

CLYDESDALE

Powering the Future

Specialist Cable Installation Equipment & Accessories



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Winches & Jetting Equipment



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Underground Cable Winch 3200

A modern machine designed specifically for the installation of underground cables in the telecom and electricity industries. The 3200 has a capstan system that means the pulling force and speed are infinitely variable. The wire bond is integral to the machine and is fitted with an automatic rope-layering device to protect the bond and reduce the operating time.

Part No.	3200 000
Pulling Force:	2000kg
Speed:	0-40m/min
Engine:	4 Stroke Petrol 18hp
Weight (without rope):	650kg

Underground Cable Winch 3300

The Underground Cable Winch 3300 is a hydraulically operated 3-tonne winch with variable pulling speed and force. The winch is equipped with double bullwheels and an auto layering system on the collecting drum. By having double bullwheels, this winch differs from a drum winch as follows:

Always the same uniform pulling force and speed no matter how much cable/rope there is on the collecting drum.

Fixed input point, that is, no lateral wander of the cable/rope.

The wire bond is integral to the machine and is fitted with an automatic rope-layering device to protect the bond and reduce the operating time. The winch features infinite control of speed and pulling force, both forwards and backwards.

Part No.	3300 0000
Pulling Force:	Max 3000kg
Speed:	0-55m/min
Bond (rope):	Steel cable, 500m x 12mm
Operation:	Hydraulic
Engine:	Diesel engine 28hp
Chassis:	Push brake, spring suspended wheel axle, adjustable support legs and wheels
Dimensions:	L 3630mm, W 1850mm, H 1250mm
Weight:	1290kg

Electronic Data Recorder for underground winches

With this control unit the permitted or required pulling force can be reset so that the winch stops when reaching the preset level. The unit gives information of pulled length of cable and pulled force. All shown on a digital display via thermoprinted paper.

Part No.	CLY 761 0010
Dimensions:	L 400mm, W 300mm, H 130mm
Weight:	8kg



3200



3300



761 0010



760 200



206



210

Mini Winch

Mini Winch used for running pilot ropes. The winch fits into the duct opening.

Part No.	CLY 760 200
Pulling Force:	Approx. 200kg
Speed:	Max 40m/min
Engine:	Honda 4 Stroke dev. 2hp
Dimensions:	640 x 640 x 370mm
Weight:	21kg

Overhead Line Winch 206

The latest descendant in our range of pole mounted winches, the 206 was developed to comply with the new CE regulations. The drive unit has a built in dead man's handle, meaning instant stop should the handle be released. The capstan operation gives a constant output thus giving better control. The winch is supplied in kit format to aid transportation, the standard kit comprises – Engine & Gearbox, Pole Frame, V Belt Drive, Exhaust Pipe, Linespreader and storage boxes. Drums (split or rope) are supplied separately.

Part No.	206 000
Pulling Force:	400kg
Speed:	0-30m/min
Engine:	4 Stroke Petrol 5.5hp
Weight:	56kg (without rope)

Multi-Purpose Winch 210

This particular winch is designed for use on both Overhead Lines and Underground Cables. A very compact and lightweight trailer winch the 210 has a dynamometer which allows us to preset the pulling force at 850kg which can be adjusted upto 1,000kg for specific occasions. This makes the machine ideally suited to ABC work.

When used on underground cable work the additional boom is required to allow horizontal line pulls in ducts and open trenches. As standard the winch is supplied for ABC work including a rope drum & 400m of 8mm Paracore rope.

Part No.	210 000
Pulling Force:	Up to 1000kg
Speed:	0-15m/min
Engine:	4 Stroke Petrol 8hp
Weight:	260kg (without rope)

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Overhead Line Winch 900 / 902

Widely regarded as the industry standard, these 2 machines have proven reliability, due mainly to their excellent design & manufacture. Their in built robustness allows use in almost any environment. The machines can be used for either new construction or refurbishment works, with the use of rope drums or split drums respectively.

Both machines are fitted with a dead mans handle, which means if the control is released the load is maintained, and hydraulically controlled prop legs and Linespreader to make operation simple and quick.

Both machines are supplied with a shaft, but drums / accessories are delivered separately, for details please see the Winch Drums & Accessories table (below).

Part No.	900	902
Drum Pulling Force:	2,000kg	3,000kg
Speed:	0-100m/min	0-100m/min
Engine:	4 Stroke Petrol 11hp	4 Stroke Petrol 18hp
Weight:	400kg (without drums)	800kg (without drums)

Overhead Line Winch 2240

Our latest generation of machine is designed to fit between the 2 capacities of the 900 / 902, with the design very similar to that of its predecessors. The latest manufacturing processes have been incorporated to give even more reliability and ease of use.

Part No.	2240
Pulling Force:	2,500kg
Speed:	0-100m/min
Engine:	4 Stroke Petrol 18hp
Weight:	700kg (without rope)



900 / 902



2240

Winch Model Number	206	210	3200	900	902	2240
Split Drum (Single)	206 001	204 001	N/A	900 004	902 004	900 004
Split Drum (Set of 3)	N/A	N/A	N/A	900 116	900 116	900 116
Rope Drum (Single)	206 002	204 003	N/A	900 114	900 114	900 114
Rope Drum (Set of 3)	N/A	N/A	N/A	900 006	900 006	900 006
Shaft	N/A	N/A	N/A	900 113	900 005	2240 005
Weatherproof Cover	N/A	210 001	3200 001	900 001	902 001	2240 001
Drum Tensioning Device	N/A	N/A	N/A	640 403	640 403	640 403
Linespreader	206 002	210 118	N/A	N/A	N/A	N/A
Linespreader (Hydraulic)	N/A	N/A	N/A	900 100	902 015	2240 100



DF5

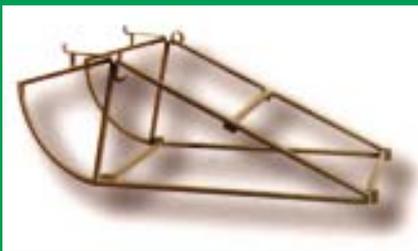
DF5 – Hydraulic Cable Pusher

Designed to be used in conjunction with a cable winch. The Cable Pusher exerts an assertive 'push' force of up to 500daN onto the cable; this force will not damage the cable but will decrease the necessary pull load exerted by the winch. This has the net result of protecting the cable and increasing efficiency. Ideally suited for the installation of cables into pre-laid ducts, the cable pusher can also be used for more conventional cable pulls into trenches. The latest development has seen the installation of multiple cables into multiple ducts in one 'pull'.

Able to assist cables with an outside diameter ranging from 20-160mm the cable pusher can also be used for the placing of sub ducts into mainline ducts.

DF5 Parts Description

Description	For Cables / Ducts	L x W x H	Weight
DF5 Cable Pusher	–	1,170 x 380 x 700mm	95kg
Petrol Engine Power Pack	–	1,100 x 430 x 600mm	82kg
Pressure Roller – Small	20-50mm O/D	–	5kg
Pressure Roller – Medium	28-90mm O/D	–	5kg
Pressure Roller – Large	45-130mm O/D	–	5kg
Pressure Roller – X Large	55-160mm O/D	–	5kg



640 115

Drum Cradle

A hot dipped galvanised frame, ideal for transporting drums around depot yards. The Clydesdale version can be taken apart for easy storage. Suitable for drums up to 2,000kg and 1400mm in diameter.

Part No.	Weight
640 115	25kg



640 1000

Roller Drumstands

Simplest type of Drumstand available the Roller Type Drumstand is ideal for use within the depot for the measuring of cable lengths etc. As this type of Drumstand has no brake mechanism care should be taken not to spin the drum at too high a speed. Rated to take a drum of almost any diameter or width the only restriction is its SWL of 1,000kg.

Part No.	L x W x H	Weight
640 1000	1,000 x 220 x 140mm	7kg (Ea.)

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Ratchet Operated Cable Drumstand

This unique 'patented' design of cable Drumstand avoids the problems associated with hydraulic ram type Drumstands with the use of a ratchet mechanism to lift the shaft vertically. Instead of pumping the hydraulic ram you simply turn the mechanical lever. This is a lot easier on the operatives back, as well as raising the drum in a smoother manner.

Part No.	640 150
Max Drum Dia. / Width / Weight	1800mm / 1200mm / 3,000kg
Length / Width / Weight (complete)	1220mm / 360mm / 113kg

Hydraulic Cable Drumstand

The more traditional type of cable Drumstand used extensively for many years now. Often seen as the lower cost alternative to the revolutionary Ratchet type. Pump the hydraulic rams on each side of the stand to raise the drum smoothly and easily.

Part No.	640 100	640 200	640 400
Max Drum Dia. / Weight	1800mm / 4000kg	3000mm / 1000kg	1600mm / 1500kg
Length / weight (complete)	1700mm / 157kg	2550mm / 515kg	1150mm / 91kg

Aluminium Drumstands

Made from Aluminium to reduce weight and with the wheels mounted on the base, these Drumstands are ideal for the stores environment, or where the drum is changed on a more regular basis. Design means that an enormous range of cable drum sizes can be managed, however, due to vertical positioning the stand can only be used on flat surfaces. Available in two sizes 4,000kg & 6,000kg

Part No.	640 4000AL	640 6000AL
Max Drum Dia. / Weight	2000mm / 4000kg	2800mm / 6000kg

Vertical Shaft Drumstand – 'RUBE'

Ideal for dispensing service cable either in stores or out in the field, the RUBE features many unique features often copied but never to the high quality that Clydesdale prides itself upon. Its roller race suspension ensures ease of movement. Easy to use because of its integral handle and pull out extender arms the RUBE is also self-balanced and galvanised for long life.

Part No.	Weight	Max. Drum Weight
640 1076	13.5kg	3200kg



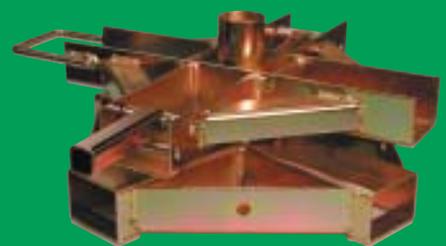
640 150



640 100



640 6000AL



640 1076

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Blowing Systems

Cable laying with MicroJet, CableJet or SuperJet consists of using a mechanical feeder to push a cable into a duct, through which flows a powerful air stream. This high-speed airflow exerts a drag on the entire surface of the cable, assisting its progress.

As the cable is not pulled, but pushed and carried along by the airflow it moves easily through the duct following any undulations or changes of direction. As no tractive force is exerted at the front of the cable, it is not subjected to the usual stresses encountered with conventional methods.

This jetting creates a method of efficient installation of long sections of fibre optic, co-axial, multi-pair or even power cables.

The compressor required for the system must have the following characteristics:

12 bar max pressure (minimum 8 bar) and 10m³/min flow rate for placing cables in ducts with an internal diameter of up to 42mm. To secure performance when ambient temperature exceeds 30°C, the use of a built in Aftercooler is recommended. A separate Aftercooler can be supplied, should the compressor not be equipped with an Aftercooler.

Any of the three machines can be used in a cascade method, and as there is no limit to the amount of machines that can be cascaded, almost limitless lengths can be installed using this method.

Please contact Clydesdale if you would like a demonstration.



ER 60



ER 60



740 2001

MicroJet

This machine is designed to install cables between 2.5mm and 6mm diameter into pre-installed microducts.

The MicroJet ER60 can be used in several methods of installation, as a cable thruster, puller, or a push/pull device by jetting in compressed air. These multiple modes of operation each have their own advantages. Jetting allows you to install microcables safely over tortuous routes. Push/pull mode installation inside buildings using an air bottle instead of a compressor, thus reducing noise, weight and inconvenience to third parties. Thrusting is safe and efficient for short cable runs up to 20m.

MicroJet ER60 has a very compact design allowing the operator to work in confined spaces and weighs only 5.5kg.

CableJet

Performance of the CableJet machines can be defined as follows:

Installation lengths of range from 1000m to 3000m and more, dependant on quality and characteristics of duct cable and ambient temperature.

Laying speed varies between 40m and 100m per minute depending on conditions. With a weight not exceeding 20kg in operational mode, the CableJet is a very compact cable laying machine. Its air-powered pushing mechanism consists of 8 notched drive wheels.

The CableJet comes supplied with cable inserts and seals covering 9-18mm diameter cables, but extra inserts covering 6-9mm diameters can be supplied. As standard it is supplied with 3 duct inserts of 32, 40, and 50mm O/D but other sizes or extra sizes may be specified when ordering, and these can range from 25 to 63mm.

An indicator showing installed length and laying speed is supplied with each CableJet, the distance meter assists the operator in locating the front end of the cable at any time.

Part No. CLY 740 2001

SuperJet

The SuperJet operates by two hydraulic motors that drive chains covered in synthetic material. Power is supplied by a hydraulic power pack driven by either an electric motor or more commonly a 4 stroke petrol engine.

It is designed for installing similar cables to the CableJet, but due to its greater pushing force it allows the efficient placement of larger cables such as armoured, fibre optic, co-axial multipair and even power cables.

In its standard form it is supplied with inserts ranging from 15-28mm, but many operators have successfully installed cables with a diameter of 11mm or below. Duct inserts as per CableJet are supplied as standard, as is the speed and distance counter.

Using special bespoke adaptor kits for the chains, the SuperJet can also be used to install bundles of microducts 7 or 10mm in diameter and various quantity configurations. The microducts are installed concurrently and are jetted-in in much the same way as a cable would be, and enjoying the same benefits of non-kink, stress free installation. After the installation of the microducts, the MicroJet could be used to install the individual cables.

Figaro

The Figaro (figure 'O') is a useful accessory to the CableJetting system, particularly when the drum length exceeds the installation capacity of one machine.

It achieves this by using several steps, which can entail coiling the uninstalled cable off the drum to reach the end. It places the cable safely in a basket at up to 100m/min, and can store up to 2km (subject to diameter) in limited space. Therefore cumbersome figure eight fleeting is avoided.

The Figaro weighs approx. 100kg with a diameter of 2.25m. It can be dismantled into four pieces for easy transportation, or can be trailer mounted if desired.

Figaro Family

Figarino – For small diameter Microcables.

Figaro – Suitable for most cables between 8 and 18mm diameter.

Figarone – For larger, heavier cables above 20mm in diameter.

Compressor

For efficient blowing results, the use of a reliable high performance compressor is imperative. Clydesdale recommends the CompAir 12 bar machine. Trailer mounted this precision built direct drive, oil injected, rotary screw type compressor has a large 73l air reservoir. For further details please request our datasheet.

Aftercooler AHP-400

The Aftercooler is an essential accessory to all compressors. The temperature of the air exiting the compressor without the aftercooler is 25-30°C above ambient temperature. Above 50°C the PE material used for the cable jacket and the duct begins to soften. This will significantly increase the friction between cable and duct, therefore causing a noticeable reduction of the system performance. The Aftercooler is placed between the compressor and the CableJet or SuperJet unit. The compressed air temperature rise, above ambient temperature, is limited to 10°C. The AHP-400 can accept an air flow of up to 14m³/min.

Part No.	CLY 740 AHP400
Weight:	2300kg
Length:	4235mm
Width:	1870mm
Height:	1635mm



Hydraulic SuperJet



Figaro



Figaro family



Compressor



Aftercooler AHP-400



Sonic Head



Cable End Cap



The 'Y' Connector



730 100

Sonic Head

The Sonic Head is an open shuttle, which allows the air stream to flow through its centre bore. Its use is recommended under the following circumstances:

- a) When the cable diameter is very small compared to the internal diameter of the duct
- b) When the cable lacks stiffness. The Sonic Head exerts a low pulling force at the front end of the cable (only a few kg), thus improving the system performance.

Part No.	Use	Weight
CLY 741 N271 000	For Ducts with an internal Dia. 29-32mm	0.21kg
CLY 741 N271 001	For Ducts with an internal Dia. 32-40mm	0.31kg
CLY 741 N271 002	For Ducts with an internal Dia. 40-51mm	0.61kg

Cable End Cap (Bullet)

Manufactured from aluminium, these cable bullets are designed to protect the end of the cable, and also to guide the cable along its desired route.

Part No.	Use
CLY 741 C70 QC011	To fit Cable Diameter 10-12mm
CLY 741 C70 QC013	To fit Cable Diameter 12-14mm
CLY 741 C70 QC015	To fit Cable Diameter 14-16mm
CLY 741 C70 QC017	To fit Cable Diameter 16-18mm
CLY 741 C70 QC019	To fit Cable Diameter 18-20mm

The 'Y' Connector

The 'Y' connector is a CableJet and SuperJet accessory designed for the placement of an additional cable in an already occupied duct (subject to available space). One branch of the Y-connector is attached to the CableJet or SuperJet and is used to place the additional cable. The other branch is used to seal off and hold the first cable. The Y-connector is supplied with two 50mm duct-sealing inserts.

Pilot Rope Blower (ATCC)

Designed to quickly and easily install steel or wire winch bond into pre-laid PVC duct, the ATCC is quickly revolutionising the cable pulling industry. The ATCC takes compressed air and uses it to effectively push the Duct Bird down the pre-laid duct. The Duct Bird having already been attached to the winch bond simply pulls it down the duct. In a recent demonstration it has been proven to pull 500m of 11mm wire winch bond in just 7 minutes. When the Duct Bird exits the duct upon completion of the 'pull' the effective vacuum is broken and the pull ceases automatically without any risk of injury to operatives or passers by. The ATCC does away with the three-stage rodding process which up until now has effectively been the only method available for the placement of the winch bond. The ATCC as such allows winching to commence almost immediately upon arrival on site, as opposed to the usual several hours wait for the rodding process to be completed.

Part No.	Duct Sizes	Kit Weight
CLY 730 100	4"-6"	31kg
CLY 730 101	3"-6"	34kg

Jetplanner Software

The Jetplanner Software allows accurate planning and design of cable routes at the click of a mouse. Variables such as cable weight, diameter and stiffness are considered along with duct diameter and topography. The Jetplanner then calculates maximum jetting distances for the particular circumstances, allowing for accurate design of joints, manhole positions and cable types and lengths. The Jetplanner Software is an invaluable tool for the serious installer.

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Sub-Duct Pusher

This hydraulically powered feeder has been specially developed for the placing of plastic sub-duct into an existing duct. Several feeder units can be connected electronically or hydraulically in series when the placing distance is long. Control of both force and speed is either mounted on the frame or can be supplied in a hand held unit (**Part No. 506 0110**) for greater flexibility.

Dimensions for all three units are the same at 550mm long x 220mm wide x 340mm high and a weight of 24kg. The feeder will accept duct diameters from 8-35mm.

Safety has also been considered during the design process with many features included, principally the dead man's handle, control unit with auto stop when the handle is released. The maximum pressure exerted onto the duct by the holding clamps is 230kg.

Part No.	Max. Pull Force	Max. Speed @	
		3hp	5hp
506 100	200kg	20m/min	29m/min
506 200	300kg	13m/min	18m/min
506 300	350kg	8m/min	11m/min

The feeder can also be supplemented with a capstan wheel that is designed for the pulling of a pilot rope, **Part No. 506 0010**

Hydraulic Power Unit for Sub-Duct Pusher

Principally designed to power the Fibre Optic cable feeder this power pack can also power various other equipment, both supplied and not supplied by Clydesdale. Manufactured from only the highest quality components to be robust, efficient and reliable the unit is relatively lightweight and can be used to run such things as auger drills and earth drivers to name but two.

The unit is both air cooled and sealed and develops either 3 or 5hp. Dimensions of the unit are as follows 600mm long x 350mm wide x 480mm high with a weight of 39kg for the 3hp unit and 42kg for the 5hp unit.

Part No.	Engine	Max. Pressure	Max. Flow	Tank Cap
506 1010	3hp	130 bar	7l/min	9l
506 1011	5hp	160 bar	11l/min	9l

Note: The hydraulic unit can also be supplied with an electric motor. Clydesdale can manufacture almost any capacity, flow or output that your requirements demand.



506 100



506 0110



506 1010



408 000



408 000



405 300

Vibrating Cable Plough

Designed to be used in all types of soil, the plough also filters away small stones and rocks ensuring that the furrowed trench is filled with fine earth. Despite its heavy duty trenching capacity the plough is surprisingly gentle to cable, ensuring that no damage is done to the cable.

The plough is fitted with a hydraulically operated support wheel to achieve the correct depth of trench. For lateral adjustment of the depth simply turn the lever. The machine is also fitted with vibration insulation dampers between plough and carrying vehicle.

Extensive experience has now been gained in using the vibrating cable plough on both JCB and Volvo diggers. Should you require mounting on an alternative machine please enquire for further details.

The speed of the machine is limited to a maximum of 40m/min on cables ranging from 8mm to 35mm in diameter.

When installing fibre optic cable, there is an accessory device that will hydraulically feed the cable into the plastic duct automatically in a single action. This process does however limit cable size to 16mm in diameter.

Part No.	Weight
408 000	980kg

Static Winch Plough

Suitable for laying cables in gardens and other sensitive areas. The principle here is that an external winch pulls the plough and the blade digs the trench, suitable winches are available from Clydesdale.

Depth of trench is adjustable between 300mm and 650mm. If it is required to trench duct then an accessory 'torpedo' is available.

As an alternative to aid transportation and storage, Clydesdale has chopped this plough in half, so that now all you need to do is bolt both halves back in place.

Part No.	Description	Length	Weight
405 300	Single Section	2.5m fixed	110kg
405 300 ENG	Two Section	1.3m x 2 sides	113kg
405 311	Torpedo	–	5kg

Link Lifters

Used as a pair in conjunction with a two-legged chain strop.

Part No.	Drum	Max Drum Weight	Weight (Pair)
640 930 3005	400 – 1600mm	6,000kg	3.3kg
640 930 3006	1800 – 3000mm	6,000kg	6.5kg

Bucket Mounted Drum Lifter

Ideal for use in depots or new locations where bucket trucks or JCBs are readily available. Bucket sizes determine that the maximum width of drum that can be transported is 1210mm. Kit consists of bucket attachment, chain straps and bearing mounted drum shaft. Not suitable for road transportation under RTA regulations.

Part No.	Drum	Max. Drum Weight
640 930 3019	Up to 2400m	3000kg

Rotating Drum Lifter

Simply insert the unit into the centre hole of the drum and the retractable arms will grip the inner skirt of the drum. The inner components are mounted on bearings to allow smooth rotation of the drum.

Part No.	Max. Pull Force	Max. Centre Hole	Weight
640 930 2930	1200kg	75mm	3.5kg
640 930 2945	2200kg	110mm	8kg
640 930 2950	4000kg	130mm	20kg

Rotating Drum Lifter Feeder Arm

Designed to be used in conjunction with any of the above-mentioned Rotating Drum Lifters although sold separately, the arm rotates with the drum allowing cable or conductor to be fed off the drum. The arm also acts as a brake on the drum, although obviously tensioning is not possible. Kit comprises arm and roller pieces.

