

# Mechanical Lifting and Positioning Equipment













MC01EN



With well over a century of experience and expertise, the "Simplex Mechanical Product Line" delivers the quality and precision to safely and efficiently get the job done.

Simplex first introduced its ratchet jack in 1899. Since then, Simplex continues to lead the mechanical jack market, providing the most versatile jacks in the industry and receiving many patents and awards for technological advancements.

Select from a wide range of specialty and general use Mechanical Products that offer superior design and construction, providing safe and efficient lifting, lowering, positioning, and leveling. These highly engineered products require minimal user effort by maximizing Simplex's proven unique mechanical design advantages.

Ergonomically designed, *Simplex* Mechanical Products are easy to transport and can be positioned for a myriad of applications such as construction, mining, shipbuilding, bridgework, maintenance, oil fields or any other industry requiring versatility and reliability, time after time.



# Methods of Mechanical Force



Rack & Pawl Design
Ratcheting mechanism used to create leverage for movement.



Threaded Screw Design
Mechanical advantage is gained by using
a specialized Acme threaded screw.



Rack & Pinion Design
A set of gears that convert rotational motion into linear motion.







Description	Series	Tonnes Range*	Model	Page
RATCHET JACKS  Ideal for mills, factory maintenance, shipyards, farms, machinery riggers, construction contractors, mining operators, bridge and railcar repair and heavy-duty industrial maintenance.	RJ RJA CR CRA	4,5 - 18,1 9,1 - 13,6 4,5 - 18,1 9,1 - 18,1		4 - 7
RACK JACKS  Suitable for a wide variety of applications requiring low closed height and extended travel. Ideal for factory maintenance, farm maintenance, machinery riggers, construction contractors, and track maintenance.	CJ LPC	1,5 - 10,1 1,5 - 10,1		8 - 9
SUPER JACKS  Used for inspecting and renewing journal brasses, bridge, tank and structural steel erectors, presses, shipbuilding and all industries where powerful, all-position jacks are required.	JJ	13,6 - 45,3		10
SCREW JACKS  Suitable for house movers, leveling, supporting, shop and factory maintenance, riggers, locomotive repairs, drillers and farm applications.	SJ SC S PJ	10,9 - 21,8 10,9 - 21,8 2,7 1,8 - 7,3	1,1	11 - 14
PUSH-PULL / LOADBINDER JACKS  Essential for any maintenance repair or production work in all types of shops and field applications. Loadbinders are used for the construction of bridges and in concrete and steel engineering projects.	SER PP	18,1 9,1		15 - 16
TRENCH BRACES & ROOF SUPPORTS  Designed for putting up cross timbers and steel beams, aligning steel mine cars, a temporary prop in connection with loading equipment, pulling up and removing slack in power cables and pulling and pushing conveyor lines and controlling the tail piece.	SE BE RS	  3,6	Ī	17 - 18
ACCESSORIES  Lever Bars, Chains and I-Beams	SLB IB CH	 		19

<sup>\*</sup> All Ton values are metric tonnes.

### **RATCHET JACKS**

RJ Series 4,5 - 18,1 Tonnes





Models: RJ84A, RJ85A, RJ1017 & RJ86A



A Model RJA1022 is used to lift an on-site rock crusher for maintenance. Its large lifting and holding capacity, low toe height and heavy-duty housing, makes the RJ Series Jacks universal tools on any jobsite. **FEATURES** ✓ Multiple-tooth pawls for strength & safety. ✓ Large base ensures a firm foundation.

- ✓ Supports full rated capacity on the toe or the cap.
- ✓ Drop-forged, alloy steel, heat-treated components.
- ✔ Plated springs to resist corrosion.
- ✔ Double-lever sockets for jacking in close quarters.



#### LIGHTWEIGHT RATCHET JACKS

Lightweight aluminium models are silver in color and offer a 30% reduction in weight.

The RJA1538 jack is designed for pole pulling applications. Chain and I-Beam are ordered separately.

