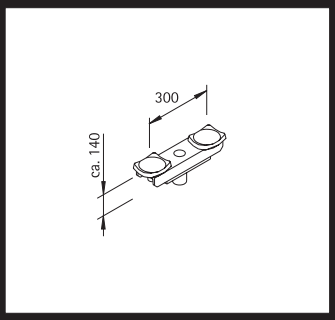
Pit lifting equipment

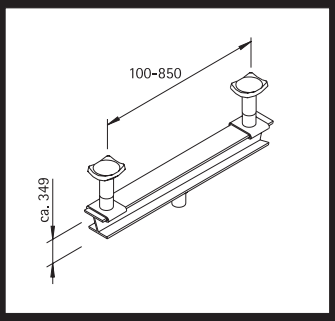
Pit planning
Pit jacks
Floor jacks
Traverses and supporting bridges
Supporting systems and accessories

nogra®

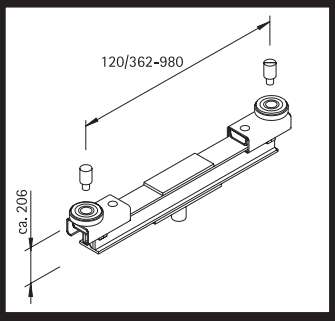
nogra Traverses & supporting bridges



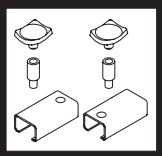
TK Axle traverse for safely supporting very heavy vehicles. The short version ensures that the load is distributed across the centre.



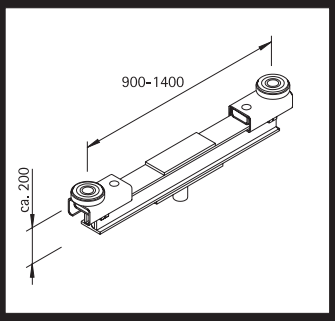
TL Both the width and the height of the carrying plate of the standard truck traverse ATS can be adjusted by the spacers at each load carrying plate.



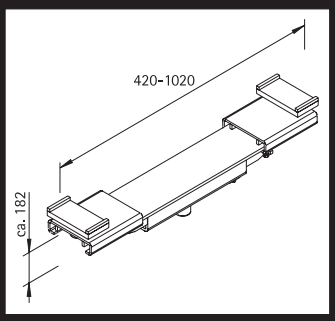
TF Very flat traverse with large lateral adjustment range of the carrying plates. Particularly suitable for buses.



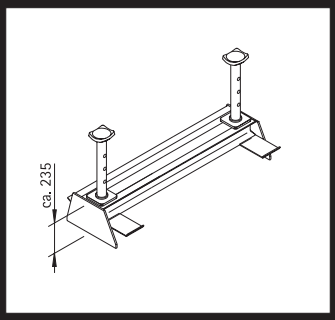
TF truck set Accessories for supporting trucks.



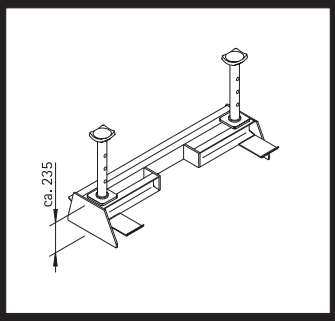
TNB Special traverse for safely supporting Neoplan buses.



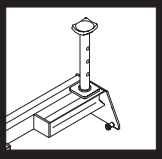
TNF The design of ATB NV takes account of the special requirements for supporting low-level buses.

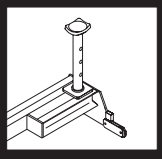


ASB-G Compact, lightweight supporting bridge.

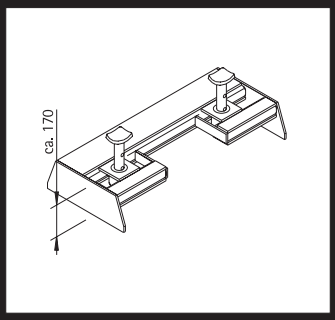


ASB Universal supporting bridge to prevent tilting. Pit jack can be used elsewhere.

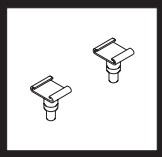




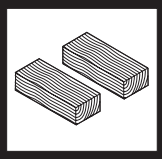
ASB-R Mobile designs. We require detailed information on your pit to produce an optimum solution. Please use the back page of this brochure for this purpose.



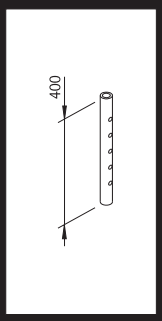
ASB NF Extra-flat supporting bridge that also fits under low-level buses.

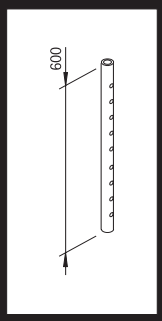


AT-A To position a traverse (on which the vehicle is raised) safely on the supporting bridge.

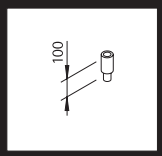


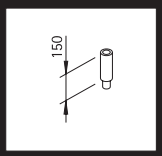
DB Wooden blocks for lowering the traverse onto the supporting bridge.

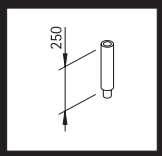




ST Spacer tubes to equalise large differences in height between supporting bridges and the load. With drop protection as standard.







