

MODELS HL/P & HL/S HYDRAULIC DOCK LEVELLERS WITH HINGED (SWING) LIP FOR PIT-RECESSED OR SUSPENDED FRAME LOADING DOCK CONSTRUCTIONS



The **sara Model HL/P Electro-Hydraulic Dock Leveller** has a heavy duty steel construction incorporating a sub frame for **mounting on the pit base**. The platform is manufactured from 8mm Durbar non-skid steel plate. The standard hydraulic swing lip is also constructed from Durbar non-skid steel plate, 15mm thick, and chamfered at the leading edge for smooth transfer of wheeled traffic. Standard lip length is 400mm which gives 350mm clear projection beyond the dock face. Standard paint finish is Red (RAL 3000) gloss.



HL/P pit recessed Hydraulic Dock Leveller with hinge lip

Designed, tested and manufactured to comply with BS EN 1398 with full operational load capacity ranging from 3000 - 10000kg per single axle (4500 - 14500kg rated) load. Heavier duty capacities are available.

The platform is supported by purpose-made longitudinal angles hinging at rear on pivot shafts manufactured from ST52 grade steel. **Hot rolled steel angle** 100 x 50 x 8mm as opposed to cold formed angle, is used to provide maximum strength and flexibility to the platform deck. The unitary construction of the sub-frame incorporates a reinforced rear member for attachment to the rear pit angle.

Designed to combine longitudinal platform strength with permissible diagonal tilt of 75 or 100mm for 2m wide platforms and over without imposed load on the platform.

Electrical motor is 220-240V / 380-420V 3 Phase 1.1kW. The supply voltage is 3 Phase, Neutral and Earth. Control voltage is 24V DC via a transformer housed within a wall mounted control box 240mm high x 160mm wide x 120mm deep and has protection to IP54. Clients isolator requirement is 20A 415V plus earth and neutral fused at 10A.



Standard hinge lip 400mm long

The **sara unique safety design** controls are 'dead-man' type (press and hold) to operate. Separate push buttons are used for lip and platform, ensuring that should an emergency arise during the motion of either lip or platform, just releasing the button will arrest the movement. This design ensures that the operator is **fully monitoring the safe transfer** of lip into the vehicle. The unique vehicle sensing lip has an extra switch arrangement located beneath the platform that activates the hydraulic float facility when the lip is in contact with the vehicle. As **an extra safety feature**, the movement of the platform will automatically arrest if it is not in contact with the vehicle floor bed.

Full safety criteria is covered with: 1) Safety valves on the main hydraulic cylinder. 2) Steel side toe guards throughout the full travel. 3) Emergency stop facility. 4) Controlled and uncontrolled auto resets.

Steel buffer mounting plates can be supplied attached to the pit edge angles to save drilling into the concrete face of the dock.



Buffer on steel mounting plate (optional)



Levellers in factory extension (twin dock house)



Internal view of Loading Bay in operation

The **sara Model HL/S Electro-Hydraulic Dock Leveller** is similar to the HL/P model but offers the **extra benefits** of a 'suspended frame' construction (see photograph below). This suspended sub-frame design allows for the total imposed load from the platform (either raised or parked) to be transferred to the top pit edge rebate via the sub-frame, thus eliminating traditional pit-base support costs. This design allows for the use of an open pit to accommodate vehicle tail lifts.

Full compliance with BS EN 1398 on design, testing and manufacture. Capacities range from 3000 - 10000kg per single axle load (4500 - 14500kg rated load).

Full Durbar non-skid steel plate construction on platform and 400mm long hinged (swing) lip giving 350mm clear beyond the dock face.