Part No. 640 930 2970

Lifting Shoe

Simpler version of the rotating drum lifter, works on the same principle except is not bearing mounted.

Part No.	Max. Drum Weight	Max. Drum	Weight
640 930 2955	1300kg	400 – 1600mm	3.5kg
640 930 2960	2800kg	1100 – 3000mm	6.5kg



640 930 3005



640 930 3019



640 930 2945



640 930 2970



640 930 2955



Cable Drum Trailers

All Cable Drum Trailers manufactured and supplied by Clydesdale are designed and tested to comply with the latest standards. All our Cable Drum Trailers are CE marked and come complete with a full lighting pack to allow them to be used safely and legally on highways within the EC (should you wish use a Clydesdale Cable Drum Trailer outside of the EC then please consult your local authorities for any specific requirement for your location).

All trailers manufactured and supplied by Clydesdale are steel welded and hot dipped galvanised to ensure the longest possible useful life. All of our trailers are also equipped with full road suspension with overrun (auto reverse), parking brakes and comply in full with current RTA regulations.

All trailers are supplied with a 50mm ball coupling as standard, however, should you prefer we offer either a 40mm or 76mm NATO eye, as alternatives.

350kg Service Cable Drum Trailer (Baby Trailer)

Used to transport and pay out service cable, the baby trailer is designed to be towed behind a small van or car (Ford Escort or equivalent). The drum is raised / lowered by using the hand winch which is geared so as to reduce operator fatigue. As standard the trailer is also supplied with drum cones to secure the drum onto the drumshaft so as to ensure safe transportation of the drums.

Part No.	Length	Width	Height	Unladen		Max. Drum	
				Weight	Dia.	Width	Weight
CLY 760 260	2.2m	1.55m	0.5m	165kg	0.6m	0.5m	350kg

1,300kg Cable Drum Trailer

Ideal for use on either overhead line or underground cable installations, the 1300kg Clydesdale trailer is simple to use and manoeuvre. The drum is raised and lowered by using the hand winch which is geared so as to reduce operator fatigue. The rear prop legs are used to ensure total stability when the trailer is in use.

As standard the trailer comes complete with a friction brake band which is used to control the speed of the drum during pay out. This allows a reasonable level of tension to be maintained on the conductor, when the trailer is used on overhead line installation.

Disc brakes can be fitted as an option for even greater control of the tension / sagging of conductors.

Part No.	Length	Width	Height	Unladen		Max. Drum	
				Weight	Dia.	Width	Weight
000 1061	2.5m	1.9m	1.8m	400kg	1.8m	1.1m	1,300kg

1,300kg Cable Drum Trailer – Road / Rail Version

Based on the Clydesdale 1300kg Cable Drum Trailer, this trailer comes with the added feature of permanently secured rail wheels. Standard UK rail gauge wheels are used. Simply tow the trailer onto the track by means of a conventional road going vehicle and then lower the rail wheel on to the track. The road wheels are then locked in position, which has the secondary effect of raising the road wheels off of the ground.

Part No.	Length	Width	Height	Unladen		Max. Drum	
				Weight	Dia.	Width	Weight
000 1061 R	2.6m	1.9m	1.8m	430kg	1.8m	1.1m	1,300kg

2,500kg Cable Drum Trailer

Specifically designed to handle the larger drums used on underground cable installations, the drum is raised by means of a single pump handle. This pump activates both the left and right side rams (simply adjust each side to give extra flow as required) so as to provide a smooth and level raising of the drum.

The drum is then locked in the raised position by the locking of the rams. When you need to lower the drum simply release the hydraulics and the drum lowers in a controlled manner.

Each trailer is supplied complete with a handy toolbox for the storage of all necessary pins etc.

As an optional extra a drum brake can be fitted to the trailer. This comprises a disc brake assembly which can be either fitted as a quick release device or a permanent feature.

Part No.	Length	Width	Height	Unladen		Max. Drum		
				Weight	Dia.	Width	Weight	
CLY 760 2500	3.3m	2.3m	1.8m	870kg	2.5m	1.4m	2,500kg	



000 1071 3

Large 3 Drum Cable Drum Trailer

Probably the most innovative development to have occurred in the field of drum trailers for years, the Clydesdale three drum trailer has revolutionised the world of three phase conductor stringing. There is no need to have 3 separate drumstands on site, all three drums can be handled by one easy to use, easy to tow Cable Drum Trailer.

In the past it has been necessary to have several vehicles simply to enable all of the equipment required to be transported to the site. Now all that is required is one vehicle to tow the three phase conductor stringing winch and one to tow the 3 Drum Cable Drum Trailer. The trailer can be loaded, with all 3 drums, in the depot. The loading of the 3 drums should take no more than 10 minutes, and then straight out to site for almost immediate stringing to commence.

The trailer is a one man operation, with a centrally located operation station where control of the individually disc braked drums can be maintained. The latest generation even comes complete with a small engine to power the raising / lowering of the A frame to assist set up and reduce operator effort.

If you have not seen the either of 3 Drum Cable Drum Trailers in action, simply call us so that we may arrange an on site demonstration at your convenience.

Please note the 3 Drum Cable Drum Trailer is a patented product under Patent No. GB 2277316A

Part No.	Length	Width	Height	Unladen		Max. Drum x3		
				Weight	Dia.	Width	Weight	
000 1071 3	4m	2.15m	2.3m	900kg	1.2m	1.0m	670kg	
000 1061 3	3.7m	1.9m	2.3m	600kg	1.0m	0.8m	400kg	



000 1061 3



Wire Winch Ropes

It has been proven by a wide variety of investigations that when pulling cable through a plastic duct that the use of wire pulling bonds significantly reduces the damage to the duct, this is predominantly due to the heat dissipation of the wire rope as opposed to a synthetic rope. The variety and choice of wire rope bonds currently available are far too extensive to list here, if you have a requirement that is not listed please contact us for further assistance. Wire ropes are available with a fibre core or independent wire rope core (IWRC).

CLYDESDALE

Powering the Future

Pulling & Lifting Equipment



CLYDESDALE

Powering the Future

Glass-fibre Duct Rod

Unlike other rodding systems available, the Clydesdale rodding system has a purpose designed to meet the requirements of several specialist industries.

The coating of weather and cold resistant HD Polyethylene gives the rod extreme durability and a very low co-efficient of friction.

The rod itself is available in 4 diameters 3, 6, 9 & 11mm and almost any length. Thus allowing you to pick the perfect size for any particular job. As well as various sizes of rod there are also 4 sizes of frame to choose from:

- 804** 1200mm dia for use with 11mm rod
- 805** 800mm dia for use with 9mm rod
- 806** 550mm dia for use with 6mm rod
- 803** Plastic frame for use with 3mm rod in place of 'fishtape' type device

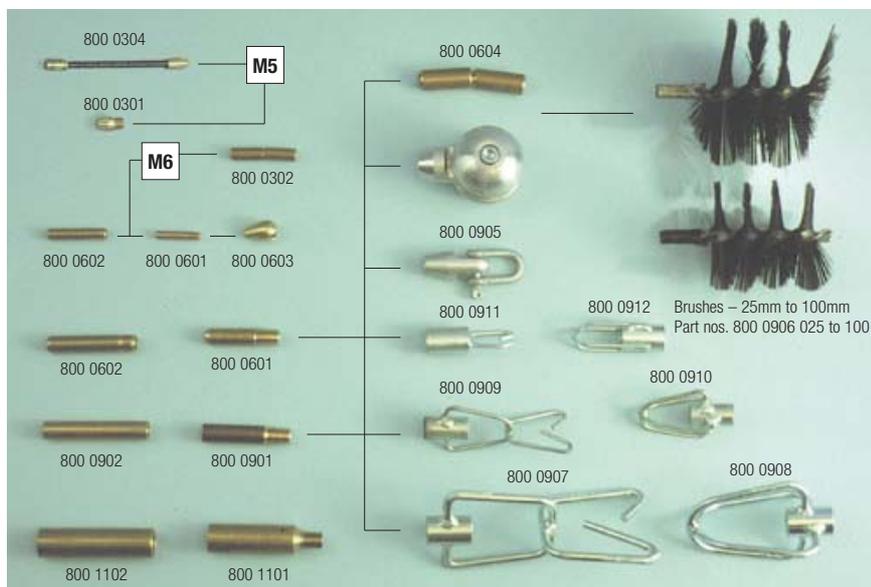
A breakdown of the most common part numbers is laid out below, however almost any variation is available on request.

Ø	30m	40m	50m	60m	80m	100m	120m	150m	200m	250m
3 - Loose	803 030	803 040	803 050	-	-	-	-	-	-	-
6 - Loose	-	806 040	806 050	806 060	806 080	806 100	-	-	-	-
6 - On Frame	-	806 040 0500	806 050 0500	806 060 0500	806 080 0500	806 100 0500	-	-	-	-
9 - Loose	-	-	-	-	809 100	809 100	809 120	809 150	-	-
9 - On Frame	-	-	-	-	809 100 0800	809 100 0800	809 120 0800	809 150 0800	-	-
11 - Loose	-	-	-	-	-	811 100	811 120	811 150	811 200	811 250
11 - On Frame	-	-	-	-	-	811 100 1200	811 120 1200	811 150 1200	811 200 1200	811 250 1200



Minirod

Stored in the plastic 'fishtape' type carry case, this size of rod (3mm) does not have the copper core, but is no less an invaluable aid when installing electrical wires in buildings, either domestic or industrial.



Minirod





CLY 680 200



CLY 680 250



CLY 680 300



CLY 680 160



CLY 680 170

Insulator Mounted Straight Line Roller

Specifically designed for reconductoring operations, this 'patented' roller allows the conductor to be brought in at final installation height. All 'sagging' adjustments etc. can therefore be carried out whilst the conductor is still on the rollers. At the same time the conductor is always fully boxed in, so it cannot escape when being pulled or transferred.

The hardened alloy roller runs freely on ball race suspension minimising the tractive effort. The insulator clamps are specially treated with rubber so as not to damage the insulators. Roller fits all types of ceramic insulators. For 33kV installation or high uplift applications a special conductor lifter is also available for use with this roller

Part No.	Description	Weight	Patent Ref.
CLY 680 200	Insulator Mounted Straight Line Roller	3kg	GB 2169151
CLY 680 250	Phase Lift for CLY 680 200	1kg	GB 2169151

Insulator Mounted Angle Roller

This unique 'patented' roller has 2 adjustable angle rollers and 2 support rollers that allow the conductor to be brought in at final installation height and adjusted to any required angle alongside the insulator. At all times the conductor is fully boxed in and cannot escape. When adjustments are complete the locking pins are opened and the roller removed, leaving the conductor in its correct position on the insulator.

Ball race suspension assists smooth running of the conductor. The insulator clamps are specially treated with rubber so as not to damage the insulators. Roller fits all types of ceramic insulators.

Part No.	Description	Weight	Patent Ref.
CLY 680 300	Insulator Mounted Angle Roller	6kg	GB 2218858

Cross Arm Mounted Roller

This design fits all ESI cross arms. The dual pin holding facility allows the top roller to be opened from either side, for convenient, insertion of the conductor. The uplift roller is of hardwearing abrasion resistant nylon, while the main roller is of hardened alloy with free running ball race suspension to minimise tractive effort. The high quality steel frame is fully galvanised after manufacture.

The straight line roller is a solid fixture, whilst the angle version rotates through 180° with 5 fixing points – +90°, -90°, +45°, -45° and 0°, thereby allowing all types of angle installation to be carried out.

Part No.	Weight	Safe Working Load
CLY 680 160	Cross Arm Mounted Roller – Straight	3.2kg
CLY 680 170	Cross Arm Mounted Roller – Angle	9kg

Aerial Bundle Cable (ABC) Rollers

A range specially designed and engineered in the UK to meet all requirements of ABC construction. Webbing straps are fitted, for details please contact Clydesdale. All rollers are issued with a unique serial number, test certificates bearing serial number, safe working load and proof load are issued as a matter of course. All parts are galvanised for increased life expectancy. Cast alloy rollers are used which are mounted with ball race suspension.

Straight Line Hanging Roller

Probably the most versatile and commonly used roller mounted on any standard hook design. This roller is ideal for straight line pulls but will accommodate slight angles.

Part No.	Weight	Safe Working Load
CLY 680 130	2.5kg	300kg

Slight Angle Roller

Designed to swing out from the pole to allow use primarily on straight line pulls but also on slight angles. 50mm webbing strap secures roller to pole.

Part No.	Weight	Safe Working Load
CLY 680 110	7.5kg	500kg

Heavy Angle Roller

Designed to perform very similarly to the CLY 680 110 in that it swings out from the pole, except that the second support roller gives greater strength and flexibility.

Part No.	Weight	Safe Working Load
CLY 680 120	10kg	750kg

Positioning Roller

Designed to swing into and past the pole so that the cable can be fed straight into a suspension clamp, the most adaptable roller, as it can be used to also perform all of the duties of the other three variations

Part No.	Weight	Safe Working Load
CLY 680 180	13.5kg	850kg

CLY 680 130



CLY 680 110



CLY 680 120





CLY 680 025/2

Conductor Running Out Block

Single pulley block ideal for the running out of conductors (ABC included) and the tensioning of conductors. The moulded aluminium alloy sheave, with interchangeable nylon protection sleeves, is mounted on ball race suspension for smooth running. Swivel hook attachment is standard.

Part No.	Dimensions			SWL	Weight
	Outside	Inside	Width of Sheave		
CLY 681 025/1	300mm	230mm	38mm	1200kg	6.5kg
CLY 681 025/2	440mm	350mm	48mm	1500kg	9.7kg
CLY 681 025/3	770mm	650mm	68mm	2000kg	28.5kg
CLY 681 025/4	920mm	800mm	68mm	2000kg	34.0kg

Heavy Duty Snatch Block

Made from high quality steel these blocks open from the side allowing easy access for the rope. Simple locking / unlocking of this side movement allows quick erection. Swivel hook attachment is standard.

Nylon Sheave

Part No.	Dimensions			SWL	Weight
	Maximum Rope Dia.	Total Length	Sheave Dia.		
CLY 681 020/0.5N	18mm	305mm	160mm	500kg	1.6kg
CLY 681 020/1.0N	18mm	315mm	170mm	1000kg	1.7kg
CLY 681 020/1.5N	20mm	330mm	180mm	1500kg	2.0kg

Steel Sheave

Part No.	Dimensions			SWL	Weight
	Maximum Rope Dia.	Total Length	Sheave Dia.		
CLY 681 020/1.5S	20mm	340mm	180mm	1500kg	3.4kg
CLY 681 020/2S	25mm	410mm	220mm	2000kg	6.6kg
CLY 681 020/3S	25mm	440mm	240mm	3000kg	7.2kg
CLY 681 020/5S	30mm	510mm	290mm	5000kg	13.0kg



CLY 680 020/1.0N

Underground Cable Roller – Straight

Made from galvanised steel frame. Main roller is mounted on shielded and waterproof ball bearings.

Part No.	Weight
CLY 682 500	5kg

Underground Cable Roller – Angle

Made from galvanised steel frame. Main roller is mounted on shielded and waterproof ball bearings.

Part No.	Weight
CLY 682 503	15kg

Cable Duct Entry Chutes

Clydesdale offers 3 variations for protecting the ductmouth straight, curved and with rollers. All made from galvanised steel with the roller version mounted on shielded and waterproof ball bearings

Part No.	Type	Diameter	Weight
CLY 682 507/1	Straight	80mm	1.7kg
CLY 682 507/2	Straight	100mm	2.0kg
CLY 682 507/3	Straight	120mm	2.5kg
CLY 682 507/4	Straight	150mm	2.8kg
CLY 682 507C/1	Curved	80mm	1.7kg
CLY 682 507C/2	Curved	100mm	2.0kg
CLY 682 507C/3	Curved	120mm	2.5kg
CLY 682 507C/4	Curved	150mm	2.8kg
CLY 682 508/1	With Rollers	60mm	4.0kg
CLY 682 508/2	With Rollers	80mm	4.5kg
CLY 682 508/3	With Rollers	100mm	5.0kg
CLY 682 508/4	With Rollers	120mm	6.0kg
CLY 682 508/5	With Rollers	140mm	7.0kg
CLY 682 508/6	With Rollers	160mm	7.5kg



CLY 682 500



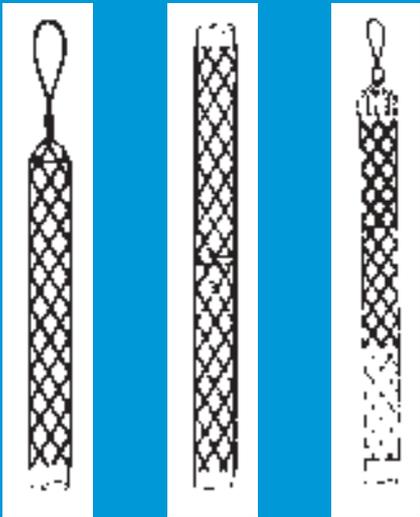
CLY 682 503



CLY 682 507/2



Cable Stockings



Cable Stockings & Grips

Clydesdale can supply approximately 1,000 variants of the cable stocking. Indicated below are details of our common stockings. Contained within this catalogue are details on just ten varieties of stockings, Clydesdale has a separate leaflet specifically for cable stockings and swivels, so if the type you require is not shown here please contact Clydesdale for the Stockings and Swivels leaflet. Other varieties of stocking available include the following;

- Double Eye
- Single Eye Fleeting
- Lace Up (split)
- Triple Weave
- Double Eye Lace Up
- Sleeve (Open Ended)
- Closed Loop
- Threaded Anchor
- Light Duty
- Joining Grips
- Made to Order
- Non Conductive

Single Eye Stocking, Double Weave, General Duty

Cable Ø	Part No. (prefix by CLY 000)		Min. Break Load (kg)	Weight (kg)	
	L = 600 (a)	L = 900 (b)		(a)	(b)
6 - 10	106/06	109/06	1504	0.12	0.32
10 - 20	106/10	109/10	1860	0.17	0.38
20 - 30	106/20	109/20	2256	0.20	0.47
30 - 40	106/30	109/30	3696	0.29	0.52
40 - 50	106/40	109/40	5490	0.63	0.95
50 - 65	106/50	109/50	5490	0.65	0.94
65 - 80	106/65	109/65	7320	0.83	1.20
80 - 95	106/80	109/80	7320	0.91	1.31
95 - 110	106/95	109/95	10613	1.30	2.10
110 - 130	106/110	109/110	10613	1.30	2.10
130 - 150	106/130	109/130	10613	1.40	2.50
150 - 180	106/150	109/150	12736	1.45	2.50

Non Conductive Cable Stockings

Cable Ø	SINGLE WEAVE			DOUBLE WEAVE			Weight (kg)	ABC Size Applicable
	Single Eye Part No.	Double Eye Part No.	Min. Break Load (kg)	Single Eye Part No.	Double Eye Part No.	Min. Break Load (kg)		
10 - 20	P1106/10	P1206/10	1120	P2106/10	P2206/10	2240	0.1	–
20 - 30	P1106/20	P1206/20	1680	P2106/20	P2206/20	3360	0.1	2 x 35 / 50 4 x 35 / 50
30 - 40	P1106/30	P1206/30	2688	P2106/30	P2206/30	4480	0.1	2 x 70 / 95 4 x 70 / 95
40 - 50	P1106/40	P1206/40	2688	P2106/40	P2206/40	5376	0.2	4 x 120
50 - 65	P1106/50	P1206/50	2688	P2106/50	P2206/50	7168	0.2	–
65 - 80	P1106/65	P1206/65	3584	P2106/65	P2206/65	7168	0.2	–
80 - 100	P1106/80	P1206/80	3584	P2106/80	P2206/80	7168	0.3	–

Double Eye Stocking, Double Weave, General Duty

Cable Ø	Part No. (prefix by CLY 000)		Min. Break Load (kg)	Weight (kg)	
	L = 600 (a)	L = 900 (b)		(a)	(b)
10 - 20	206/10	209/10	1860	0.25	0.40
20 - 30	206/20	209/20	2256	0.27	0.42
30 - 40	206/30	209/30	3696	0.41	0.58
40 - 50	206/40	209/40	5490	0.60	0.76
50 - 65	206/50	209/50	5490	0.65	0.84
65 - 80	206/65	209/65	7320	0.83	1.15
80 - 95	206/80	209/80	7320	0.85	1.23
95 - 110	206/95	209/95	10613	1.40	2.3
110 - 130	206/110	209/110	10613	1.40	2.3

Triple Weave Stocking, for use when extra high loads are needed

Cable Ø	Part No. (prefix by CLY 000)		Length (mm)	Min. Break Load (kg)	Weight (kg)
	Single Eye	Double Eye			
6 - 13	TW1/FE6	TW2/FE6	700	2250	0.22
12 - 19	TW1/FE12	TW2/FE12	825	3380	0.39
19 - 25	TW1/FE19	TW2/FE19	1050	5540	0.80
25 - 32	TW1/FE25	TW2/FE25	1300	9550	1.50
32 - 38	TW1/FE32	TW2/FE32	1500	11456	1.96
38 - 48	TW1/FE38	TW2/FE38	1900	11456	2.10
48 - 63	TW1/FE48	TW2/FE48	1900	15051	2.20

Swivels

Clydesdale offers 2 types of Swivel – Articulated and Straight Bearing. Both are manufactured of high quality tensile steel and galvanised for long life.

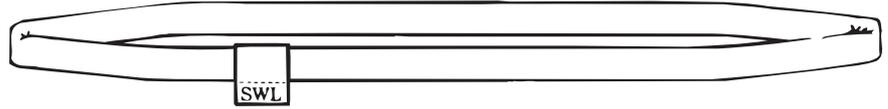
Swivel Number	Diameter		Length	Weight	SWL
	Swivel	Rope			
01	Straight	7	80mm	0.2kg	500kg
02	Straight	9	90mm	0.2kg	1000kg
03	Straight	10	100mm	0.3kg	1500kg
04	Straight	12	105mm	0.4kg	2000kg
05	Straight	14	115mm	0.5kg	3000kg
06	Straight	19	165mm	1.7kg	6000kg
07	Straight	30	270mm	1.8kg	15000kg
08	Straight	16	130mm	0.5kg	2000kg
09	Straight	10	125mm	0.5kg	2000kg
10	Articulated	9	60mm	0.2kg	800kg
11	Articulated	10	125mm	0.5kg	2000kg
12	Articulated	15	195mm	1.4kg	4000kg
13	Articulated	20	205mm	2.9kg	7000kg
14	Articulated	24	205mm	3.0kg	12000kg
15	Articulated	15	195mm	1.5kg	4000kg



Articulated Swivel



Straight Swivel



Round Slings

Made from 100% Polyester, the round slings are light-weight, low stretch and very high in strength. The slings are all lined for SWL identification and contain no stitching.