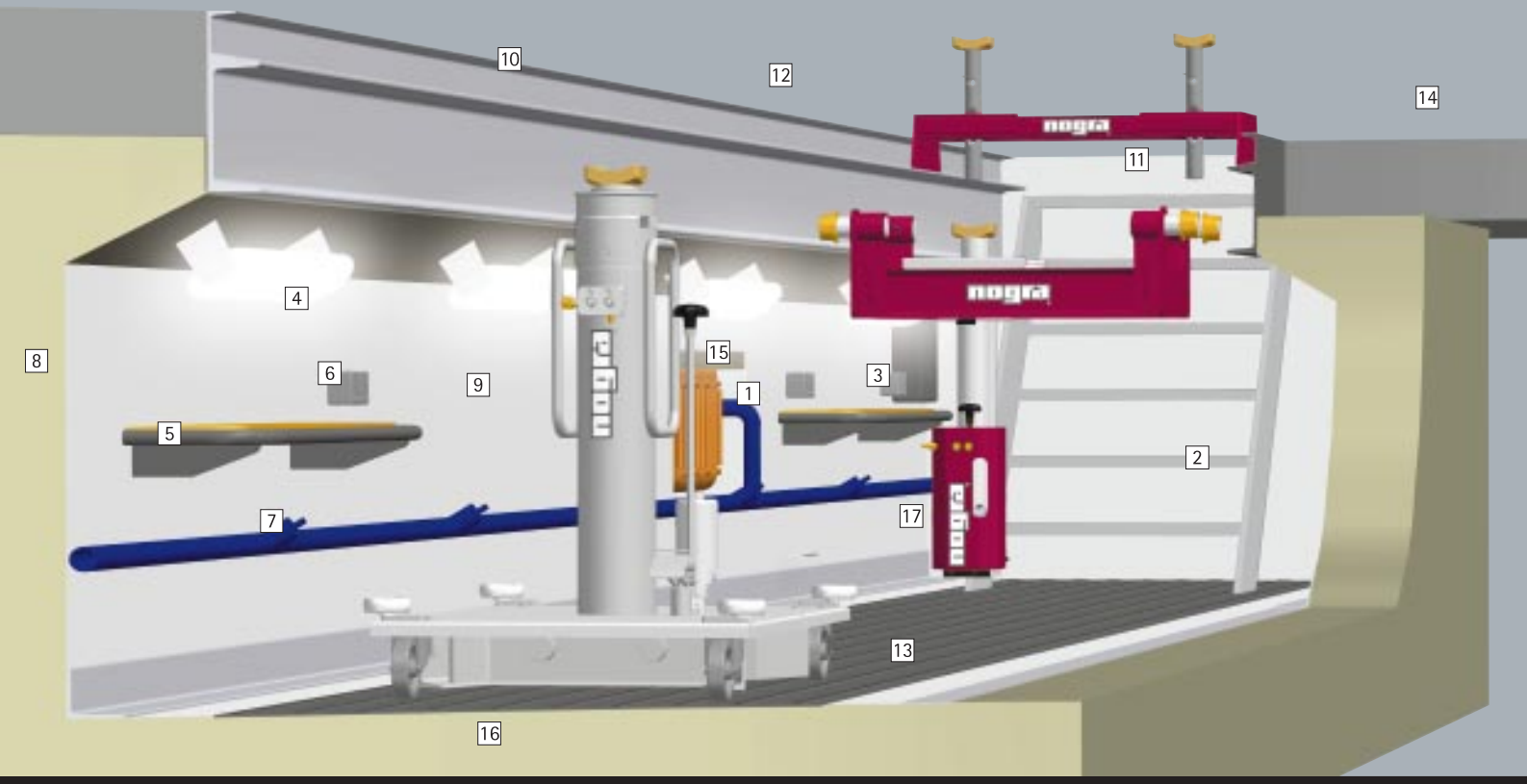
STZ Spacers for height adjustment between supporting bridges/traverses and load.

Model	Peg ø	Order No. Capacity			
	mm	4-10 t	12-15 t	20 t	30 t
TK	35	510006	510007		
	55	510008	510009	510010	
	80			510011	510012
TL	35	510013	510014		
	55	510015	510016	510017	
	80			510018	510019
TF	35	510020	510021		
	55	510022	510023		
TF truck set		510024	510024		
TNB	55	510025			
TNF	55	510026			
ASB-G		510027	510028	510029	510030
ASB		510031	510032	510033	510034
ASB-R		510035	510036	510037	510038
ASB-NF		510039	510040		
AT-A		510041	510042	510042	
DB		510043	510043		
ST 400		510044	510045	510045	510045
ST 600		510046	510047	510047	510047
STZ 100	35	510048	510048		
	55	510049	510049	510049	510049
STZ 150	35	510050	510050		
	55	510051	510051	510051	510051
	80			510052	510052
STZ 250	35	510053	510053		
	55	510054	510054	510054	510054
	80			510055	510055

nogra Contents

nogra Pit planning

The pit is first and foremost The central feature of a perfectly functioning workshop is the pit. Here, everything must work hand in hand to keep the throughput times as short as possible. But what is needed in an ergonomic pit? What must be taken into account? This raises many questions, and we have explained some of the answers briefly below.



Length Choose according to need, 21 m is ideal. A long vehicle should never block both accesses.

Width 1050 mm outer edge of wheel rail for truck and bus workshops (universal pits for all types of vehicles). If more than 1 pit is available, the widths may be of variable size in order to have an optimum width for each vehicle.

Depth 1390 mm for trucks and vehicles with ample ground clearance. 1490 mm for buses and vehicles with low ground clearance. Note: depth of pit and free space of the vehicle should allow a comfortable standing height (pit depth for **nogra** pit jacks see page 9). With a depth of more than 1600 mm, the regulations for forced ventilation are to be observed.

Shape of pit We recommend an enlarged width of the pit below the edge on both sides by approx. 200-270 mm. Thus, the working space will be enlarged and space is gained for maintenance conduits, illumination and shelves.

Stowage space Additional stowage space can be planned for oil drums, stationary greasing equipment etc. You may also plan space for mobile pit jacks.

