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HEAVY EQUIPMENT-TOOLS KATALOG

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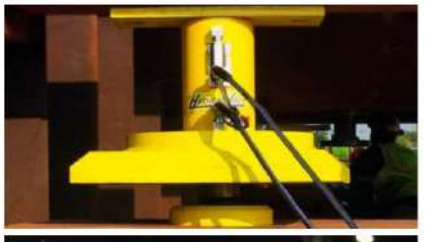
PRODUCTS

HYDRA-SLIDE

PRODUCTS

HYDRA-SLIDE



PRODUCTS

HYDRA-SLIDE

Low Profile Skidding Systems

XLP30
EXTREME LOW PROFILE SKIDDING SYSTEM

CE

Innovation

Hydra-Slide has identified a gap in the traditional load-moving equipment available in the industrial market. There is a need for a reliable, safe method of moving loads in the range of 30 tons and under.

Pump carts, dollies, and forklifts are typically insufficient for the task, whereas gantries, cranes, and traditional skidding systems are expensive to mobilize, and oversized for this type of work. The result is often makeshift, untested methods using rollers, ropes and pulleys, or overloaded dollies – solutions that can be unpredictable and dangerous for both commodity and crew.

The XLP30 Skidding System bridges the gap so contractors can safely and efficiently move lighter loads with control and accuracy. The XLP30 is simple, user-friendly, and versatile - and like every Hydra-Slide system, it is **designed with the rigger in mind.**

The XLP30 features a 1.125" (29mm) profile, is completely hand-portable, requires limited jacking, and can push or pull up to 30 tons (27 tonnes).

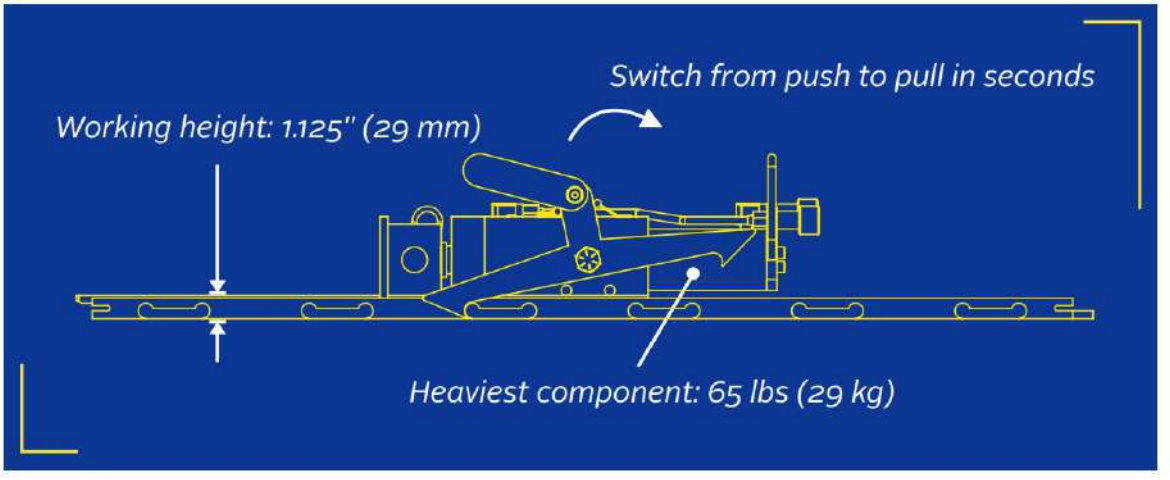
- Simple switch from push to pull mode
- Ideal for limited clearance/access
- Low-maintenance steel-UHMW slide surface
- Cylinders automatically reset, keeping crew members at a safe distance

XLP30 Specifications	
Skidding Push Capacity*	**30 ton** *27 tonne*
Skidding Pull Capacity*	**30 ton** *27 tonne*
Skidding System Height	**1.125"** *29 mm*
Cylinder Capacity - Push	**10 ton** *9 tonne*
Cylinder Capacity - Pull	**5 ton** *4.5 tonne*
Cylinder Push/Pull Stroke	**10"** *254 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
System Coefficient of Friction	**10-15%**
Surface Material	UHMW Polyethylene
Maximum Slope	**+/- 2%**
Alignment Tolerance	**+/-0.25"** *+/- 6 mm*
Max. Operating Pressure	**10,000 psi** *700 bar*

*Based on standard system with (2) cylinders

Full system is stored in a compact steel box for convenience & easy transportation

XLP30 Dimensions	Length	Width	Height	Weight
Track Section	**56"** *1.42 m*	**6.0"** *150 mm*	**1.0"** *25 mm*	**42 lb** *19 kg*
Slider Plate - 2'	**24"** *610 mm*	**3.75"** *95 mm*	**0.375"** *10 mm*	**8.9 lb** *4.0 kg*
Slider Plate - 4'	**48"** *1.22 m*	**3.75"** *95 mm*	**0.375"** *10 mm*	**18.6 lb** *8.4 kg*
Push/Pull Head	**18"** *460 mm*	**3.75"** *95 mm*	**4"** *100 mm*	**11 lb** *5.0 kg*
Cylinder Assembly	**18"** *460 mm*	**6"** *150 mm*	**7"** *180 mm*	**65 lb** *29 kg*
Full System in Storage Box	**59"** *1.50 m*	**39"** *990 mm*	**29"** *740 mm*	**1150 lb** *518 kg*



XLP30 Extreme Low Profile Skidding System

Hydraulic Cylinder Type	Powerteam RD1010
Effective Stroke Length	8" / 205mm
Cylinder Extend Volume	22.3 in³ / 0.365 L
Cylinder Retract Volume	8.8 in³ / 0.144 L

Conventional Power Units

		CPU-1-2E	CPU-3-2E	CPU-4E	CPU-2G	CPU-4G
Hydraulic Pump		ZE3	ZE5	ZE6	ZG5	ZG6
Rated power	hp	1.0	3.0	7.5	4.0	10.0
	kW	*0.75*	*2.2*	*5.6*	*3.0*	*7.5*
Total Output	in^3/min	40*	120*	200*	100*	200*
	L/min	*0.7**	*2.0**	*3.3**	*1.6**	*3.3**
Output per Port†	in^3/min	20*	60*	100*	50*	100*
	L/min	*0.33**	*1.0**	*1.6**	*0.82**	*1.6**
Cycle Time‡	sec	74	29	20	33	20
Skidding Speed	ft/hour	33	86	127	74	127
	m/hour	*10.1*	*26.2*	*38.7*	*22.6*	*38.7*

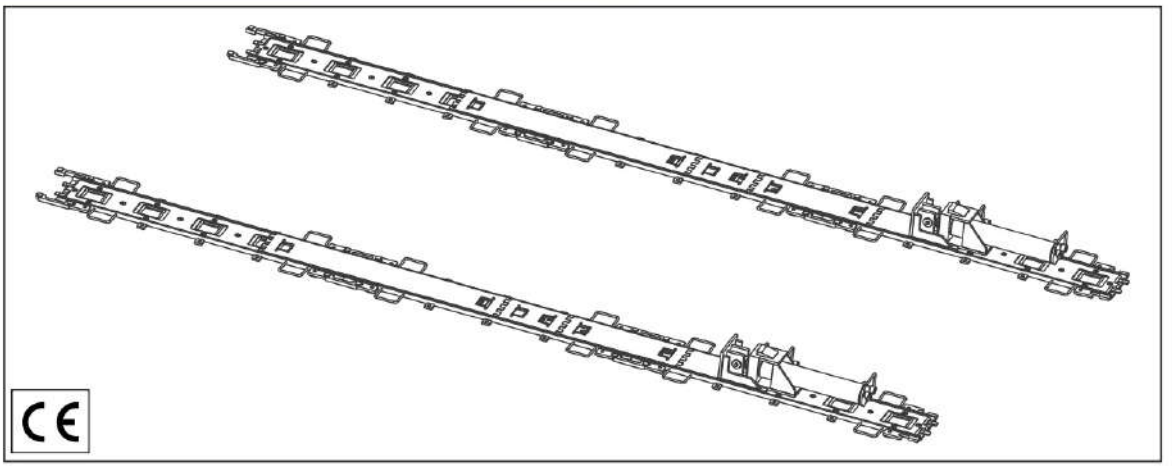
* These are two-stage pumps; at pressures less than ~1000 psi (70 bar) the flow rate is significantly higher (typically only seen when cylinders are extended/retracted without load.)
† Values shown assume (2) hydraulic cylinders in operation
‡ Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle

Synchronous Power Units

		SPU-4D	SPU-6D/ SPU-8D	SPU-4E	SPU-6E	SPU-8E
Hydraulic Pump		PF1002	PF1002 x 2	PF1002	PF4011	PF4011
Rated power	hp	23.0	50.0	15.0	30.0	40.0
	kW	*17.2*	*37.3*	*11.2*	*22.4*	*29.8*
Output per Port	in^3/min	115	115	115	203	203
	L/min	*1.9*	*1.9*	*1.9*	*3.3*	*3.3*
Cycle Time*	sec	21	21	21	14	14
Skidding Speed	ft/hour	113	113	113	169	169
	m/hour	*34.4*	*34.4*	*34.4*	*51.5*	*51.5*
With Paired Ports†	ft/hour	226	226	226	338	338
	m/hour	*68.9*	*68.9*	*68.9*	*103*	*103*

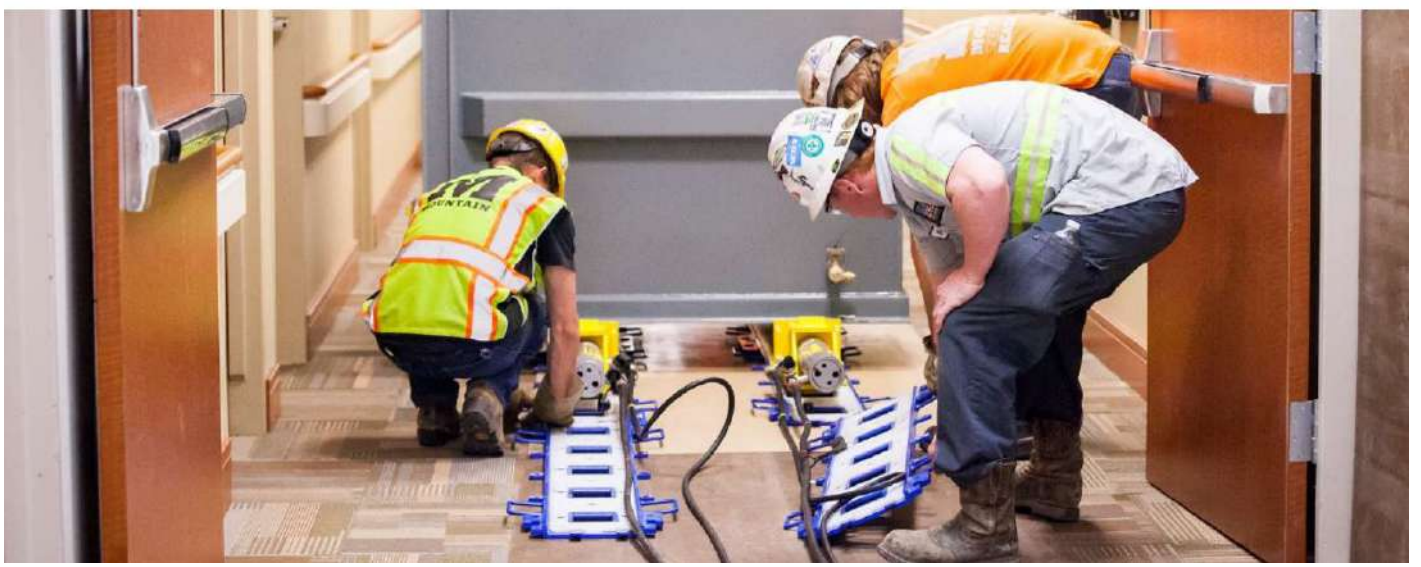
* Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle
† Synchronous power units feature valves that allow each pair of ports to be combined into a single output, effectively doubling the oil flow rate

XLP150
EXTREME LOW PROFILE SKIDDING SYSTEM

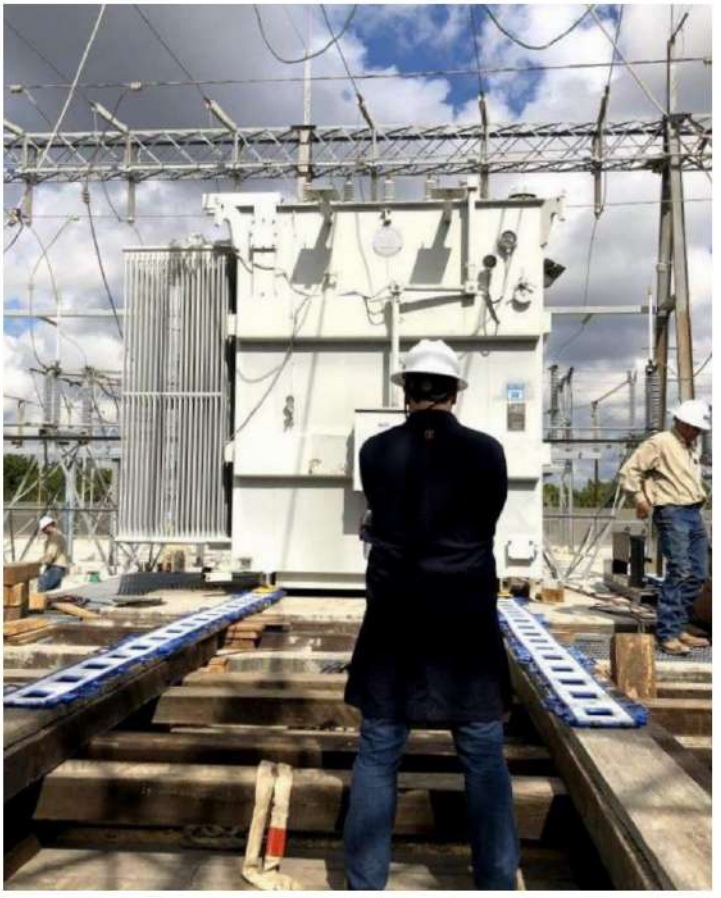


The XLP150 one of the most versatile skidding systems ever designed. It is completely hand-portable and is ideal for confined work spaces, indoor applications such as hospitals and laboratories - anywhere a clean, self-contained and compact system is essential. It performs just as well in harsh environments or underground.