Colour	Maximum SWL Straight Lift	Standard Lengths Available
Violet	1,000kg	1, 2, 3, 4, 5, or 6m circumference
Green	2,000kg	1, 2, 3, 4, 5, or 6m circumference
Yellow	3,000kg	1, 2, 3, 4, 5, or 6m circumference
Grey	4,000kg	1, 2, 3, 4, 5, or 6m circumference
Red	5,000kg	2, 3, 4, 5, or 6m circumference
Brown	6,000kg	2, 3, 4, 5, or 6m circumference
Blue	8,000kg	2, 3, 4, 5, or 6m circumference

Other strengths are available on request.

Single Thickness Sling

Double Thickness Sling

Endless Sling

Round Sling

50	N/A	25	–
100	50	50	–
150	75	75	–
200	100	100	–
250	N/A	N/A	–
300	150	150	–
N/A	200	200	–

Colour



Colour	1.0T	0.8T	2.0T	1.8T	1.4T	1.0T
Violet	1.0T	0.8T	2.0T	1.8T	1.4T	1.0T
Green	2.0T	1.6T	4.0T	3.6T	2.8T	2.0T
Yellow	3.0T	2.4T	6.0T	5.4T	4.2T	3.0T
Grey	4.0T	3.2T	8.0T	7.2T	5.6T	4.0T
Red	5.0T	4.0T	10.0T	9.0T	7.0T	5.0T
Brown	6.0T	4.8T	12.0T	10.8T	8.4T	6.0T
Blue	8.0T	6.4T	16.0T	14.4T	11.2T	8.0T

Pulling Ropes

Clydesdale is able to supply a vast variety of pulling ropes both synthetic and wire. Used for many purposes from sash line to winch bonds. If the rope that you require is not mentioned here please contact us for further assistance. It is not standard practice for Clydesdale to test certificate rope, however if you require this please state accordingly when ordering.

Synthetic Sash Line Ropes

Synthetic ropes supplied by Clydesdale fall into 2 main categories – Sash Line and Winch Bonds. For sash line, what is required is a rope that is easy to manipulate, loop etc. but that is also easy to handle. As such we have tended to supply a basic hempex rope for sash line. This rope is constructed from three strands making the tying of knots simple and aiding the looping of the rope through shackles, pulley blocks etc.

Part No.	Ø	MBL	Weight / 100m
CLY 913 03 16	16mm	2,180kg	10.4kg
CLY 913 03 24	24mm	4,830kg	23.0kg
CLY 913 03 32	32mm	8,300kg	40.1kg
CLY 913 03 40	40mm	12,900kg	62.3kg

Synthetic Winch Ropes

Obviously this is the area in which Clydesdale has the most experience, having supplied cable-pulling winches for over 20 years. When selecting a winch rope you should consider three critical areas, strength, stretch and wear. Over the years Clydesdale has evaluated many manufacturers variations and we are confident that the rope which we supply for this purpose, Paracore is of the highest possible specification. With a stretch characteristic of less than 4%. Offering excellent UV resistance this rope consists of a core of low twist parallel yarns of high tenacity polyester fibre tightly encased in a 16, 24 or 32 plait (Ø dependant). Abrasion resistant polyester outer cover gives exceptional strength to weight ratio with extremely low elongation for a polyester rope (never more than 4%). Paracore has a relative density of 1.38 and can be used in extremes of temperature from -70°C to +200°C, however, extremely high temperatures (over 100°C) will reduce MBL. Paracore is supplied as standard with soft eyes at each end unless requested otherwise.

Part No.	Ø	Colour	MBL	Weight / 100m	Winch
CLY 913 01 07 B	7mm	Black	2,000kg	4.2kg	900 – 3 Phase
CLY 913 01 07 R	7mm	Red	2,000kg	4.2kg	900 – 3 Phase
CLY 913 01 07 W	7mm	White	2,000kg	4.2kg	900 – 3 Phase
CLY 913 01 08	8mm	White	2,500kg	5.0kg	210
CLY 913 01 10 B	10mm	Black	3,250kg	6.6kg	902 / 2240 – 3 Phase
CLY 913 01 10 R	10mm	Red	3,250kg	6.6kg	902 / 2240 – 3 Phase
CLY 913 01 10 W	10mm	White	3,250kg	6.6kg	902 / 2240 – 3 Phase
CLY 913 01 12	12mm	White	4,080kg	7.9kg	–

Certain other winching activities require a larger diameter synthetic winch rope, for these requirements Clydesdale suggests Dyneema, probably the highest specification of rope currently available, in terms of strength, wear and stretch.

Part No.	Ø	MBL	Weight / 100m
CLY 913 02 16	16mm	12,000kg	17.5kg
CLY 913 02 20	20mm	19,000kg	28.0kg
CLY 913 02 24	24mm	25,500kg	38.9kg





CLY 1019



CLY 1020



CLY 1104

X-Arm Lifter

Designed to lift any X-Arm easily and smoothly without undue effort from the construction crew. This device makes new construction or refurbishment of overhead lines safer and simpler. If the bracket is used (extra cost) the X-Arm can also be balanced to avoid any sway whatsoever.

Part No. CLY 1019

Double X-Arm Lifter

Specifically designed for use on the new ESI 43-40 type of X-Arm, the Double X-Arm Lifter is an invaluable tool. Its double action allows erection of 2 X-Arms without alteration of its position. The bracket is supplied as part of the lifter to enable parallel lifting, improving safety and reducing damage that may be caused.

Part No.	Description	Weight	SWL	Bracket
CLY 1019	X-Arm Lifter	7.5kg	150kg	CLY 1018
CLY 1020	Double X-Arm Lifter	18kg	300kg	Included

Conductor Lifter

This appliance has been specially devised to facilitate the replacement of old or damaged insulators. The unit fixes directly onto the X-Arm. A built in ratchet puller allows the conductor to be lifted effortlessly clear of the insulator and then lowered back into place. Fully galvanised high quality steel.

Part No.	Weight	SWL	Max. Lift
CLY 1021	9kg	250kg	540mm

Pole Lifting Jack

When you need to remove old or decayed poles, there are 2 versions of our Pole Lifting Jack available. Firstly the vehicle driven unit which will work off the hydraulic system of your truck. We will need to know various details as all are made to order. Secondly, a manually operated version which can be set up almost anywhere. Both versions are set to have a lifting force of 10,000kg, however, as each item is made to suit, further details are available upon request.

Part No. CLY 1104 – Manually operated
CLY 1104A – Vehicle driven

Transformer Lifting Gin

Top and bottom welded attachment rings make it easy to hoist the Lifting Gin to working height. The quick release nylon webbing straps are then ratchet tightened to secure the unit. The top section is hinged to allow the wire lifting rope to pass through and over 2 lifting pulleys, the rope is then locked in place with the locking pins and chains. The transformer is then hoisted to the required height, and as the bearing arm rotates through 180° the transformer can be lowered exactly into place. The alloy rollers run on ball race suspension to reduce tractive effort.

Part No.	Weight	SWL	Max. Wire Rope Dia
CLY 1022	17.5kg	1,000kg	12mm

CLYDESDALE

Powering the Future

Ratchet Puller / Pull-Lifts

Fundamentally there are three types of pull-lift currently available, Clydesdale is able to supply all three varieties, these are Wire Rope, Chain & Webbing. Each type has its own advantages and disadvantages, a brief summary of these advantages is laid out below;

- Wire Rope ● Lightweight ● Compact ● Easy to Maintain
- Chain ● Industry Standard ● Wide Variety ● Incredibly Robust
- Webbing ● Very Lightweight ● Visible ● Live Working Applications

Once you have selected the type of pull lift that suits your requirements please select model from table. Other makes / sizes are also available including Yale, Lung-All and Little Mule, please ask for further details.

Part No.	Type	Standard Lift	Weight	SWL (Lift)
CLY 700 Y11-25	Chain Block	1.0m	2.0kg	250kg
CLY 700 500	Wire Rope	1.3m	2.4kg	500kg
CLY 700 N500	Webbing	1.2m	2.8kg	500kg
CLY 700 Y11-50	Chain Block	1.5m	3.6kg	500kg
CLY 700 750	Chain Pull-Lift	1.0m	4.1kg	750kg
CLY 700 Y11-80	Chain Block	1.5m	6.2kg	800kg
CLY 700 1000	Wire Rope	1.2m	3.1kg	1000kg
CLY 700 N1000	Webbing	1.0m	3.2kg	1000kg
CLY 700 N1000P	Webbing	1.5m	3.3kg	1000kg
CLY 700 N1500	Webbing	1.0m	4.5kg	1500kg
CLY 700 N1500P	Webbing	1.5m	4.6kg	1500kg
CLY 700 P1500	Wire Rope	1.5m	4.1kg	1500kg
CLY 700 P1500P	Wire Rope	3.0m	5.0kg	1500kg
CLY 700 Y11-16	Chain Block	1.5m	9.5kg	1600kg
CLY 700 Y11-32	Chain Block	1.5m	15.5kg	3200kg
CLY 700 Y11-63	Chain Block	1.5m	26.5kg	6300kg

Dynamometers

These truly compact dynamometers are astonishingly small in size and weight, yet big on performance and accuracy. The accuracy is stated at $\pm 3\%$ full scale.

Part No.	Capacity	Graduation	Weight
CLY 940 A01	100kg	2kg	0.8kg
CLY 940 A05	500kg	10kg	0.7kg
CLY 940 A10	1000kg	20kg	0.8kg
CLY 940 A20	2000kg	50kg	1.2kg
CLY 940 A30	3000kg	50kg	2.3kg
CLY 940 A50	5000kg	100kg	3.5kg

Digital Dynamometers

Highly accurate ($\pm 0.3\%$) and lightweight, this dynamometer is ideally suited for those environments where accurate measurements are required. Details are provided of our most common variant, other sizes and specifications are available upon request. Supplied in wooden carry box with two shackles.

Part No.	Capacity	Graduation	Weight
CLY 940 300029	12KN	100N	3.5kg



Note: Not to Scale



700 N1000

700 Y11-50



700 1000



940 A20



940 300 029

'Chicago' Grips – Grips for Large-Diameter Conductors

Each of these grips is custom finished to cable specifications. Designed for hollow conductors and other large-diameter cables, the round jaws of these grips are shaped to provide maximum contact with the circumference of the cable, virtually eliminating conductor damage. Because we hold these grips in blank and finish each grip to your specs, allow 60 to 90 days for delivery. Since these grips are made to special order, they are not returnable.

Part No. 1628-50 is furnished with removable floating jaw which allows maximum coverage of cables and minimal conductor damage, particularly under heavy load. The removable jaw is held in place by a bolt swaged into the lever arm of grip, secured by a nut and cotter pin. Jaw must be removed to insert cable.

Your order must specify exact outside diameter of cables, circular mill with strand combination or manufacturer's code. Each grip for large diameter cable is made for one-size cable only.

Part No.	Minimum* Cable	Maximum* Cable	SWL	Approx. Weight Each
1628-16P	7.87mm	22.35mm	2500kg	7.73kg
1628-30	21.59mm	31.50mm	2500kg	12.27kg
1628-40	31.50mm	39.12mm	2500kg	15.45kg
1628-50	25.40mm	46.23mm	2500kg	15.45kg

*Minimum-maximum sizes listed indicate the unfinished size range capability for each Cat. No. Each grip is finished to fit one specific cable size only within range shown.

Grips for Bare A.C.S.R., – Aluminium and Stranded-Copper Cables

The round, smooth inside conductor jaw on this series of grips is ideal for bare A.C.S.R., aluminium and stranded-copper cables. The smooth jaw grips with maximum contact and are less likely to damage conductors.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1656-20	5.08mm	10.16mm	900kg	1.36kg	10.2cm
1656-30	7.87mm	13.46mm	900kg	1.70kg	12.1cm
1656-40	13.46mm	18.80mm	1600kg	3.41kg	14.0cm
1656-50	18.8mm	21.84mm	1600kg	3.41kg	14.0cm
1656-60	21.84mm	24.38mm	1600kg	3.41kg	14.0cm

Grips for Aluminium Conductors

Lightweight grips designed for use on aluminium conductors in distribution work. Round jaw shaped to provide maximum contact with circumference of cable, less likely to damage conductors. Supplied with spring and locking loop handles, allowing jaws to be held in an open position for easier placement on cable.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1678-20	24.38mm	25.91mm	1600kg	3.41kg	14.0cm
1678-30	25.91mm	27.43mm	900kg	3.41kg	14.0cm
1678-40	27.43mm	28.96mm	900kg	3.41kg	14.0cm
1678-50	28.96mm	30.48mm	900kg	3.41kg	14.0cm



1656-30

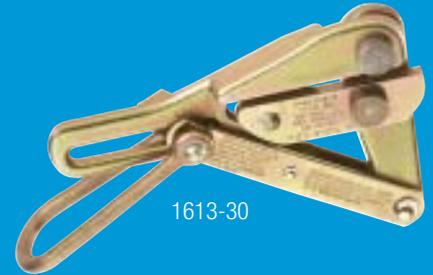


1678-30

Grip for Bare Wire

A lightweight, especially economical grip for working with solid and stranded bare wire from 2mm to 5.1mm. Single 'V' groove jaw.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1613-30	2.03mm	5.08mm	250kg	0.68kg	7.6cm



Grips for Weatherproof Wire

Round inside jaw contour for weatherproof coated wire. Notches in jaw provide firm grip on insulation.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1611-20	5.08mm	10.16mm	900kg	1.36kg	10.2cm
1611-30	7.87mm	13.46mm	900kg	1.70kg	12.1cm
1611-40	13.46mm	18.8mm	1600kg	3.52kg	14.0cm
1611-50	19.81mm	22.35mm	1600kg	3.52kg	14.0cm

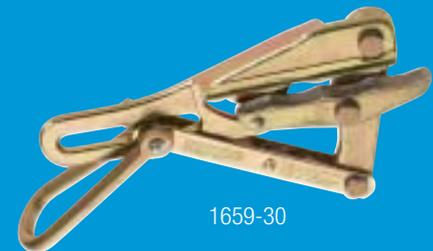


Note: Due to various types of weatherproof coatings available, selection of proper grips is determined by outside diameter of cable.

Grips for PVC-Covered Conductors

The serpentine jaws of this grip series are specially machined to allow insertion of insulated conductor through the jaws, which reduce danger of slippage which might result in insulation damage. Eliminates necessity of stripping insulation from conductor. Round inside-jaw contour.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1659-20	5.08mm	10.67mm	900kg	1.36kg	10.2cm
1659-30	7.87mm	12.70mm	900kg	1.70kg	12.1cm
1659-40	12.45mm	20.07mm	1600kg	3.52kg	14.0cm
1659-50	20.07mm	25.65mm	1600kg	3.52kg	14.0cm



Parallel Jaw Grips

These lightweight, compact grips pull an exceptionally wide range of cable sizes and types. Each grip is designed with round inside-jaw contours. The lower jaw is serrated to firmly grip insulated cables and conductors. The design includes a latch that prevents the grip from falling in case of jaw disengagement from the cable, plus a large-diameter eye that accommodates large hooks on hoists, winches and tackle blocks.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1685-20	4mm	22mm	900kg	1.3kg	6.0cm
1685-31	16mm	32mm	1600kg	2.3kg	11.43cm



Grips for Extra-High-Strength Cables, Messenger, Guy Strand and Conductors

A family of grips for cable sizes from 3.10mm to 25.4mm. Double 'V' grooves give four-point contact, reducing chance of slipping and providing proper alignment. For larger conductors, see our grips with round inside-jaw contour.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1613-40	3.05mm	9.4mm	900kg	1.36kg	10.2cm
1684-5	5.54mm	13.97mm	1600kg	2.84kg	12.7cm
1692-5	5.54mm	13.97mm	1600kg	2.89kg	12.7cm
1684-5F*	4.06mm	13.97mm	1600kg	7.05kg	18.4cm
1628-16	7.87mm	15.75mm	2500kg	7.05kg	18.4cm
1628-17	12.7mm	19.05mm	2500kg	7.73kg	18.4cm
1628-18	19.05mm	25.4mm	2500kg	7.73kg	18.4cm

*Similar to No. 1684-5 above except with a file inserted in jaw for extra gripping power. Replacement file No. 578 and screws No. 573 are also available.

Hot-Line Grips for Bare Conductors

Hot-Line Grips for both bare and insulated conductors. Grip may be placed on wire with hot-line stick. When stick is removed, latch closes automatically to guard against grip accidentally disengaging from wire. Standard hot-line grips are not supplied with springs or lock-open features. When these features are desired, add prefix letter 'S' before part number (example: S1684-5H).

Part No.*	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1613-40H	3.05mm	9.4mm	900kg	1.48kg	10.2cm
1684-5H	5.54mm	13.97mm	1600kg	2.84kg	12.7cm
1656-20H	5.08mm	10.16mm	900kg	1.48kg	10.2cm
1656-30H	7.87mm	13.46mm	900kg	1.82kg	12.1cm
1656-40H	13.46mm	18.8mm	1600kg	3.52kg	14.0cm
1656-50H	18.8mm	21.84mm	1600kg	3.52kg	14.0cm
1656-60H	21.84mm	24.84mm	1600kg	3.41kg	14.0cm

Klein 'Haven' Grips

Designed for use when light, compact grip is desired and where conductor damage is not a factor. Gripping pressure of the knurled jaw is applied to a 6.35mm cable area.

1604-20L and 1625 series have a swing latch to help hold cable in the jaw.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each
1604-10	1.52mm	6.35mm	450kg	0.45kg
1604-20	3.18mm	12.7mm	900kg	1.14kg
1604-20L	3.18mm	12.7mm	900kg	1.14kg
1625-20	7.11mm	19.05mm	1600kg	1.50kg
1625-20 7/8	9.65mm	22.35mm	1600kg	1.59kg
1625-20 1	12.7mm	25.4mm	1600kg	1.59kg



1613-40H



1604-20

Bell-System Type Grips

1684-5AT is identical to Bell-System type 'L' strand puller; 1628-16AT is identical to Bell-System 'H' strand puller. All are equipped with chain, toggle and shackle.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1684-5AT	5.54mm	13.97mm	1600kg	2.84kg	12.7cm
1628-16AT	7.87mm	15.75mm	2500kg	7.05kg	18.4cm
1692-5AT	5.54mm	13.97mm	1600kg	2.89kg	12.7cm

'Type B' Strand Puller

This grip is similar to Bell-System Type B Strand Puller. Designed to pull 6.35mm figure-8 telephone cable. Serpentine grooves grip insulation on strand, preventing slippage. Equipped with chain, toggle and shackle.

Part No.	Minimum Cable	Maximum Cable	SWL	Approx. Weight Each	Jaw Length
1659-5AT	5.08mm	9.4mm	900kg	2.72kg	12.7cm

Range Taking 'ABC' Come Along Clamp

Rather than having a multitude of Come Alongs for the various sizes of Aerial Bundled Conductor, this clamp will cover nearly all of the sizes in one clamp. Sizes covered are 2 core 35mm, 50mm, 95mm and 120mm and all 4 and 5 core variants.

Part No.	SWL	Weight
CLY 920 1174	850kg	3kg

Come Along Clamps for ABC

Made of steel with fine grooved aluminium jaws that give a strong and safe grip on the conductor. Each clamp is specifically finished to match the size of Aerial Bundled Conductor.

Part No.	ABC Size	SWL	Weight
CLY 920 0625	4 x 25	300kg	2.2kg
CLY 920 0650	4 x 50	600kg	3.6kg
CLY 920 0695	4 x 95	850kg	4.7kg

Come Along Clamps for Steel Stay Wire & Copper Conductor

Made of forged steel with fine grooved jaws. A built in spring holds the grip in position even when there is no pulling force applied.

Part No.	Cable Ø	SWL	Weight
CLY 920 4101	1 - 4mm	200kg	0.25kg
CLY 920 4102	3 - 8mm	700kg	0.95kg
CLY 920 4103	5 - 10mm	1100kg	1.15kg
CLY 920 4104	8 - 16mm	1400kg	1.95kg
CLY 920 4105	14 - 23mm	2000kg	3.50kg



1684-5AT



1659-5AT



920 1174



920 0695



920 4102

Lubricants

Clydesdale supplies various types of lubricants to assist the pulling, jetting, blowing and general installation of cables. The significant part of our range of lubricants is illustrated below in relatively brief terms, further details including COSHH / MSDS are available upon request.



745 NB-19

Silicone Plus – Cable Pulling Lubricant

A cream coloured pourable lubricant specially formulated to assist the pulling of cables into plastic ducts. Supplied either with (NN) or without (NB) small frictionless roller balls as part of its make up, Silicone Plus is, despite its name free of any wax, silicone or grease and as such will degrade naturally. Also available in a winter grade formulation for use at extremes of temperature. Silicone Plus will cause absolutely no damage to the cable sheathing.

Part No.	With Balls	Pack Size	Temp Range
CLY 745 NN-19	No	36 x 19L	-5°C to +45°C
CLY 745 NB-19	Yes	36 x 19L	-5°C to +45°C
CLY 745 WN-19	No	36 x 19L	-30°C to +45°C
CLY 745 WB-19	Yes	36 x 19L	-30°C to +45°C



745 JL-95

Jetlube – Cable Blowing / Jetting Lubricant

Specifically designed to be used whilst blowing cables into air tight ducts, Jetlube reduces the frictional drag on both cable and duct thus increasing the installed distance significantly. Jetlube can also be used to pre-lubricate the duct prior to the blowing process commencing, this will have the effect of cleaning the duct. Jetlube can also be used to pre-lubricate a duct prior to PULLING in a cable thus avoiding 'burn-through' when a synthetic rope is being used. Also available in a winter grade formulation for use at extremes of temperature. Jetlube will cause absolutely no damage to the cable sheathing.

Part No.	Pack Size	Temp Range
CLY 745 JL-95	12 x 95cL	-5°C to +45°C
CLY 745 JW-95	12 x 95cL	-30°C to +45°C

Cleaners

Clydesdale supplies many different types of cleaner for both the cleaning of cables, ducts, hotsticks, as well as more general purpose cleaners.

S-1 Hotstick Wipe

It is commonly recognised that all tools will last longer if they are cared for and cleaned by the operator. The S-1 Silicon wipe is the ideal tool for the care of hotsticks. The wipe removes any foreign material and leaves a silicon residue on the hotstick stick itself. The silicon residue causes water to bead up thus ensuring safe use. Each wipe comes in a convenient one-time use pocket and should be discarded properly after use.

Part No.	Pack Size
CLY 745 S-1	144 Wipes

W-1 Wax Wipe

A more general-purpose wipe, used to clean and care for general tools, the W-1 leaves a non-conductive water coating on the surface of the cleaned item. Also suitable for the cleaning of rubber and porcelain items.

Part No.	Pack Size
CLY 745 W-1	72 Wipes

FST – Duct Sealant Kit

There are a number of reasons why it may be necessary to seal a duct, to stop water ingress and containment of rodents to name but two, the FST Duct Sealant Kit is a proven method. Simply insert the two foam blocks into the end of the ducts, one further into the duct and one at the edge, then inject the two-part foam formulation into the resulting gap. The two-part foam will 'set' almost immediately to quickly and permanently seal your duct.

