Tipping hoists

for rigid truck and trailer bodies

Lighter

...for even more payload per tip

Faster

...for greater productivity in operation

Stronger

...for minimised downtime

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Setting global industry standards since 1916, sold and serviced in Australia by BPW Transpec since 1955.

Edbro C Series technology has set new industry standards with unique features and unrivalled benefits.

Contents

C Series Benefits and Features 5
CS Top Lift Range (CS11-CS15) 6
CS Top Lift Range Model Specifications 7
CS Top Lift Range (CS17-CS19) 8
CS Top Lift Range Model Specifications 9
CS Outer Cover Range 10
CS Outer Cover Range Model Specifications 11
CX Ram/Tank Range 12
CX Ram/Tank Range Model Specifications 13
CS22 14
RK Double Acting Telescopic 15
Tipper Safety Products 16
Hydraulic Solutions 17
Air Operated Cab Controls 18
Bent Axis Pumps 19
Gear Pumps 20
CT Hydraulic Valves 21
Body Locks 22
Stroke Selection Chart 23

Top Lift

Outer Cover

Ram & Tank

Disclaimer:

The information and advice contained in this brochure including prices and specifications are current and correct as at 1 May 2015 but may be subject to change. BPW Transpec shall not be liable for any changes that occur after that date. It is your responsibility to contact your BPW Transpec branch or representative to ensure that all information and advice is up to date before placing an order.

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C-Series Technology

STATE OF THE ART TECHNOLOGY

From cylinder design, using the latest 3D modeling and finite element analysis techniques, to a unique laser welding process used during manufacture, Edbro's long standing reputation for innovation ensures the optimum solution to all your cylinder needs.

ENGINEERING EXPERTISE

More than 90 years of cylinder design experience combined with full application engineering support, ensuring the most appropriate product for each application and optimum safety in operation.

UNRIVALLED QUALITY

Extensive on-line quality control systems are employed throughout the manufacturing process and every Edbro cylinder is subjected to a final production test at 150% of maximum pressure.

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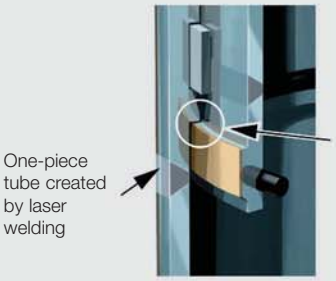
C-Series Benefits and Features

LIGHTER

Increased Payloads

The world's lightest tipping cylinders providing increased payload and so increased operating profits.



FASTER

Faster Tipping Speeds

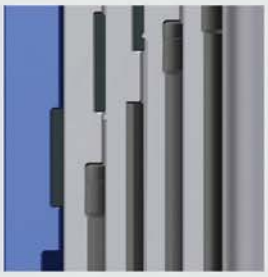
One-piece tube construction and increased tube contact faces allow faster tipping speeds.

STRONGER

Increased Lift & Side Load Capacity

Advanced design and production engineering techniques, including laser welding, provide increased lift capacity and side load resistance. Base tube head section increased by as much as 53%.

Double lip wiper seal ensures efficient lubrication of each tube and prevents contamination of the cylinder.
Unique 5 point sealing system reduces friction for years of smooth, trouble-free operation.



Wear rings made from non-metallic, acetal material provide low friction and long service life.
One-piece tubes with large stop contact faces provide optimum durability for long life and reduced maintenance.

1. Friction welded tube assembly increases strength and fatigue life.
2. Brass slider reduces risk of scoring and damage due to side load.
3. Unique clip and seal arrangement provides vlong life and ensures easy servicing.

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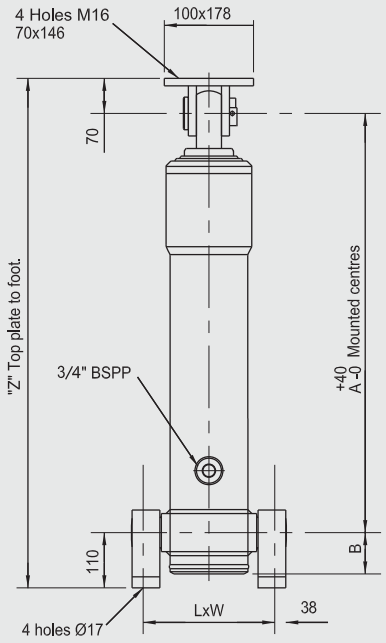
Top Lift Range

CS11 model range
16 tonne capacity

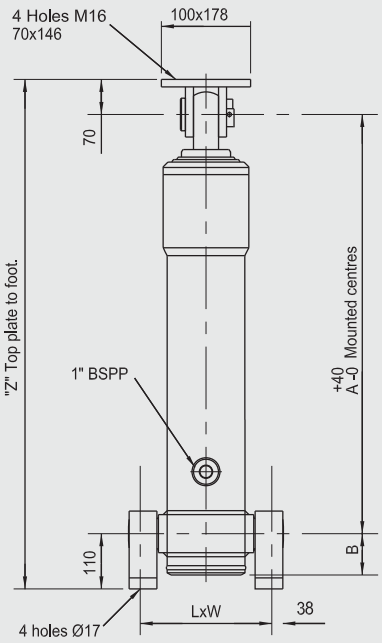
CS13 model range
24 tonne capacity

CS15 model range
32 tonne capacity

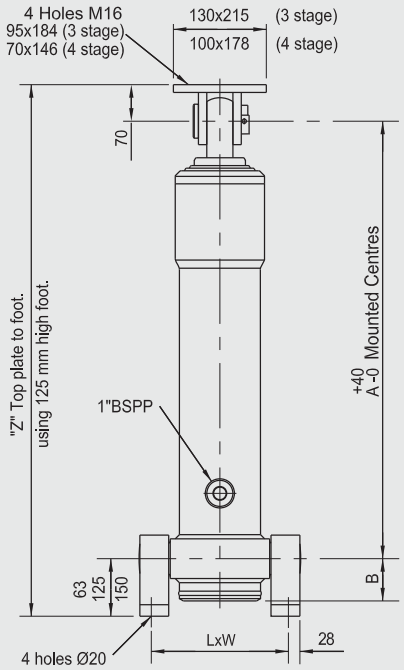
CS11 Model



CS13 Model



CS15 Model



Capacities quoted are nominal and include body and payload

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Top Lift Range

CS11 Model

CS11 MODEL	Stroke (mm)	Z (mm)	A (mm)	B (mm)	S_Vol* (ltr)	L x W	Weight (kg)	Pivot Length 50º (mm)
11.3.3194TLB	3,194	1,479	1,299	60	24	Standard Foot bracket 95 x 240 110mm High P/n: 13110B60	92	3,800
11.3.3494TLB	3,494	1,579	1,399	60	27		97	4,158