- Simple switch from push to pull mode
- Ideal for limited clearance/access
- Low-maintenance steel-UHMW slide surface
- Cylinders automatically reset
- Stamped, engineered assembly drawings provided



XLP150
EXTREME LOW PROFILE SKIDDING SYSTEM

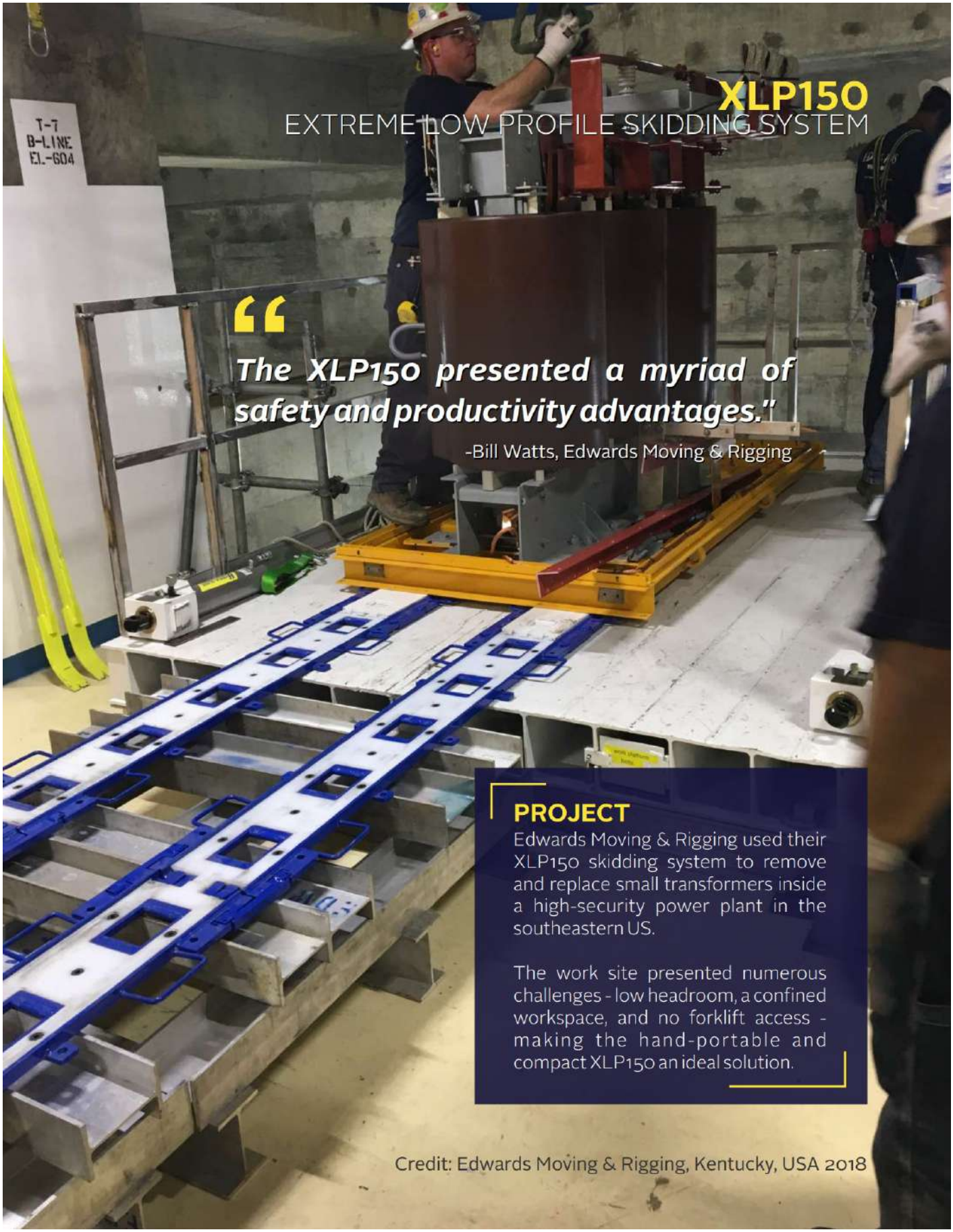


XLP150 Specifications	
Skidding Push Capacity*	**250 ton** *227 tonne*
Skidding Pull Capacity*	**150 ton** *136 tonne*
Skidding System Height	**1.25"** *32 mm*
Cylinder Capacity - Push	**30 ton** *27 tonne*
Cylinder Capacity - Pull	**12.5 ton** *11.5 tonne*
Cylinder Push/Pull Stroke	**14.25"** *362 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
System Coefficient of Friction	**10-15%**
Slide Surface Material	UHMW Polyethylene
Maximum Slope	**+/- 2%**
Track Alignment Tolerance	**+/-0.25"** *+/- 6 mm*
Maximum Operating Pressure	**10,000 psi** *700 bar*

*Based on standard system with (2) cylinders

XLP150 Dimensions	Length	Width	Height	Weight
Track Section	**60"** *1.52 m*	**15.25"** *390 mm*	**1.125"** *29 mm*	**65 lb** *29 kg*
Slider Plate - 1'	**12"** *300 mm*	**7.75"** *200 mm*	**0.375"** *10 mm*	**7.5 lb** *3.4 kg*
Slider Plate - 2'	**24"** *610 mm*	**7.75"** *200 mm*	**0.375"** *10 mm*	**17.5 lb** *7.9 kg*
Slider Plate - 4'	**48"** *1.22 m*	**7.75"** *200 mm*	**0.375"** *10 mm*	**40 lb** *18 kg*
Push/Pull Head	**19"** *483 mm*	**7.75"** *200 mm*	**6.5"** *165 mm*	**31 lb** *14 kg*
Cylinder Assembly	**26"** *660 mm*	**7.75"** *200 mm*	**8"** *203 mm*	**80 lb** *36 kg*
Full System in Storage Box	**76"** *1.93 m*	**48"** *1.22 m*	**31"** *790 mm*	**2090 lb** *948 kg*

Full system is stored in a compact steel box for convenience & easy transportation



XLP150

EXTREME LOW PROFILE SKIDDING SYSTEM

"The XLP150 presented a myriad of safety and productivity advantages."

-Bill Watts, Edwards Moving & Rigging

PROJECT

Edwards Moving & Rigging used their XLP150 skidding system to remove and replace small transformers inside a high-security power plant in the southeastern US.

The work site presented numerous challenges - low headroom, a confined workspace, and no forklift access - making the hand-portable and compact XLP150 an ideal solution.

Credit: Edwards Moving & Rigging, Kentucky, USA 2018

XLP150 Skidding System

Hydraulic Cylinder Type	HS3014
Effective Stroke Length	12" / 305mm
Cylinder Extend Volume	92.7 in³ / 1.52 L
Cylinder Retract Volume	43.0 in³ / 0.70 L

Conventional Power Units

		CPU-1-2E	CPU-3-2E	CPU-4E	CPU-2G	CPU-4G
Hydraulic Pump		ZE3	ZE5	ZE6	ZG5	ZG6
Rated power	hp	1.0	3.0	7.5	4.0	10.0
	kW	*0.75*	*2.2*	*5.6*	*3.0*	*7.5*
Total Output	in^3/min	40*	120*	200*	100*	200*
	L/min	*0.7**	*2.0**	*3.3**	*1.6**	*3.3**
Output per Port†	in^3/min	20*	60*	100*	50*	100*
	L/min	*0.33**	*1.0**	*1.6**	*0.82**	*1.6**
Cycle Time‡	sec	295	104	66	124	66
Skidding Speed	ft/hour	12	35	54	29	54
	m/hour	*3.7*	*10.4*	*16.3*	*8.8*	*16.3*

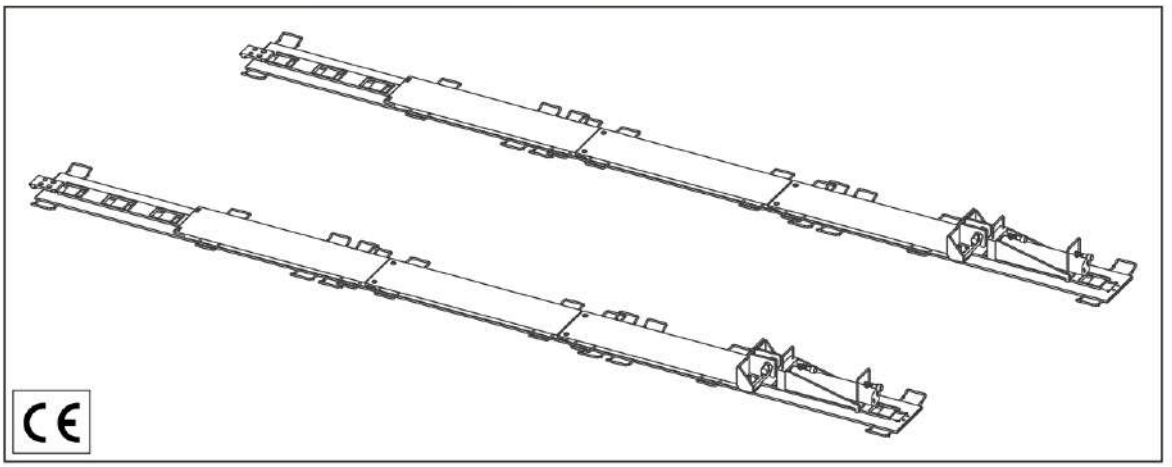
* These are two-stage pumps; at pressures less than ~1000 psi (70 bar) the flow rate is significantly higher (typically only seen when cylinders are extended/retracted without load.)
† Values shown assume (2) hydraulic cylinders in operation
‡ Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle

Synchronous Power Units

		SPU-4D	SPU-6D/ SPU-8D	SPU-4E	SPU-6E	SPU-8E
Hydraulic Pump		PF1002	PF1002 x 2	PF1002	PF4011	PF4011
Rated power	hp	23.0	50.0	15.0	30.0	40.0
	kW	*17.2*	*37.3*	*11.2*	*22.4*	*29.8*
Output per Port	in^3/min	115	115	115	203	203
	L/min	*1.9*	*1.9*	*1.9*	*3.3*	*3.3*
Cycle Time*	sec	76	76	76	45	45
Skidding Speed	ft/hour	47	47	47	80	80
	m/hour	*14.3*	*14.3*	*14.3*	*24.0*	*24.0*
With Paired Ports†	ft/hour	95	95	95	160	160
	m/hour	*28.6*	*28.5*	*28.5*	*48.1*	*48.1*

* Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle
† Synchronous power units feature valves that allow each pair of ports to be combined into a single output, effectively doubling the oil flow rate

LP350
LOW PROFILE SKIDDING SYSTEM



The LP350 is our workhorse low-profile skidding system. Engineered for function and convenience, the LP350 has a durable graphite slide surface and a working height of 1.5" (38mm).

- Capable of pushing loads up to 350 tons (318 tonnes)
- Quick & simple track connections
- Durable graphite slide surface
- Cylinders automatically reset
- Stamped, engineered assembly drawings provided

LP350
LOW PROFILE SKIDDING SYSTEM

LP350 Specifications	
Skidding Push Capacity*	**350 ton** *318 tonne*
Working Height	**1.5"** *38 mm*
Cylinder Capacity	**30 ton** *27 tonne*
Cylinder Push/Pull Stroke	**14.25"** *362 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
System Coefficient of Friction	**15-20%**
Slide Surface Material	Graphite
Maximum Slope	**+/- 2%**
Track Alignment Tolerance	**+/- 0.25"** *+/- 6 mm*
Maximum Operating Pressure	**10,000 psi** *700 bar*

*Based on standard system with (2) push cylinders

Full system is stored in a compact steel box for convenience & easy transportation

LP350 Dimensions	Length	Width (working)	Width (incl. handles)	Height	Weight
Track Section	**72"** *1.83 m*	**12"** *305 mm*	**20"** *508 mm*	**1"** *25 mm*	**120 lb** *54 kg*
Slider Plate	**48"** *1.22 m*	**12"** *305 mm*	**20"** *508 mm*	**1"** *25 mm*	**125 lb** *56 kg*
Cylinder Assembly	**27"** *690 mm*	**6.5"** *170 mm*	**6.5"** *170 mm*	**9"** *230 mm*	**100 lb** *45 kg*
Full System in Storage Box	**76"** *1.93 m*	**48"** *1.22 m*	**48"** *1.22 m*	**31"** *790 mm*	**3750 lb** *1700 kg*

LP350
LOW PROFILE SKIDDING SYSTEM

A GOOD FIT

The LP350 represents the continued evolution of the low-profile range that also includes the XLP150 extreme low profile system.