Each kit comprises: 1 x 6oz cartridge (FST-180), 2 x 24" Foam damming strips (FST-DAM), 3 x Mixing nozzles, 1 x Pair disposable gloves, 1 x Positioning rod for foam dam, 1 x Pre-treating wipe (CD-1), 1 x Resealing cap & 1 x Instruction sheet

Part No. CLY 745 FST



745 S-1



745 W-1



745 FST

CLYDESDALE

Powering the Future

Insulated Tools



A range of Insulated Hand Tools Designed, Tested and Approved / Certified to Industry, National and European Standards. This range of tools offers 6 key safety characteristics;

- 1 A white shell is moulded onto the metal parts of the tool. This insulating shell is both unbreakable and irremovable, and ensures, instantaneously and permanently, total insulation of the tool.
- 2 The orange coloured PVC which covers the shell coated tool is totally irremovable, non-flammable and ensures a perfect grip of the tool when held.
- 3 Coating the handles with ridge marks ensures a perfect grip of the tool when held with greasy hands or gloves.
- 4 The two finger stop (or Buffers) (where used) are made from treated Rilsan, which has insulation properties in excess of 15,000 Volts.
- 5 The end of the handles are reinforced with several layers of PVC onto the shell, in order to withstand the highest of impacts.
- 6 All insulating properties are guaranteed for temperatures from -20°C to +60°C (-4°F to 140°F).

The exceptional quality of this range of Insulated Tools ensures their use over many years. Every Insulated Tool within this range undergoes 7 separate tests prior to the end of the manufacturing process thus allowing us to offer a full guarantee on each and every tool. This range of Insulated Hand Tools complies with the following standards;

EN 60900, ESI 26-3, VDE 0680 & NFC 18-400

Insulated Reversible Ratchet Wrench

Available in 1/4", 3/8" and 1/2" square drive formats. These tools are made from forged alloy steel with a high carbon content. Drive direction controlled by a central control, these Ratchet Drivers feature 17 separate tooth engagements when the force is being applied.

Part No.	Drive Size	Torque	Length	Weight
CLY 350 MS55	1/4" Sq.	7Nm	125mm	140g
CLY 350 MS85	3/8" Sq.	20Nm	185mm	250g
CLY 350 MS65	1/2" Sq.	35Nm	255mm	580g

Insulated Torque Wrench

Featuring a linear graduation allowing simple and accurate reading of the torque during adjustment. These tools are extremely light and robust as the main body is made from aluminium alloy. The graduation is clearly marked in both Imperial and Metric units of measurement (lbf and Nm), also there is an auto reset function. Designed to be used in conjunction with our range of drive enlargers and reducer allowing these tools to be used with an extremely large range of head types. Further specifications available upon request.

Part No.	Drive	Reversible	Torque Range		Length	Weight
CLY 350 MS100	3/8"	No	8-54Nm	5-40lbf	330mm	850g
CLY 350 MS100R	3/8"	Yes	8-54Nm	5-40lbf	330mm	850g
CLY 350 MS100N2	1/2"	No	30-150Nm	20-110lbf	450mm	930g



Cut through view



MS55



MS100



Insulated 'T' Bar Driver

These tools are forged from high strength chromium alloy steel.

Part No.	Drive	Length	Weight
CLY 350 MS72J-130	3/8"	130mm	380g
CLY 350 MS72J-206	3/8"	206mm	420g
CLY 350 MS72S	1/2"	310mm	800g



Insulated Drive Enlarger

Designed to allow different drive size socket heads to be used on a single Ratchet Wrench simply by adding the chosen enlarger to the drive pin of the ratchet and thus changing the drive size. These tools are forged from high strength chromium alloy steel.

Part No.	From	To	Length	Weight
CLY 350 MS95	1/4"	3/8"	50mm	20g
CLY 350 MS91	3/8"	1/2"	64.5mm	40g



Insulated Drive Reducer

Designed to allow different drive size socket heads to be used on a single Ratchet Wrench simply by adding the chosen reducer to the drive pin of the ratchet and thus changing the drive size. These tools are forged from high strength chromium alloy steel.

Part No.	From	To	Length	Weight
CLY 350 MS70	1/2"	1/4"	75mm	60g
CLY 350 MS90	1/2"	3/8"	68mm	40g
CLY 350 MS96	3/8"	1/4"	64mm	20g

Insulated Ratchet Extension Bar

Used to extend the reach of the Ratchet Wrench, these extension bars simply snap onto the drive pin. These tools are forged from high strength chromium alloy steel.

Part No.	Drive	Length	Weight
CLY 350 MS54	1/4"	114mm	50g
CLY 350 MS54L	1/4"	164mm	70g
CLY 350 MS84	3/8"	140mm	124g
CLY 350 MS84L	3/8"	264mm	270g
CLY 350 MS71	1/2"	144mm	245g
CLY 350 MS71L	1/2"	264mm	435g

CLYDESDALE

Powering the Future

Insulated 1/4" Square Drive Socket Heads

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS56-04	4mm	38mm	10g
CLY 350 MS56-05	5mm	38mm	12g
CLY 350 MS56-05.5	5.5mm	38mm	14g
CLY 350 MS56-06	6mm	38mm	16g
CLY 350 MS56-07	7mm	38mm	18g
CLY 350 MS56-08	8mm	38mm	20g
CLY 350 MS56-09	9mm	38mm	22g
CLY 350 MS56-10	10mm	38mm	24g
CLY 350 MS56-11	11mm	38mm	26g
CLY 350 MS56-12	12mm	38mm	28g
CLY 350 MS56-13	13mm	38mm	30g
CLY 350 MS56-14	14mm	38mm	32g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS56-W03	3/16"	38mm	12g
CLY 350 MS56-W04	1/4"	38mm	16g
CLY 350 MS56-W05	5/16"	38mm	20g
CLY 350 MS56-W06	3/8"	38mm	24g
CLY 350 MS56-W07	7/16"	38mm	28g
CLY 350 MS56-W08	1/2"	38mm	30g
CLY 350 MS56-W09	9/16"	38mm	32g

Insulated 1/4" Square Drive Male Hex Key (Allen) Heads

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS57-03	3mm	58.5mm	16g
CLY 350 MS57-04	4mm	58.5mm	18g
CLY 350 MS57-05	5mm	58.5mm	20g
CLY 350 MS57-06	6mm	58.5mm	22g
CLY 350 MS57-07	7mm	58.5mm	24g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS57-W02	1/8"	58.5mm	16g
CLY 350 MS57-W03	3/16"	58.5mm	20g
CLY 350 MS57-W04	1/4"	58.5mm	24g
CLY 350 MS57-W05	5/16"	58.5mm	26g



MS56



MS57



MS86



MS86

Insulated 3/8" Square Drive Socket Heads

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS86-08	8mm	40.5mm	35g
CLY 350 MS86-09	9mm	40.5mm	35g
CLY 350 MS86-10	10mm	40.5mm	40g
CLY 350 MS86-11	11mm	40.5mm	40g
CLY 350 MS86-12	12mm	40.5mm	40g
CLY 350 MS86-13	13mm	43.5mm	45g
CLY 350 MS86-14	14mm	43.5mm	45g
CLY 350 MS86-15	15mm	43.5mm	45g
CLY 350 MS86-16	16mm	43.5mm	50g
CLY 350 MS86-17	17mm	43.5mm	50g
CLY 350 MS86-18	18mm	46.5mm	70g
CLY 350 MS86-19	19mm	46.5mm	70g
CLY 350 MS86-20	20mm	46.5mm	80g
CLY 350 MS86-21	21mm	46.5mm	110g
CLY 350 MS86-22	22mm	46.5mm	120g
CLY 350 MS86-23	23mm	46.5mm	130g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS86-W05	5/16"	40.5mm	35g
CLY 350 MS86-W06	3/8"	40.5mm	40g
CLY 350 MS86-W07	7/16"	40.5mm	40g
CLY 350 MS86-W08	1/2"	43.5mm	45g
CLY 350 MS86-W09	9/16"	43.5mm	45g
CLY 350 MS86-W10	5/8"	43.5mm	50g
CLY 350 MS86-W11	11/16"	43.5mm	50g
CLY 350 MS86-W12	3/4"	46.5mm	70g
CLY 350 MS86-W13	13/16"	46.5mm	110g
CLY 350 MS86-W14	7/8"	46.5mm	120g

Insulated 3/8" Square Drive Socket Heads – Long Series

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS86L-08	8mm	67.5mm	50g
CLY 350 MS86L-09	9mm	67.5mm	55g
CLY 350 MS86L-10	10mm	67.5mm	60g
CLY 350 MS86L-11	11mm	67.5mm	70g
CLY 350 MS86L-12	12mm	67.5mm	70g
CLY 350 MS86L-13	13mm	67.5mm	80g
CLY 350 MS86L-14	14mm	73.5mm	90g
CLY 350 MS86L-15	15mm	73.5mm	100g
CLY 350 MS86L-16	16mm	73.5mm	120g
CLY 350 MS86L-17	17mm	80.5mm	150g
CLY 350 MS86L-18	18mm	80.5mm	160g
CLY 350 MS86L-19	19mm	80.5mm	170g
CLY 350 MS86L-21	21mm	80.5mm	210g
CLY 350 MS86L-22	22mm	80.5mm	225g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS86L-W05	5/16"	67.5mm	50g
CLY 350 MS86L-W06	3/8"	67.5mm	60g
CLY 350 MS86L-W07	7/16"	67.5mm	70g
CLY 350 MS86L-W08	1/2"	67.5mm	75g
CLY 350 MS86L-W09	9/16"	73.5mm	90g
CLY 350 MS86L-W10	5/8"	73.5mm	120g
CLY 350 MS86L-W11	11/16"	80.5mm	150g
CLY 350 MS86L-W12	3/4"	80.5mm	170g
CLY 350 MS86L-W13	13/16"	80.5mm	210g
CLY 350 MS86L-W14	7/8"	80.5mm	225g

Insulated 3/8" Square Drive Male Hex Key (Allen) Heads

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS87-03	3mm	64mm	40g
CLY 350 MS87-04	4mm	64mm	40g
CLY 350 MS87-05	5mm	64mm	50g
CLY 350 MS87-06	6mm	64mm	50g
CLY 350 MS87-07	7mm	69mm	50g
CLY 350 MS87-08	8mm	69mm	60g
CLY 350 MS87-10	10mm	69mm	60g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS87-W02	1/8"	55mm	40g
CLY 350 MS87-W03	3/16"	55mm	50g
CLY 350 MS87-W04	1/4"	55mm	50g
CLY 350 MS87-W05	5/16"	60mm	60g
CLY 350 MS87-W06	3/8"	60mm	60g

MS86L



MS86L



MS87



MS87





MS66



MS66

Insulated 1/2" Square Drive Socket Heads

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS66-08	8mm	52mm	60g
CLY 350 MS66-09	9mm	52mm	60g
CLY 350 MS66-10	10mm	52mm	60g
CLY 350 MS66-11	11mm	52mm	60g
CLY 350 MS66-12	12mm	52mm	80g
CLY 350 MS66-13	13mm	52mm	80g
CLY 350 MS66-14	14mm	52mm	80g
CLY 350 MS66-15	15mm	52mm	80g
CLY 350 MS66-16	16mm	52mm	80g
CLY 350 MS66-17	17mm	52mm	80g
CLY 350 MS66-18	18mm	52mm	80g
CLY 350 MS66-19	19mm	52mm	100g
CLY 350 MS66-20	20mm	52mm	100g
CLY 350 MS66-21	21mm	52mm	100g
CLY 350 MS66-22	22mm	54mm	120g
CLY 350 MS66-23	23mm	54mm	120g
CLY 350 MS66-24	24mm	54mm	140g
CLY 350 MS66-25	25mm	54mm	140g
CLY 350 MS66-26	26mm	54mm	160g
CLY 350 MS66-27	27mm	56mm	160g
CLY 350 MS66-28	28mm	56mm	160g
CLY 350 MS66-29	29mm	56mm	160g
CLY 350 MS66-30	30mm	58mm	180g
CLY 350 MS66-32	32mm	60mm	200g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS66-W03	3/16"	40mm	50g
CLY 350 MS66-W04	1/4"	40mm	50g
CLY 350 MS66-W05	5/16"	40mm	60g
CLY 350 MS66-W06	3/8"	40mm	60g
CLY 350 MS66-W07	7/16"	40mm	60g
CLY 350 MS66-W08	1/2"	40mm	80g
CLY 350 MS66-W09	9/16"	40mm	80g
CLY 350 MS66-W10	5/8"	40mm	80g
CLY 350 MS66-W11	11/16"	40mm	80g
CLY 350 MS66-W12	3/4"	40mm	100g
CLY 350 MS66-W13	13/16"	40mm	100g
CLY 350 MS66-W14	7/8"	40mm	100g
CLY 350 MS66-W15	15/16"	40mm	140g
CLY 350 MS66-W16	1"	40mm	160g
CLY 350 MS66-W17	1 1/16"	40mm	160g
CLY 350 MS66-W18	1 1/8"	40mm	160g
CLY 350 MS66-W20	1 1/4"	40mm	200g

CLYDESDALE

Powering the Future

Insulated 1/2" Square Drive Socket Heads – Long Series

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS66L-12	12mm	96mm	120g
CLY 350 MS66L-13	13mm	96mm	120g
CLY 350 MS66L-14	14mm	96mm	140g
CLY 350 MS66L-15	15mm	96mm	140g
CLY 350 MS66L-16	16mm	96mm	140g
CLY 350 MS66L-17	17mm	96mm	160g
CLY 350 MS66L-18	18mm	96mm	160g
CLY 350 MS66L-19	19mm	96mm	160g
CLY 350 MS66L-21	21mm	96mm	240g
CLY 350 MS66L-22	22mm	96mm	280g
CLY 350 MS66L-23	23mm	96mm	320g
CLY 350 MS66L-24	24mm	96mm	340g
CLY 350 MS66L-26	26mm	96mm	420g
CLY 350 MS66L-27	27mm	96mm	420g
CLY 350 MS66L-28	28mm	96mm	420g
CLY 350 MS66L-29	29mm	96mm	420g
CLY 350 MS66L-30	30mm	96mm	460g
CLY 350 MS66L-32	32mm	96mm	500g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS66L-W08	1/2"	90mm	120g
CLY 350 MS66L-W09	9/16"	90mm	135g
CLY 350 MS66L-W10	5/8"	90mm	145g
CLY 350 MS66L-W11	11/16"	90mm	160g
CLY 350 MS66L-W12	3/4"	90mm	170g
CLY 350 MS66L-W13	13/16"	90mm	220g
CLY 350 MS66L-W14	7/8"	100mm	270g
CLY 350 MS66L-W15	15/16"	100mm	350g
CLY 350 MS66L-W16	1"	100mm	420g
CLY 350 MS66L-W17	1 1/16"	100mm	420g
CLY 350 MS66L-W18	1 1/8"	100mm	425g
CLY 350 MS66L-W20	1 1/4"	100mm	515g



MS66L



MS66L

MS67



MS67



Insulated 1/2" Square Drive Male Hex Key (Allen) Heads

These tools are forged from high strength chromium alloy steel.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS67-06	6mm	92mm	100g
CLY 350 MS67-08	8mm	92mm	100g
CLY 350 MS67-10	10mm	92mm	100g
CLY 350 MS67-11	11mm	92mm	120g
CLY 350 MS67-12	12mm	102mm	160g
CLY 350 MS67-14	14mm	102mm	160g
CLY 350 MS67-17	17mm	102mm	180g
CLY 350 MS67-19	19mm	102mm	220g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS67-W04	1/4"	92mm	100g
CLY 350 MS67-W05	5/16"	92mm	100g
CLY 350 MS67-W06	3/8"	92mm	100g
CLY 350 MS67-W07	7/16"	92mm	120g
CLY 350 MS67-W08	1/2"	102mm	160g
CLY 350 MS67-W09	9/16"	102mm	160g
CLY 350 MS67-W10	5/8"	102mm	180g
CLY 350 MS67-W12	3/4"	102mm	220g

Insulated Adjustable Spanner (Shifter)

Forged from alloy steel and treated by a means of high frequency tempering, this spanner is of the highest quality available. Please note that the head is not insulated, if insulation of the head is required see below for extensive range.

Part No.	Size	Max. Jaw Open	Length	Weight
CLY 350 MS7-115	4"	13mm	115mm	80g
CLY 350 MS7-160	6"	20mm	160mm	170g
CLY 350 MS7-210	8"	27mm	210mm	330g
CLY 350 MS7-260	10"	30mm	260mm	550g
CLY 350 MS7-310	12"	34mm	310mm	830g
CLY 350 MS7-385	15"	44mm	385mm	1290g

Totally Insulated Adjustable Spanner (Shifter) with moving head insulation

Forged from alloy steel and treated by a means of high frequency tempering, this spanner is of the highest quality available. The jaw opening is controlled by the dial on the side of the head, this dial is fabricated by PVC which is completely non conductive.

Part No.	Size	Max. Jaw Open	Length	Weight
CLY 350 MS7S-210	8"	27mm	210mm	360g
CLY 350 MS7S-260	10"	30mm	260mm	600g
CLY 350 MS7S-310	12"	34mm	310mm	1050g

MS7



MS7S



Totally Insulated Adjustable Spanner (Shifter) with fixed head insulation

Forged from alloy steel and treated by a means of high frequency tempering, this spanner is of the highest quality available. The jaw opening is controlled by the dial on the side of the head, this dial is fabricated by PVC which is completely non conductive.

Part No.	Size	Max. Jaw Open	Length	Weight
CLY 350 MS7SC-210	8"	27mm	210mm	370g
CLY 350 MS7SC-260	10"	30mm	260mm	615g
CLY 350 MS7SC-310	12"	34mm	310mm	1120g



MS7SC

Insulated Single Open Ended (SOE) Spanner

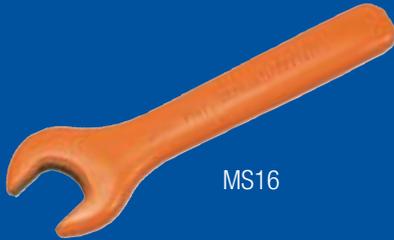
Forged from heat treated chrome vanadium steel these spanners feature some of the thinnest head dimensions available.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS16-05	5mm	95mm	20g
CLY 350 MS16-05.5	5.5mm	100mm	20g
CLY 350 MS16-06	6mm	105mm	25g
CLY 350 MS16-07	7mm	107mm	30g
CLY 350 MS16-08	8mm	110mm	30g
CLY 350 MS16-09	9mm	115mm	35g
CLY 350 MS16-10	10mm	120mm	40g
CLY 350 MS16-11	11mm	125mm	45g
CLY 350 MS16-12	12mm	130mm	50g
CLY 350 MS16-13	13mm	135mm	60g
CLY 350 MS16-14	14mm	140mm	75g
CLY 350 MS16-15	15mm	145mm	80g
CLY 350 MS16-16	16mm	150mm	100g
CLY 350 MS16-17	17mm	155mm	110g
CLY 350 MS16-18	18mm	160mm	125g
CLY 350 MS16-19	19mm	167mm	130g
CLY 350 MS16-20	20mm	172mm	160g
CLY 350 MS16-21	21mm	177mm	170g
CLY 350 MS16-22	22mm	182mm	190g
CLY 350 MS16-23	23mm	190mm	200g
CLY 350 MS16-24	24mm	200mm	220g
CLY 350 MS16-25	25mm	210mm	260g
CLY 350 MS16-26	26mm	220mm	270g
CLY 350 MS16-27	27mm	225mm	290g
CLY 350 MS16-28	28mm	230mm	300g
CLY 350 MS16-29	29mm	235mm	360g
CLY 350 MS16-30	30mm	240mm	365g
CLY 350 MS16-31	31mm	245mm	370g
CLY 350 MS16-32	32mm	250mm	380g
CLY 350 MS16-33	33mm	255mm	410g
CLY 350 MS16-34	34mm	260mm	420g
CLY 350 MS16-35	35mm	265mm	450g
CLY 350 MS16-36	36mm	270mm	580g
CLY 350 MS16-37	37mm	275mm	650g
CLY 350 MS16-38	38mm	280mm	650g



MS16



MS16



MS21

Imperial Sizes / Insulated Single Open Ended (SOE) Spanner

Part No.	Size	Length	Weight
CLY 350 MS16-W04	1/4"	85mm	30g
CLY 350 MS16-W05	5/16"	90mm	30g
CLY 350 MS16-W06	3/8"	100mm	40g
CLY 350 MS16-W07	7/16"	100mm	45g
CLY 350 MS16-W08	1/2"	130mm	55g
CLY 350 MS16-W09	9/16"	135mm	75g
CLY 350 MS16-W10	5/8"	155mm	100g
CLY 350 MS16-W11	11/16"	160mm	120g
CLY 350 MS16-W12	3/4"	167mm	130g
CLY 350 MS16-W13	13/16"	172mm	180g
CLY 350 MS16-W14	7/8"	200mm	190g
CLY 350 MS16-W15	15/16"	210mm	220g

Insulated Single Ended Ring Spanner

Forged from heat treated chrome vanadium steel these spanners feature a cranked head for easier access and increased torque.

