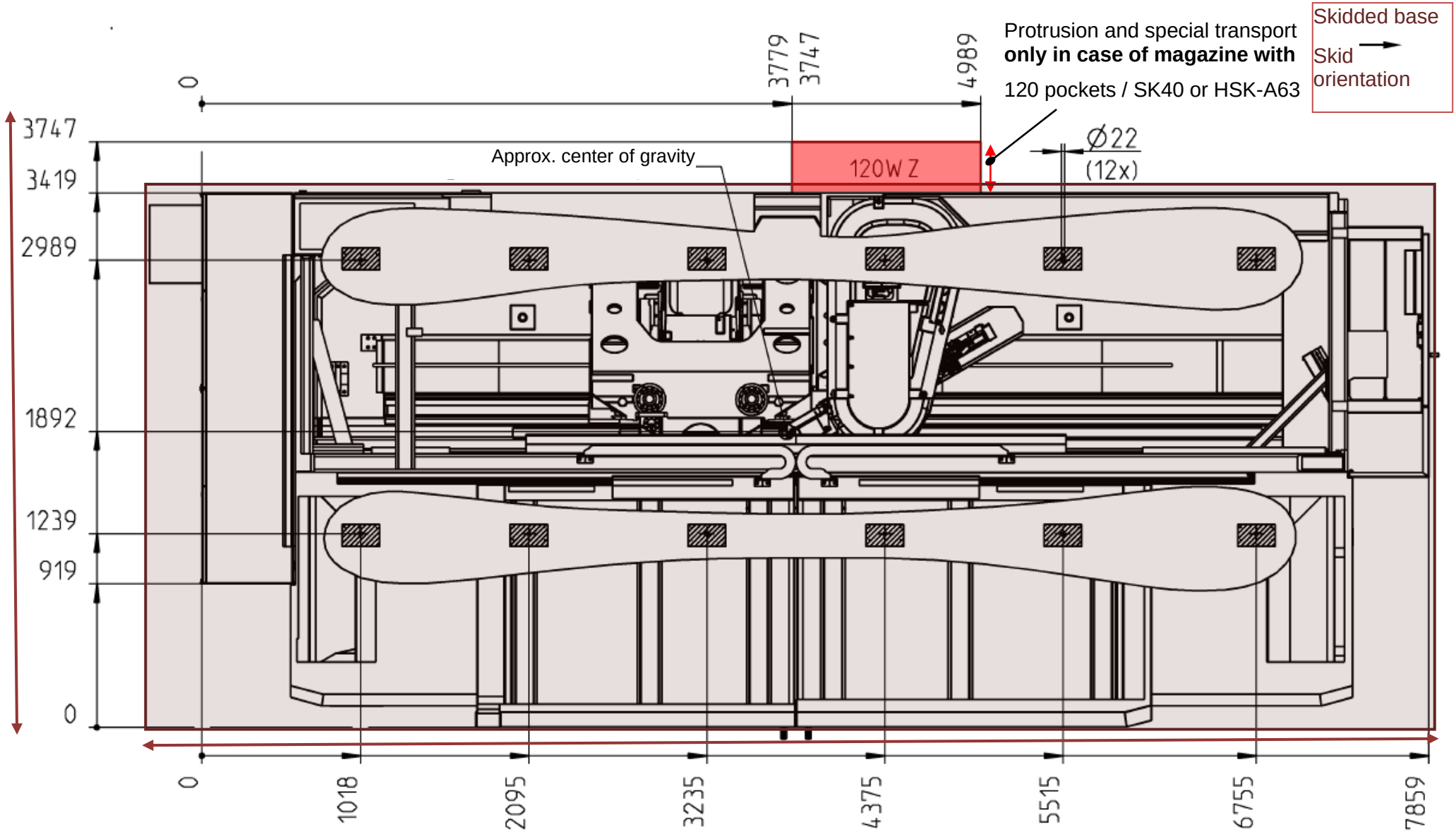
[for 120 tool pockets with SK 40 / HSK-A63; see → only next page]

The control unit is demounted for transport [and fixed on the rigid table] ! Dimensions in [mm] **W x D total 8400 x 3450 mm**



Transport (by truck) - base/foil on skidded base **only in case of magazine variant: SK 40 / HSK-A63 with 120 tool pockets;**