Parallel 0/+5 mm

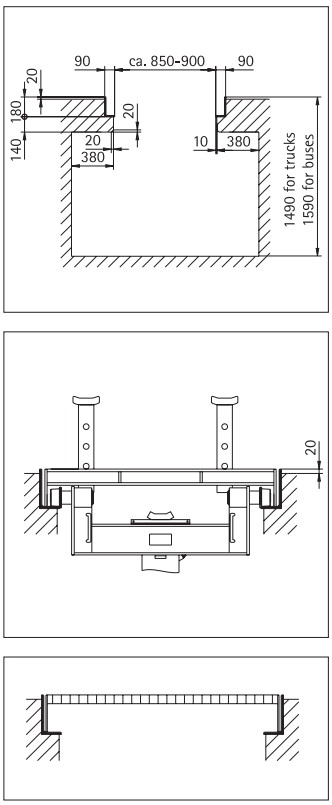
Regulations Please observe existing local regulations available from your authorities.

Barriers/pit cover Pits must be secured in order to prevent accidents. This may be achieved by setting up chains to block access approx. 500 mm from the edge of pit. With longer service intervals, it may be advisable to completely cover the pit.

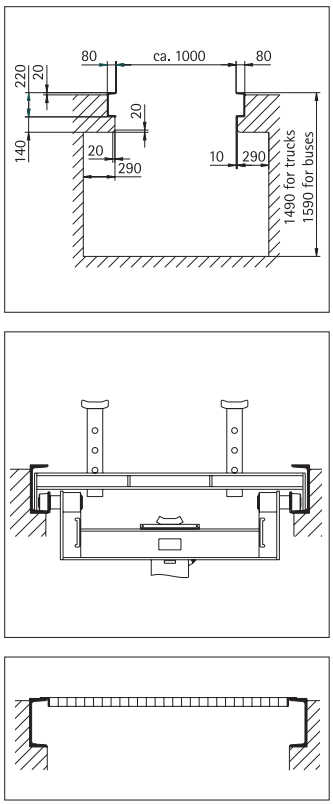
Access There should always be 2 stairs. Emergency exits are not allowed if they replace the stairs.

Oil trap Use according to local rules.

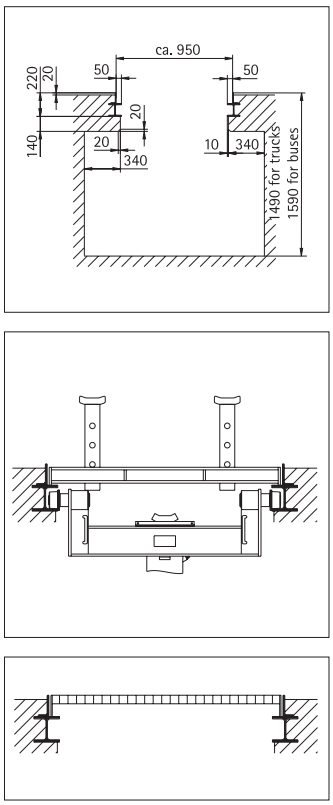
1 **Supply line** PVC ø 300 for electrical cables, compressed air, oil hoses etc.
2 **Access** Always 2 stairs.
3 **Light switch** Beside the access stairway, can be installed in the cable conduit for pit lights.
4 **Lighting** Pit lights in staggered arrangement. They must not project into the pit.
5 **Tool tray** These are much cheaper than recesses in the concrete.
6 **Power socket** 220 V/16 A flush mounted in the conduit.
7 **Compressed air** A service unit in the pit is recommended.
8 **Pit depth** Ideal for trucks only, pit 1390 mm (1490 mm for buses).
9 **Cable conduit** For electrical installation (PVC), flush mounted. Light switches and power sockets.
10 **Wheel rails** approx. 80-100 mm above the ground.
11 **Pit width** approx. 900-1050 mm. Wider pits are no longer suitable for all vehicles (twin wheels).
12 **Pit length** Ideally approx. 21 m (the longer the better).
13 **Oil trap** according to local regulations.
14 **Barrier** Installed approx. 500 mm outside the pit.
15 **Stowage space** Dimensions, e.g. w x l = 600 x 2200 mm (for oil barrels, lubricating equipment etc. Appropriate in pits used for oil changes and lubrication only).
16 **Pit design** Floor and walls lined with panels, pit edging galvanised.
17 **Extraction** Observe regulations!



GE I Standard pit for trucks and buses. Pit jacks up to 20 t. Economical pit edges without notable disadvantages. Pit jack and supporting bridge can be easily combined.

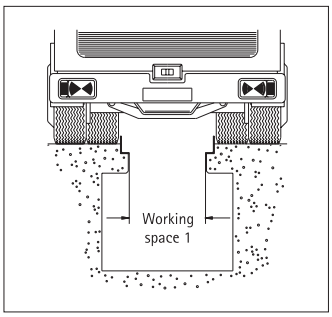


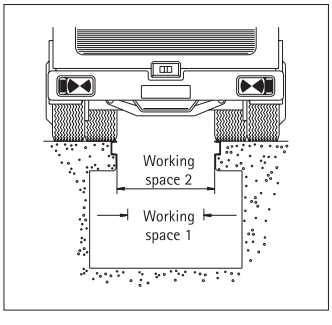
GE II Wide, safe pit for pit jacks up to 20 t. There is a working space of ca. 1000 mm available. Receivers should be installed for pit jacks from 20 t.



GE III Standard pit for heavy vehicles. 2 different traverse levels for the pit jack and the supporting bridge are advantageous. The working space (overall width) is considerably greater than for GE I at approx. 950 mm. If FI 70 x 70 is used, this is especially suitable for vehicle-bearing pit covers. Receivers should be installed for pit jacks from 20 t.

Working space (overall width) The maximum working space is obtained if profiles are used which are closed at the top (U-profiles or I-girders). This is increased if circumstances allow the omission of wheel rails and pit cover edgings. The wheel rails reduce the remaining working space particularly for vehicles with low ground clearance. A recess beneath the pit edging creates stowage space and improves the access beneath the pit jack trolley.