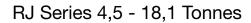




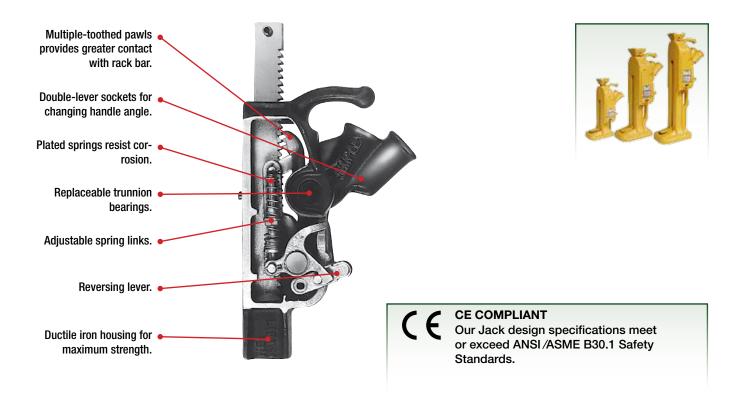


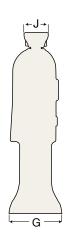
IB1538 I-Beam

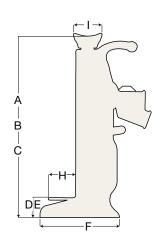
Model	Jack Housing Material	Support Capacity (tonnes)	Lifting Capacity (tonnes)	Handle Effort per Tonne
				(N)
RJ84A				44
RJ85A		4,5	4,5	44
RJ86A				44
RJ1017	Steel	Steel		54
RJ22B		9,1	9,1	30
RJ24A		40.4	40.0	44
RJ2029		18,1	13,6	36
RJA1022	Aluminium	9,1	9,1	40
RJA1538	Aluminium  -	13,6	7,3	57

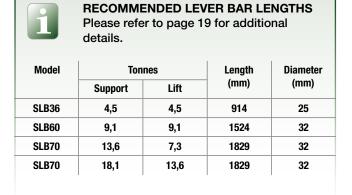












				Dimension	s (mm)					Weight	Model
Α	В	C	D	E	F	G	Н	ı	J		
Minimum Height	Maximum Height	Stroke	Toe Minimum Height	Toe Maximum Height	Base Length	Base Width	Toe Length	Cap Length	Cap Width	(kg)	
356	533	178	45	223	187	127	64	67	59	13	RJ84A
432	685	254	45	299	187	127	64	67	59	14	RJ85A
508	838	330	45	375	187	127	64	67	59	16	RJ86A
439	679	241	42	283	222	152	61	73	67	18	RJ1017
550	854	305	51	356	260	165	61	76	64	32	RJ22B
591	914	324	58	381	260	203	67	89	73	42	RJ24A
712	1168	457	58	514	279	203	67	89	73	47	RJ2029
550	854	305	51	356	260	165	61	76	64	19	RJA1022
956	1502	540		546	207	210				28	RJA1538





Models: CR321B



The CRA1029R and CRA1029L Reel Jacks can easily handle large reels. The large wooden bases and low handle efforts enhance safety and reduce operator fatigue.

#### **FEATURES**

- ✓ Multiple-tooth pawls for strength & safety.
- ✓ Tough hardwood bases laminated for extra strength.
- ✔ Drop-forged, alloy steel, heat-treated components.
- ✔ Plated springs to resist corrosion.
- ✔ Double-lever sockets for jacking in close quarters.







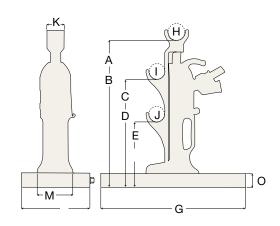
#### **CARRYING HANDLE**

Center mounted carrying handle makes these jacks easy to position and transport.