CS13 Model

CS13 MODEL	Stroke (mm)	Z (mm)	A (mm)	B (mm)	S_Vol* (ltr)	L x W	Weight (kg)	Pivot Length 50º (mm)
13.3.2719TLB	2,719	1,329	1,149	60	30	Standard Foot bracket 95 x 240 110mm High P/n: 13110B60	115	3,235
13.3.2869TLB	2,869	1,379	1,199	60	31		118	3,415
13.3.3169TLB	3,169	1,479	1,299	60	34		125	3,770
13.3.3469TLB	3,469	1,579	1,399	60	38		130	4,120
13.3.3469TL200	3,469	1,436	1,256	200	38		119	4,120
13.3.3469TL356	3,469	1,280	1,100	356	38		119	4,120
13.3.3919TLB	3,919	1,729	1,549	60	43		139	4,660
13.3.3919TL200	3,919	1,586	1,406	200	43		135	4,660
13.3.3919TL356	3,919	1,430	1,250	356	43		135	4,660
13.4.3441TLB	3,441	1,284	1,104	60	32		116	4,095
13.4.3841TLB	3,841	1,384	1,204	60	36		125	4,570
13.4.4041TLB	4,041	1,434	1,254	60	38		129	4,809

CS15 Model

CS15 MODEL	Stroke (mm)	Z (mm)	A (mm)	B (mm)	S_Vol* (ltr)	L x W	Weight (kg)	Pivot Length 50º (mm)
15.3.4489TLB	4,489	1,925*	1,730	80	66	Standard Foot bracket 165 x 305 *125mm High P/n: 15125B60 Optional Height 63mm and 150mm	195	5,340
15.3.4789TLB	4,789	2,025*	1,830	80	70		203	5,700
15.4.4206TLB	4,206	1,480*	1,285	80	53		173	5,005
15.4.4206TL150	4,206	1,406*	1,211	150	53		168	5,005
15.4.4606TLB	4,606	1,580*	1,385	80	59		181	5,480
15.4.5206TLB	5,206	1,730*	1,535	80	67		195	6,200
15.4.5606TLB	5,606	1,830*	1,635	80	72		204	6,670
15.4.6006TLB	6,006	1,930*	1,735	80	77		214	7,148

Valve pressure setting: Nominal 150 Bar (2,175psi). For maximum pressure ratings refer to individual cylinder drawings.
Add 25% to swept volume for approximate tank size
Weights quoted include nominated brackets
* 'Z' dimension includes nominated bracket height and an initial pull out of 10mm.

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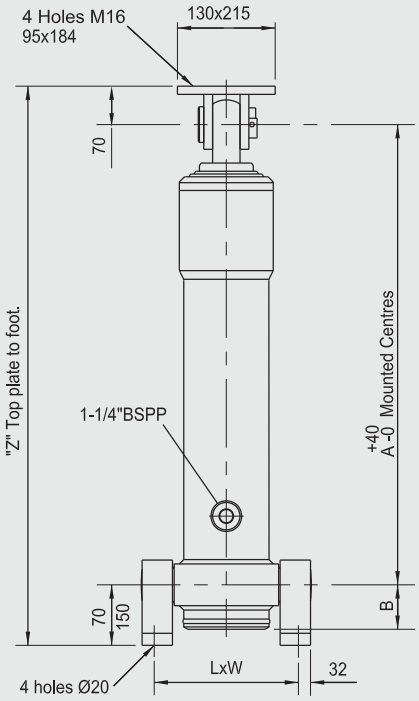
Top Lift Range

CS17 model range
40 tonne capacity

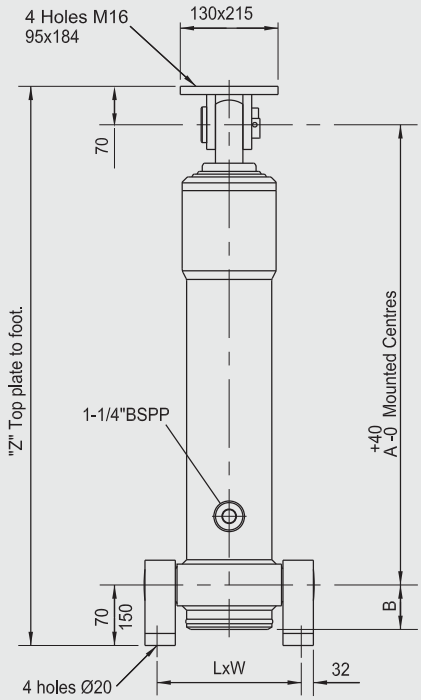
CS18 model range
50 tonne capacity

CS19 model range
60 tonne capacity

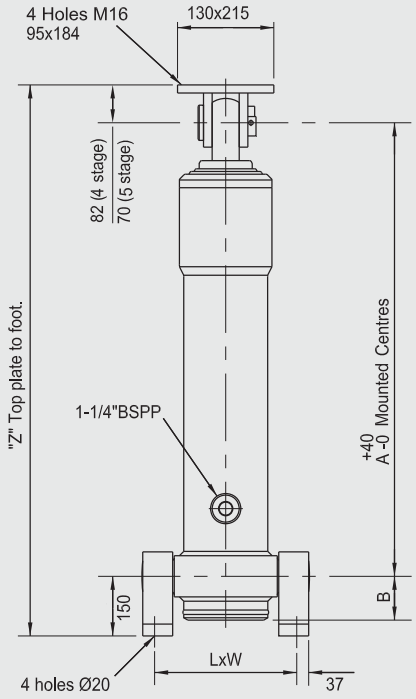
CS17 Model



CS18 Model



CS19 Model



Capacities quoted are nominal and include body and payload.