Part No.	Size	Length	Weight
CLY 350 MS21-06	6mm	135mm	50g
CLY 350 MS21-07	7mm	138mm	60g
CLY 350 MS21-08	8mm	146mm	75g
CLY 350 MS21-09	9mm	150mm	80g
CLY 350 MS21-10	10mm	161mm	90g
CLY 350 MS21-11	11mm	163mm	95g
CLY 350 MS21-12	12mm	179mm	100g
CLY 350 MS21-13	13mm	185mm	120g
CLY 350 MS21-14	14mm	198mm	165g
CLY 350 MS21-15	15mm	203mm	170g
CLY 350 MS21-16	16mm	208mm	190g
CLY 350 MS21-17	17mm	218mm	200g
CLY 350 MS21-18	18mm	228mm	230g
CLY 350 MS21-19	19mm	243mm	250g
CLY 350 MS21-20	20mm	248mm	300g
CLY 350 MS21-21	21mm	257mm	330g
CLY 350 MS21-22	22mm	262mm	340g
CLY 350 MS21-23	23mm	270mm	360g
CLY 350 MS21-24	24mm	280mm	420g
CLY 350 MS21-25	25mm	282mm	450g
CLY 350 MS21-26	26mm	285mm	470g
CLY 350 MS21-27	27mm	290mm	490g
CLY 350 MS21-28	28mm	295mm	510g
CLY 350 MS21-29	29mm	300mm	550g
CLY 350 MS21-30	30mm	302mm	580g
CLY 350 MS21-32	31mm	310mm	590g
CLY 350 MS21-36	36mm	360mm	950g
CLY 350 MS21-41	41mm	385mm	1000g
CLY 350 MS21-46	46mm	445mm	1100g
CLY 350 MS21-50	50mm	460mm	1200g

CLYDESDALE

Powering the Future

Imperial Sizes / Insulated Single Ended Ring Spanner

Part No.	Size	Length	Weight
CLY 350 MS21-W04	1/4"	152mm	50g
CLY 350 MS21-W05	5/16"	158mm	75g
CLY 350 MS21-W06	3/8"	163mm	85g
CLY 350 MS21-W07	7/16"	172mm	95g
CLY 350 MS21-W08	1/2"	188mm	125g
CLY 350 MS21-W09	9/16"	198mm	165g
CLY 350 MS21-W10	5/8"	208mm	190g
CLY 350 MS21-W11	11/16"	218mm	215g
CLY 350 MS21-W12	3/4"	228mm	250g
CLY 350 MS21-W13	13/16"	248mm	315g
CLY 350 MS21-W14	7/8"	262mm	340g
CLY 350 MS21-W15	15/16"	270mm	390g
CLY 350 MS21-W16	1"	282mm	450g
CLY 350 MS21-W17	1 1/16"	285mm	490g
CLY 350 MS21-W18	1 1/8"	290mm	430g
CLY 350 MS21-W19	1 3/16"	300mm	580g
CLY 350 MS21-W20	1 1/4"	302mm	585g
CLY 350 MS21-W21	1 15/16"	306mm	600g
CLY 350 MS21-W24	1 1/2"	360mm	700g

Insulated Nut Spinner

The blade is forged from heat treated chrome vanadium steel these spinners feature 6 points. Specially designed for screwing and unscrewing the most inaccessible nuts, these spinners are fitted with the same handle / grip as our range of screwdrivers.

Metric Sizes

Part No.	Size	Blade Length	Handle Length	Weight
CLY 350 IS36-04	4mm	130mm	105mm	80g
CLY 350 IS36-05	5mm	130mm	105mm	94g
CLY 350 IS36-06	6mm	130mm	105mm	106g
CLY 350 IS36-07	7mm	130mm	105mm	144g
CLY 350 IS36-08	8mm	130mm	117mm	170g
CLY 350 IS36-09	9mm	130mm	117mm	192g
CLY 350 IS36-10	10mm	130mm	117mm	196g
CLY 350 IS36-11	11mm	130mm	117mm	214g
CLY 350 IS36-12	12mm	130mm	117mm	216g
CLY 350 IS36-13	13mm	130mm	128mm	254g
CLY 350 IS36-14	14mm	130mm	128mm	282g
CLY 350 IS36-17	17mm	130mm	128mm	292g

Imperial Sizes

Part No.	Size	Blade Length	Handle Length	Weight
CLY 350 IS36-W03	3/16"	130mm	105mm	160g
CLY 350 IS36-W04	1/4"	130mm	105mm	170g
CLY 350 IS36-W05	5/16"	130mm	117mm	175g
CLY 350 IS36-W06	3/8"	130mm	117mm	185g
CLY 350 IS36-W07	7/16"	130mm	117mm	205g
CLY 350 IS36-W08	1/2"	130mm	128mm	210g
CLY 350 IS36-W09	9/16"	130mm	128mm	215g
CLY 350 IS36-W10	5/8"	130mm	128mm	220g





Insulated Socket Spanner with "T" Handle

Forged from heat treated alloy steel these spanners are designed for easier access and increased torque.

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS19-14	14mm	700mm	1600g
CLY 350 MS19-16	16mm	700mm	1650g
CLY 350 MS19-17	17mm	700mm	1700g
CLY 350 MS19-19	19mm	700mm	1750g
CLY 350 MS19-21	21mm	700mm	1800g
CLY 350 MS19-23	23mm	700mm	1850g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS19-W08	1/2"	700mm	1450g
CLY 350 MS19-W09	9/16"	700mm	1630g
CLY 350 MS19-W10	5/8"	700mm	1640g
CLY 350 MS19-W11	11/16"	700mm	1700g
CLY 350 MS19-W12	3/4"	700mm	1750g
CLY 350 MS19-W13	13/16"	700mm	1800g
CLY 350 MS19-W14	7/8"	700mm	1850g
CLY 350 MS19-W15	15/16"	700mm	1860g
CLY 350 MS19-W16	1"	700mm	1900g
CLY 350 MS19-W17	1 1/16"	700mm	1920g
CLY 350 MS19-W18	1 1/8"	700mm	1950g
CLY 350 MS19-W20	1 1/4"	700mm	2550g



Insulated Pipe Wrench

Forged from heat treated chrome vanadium steel these 12 sided socket head pipe wrenches are offset to allow increased access.

Part No.	Size	Length	Weight
CLY 350 MS20-06	6mm	82mm	30g
CLY 350 MS20-07	7mm	90mm	35g
CLY 350 MS20-08	8mm	94mm	50g
CLY 350 MS20-10	10mm	118mm	90g
CLY 350 MS20-11	11mm	130mm	95g
CLY 350 MS20-12	12mm	135mm	130g
CLY 350 MS20-13	13mm	150mm	160g
CLY 350 MS20-14	14mm	160mm	170g
CLY 350 MS20-15	15mm	166mm	220g
CLY 350 MS20-16	16mm	172mm	230g
CLY 350 MS20-17	17mm	189mm	280g
CLY 350 MS20-18	18mm	196mm	320g
CLY 350 MS20-19	19mm	208mm	370g
CLY 350 MS20-21	21mm	233mm	510g
CLY 350 MS20-22	22mm	240mm	660g
CLY 350 MS20-23	23mm	260mm	690g
CLY 350 MS20-24	24mm	265mm	710g
CLY 350 MS20-25	25mm	280mm	780g
CLY 350 MS20-26	26mm	290mm	810g
CLY 350 MS20-27	27mm	300mm	1000g
CLY 350 MS20-28	28mm	310mm	1050g
CLY 350 MS20-29	29mm	320mm	1150g
CLY 350 MS20-30	30mm	327mm	1280g

Insulated Allen Keys

The blades of the entire range of allen keys are forged from chrome vanadium steel which has undergone a high frequency heat treatment in order to achieve a hardness of between 160 and 180kg/mm². The quality of this steel allows a reduction in the thickness of the resulting key, meaning that after the insulation process the Clydesdale / Sibille range of keys is comparable in thickness to other non insulated keys of the same usable size. The tightening torques achieved by Clydesdale / Sibille keys are greater by approx. 60% than those specified by the nut and bolt industries by their standards worldwide.

Insulated Allen Key - "T" Handle

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS23TS-03	3mm	172mm	90g
CLY 350 MS23TS-04	4mm	172mm	95g
CLY 350 MS23TS-05	5mm	172mm	100g
CLY 350 MS23TS-06	6mm	178mm	105g
CLY 350 MS23TS-07	7mm	178mm	110g
CLY 350 MS23TS-08	8mm	178mm	140g
CLY 350 MS23TS-09	9mm	178mm	180g
CLY 350 MS23TS-10	10mm	178mm	210g
CLY 350 MS23TS-11	11mm	178mm	230g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS23TS-W02	1/8"	175mm	90g
CLY 350 MS23TS-W03	3/16"	175mm	100g
CLY 350 MS23TS-W04	1/4"	175mm	108g
CLY 350 MS23TS-W05	5/16"	178mm	140g
CLY 350 MS23TS-W06	3/8"	178mm	226g
CLY 350 MS23TS-W07	7/16"	178mm	230g
CLY 350 MS23TS-W08	1/2"	180mm	300g

Insulated Allen Key – Standard Series

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 MS23-03	3mm	123mm	20g
CLY 350 MS23-04	4mm	124mm	30g
CLY 350 MS23-05	5mm	125mm	50g
CLY 350 MS23-06	6mm	125mm	70g
CLY 350 MS23-07	7mm	126mm	85g
CLY 350 MS23-08	8mm	126mm	110g
CLY 350 MS23-09	9mm	127mm	140g
CLY 350 MS23-10	10mm	128mm	190g
CLY 350 MS23-11	11mm	128mm	190g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 MS23-W02	1/8"	123mm	20g
CLY 350 MS23-W03	3/16"	124mm	30g
CLY 350 MS23-W04	1/4"	125mm	70g
CLY 350 MS23-W05	5/16"	126mm	110g
CLY 350 MS23-W06	3/8"	127mm	155g
CLY 350 MS23-W07	7/16"	128mm	190g



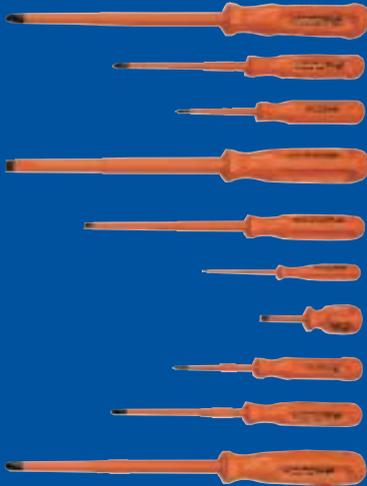
MS23TS



MS23



IS64



IS18

Insulated Allen Key – ‘Screwdriver’ Handle

Metric Sizes

Part No.	Size	Length	Weight
CLY 350 IS64-02.5	2.5mm	87mm	42g
CLY 350 IS64-03	3mm	87mm	44g
CLY 350 IS64-04	4mm	95mm	78g
CLY 350 IS64-05	5mm	95mm	80g
CLY 350 IS64-06	6mm	105mm	124g
CLY 350 IS64-07	7mm	117mm	148g
CLY 350 IS64-08	8mm	117mm	212g

Imperial Sizes

Part No.	Size	Length	Weight
CLY 350 IS64-W03	3/16"	95mm	78g
CLY 350 IS64-W04	1/4"	117mm	124g
CLY 350 IS64-W05	5/16"	117mm	148g
CLY 350 IS64-W06	3/8"	127mm	212g

Insulated Screwdrivers

In compliance with the many different types of electrical work, Sibille has produced a multitude of sizes of screwdriver, with the aim of satisfying almost every specific need. Each screwdriver has gone through a rigorous series of research, development, design and test procedures to ensure that the tool not only performs the required task well but so that it performs it time and time again for the many years of its expected life.

One of the key advantages of this range of Insulated Screwdrivers is that the diameter (including insulation) of the blade is the same as that of the screw head. This has been achieved by recessing the blade length so that there is no requirement of the user to ‘peel’ back the insulation as is required by other inferior brands. The handle is designed so as to give a positive ‘tight’ grip even when wearing gloves, also allowing a high torque generation. All Clydesdale / Sibille Insulated Screwdrivers are manufactured from the highest quality materials and then undergo a high frequency heat treatment to ensure a hardness of between 160 and 180kg/mm. The advantage of the constant diameter insulated blade is that the screwdriver may be inserted anywhere without damaging the insulation, thus preventing any risk to the user.

Insulated Screwdriver – Slothead

Part No.	Blade Angle	Width	Blade Thickness	Length	Handle Length	Weight
CLY 350 IS18-02	–	2mm	0.36mm	70mm	75mm	16g
CLY 350 IS18-03	–	3mm	0.44mm	100mm	87mm	30g
CLY 350 IS18-04	–	4mm	0.71mm	120mm	95mm	52g
CLY 350 IS18-05.5	–	5.5mm	0.91mm	150mm	95mm	72g
CLY 350 IS18-06.5	–	6.5mm	1.08mm	150mm	105mm	92g
CLY 350 IS18-08	–	8mm	1.08mm	150mm	117mm	142g
CLY 350 IS18-08-2	–	8mm	1.08mm	200mm	117mm	166g
CLY 350 IS18-10	–	10mm	1.42mm	150mm	127mm	216g
CLY 350 IS18-10-2	–	10mm	1.42mm	250mm	127mm	282g
CLY 350 IS18-12	–	12mm	1.79mm	200mm	127mm	318g
CLY 350 IS18B-06.5	–	6.5mm	1.08mm	40mm	50mm	36g

CLYDESDALE

Powering the Future

Insulated Screwdriver – Offset Blade – Slothead

These screwdrivers provide a handy aid for very difficult access screws, provided in variants where the blade angle is in line with the length of the blade and against the length of the blade, the handle is moulded like a standard allen key to allow even greater access to recessed cabinets.

Part No.	Blade Angle	Width	Blade Thickness	Length	Handle Length	Weight
CLY 350 MS37LL-05	With	5mm	0.91mm	23mm	153mm	40g
CLY 350 MS37LL-06	With	6mm	1.01mm	28mm	100mm	25g
CLY 350 MS37LL-08	With	8mm	1.21mm	33mm	135mm	45g
CLY 350 MS37LL-10	With	10mm	1.42mm	42mm	150mm	70g
CLY 350 MS37LT-05	Against	5mm	0.91mm	23mm	150mm	40g
CLY 350 MS37LT-06	Against	6mm	1.01mm	28mm	100mm	25g
CLY 350 MS37LT-08	Against	8mm	1.21mm	33mm	130mm	45g
CLY 350 MS37LT-10	Against	10mm	1.42mm	42mm	150mm	70g

Insulated Magnetic Screwdriver with detachable tips

Supplied as a standard set with 4 of the most commonly required tips (slothead 5.5 & 6.5mm, cross head 4.5 & 6mm), this tool is made from chrome vanadium steel and simply has been magnetised to allow the holding of screws for areas of extremely limited access. For other tip sizes please contact Clydesdale.

Part No.	Length	Head Ø	Weight
CLY 350 TM18	245mm	16mm	120g

Insulated Screwdriver – Pozidrive

Part No.	Pozi No.	Width	Blade Thickness	Length	Handle Length	Weight
CLY 350 IP18-0	0	4mm	0.71mm	150mm	95mm	55g
CLY 350 IP18-1	1	5mm	0.81mm	100mm	95mm	60g
CLY 350 IP18-2	2	6mm	1.01mm	125mm	105mm	82g
CLY 350 IP18-3	3	8mm	1.08mm	150mm	117mm	146g
CLY 350 IP18-4	4	10mm	1.42mm	200mm	127mm	256g
CLY 350 IP18B-1	1	5mm	0.81mm	40mm	50mm	34g
CLY 350 IP18B-2	2	6mm	1.01mm	40mm	50mm	34g

Insulated Screwdriver – Philips

Part No.	Phil No.	Width	Blade Thickness	Length	Handle Length	Weight
CLY 350 IC18-0	0	4mm	0.71mm	150mm	95mm	55g
CLY 350 IC18-1	1	5mm	0.81mm	100mm	95mm	60g
CLY 350 IC18-2	2	6mm	1.01mm	125mm	105mm	82g
CLY 350 IC18-3	3	8mm	1.08mm	150mm	117mm	146g
CLY 350 IC18-4	4	10mm	1.42mm	200mm	127mm	256g

Insulated Screwdriver – Countersunk

Part No.	CS No.	Width	Blade Thickness	Length	Handle Length	Weight
CLY 350 TC4-1	1	2.5mm	0.38mm	120mm	120mm	90g
CLY 350 TC4-2	2	3mm	0.48mm	120mm	120mm	90g
CLY 350 TC4-3	3	3.5mm	0.59mm	100mm	120mm	90g



MS7LL



TM18



IP18



IC18



TC4



IS77



IS79



MS22J



IS22



A02



MS2E

MS2



MS61

Insulated Knives

All of the insulation used on our range of Insulated Knives is moulded in one piece, thus avoiding possible air gaps or other potential hazards. All blades used are of 70K steel, giving extreme strength and long lasting sharpness. All knives have been designed with the end user in mind, the knives are well balanced which allows effortless cutting, also safety is key, hence the addition of the finger stops. The blade insulation is locked by 6 fixing points to ensure that both the blade and the insulation stay in place.

All Knives are supplied in a protective storage sheath (as pictured).

N.B. Sharpening is recommended using Sharpener A02

Part No.	Blade Length	Blade Thickness	Blade Type	Total Length
CLY 350 IS77	64mm	6mm	Straight & curved tip	180mm
CLY 350 IS78	64mm	6mm	Straight & curved tip	175mm
CLY 350 IS79	62mm	6mm	Curved	160mm

Insulated Hacksaw

Each hacksaw is supplied complete with a blade, which is easily replaceable. The standard hacksaw frame is an injection moulded unit giving one of the most ergonomically designed hacksaws available. Another feature of the hacksaw is the inclusion of a blade tension lever and the possibility of offsetting the blade for side cutting. The Junior hacksaw is of the dipped insulation type.

Part No.	Type	Length	Blade Length	Spare Blade Ref.
CLY 350 MS22J	Junior	263mm	145mm	CLY 351 L22J
CLY 350 IS22	Standard	450mm	297 or 304mm	CLY 351 L10

Sharpening Stone

Used from the sharpening of any blade, this sharpening stone comes complete with a protective plastic handle.

Part No.	Length	Weight
CLY 350 A02	255mm	220g

Insulated Scissors

Available in 2 versions, either with the upper parts of the blades insulated or plain. These scissors have been designed with special handle opening so as to be used comfortably with gloves. They are ambi-dextrous, and the blades are constructed from stainless steel. They are suitable for wire cutting.

Part No.	Type	Length	Weight
CLY 350 MS2	Plain Blade	132mm	80g
CLY 350 MS2E	Ins. Blade	135mm	85g

Insulated Cable Cutter

Forged from nickel chromium steel the blades on these cable cutters are replaceable. Its anti crossing design avoids cable crushing and deformation. The incredible gearing allows much harder materials to be cut than would be expected from such a lightweight range of cable cutters.

Part No.	Max. Jaw Open	Length	Weight	Spare Blade Ref.
CLY 350 MS61-160	5.5mm	160mm	290g	—
CLY 350 MS61-330	12mm	330mm	970g	CLY 351 MS61M
CLY 350 MS61-630	14mm	630mm	2550g	CLY 351 MS61C

Insulated Bolt Cutter

Forged from steel with a very high mechanical strength the blades of this bolt cutter are double heat treated to give even higher cutting strength.

Part No.	Length	Length	Weight	Spare Blade Ref.
CLY 350 MS29D	465mm	18"	1700g	CLY 351 MS29DM

Insulated Ratchet Cable Cutter

Manufactured from a treated forged steel blade with a hardness rated at 50 HRC, the blade can be released at any point during the cutting process. This cutter should only be used to cut either Copper or Aluminium conductors and will not cut steel, ACSR or hard drawn Copper.

Part No.	Length	Length	Weight	Spare Moving Blade	Spare Fixed Blade
CLY 350 MS76S	270mm	10"	730g	CLY 351 MS76NM	CLY 351 MS76MF

Insulated Ratchet Cable Cutter – Slim Design

Design to be used in areas where access is limited these ratchet cutters feature a chromium tipped forged steel blade. The blade can be released at any point during the cutting process. This cutter should only be used to cut either Copper or Aluminium conductors and will not cut steel, ACSR or hard drawn Copper.

Part No.	Length	Length	Weight	Spare Moving Blade	Spare Fixed Blade
CLY 350 MS46	330mm	13"	1100g	CLY 351 MS46M	CLY 351 MS46F

Insulated Cable Cutting Pliers

The shape of the nose of the blade makes these pliers the tool of choice for professionals. Its small size allows use in very confined areas, and its pawl lock allows the blade to be protected whilst not in use. The blades are individually heat treated to give a hardness of HRC 56. Suitable for Cu and Al only.

Part No.	Max. Jaw Opening	Length	Weight
CLY 350 MS45-195	15mm	195mm	430g
CLY 350 MS45-230	20mm	230mm	500g

Insulated Cable Cutting Plier – Telephone Cable

Specially designed for the cutting of the telephone cables, hence double section shaping.

Part No.	Max. Jaw Opening	Length	Weight
CLY 350 MS30S	14mm	160mm	200g

Insulated Flush Cutting Pliers

Again specifically designed for the cutting of telephone cables the truncated nose gives a completely 'flush' finish.

Part No.	Length	Weight
CLY 350 MS5S	150mm	100g





MS62

Insulated Profiling Shear Pliers

Used to precision cut sheet steel along an exact outline.

Part No.	Length	Weight	Capacity
CLY 350 MS62-225	225mm	430g	1mm
CLY 350 MS62-275	275mm	660g	1.2mm

Insulated End Cutting Pliers

These tools are forged from chrome vanadium steel with a high carbon content, and are individually heat treated for added strength.

Part No.	Length	Length	Jaw Gap	Max. Jaw Opening	Weight
CLY 350 MS6-135	135mm	5"	7mm	19mm	210g
CLY 350 MS6-170	170mm	6.5"	8mm	23mm	290g
CLY 350 MS6-210	210mm	8"	10mm	27mm	410g

Insulated End Cutting Pliers – Extended Reach

These tools are forged from chrome vanadium steel with a high carbon content, and are individually heat treated for added strength.

Part No.	Length	Length	Jaw Gap	Max. Jaw Opening	Weight
CLY 350 MS31-170	170mm	6.5"	13.5mm	30mm	270g
CLY 350 MS31-185	185mm	7"	14.5mm	32mm	350g

Insulated Diagonal Cutting Plier

Manufactured from chrome vanadium steel with a high carbon content, these pliers are individually induction heat treated.

Part No.	Length	Length	Weight	Test Material	Capacity Ø
CLY 350 MS60-145	145mm	5.5"	200g	160kg/mm ²	1.6mm
CLY 350 MS5-150	150mm	5.5"	210g	200kg/mm ²	1.4mm
CLY 350 MS60-168	168mm	6.5"	260g	160kg/mm ²	1.6mm
CLY 350 MS5-175	175mm	6.5"	300g	200kg/mm ²	1.6mm
CLY 350 MS60-185	185mm	7"	350g	160kg/mm ²	1.6mm
CLY 350 MS5-195	195mm	7.5"	400g	200kg/mm ²	1.8mm

Fully Insulated Diagonal Cutting Plier

The same as the MS60 tool but with fully Insulated blades, the insulation is achieved during a one dip process.

Part No.	Length	Length	Weight	Test Material	Capacity Ø
CLY 350 MS60E-168	168mm	6.5"	260g	160kg/mm ²	1.6mm

Insulated Offset Diagonal Cutting Pliers

Manufactured from chrome vanadium steel with a high carbon content, these pliers are individually induction heat treated. The head is angled at 35°.

Part No.	Length	Length	Weight
CLY 350 MS24-165	165mm	6.5"	230g



MS31



MS60



MS60E



MS24

Insulated Universal / Combination Pliers

Manufactured from chrome vanadium steel with a high carbon content, these pliers are individually induction heat treated.

Part No.	Length	Length	Weight	Test Material	Capacity Ø
CLY 350 MS4-145	145mm	5.5"	190g	200kg/mm ²	1.4mm
CLY 350 MS4-165	165mm	6.5"	250g	200kg/mm ²	1.6mm
CLY 350 MS4-185	185mm	7"	340g	200kg/mm ²	1.8mm
CLY 350 MS4-210	210mm	8"	490g	200kg/mm ²	2.0mm
CLY 350 MS4-220	220mm	9"	450g	200kg/mm ²	2.0mm

Fully Insulated Universal / Combination Pliers

The same as the MS4 tool but with fully Insulated blades, the insulation is achieved during a one dip process.