In contrast to their heavy track counterparts, these products are completely hand-portable, compact and ideal for use in areas with limited access or clearance.

"We were very pleased with the [Hydra-Slide] system. We have a history stretching back 50 years—principally in Sweden but around the world too—and a hallmark of the company has always been innovation and development of our equipment fleet. The LP350 fits with that overarching theme."

-Joakim Andersson, Jinert

Credit: Sven Jinert AB, Hässleholm, Sweden 2020

LP350 Skidding System

Hydraulic Cylinder Type	HS3014
Effective Stroke Length	12" / 305mm
Cylinder Extend Volume	92.7 in³ / 1.52 L
Cylinder Retract Volume	43.0 in³ / 0.70 L

Conventional Power Units

		CPU-1-2E	CPU-3-2E	CPU-4E	CPU-2G	CPU-4G
Hydraulic Pump		ZE3	ZE5	ZE6	ZG5	ZG6
Rated power	hp	1.0	3.0	7.5	4.0	10.0
	kW	*0.75*	*2.2*	*5.6*	*3.0*	*7.5*
Total Output	in^3/min	40*	120*	200*	100*	200*
	L/min	*0.7**	*2.0**	*3.3**	*1.6**	*3.3**
Output per Port†	in^3/min	20*	60*	100*	50*	100*
	L/min	*0.33**	*1.0**	*1.6**	*0.82**	*1.6**
Cycle Time‡	sec	295	104	66	124	66
Skidding Speed	ft/hour	12	35	54	29	54
	m/hour	*3.7*	*10.4*	*16.3*	*8.8*	*16.3*

* These are two-stage pumps; at pressures less than ~1000 psi (70 bar) the flow rate is significantly higher (typically only seen when cylinders are extended/retracted without load.)
† Values shown assume (2) hydraulic cylinders in operation
‡ Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle

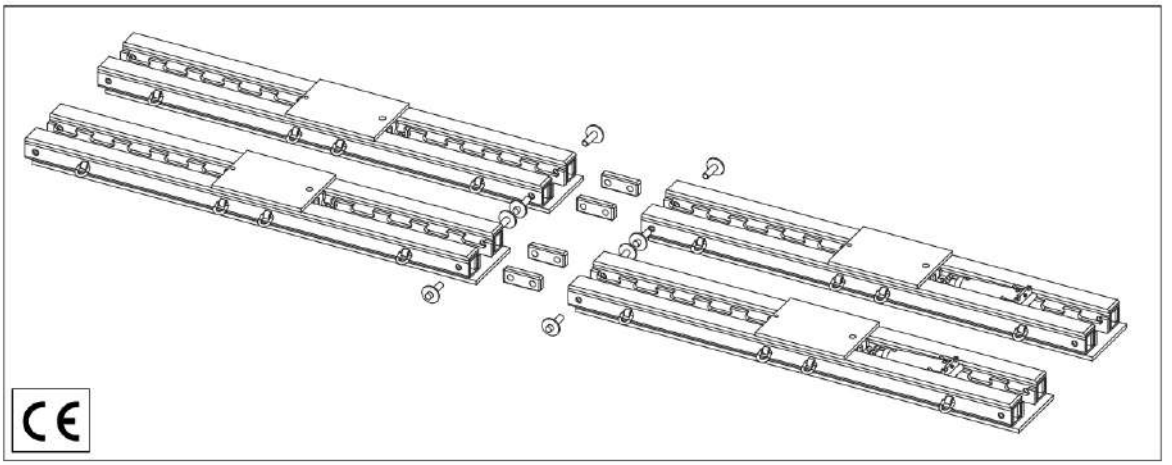
Synchronous Power Units

		SPU-4D	SPU-6D/ SPU-8D	SPU-4E	SPU-6E	SPU-8E
Hydraulic Pump		PF1002	PF1002 x 2	PF1002	PF4011	PF4011
Rated power	hp	23.0	50.0	15.0	30.0	40.0
	kW	*17.2*	*37.3*	*11.2*	*22.4*	*29.8*
Output per Port	in^3/min	115	115	115	203	203
	L/min	*1.9*	*1.9*	*1.9*	*3.3*	*3.3*
Cycle Time*	sec	76	76	76	45	45
Skidding Speed	ft/hour	47	47	47	80	80
	m/hour	*14.3*	*14.3*	*14.3*	*24.0*	*24.0*
With Paired Ports†	ft/hour	95	95	95	160	160
	m/hour	*28.6*	*28.5*	*28.5*	*48.1*	*48.1*

* Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle
† Synchronous power units feature valves that allow each pair of ports to be combined into a single output, effectively doubling the oil flow rate

Heavy Track Skidding Systems

HT300
HEAVY TRACK SKIDDING SYSTEM



The HT300 features rigid steel tracks designed to carry loads over unsupported spans, is engineered to push loads up to 300 tons (270 tonnes), and has a working height of only 7" (180 mm).

- Quick & simple track connections
- Designed to both push and pull
- Durable graphite slide surface
- Cylinders automatically reset
- Stamped, engineered assembly drawings and capacity charts provided

HT300
HEAVY TRACK SKIDDING SYSTEM

HT300 Specifications	
Skidding Push Capacity*	**300 ton** *270 tonne*
Skidding Pull Capacity*	**150 ton** *135 tonne*
Working Height	**7"** *180 mm*
Cylinder Capacity - Push	**30 ton** *27 tonne*
Cylinder Capacity - Pull	**15 ton** *13.5 tonne*
Cylinder Push/Pull Stroke	**14.25"** *362 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
Skid Shoe Capacity	**75 ton** *67.5 tonne*
System Coefficient of Friction	**15-20%**
Slide Surface Material	Graphite
Maximum Slope	**+/- 2%**
Track Alignment Tolerance	**+/- 0.25"** *+/- 6 mm*
Maximum Operating Pressure	**10,000 psi** *700 bar*

*Based on standard system with (2) cylinders & (4) skid shoes

HT300 Dimensions	Length	Width*	Height	Weight
20' Track Section	**20'** *6.10 m*	**16"** *406 mm*	**6.25"** *160 mm*	**2500 lb** *1134 kg*
19' Track Section	**19'** *5.80 m*	**16"** *406 mm*	**6.25"** *160 mm*	**2375 lb** *1077 kg*
15' Track Section	**15'** *4.57 m*	**16"** *406 mm*	**6.25"** *160 mm*	**1875 lb** *850 kg*
12' Track Section	**12'** *3.66 m*	**16"** *406 mm*	**6.25"** *160 mm*	**1500 lb** *680 kg*
10' Track Section	**10'** *3.05 m*	**16"** *406 mm*	**6.25"** *160 mm*	**1250 lb** *567 kg*
HT300 Skid Shoe	**26"** *660 mm*	**17"** *430 mm*	**6"** *150 mm*	**165 lb** *75 kg*
Storage Rack with shoes and blocks	**41"** *1040 mm*	**39"** *990 mm*	**33"** *840 mm*	**940 lb** *426 kg*
Storage Box with components	**42"** *1.07 m*	**34"** *860 mm*	**22"** *560 mm*	**1000 lb** *454 kg*

*Listed track widths are effective width; full width including lifting lugs is 18.5" (470mm)

All system components are stored in a compact steel box for convenience & easy transportation

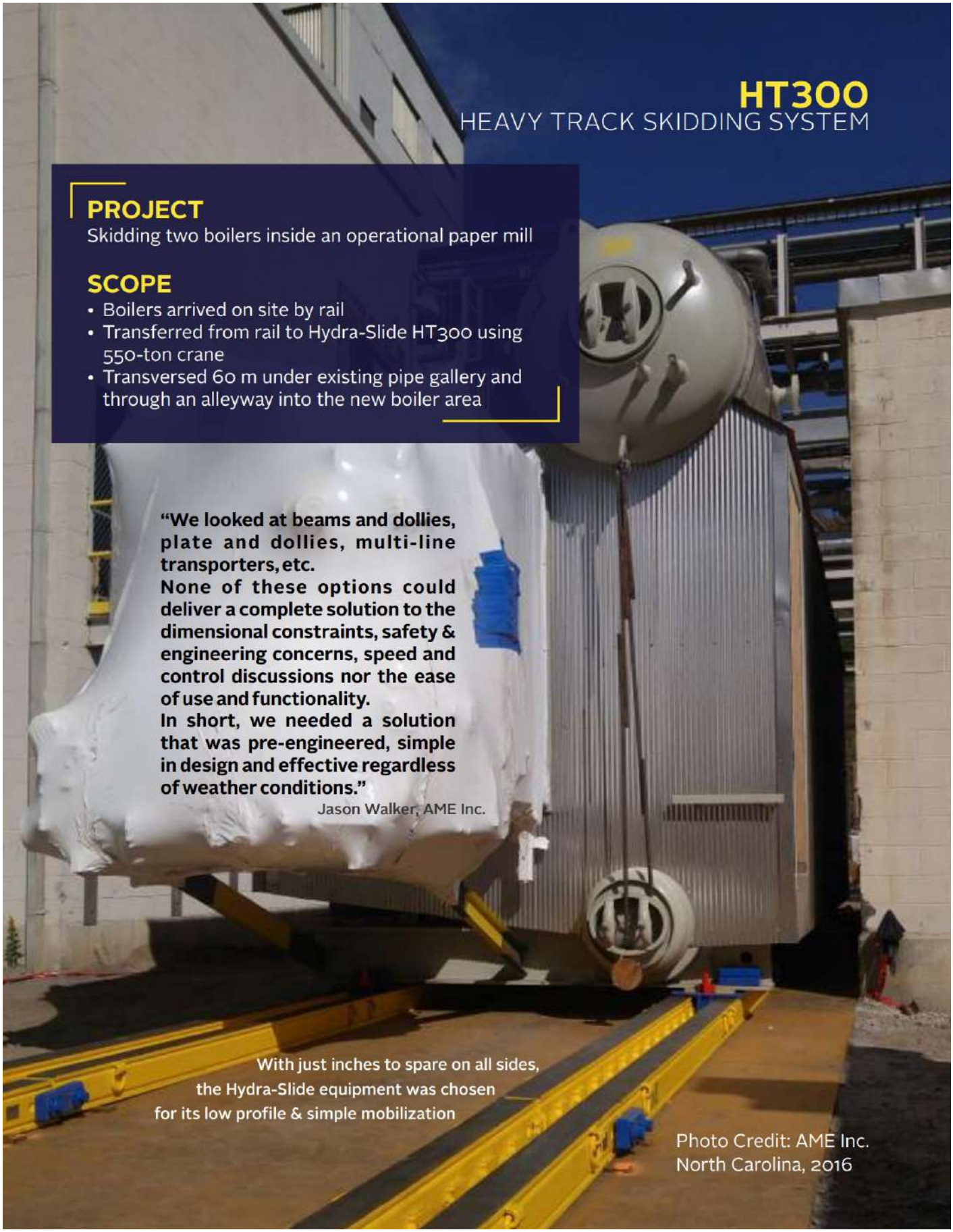
HT300
HEAVY TRACK SKIDDING SYSTEM

PROJECT
Skidding two boilers inside an operational paper mill

SCOPE
- Boilers arrived on site by rail
- Transferred from rail to Hydra-Slide HT300 using 550-ton crane
- Transversed 60 m under existing pipe gallery and through an alleyway into the new boiler area

"We looked at beams and dollies, plate and dollies, multi-line transporters, etc.
None of these options could deliver a complete solution to the dimensional constraints, safety & engineering concerns, speed and control discussions nor the ease of use and functionality.
In short, we needed a solution that was pre-engineered, simple in design and effective regardless of weather conditions."

Jason Walker, AME Inc.