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Top Lift Range

CS17 Model

CS17 MODEL	Stroke (mm)	Z (mm)	A (mm)	B (mm)	S_Vol* (ltr)	L x W	Weight (kg)	Pivot Length 50º (mm)
17.4.5166TLB	5,166	1,754*	1,534	80	88	Standard Foot bracket 165 x 343 *150mm High P/n: 18150B60 Optional Height 70mm	237	6,147
17.4.5566TLB	5,566	1,854*	1,634	80	95		246	6,623
17.4.5966TLB	5,966	1,954*	1,734	80	102		262	7,100
17.4.6366TLB	6,366	2,054*	1,834	80	108		274	7,575
17.5.6483TLBDP	6,483	1,760*	1,540	80	98		256	7,715

CS18 Model

CS18 MODEL	Stroke (mm)	Z (mm)	A (mm)	B (mm)	S_Vol* (ltr)	L x W	Weight (kg)	Pivot Length 50º (mm)
18.4.5166TLB	5,166	1,755*	1,535	80	102	Standard Foot bracket 165 x 343 *150mm High P/n: 18150B60 Optional Height 70mm	268	6,147
18.4.5566TLB	5,566	1,855*	1,635	80	110		269	6,623
18.4.5966TLB	5,966	1,955*	1,735	80	118		295	7,100
18.4.6366TLB	6,366	2,055*	1,835	80	126		309	7,575
18.4.6966TLB	6,966	2,205*	1,985	80	138		328	8,289
18.5.7483TLB	7,483	1,962*	1,742	80	131		324	8,905
18.5.8233TLB	8,233	2,112*	1,892	80	144		347	9,797

CS19 Model

CS19 MODEL	Stroke (mm)	Z (mm)	A (mm)	B (mm)	S_Vol* (ltr)	L x W	Weight (kg)	Pivot Length 50º (mm)
19.4.5916TLB	5,916	1,971*	1,739	80	131	Standard Foot bracket 165 x 343 *150mm High P/n: 19150B70	315	7,040
19.4.6316TLB	6,316	2,071*	1,839	80	139		327	7,516
19.4.6916TLB	6,916	2,220*	1,988	80	152		353	8,230
19.5.5928TLB	5,928	1,664*	1,444	80	117		294	7,054
19.5.6428TLB	6,428	1,764*	1,544	80	127		309	7,650
19.5.6928TLB	6,928	1,864*	1,644	80	137		325	8,244
19.5.7428TLB	7,428	1,964*	1,744	80	147		340	8,839

Valve pressure setting: Nominal 150 Bar (2,175psi). For maximum pressure ratings refer to individual cylinder drawings.
Add 25% to swept volume for approximate tank size
Weights quoted include nominated brackets
* 'Z' dimension includes nominated bracket height and an initial pull out of 10mm.

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Outer Cover Range

CS11 model range
16 tonne capacity

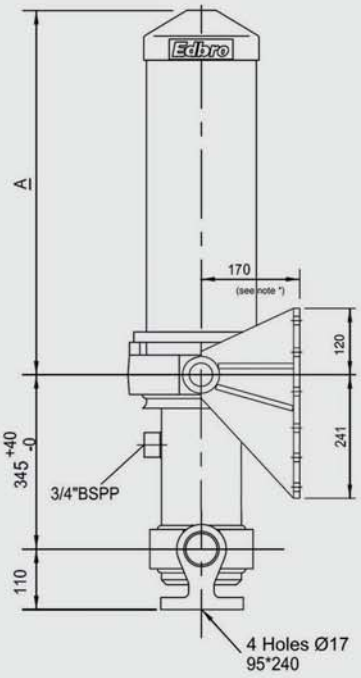
CS13 model range
24 tonne capacity

CS15 model range
32 tonne capacity

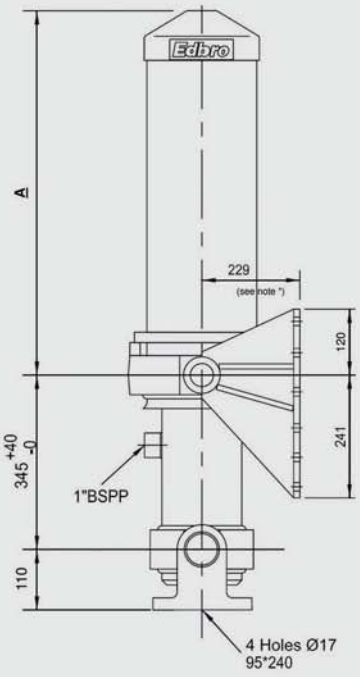
CS17 model range
40 tonne capacity

CS18 model range
45 tonne capacity

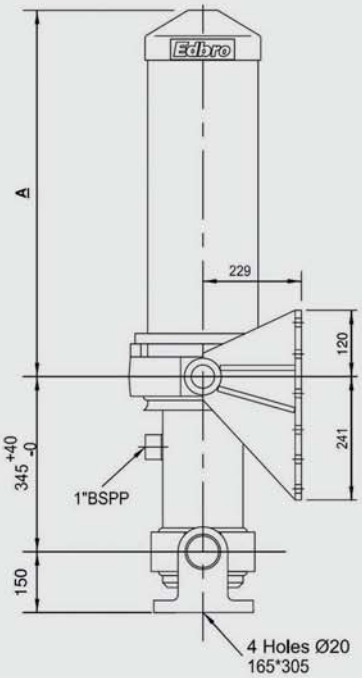
CS11 Model



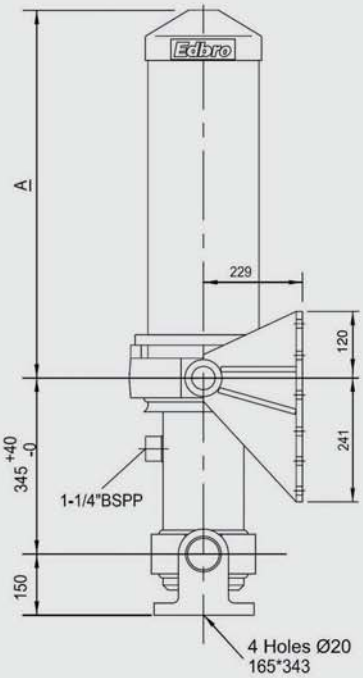
CS13 Model



CS15 Model



CS17 & CS18 Model



Capacities quoted are nominal and include body and payload

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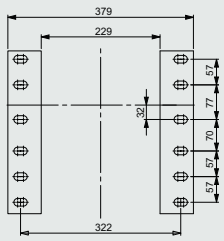
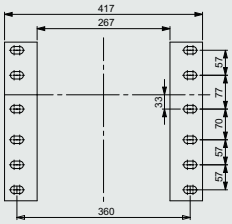
Outer Cover Range