Part No.	Length	Length	Weight	Test Material	Capacity Ø
CLY 350 MS4E-185	185mm	7"	340g	200kg/mm ²	1.8mm

Insulated Flat Nosed Pliers

Manufactured from chrome vanadium steel with a high carbon content, these pliers are individually induction heat treated.

Part No.	Length	Length	Nose Style	Nose Length	Weight
CLY 350 MS11-150	1501.1mm	5.5"	Short	30mm	150g
CLY 350 MS11-170S	1701.1mm	6.5"	Short	39mm	170g
CLY 350 MS11-170L	1701.1mm	6.5"	Long	50mm	170g
CLY 350 MS11-205	2051.1mm	8"	Long	70mm	260g

Fully Insulated Flat Nosed Pliers

The same as the MS11 tool but with fully Insulated blades, the insulation is achieved during a one dip process.

Part No.	Length	Length	Nose Style	Nose Length	Weight
CLY 350 MS11E-170	170mm	6.5"	n/a	45mm	180g



MS4E



MS11E

Insulated Rounded Nose Pliers

Manufactured from chrome vanadium steel with a high carbon content, these pliers are individually induction heat treated.

Part No.	Length	Length	Nose Style	Nose Length	Test Material	Capacity Ø	Weight
CLY 350 MS10-170	170mm	6.5"	Straight Half Round	50	160kg/mm ²	1.0mm	180g
CLY 350 MS10-205	205mm	8"	Straight Half Round	70	160kg/mm ²	1.6mm	240g
CLY 350 MS13-165	165mm	6.5"	Bent 45° Half Round	46	160kg/mm ²	1.0mm	180g
CLY 350 MS13-205	205mm	8"	Bent 45° Half Round	67	160kg/mm ²	1.6mm	230g
CLY 350 MS15-170	170mm	6.5"	Straight Full Round	51	n/a	n/a	170g



MS13E

Fully Insulated Rounded Nose Pliers

The same as the MS13 tool but with fully Insulated blades, the insulation is achieved during a one dip process.

Part No.	Length	Length	Nose Style	Nose Length	Test Material	Capacity Ø	Weight
CLY 350 MS13E-170	170mm	6.5"	Bent 45° Half Round	46	160kg/mm ²	1.0mm	180g



MS8

Insulated Slip Joint / Scotch Gas Pliers

Forged from the highest quality chrome vanadium steel, this tool is used for any task involving the 'twisting' of another object.

Part No.	Length	Length	Nose Style	Max. Jaw Opening	Locking Positions	Weight
CLY 350 MS8-205	205mm	8"	Tapered	30	6	230g
CLY 350 MS8-250	250mm	10"	Tapered	40	6	400g
CLY 350 MS8-310	310mm	12"	Tapered	55	6	670g
CLY 350 MS26-250	250mm	10"	Straight	45	5	490g
CLY 350 MS27-250	250mm	10"	Curved	45	5-Double rack	440g
CLY 350 MS32-360	360mm	14.5"	Curved	75	7	1010g



MS26



MS32

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Powering the Future

Insulated Cable Stripping Pliers

A simple to use, automatically adjustable tool which enables the user to access even the most inaccessible places. The cutting edge is replaceable. To use simply position the wire to be stripped between the cutting edges, press the pliers together and turn, ensure to only use sufficient force and not to over grip.

Part No.	Length	CSA Range	Weight
CLY 350 MS43-10	155mm	0.5 to 10mm ²	210g



MS43-10

Insulated Axe

Manufactured from the highest quality materials this axe is insulated to allow cutting of trees, bushes etc in close proximity to LV power lines.

Part No.	Length	Length	Weight
CLY 350 MS104	380mm	15"	1,200g



MS104

Universal Composite Pliers

Containing absolutely no metal parts, this tool represents the next generation of Insulated Hand Tools – Non Conductive Hand Tools. Totally non-corroding and due to its composite material is approx. 2/3 the weight of a traditional universal pliers.

Part No.	Length	Length	Weight
CLY 350 MC4	200mm	8"	150g



MC4

CLYDESDALE

Powering the Future

PPE / Arc Flash Protection



IMPORTANT SAFETY INFORMATION

Arc Protection Clothing Requirements

Whenever possible, always de-energise circuits before working on or around them.

- OSHA CFR 1910.269 'The employer shall ensure that each employee who is exposed to the hazards of flames or electric arcs does not wear clothing that, when exposed to flames or electric arcs, could increase the extent of injury that would be sustained by the employee.' (l)(6)(iii)
- Clothing made from acetate, nylon, polyester and rayon either pure or blended should not be worn when working in hazardous environments. Clothing made from 100% cotton or wool must be determined acceptable for the conditions the worker will be exposed to. Clothing made from flame-resistant materials, that meet current ASTM F1506, is acceptable.
- ASTM F1506 details the specifications of a textile to be used by an electrical worker as a means of electrical arc protection. A garment must include a label, which states the following information: Tracking I.D. Code, Meets ASTM F1506, Manufacturer's name, Care Instructions & Fibre Content, Size, and 'Arc Rating' – ATPV or EBT.
- ASTM F2178 is the test method used to measure arc rated products intended to protect the face of workers exposed to electrical arcs.
- To evaluate FR clothing materials in order to measure the heat transferred through the fabric, two values are calculated: arc-thermal performance value (ATPV) and heat attenuation factor (HAF).
- ATPV is the minimum energy causing the predicted onset of second-degree burns.
- HAF is the percentage of total energy of the arc that the fabric prevents from passing through.
- Heavier or layers of FR fabrics give higher ATP values.

Always Perform a Hazard Assessment

The NFPA 70E Standard for Electrical Safety Requirements for Employee Workplaces requires employers to perform an Electrical Arc Hazard Assessment. Each situation is unique and needs to be evaluated on its own merits. ASTM F1959 details the standardised test that must be used to determine the thermal protective value of textiles in an electric arc application.

Clothing selected for a particular application shall have an arc protective rating of (EBT or APTV) higher than the potential hazard to prevent the onset of 2nd degree burns. Above right are factors affecting potential energy exposures based on the Duke Heat Flux Calculator on our site (www.clydesdale.ltd.uk/calculator) to compute potential thermal exposure.

NFPA 70E 2000 Edition

Table 3-3.9.3 Protective Clothing Characteristics – Typical Protective Clothing Systems

Clydesdale Clothing Colour Code	Hazardous Risk Category	Clothing Description (Number of clothing layers given in brackets)	Total Weight oz. / yd ²	Minimum Arc Thermal Performance Exposure Value (ATPV)* or Breakopen Threshold Energy (EBT)* Rating of PPE cal / cm ²
Blue	0	Untreated cotton	(1) 4.5 - 7	–
	1	FR shirt & FR Trousers	(1) 4.5 - 8	5
	2	Cotton underwear plus FR shirt and FR trousers (2)	9 - 12	8
Royal Blue	3	Cotton underwear plus FR shirt and FR trousers plus FR coverall (3)	16 - 20	25
Grey	4	Cotton underwear plus FR shirt and FR trousers plus double layer switching jacket and trousers (4)	24 - 30	40



*ATPV is defined in the ASTM F1959 standard arc test method for flame resistant (FR) fabrics as the incident energy that would just cause the onset of a second degree burn. E_{BT} is the average of the five highest incident energy exposure values below the Stoll curve where the fabric does not exhibit breakopen. E_{BT} is reported when ATPV cannot be measured due to FR fabric breakopen.

Factors Affecting the Extent & Seriousness of Worker Injury when Exposed to Arc Flash

1. Electric arc intensity
 - Fault current
 - System voltage
 - Electrode gap
 - Number of phases involved
 - Open arc configuration or enclosure
2. Electric arc duration
3. Distance of the worker from the electric arc
4. Type and fit of clothing worn
5. Age and health factors



Clydesdale FR Fabrics

- Clydesdale uses Westex Indura Ultra Soft® exclusively. Indura Ultra Soft® blend of 88% cotton and 12% high tenacity nylon substantially increase the fabric's abrasion resistance helping the garment last over 50% longer than 100% cotton garments. Plus the new softer feel further enhances the breathable 'all-weather' comfort of cotton. The treatment process for Indura flame resistant fabrics forms a long chain flame retardant polymer impregnated into the core of each cotton fibre. Guaranteed flame resistant for the life of the garment. An excellent value equation.
- NOMEX® is a man made fibre resistant to heat, flame and chemicals. NOMEX® and KEVLAR® are registered trademarks of E.I. du Pont de Nemours and Company.

Effects of Electrical Shock

Even relatively low voltages can be fatal. For example, electrical shocks produced from common 50 Hz ac power passing from hand to foot for a duration of one second can have the following effects:

Current	Effects
1-3 Milliamps	Tingling Sensation
3+ Milliamps	Shock (pain)
10+ Milliamps	Muscular Contractions (can't let go)
30+ Milliamps	Respiratory Paralysis (may be fatal)
60+ Milliamps	Ventricular Fibrillation (usually fatal)
4+ Amps	Heart Paralysis (fatal)
5+ Amps	Tissue Burning (fatal, vital organs destroyed)

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Trust the No.1...

Clydesdale is the leading specialist in overhead line and cable installation equipment for the Electricity and Telecommunication industries.

Expertise...

For many years Clydesdale has been supporting the Electricity and Telecommunication markets in the UK and Ireland. If you have a job that requires a bespoke solution, utilise our expertise, talk to Clydesdale.

If you have questions or require further information please contact our Customer Services Department on +44 (0)1234 855855 who will be pleased to answer your request.

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CLY 574 020



CLY 574 075



CLY 574 031

Dual stage front closure with plastic zip and FR Velcro storm flap on 31-100 cal/cm² jacket designs.



CLY 530 T565BC

Clydesdale PRO-WEAR™ Flash Jackets

Dual stage front closure with plastic zip and FR Velcro storm flap on 31-100 cal/cm² jacket designs.

- 8 cal/cm² to 100 cal/cm² protection
- Indura Ultra Soft® material – Excellent breathability & cotton comfort
- All Clydesdale PRO-WEAR™ sewn with Nomex® thread
- 32" long and available in sizes S, M, L, XL, 2XL and 3XL
- Other sizes available by special order
- Jackets designed to interface with PRO-HOOD™
- Meets current ASTM F1506 and NFPA 70E standards

Part No.	Description
CLY 574 008	8 cal/cm ² , 7oz./yd ² material, expansion back for added comfort, FR Velcro front closure, Nomex® wristlets, navy blue
CLY 574 011	11 cal/cm ² , 9oz./yd ² material, expansion back for added comfort, FR Velcro front closure, Nomex® wristlets, navy blue
CLY 574 020	20 cal/cm ² , 13oz./yd ² material, expansion back for added comfort, FR Velcro front closure, Nomex® wristlets, navy blue
CLY 574 031	31 cal/cm ² , 2 layer (9oz./yd ² & 7oz./yd ²) material, expansion back for added comfort, dual stage front closure with plastic zip and FR Velcro storm flap, Nomex® wristlets, royal blue
CLY 574 040	40 cal/cm ² , 2 layer (9oz./yd ² & 13oz./yd ²) material, expansion back for added comfort, dual stage front closure with plastic zip and FR Velcro storm flap, Nomex® wristlets, grey
CLY 574 055	55 cal/cm ² , 2 layer (13oz./yd ² & 13oz./yd ²) material, expansion back for added comfort, dual stage front closure with plastic zip and FR Velcro storm flap, Nomex® wristlets, grey
CLY 574 075	75 cal/cm ² , 3 layer (7oz./yd ² & 2-13oz./yd ²) material, expansion back for added comfort, dual stage front closure with plastic zip and FR Velcro storm flap, Nomex® wristlets, grey
CLY 574 100	100 cal/cm ² , 4 layer (2-7oz./yd ² & 2-13oz./yd ²) material, expansion back for added comfort, dual stage front closure with plastic zip and FR Velcro storm flap, Nomex® wristlets, grey

Note: Add suffix 'S' for small, 'M' for medium etc.

Warning: Arc Flash Clothing protects from thermal effects of arc flash only.

Safety Glasses

- CE marked, meets current EN166 standard
- Anti-fog, anti-scratch, anti-static
- 99.9% UV protection

Part No.	Description
CLY 530 T565BC	Clear lens, black frame
CLY 530 T565BS	Smoked lens, black frame
CLY 530 T565BA	Amber lens, black frame

Clydesdale PRO-HOOD™ Arc Flash Protection Hood

- 8 cal/cm² to 100 cal/cm² protection
- Indura Ultra Soft® material – Excellent breathability & cotton comfort
- All Clydesdale PRO-HOOD™ sewn with Nomex® thread
- 6" x 16" (152 x 406mm) viewing area
- Wide, arc rated, anti-fog amber lens
- Meets current ASTM F2178 and NFPA 70E standards and flammability requirements of ASTM F1506
- Universal hard hat bracket included
- One size fits all

Part No.	Description
CLY 571 008	8 cal/cm ² protection, single layer of 7oz./yd ² material, navy blue
CLY 571 011	11 cal/cm ² protection, single layer of 9oz./yd ² material, navy blue
CLY 571 020	20 cal/cm ² protection, single layer of 13oz./yd ² material, navy blue
CLY 571 031	31 cal/cm ² protection, 2 layer (9oz./yd ² & 7oz./yd ²) material, royal blue
CLY 571 040	40 cal/cm ² protection, 2 layer (9oz./yd ² & 13oz./yd ²) material, grey
CLY 571 055	55 cal/cm ² protection, 2 layer (13oz./yd ² & 13oz./yd ²) material, grey
CLY 571 075	75 cal/cm ² protection, 3 layer (7oz./yd ² & 2-13oz./yd ²) material, grey
CLY 571 100	100 cal/cm ² protection, 4 layer (2-7oz./yd ² & 2-13oz./yd ²) material, grey

Replacement Arc Flash Protection Lenses, Brackets and Helmets

- 11 cal/cm² to 100 cal/cm² protection
- 1.5mm thickness
- 6" x 16" (152 x 406mm) viewing area on replacement PRO-HOOD™ shield
- Amber tint
- Use with FR clothing
- Works with Clydesdale PRO-HOOD™

Part No.	Description
CLY 540 SA29R03	ANSI Type I, front brim with ratchet 4-point suspension
CLY 579 4000V	Replacement amber lens with Velcro attachment for 11 cal/cm ² to 40 cal/cm ² Clydesdale PRO-HOOD™
CLY 579 10000	Replacement face shield for 55 cal/cm ² and higher Clydesdale PRO-HOOD™
CLY 579 001	Universal dielectric hard hat bracket to interface with front brim hard hats



CLY 571 020



CLY 571 040



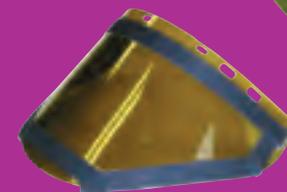
CLY 571 031



CLY 540 SA29R03



CLY 579 4000V



CLY 579 10000



CLY 579 001



CLY 573 011



CLY 573 031



CLY 573 040



CLY 572 011



CLY 421 010

Clydesdale PRO-WEAR™ Arc Flash Protection Bib Overalls & Coveralls

- 8 cal/cm² to 100 cal/cm² protection
- Indura Ultra Soft® material – Excellent breathability & cotton comfort
- All Clydesdale PRO-WEAR™ sewn with Nomex® thread
- Bib front for added protection
- Integrated heavy duty braces
- Adjustable Velcro waist straps
- Easy-on boot access
- Meets current ASTM F1506 and NFPA 70E standards
- Sizes S, M, L, XL, 2XL and 3XL available
- Other sizes available by special order

Part No.	Description
CLY 573 011	11 cal/cm ² , 9oz./yd ² material, relax cut for greater mobility and heavy duty braces, navy blue
CLY 573 020	20 cal/cm ² , 13oz./yd ² material, relax cut for greater mobility and heavy duty braces, navy blue
CLY 573 031	31 cal/cm ² , 2 layer (9oz./yd ² & 7oz./yd ²) material, relax cut for greater mobility and heavy duty braces, royal blue
CLY 573 040	40 cal/cm ² , 2 layer (9oz./yd ² & 13oz./yd ²) material, relax cut for greater mobility and heavy duty braces, grey
CLY 573 055	55 cal/cm ² , 2 layer (13oz./yd ² & 13oz./yd ²) material, relax cut for greater mobility and heavy duty braces, grey
CLY 573 075	75 cal/cm ² , 3 layer (7oz./yd ² & 2-13oz./yd ²) material, relax cut for greater mobility and heavy duty braces, grey
CLY 573 100	100 cal/cm ² , 4 layer (2-7oz./yd ² & 2-13oz./yd ²) material, relax cut for greater mobility and heavy duty braces, grey
CLY 572 008	8 cal/cm ² , COVERALLS 7oz./yd ² material, full cut with set in sleeves, front flame retardant closure, expansion back, and 2-ply Nomex® wristlets, navy blue
CLY 572 011	11 cal/cm ² , COVERALLS 9oz./yd ² material, full cut with set in sleeves, front flame retardant closure, expansion back, and 2-ply Nomex® wristlets, navy blue
CLY 572 020	20 cal/cm ² , COVERALLS 13oz./yd ² material, full cut with set in sleeves front flame retardant closure, expansion back, and 2-ply Nomex® wristlets, navy blue

Note: Add suffix 'S' for small, 'M' for medium, etc.

Kit Bag

Part No.	Description
CLY 421 010	Large Kit bag for storing Clydesdale PRO-WEAR™ Arc Flash Clothing, gloves and other accessories

Arc Flash Protection Kits

Kits with Coveralls

Part No.	cal/cm ² Rating	Glove Class	Glove Size	Garment Size
CLY 575	008	0	08, 09, 10 or 11	S = 1, M = 2, L = 3, XL = 4, 2XL = 5 or 3XL = 6
CLY 575	011	0		
CLY 575	020	0		
CLY 575	020	2		

Example

CLY 575	011	0	09	4
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CLY 575 011 0094 is an arc flash protection kit with a rating of 11 cal/cm² containing Black 11" Rubber Insulating Gloves Class 0 size 9, Leather Protector Gloves 10" size 9, Orange Hard Hat SA29R03, T565 BC Safety Glasses, PRO-WEAR™ Coveralls size XL, PRO-HOOD™ Arc Flash Protection Hood, Glove Storage Bag all supplied in Arc Flash Kit Bag.

CLY 575 011 0093



Kits with Bib Overalls & Jackets

Part No.	cal/cm ² Rating	Glove Class	Glove Size	Garment Size
CLY 576	011	0	08, 09, 10 or 11	S = 1, M = 2, L = 3, XL = 4, 2XL = 5 or 3XL = 6
CLY 576	020	0		
CLY 576	020	2		
CLY 576	031	0		
CLY 576	031	2		
CLY 576	040	2		
CLY 576	055	2		
CLY 576	075	2		
CLY 576	100	2		

Example

CLY 576	040	2	09	4
---------	-----	---	----	---

CLY 576 040 2094 is an arc flash protection kit with a rating of 40 cal/cm² containing Black 14" Rubber Insulating Gloves Class 2 size 9, Leather Protector Gloves 12" size 9, Orange Hard Hat SA29R03, T565 BC Safety Glasses, PRO-WEAR™ Flash Protection Bib Overalls size XL, PRO-WEAR™ Flash Jacket size XL, PRO-HOOD™ Arc Flash Protection Hood, Glove Storage Bag all supplied in Arc Flash Kit Bag.



CLY 576 020 0103

Size Selector Chart

Chest	Waist	Inside Leg	Size	Size Code
34-36"	28-30"	28"	S	1
38-40"	32-34"	29"	M	2
42-44"	36-38"	30"	L	3
46-48"	40-42"	30"	XL	4
50-52"	44-46"	30"	2XL	5
54-56"	48-50"	30"	3XL	6



CLY 576 100 2104

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CLY 560 1410



CLY 552 1410



CLY 550 1409



Clydesdale Insulating Gloves

Clydesdale insulating gloves are available in sizes 8-11. Proper fit is important to minimise chafing and fatigue. To determine glove size, measure the circumference around the palm (in inches). Allow for additional room if fabric glove liners are to be worn, especially with thermal liners.

Available in a variety of colours, material types and voltage classes Clydesdale insulating gloves are extremely flexible and make working with small parts easy. All Clydesdale Insulating Gloves meet or exceed EN 60903 and ASTM D120 standards

Part Number	Voltage Class	Length	Material Type	Colour
CLY 5600 11**	00 (500V working)	11"	I – Latex	Orange
CLY 550 11**	0 (1000V working)	11"	I – Natural Rubber	Black
CLY 550 14**	0 (1000V working)	14"	I – Natural Rubber	Red / Yellow
CLY 560 14**	0 (1000V working)	14"	I – Latex	Orange
CLY 570 16**	0 (1000V working)	16"	II – EPDM	Blue
CLY 570 16**BO	0 (1000V working)	16"	II – EPDM	Blue / Orange
CLY 551 14**	1 (7500V working)	14"	I – Natural Rubber	Black
CLY 551 16**	1 (7500V working)	16"	I – Natural Rubber	Black / Red
CLY 561 16**	1 (7500V working)	16"	I – Latex	Orange
CLY 552 14**	2 (17500V working)	14"	I – Natural Rubber	Black
CLY 552 16**	2 (17500V working)	16"	I – Natural Rubber	Yellow / Black
CLY 553 16**	3 (26000V working)	16"	I – Natural Rubber	Yellow / Black
CLY 553 18**	3 (26000V working)	18"	I – Natural Rubber	Yellow / Black
CLY 554 18**	4 (36000V working)	18"	I – Natural Rubber	Yellow / Black

** Insert suffix for sizing, 08 for size 8, 10 for size 10 etc.

Note: Two Colour gloves, inside colour is first, i.e. Red / Yellow denotes a glove with an inner colour of red and an outer colour of yellow.

Other configurations of class, length and material type are available. Please enquire for further details.

Clydesdale Leather Protector Gloves

Leather protector gloves should always be worn over Insulating Gloves to provide necessary mechanical protection against cuts, abrasions and punctures. Clydesdale leather protector gloves are manufactured from cowhide or goatskin. Goatskin is softer and therefore more flexible whilst cowhide is stronger and more economically priced.

As laid down within the specifications of the EN and ASTM standards it is essential to ensure the correct distance between the top of the protector glove cuff and the top end of the bead of the insulating glove. The clearance table opposite details the applicable gap per class of insulating glove.

Warning: Never use leather protector gloves on their own for protection against electric shock as serious injury or death will result, always use the correctly specified insulating gloves.