With just inches to spare on all sides, the Hydra-Slide equipment was chosen for its low profile & simple mobilization

Photo Credit: AME Inc.
North Carolina, 2016

HT300 Skidding System

Hydraulic Cylinder Type	HS3014
Effective Stroke Length	12" / 305mm
Cylinder Extend Volume	92.7 in³ / 1.52 L
Cylinder Retract Volume	43.0 in³ / 0.70 L

Conventional Power Units

		CPU-1-2E	CPU-3-2E	CPU-4E	CPU-2G	CPU-4G
Hydraulic Pump		ZE3	ZE5	ZE6	ZG5	ZG6
Rated power	hp	1.0	3.0	7.5	4.0	10.0
	kW	*0.75*	*2.2*	*5.6*	*3.0*	*7.5*
Total Output	in^3/min	40*	120*	200*	100*	200*
	L/min	*0.7**	*2.0**	*3.3**	*1.6**	*3.3**
Output per Port†	in^3/min	20*	60*	100*	50*	100*
	L/min	*0.33**	*1.0**	*1.6**	*0.82**	*1.6**
Cycle Time‡	sec	295	104	66	124	66
Skidding Speed	ft/hour	12	35	54	29	54
	m/hour	*3.7*	*10.4*	*16.3*	*8.8*	*16.3*

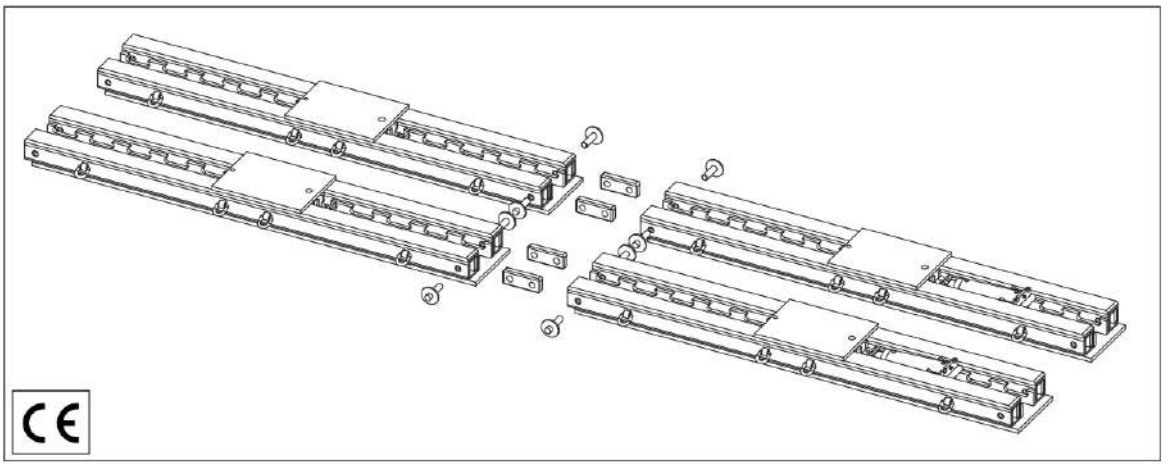
* These are two-stage pumps; at pressures less than ~1000 psi (70 bar) the flow rate is significantly higher (typically only seen when cylinders are extended/retracted without load.)
† Values shown assume (2) hydraulic cylinders in operation
‡ Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle

Synchronous Power Units

		SPU-4D	SPU-6D/ SPU-8D	SPU-4E	SPU-6E	SPU-8E
Hydraulic Pump		PF1002	PF1002 x 2	PF1002	PF4011	PF4011
Rated power	hp	23.0	50.0	15.0	30.0	40.0
	kW	*17.2*	*37.3*	*11.2*	*22.4*	*29.8*
Output per Port	in^3/min	115	115	115	203	203
	L/min	*1.9*	*1.9*	*1.9*	*3.3*	*3.3*
Cycle Time*	sec	76	76	76	45	45
Skidding Speed	ft/hour	47	47	47	80	80
	m/hour	*14.3*	*14.3*	*14.3*	*24.0*	*24.0*
With Paired Ports†	ft/hour	95	95	95	160	160
	m/hour	*28.6*	*28.5*	*28.5*	*48.1*	*48.1*

* Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle
† Synchronous power units feature valves that allow each pair of ports to be combined into a single output, effectively doubling the oil flow rate

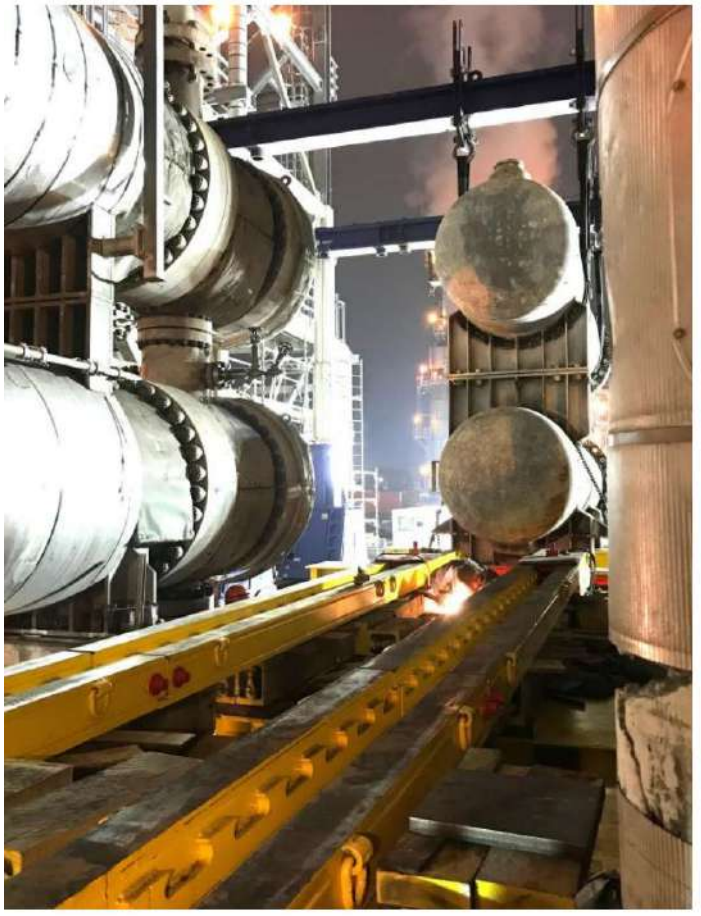
HT500
HEAVY TRACK SKIDDING SYSTEM



The HT500 features rigid steel tracks designed to carry loads over unsupported spans, is engineered to push loads up to 500 tons (454 tonnes), and has a working height of only 8" (205 mm).

- Quick & simple track connections
- Designed to both push and pull
- Durable graphite slide surface
- Cylinders automatically reset
- Stamped, engineered assembly drawings and capacity charts provided

HT500
HEAVY TRACK SKIDDING SYSTEM



HT500 Specifications	
Skidding Push Capacity*	**500 ton** *454 tonne*
Skidding Pull Capacity*	**250 ton** *227 tonne*
Working Height	**8"** *205 mm*
Cylinder Capacity - Push	**55 ton** *50 tonne*
Cylinder Capacity - Pull	**28 ton** *25 tonne*
Cylinder Push/Pull Stroke	**13"** *330 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
Skid Shoe Capacity	**125 ton** *113.5 tonne*
System Coefficient of Friction	**15-20%**
Slide Surface Material	Graphite
Maximum Slope	**+/- 2%**
Track Alignment Tolerance	**+/- 0.25"** *+/- 6 mm*
Maximum Operating Pressure	**10,000 psi** *700 bar*

*Based on standard system with (2) cylinders & (4) skid shoes

HT500 Dimensions	Length	Width*	Height	Weight
20' Track Section	**20'** *6.10 m*	**17.5"** *445 mm*	**7"** *180 mm*	**3460 lb** *1569 kg*
19'-2" Track Section	**19'-2"** *5.84 m*	**17.5"** *445 mm*	**7"** *180 mm*	**3270 lb** *1483 kg*
15' Track Section	**15'** *4.57 m*	**17.5"** *445 mm*	**7"** *180 mm*	**2590 lb** *1175 kg*
12'-6" Track Section	**12'-6"** *3.81 m*	**17.5"** *445 mm*	**7"** *180 mm*	**2075 lb** *941 kg*
10' Track Section	**10'** *3.05 m*	**17.5"** *445 mm*	**7"** *180 mm*	**1730 lb** *785 kg*
HT500 Skid Shoe	**24"** *610 mm*	**18"** *460 mm*	**6"** *150 mm*	**200 lb** *91 kg*
Storage Rack with shoes and blocks	**41"** *1040 mm*	**39"** *990 mm*	**33"** *840 mm*	**1030 lb** *467 kg*
Storage Box with components	**42"** *1070 mm*	**34"** *860 mm*	**22"** *560 mm*	**1020 lb** *463 kg*

*Listed track widths are effective width; full width including lifting lugs is 20" (508mm)

All system components are stored in a steel box for convenience & easy transportation

HT500
HEAVY TRACK SKIDDING SYSTEM

PROJECT
Emergency replacement of a failed transformer

The Hydra-Slide HT500 is often used for the relocation of power transformers, fluid/gas vessels, and transfer of large loads between rail and transport equipment.

The Hydra-Slide skidding systems are an integral part of many of these projects. They can be utilized to efficiently and safely move large loads in confined spaces and allow for precise placement and alignment of heavy loads."

Steve Hentrich, HWP Rigging

Photo Credit: HWP Rigging, Missouri, 2016

HT500 Skidding System

Hydraulic Cylinder Type	Powerteam RD5513
Effective Stroke Length	10" / 255mm
Cylinder Extend Volume	144.9 in³ / 2.37 L
Cylinder Retract Volume	73.9 in³ / 1.21 L

Conventional Power Units

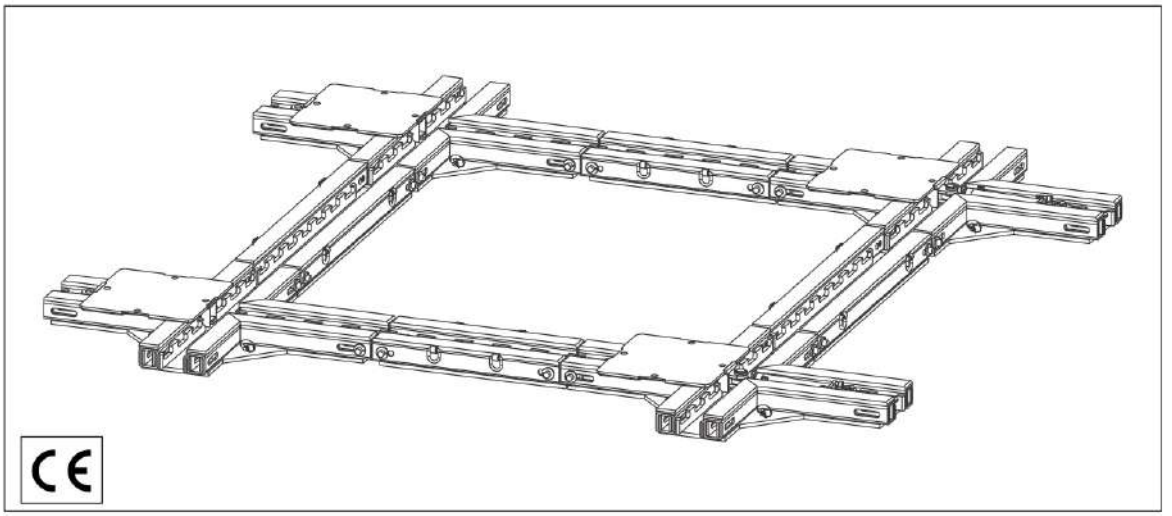
		CPU-1-2E	CPU-3-2E	CPU-4E	CPU-2G	CPU-4G
Hydraulic Pump		ZE3	ZE5	ZE6	ZG5	ZG6
Rated power	hp	1.0	3.0	7.5	4.0	10.0
	kW	*0.75*	*2.2*	*5.6*	*3.0*	*7.5*
Total Output	in^3/min	40*	120*	200*	100*	200*
	L/min	*0.7**	*2.0**	*3.3**	*1.6**	*3.3**
Output per Port†	in^3/min	20*	60*	100*	50*	100*
	L/min	*0.33**	*1.0**	*1.6**	*0.82**	*1.6**
Cycle Time‡	sec	459	160	102	192	102
Skidding Speed	ft/hour	7.0	19	29	16	29
	m/hour	*2.0*	*5.6*	*8.9*	*4.7*	*8.9*

* These are two-stage pumps; at pressures less than ~1000 psi (70 bar) the flow rate is significantly higher (typically only seen when cylinders are extended/retracted without load.)
† Values shown assume (2) hydraulic cylinders in operation
‡ Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle

Synchronous Power Units

		SPU-4D	SPU-6D/ SPU-8D	SPU-4E	SPU-6E	SPU-8E
Hydraulic Pump		PF1002	PF1002 x 2	PF1002	PF4011	PF4011
Rated power	hp	23.0	50.0	15.0	30.0	40.0
	kW	*17.2*	*37.3*	*11.2*	*22.4*	*29.8*
Output per Port	in^3/min	115	115	115	203	203
	L/min	*1.9*	*1.9*	*1.9*	*3.3*	*3.3*
Cycle Time*	sec	119	119	119	70	70
Skidding Speed	ft/hour	25	25	25	43	43
	m/hour	*7.6*	*7.6*	*7.6*	*13.0*	*13.0*
With Paired Ports†	ft/hour	50	50	50	86	86
	m/hour	*15.2*	*15.2*	*15.2*	*26.1*	*26.1*

* Cycle time accounts for full extension, full retraction, and a reaction time of 5 seconds per cycle
† Synchronous power units feature valves that allow each pair of ports to be combined into a single output, effectively doubling the oil flow rate



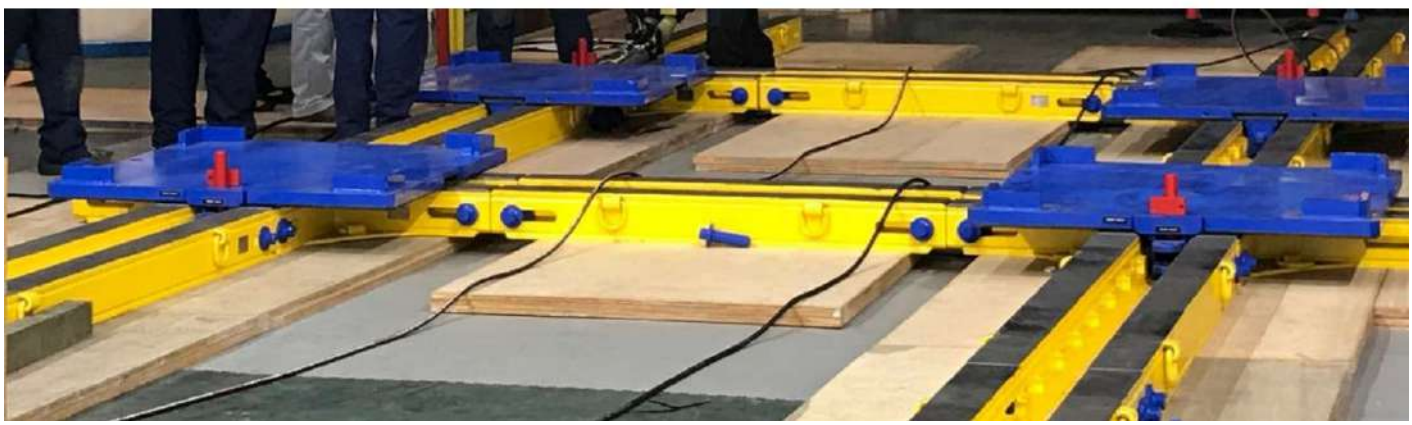
The Crossover system allows a 90° change of direction while skidding, without jacking the load or repositioning tracks and skid shoes.