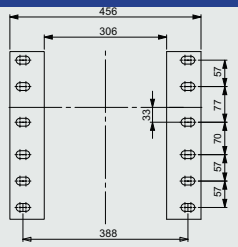
CS11 Model

CS11 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
11.3.3194CMB	3,194	986	25		140	3,800
11.3.3494CMB	3,494	1,086	27		146	4,158
11.3.3944CMB	3,944	1,236	31		156	4,693
11.4.4671CMB	4,671	1,091	31		161	5,558
11.4.5271CMB	5,271	1,241	34		166	6,272

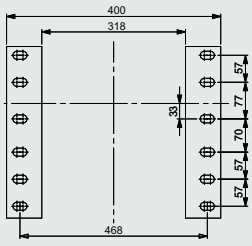
CS13 Model

CS13 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
13.3.3169CMB	3,169	987	34		186	3,770
13.3.3469CMB	3,469	1,087	38		194	4,120
13.3.3919CMB	3,919	1,237	43		207	4,660
13.4.4641CMB	4,641	1,092	44		201	5,522
13.4.5241CMB	5,241	1,242	49		209	6,235

CS15 Model

CS15 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
15.4.4006CMB	4,006	925	51		243	4,767
15.4.4606CMB	4,606	1,075	59		261	5,480
15.4.5206CMB	5,206	1,225	67		278	6,200
15.4.5606CMB	5,606	1,325	72		293	6,670
15.4.6006CMB	6,006	1,425	77		299	7,148

CS17 & CS18 Model

CS17 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
17.5.6233CMBDP	6,233	1,181	95		338	7,417
17.5.7233CMB	7,233	1,381	109		368	8,607
17.5.8233CMB	8,233	1,581	125		399	9,797
17.5.8983CMB	8,983	1,831	141		438	10,689
CS18 MODEL	**Stroke (mm)**	**A (mm)**	**S_Vol* (ltr)**		**Weight (kg)**	**Pivot Length 50° (mm)**
18.5.7233CMBDP	7,233	1,381	127		413	8,607

Valve pressure setting: Nominal 150 Bar (2,175psi). For maximum pressure ratings refer to individual cylinder drawings
Add 25% to swept volume for approximate tank size
Weights quoted include feet and body brackets
*Alternate brackets available

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Combined Ram/Tank Range

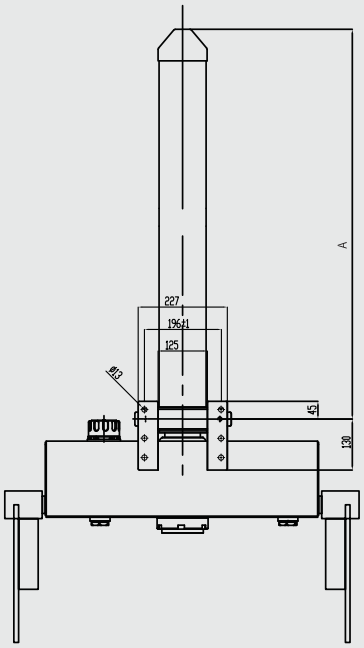
CX7 model range
7 tonne capacity

CX10 model range
10 tonne capacity

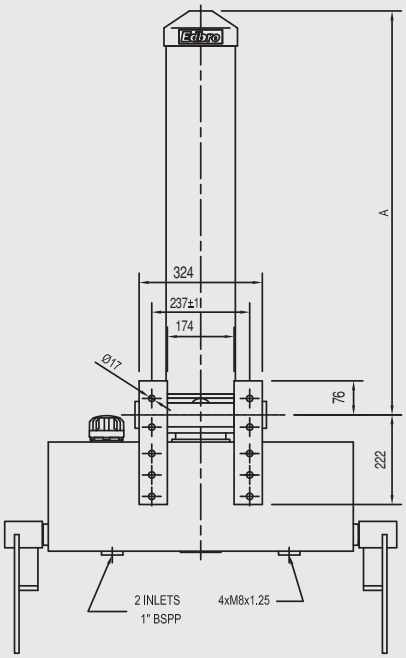
CX11 model range
16 tonne capacity

CX13 model range
24 tonne capacity

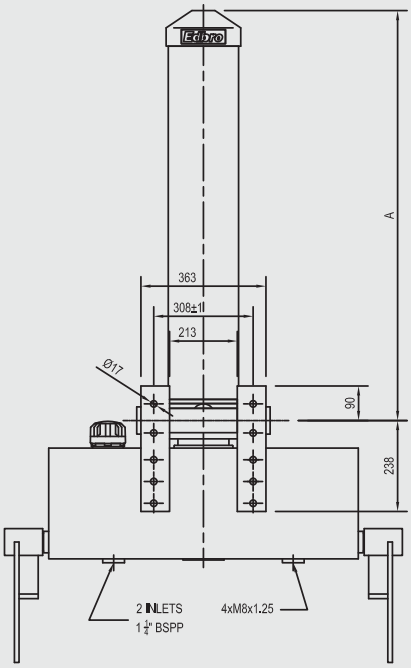
CX7 Model



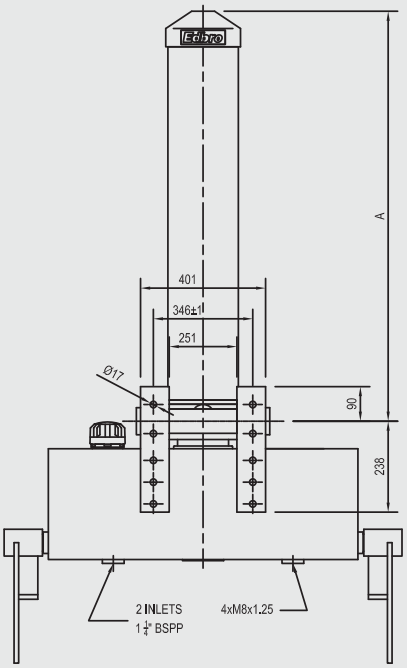
CX10 Model



CX11 Model



CX13 Model



Capacities quoted are nominal and include body and payload

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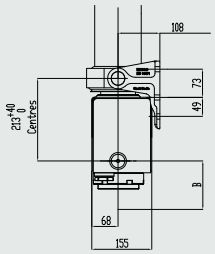
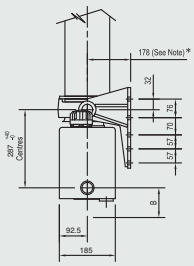
Combined Ram/Tank Range