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Part No.	Material	Length	Description
CLY 555 07451 **	Goatskin	13"	Buckle tie and high visibility cuff
CLY 555 156-4-**	Cowhide	12"	4" Salcor Rubber Cuff
CLY 555 156-6-**	Cowhide	14"	6" Salcor Rubber Cuff
CLY 555 ILP10 **	Cowhide	10"	Elasticated cuff
CLY 555 ILP3S **	Cowhide	12"	Leather cuff palm-side, vinyl reverse

Glove Class	Distance
00	1/2" / 13mm
0	1/2" / 13mm
1	1" / 26mm
2	2" / 51mm
3	3" / 76mm
4	4" / 102mm

Glove Bags

Part No.	Glove Length in. (mm)	Dimensions in. (mm)	Weight lbs. (kgs)
CLY 420 GB112	11(280)	9" x 14" (229 x 356)	1 (.5)
CLY 420 GB114	14 (356)	9" x 16" (229 x 406)	1 (.5)
CLY 420 GB116	16 (406)	9" x 18" (229 x 457)	1.2 (.6)
CLY 420 GB118	18 (457)	9" x 20" (229 x 508)	1.5 (.7)

Glove Inflator

Electrical insulating gloves must be inspected before each use. Inspection is simplified by using a portable glove inflator such as the G-99. The G-99 is a simple, easy to use, portable glove inflator. The G-99 provides a quality means of inspecting gloves in the field. The glove is secured to the inflator using a nylon strap, fastened with Velcro, or a rubber 'O' ring. Inflation is accomplished by pumping the bellows of the inflator.

Part No.	Description	Weight lbs (kgs)
G-99	Glove Inflator Kit	2 (.91)
G-99B	Replacement Bag	-
G-99R	Replacement 'O' Ring	-
G-99S	Replacement Strap	-
G-99V	Replacement Check Valve	-



CLY 555 07451 10

CLY 550 1109



CLY 555 ILP1009

CLY 420 GB112



CLY 559 G-99

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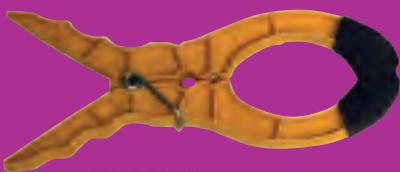


CLY 971 R1330

CLY 971 R1330PVC



CLY 973 4860



CLY 559 21

Roll Blankets

Clydesdale has gone to great lengths to protect workers from low voltage electrical hazards by now offering insulating blanket material on a roll. Clydesdale's insulating Roll Blankets, made from a high strength, fabric-reinforced Type II rubber, allow workers to custom-cut blankets to fit each application at the job site. This minimises the number of different low voltage blanket sizes and shapes that would otherwise need to be carried from job to job.

All classes of Roll Blankets are easily cut with scissors, and are flexible to -40°C . Highly puncture and tear resistant, each class of blanket is also flame (self-extinguishing), oil, and ozone resistant. Each comes in a convenient 36" wide roll, 30 feet in length in unique colours making it easy to identify and highly visible in the work area.

Clear PVC Roll Blankets

Clydesdale's Roll Blanket line includes a Class 1 (7500V) clear PVC material that permits complete visibility, yet provides the necessary insulating properties meeting ASTM F1742 standards.

Part No.	Description	Max. Use	Dimensions ft. (m)
CLY 971 R0330	Class 0 Yellow	1000 V ac	3' x 30' (.9 x 9)
CLY 971 R1330	Class 1 Yellow / Orange	7500 V ac	3' x 30' (.9 x 9)
CLY 971 R1330PVC	Class 1 Clear PVC	7500 V ac	3' x 30' (.9 x 9)

Arc Suppression Blanket

The Arc Suppression Blanket is used as a barrier for protection from the explosive and incendiary effects of electrical arcs and flashes. These hazardous electrical discharges can be caused by faults in cables, cable splices joints and at transformer terminals, or they may be generated by the operation of switchgear, circuit breakers and lightning arrestors. The blanket can be used for worker protection in underground vaults, switchyards and other locations where electrical equipment poses a risk of exposure to explosive electrical discharges.

Caution: Because of the unpredictability of electrical discharges, the Arc Suppression Blanket may not totally contain arcs and flashes, but only reduce or limit explosive and incendiary effects. In such cases injuries may still occur, even when the blanket is properly used.

Part No.	Dimension in. (mm)	Description
CLY 973 4860C	48 x 60 (1219 x 1524)	with Canister
CLY 973 4896C	48 x 96 (1219 x 2438)	with Canister
CLY 973 4860	48 x 60 (1219 x 1524)	Blanket Only
CLY 973 4896	48 x 96 (1219 x 2438)	Blanket Only

Blanket Pegs

Blanket Pegs can be effectively used to hold insulating blankets in place. Springs are used for tension while extra holes in the body of the peg are used to grip conductors and prevent line hose from sliding. Blanket pegs are made of fibreglass reinforced nylon and have moulded rubber boots to increase slip resistance.

Part No.	Description	Length in. (mm)	Jaw Opening in. (mm)	Weight lbs. (kgs)
CLY 559 21	Nylon Peg c/w boots	9.5 (241)	5 (127)	.25 (.11)

Insulated Rescue Hook

Clydesdale's Insulated Rescue Hook is an invaluable tool for any workplace, used to withdraw an injured worker from a hazardous area. Confined spaces, in vaults or just near electrical cabinets and switchgear are some of the places where this tool is a must. Featuring a foam filled, fibreglass reinforced handle for superior electrical insulation and a coated heat treated body hook with an 18" opening, the stick is available in standard lengths of 6 and 8 feet. Other lengths are available as a special order. Contact us with your requirements.

Part No.	Length ft. (m)	Weight lbs. (kgs)
CLY 250 24401	6 (1.8)	4.5 (2)
CLY 250 24403	8 (2.4)	5.5 (2.5)

Static Discharge Stick

The Static Discharge Stick is designed to safely remove the static charge after de-energizing. This grounding tool is pre-assembled and includes a brass alloy 'U' hook, 4 foot closed cell foam filled tubular fiberglass switch stick made in accordance with ASTM Standard F711. Six feet of copper grounding cable attached to a Clydesdale 1814 flat jaw grade 3 bronze serrated clamp with strain relief.

Part No.	Cable Length ft. (m)	Description	Weight lbs. (kgs)
CLY 250 20817	6 (1.8)	Static Discharge Stick 4' (1.2m) length	8 (3.6)

Switchboard Matting

Switchboard Matting is permanently placed in front of switchgear, motor control centres and other high voltage apparatus to provide personal protection for workers. Made from high quality rubber, 1/4" (6.4mm) thick and tested to 20kV to comply with ASTM D178, Class 2 specifications. The corrugated surface acts as a safety tread while reducing the possibility of metal particles becoming embedded. Switchboard matting is supplied in 25 yard rolls.

Maximum Use: 17000V

Part No.	Dimensions in. (mm)	Weight lbs. (kgs) per yd.
CLY 558 M24-2	1/4 x 24 (6 x 610)	9 (4.1)
CLY 558 M30-2	1/4 x 30 (6 x 762)	12 (5.4)
CLY 558 M36-2	1/4 x 36 (6 x 914)	15 (6.8)
CLY 558 M48-2	1/4 x 48 (6 x 1219)	18 (8.2)



CLY 250 24401



CLY 250 20817



CLY 558 M24-2

Matting cross section



6506A



6506A

Ground Tents & Shelters

All ground tents feature:

- One piece instant set-up in less than 10 seconds
- No loose parts
- Two screened windows
- Tie-down cords through hubs
- Ground flaps for weight anchoring
- Rubber, non-slip feet
- Carry case & tent stakes

'A' style tents include two screen windows with roll up flaps, a tie down cord through each of the three hubs, ground flaps, single zippered front door, exterior roof line loops for tie down, carry case and three tent stakes. The tent also features a vertical slit in the rear wall, from the hub to ground. Used to allow entry of cable or pipe when jointing, splicing or fusion welding in the tent, the slit is closed over by means of a 'Velcro' style closure and a hook & ring assembly.

Model	Size	Weight	Folded Dimensions
6504A	122 x 122cm	8.2kg	15 x 117cm
6506A	178 x 178cm	9.1kg	15 x 142cm
6508A	239 x 239cm	14.1kg	18 x 168cm
6510A	299 x 299cm	15.4kg	20 x 193cm

Manhole Tents

The Clydesdale manhole tent works in conjunction with a manhole shield with dual size, 84cm & 91cm diameter, and a manhole guard frame (see below). Model 6000 includes a bowed metal frame, and fits guards with four vertical post openings. Standard colour is yellow.

Model	Dimensions	Weight	Folded Dimensions
6000 (for use with Guard 4000)	102 x 102 x 168cm High	3.6kg	15 x 15 x 96cm

Manhole Shields

Made from lightweight T6 Aluminium, the shield is reversible to fit both standard 68.5cm & 76cm manholes. No clamps or sealing compounds are required – a water tight seal is formed by inflating the tube to 5-10lbs of air.

Model	Dimensions	Weight
3336-12A	(84cm or 91cm dia.) 30.5cm high	11kg

Manhole Guards

These lightweight, rugged steel safety fences provide a rigid and highly visible traffic barrier around open manholes. They help to eliminate wind hazards when used with a manhole weather tent. Model 4000 clamps securely to the manhole shield.

Model	Dimensions	Weight	Material
4000	107cm x 80cm x 82cm	16kg	Steel

Trench Tents

Available in two standard sizes, these tents offer protection from the elements during trenching or boring operations. One piece construction allows for easy set up and take down and openings on both ends allow easy access. One-piece structure features no interior obstructions. This tent may be used as a modular set-up by adding as many units (end-to-end) as required.

Model	Dimensions	Weight	Folded Dimensions
6408A	240 x 490 x 200cm High	19.5kg	20 x 20 x 190cm
6413A	390 x 730 x 250cm High	49.5kg	30.5 x 41 x 254cm

Non-Conductive Work Umbrellas

Heavy duty design for use in maintenance or installation, this work umbrella is ideal for Utility, Railway and Communication companies. The frame is manufactured from fibreglass and is therefore non-conductive. This also means that it will not corrode and makes it lightweight in its use. The main handle is telescopic, extending 2 metres in height, with a 45° locking tilt facility.

The cover is made from PU Nylon flame retardant material which has been proven in industry over the last 18 years. Also available is a fabric skirt. When attached to the umbrella this allows added cover. The skirt can be fitted by zip fasteners along the edges, and can be secured to the ground by pegs.

The umbrella also features two guy ropes & pegs attached within the top cap to enable secure fixing in windy conditions.

- No loose components to be misplaced
- Allows maximum light into work area
- Lightweight
- Flame retardant
- Tear proof
- Anti-mildew

Options include:

- Logo/company branding



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Specialist Cable Installation Tools



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Portable Engine Drill

The most dependable petrol engine drill on the market, its heat-treated gears, heavy-duty roller and ball bearing systems ensure reliability throughout its lifetime. Though compact and lightweight (Dimensions 366 x 216 x 258mm), this drill is extremely powerful and can drill through wood, metal or masonry due to the fact that the chuck speed is easily adjusted via the throttle lever. The keyless chuck (½") option makes it ideal for use whilst working at the top of O/H Line poles. The drilling capacity is 250 - 325rpm.

Part No.	Weight (Dry)	Option
CLY 610 100	3.9kg	Keyless Chuck
CLY 610 105	3.8kg	Keyed Chuck

Carry Box for Portable Engine Drill

This metal bound plywood carrying box is purpose designed for the Engine Drill. Robust in nature it will give years of protection to the machine.

Part No.	Weight
CLY 610 110	2.5kg

Metal Mixing Bit

Ideal for mixing of jointers compound, this bit effectively turns the Engine Drill into a large food mixer. Widely used and now considered by many as indispensable equipment.

Part No.	Weight
CLY 610 116	1.5kg

Timber Auger Bits

Made to the highest levels of quality these auger bits are machine finished to guarantee smooth holes. Distance marked for convenience, all sizes are stocked for quick despatch. Generally available in 2 lengths either 330mm or 450mm. Special lengths and sizes are also available, please ask for details.

Diameter	Length 330mm	Length 450mm	Weight
13mm	611 113 L= 285mm	612 113	0.4kg / 0.5kg
14mm	611 114 L=285mm	612 114	0.4kg / 0.5kg
15mm	611 115	612 115	0.4kg / 0.5kg
16mm	611 116	612 116	0.4kg / 0.5kg
17mm	611 117	612 117	0.4kg / 0.5kg
18mm	611 118	612 118	0.4kg / 0.6kg
19mm	611 119	612 119	0.4kg / 0.6kg
21mm	611 121	612 121	0.4kg / 0.6kg
22mm	611 122	612 122	0.5kg / 0.6kg
23mm	611 123	612 123	0.5kg / 0.7kg
24mm	611 124	612 124	0.6kg / 0.7kg
27mm	611 127	612 127	0.6kg / 0.7kg
28mm	-	612 128	- / 0.7kg
32mm	610 132	612 132	0.7kg / 0.8kg



610 105



Keyless Chuck



610 110



611 119



610 116



TAG 200

MV Voltage Detector TAG 200

Every person involved with overhead power lines needs to know whether the network on which they are working is LIVE or DEAD. This simple to use Voltage Detector has a number of unique features, the most novel of all is its in-built self checking device which tests all of its circuitry, battery connection, as well as the stability of the threshold voltage.

In the event of a live contact the device emits a flashing red light as well as an audible buzzer, should the contact be dead then a constant green light and no audible signal is given. Should either the battery voltage diminish or the operator fail to disengage the unit will automatically turn itself off.

Frequency Range: 50 and 60Hz **Temperature Range:** -25°C to +40°C

Weight: 0.38kg **Length:** 188mm

Diameter: 49mm

Standard Kit comprises: 1 x Tester, 1 x Metal Carry Box, 1 x Universal electrode, 1 x Straight electrode



TAG 300

HV Voltage Detector TAG 300

Working on the same principle as the TAG 200 the TAG 300 is designed for use on High Voltage ranges upto 400kV, the same self check system is employed but the live indication is given by 3 flashing red lights and the audible buzzer. Should the network be dead and safe to work then a single solid green light will appear and no buzzer. The same auto cut off is also standard.

Frequency Range: 50 and 60Hz **Temperature Range:** -25°C to +55°C

Weight: 0.42kg **Length:** 210mm

Diameter: 90mm

Standard Kit comprises: 1 x Tester, 1 x Metal Carry Box, 1 x 60mm Hook electrode, 1 x 120mm Hook, 1 x Straight electrode



TAG 330

VHV Voltage Detector TAG 330

Again using the same principle of design and self checking as the aforementioned TAG 200 and TAG 300, TAG 330 is designed for use on Very High Voltage networks upto 735kV. The live signal is the same as the TAG 200 by means of a flashing red light and audible buzzer, dead signal is no buzzer and a constant green light.

Frequency Range: 50 and 60Hz **Temperature Range:** -25°C to +40°C

Weight: 0.42kg **Length:** 210mm

Diameter: 90mm

Standard Kit comprises: 1 x Tester, 1 x Metal Carry Box, 1 x 60mm Hook electrode, 1 x 120mm Hook electrode, 1 x 100mm Straight electrode

Part No.	Type	Voltage Range	Colour
CLY 300 2-1040	TAG 200	10 to 40kV	Yellow
CLY 300 2-1133	TAG 200	11 to 33kV	Blue
CLY 300 3-3366	TAG 300	33 to 66kV	Red
CLY 300 3-66132	TAG 300	66 to 132kV	Yellow
CLY 300 33-240400	TAG 330	240 to 400kV	Red
CLY 300 33-400735	TAG 300	400 to 735kV	Red

Other voltage ranges may well be available, please let us know your requirements.

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TAG 2000 Electronic MV detector up to 80kV AC

The TAG 2000 device is designed to check absence or presence of nominal voltage by direct contact to the line. It is usually used prior to earthing operation of a three-phase voltage system. A sharp design, including specific configuration of sensors and digital processor, provides the required accuracy to face most of field configurations.

The TAG 2000 can be used in all weather and at temperatures between -250°C to +550°C. The device features – A permanent standby mode, a sound indication beeper, light indication by 3 red lights, a built in 'Allcheck' test feature, a 40mm 'Y' shape contact probe (straight hook probe available), a 9V battery 6LR61 supply, a blue polycarbonate shell and weighs 0.270kg.

Each unit must be equipped with an insulating stick with the minimal insulating length in accordance with the regulation in force. The device can be fitted to any insulating stick with universal (sunrise) end fitting or to any others by means of adapters.

Description	Reference
Detector without accessory	TAG 2000
Detector with multi-purpose probe and soft case	TAG 2000GBS
Detector with multi-purpose probe and metal case	TAG 2000GBC

Voltage range to be specified when ordering in the ratio 1:4.

Description	Reference
40mm multi-purpose probe (M8)	47 736
40mm straight electrode (M8)	41 811B
40mm Y-shape electrode (M8)	42 029
Soft carrying case	SBH 1000
Metal carrying box	CT 200
Adapter for grip-all clamp stick	327 39
APV type Adapter	327 15V

Stick Adapters



Adapters



Direct Fitting

Reference

327 39

327 39

–

Stick End Fittings



Code

CR

APV

U

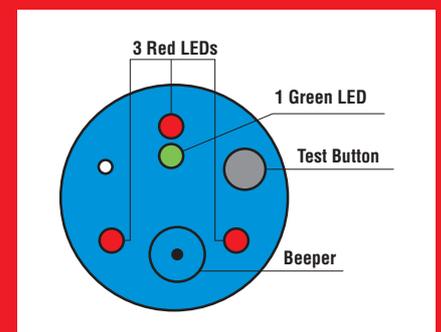
Sticks

Grip All Clamp Stick

RTTE or TRS/TRE



TAG 2000



40mm multi-purpose Electrode 47736

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TAG 5000



TAG 5000 in use

Wireless Phasing Device TAG 5000

The first phasing device available without cumbersome leads and wires as such, banishing all of those disadvantages to history. Easy to use and together with its in built self checking system which tests all of the internal circuits, battery connections, as well as the stability of its threshold voltage reliability is almost beyond doubt. Further security features include an auto stop mechanism for battery protection and an auto switch, which means should the operator forget to engage the unit, and it comes into contact with a voltage presence the device will automatically turn itself on.

The device consists of 2 parts, Transmitter and Receiver. The Transmitter (GREY) which also acts as a voltage detector by means of an audible and visual signal, then measures the phase angle and transmits this information to the receiver. The Receiver (BLUE) then compares the information received to that of the phase it is in contact with, if the result is an 'in phase' situation then the receiver emits an audible and visual signal. Any obstacles such as walls or doors do not hinder the signal sent by the Transmitter. The HF link is coded at 27MHz and as such needs no type approval.

Weight: 0.42kg (x2 parts) **Length:** 210mm (x2 parts)

Diameter: 90mm (x2 parts)

Standard Kit comprises: 1 x Transmitter, 1 x Receiver, 1 x Metal Carry Box, 1 x 60mm Hook electrode, 1 x Y electrode

Part No.	Voltage Range
CLY 300 5-1133	11 to 33kV
CLY 300 5-1040	10 to 40kV

Other voltage ranges may well be available, please let us know your requirements.

Accessories for TAG series of detectors and devices

Description	To Fit	Part No.
Metal Carry Box	TAG 200	CLY 300 CT200
Metal Carry Box	TAG 200/300	CLY 300 CT300
Metal Carry Box	TAG 5000	CLY 300 CT500
Straight Electrode 25mm	TAG 200	CLY 300 4181 1/A
Straight Electrode 40mm	TAG 200	CLY 300 4181 1/B
Straight Electrode 100mm	TAG 300/330	CLY 300 AD 100
Hook Electrode 60mm dia	TAG 300/330	CLY 300 AC 60
Hook Electrode 60mm dia	TAG 5000	CLY 300 EC500
Hook Electrode 120mm dia	TAG 300/330	CLY 300 AC 120
Hook Electrode 200mm dia	TAG 300/330	CLY 300 AC 200
Y Electrode 25mm	TAG 200	CLY 300 4230/A
Y Electrode 25mm	TAG 5000	CLY 300 EV500
Y Electrode 40mm	TAG 200	CLY 300 42029
Adapter for Grip All Stick	TAG 200/300/330/5000	CLY 300 327-39
Adapter for Bowthorpe Rod	TAG 200/300/330/5000	CLY 300 UK3

TAG 700 – Phase Rotation Indicator with in-built LV Voltage and Continuity test features

A handy and easy to use three-in-one tester. The TAG 700 automatically recognises whether the supply is AC or DC and measures voltage from 12 to 690V. The continuity test function provides both audible and visual indication. Patented three-phase rotation detection system. Powered by 2 x AAA batteries. For further specification please request full data sheet.

Part No.	Dimensions	Weight
CLY 300 700	320 x 80 x 40mm	240g

FC 2000

The FC 2000 is a vocal cable identifier. It detects de-energised cables for LV, MV and HV underground and overhead systems. It can be used to identify a particular cable in a trench or a duct. The FC 2000 can also be used for the identification of the 3 conductors (A, B, C) of a de-energised and a short circuited three-phase system, in a single operation.

The FC 2000 is linked to the use of the short-circuit/earthing systems in one or two of the cable ends. There is no need to disconnect the earthing devices or to open the earthing switches during the operation. This protects against supply feedback and simplifies the operating procedure.

FC 5000

The FC 5000 is for live cable identification of up to 440V AC. This device provides safe identification of low voltage live insulated cable before a live connection operation or before de-energised operation (peak and cut). It also provides core (phase) identification on three-phase voltage system. Its specific modulator draws a coded current that can be only detected between the modulator connection point and the power source (HV / LV transformer).

Detection is available on high-loaded cables.

It can be used to find the right cable among other low or high voltage cables in a trench or a duct. The device can be used to find the phase to make a connection, and the phase of any customer. The FC 5000 has a voltage range of 180V – 440V and a frequency of 50Hz and 60Hz.

The modulator comes in a yellow shock-proof all weather case containing modulator and carrying accessories. The modulator features 3 phases or phase and neutral supply for cable identification and 3 phases for core (phase) identification. Other features include – 800V protection, weighs 9kg, low current connectors, an average current of 4A, a peak current of 18A at a max of 400V, a 1kHz signal, a transmission of signal on live cables, a built-in 'Allcheck' to simulate cable and phase identification and a maximum internal temperature of 72°C.



TAG 700



FC 2000F



FC 5000



FC 5000D



APV



U

Telescopic Sticks

Dielectric resistance 100kV / 30cm after exposure to humidity.

- consisting of 2 or 3 parts in fibreglass
- locked by push button in folded or unfolded position
- upper tube in composite fibreglass on yellow foam, IEC / CEI 60855 quality
- lower tube interior silicone-treated against damp
- best fitted with a protected connection for optional extension

The standard TR sticks are supplied with APV end fitting (female 12mm, hexagonal, with automatic lock) or U end fitting (splined universal end fitting) or EAF end fitting (female 21mm hexagonal socket with automatic lock), to be specified when ordering.