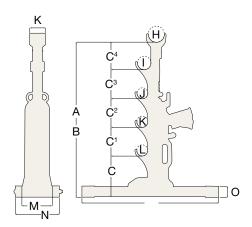
Model	Capacity / Pair Handle Effor		Handle Effort	Stroke			Dir	nensions (mr	n)		
			per ionnes		А	В	C	C 1	C <sup>2</sup>	C 3	C 4
	Side Hooks (tonnes)	Top Hooks (tonnes)	(N)	(mm)	Minimum	Maximum			Minimum		
CR320B	4,5	9,1	142	241	528	768	387				
CR321B			134	356	877	1232	235	397	559	721	883
CRA1029R	9,1	18,1	134	295	791	1086	632				
CRA1029L			134	295	791	1086	632				

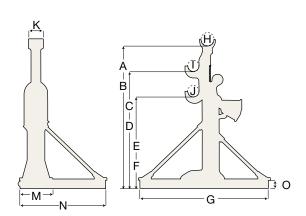


#### CR320B



#### CR321B









#### **WARNING**

Please follow all recommended safety precautions to avoid personal injury or damage to the unit.



#### **CE COMPLIANT**

Our Jack design specifications meet or exceed ANSI/ASME B30.1 Safety Standards.



#### **RECOMMENDED LEVER BAR LENGTHS** Please refer to page 19 for additional

details.

Model	Ton	ines	Length	Diameter
	Side Hooks	Top Hooks	(mm)	(mm)
SLB36	4,5	9,1	914	25
SLB60	9,1	18,1	1524	32

Dimensions (mm)												Weight	Model
D	D E F G H I J K L M N O												
Maximum	Maximum	Maximum	Length	Diameter	Diameter	Diameter	Diameter	Diameter	Length	Width	Height	(kg)	
629	234	476	518	67	57	57			127	238	57	23	CR320B
			771	79	76	61	61	61	151	248	51	58	CR321B
927	479	774	762	79	67	67			191	508	57	39	CRA1029R
927	479	774	762	79	67	67			191	508	57	39	CRA1029L

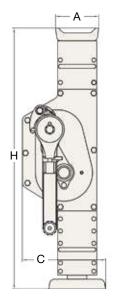


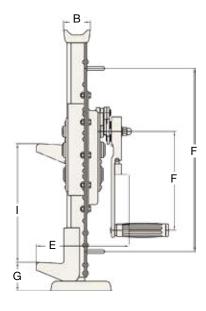




Here a CJ100 is used to position this cargo container for repair. Its solid base provides greater stability and more surface area.

- Developed in accordance with the latest safety regulations.
- ✓ Suitable for lifting loads of any type.
- ✓ Safety crank with folding handle.
- ✓ Lifting with either fixed toe or on clawed head.
- ✓ Low expenditure of force through optimal ratio.







#### **CE & DIN 7355 COMPLIANT**

Our Jack design specifications meet or exceed ANSI/ASME B30.1 Safety Standards.



The jack is rated for full capacity at both the head and toe lift points.

Model	Toe Capacity	Head Capacity		Dimensions (mm)								
	oupuony	oupdoity	Α	В	С	D	E	F	G	Н	ı	
	(tonnes)	tonnes)	Width	Depth	Width	Length	Depth	Length	Height	Minimum Height	Stroke	(kg)
CJ15	1,5	1,5	90	50	151	250	202	525	65	725	350	13,5
CJ30	3	3	100	50	204	250	213	525	70	725	350	22
CJ50	5	5	110	68	211	250	236	525	70	725	300	28
CJ100	10,1	10,1	140	70	257	300	297	590	80	800	300	46



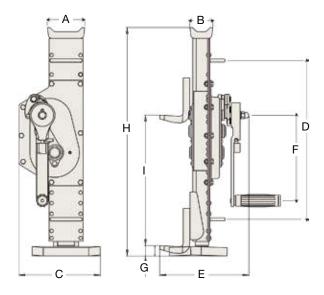


Models: LPC30 & LPC100



The LPC50 is used to lift this concrete slab. The head and toe capacity along with its mobility, makes the Rack Jacks ideal for various applications.

- ✓ Low body height.
- Milled rack, geared wheels and tempered gears.
- ✓ Suitable for lifting loads of any type.
- ✓ Safety crank with folding handle.
- ✓ Low expenditure of force through optimal ratio.
- ✓ All construction components standardized.
- ✓ Lifting with either fixed toe or on clawed head.





The jack is rated for full capacity at both the head and toe lift points.