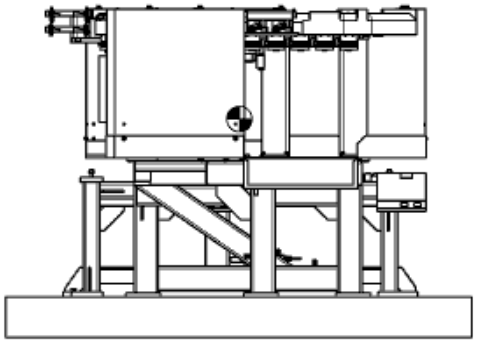
The control unit is demounted for transport [and fixed on the rigid table] ! Dimensions in [mm] **W x D total 8400 x 3900 mm**

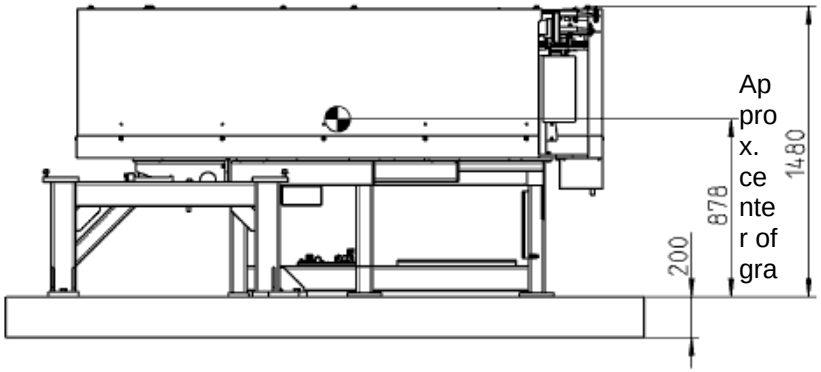


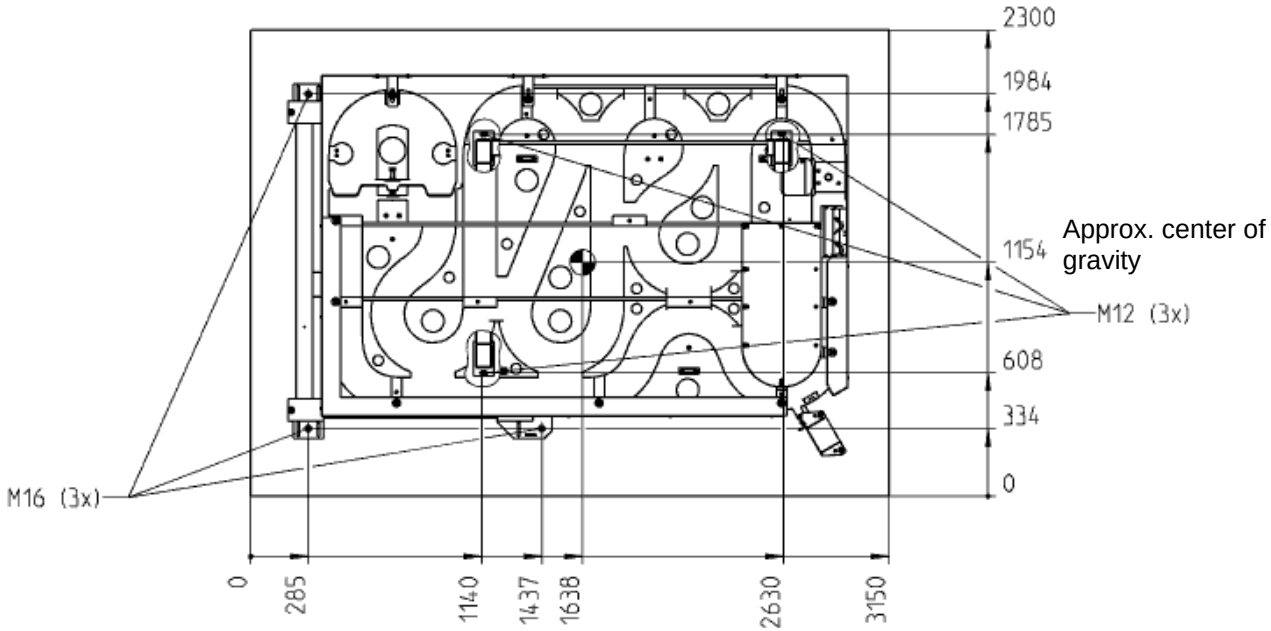
Note additional transport parts