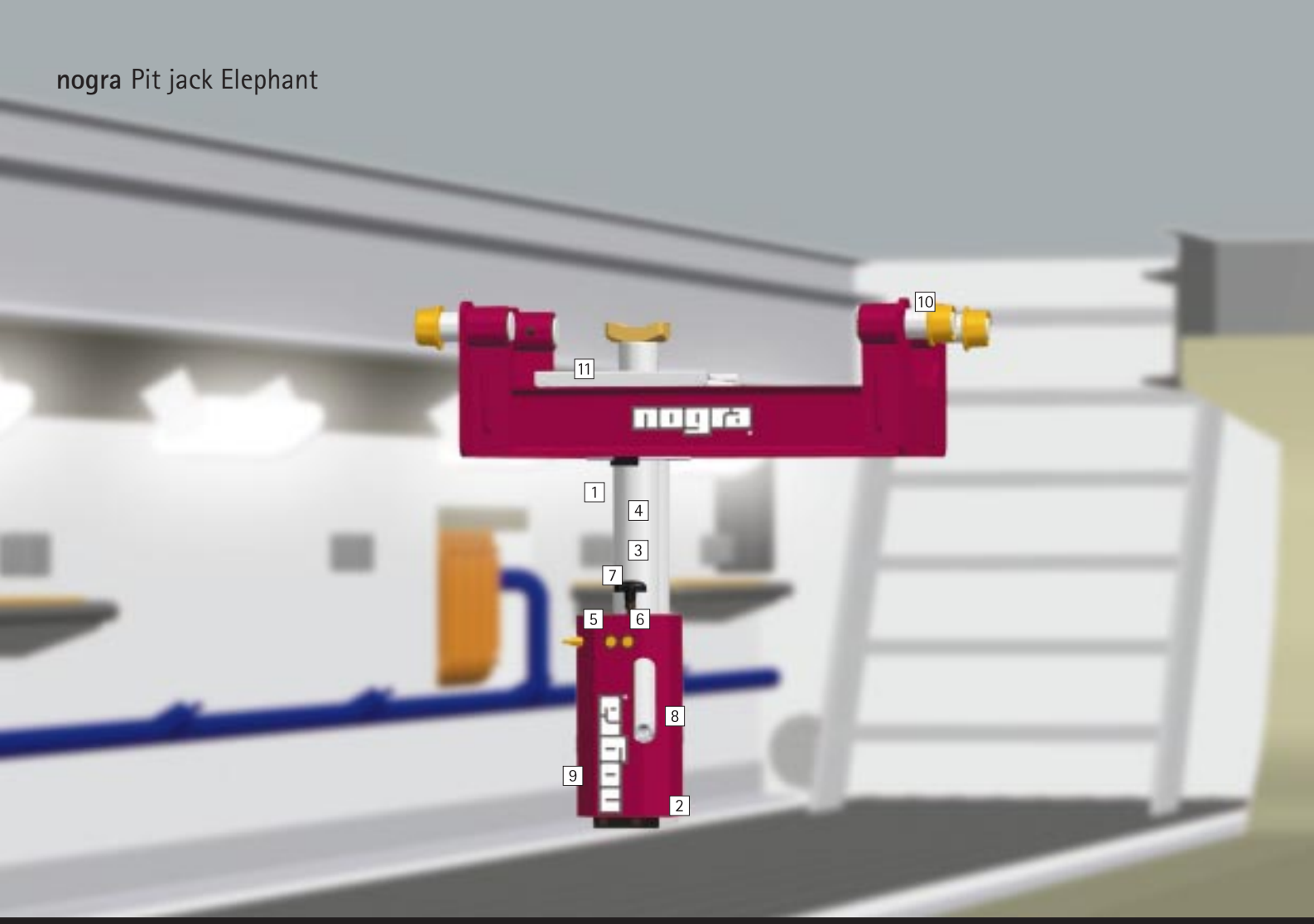
Example The different pit edgings lead to differences in the width of the working spaces. The standing of trucks is identical in both cases.

Choice of proper pit edging The information on this page should help you to choose the right edging. The following criteria should be observed.

Safety How is the passage to and from the pit? You may omit the wheel rails if it is possible to enter and leave the pit in a straight line. In this case, the pit may be built wider. Never omit the wheel rails if this is not the case or if the pit can only be left in reverse gear. Marking of passage routes is recommended as a guide.

Loading capacity In many cases, the edge of the pit acts as a rail for the trolley of the pit jack. In order to comply with static requirements, the profiles should not be too small. See this page for dimensions. Anchoring irons should be welded to the backs of the profiles at regular intervals (200-300 mm spacing according to static requirements). The profile projects by 5-10 mm over its entire length. If using pit jacks with a non-adjustable trolley, receivers should be installed, the dimensions of which are to be given by static calculations.

Pit cover Conventional covers consist of gratings or wooden planks. Covers are always useful if the pit is only temporarily in use. If wheel rails are used, the cover should be such that vehicles can pass over it. If the pit is used frequently, barriers made of upright bars or chains may be sufficient.



Note Some of the above features are options available at an additional charge.

1 **Slimline design** The consistent duo-construction saves space and makes more free space along the length of the pit.

2 **Covered controls** Effective protection against impact, which prevents possible injuries to the user. The equipment is also protected against external influences.

3 **Lifting and pump piston hard chrome plated** Both the piston rod and the pump piston are hard chrome plated for protection against corrosion and wear.

4 **DTS technology (Dual Tank System)** Enables the complete oiling of the cylinder. A special process prevents the development of rust at the inner wall of the cylinder.

5 **Hydropneumatic quick lift** The hydropneumatic quick lift rapidly moves the piston rod to the lifting point.

6 **Pneumatic motor for heavy lifting** The load stroke of the pneumatic motor enables the load to be lifted at the push of a button – without any physical effort.