Movement along either the x- or y-axis is accomplished by simply removing the guide rail within the shoe and positioning in the perpendicular direction. No heavy equipment is required, and there is no down-time during the direction change. Because the track lattice is built to a specific load footprint, it is primarily intended for applications where the item(s) being moved have consistent dimensions.

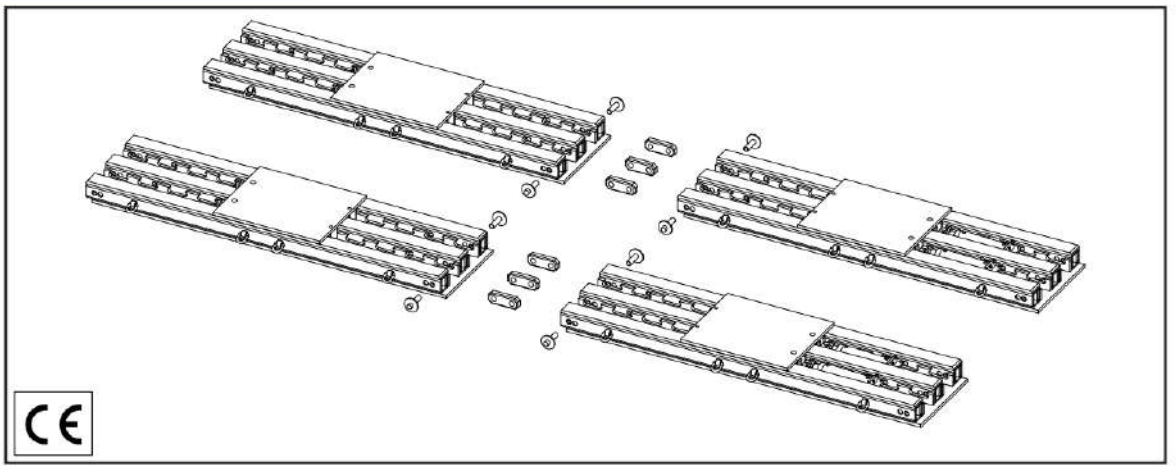
Crossover systems are available for both the HT300 and HT500 Heavy Track skidding systems, and work with our standard pin and lug connectors.

Cross Over Specifications		
Base Skidding System	**HT300**	**HT500**
Crossover Track Length*	**58.375"** *1.48 m*	**52"** *1.32 m*
Crossover Track Width	**58.375"** *1.48 m*	**52"** *1.32 m*
Crossover Track Height	**6.25"** *160 mm*	**7"** *180 mm*
Crossover Track Weight	**1130 lb** *513 kg*	**1350 lb** *612 kg*

*Track lengths and crossover skid shoes are customizable to suit any spacing requirements



HT1000
TRI-RAIL SYSTEM



The HT1000 Tri-Rail is our highest-capacity stand-alone skidding system. Each track incorporates two cylinders for maximum push capacity, and the system's working height is just 8" (205 mm).

- Quick & simple track connections
- Designed to both push and pull
- Durable graphite slide surface
- Cylinders automatically reset
- Stamped, engineered assembly drawings and capacity charts provided

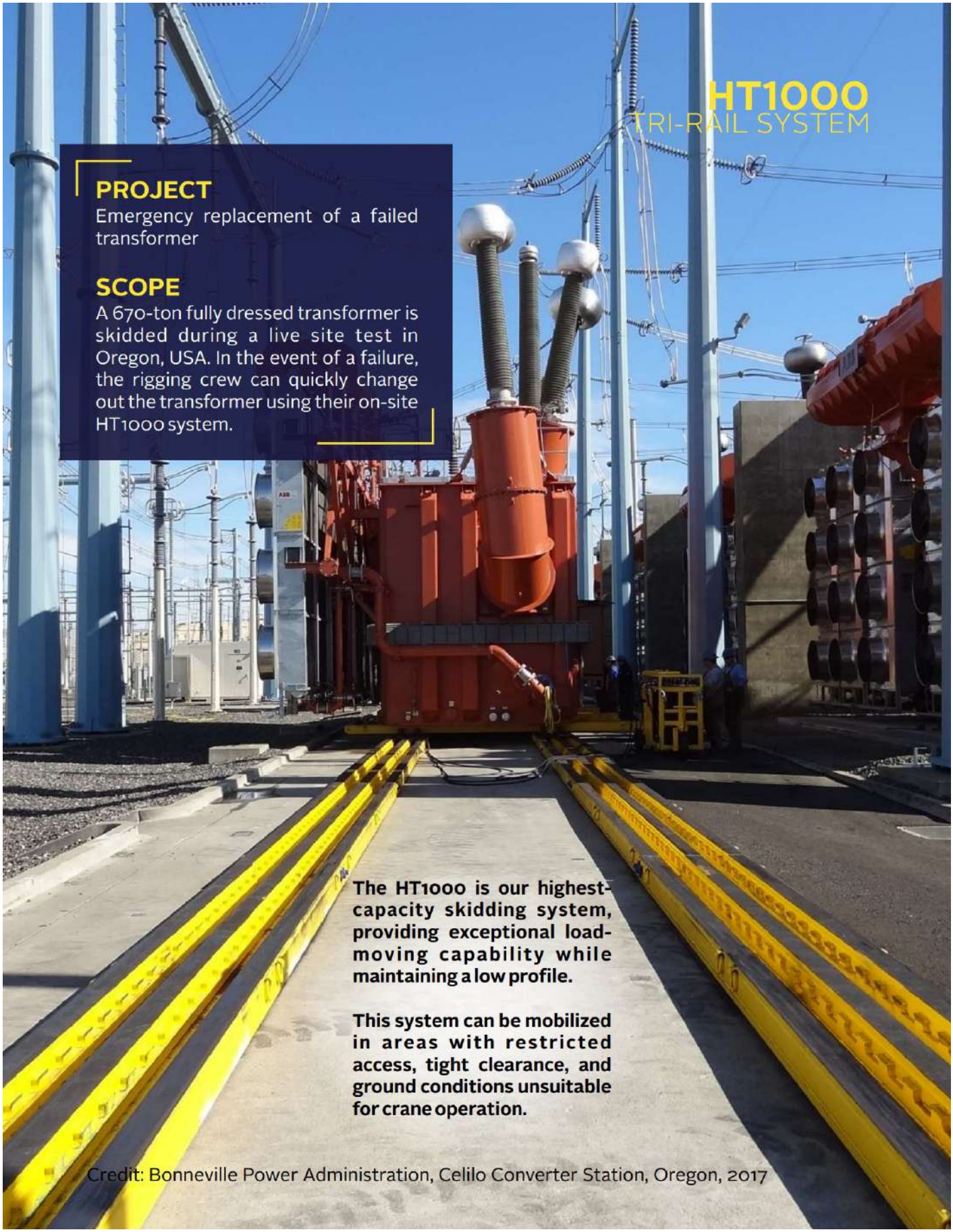
HT1000
TRI-RAIL SYSTEM

HT1000 Specifications	
Skidding Push Capacity*	**1000 ton** *907 tonne*
Skidding System Height	**8"** *205 mm*
Cylinder Capacity - Push	**55 ton** *50 tonne*
Cylinder Capacity - Pull	**28 ton** *25 tonne*
Cylinder Push/Pull Stroke	**13"** *330 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
Skid Shoe Capacity	**250 ton** *227 tonne*
System Coefficient of Friction	**15-20%**
Slide Surface Material	Graphite
Maximum Slope	**+/- 2%**
Track Alignment Tolerance	**+/- 0.25"** *+/- 6 mm*
Maximum Operating Pressure	**10,000 psi** *700 bar*

*Based on standard system with (4) cylinders & (4) skid shoes

HT1000 Dimensions	Length	Width	Height	Weight
20' Track Section	**20'** *6.10 m*	**34"** *860 mm*	**7"** *180 mm*	**5600 lb** *2560 kg*
19'-2" Track Section	**19'-2"** *5.84 m*	**34"** *860 mm*	**7"** *180 mm*	**5367 lb** *2434 kg*
15' Track Section	**15'** *4.57 m*	**34"** *860 mm*	**7"** *180 mm*	**4200 lb** *1905 kg*
12'-6" Track Section	**12'-6"** *3.81 m*	**34"** *860 mm*	**7"** *180 mm*	**3360 lb** *1524 kg*
10' Track Section	**10'** *3.05 m*	**34"** *860 mm*	**7"** *180 mm*	**2800 lb** *1270 kg*
HT1000 Skid Shoe	**40"** *1.02 m*	**30.5"** *775 mm*	**6"** *150 mm*	**490 lb** *222 kg*
Storage Box (two per system)	**42"** *1.07 m*	**34"** *860 mm*	**22"** *560 mm*	**1000 lb** *454 kg*

All system components are stored in a steel box for convenience & easy transportation



HT1000
TRI-RAIL SYSTEM

PROJECT
Emergency replacement of a failed transformer

SCOPE
A 670-ton fully dressed transformer is skidded during a live site test in Oregon, USA. In the event of a failure, the rigging crew can quickly change out the transformer using their on-site HT1000 system.

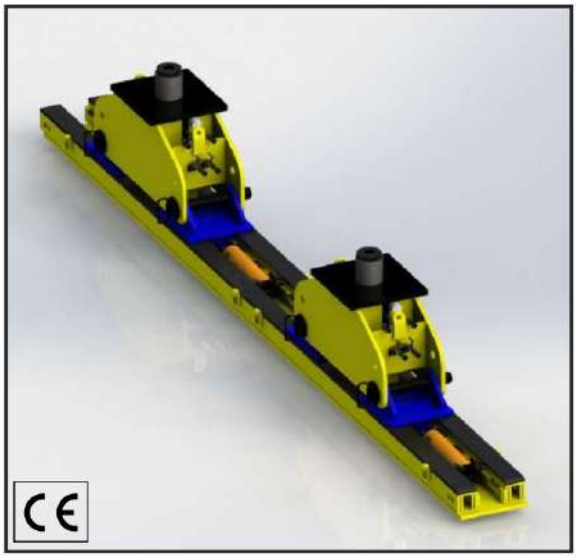
The HT1000 is our highest-capacity skidding system, providing exceptional load-moving capability while maintaining a low profile.

This system can be mobilized in areas with restricted access, tight clearance, and ground conditions unsuitable for crane operation.

Credit: Bonneville Power Administration, Celilo Converter Station, Oregon, 2017

Specialized Hydraulic Equipment

JLS250
JACKING LOAD SHOES



Our JLS250 jacking load shoes are load-compensating skid shoes designed to work with both our HT300 & HT500 skidding systems.

- Each shoe includes a 250-ton (227-tonne) double-acting lift cylinder
- Two pressure and two return ports allow parallel connection
- Universal shoe is compatible with both HT300 and HT500 systems
- Can be configured in 3- or 4-point suspension groupings for stability and load distribution

JLS250 shoes can be hydraulically connected with any number of other shoes to increase the total system capacity while maintaining equal load support and weight distribution.