only for tool magazine with 60 /120 pockets for SK 50/ HSK-A100

- Separate transport of magazine approx. 1.3 t
  ~ 2 t with packaging

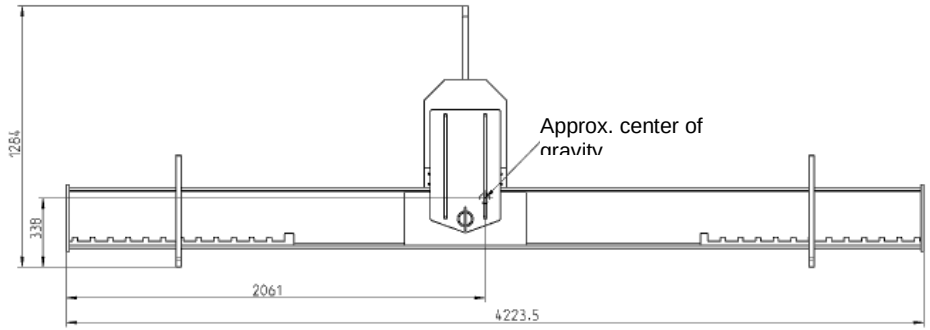


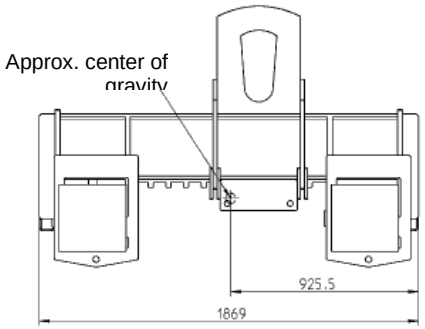


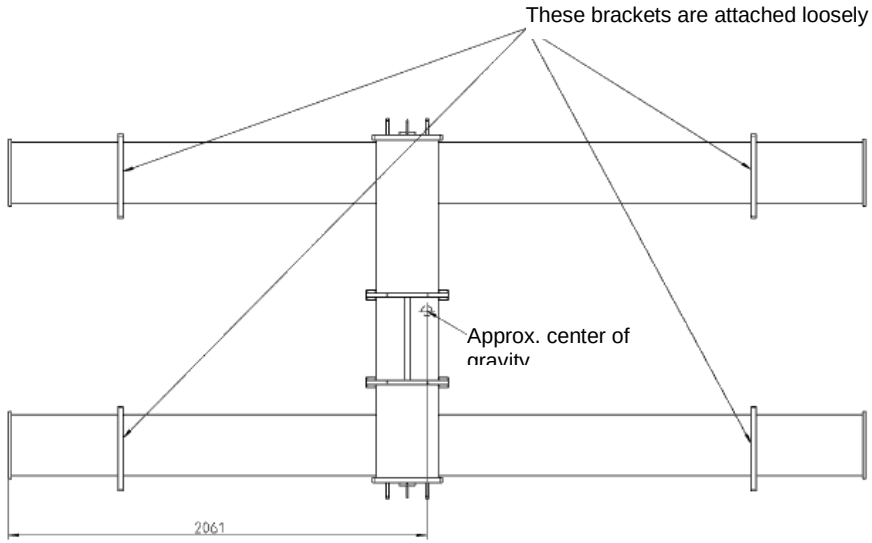


Backhaul of the crane traverse bar

Illustration:







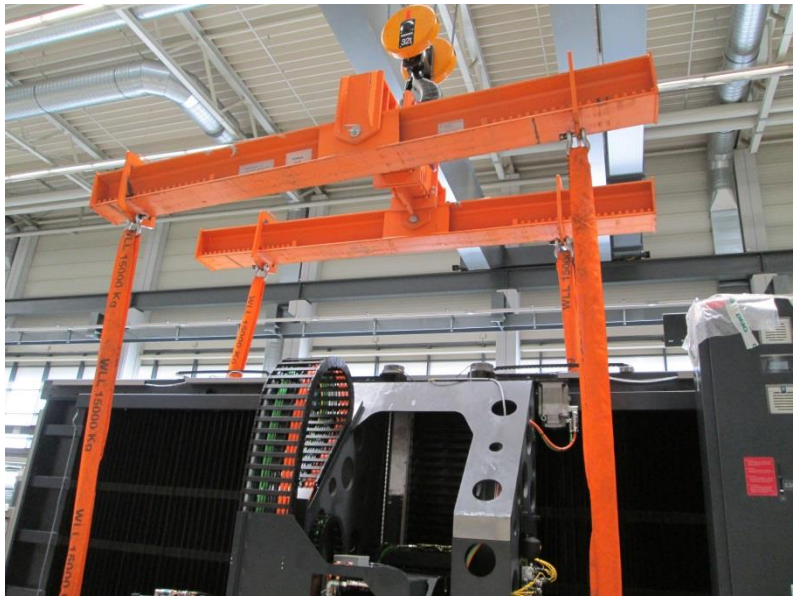
The transport traverse bar (1 pc.) **is an item on loan** from the Seebach plant and is usually supplied with the transported machine and separate accessories!

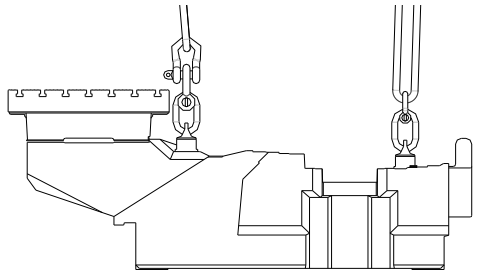
The customer is responsible for the return transport of these items to Seebach. This can not always be done with the same transporter (coordination required) !

Total approx. 1950 kg /

L x D x H: 4250 * 1900 * 1300 mm

Transport shall only be carried out in accordance with the relevant 'instructions':

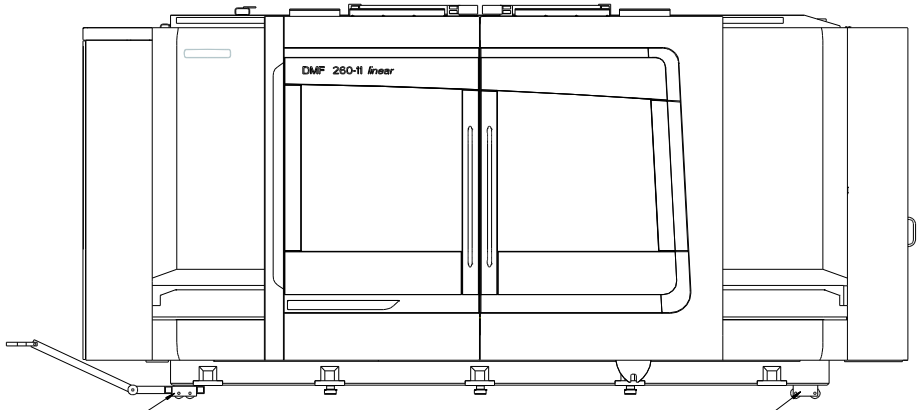




Transport in the hall with

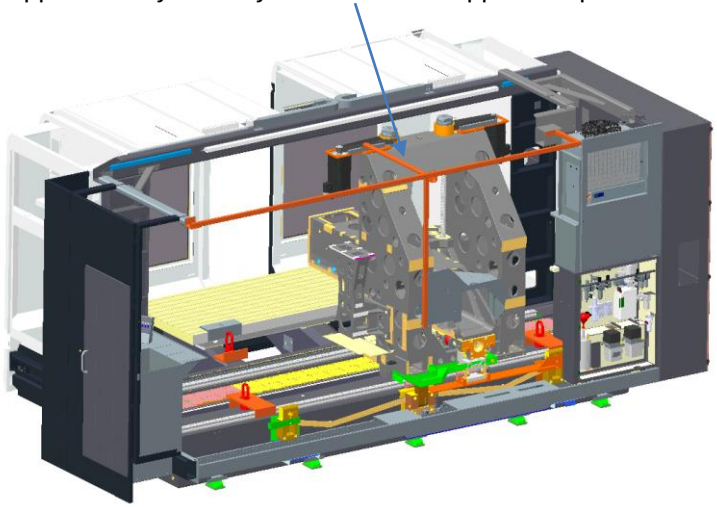
(1) Air cushions

(2) Armored steel rollers



Adaptation Transport for DMF y1100

Supplementary security framework to support the plan from mid-2017



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