7 **Pneumatic forced return** The hydropneumatic forced return rapidly retracts the piston even when not under load. Unlike conventional pit jacks, the piston is effectively "pulled" back into its rest position.

8 **Stepless fine adjustment stroke** The stepless fine adjustment stroke permits the pit jack to be positioned accurately to the vehicle. Important for responsive lifting and when raising assemblies into position.

9 **Detachable double pump** The simple, compact design simplifies regular maintenance work.

10 **Rollers with roller bearings** in the chassis and cross-trolley allow extremely light movement.

11 **Load-depressing safety cross-trolley** The movement facility under load is disabled from a load of approx. 800 kg. A particularly flat design is also achieved.

nogra Pit jack Elephant

HH The manually operated hydraulic basic version with a double pump for quick and load lifting.

PH More convenience due to pneumatic quick lifting and pneumatic forced return.

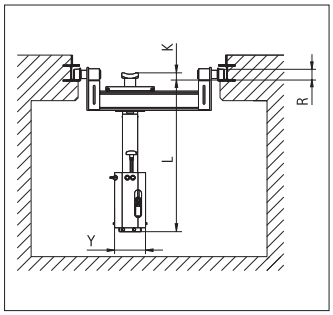
LM Optimum workplace ergonomy by additional pneumatic motor to lift the load at the push of a button.

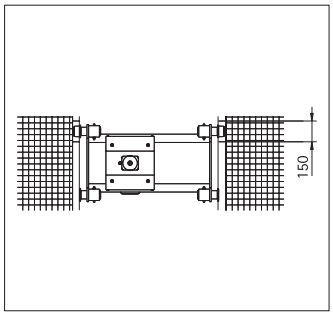
Model	Capacity	Stroke	Peg diameter	Dimensions		Carriage[1] standard/lowered		Weight ca.	Order No.
				Y	R	L[2]	K		
	t	mm	mm	mm	mm	mm	mm	kg	
Elephant HH 4	4	560	55	180	80	838/1030	51/-137	178	**3850**
Elephant HH 6	6	760	55	180	80	1038/1230	51/-137	183	**3851**
Elephant HH 10	10	760	55	224	80	1100/1260	51/-137	237	**3852**
Elephant HH 12	12	760	55	224	80	1100/1260	51/-137	241	**3853**
Elephant HH 15	15	760	55	224	80	1100/1260	86/-137	246	**3854**
Elephant HH 20	20	760	80	240	95	1056/1195	86/-72	274	**3855**
Elephant HH 30	30	760	80	240	95	1036/1175	106/-72	281	**3856**
Elephant PH 4	4	560	55	180	80	838/1030	51/-137	178	**3857**
Elephant PH 6	6	760	55	180	80	1038/1230	51/-137	183	**3858**
Elephant PH 10	10	760	55	224	80	1100/1260	51/-137	237	**3859**
Elephant PH 12	12	760	55	224	80	1100/1260	51/-137	241	**3860**
Elephant PH 15	15	760	55	224	80	1100/1260	86/-137	246	**3861**
Elephant PH 20	20	760	80	240	95	1056/1195	86/-72	274	**3862**
Elephant PH 30	30	760	80	240	95	1036/1175	106/-72	281	**3863**
Elephant LM 4	4	560	55	180	80	838/1030	51/-137	178	**3780**
Elephant LM 6	6	760	55	180	80	1038/1230	51/-137	183	**3781**
Elephant LM 10	10	760	55	224	80	1100/1260	51/-137	237	**3782**
Elephant LM 12	12	760	55	224	80	1100/1260	51/-137	241	**3783**
Elephant LM 15	15	760	55	224	80	1100/1260	86/-137	246	**3784**
Elephant LM 20	20	760	80	240	95	1056/1195	86/-72	274	**3785**
Elephant LM 30	30	760	80	240	95	1036/1175	106/-72	281	**3786**

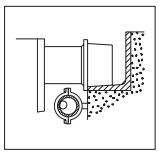
Model	Order No. Capacity 4-10 t	12-15 t	20 t	30 t
Rolls of carriage set free	**510001**	**510002**	**510002**	**510002**
Rolls with special profile	**510003**	**510003**	**510003**	**510003**
Screwed carriage	**510004**	**510005**	**510005**	**510005**

[1] **Carriage versions**
Capacity: 4-10 t V1 A=790-920 mm
V2 A=880-1010 mm
V3 A=970-1100 mm
Capacity: up to15 t V1 A=830-920 mm
V2 A=920-1010 mm
V3 A=1010-1100 mm
From a capacity of 20 t upwards, all carriages are made to fit the dimensions of the pit.

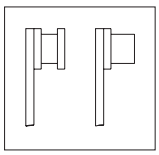
[2] **Note**
Ensure sufficient ground clearance.