Galvanised finish available



Suspended Frame construction with "Open Pit" for vehicle tail lift

OPTIONAL EXTRAS FOR BOTH MODELS (HL/P & HL/S)

- Special heavy-duty capacities.
- Insulation under platforms.
- Extra projection Hinged Lips.
- Galvanised finish.
- VS 'Intelligent' Dock Buffer System (see page 7).
- Special non-skid surfaces.
- Steel supporting constructions with handrails.
- Installation Pouring Pans.
- Side Sealing Brush Strips.
- Special colour finishes.
- Interlocks with other dock equipment.
- Composite Control Boxes.
- Automatic return to dock level.
- Special sizes to suit existing pits.
- Steel Pit Edge Angle Set (for casting in).
- Pre-cast Concrete Pits
- LED Traffic Lights



Suspended Frame Dock Leveller with yellow/black safety chevrons, visible when platform operates above and below dock



Levellers in chill store operation



Levellers in heavy-duty fabricated steel pouring pans



sara Pre-cast Concrete loading bay installation

MODEL TS ELECTRO HYDRAULIC DOCK LEVELLER WITH TELESCOPIC LIP



Telescopic Levellers with opening for vehicle tail lifts



Control Box

The **sara** Model 'TS' Electro-Hydraulic Dock Leveller has an all-steel construction with a **unique suspended type sub-frame** which is supported within the top rebate of the pit.

This dock leveller incorporates a hydraulically operated **telescopic lip** with a **steel thickness of 12mm to 20mm** depending on the capacity. Standard horizontal travel is up to 500mm. Fully adjustable lip projection for final vehicle positioning using 'dead-man' push buttons.

The platform is constructed from Durbar non-skid steel plate, **standard thickness up to 8mm**, depending on the capacity.

Designed and manufactured to meet Euro Standard BS EN 1398 with single axle load capacity ratings from 3000 to 11000kg.

The unique suspended frame design ensures that the total imposed load from the platform is transferred to the pit edge rebate via sub frame bearers offering the choice of a **vehicle tail lift** cavity within the bottom of the pit, **without additional pit-base support or expense**.

Strong pit design is achieved via support bearers with 'fish tails' for welding to steel dowel pins during installation.

The motor is rated at 380-420V 3 Phase 1.1kW with protection to IP54. The motor is factory wired and fully tested to Euro standards before despatch.

The control system is 24V DC and includes a solenoid valve. The system is 'fail-safe' in that it will completely lock up if power is cut.

Two heavy duty steel cross traffic legs ensure safety and stability when the leveller is in **parked position** at dock level.

The **sara** 'TS' Dock Leveller has a side tilt facility of 70 - 150mm (depending on platform size) to accept an uneven vehicle deck (without an imposed load).

The platform lifting cylinder is single acting and uses separate seals at the top and bottom of its stroke. The cylinder is front mounted to provide maximum lifting force. An anti-hose break valve is fitted at the base of the cylinder to arrest the platform descent in the unlikely event of a hose failure.

A separate double acting cylinder is mounted beneath the platform to provide independent telescopic lip movement and adjustment. When the telescopic lip is retracted and parked under the platform it is 'stowed' on **heavy-duty steel box section legs**. The final working position of the telescopic lip is **infinitely adjustable** (unlike hinged/swing lip dock levellers) bringing many unique benefits to the operator - see opposite page.

All **sara** steel components are treated with a proven industrial paint system, including rust inhibitors. Standard colour Red (RAL 3000).

The control functions are housed in a high quality six push-button control box; platform up, lip out, lip in, platform down, park, and emergency stop. Protection to IP54.

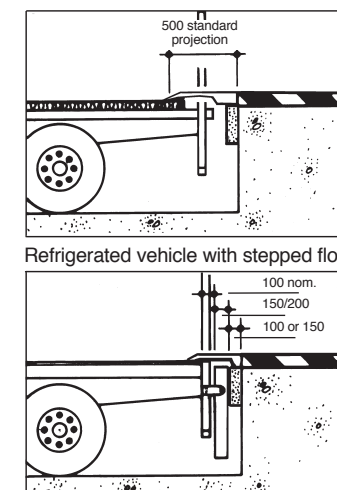
BENEFITS OF THE sara TELESCOPIC LIP*

The telescopic lip is **adjustable to any point** to give:

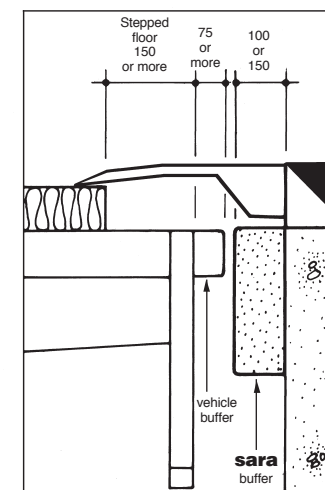
1. Safe traffic cross-over entry into **unevenly** parked vehicles.
2. Easy removal and placing of pallets stacked at extreme rear of vehicle, both above and, more importantly, **below** Dock level.
3. **Full drop of security door** (if required) in front of the Dock Leveller due to choice of lip projections.
4. The telescopic lip action offers extra movements of lip **without** vehicle re-positioning.
5. Easy bridging of '**old-style**' tail lifts or **stepped vehicle floors** (see drawings). This is vitally important when an existing dock **cannot** have 'vehicle tail-lift' pit construction.
6. Ideal for **side loading**.
7. A **greater operating range** can be achieved by the **sara** TS Dock Leveller - often as much as 25% more than a hinged-lip dock leveller - thanks to the special design of its telescopic lip.

Note: These benefits are difficult (if not impossible) to achieve safely with a Hinged-lip Dock Leveller!

OPERATIONAL EXAMPLES (see note 5 above)



Typical vehicle with tail-lift in the dock (vertical) position below dock



Detail of Telescopic Lip on stepped vehicle floor

The **sara** 'TS' Dock Leveller offers a **high degree of guaranteed safety** with full length side toe guard protection in a single solid steel sheet (without hinges). Hose failure valve, emergency stop button and heavy duty steel support legs under the platform are also provided as standard. The Dock Leveller is designed with a choice of capacities to suit clients' precise operational criteria, both current and **future**.

Above all, the **sara** 'TS' Telescopic Lip Dock Leveller is **quicker, easier and safer** to use than Hinged-lip Dock Levellers.

OPTIONAL EXTRAS

- Telescopic lip projection up to 1000mm.
- Special heavy duty capacities.
- Insulation under platform.
- VS 'Intelligent' Dock Buffer System (see page 7).
- Special non-skid surfaces.
- Pit-recessed design.
- Side Sealing Brush Strips.
- Steel support constructions with handrails.
- Composite Control Boxes.
- Special colour finishes.
- Interlocks with other Dock Equipment.
- Specials to suit existing pits.
- Galvanised finish.
- Buffer Pouring Pans.
- Pre-cast Concrete Pits.
- LED Traffic Lights
- Manual or hydraulic finger 'segments' on platform sides



Loading Bays with 'Open Pit'



sara Levellers being set in sara Pre-cast Concrete Pits

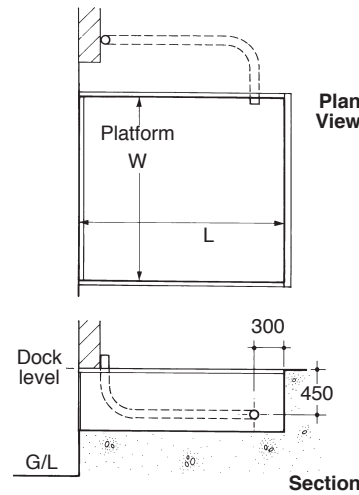
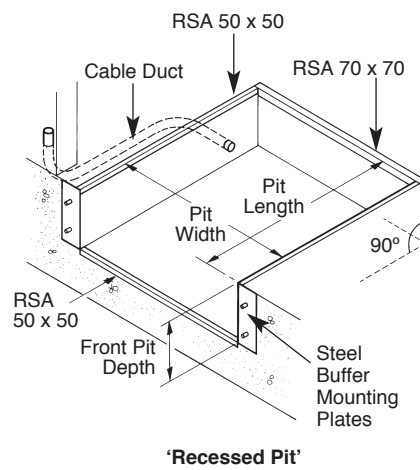