#### CE COMPLIANT

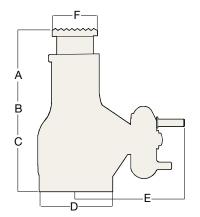
Our Jack design specifications meet or exceed ANSI/ASME B30.1 Safety Standards.

Model	Toe Capacity	Head Capacity		Dimensions (mm)								Weight
	Oupdoity	оарасну	Α	В	C	D	E	F	G	Н	I	
	(tonnes)	(tonnes)	Width	Depth	Width	Length	Depth	Length	Height	Minimum Height	Stroke	(kg)
LPC15	1,5	1,5	90	50	166	525	218	250	30	724	350	16
LPC30	3	3	100	50	217	525	234	250	30	733	350	25
LPC50	5	5	110	68	239	525	260	250	30	730	300	32
LPC100	10	10	140	70	294	590	319	300	35	802	300	55





Models: JJA2515C & JJ3510D





Outdoor use and weld splatter can shorten the life of standard jacks. "We chose Simplex Super Jacks for the bullet proof construction and holding power."

# **FEATURES**

- ✓ Ratcheting screw jack design.
- Holds the load indefinitely, and will not creep down.
- ✓ Positive shoulder stop for safety.
- ✓ Available with aluminum or ductile iron housing.
- ✓ Ball bearings for smooth operation and low handle effort.



# RECOMMENDED LEVER BAR LENGTHS

Please refer to page 19 for additional details.

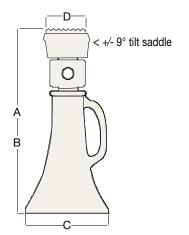
Model	Tonnes	Length (mm)	Diameter (mm)
SLB36	13,6	914	25
SLB36	22,7	914	25
SLB36	31,8	914	25
SLB56	45,3	1422	29

Model	Jack	Capacity			Dimensio	ns (mm)			Handle	Weight
	Housing Material		A	В	С	D	E	F	Effort Per Tonne	
	Material	(tonnes)	Minimum Height	Maximum Height	Stroke	Base Diameter	Socket	Cap Diameter	(N)	(kg)
JJ2510C		22,7	261	387	127	138	191	79	27	19,5
JJ3510D	Steel	31,8	261	387	127	140	191	79	22	20,0
JJ5010B		45,3	262	363	102	184	224	100	18	36,3
JJA1510C		13,6	261	387	127	138	191	60	40	12,7
JJA2510C		22,7	261	387	127	138	191	79	27	15,4
JJA2515C	Aluminium	22,7	388	606	225	141	191	79	27	19,5
JJA3510D		31,8	261	387	127	138	191	79	22	15,4
JJA5010B		45,3	262	363	102	184	224	100	18	27,7





Models: SJ1512, SJ156 & SJ158





Simplex screw jacks are used to adjust the height of this roller fixture. "We use this fixture during the cutting of long pieces of stock."

- ✓ Ductile iron bodies for strength.
- ✓ Positive welded stop for safety.
- Supports loads indefinitely, and will not creep down.
- ✓ Carry handle for ease of transport.
- ✓ Four holes for easy positioning of lever bar.
- ✓ 9° tilt saddle assists in centering load point.



#### RECOMMENDED LEVER BAR LENGTHS

Please refer to page 19 for additional details.

Model	Tonnes	Length (mm)	Diameter (mm)
SLB24	10,9	610	19
SLB35	18,1	914	21
SLB42	21,8	1067	29

Model	Sustaining Capacity		Dimensi	ons (mm)		Handle	Weight
	Capacity	Α	В	C	D	Effort Per Tonne	
	(tonnes)	Closed Height	Stroke	Base Diameter	Cap Diameter	(N)	(kg)
SJ156		245	95	83	73	7,3	4,5
SJ158	10,9	296	146	140	73	7,3	5,4
SJ1512		397	248	159	73	7,3	7,3
SJ208		299	127	152	79	6,8	7,7
SJ2010	18,1	350	178	165	79	6,8	9,1
SJ2012		400	229	171	79	6,8	10,9
SJ258		331	108	165	83	6,8	12,7
SJ2512	21,8	432	210	184	83	6,8	16,8
SJ2518		585	362	216	83	6,8	23,6

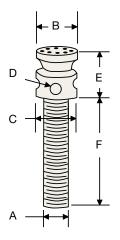


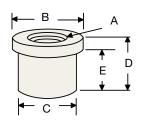




The shoulder nut is placed into piping, fixtures or other fixed forms supplied by the user.