JLS250
JACKING LOAD SHOES

JLS250 Specifications		
Base Skidding System	HT300	HT500
System Capacity (4 Shoes)	**600 ton** *544 tonne*	**1000 ton** *907 tonne*
System Capacity (6 Shoes)	**900 ton** *816 tonne*	**1500 ton** *1361 tonne*
System Capacity (8 Shoes)	**1200 ton** *1089 tonne*	**2000 ton** *1814 tonne*
System Height (Retracted)	**31.75"** *805 mm*	**32.5"** *825 mm*
Lift Cylinder Capacity	**250 ton** *227 tonne*	**250 ton** *227 tonne*
Lift Cylinder Stroke	**10"** *255 mm*	**10"** *255 mm*
Tilting Load Cap	**+/- 5%**	**+/- 5%**
Push Cylinder Capacity	**30 ton** *27 tonne*	**55 ton** *50 tonne*
Push Cylinder Stroke	**14.25"** *362 mm*	**13"** *330 mm*
Skidding Speed*	**90 ft/hr** *27 m/hr*	**55 ft/hr** *17 m/hr*
System Coefficient of Friction	**15-20%**	
Slide Surface Material	Graphite	
Maximum Slope	**+/- 2%**	
Track Alignment Tolerance	**+/- 0.25"** *+/- 6 mm*	
Maximum Operating Pressure	**10,000 psi** *700 bar*	
Hydraulic Groupings	3-Point or 4-Point	

*Speed determined using Hydra-Pac SPU-4D

Did you know?

When multiple hydraulic cylinders are used to support a load, it may be advantageous to connect the cylinders into 3 separate hydraulic groups, referred to as a *3-point suspension*.

The cylinders within each group are connected in parallel, but each of the 3 groups is independent from each other.

To understand the concept, consider that a 3-legged stool will not wobble; each leg remains in contact with the floor. The legs form a *stability triangle*.

JLS250 Dimensions	
Weight (per shoe)	**2100 lbs** *953 kg*
Length	**66"** *1680 mm*
Width	**24"** *610 mm*
Working Height - Retracted (HT300)	**31.75"** *805 mm*
Working Height - Extended (HT300)	**41.75"** *1060 mm*
Working Height - Retracted (HT500)	**32.5"** *825 mm*
Working Height - Extended (HT500)	**42.5"** *1080 mm*

Like all Hydra-Slide skidding systems, Hydra-Slide's TT-series Turntables are designed with cylinders that self-reset into ratchets along the rotating plate.

This eliminates the need for pulleys, hold backs, winch lines, or other external forces acting on the load.

Our Turntables can also accommodate multiple push cylinders to increase system capacity.

Our engineered Turntables are extremely simple and low-maintenance, and they solve a big problem: rotating any heavy or oversized load accurately and efficiently, even in areas of restricted access or clearance.

- Capacity up to 900 tons (816 tonnes)
- Fully bidirectional rotating mechanism
- Cylinders automatically reset during rotation
- Low-maintenance graphite-grease contact surface
- Stamped, engineered assembly drawings provided

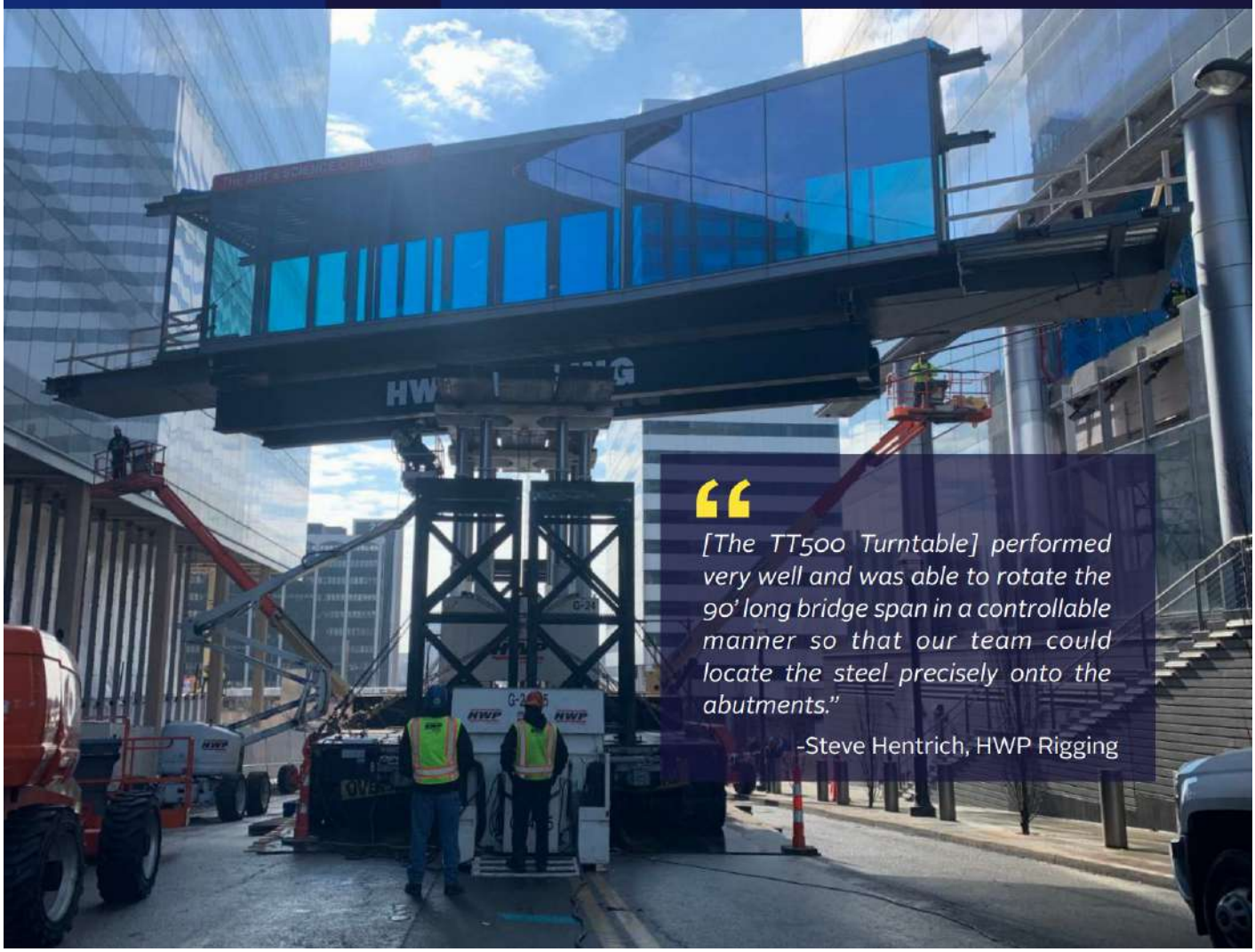
Turntable Specifications	TT150-6	TT225/450-7.5	TT250/500-8	TT250/500/900-10
System Capacity	**150 ton** *136 tonne*	**225 ton/cyl.** *204 tonne/cyl.*	**250 ton/cyl.** *227 tonne/cyl.*	**250 ton/cyl.** *227 tonne/cyl.*
Turntable Height	**4.5"** *115 mm*	**6"** *152 mm*	**6"** *152 mm*	**6"** *152 mm*
Cylinder Capacity	**10 ton** *9.1 tonne*	**25 ton** *22.7 tonne*	**25 ton** *22.7 tonne*	**25 ton** *22.7 tonne*
No. of Push Cylinders	**2**	**1 or 2**	**1 or 2**	**1, 2, or 4**
Cylinder Stroke	**10"** *254 mm*	**14.25"** *362 mm*	**14.25"** *362 mm*	**14.25"** *362 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)	Enerpac CR400 (female)	Enerpac CR400 (female)	Enerpac CR400 (female)
Rotation Speed	**90° / 3 min**	**90° / 7 min**	**90° / 7 min**	**90° / 9 min**
Loading Surface Material	Rubber	Rubber	Rubber	Rubber
Max. Operating Pressure	**10,000 psi** *700 bar*	**10,000 psi** *700 bar*	**10,000 psi** *700 bar*	**10,000 psi** *700 bar*
Base Dimensions	**6' x 6'** *1.83 m x 1.83 m*	**7.5' x 7.5'** *2.29 m x 2.29 m*	**8' x 8'** *2.44 m x 2.44 m*	**10' x 10'** *3.05 m x 3.05 m*
Rotating Plate Diameter	**6'** *1.83 m*	**7.5'** *2.29 m*	**8'** *2.44 m*	**10'** *3.05 m*
System Weight	**1645 lb** *745 kg*	**5625 lb** *2550 kg*	**6400 lb** *2900 kg*	**9500 lb** *4300 kg*

HYDRAULIC
TURNTABLES

PROJECT

HWP Rigging developed an innovative approach to constructing a pedestrian bridge connecting two high-rise office buildings in busy downtown St. Louis, MO, USA. Moving this structure in its entirety required the combined use of many different types of rigging and transportation equipment including SPMTs, hydraulic gantries, and a Hydra-Slide TT500 hydraulic turntable. The TT500 was used to rotate the structure into its final orientation efficiently and accurately.

The work was performed in a single weekend, which helped to minimize impact to traffic and the local community. All of the equipment was seamlessly integrated in order to safely and efficiently transport the structure and lift it into place in one continuous sequence.

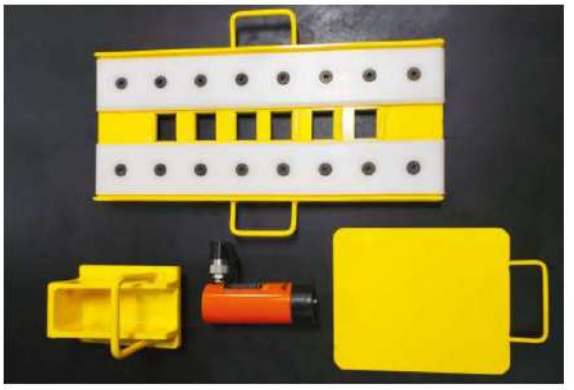


> *"[The TT500 Turntable] performed very well and was able to rotate the 90' long bridge span in a controllable manner so that our team could locate the steel precisely onto the abutments."*
>
> -Steve Hentrich, HWP Rigging

AS150
ALIGNMENT SHOES

The AS150 Alignment Shoe system makes final precise positioning of a load simple and accurate. Each component is hand-portable, allowing transportation, set-up, and mobilization with minimal personnel and equipment.

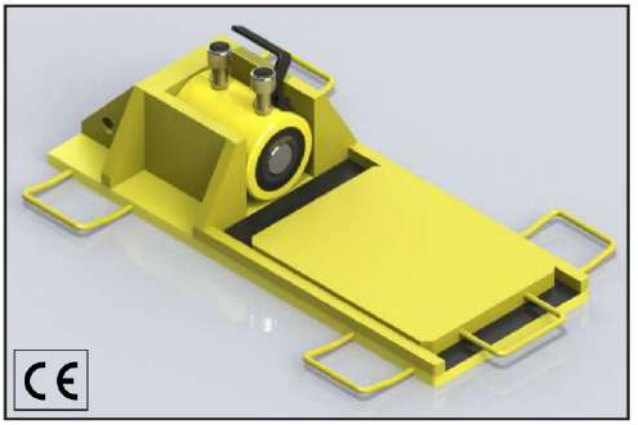
AS150 Specifications	
Full System Capacity	**150 ton** *138 tonne*
Capacity Per Shoe	**37.5 ton** *34 tonne*
Cylinder Capacity	**10 ton** *9 tonne*
Cylinder Stroke	**4"** *100 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
Working Height	**1.75"** *44 mm*
System Coefficient of Friction	**10-15%**
Friction Surface Material	UHMW polyethylene
Maximum Slope	**+/- 2%**
Maximum Operating Pressure	**10,000 psi** *700 bar*



With a 150-ton (138-tonne) capacity and maximum component weight of 39 lb (18 kg), this system is designed for effortless set-up and maximum portability.

Dimensions	Length	Width (working)	Width (full)	Height	Weight
Track Section	**25"** *635 mm*	**10"** *254 mm*	**15.625"** *397 mm*	**1.125"** *29 mm*	**39 lb** *18 kg*
Slider Plate	**12"** *305 mm*	**10"** *203 mm*	**10"** *203 mm*	**0.375"** *10 mm*	**13 lb** *6 kg*
Push Cylinder & Support	**7.25"** *184 mm*	**4.75"** *121 mm*	**4.75"** *121 mm*	**4.75"** *121 mm*	**25 lb** *11 kg*

AS500
ALIGNMENT SHOES



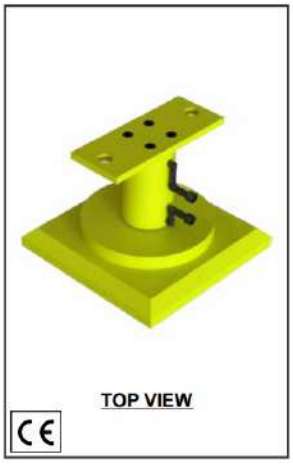
AS500 Specifications	
Full System Capacity (4 Alignment Shoes)	**500 ton** *454 tonne*
Alignment Shoe Capacity (each)	**125 ton** *113 tonne*
Cylinder Capacity	**50 ton** *45.4 tonne*
Cylinder Stroke	**2" or 4"** *50 mm or 100 mm*
Cylinder Hydraulic Couplers	Enerpac CR400 (female)
Working Height	**1.5"** *38 mm*
System Coefficient of Friction	**15-20%**
Slide Surface Material	Graphite
Maximum Slope	**+/- 2%**
Maximum Operating Pressure	**10,000 psi** *700 bar*

The AS500 Alignment Shoe system makes final precise positioning of a load simple and accurate. Each component is hand-portable, allowing transportation, set-up, and mobilization with minimal personnel and equipment.