DIMENSIONS AND INSTALLATION DETAILS

General notes:

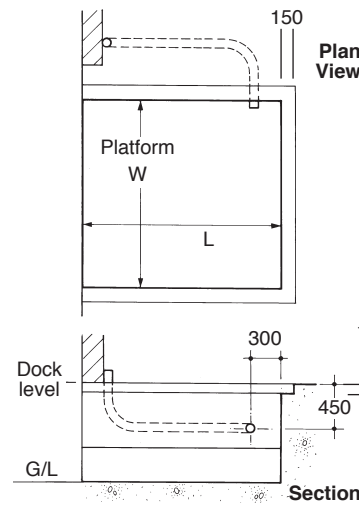
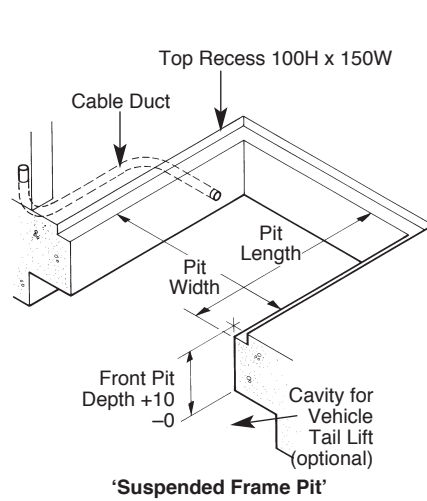
1. Final construction details for individual contracts to be confirmed in writing by **sara** before construction.
2. For sloping dock approaches, **sara** should be advised.

Model No.	Platform L x W	Pit length	Pit width	Rear depth	Front depth
Model range HL/P (Pit-recessed Type, see page 2)					
20/18	2000 x 1830	2080	1860	610	620
25/18	2500 x 1830	2580	1860	610	620
30/18	3000 x 1830	3080	1860	610	620
35/18	3500 x 1830	3580	1860	720	730
40/18	4000 x 1830	4080	1860	720	730
45/18	4500 x 1830	4580	1860	720	730
20/20	2000 x 2000	2080	2030	610	620
25/20	2500 x 2000	2580	2030	610	620
30/20	3000 x 2000	3080	2030	610	620
35/20	3500 x 2000	3580	2030	720	730
40/20	4000 x 2000	4080	2030	720	730
45/20	4500 x 2000	4580	2030	720	730
20/21	2000 x 2134	2080	2164	610	620
25/21	2500 x 2134	2580	2164	610	620
30/21	3000 x 2134	3080	2164	610	620
35/21	3500 x 2134	3580	2164	720	730
40/21	4000 x 2134	4080	2164	720	730
45/21	4500 x 2134	4580	2164	720	730