Models: SC03568 & SC03620







144 Screw and Cap assemblies support the outer wall of a large generator assembly at the Grand Coulee Dam.

### **FEATURES**

- ACME threads holds the load indefinitely without creep down.
- ✓ Four-hole assembly allows for infinite height adjustments and exact leveling.
- ✓ Shoulder nut can be welded to piping.
- ✓ 9° tilt saddle assists in centering load point.



# **RECOMMENDED LEVER BAR LENGTHS**Please refer to page 19 for additional details.

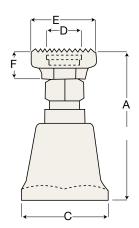
Model	Tonnes	Length (mm)	Diameter (mm)
SLB24	10,9	610	19
SLB35	18,1	914	21
SLB42	21,8	1067	29

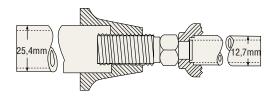
Model	Sustaining		Dimension	18				Weight
	Capacity	A	A B		D	E	F	
	(tonnes)	Modified Acme Thread Diameter - Pitch A (Thread)	(mm)	(mm)	(mm)	(mm)	(mm)	(kg)
SC156		1 1/2 - 3	73	57	22	95	144	2,5
SC158	10,9	1 1/2 - 3	73	57	22	95	195	2,8
SC1512		1 1/2 - 3	73	57	22	95	297	3,5
SC208		2 - 2 1/2	79	73	24	102	192	4,8
SC2010	18,1	2 - 2 1/2	79	73	24	102	243	5,4
SC2012		2 - 2 1/2	79	73	24	102	294	6,1
SC258		2 1/2 - 2 1/2	83	83	30	129	198	7,6
SC2512	21,8	2 1/2 - 2 1/2	83	83	30	129	300	9,9
SC2518		2 1/2 - 2 1/2	83	83	30	129	452	13,3
Shoulder Nuts								
SCN15		1 1/2 - 3	76	61	76	57		1,5
SCN20		2 - 2 1/2	101	76	83	57		2,3
SCN25		2 1/2 - 2 1/2	127	100	101	76		5





Model: S3A





The spreader jack can easily be extended by fitting a 25,4mm diameter pipe in the cap well and a 12,7mm diameter pipe in the housing well.



The S3A, with its low profile and small footprint was the perfect solution to level the bed of this milling machine.

- ✔ Perfect for close quarters and tight spaces.
- ✓ Supports 2,7 tonnes and has a 25,4 mm stroke for adjustments.
- Closed height of 77 mm.
- ✓ Serrated cap rotates and prevents load slippage.



#### **WARNING**

Please follow all recommended safety precautions to avoid personal injury or damage to the unit.



#### **CE COMPLIANT**

Our Jack design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

Model	Sustaining Capacity	Operable Rise (mm)			Dimensio	ons (mm)			Weight
	oupdoity	(11111)	A	A B C D E F					
	(tonnes)		Minimum Height	Maximum Height	Base	Well Diameter	Cap Width	Cap Height	(kg)
S3A	2,7	25,4	77	101	51	21	38	17	1,5



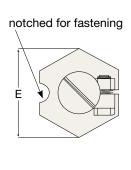


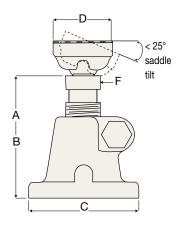
Models: PJ1P, PJ2P & PJ4P



The notched base and swivel socket cap makes the versatile Simplex Planer Jacks the perfect choice for leveling, or repair & maintenance on machinery beds and motors.