- 500 ton (454 tonne) system capacity
- 1.5" (38 mm) working height
- Durable rubber base prevents unwanted movement

Full system is stored in a compact steel box for convenience & easy transportation

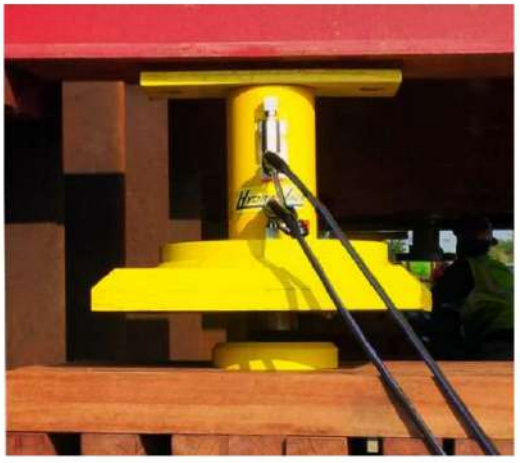
AS500 Dimensions	Length	Width (working)	Width (full)	Height	Weight
Alignment Shoe Base	**30"** *762 mm*	**12"** *510 mm*	**20"** *510 mm*	**6"** *150 mm*	**110 lb** *50 kg*
Slider Plate	**14"** *356 mm*	**10.375"** *260 mm*	**10.375"** *260 mm*	**0.75"** *19 mm*	**25 lb** *11 kg*
Push Cylinder (Retracted)	**5"** *130 mm*	**5"** *130 mm*	**5"** *130 mm*	**7"** *183 mm*	**37 lb** *17 kg*
Storage Box	**34"** *860 mm*	**34"** *860 mm*	**34"** *860 mm*	**22"** *560 mm*	**1075 lb** *488 kg*



TOP VIEW

CE

BOTTOM VIEW



Hydra-Jack™ Climbing Jacks incorporate a hydraulic cylinder inverted inside a specially designed load casing. As the jacks are extended and retracted, block piles are progressively built under the jack for a fast and safe means of raising or lowering large loads or structures.

- Available in 55 - 200 ton (50 - 180 tonne) capacity
- Equipped with velocity fuses to protect against hose rupture or rapid pressure loss
- Ideal for use with standard 4" x 4" (100mm x 100mm) jacking timbers
- Stamped, engineered drawing included

Climbing Jack	CJ55	CJ100	CJ200
Capacity	**55 ton** *50 tonne*	**100 ton** *91 tonne*	**200 ton** *181 tonne*
Cylinder Type	PowerTeam RD556	Enerpac RR1006	PowerTeam RD2006
Stroke	**6"** *150 mm*	**6"** *150 mm*	**6"** *150 mm*
Retracted Height	**15.5"** *395 mm*	**18"** *460 mm*	**21.5"** *550 mm*
Base Dimensions	**17" x 17"** *430 mm x 430 mm*	**24" x 24"** *610 mm x 610 mm*	**28" x 28"** *710 mm x 710 mm*
Max. Operating Pressure	**10,000 psi** *700 bar*	**10,000 psi** *700 bar*	**10,000 psi** *700 bar*
Weight	**300 lb** *136 kg*	**750 lb** *340 kg*	**1450 lb** *658 kg*

Hydraulic Power Units

These single-circuit, cart-mounted power units are suitable for the operation of all Hydra-Slide equipment as well as most double-acting jacking applications. They are suitable in applications that do not require synchronized flow rates.

Radio control upgrade package available

Model		CPU-1-2E†	CPU-3-2E	CPU-4E	CPU-2G	CPU-4G
Drive Type		Electric	Electric	Electric	Gasoline	Gasoline
No. of Pressure Outlets*		2	2	4	2	4
No. of Return Outlets*		2	2	4	2	4
Engine Power	hp	1	3	7	4	10
	kW	*0.75*	*2*	*5*	*3*	*8*
Flow Rate (two-stage)	gal/min	2.8 / 0.26	3.7 / 0.5	3.9 / 0.9	3.0 / 0.4	3.9 / 0.9
	L/min	*10.6 / 1.0*	*14 / 1.9*	*15 / 3.3*	*11 / 1.6*	*15 / 3.3*
Reservoir Volume	gal.	10	10	10	10	10
	L	*38*	*38*	*38*	*38*	*38*
Max. Operating Pressure	psi	10,000	10,000	10,000	10,000	10,000
	bar	*700*	*700*	*700*	*700*	*700*
Length	in.	31	31	31	31	50
	mm	*790*	*790*	*790*	*790*	*1270*
Width	in.	29	29	29	29	33
	mm	*740*	*740*	*740*	*740*	*840*
Height	in.	42	42	42	42	41
	mm	*1070*	*1070*	*1070*	*1070*	*1040*
Weight	lb	330	330	330	320	440
	kg	*150*	*150*	*150*	*145*	*200*
Voltage Options		115V single-phase	3-phase‡	3-phase‡	n/a	n/a

* Units come standard with Enerpac CR400 (female) quick connect couplers on all outlets; custom options available on request.

† Intended for intermittent, light-duty use- ideal as a backup unit.

‡ Available in various standard voltages, 50 Hz and 60 Hz.

HYDRA-PAC
SYNCHRONOUS POWER UNITS

DIESEL

PROPANE

ELECTRIC

Hydra-Pac Synchronous Power Units provide synchronized control of multiple hydraulic cylinders. These units are designed with multiple independent oil circuits to provide equal flow to each line regardless of weight distribution.

- Available with diesel, propane, or electric drive
- Custom-built to operate 4, 6, or 8 cylinders
- Large 30-gallon (113-litre) reservoir with 18 gallons (68-litre) usable oil
- Fully mechanical multi-point lifting and lowering without electronics or wires

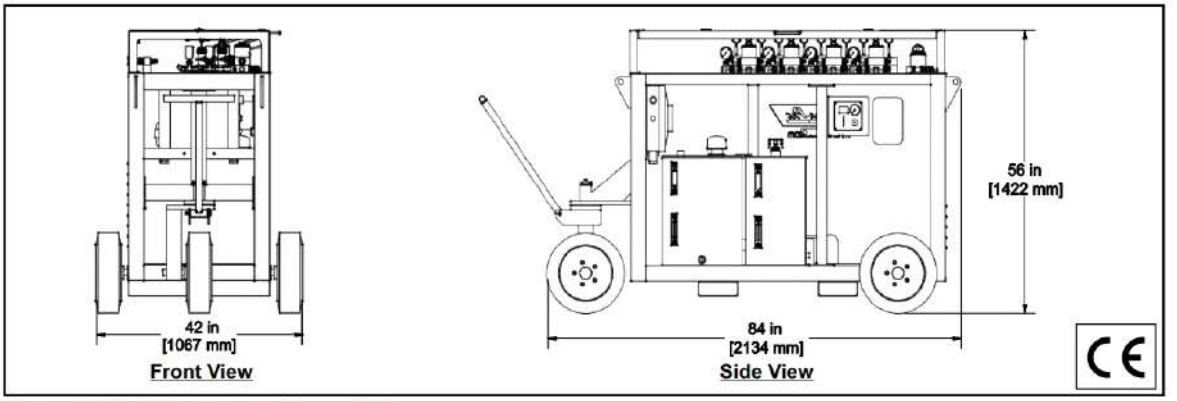
Radio control upgrade package available

Model		SPU-4D	SPU-6D	SPU-8D	SPU-4P	SPU-6P	SPU-8P	SPU-4E	SPU-6E	SPU-8E
Drive Type		Diesel	Diesel	Diesel	Propane	Propane	Propane	Electric	Electric	Electric
No. of Advance Ports*		4	6	8	4	6	8	4	6	8
No. of Retract Ports*		4	6	8	4	6	8	4	6	8
Engine Power	hp	25	56	56	31	62	62	15	30	40
	kW	18.5	42	42	23	46	46	11	22	30
Flow Rate (single port)	gal/min	0.5	0.5	0.5	0.5	0.5	0.5	0.4‡	0.7‡	0.75‡
	L/min	1.9	1.9	1.9	1.9	1.9	1.9	1.4‡	2.6‡	2.8‡
Flow Rate (paired)†	gal/min	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.4	1.5
	L/min	3.8	3.8	3.8	3.8	3.8	3.8	2.8	5.2	5.6
Usable Oil	gal.	18	18	18	18	18	18	18	18	18
	L	68	68	68	68	68	68	68	68	68
Max. Operating Pressure	psi	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	bar	700	700	700	700	700	700	700	700	700
Length	in.	84	104	104	84	104	104	84	104	104
	m	2.13	2.64	2.64	2.13	2.64	2.64	2.13	2.64	3.64
Width	in.	42	42	42	42	42	42	42	42	42
	m	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Height	in.	56	56	56	63	63	63	56	56	56
	m	1.42	1.42	1.42	1.60	1.60	1.60	1.42	1.42	1.42
Weight	lb	2050	2650	2675	1920	2650	2675	1915	2550	2650
	kg	930	1200	1210	870	1200	1210	870	1150	1200
Voltages Available		Not Applicable						230/460V - 60Hz - 3-phase 575V - 60Hz - 3-phase 208/415V - 50Hz - 3-phase		

* Units come standard with Enerpac CR400 (female) quick connect couplers on all ports; custom options available on request

† On Hydra-Pac power units, ports can be combined in pairs to double the available flow rate, which also halves the number of usable ports

‡ Variable Frequency Drive allows control of flow rate across a wide range



Shown: SPU-4D Synchronous Power Unit

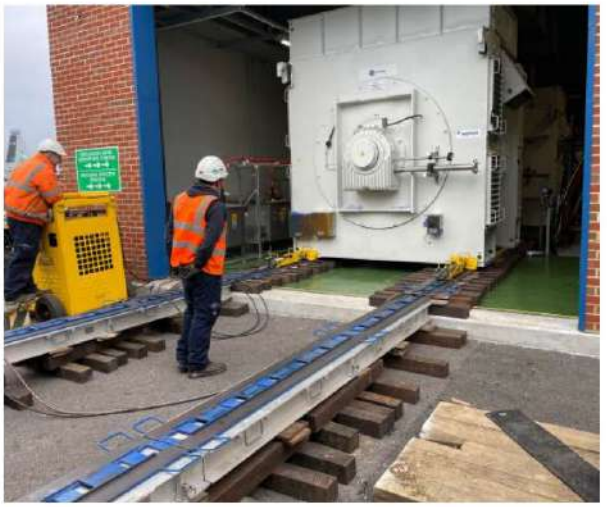
System Accessories

Engineered steel stands for jacking and shoring applications.

- Can be stacked and bolted together
- Equipped for lifting and handling by forklift
- Available in a range of standard heights
- Stamped, engineered drawing included

Stand	Base	Height	Weight	Capacity
MS100-18	36" x 36" *910 mm x 910 mm*	18" *460 mm*	560 lb *254 kg*	100 ton *91 tonne*
MS100-24	36" x 36" *910 mm x 910 mm*	24" *610 mm*	645 lb *293 kg*	100 ton *91 tonne*
MS100-30	36" x 36" *910 mm x 910 mm*	30" *760 mm*	730 lb *331 kg*	100 ton *91 tonne*
MS100-36	36" x 36" *910 mm x 910 mm*	36" *910 mm*	815 lb *370 kg*	100 ton *91 tonne*
MS100-42	36" x 36" *910 mm x 910 mm*	42" *1070 mm*	900 lb *408 kg*	100 ton *91 tonne*
MS100-48	36" x 36" *910 mm x 910 mm*	48" *1220 mm*	985 lb *447 kg*	100 ton *91 tonne*
SS100-12	24" x 24" *610 mm x 610 mm*	12" *305 mm*	385 lb *175 kg*	100 ton *91 tonne*
SS200-12	40" x 40" *1020 mm x 1020 mm*	12" *305 mm*	1020 lb *463 kg*	200 ton *181 tonne*
SS200-24	40" x 40" *1020 mm x 1020 mm*	24" *610 mm*	1195 lb *542 kg*	200 ton *181 tonne*

Shown with LP350 Skidding System tracks



Engineered, light-weight aluminum beams to provide enhanced gap-spanning capability for Hydra-Slide XLP30, XLP150, and LP350 skidding systems, or as a stand-alone addition to your rigging gear.

- Hand-portable & robust
- Simple finger joints with pin connections
- Up to 3' (0.9m) span with full capacity
- Enhances structural integrity of low profile skidding systems
- Stamped, engineered load chart provided

Specifications	
Full Length	**72"** *1829 mm*
Effective Length	**60"** *1524 mm*
Height	**6"** *152 mm*
Width	**16.375"** *416 mm*
Weight	**106 lb** *48 kg*
Material	Aluminum 6061-T6
Load Capacity	**15 ton/ft.** *45 tonne/m*
Max. Allowable Span	**36"** *910 mm*

EKKI
JACKING TIMBERS

Ideally suited for jacking and blocking applications, Ekki hardwood jacking timbers are exceptionally strong and resistant to crushing and bending.