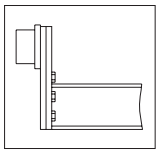




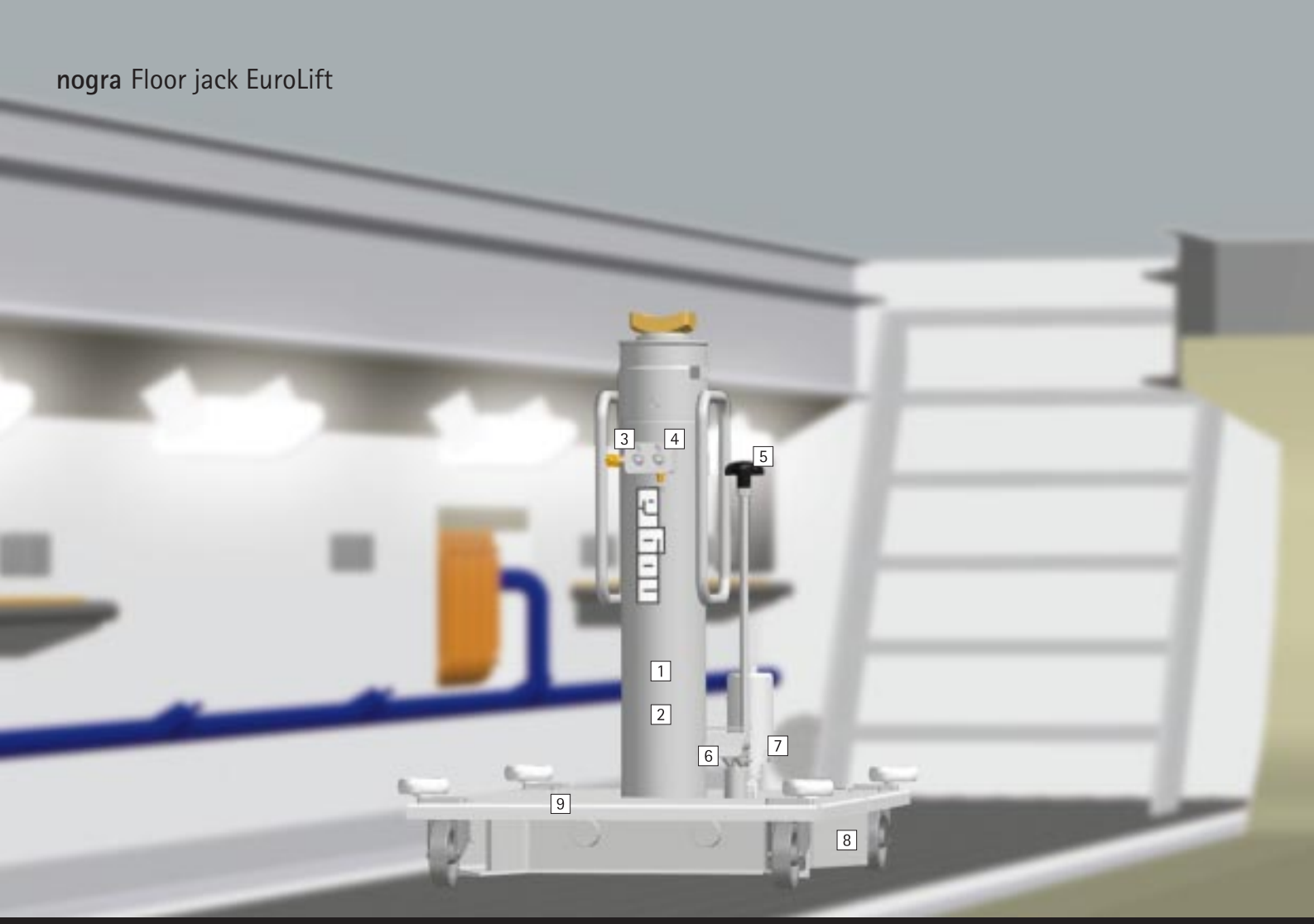
Rollers of the chassis exposed.



Rollers with special profile.



Bolted chassis.



Note Some of the above features are options available at an additional charge.

1 **Lifting and pump piston hard chrome plated** Both the piston rod and the pump piston are hard chrome plated for protection against corrosion and wear.

2 **DTS technology (Dual Tank System)** Enables the complete oiling of the cylinder. A special process prevents the development of rust at the inner wall of the cylinder.

3 **Hydropneumatic quick lift** The hydropneumatic quick lift rapidly moves the piston rod to the lifting point.

4 **Pneumatic motor for heavy lifting** The load stroke of the pneumatic motor enables the load to be lifted at the push of a button – without any physical effort.

5 **Pneumatic forced return** The hydropneumatic forced return rapidly retracts the piston even when not under load. Unlike conventional pit jacks, the piston is in effect "pulled" back into its rest position.

6 **Stepless fine adjustment stroke** The stepless fine-adjustment stroke permits the pit jack to be positioned accurately at the vehicle. Important for responsive lifting and when raising assemblies into position.

7 **Detachable double pump** The simple, compact design simplifies regular maintenance work.

8 **Load-depressing safety chassis** The movement facility under load is disabled from a load of approx. 800 kg.

9 **Chassis designed as a standing surface** Reduces the danger of tripping in the pit and thereby the risk of injury.

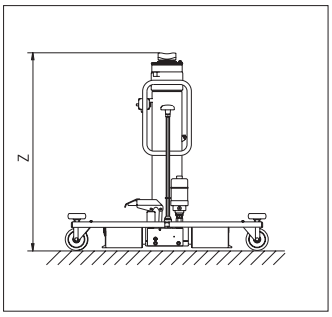
nogra Floor jack EuroLift

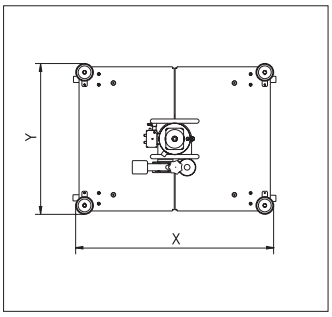
PH More convenience due to pneumatic quick lifting and pneumatic forced return.

LM Optimum workplace ergonomy by additional pneumatic motor to lift the load at the push of a button.

TLM LM technology in telescopic design. Even flatter, even higher performance.