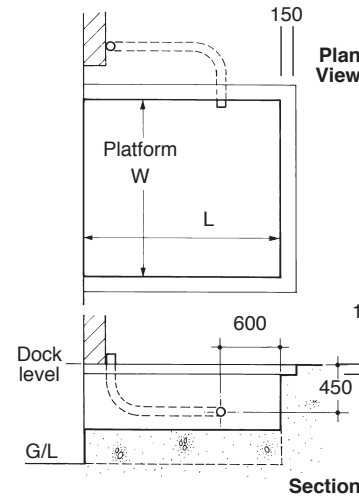
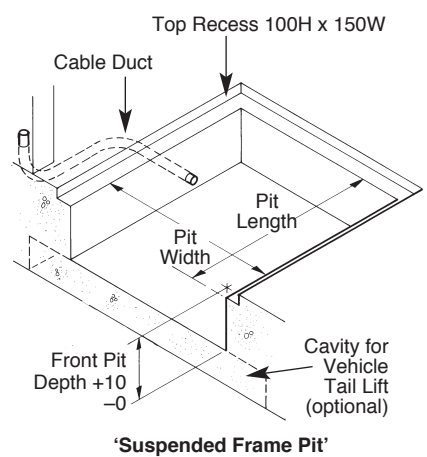
Model range HL/S/2 (Suspended Frame Type, see page 3)					
20/18	2000 x 1830	2000	1900	610	610
25/18	2500 x 1830	2500	1900	610	610
30/18	3000 x 1830	3000	1900	610	610
35/18	3500 x 1830	3500	1900	710	710
40/18	4000 x 1830	4000	1900	710	710
45/18	4500 x 1830	4500	1900	810	810
20/20	2000 x 2000	2000	2070	610	610
25/20	2500 x 2000	2500	2070	610	610
30/20	3000 x 2000	3000	2070	610	610
35/20	3500 x 2000	3500	2070	710	710
40/20	4000 x 2000	4000	2070	710	710
45/20	4500 x 2000	4500	2070	810	810
20/21	2000 x 2130	2000	2200	610	610
25/21	2500 x 2130	2500	2200	610	610
30/21	3000 x 2130	3000	2200	610	610
35/21	3500 x 2130	3500	2200	710	710
40/21	4000 x 2130	4000	2200	710	710
45/21	4500 x 2130	4500	2200	810	810

Larger Platforms available to order.



Model range TS (Suspended Frame or Pit-recessed Type, see pages 4 & 5)					
20/17	2000 x 1750	2000	1820	810	810
25/17	2500 x 1750	2500	1820	810	810
30/17	3000 x 1750	3000	1820	810	810
35/17	3500 x 1750	3500	1820	910	910
40/17	4000 x 1750	4000	1820	910	910
45/17	4500 x 1750	4500	1820	910	910
20/20	2000 x 2000	2000	2070	810	810
25/20	2500 x 2000	2500	2070	810	810
30/20	3000 x 2000	3000	2070	810	810
35/20	3500 x 2000	3500	2070	910	910
40/20	4000 x 2000	4000	2070	910	910
45/20	4500 x 2000	4500	2070	910	910
20/22	2000 x 2250	2000	2320	810	810
25/22	2500 x 2250	2500	2320	810	810
30/22	3000 x 2250	3000	2320	810	810
35/22	3500 x 2250	3500	2320	910	910
40/22	4000 x 2250	4000	2320	910	910
45/22	4500 x 2250	4500	2320	910	910

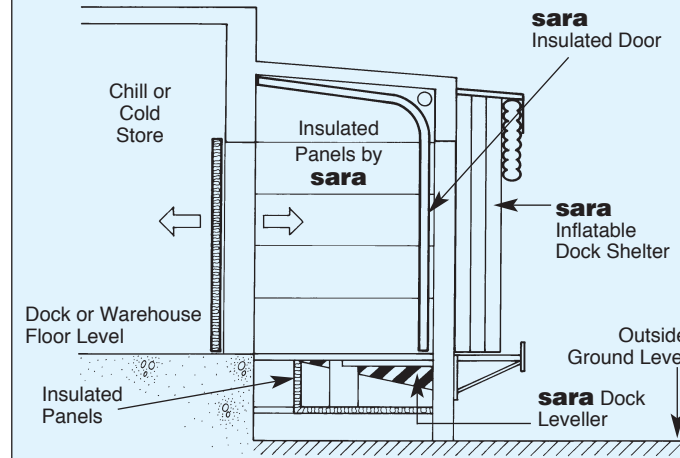
Platform Gradients (all models)
Current EC/CEN Standards on safe gradients for Dock Leveller Platforms in the operating position recommend a maximum safe operating slope of 12.5% or 7° (1 in 8).