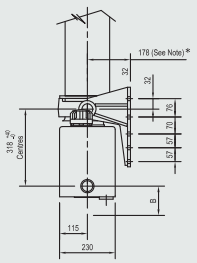
CX7 Model

CX7 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
7.3.2595RT	2,595	972	7		98	3,088
7.3.2895RT	2,895	1,072	9		102	4,158

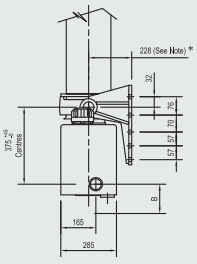
CX10 Model

CX10 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
10.3.3059RT	3,059	1,022	16		145	3,640
10.3.3359RT	3,359	1,122	18		152	3,997
10.3.3659RT	3,659	1,222	19		160	4,354

CX11 Model

CX11 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
11.3.3194RTB	3,194	1,041	25		195	3,800
11.3.3494RTB	3,494	1,141	27		202	4,158
11.3.3944RTB	3,944	1,291	31		212	4,693
11.4.4671RTB	4,671	1,136	31		225	5,558

CX13 Model

CX13 MODEL	Stroke (mm)	A (mm)	S_Vol* (ltr)	Pattern	Weight (kg)	Pivot Length 50° (mm)
13.4.4641RTB	4,641	1,093	44		300	5,522

Valve pressure setting: Nominal 150 Bar (2,175psi) For maximum pressure ratings refer to individual cylinder drawings
*Alternative body lifting brackets available
Weights quoted include feet and body brackets

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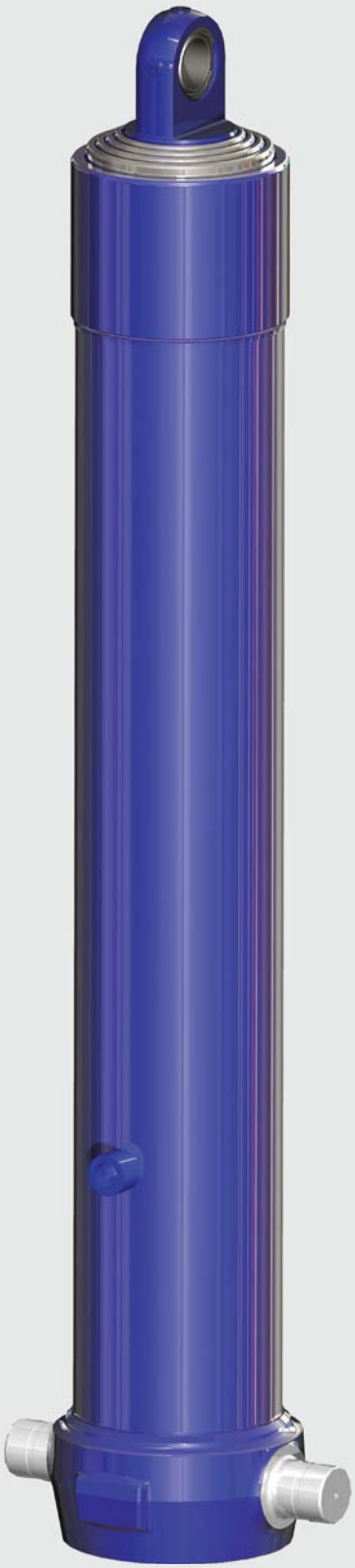
CS22

CS22 Technology increases Lifting Capacity to 90 tonnes

- 5 stage model
- 73 – 90t capacity
- Thick tube sections for maximum strength
- Large contact faces for speed and durability
- Unique CS series 5 point sealing system



CS22 - strength and reliability by design

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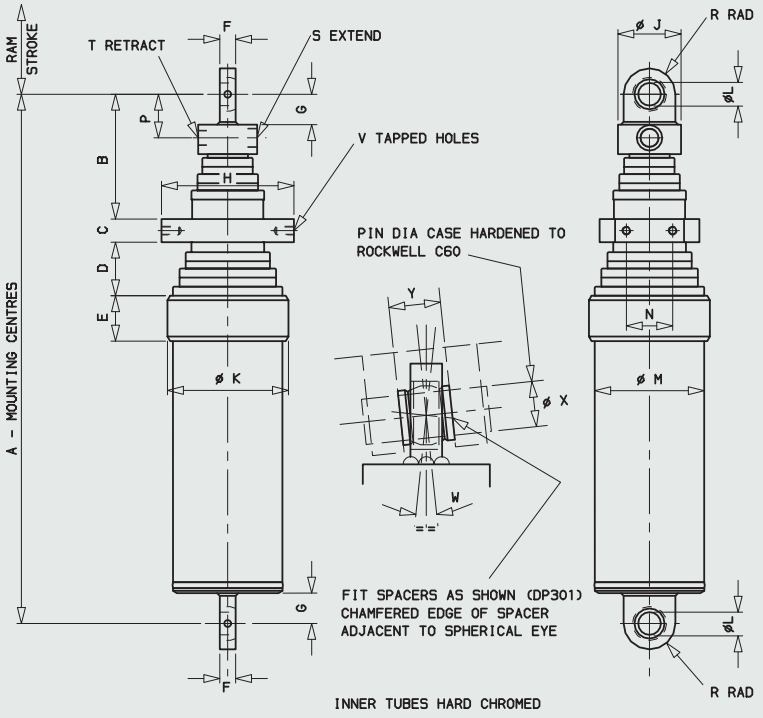
RK Double Acting Telescopic

Ejector Technology

The Edbro RK Series of multi-telescopic, double acting cylinders are used for a wide range of applications.
Typical applications are ejector trailers, roll back trailers and refuse collection vehicles.