- ✓ Side locking screw keeps the jack extended and prevents lowering due to vibration.
- ✓ Screw operation provides countless adjustments for exact leveling.
- Ideal jack for leveling plane beds, millers and machinery.
- Ball and socket cap swivels to center load forces.
- ✓ Notched base fastens easily to machine beds.







#### **CE COMPLIANT**

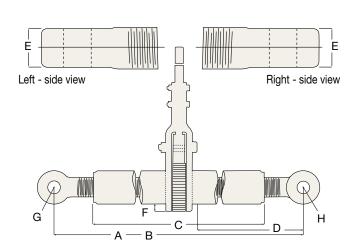
Our Jack design specifications meet or exceed ANSI/ASME B30.1 Safety Standards.

Model	Sustaining	Operable							Weight
	Capacity	Rise	A	В	C	D	E	F	
	(tonnes)	(mm)	Minimum Height	Maximum Height	Across Flats	Cap Diameter	Across Points	Hex Across Flats	(kg)
PJ1P	1,8	25	70	95	60	32	70	19	0,7
PJ2P	3,6	38	96	133	79	43	92	25	1,4
PJ3P	5,4	57	134	190	102	52	117	32	2,7
PJ4P	7,3	102	191	292	136	64	157	38	5,4

SER Series 18,1 Tonnes



Models: SER20 & SER30





The SER Series Loadbinder Jack was used to secure a tractor for transporting. The heavy-duty steel construction makes this jack useful in a myriad of applications.

# **FEATURES**

- ✓ 18,1 tonnes capacity models are used for connecting river barges, pulling forms and steel plates.
- ✓ Ideal for bridge construction and steel engineering projects.
- ✓ Equipped with spring activated pawl and 66cm integrated handle.
- ✓ Can be used in "push" or "pull" applications.



#### **WARNING**

Please follow all recommended safety precautions to avoid personal injury or damage to the unit.

Model	Travel	Screw		Dimensions (mm)									
	Length	Diameter	A	В	C	D	E	F	G	Н			
			Eye t	o Eye	Barrel Width	Left / Right Screw	Left / Right Screw Eye	Ratchet Socket Length	Inner Diameter Left / Right	Radius			
	(mm)	(mm)	Minimum	Maximum		Length	Thickness		Screw Eye		(kg)		
SER10	356	51	585	939	457	279	48	19	33	44	25,9		
SER20	508	51	737	1244	610	356	48	19	33	44	29,9		
SER30	660	51	889	1549	762	432	48	19	33	44	33,6		
SER40	965	51	1194	2159	1067	584	48	19	33	44	41,7		



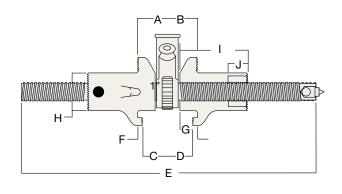


Models: PP610, PP61015



A Simplex PP610 is used to separate these I-Beams for proper bridge repair operation and maintenance.

- ✓ Used for pushing, pulling, holding and more.
- ✓ Ideal for weld shops.
- ✓ End nuts are designed to permit the use of chains with eye hooks.
- Suitable for adjusting forms, dampers, fixtures and flues.
- Incorporates 1.25-6 ACME 2G Class, right and left hand.





#### CE COMPLIANT

Our Jack design specifications meet or exceed ANSI/ASME B30.1 Safety Standards.



### RECOMMENDED LEVER BAR LENGTHS

Please refer to page 19 for additional details.

Model	Tonnes	Length (mm)	Diameter (mm)
SLB24	9,1	610	19

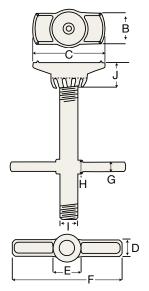
Model					Dimensions (	(mm)					
	Α	A B C D E F G H I J									
	Minimum	Minimum Maximum Minimum Maximum Length Length Length Length Length Length									
PP610	86	206	73	193	254	8	19	60	81	32	
PP61015					254						

Model	Centered Capacity (tonnes)	Hook/Toe Offset Load Capacity (tonnes)	Travel (mm)	Handle Effort per ton (N)	Screw Diameter (mm)	Weight (kg)
PP610	9,1	1,8	121	6,8	32	5,9
PP61015	9,1	1,8		6,8	32	2,3

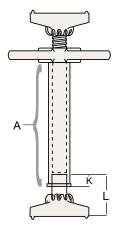




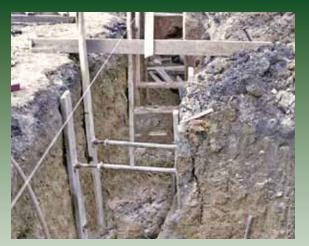
Model: SE12, SE18 - Screw & Butt End Sold Separately



Dimensions assume the use of both screw & butt ends together as an assembly.