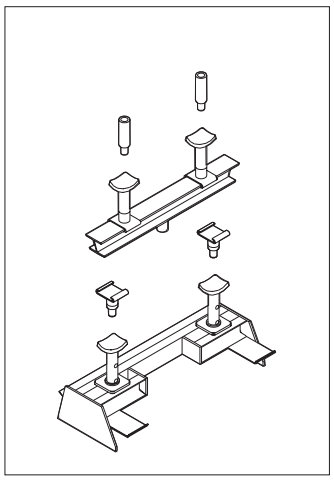
Model	Capacity	Stroke	Peg diameter	Dimensions X	Y	Z min.	max.	Weight ca.	Order No.
	t	mm	mm	mm	mm	mm	mm	kg	
EuroLift PH 6	6	760	55	1085	845	1104	1864	229	**3790**
EuroLift PH 10	10	760	55	1085	845	1104	1864	245	**3791**
EuroLift PH 15	15	760	55	1085	845	1104	1864	283	**3792**
EuroLift PH 20	20	760	80	1085	845	1171	1931	331	**3793**
EuroLift LM 6	6	760	55	1085	845	1104	1864	229	**3794**
EuroLift LM 10	10	760	55	1085	845	1104	1864	245	**3795**
EuroLift LM 15	15	760	55	1085	845	1104	1864	283	**3796**
EuroLift LM 20	20	760	80	1085	845	1171	1931	331	**3797**
EuroLift TLM 15/15	15/15	1200	55	1085	845	1007	1930	368	**3798**



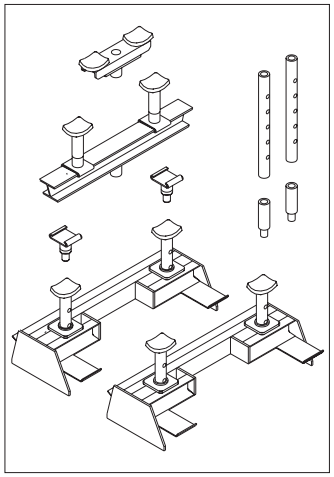


Model	Peg ø	Order No. Capacity			
	mm	4-10 t	12-15 t	20 t	30 t
Supporting	35	**510056**	**510057**		
package M	55	**510058**	**510059**	**510060**	
	80			**510061**	**510062**
Supporting	35	**510063**	**510064**		
package B	55	**510065**	**510066**	**510067**	
	80			**510068**	**510069**
Supporting	35	**510070**	**510071**		
package N	55	**510072**	**510073**		
ATX	35	**510074**	**510074**		
	55	**510075**	**510075**	**510075**	
	80			**510076**	**510076**
ATG	35	**510077**	**510077**		
	55	**510078**	**510078**		
ATU	35	**510079**	**510079**		
	55	**510080**	**510080**		
ATU 145	35	**510081**	**510081**		
	55	**510082**	**510082**		
ATU 175	35	**510083**	**510083**		
	55	**510084**	**510084**		
ATU 220	35	**510085**	**510085**		
	55	**510086**	**510086**		
ATH	35	**510087**	**510087**		
	55	**510088**	**510088**	**510088**	
	80			**510089**	
ATK	35	**510090**	**510090**		
KSV 150	35	**510091**	**510091**		
	55	**510092**	**510092**	**510092**	**510092**
	80			**510093**	**510093**
KSV 250	35	**510094**	**510094**		
	55	**510095**	**510095**	**510095**	**510095**
	80			**510096**	**510096**

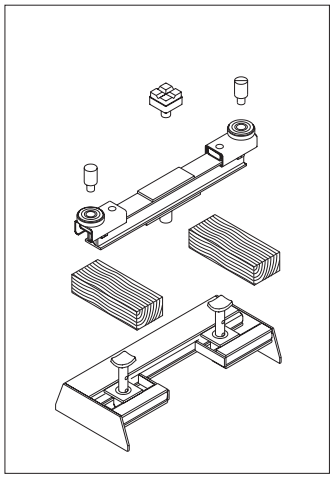
Model	Peg diameter	Capacity	Order No.
	mm	t	
GP 2000	35	1	**510097**
GP 4000	35	1	**510098**
Bushing 55/35	-		**510099**
Bushing 80/35	-		**510100**
Bushing xx/35	-		**510101**
Condensate drain	-		**510102**
Load meter	-		**510103**



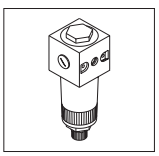
Supporting package M The minimum equipment for a working pit, comprising:
1 supporting bridge ASB
1 axle traverse TL
2 spacers STZ 150
1 connecting set AT-A



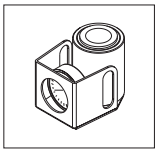
Supporting package B The basic equipment for truck workshops with universal vehicle passage, comprising:
2 supporting bridges ASB
1 axle traverse TL
1 axle traverse TK
2 spacers STZ 150
1 connecting set AT-A
2 spacer tubes ST 600



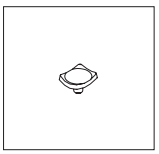
Supporting package N For bus and public transport workshops (low-level buses), comprising:
1 supporting bridge ASB-NV
1 axle traverse TNB
2 mushroom-shaped supports ATK
2 wooden blocks DB
1 carrying plate ATH



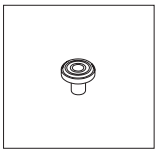
Condensation trap Protects the pneumatic control system and the pneumatic motor against dirt and condensation



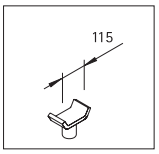
Axle load scales To measure the axle loads on the pit jack



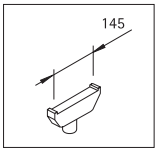
ATX The carrying plate ATX is standard on all pit jacks from 4 t upwards.

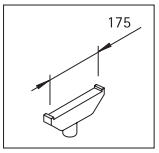


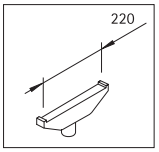
ATG With its rubber surface, carrying plate R is particularly suitable for use with cars.

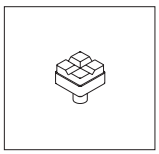


ATU Four different widths in total, for a flexible range of uses.

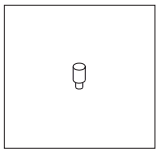




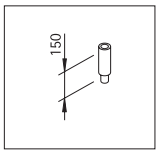




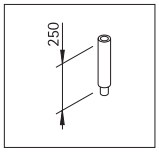
ATH The hardwood insert on carrying plate H allows heavy loads to be raised gently.