Features

- High performance Edbro sealing system and double lip wiper seals minimize service requirements
- Zinc alloy ram nuts and inserts provide smooth operation and maximum durability
- Hard chromed tubes protect the cylinder even when exposed to the elements

Tube diameter (mm)			240	213	186	160	133	111	89	70	50
Piston diameter (mm)			254	222	197	171	146	121	98	76	57
Extended											
Thrust area (cm)			507	387	305	230	167	115	75	45	26
Thrust @ 175 bar (tonnes)					54	41	30	21	13	8	5
Thrust @ 150 bar			77	59	47	35	26	18	12	7	4
Retract											
Thrust area (cm)			54	31	33	29	28	18	13	7	6
Thrust @ 175 bar (tonnes)					6	5	5	3	2	1	1
Thrust @ 150 bar			8	5	5	4	4	3	2	1	1
Model code	**MWP (bar)**										
		2 stage									
		3 stage									
RK121	175	4 stage									
		2 stage									
		3 stage									
		4 stage									
RK146	175	5 stage									
		3 stage									
		4 stage									
		5 stage									
		6 stage									
RK197	150	7 stage									
		3 stage									
		4 stage									
		5 stage									
		6 stage									
		7 stage									
RK222	150	8 stage									

RK Series ejector cylinders are available with a range of mounting options for both the base and piston ends.
A wider range of strokes are available on request. Please consult BPW Transpec for individual specification details.

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Tipping Safety

High Voltage Alert

Clear warning to operator of potential danger in tipping.
Reduces the risk of power line contact, improving the safety of tipping.

Components

- Compact detection antenna
- In-cab warning unit with clear audio and visual warnings
- 12/24 volt unit easily fitted to a range of vehicles including tippers, cranes and construction equipment

Trailer Application

Rigid Application

Inclinometer

Continual monitoring of tipping angle during operation to reduce risk of accident

Components

- Easy to read in-cab display unit
- Pneumatic tipping cut off valve
- IP rated suzi connectors / suzi lead
- Protective ABS cover
- IP68 sensor complete with state of the art 3D sensor to indicate sideways chassis movement with accuracy of 0.1° to 360°

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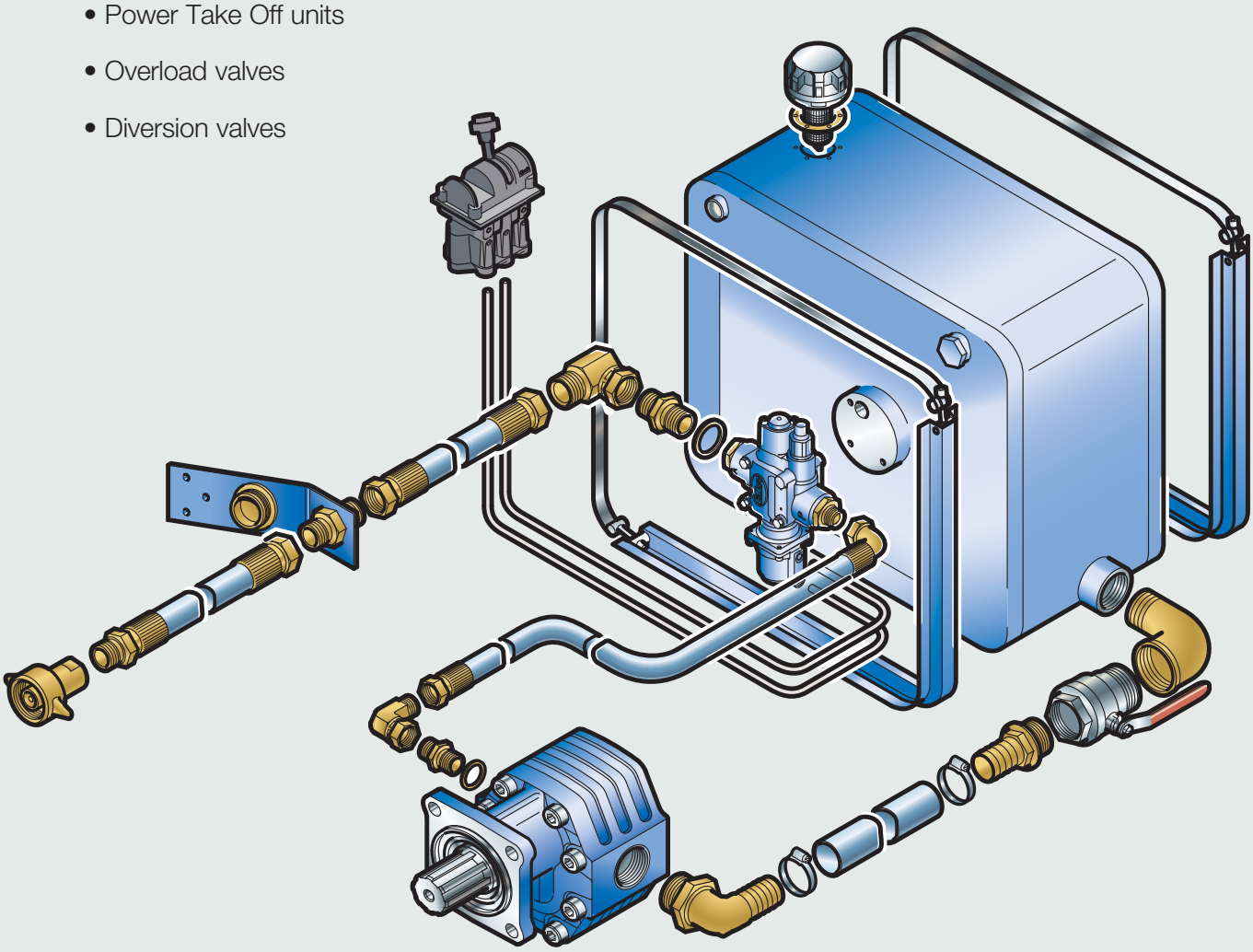
Hydraulic Solutions

Specially selected, top quality components combine to produce high performance hydraulic solutions

Range of products includes:

- Air operated cab controls
- Bent axis piston pumps
- Gear pumps
- Tipping control valves
- Power Take Off units
- Overload valves
- Diversion valves