Note: Customer Supplied DN "Diametre Nominal" 38,1 mm or 50,8 mm pipe.



Simplex SE Series Trench Braces are used to shore up the walls of this trench for the repair work of underground water pipes.

- ✔ Provides an efficient, economical protection against cave-ins and costly re-digging in construction & maintenance.
- Ball socket joints tilt for added safety on angular mounting.
- Holes on each end facilitates mounting to wood members.



#### **WARNING**

Please follow all recommended safety precautions to avoid personal injury or damage to the unit. Reference OSHA Timber Trench Brace Charts for proper spacing guidelines.

Model	Adjust	Pipe						Dimensi	ons (mm)					
(Screw End)	Range	Size	A	В	C	D	E	F	G	Н	ı	J	K	L
,	(mm)	(DN)	Minimum Pipe Length	Width	Length	Lever Width	Lever Diameter O.D.		Lever Height	Lever Nut Height	Screw Diameter O.D.	Height	Butt End Height	Collar Height
SE12	178	38	305	62	146	32	54	241	17	29	35	62		
SE16	254	38	407	62	146	32	54	241	17	29	35	62		
SE18	254	50	457	70	190	38	68	279	20	35	47	76		
Model (Butt End)		nds to be h Butt End												
BE25	SE12	/ SE16		62									35	98
BE35	SE	E18		70									44	124



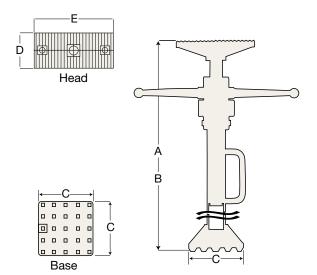


Models: RS139AS66102, RS139AS78114



This RS Series Roof Support was used to support a horizontal I-Beam while weld work was being done on the verticle I-Beam.

- ✓ Rated at 3,6 tonnes sustaining capacity.
- Designed for a wide range of maintenance and holding capabilities.
- Aluminium alloy housing and base makes this unit light and portable.
- ✓ Balanced carrying handle.
- ✔ Holds the load indefinitely without creep down.





#### **CE COMPLIANT**

Our Jack design specifications meet or exceed ANSI/ASME B30.1 Safety Standards.



#### WARNING

Please follow all recommended safety precautions to avoid personal injury or damage to the unit.

Model	Stroke		Dimensions (mm)							
		A	A B C D E							
		Minimum	Maximum	Base	Head	Head				
	(mm)	Height	Height		Width	Length	(kg)			
RS139AS66102	914	1676	2591	152	102	229	26			
RS139AS78114	914	1981	2896	152	102	229	29			



# LEVER BARS & ACCESSORIES

STEEL LEVER BARS & ACCESSORIES										
Model	Description	Length (mm)	Diameter (mm)	Weight (kg)						
SLB24	Round Lever Bar	610	19	1,8						
SLB35	Round Lever Bar	902	21	2,7						
SLB36	Round Lever Bar	914	25	3,6						
SLB42	Round Lever Bar	1067	29	5,4						
SLB56	Round (Tapered) Lever Bar	1492	29	7,3						
SLB60*	Chisel Point Lever Bar	1524	32	7,7						
SLB70	Chisel Point Lever Bar	1778	32	9,1						
IB1538	I - Beam Base	508		20						
CHA1538	Heavy Duty Chain	2134	16	13						

<sup>\*</sup> Note: The SLB60 lever bars can be interchangeable with the SLB70 model, resulting in lower handle efforts.





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