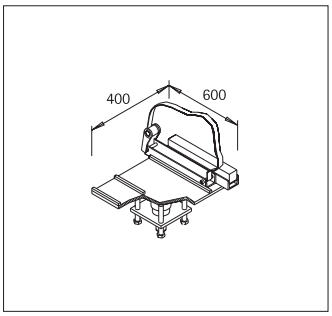


ATK Special support for buses (on frame) (mushroom-shaped support).

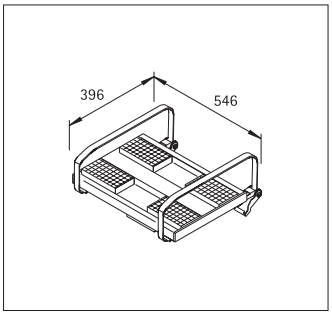


KSV Extension ram for height adjustment between pit jack and load. *Not for use in conjunction with traverses.*

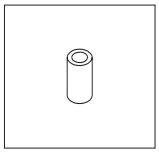




GP 2000 The unit can easily avoid obstructions due to an all-round adjustment angle of ± 15° using screws. Tensioning straps are used to secure the load.

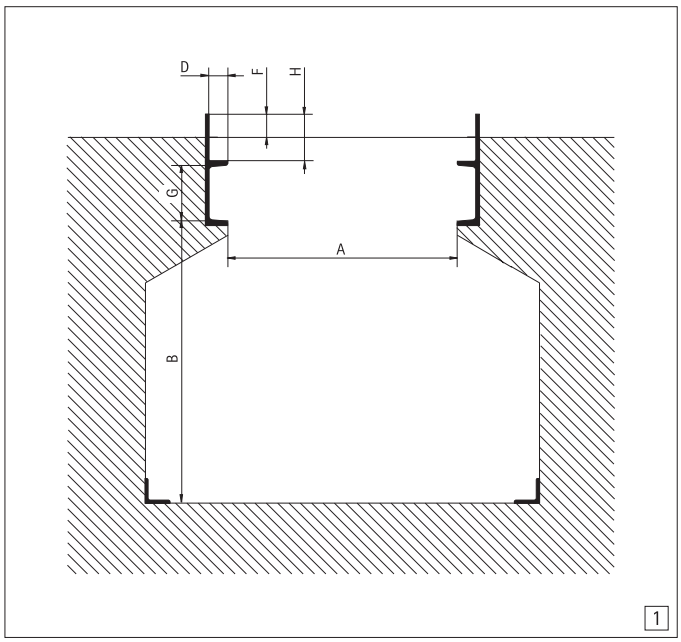


GP 4000 The extra-flat version, with large-area rubber support surfaces and two tensioning straps, is particularly versatile. The adjustment angle is ± 12°.



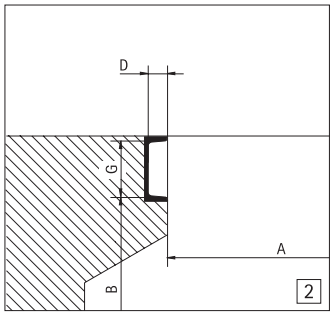
Bushing To adapt different receiver bores and pin ø

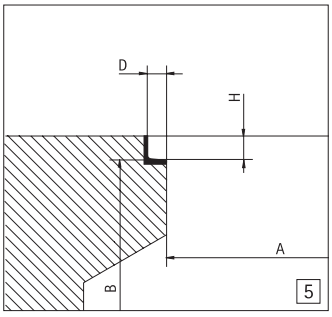
nogra Dimension sheet

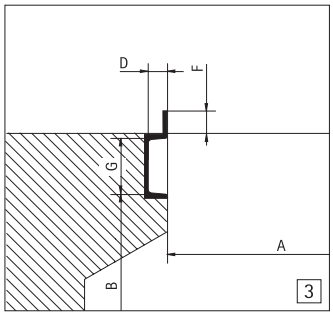


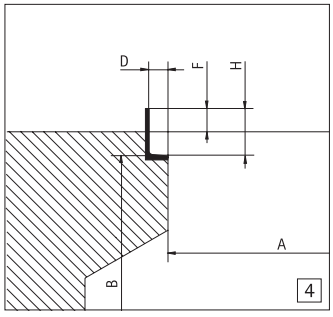
Dimension sheet for carriages and supporting systems We manufacture your pit trolley and your supporting bridge according to this dimension sheet. Please measure these dimensions carefully. The pit dimension A is especially important. Please check whether this distance is equal over the entire length of the pit. If this is not the case, please specify the largest and smallest dimensions (please check on different points).

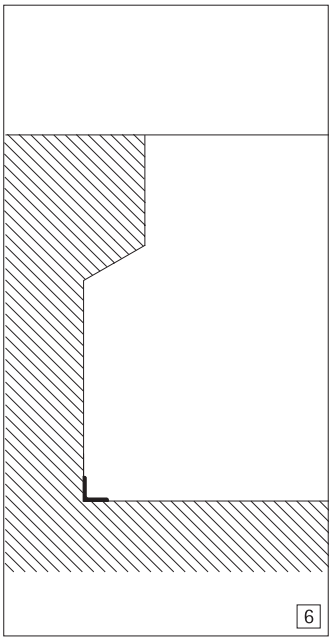
If your pit contains projections, e.g. strip lights, trays etc, please enter these with all important dimensions in the sketch. If the profile of your pit is not shown, please sketch this in the box 6 provided for this purpose.











Pit border	Type	
Distance from roll surface to pit floor	**B**	mm
Pit internal dimensions	**A**	mm
Closed profile height	**G**	mm
Roll surface width	**D**	mm
Wheel rail height	**F**	mm
Open profile height	**H**	mm

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