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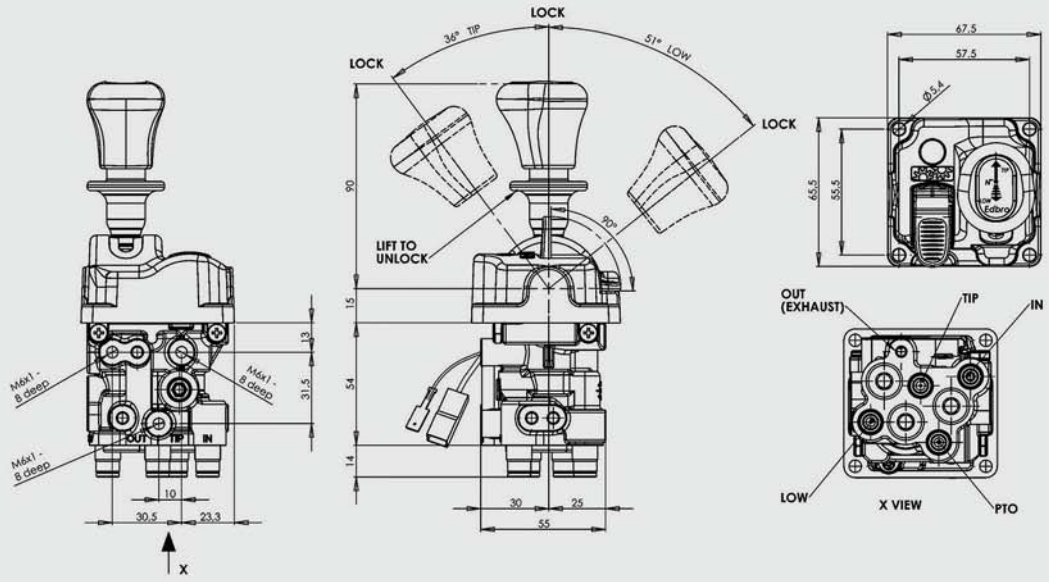
Air Operated Cab Controls

AV Series *Automatic PTO or MANUAL Disengagement*

PM605 *Dual Air control kit*

- Proportional lower control
- Compact and lightweight for easy installation
- Secure and easy to use push in fittings – metric and imperial
- Operates hoist valve and PTO

Specifications of hoist/PTO operating air controls			
Weight	450g	Air pipe material	Nylon
Operating temperature range	-45º +80º	Air pipe diameter	6mm or 1/4”
Air condition	Dry filtered air	Maximum working pressure	12 bar



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Bent Axis Pumps

For Tipper & Crane Applications

A range of bent axis piston pumps are available for close-coupled, independent installation or combined with both direct drive rear mount and side mounted power-take-offs.

Designed specifically for medium pressure tipper applications or high pressure crane applications.

These compact yet lightweight pump units feature high tensile steel components with Edbro style aluminum casings for ease of installation in the most difficult applications.

TIPPER PUMPS

	PKS9600/02 EBA06422	PKS9601/02 EBA09022	PKS9602/02 EBA13022
Displacement (cm^3/rev)	64	90	130
Max. Working Pressure (bar)	250	250	220
Max. Working Speed (RPM)	1,900	1,800	2,000
Weight (kg)	8.1	8.9	13.2

CRANE PUMPS

	PKS9616/04 EBA03440	PKS9605/05 EBA04740	PKS9617/06 EBA06440	PKS9619/01 EBA10840
Displacement (cm^3/rev)	34	47	64	108
Continuous (RPM)	2,300	1,900	1,900	1,500
Intermittent (RPM)	3,000	2,500	2,500	2,000
Max. Working Pressure (bar)	400	400	400	400
Weight (kg)	8.1	11.7	11.7	17

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Gear Pumps

For Tipper Applications

A range of gear pumps are available for close-coupled PTO mounting. Compact size for easy installation, pump kits are supplied complete with low and high pressure fittings.

- 3 hole pumps supplied with UNI mounting flange
- 4 hole pumps supplied with ISO mounting flange

	PKS9620/04 EGP0612403H	PKS9609/03 EGP0822103H	PKS9609/02 EGP082220	PKS9612/01 EBA100220	PKS9611/03 EBA125150
Displacement (cm³/rev)	60	82	82	100	125
Continuous (RPM)	1,800	1,500	1,500	1,500	1,500
Intermittent (RPM)	2,000	1,800	1,800	1,800	1,800
Max. Working Pressure (bar)	240	210	220	220	180
Weight (kg)	12	13	15	15	17
Mounting	3 Bolt	3 Bolt	4 Bolt	4 Bolt	4 Bolt

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CT Hydraulic Valve

For Tipper & Crane Applications

Combining engineering excellence and the latest technology, Edbro has developed the CT range of hydraulic control valves. All of the fully proportional valves in the range provide excellent tipping control and are built to last even in the harshest of working environments.

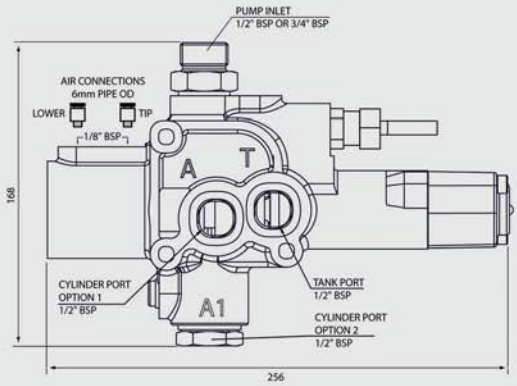
Features

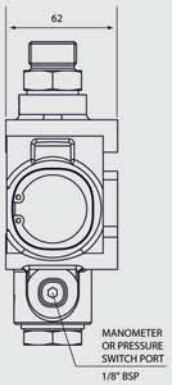
- Increased safety with excellent operational control
- Increased productivity with the fastest site turnaround times
- Completely interchangeable with previous Edbro models

CT040 / CT070

CT040 / CT070

Fully proportional valves with excellent lowering control





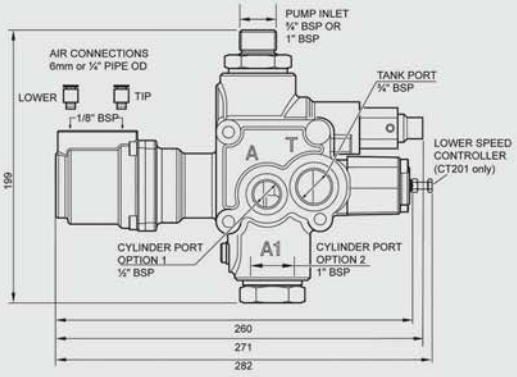
CT200 / CT201

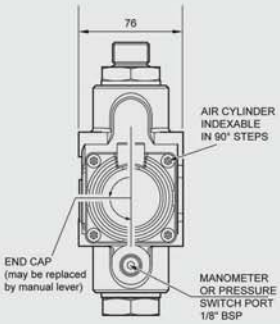
CTD250

Two-spool control valve for optimised applications

CT200 / CT201

Increased flow capacity, faster lowering and reduced tipping cycle times.