- 25+ year lifespan
- naturally resistant to rot, decay, pests, and splitting
- Timbers do not become structurally compromised over time
- Flame-resistant

Nominal Size	Length	Width	Height	Weight
2" x 4" x 24"	23.6" *600 mm*	3.7" *95 mm*	1.8" *45 mm*	7 lb *3 kg*
4" x 4" x 40"	39.4" *1.00 m*	3.9" *100 mm*	3.9" *100 mm*	24 lb *11 kg*
4" x 6" x 40"	39.4" *1.00 m*	5.6" *142 mm*	3.7" *93 mm*	33 lb *15 kg*

STORAGE CRIBS

We also offer steel cribs for timber storage; each crib holds 100 standard 4" x 4" (100mm x 100mm) ekki timbers.

- Perforated bottom and sides for drainage and ventilation
- Forkliftable & equipped with lifting lugs
- Stackable
- Engineered design

	Length	Width	Height	Weight
Crib Dimensions	46" *1.17 m*	45" *1.14 m*	50" *1.27 m*	300 lb *136 kg*

Advantages

Ekki wood is one of the strongest, toughest, and most durable timbers available, with a lifespan of 25+ years. it is naturally resistant to rot, decay, biological attack, industrial chemicals, and abrasion. Ekki is also flame-resistant and has an extremely high crushing strength.

	Ekki	White Oak	Hemlock/ Fir	Spruce	Rhino Crib (synthetic)
Static bending yield stress (in-lb)	**13,589**	3,730	4,320	3,090	2,750
Crushing strength parallel to grain (in-lb)	**10,450**	3,580	3,610	2,760	n/a
Crushing strength normal to grain (in-lb)	**2,450**	716	460	300	1482
Specific gravity (g/cm³)	**1.1 - 1.3**	0.7 - 0.74	0.64 - 0.8	0.43 - 0.8	0.93

Sources: Forinek Canada Corp., Forestry Technical Report 21, and the Timber Handbook published by the TNO, Delft, Netherlands.

Maintenance & Storage

Ekki wood should be stored in a dry location with constant humidity and temperature. If this is not possible, it should at least be protected from direct sunlight, wind, and excess moisture.

Scientific Name:

Lophira alata

Common names:

Ekki, Azobe, Bongossi, Bakundu (Cameroon), **Kaku** (Ghana), **Esore** (Ivory Coast), **Aba** (Nigeria), **Endwi** (Sierra Leone)

Distribution

West Africa, extending into the Congo basin; occurs in evergreen and moist deciduous forests, in freshwater swamp forests, and close to river banks.

Description

Heartwood is dark red, chocolate brown, or purple-brown with conspicuous white deposits in the vessels. Texture is coarse, grain usually interlocked; lustre is low, no characteristic odour or taste.

Finish

Ekki is typically delivered "green" with up to about 40% moisture content, clear and defect free with no sapwood and no centre of heart. Timbers are planed 4 sides to tolerances of +/– 1 mm. Ends are waxed to reduce the migration of moisture into and out of the timbers. Cross cutting in the field can be done easily and cleanly but rip sawing in the field is not recommended.

Drying

Very slow. Ekki is particularly susceptible to distortion and cracking when drying (especially thin-cut timber). Longitudinal splits can also occur rapidly. Given its applications, Ekki will often dry out while in situ, which can lead to the above mentioned problems if insufficient attention is paid to its care and storage. Minor cracking and end splitting do not normally affect its strength and usage. Shrinkage: Radial: 8%, Tangential: 11.1%, Volumetric: 18.3%

Fire Rating

EN 13823 - Single Burning Item (SBI): 45mm x 150mm sample tested in accordance with NEN-EN 13823:2002 resulted in a Bs-1 classification.

Source: Test Results Indicative SBI Examination of Massive Azobe Wood - 45 mm. TNO Report 2006-CVB-R0352, 2006.

Supplemental Information

Heavy Track Systems

Our Heavy Track skidding systems feature rigid steel track sections that can carry load over unsupported spans.

Extremely durable and user-friendly, these systems are ideal for rough site conditions, trans-loading, and spanning pits or other openings.

Low Profile Systems

Our Low Profile skidding systems are completely hand-portable and feature extremely low working height.

Compact and lightweight, these systems are ideal for areas with restricted access/clearance and flat, continuous support.

Features	Heavy Track	Low Profile
Capacity range	**300 - 1000 ton** *272 - 907 tonne*	**150 - 350 ton** *136 - 318 tonne*
Requires continuous support	No	Yes
Load-bearing track	Yes	No
Fully hand-portable	No	Yes
Bidirectional tracks	Yes	Yes

All Hydra-Slide skidding systems, turntables, alignment shoes, and jacks, as well as most other double-acting jack applications, can be operated using both Hydra-Pac synchronous power units and conventional power units- each have their own advantages.

Hydra-Pac Synchronous

Our Hydra-Pac™ Synchronous power units are designed with multiple independent oil circuits. The circuits are not interconnected, and provide equal flow to each line regardless of the weight of the load or the pressure in the circuit. This is accomplished using specially designed piston pumps, valves and control devices.

Under normal operating conditions, oil flow and hence cylinder extension and retraction rates should be within 5% of each other on all circuits, even if the weight is unbalanced.

Advantages

Synchronous power units allow the operator to safely lift, lower, or slide virtually any load equally on all points.

Conventional

Our conventional hydraulic power units are suitable for applications that do not require synchronized flow rates.

Conventional power units have a single oil supply circuit. The circuit may be split into multiple outlets, but since they are connected, they will act as one. When jacking a load that is heavier at one end, cylinders with less load will advance more quickly, so it is often necessary to jack "end to end" to ensure load balance. When skidding, it is necessary to ensure that both cylinders advance at nearly the same rate.

Advantages

These units are low-cost, compact, and highly portable, making them ideal as back-up units.

Features	Hydra-Pac Synchronous	Conventional
Engine/motor types available	Diesel, propane, electric	gasoline, electric
Manual control valves for each circuit	Yes	No
Flow rate controlled independently in each circuit	Yes	No
Maintain constant jacking/ lowering speed	Yes	No
Maintain uniform pushing/ pulling forces	Yes	No
Circuits can be paired to increase flow	Yes	No

The tracks of our low profile skidding systems are constructed of thin steel plates that have negligible resistance to bending. For full capacity, the load must be evenly distributed over the entire length of the slider plate(s) *and* the track must be fully supported over its entire length.

For lighter loads, it may be possible to have less than full distribution of the load or less than full support under the track, *provided that the contact pressures do not exceed certain values.* It is always good practice to support underneath track connections and to minimize unsupported spans as much as possible.

Structural capacity is based on the **contact pressure** between sliding surfaces. Recommended maximum contact pressures for Hydra-Slide low profile systems are:

- **XLP30** - 3 tons/foot (8.9 tonnes/m)
- **XLP150** - 10 tons/foot (29.8 tonnes/m)
- **LP350** - 15 tons/foot (44.7 tonne/m)

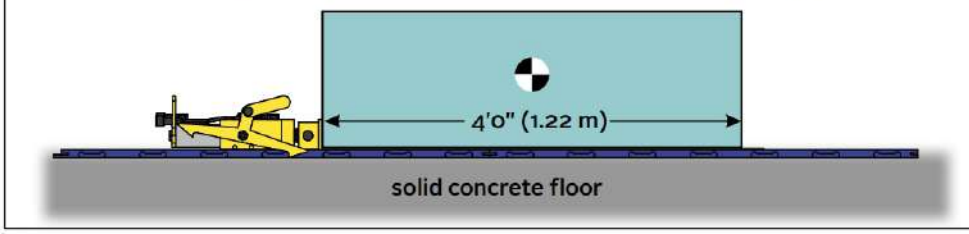
Please note that contact pressure can be affected by the load having an offset centre of gravity.

For the calculations on the following page, **contact length** is determined by the minimum distance where the track and slider plates are sandwiched between a rigid load contact area and the track support area.

*Load capacity is maximized when the load is in full contact with the slider plates **and** the track is fully supported, as seen below. Sample capacity calculations on the following page.*

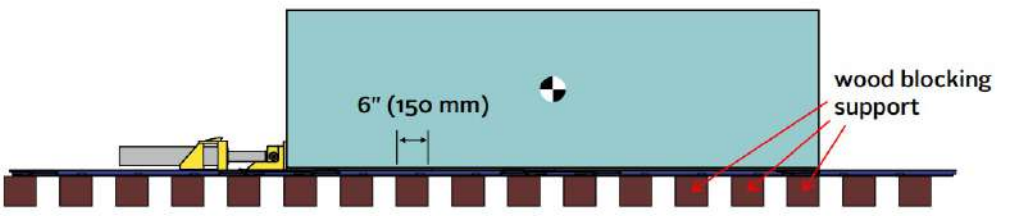
XLP30 Example - The load is in full contact with the slider plates, and the track is fully supported by a concrete floor:

Contact length = 4'0" = 8'0" for two tracks	Contact length = 1.22 m = 2.44m for two tracks
Max. load weight = contact length x max. contact pressure = 8'0" x 3 ton/foot **= 24 ton**	Max. load weight = contact length x max. contact pressure = 2.44m x 8.9 tonne/m **= 21.7 tonne**



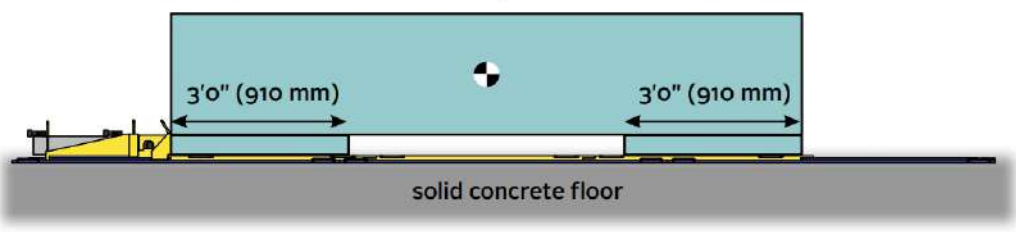
XLP150 Example - the load is in full contact with the slide plates, and the track is partially supported by 10 timbers with spans between them:

Contact length = 10 x 6" = 5'0" per track = 10'0" for two tracks	Contact length = 10 x 150mm = 1.52m per track = 3.05m for two tracks
Max. load weight = contact length x max. contact pressure = 10'0" x 10 ton/foot **= 100 ton**	Max. load weight = contact length x max. contact pressure = 3.05m x 29.8 tonne/m **= 91 tonne**



LP350 Example - the load is supported on two 3' sections, with full support under the track:

Contact length = 2 x 3'0" = 6'0" per track = 12'0" for two tracks	Contact length = 2 x 910mm = 1.83m per track = 3.66m for two tracks
Max. load weight = contact length x max. contact pressure = 12'0" x 15 ton/foot **= 180 ton**	Max. load weight = contact length x max. contact pressure = 3.66m x 44.7 tonne/m **= 164 tonne**



First, some definitions:

Friction is defined as the force resisting the relative motion of two surfaces sliding against each other.

The **Coefficient of Friction (CoF)** is the ratio between the force of friction and the force pressing the surfaces together (the weight of the load).

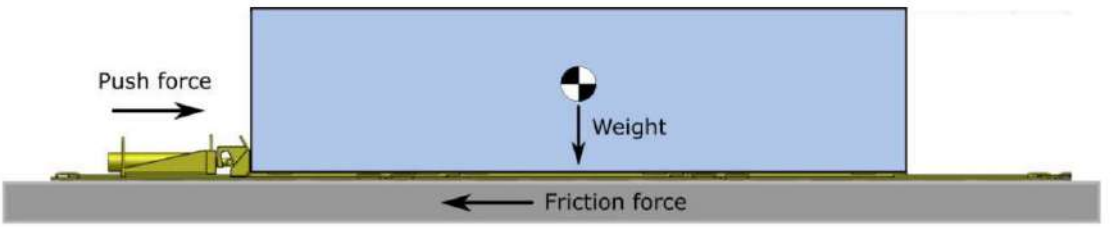
The **CoF** between two surfaces is a number ranging from 0 to 1; the larger the number, the greater the resistance to sliding, and the more force is required to move a load.

At first glance you might assume that a lower coefficient of friction is better, because less force will be required to move the load; however, this assumption doesn't account for safety.

In many cases the field conditions are not perfect and we need to account for factors like slight out-of-levelness, uneven ground conditions, and load momentum. No matter the conditions, we still need to maintain precise control over the direction and speed of movement, and have the ability to stop the load precisely.

This is where a higher coefficient of friction is actually beneficial. With a known CoF we can plan for how much push or pull force will be required, while still maintaining this precise control over direction and speed, and most importantly preventing the load from running away.

Our skidding systems use an engineered lubricating material at the sliding surface which provides a consistent CoF in the range of 0.10 to 0.20, with very little variance, while the relatively high forces required to move the load are provided by hydraulic push or pull cylinders. The cylinders exert their forces internally and keep the speed of movement slow and controlled, while the track acts as a guide ensuring the load always goes where it is intended to.



Referring to the diagram above:

If the load is 300 tons and the known CoF is **0.15**, the push force required is **300 x 0.15 = 45** tons.

Our HT300 system provides this push force using two 30-ton hydraulic cylinders.

If the load is 500 tons and the known CoF is **0.20**, the push force required is **500 x 0.20 = 100 tons**.

Our HT500 system provides this push force using two 55-ton hydraulic cylinders.

In moving heavy loads with hydraulic skidding systems, friction ensures that the movement of loads is always under precise control, and keeps the job safe for everyone around.

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