ALTERNATIVE LOADING DOCKS

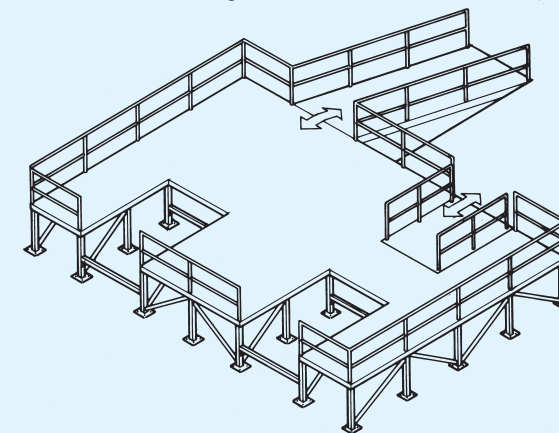
sara LOADING DOCK POD

Increasingly popular in the Cold and Chill Store industries. Providing good insulation and climate control for temperature maintenance. Can be added to an existing building or designed in from new. Please ask for our drawings.



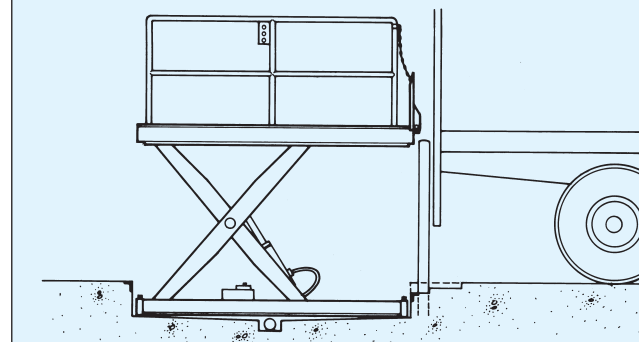
sara STEEL DOCKS (INTERNAL OR EXTERNAL)

Cheaper than building a new warehouse! Can provide a quick, economical solution for faster, safer loading/unloading of goods. Can be removable for relocation at a later date. Can include Dock Levellers or **sara** Scissor Lift Tables. Can be adjustable in height. Please ask for our drawings.



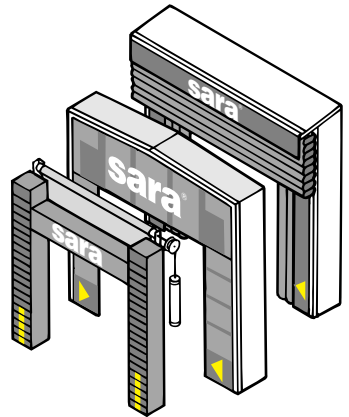
sara SCISSOR LIFTS

The safe reliable answer to load handling between levels, or when a raised dock is not feasible. Made to the highest quality standards (including the latest EURO/CEN standards) and available in a wide range of capacities and operating options. Please ask for our brochure.

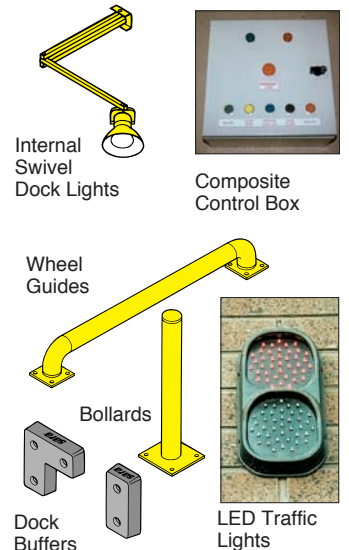


LOADING BAY ACCESSORIES

A full range from **sara** to complete the 'Total Package' of your requirements, all to the latest CEN standards. Please refer to separate brochures.



Dock Seals: Rigid, Retractable, Inflatable and Foam Dock Pads etc.



sara VS Dock Buffer System: (patented)

- Senses vehicle creep away from Dock Face
- Sounds an alarm
- Switches on/off any lights
- Opens/closes any doors