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Body Locks

Polyp body-locking device

Use 1 or 2 polyps per body. Mount 1 in the body centre, or 2 spaced equally from the body centre.

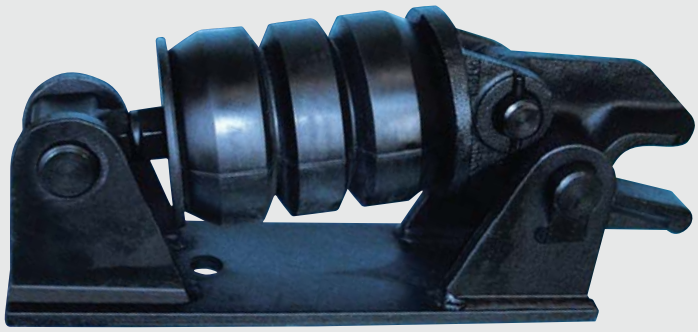
Part Number	Description
14.1046S	Body Lock Assembly with Steel Thorn
14.0146A	Body Lock Assembly with Aluminium Thorn
14.1048S	Steel Thorn only
14.1048A	Aluminium Thorn only
14.1049	Mounting Cup only
14.1047	Rubber Body only

Key features and benefits:

- Designed to stop an empty body from rattling in transit.
- Prevents damage to the chassis and the tipper for longer overall life.
- Steel and aluminium bracket options are available.

Body clamp

Part Number	Description
BCA01	Body Clamp
BCA02	Steel top bracket
BCA02A	Aluminium top bracket



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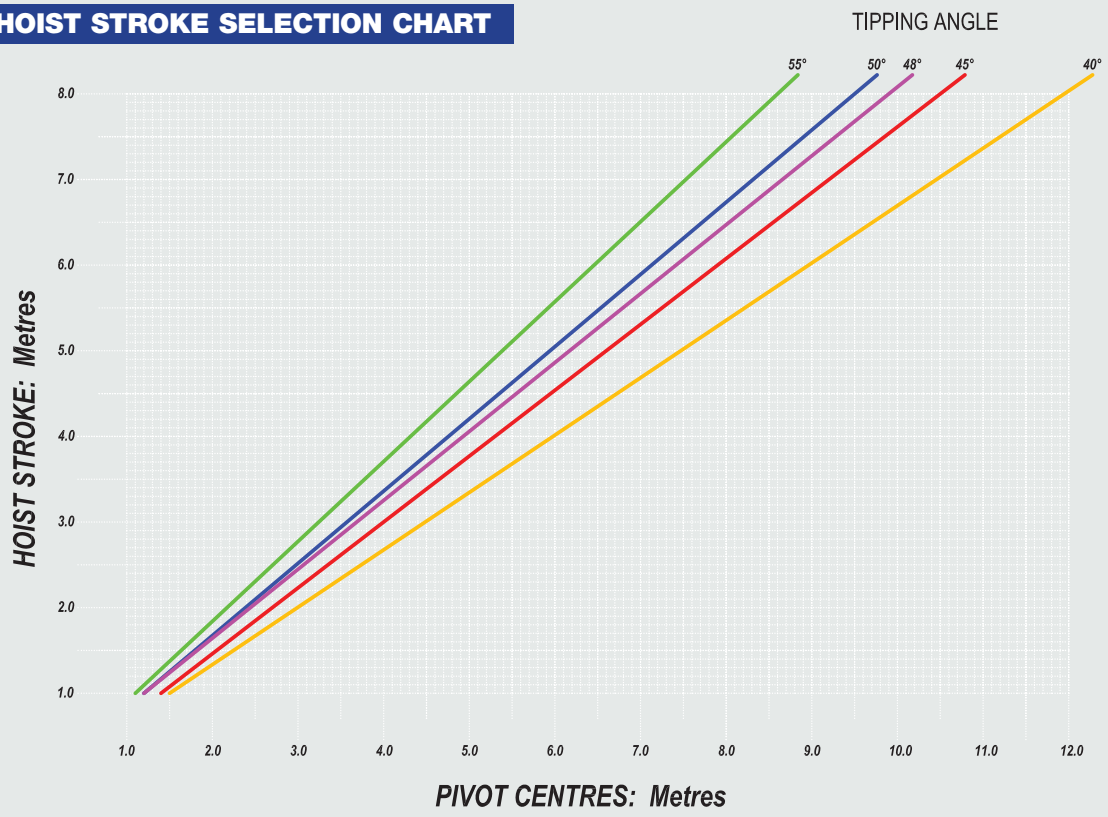
Stroke Selection Chart

HOIST STROKE SELECTION CHART



THE ABOVE CHART IS FOR GUIDANCE ONLY IN THE QUICK SELECTION OF HOIST STROKES. IT ASSUMES THAT THE HOIST IS VERTICAL WITH THE BODY AND HOIST PIVOTS BEING ON THE SAME PLANE. IF A MORE ACCURATE CALCULATION IS REQUIRED, PLEASE DO NOT HESITATE TO CONTACT BPW TRANSPEC.

Quick Calculation Tipper Guide

TO CALCULATE TIPPING ANGLE

Hoist Stroke
Pivot Centres x 59 = Tip Angle

Example:

$$\frac{3450}{4100} \times 59 = 49.6°$$

TO CALCULATE HOIST STROKE

Hoist Stroke = Pivot Centres x 0.76
GIVES A 45° TIP ANGLE
Hoist Stroke = Pivot Centre x 0.80
GIVES A 47.5° TIP ANGLE
Hoist Stroke = Pivot Centre x 0.84
GIVES A 50° TIP ANGLE

TO CALCULATE PIVOT CENTRES

Pivot Centres = Hoist Stroke x 1.32
FOR A 45° TIP ANGLE
Pivot Centres = Hoist Stroke x 1.25
FOR A 47.5° TIP ANGLE
Pivot Centres = Hoist Stroke x 1.19
FOR A 50° TIP ANGLE

HELPFUL CONVERSIONS

1PSI	=	0.006897 BAR
1 US Gallon	=	3.79 Litres
1 BAR	=	14.50PSI
1 BAR	=	.1Mpa
1 Horsepower	=	0.745700 Kilowatts

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TRANSPEC
ENGINEERED TO LAST

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