Use:

- Checking absence of voltage
- Earthing in MV / LV stations – Operating switches
- All operations not requiring high mechanical loads

TR2 references		Length (retracted)		Length (extended)		Weight	Extension ref.		Cover	
TR 245	(TP 34B)	0,85m	25kV	1,5m	63kV	1,05kg	not extendable		HTR 1 950	(TH 5)
TR 275	(TD 23PE)	1,10m	36kV	2m	90kV	1,2kg	1m	RTR 100	HTR 11 100	(TH 6)
TR 276	–	1,10m	36kV	2m	90kV	1,2kg	not extendable		HTR 11 100	(TH 6)
TR 2225	(TP 34E)	1,75m	72kV	3.2m	225kV	1,5kg	1,8m	RTR 180	HTR 11 850	(TH 7)
TR 2245	(TP 34F)	2,15m	110kV	4m	300kV	2,2kg	2,15m	RTR 215	HRT 11	(TH 8)
TR 2330	–	2,65m	150kV	5m	330kV	3kg	2,15m	RTR 215	HTR 12 750	–
TR 3450	(TR 3)	1,65m	63kV	4.5m	150kV	3kg	not extendable		HTR 11 850	(TH 7)
TR 3500	(TR 3)	1,85m	90kV	5m	250kV	4kg	not extendable		HTR 11 850	(TH 8)
TR 3600	(TR 3)	2,15m	110kV	6m	300kV	5kg	not extendable		H 11	(TH 8)



Salcor Tool Holders

Salcor® Tool Holders

Specifically designed to secure tools, including hotsticks, to trailers, compartments and even to walls in buildings. The Salcor® tool holders are ideal for the storage of fibreglass hotsticks, they are constructed from Salcor® Rubber and as such will not harm the fibreglass in any way. Supplied in packs of 12.

Part No.	Length	Weight
CLY 559 1191	25.4mm	1.4kg
CLY 559 1192	32mm	1.6kg
CLY 559 1193	44mm	1.7kg

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External Rod Clampsticks

External Rod Clampsticks are constructed of closed cell foam-filled tubular fibreglass in accordance with ASTM standard F711. The hook operating rod, made of solid 9.5mm diameter fibreglass, is mounted on the exterior of the tool so that it can be easily wiped down prior to use.

Universal Switch Sticks

These foam filled FRP Hotsticks are manufactured using a pultrusion process that results in a product with extremely high electrical and mechanical qualities.

External Rod Clampstick

Part No.	Length	Weight each
4007	1.32m	1.9kg
4008	1.62m	2.1kg
4009	1.93m	2.4kg
4010	2.54m	2.8kg
4011	3.15m	3.2kg
4012	3.76m	3.5kg
4013	4.37m	4.3kg

Double Ended Universal

Part No.	Dimensions: Dia x Length	Weight each
4230	31.7mm x 1.8m	1.5kg
4231	31.7mm x 2.4m	1.8kg
4232	31.7mm x 3.0m	2.2kg
4233	31.7mm x 3.6m	2.5kg
4234	31.7mm x 4.3m	2.8kg

Universal w/ Rotary Prong or Blade

Part No.	Dimensions: Dia x Length	Weight each
4084 Rotary Prong	31.7mm x 1.8m	1.7kg
4085 Rotary Prong	31.7mm x 2.4m	2.0kg
4086 Rotary Blade	31.7mm x 1.8m	1.7kg
4087 Rotary Blade	31.7mm x 2.4m	2.0kg

Universal w/ Double Prong

Part No.	Dimensions: Dia x Length	Weight each
4088	31.7mm x 1.8m	1.7kg
4089	31.7mm x 2.4m	2.0kg

Head Only

Part No.	Description	Weight each
4093	Rotary Blade Head	0.4kg
4096	Double Prong Head	0.4kg
4098	Blade Hanger	0.1kg



Open Hook



4008



4084 Rotary Prong



4086 Blade Head



4088 Double Prong Head



Double Ended Universal Hotstick

Key

1. 2500 Shotgun Adapter (0.2kg)
2. 4236 Tree / Wire Hook (0.2kg)
3. 9878 Pig Tail Disconnect (0.2kg)
4. 9838 Chuck Blank (0.2kg)
5. 9971 Light Duty Cutout Prong (0.2kg)
6. 9969 Heavy Duty Disconnect Head (0.3kg)
7. 9979 Prong Disconnect (0.2kg)
8. 4099 Rotary Prong Tie Head (0.27kg)
9. 4100 Rotary Blade Tie Head (0.3kg)
10. 9839 Pointed Disconnect (0.2kg)
11. 4101 Double Prong Tie Head (0.22kg)
12. 4102 Fixed Blade Tie Head (0.22kg)

Universal Fittings



CLYDESDALE

Powering the Future

Universal Fittings



1



2



3



4



5



6



9



7



8



10



11



12

Key

1. 4106 Tubular Line Cleaner (0.6kg)
2. 4111 'V' Line Cleaner (0.6kg)
3. 4113 Replacement Brushes x 10 (1.4kg)
4. 4106 Curved Blade Skinning Knife (0.2kg)
5. 4103 Pruning Saw Handle (0.22kg)
6. 4104 Pruning Saw (0.22kg)
7. 4181 Hack Saw, w/ replacement blades (0.2kg)
8. 9834 Clamp Stick Head (0.6kg)
9. 4105 Tree Pruner on 3.6m Fibreglass Pole, Complete with 7.62m of Line (0.2kg)
10. UST Universal System Tool Blanket Pin (0.45kg)
11. 4114 Flex Head Socket Wrench (0.5kg)
12. 4115 Ratchet Wrench 12sq. Drive (0.22kg)

CLYDESDALE

Powering the Future



MD6



Y-35

Compression Tools

A wide variety of manufacturers exist in this segment of our industry, but Clydesdale has long been established as being the supplier of one of the best. The same manufacturer as for our extensive range of hydraulic tools, now surely the industry standard, this range of compression tools is made with the same high quality material and high levels of skill.

Manual / Hydraulic Operation Compression Tool

Suitable for the installation of a wide range of compression fittings for overhead line construction. This tool feature fixed D3 and BG dies, so that this operation is continuously available. Supplied complete with its own carry bag this tool readily accepts MD-6 (W) dies. Dies are sold separately.

Part No.	Type.	Output	Weight	Length
CLY 936 MD6	Manual	4500kg	2.8kg	630mm
CLY 936 Y-35	Hydraulic	5400kg	3.7kg	425mm

Battery Operated Compression Tool

Again used in conjunction with MD-6 W dies or equivalent, sold separately. The beauty of battery power is there is no muscle power required, hence there is virtually no risk of muscle injury. Giving an output of some 5 metric tonnes, this tool is lightweight and easy to use. Manufactured from the very highest quality components this is probably the bench mark tool by which other battery operated compression tools will be judged. As a matter of policy Clydesdale goes to many lengths to see if products can be improved. In this case we have had several of the parts Nickel plated to give a longer life expectancy as well as having the head insulated with the same material as is used on our range of Insulated Hand Tools, this material has been extensively tested to ESI 26-3.

As well as the high specification of the tool itself, the accessories are also high quality, with the new charger coming complete with a discharge button so that memory effect can at last be a thing of the past. As well as this the new super smart batteries re-charge within 22 minutes, completely. Obviously all spare parts and accessories are available individually, however, for your convenience Clydesdale has assembled a complete working kit, details below;

Part No. CLY 937 EDW-58IB Kit	1 x EDW-561 Batt Op Comp Tool
	2 x Super Smart Batteries
	1 x Cigar Lighter Charger
	1 x Shoulder Strap
	1 x Plastic Carry Case



EDW-581



U-DIE



W-DIE

Please Note

A wide range of dies are also available for all types of compression tools, please stipulate tool and conductor.

Clydesdale is also able to supply compression tools from several other manufacturers if your company policy does not allow you to choose our variation. Please be assured that all manufacturers have benefits to their compression tools, Clydesdale are here to help you make the right decision from the mass of information that is available.

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Powering the Future

Battery Operated Compression Tool

Used in conjunction with Burndy U dies or equivalent, sold separately. The beauty of battery power is there is no muscle power required, hence there is virtually no risk of muscle injury. Giving an output of some 12 metric tonnes, this tool is lightweight and easy to use. Manufactured from the very highest quality components this is probably the benchmark tool by which the other battery operated compression tools will be judged. As a matter of policy Clydesdale goes to many lengths to see if the products can be improved. The head can be insulated (not shown) with the same material as is used on our range of insulated hand tools, this material has been extensively tested to ESI 26-3.

As with the W die battery operated tool, the U die tool is also sold as a kit, details of the standard kit are given below. However, please bear in mind that this service is carried out by Clydesdale, not the manufacturer, so if you want a different kit, or indeed the component parts individually please see the details at the foot of this page.

Part No. CLY 937 EC125IA **Kit comprises:**

- 1 x EC125I Batt Op Comp Tool
- 2 x Super Smart Batteries
- 1 x Cigar Lighter Charger
- 1 x Shoulder Strap
- 1 x Plastic Carry Case

Battery Operated Compression Tool Accessories

Batteries – 14.4V DC, 2AH

Part No.	Description	Charge Times			Dimensions	
		CT2415-D	CD1457HB	CT1415HB	L x H x W	Weight
CLY 936 BA1420	Standard Battery Pack	1 Hour	15 minutes	1 Hour	100 x 137 x 70mm	730g
CLY 936 BA1420X	Standard Battery Pack	1 Hour	15 minutes	1 Hour	100 x 137 x 70mm	730g

Ensure that batteries are fully discharged and re-charged at least every 3 months. Both batteries have a life expectancy of 600 re-charges, number of cycles per charge is dependant on nature of use.

Charger Units

Part No.	Description	Input Voltage	L x H x W	Weight
CLY 936 CT1415-D	Cigar Lighter Charger Unit	12 / 24V DC	200 x 95 x 115mm	700g
CLY 936 CT1417HB	Super Charger Unit c/w Discharge Button	220 / 240V	200 x 95 x 115mm	770g
CLY 936 CT1415HB	Standard Charger Unit	220 / 240V	212 x 95 x 105mm	1.9kg

If the super charger is used properly it is possible to almost eradicate memory loss effect, for a full explanation please contact Clydesdale. For this to be possible, a routine discharge and re-charge procedure must be entered into.



EC-125



BA1420X



CT1415-D

CLYDESDALE

Powering the Future



S-24

Hydraulic Cutters & Heads

A vast range of conductors, cables, wire ropes and indeed around bars can be cut with the Clydesdale range of hand held hydraulic cutters. All models shown are of the guillotine variety, which jam far less frequently than the shear type equivalent.

Of course, the biggest advantage with these tools is that they are ready to cut instantly, there is no set up time. The head rotates through 180° to allow for the best cutting position, indeed it is imperative that all cutting can be done at an angle of 90° from the material which you are cutting.

The alternative to hand held cutters are cutting heads which are operated remotely using either a hand or foot pump. The heads can also be operated using any hydraulic pump with a max oil pressure of 700kg/cm² (10,000psi). As standard the units come with PT 3/8" high-pressure couplers, alternatives available upon request.

Blades can be easily replaced, please find below a comprehensive parts list for all the cutters.

Cutter Selection Chart (Maximum Cutting Capacity)

Part No.	Max. Output (tons)	Length	Weight	Handle Load	Round Bar (mm)			Wire Strands (mm)				Cable (mm)	
					Soft Al Bar	Soft Steel Bar	Reinforcing Bar	Bare Cu Strands	1x7 Guy Bare Al Strands	Lead ACSR	Steel Wire Strands	Sheath Cable	SWA Cable
S-20	4	390mm	2.8kg	18	16	16	13	20	20	21	15	–	18
S-24	7.8	426mm	4kg	28	18	20	16	24	24	24	20	–	24
S-32A	20	675mm	9.3kg	29	32	25	25	32	32	32	32	–	32
S-75	2.5	695mm	6.8kg	16.5	–	–	–	23	29	–	–	75	50
P-85	3	65mm	14kg	7.2	–	–	–	28	46	–	–	85	50
P-100	7.5	140mm	19kg	13.5	–	–	–	42	46	–	–	100	75
P-130	7.5	178mm	21kg	15	–	–	–	42	46	–	–	130	75



S-24

Operating Pump Selection Chart

Part No.	Type	Pressure Rating (Kgf/sq.cm)	Oil (cc/stroke)	Reservoir Capacity	Weight	Dimensions LxWxH (mm)
HP-700S	Hand Op 2 Speed	Low/0-20	12.26	720cc	10.5kg	580x140x160
FP-700S	Foot Op 2 Speed	High/200-700	2.26	1300cc	12kg	720x150x190
13S-1	Foot Op 2 Speed	Low/0-20 High/200-700	10.3 1L	1300cc	11kg	480x150x180

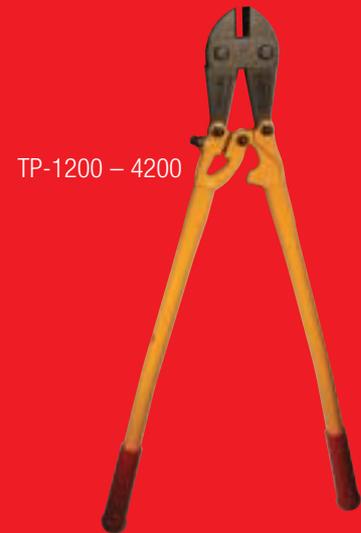
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Bolt Cutters

Made from the highest quality materials, these Bolt Cutters have adjustable blades for easy use. Lightweight Japanese construction ensures long reliable life.

Part No.	Size (Length)	Cut Ø	Weight
CLY 930 TP-1200	12"/300mm	5mm	0.5kg
CLY 930 TP-1800	18"/450mm	8mm	1.0kg
CLY 930 TP-2400	24"/600mm	10mm	2.9kg
CLY 930 TP-3000	30"/750mm	12mm	3.8kg
CLY 930 TP-3600	36"/900mm	15mm	4.7kg
CLY 930 TP-4200	42"/1050mm	18mm	5.6kg



TP-1200 – 4200

Rod & Wire Cutters

Clydesdale currently has 4 variations of the Rod & Wire Cutters each with unique features, ideal for different situations.

- The series ME*N is made with hollow aluminium pipe handles which makes them incredibly lightweight, without impacting on their performance.
- The series ME*S has fibreglass handles which again makes them incredibly lightweight but due to the non-conductivity of fibreglass means that they can be used in live applications.
- The series MI is the smallest type, its compact size allows use in confined space.
- The series MSH is the strong cutter in the range, with a little skill and a lot of strength these cutters can even be used to cut staywire. This cutting ability is due to the fact that the blades are made from hardened high-speed steel laminated to carbon alloy steel.

Part No.	Type	Length	Cut Capacity	Weight
CLY 930 ME-200N	ME*N	500mm	Cu/Al 200mm ²	0.9kg
CLY 930 ME-400N	ME*N	700mm	Cu/Al 400mm ²	1.5kg
CLY 930 ME-150S	ME*S	460mm	Cu/Al 150mm ²	0.9kg
CLY 930 ME-250S	ME*S	615mm	Cu/Al 250mm ²	1.5kg
CLY 930 MI-060	MI	310mm	Wire Rope 7mmØ	0.7kg
CLY 930 MI-100	MI	445mm	Wire Rope 10mmØ	1.1kg
CLY 930 MI-200	MI	600mm	Wire Rope 12mmØ	1.8kg
CLY 930 MSH-65	MSH	585mm	Wire Rope 16mmØ	2.2kg



ME*N

ME*S



MI

MSH

Note: Not to Scale



RC-32C



63060



930 K-3



63700

Ratchet Cable Cutters

Probably the highest quality ratchet cutters, of their size, currently available, the RCC-32 & RCC-42 are in use in nearly all of the utilities in the UK, used because of their reliability and their proven long lifespan their Japanese build quality has been a market leader for several years now.

Part No.	Length	Weight	Max Cable Ø
CLY 930 RCC-32C	230mm	0.5kg	32mm
CLY 930 RCC-42SC	260mm	1.2kg	42mm

Ratcheting Cable Cutter

With one hand, cleanly cut copper up to 400 MCM, and aluminium and multi-conductor cables up to 600 MCM. The unique ratchet action holds the cable tight and allows rapid, straight cuts with minimum effort. Hold open spring speeds the cutting action. The quick release lever opens the blade at any time during operation. Large, finger-formed handles have limit guards and plastic covering for comfortable, non-slip grip. This strong, light-weight tool can be locked in a closed position for pouch carrying. This product is not designed for cutting steel or ACSR.

Part No.	Length
CLY 930 63060	Length 255mm

Ratchet Cable Cutters

The third variety of hand held ratchet cable cutters supplied by Clydesdale are by far the simplest to use. Simply action, no reverse gear on handle, simply pull the cutting blade back, this can be achieved at any blade position. Designed for the cutting of Copper and Aluminium cables only with a max. CSA of 500mm².

Part No.	Length	Max. Cut CSA	Max Cut Ø	Weight
CLY 930 K-3	255mm	300mm ²	34mm	0.9kg
CLY 930 K-4	340mm	500mm ²	52mm	1.3kg

Heavy-Duty Ratcheting Cutter

The ratchet-action design of this cutter provides maximum leverage with minimum effort for severe-service use in cutting ACSR and AAAC, common guy strand, steel wire rope, steel rod (C.R.S. soft), and copper or aluminium cable. It features a drop forged, heat-treated, shear-type blade, plus a 914mm steel handle with heavy vinyl grips for comfort and slip resistance. The design incorporates a blade to engage the cable or other material being cut, plus a quick-release mechanism, which allows removal of the cable or rod before completion of the cut, if desired. Not designed for cutting EHS Guy Strand or reinforcement rod.

The Cutting Capacity of the Heavy-Duty Ratcheting Cutters is 32mm ACSR, AAAC, 11mm Common Guy Strand, 16mm Steel Wire Rope, 13mm Steel Rod, 35mm Copper or Aluminium.

Part No.	Overall Length	Approx. Weight
CLY 930 63700	914mm	6kg

Holstered Lock Knife

This superb quality precision made lock knife comes complete with its own moulded plastic holder, which fits all sizes of workbelts and harness straps, and will not release the knife until the release button is depressed. The 80mm hollow ground blade is made of stainless steel to avoid corrosion and the holster features a grinding point for re-sharpening the blade. The ergonomically designed handle increases usability due to its comfortable grip style.

Part No.	Length	Weight
CLY 930 LE-325	234mm	130g (including Holster)

Lock Knife

Using the same 80mm hollow ground stainless steel blade as featured on the LE-325, this knife is positioned in a hardwood handle with brass rivet components. Once opened and locked in place the knife will not close until the release is depressed.

Part No.	Length	Weight
CLY 930 MDX-01	195mm (Open)	110g

Multi-Purpose Sharpening Tool

A knife sharpener – and a lot more. Tungsten-carbide bonded to fine, medium and rough sharpening surfaces, hardens this steel enough to dress any knife. The chisel point makes this tool useful for hacking, prying, scraping, splitting, cutting sheet metal or other rough jobs that would harm a knife. The leather-sheath handle folds out of the way for use as a sharpener, provides a convenient way to hold the tool when using it as a chisel or other tool. The leather lanyard holds the tool in sheath and secures it to belt or ring.

Part No. 44150 Overall size: 127 x 22 x 6mm

Compact Pocket Knives

Compact, lightweight knives in three sizes. Stainless steel handles and blades. Rose-wood handle inserts on both sides. Modified spear-point blades lock open.

Part No.	Blade Length	Length Closed
44032	4.1cm	6.4cm
44033	5.1cm	7.6cm
44034	6.7cm	10.2cm

High Leverage Cable Cutter

This handy, economical tool handles most cable cutting jobs with ease. Special high-leverage design gives it amazing cutting capability for its size. Cable-gripping, shear-type jaws cut up to 4/0 aluminium (not ACSR), up to 2/0 soft copper, up to 100 pair, 24 gauge communications cable. This tool makes clean efficient cuts. It is very compact at only 241mm long, so can be carried in a tool pouch or holder. It is ideal for working in confined spaces. The cutter has tough, comfortable, red plastic dipped handles. Not designed for cutting steel or ACSR.

Part No.	Length
CLY 930 63050	241mm



LE-325



MDX-01



44150



44032 - 34



63050



Ratchet Podger Spanner



Rubber Grip

Ratchet Podger Spanner RM Series

These Ratchet Podger Spanners, with reversible changeover pawl, make construction operations easy, even in adverse working conditions. Fully drop forged with heat-treated tapered podger makes lining up of boltholes easy. When ordering please prefix sizes with RM for part number.

Size	Length	Weight	Metric Nut		Grip Size
			Size	Equivalent	
10 x 12mm	235mm	190g	M6	RG 3	–
10 x 13mm	235mm	190g	M6	M8	RG 3
10 x 14mm	235mm	190g	M6	–	RG 3
11 x 13mm	235mm	190g	–	M8	RG 3
12 x 14mm	235mm	190g	–	–	RG 3
13 x 17mm	278mm	260g	M8	M10	RG 3
13 x 19mm	278mm	260g	M8	M12	RG 3
17 x 19mm	312mm	430g	–	M10	RG 4
17 x 21mm	312mm	430g	M10	M12	RG 4
17 x 22mm	312mm	430g	M10	M14	RG 4
19 x 21mm	312mm	470g	M10	–	RG 4
19 x 22mm	312mm	430g	M12	M14	RG 4
19 x 24mm	358mm	460g	M12	–	RG 4
21 x 26mm	358mm	770g	M12	M16	RG 5
21 x 27mm	358mm	760g	M14	–	RG 5
22 x 24mm	358mm	760g	M14	M18	RG 5
22 x 27mm	358mm	760g	–	M16	RG 5
23 x 26mm	358mm	760g	–	–	RG 5
24 x 27mm	358mm	760g	M16	M18	RG 5
24 x 30mm	415mm	1100g	M16	M20	RG 6
26 x 32mm	415mm	1100g	–	–	RG 6
27 x 30mm	415mm	1100g	M18	M20	RG 6
30 x 32mm	415mm	1140g	M20	–	RG 6
32 x 35mm	460mm	1540g	–	–	RG 6
32 x 36mm	460mm	1540g	–	–	RG 6

Please enquire if the size you require is not mentioned.

Rubber Grip

Oil resistant rubber handle specifically supplied to aid grip when used on the Clydesdale range of Ratchet Podger Spanners. To ensure you choose the correct grip for each Ratchet Podger Spanner please refer to the Ratchet Podger Spanner specification table above.

Extension Sockets

For use on RM or RW series ratchet wrenches.

Part No.	Size	Max. Torque	Weight
HS 17	17mm	48kgf/m	50g
HS 19	19mm	57kgf/m	90g
HS 24	24mm	80kgf/m	150g
HS 27	27mm	94kgf/m	200g
HS 30	30mm	107kgf/m	260g
HS 32	32mm	116kgf/m	300g

Double Ended Ratchet Spanner RW Series

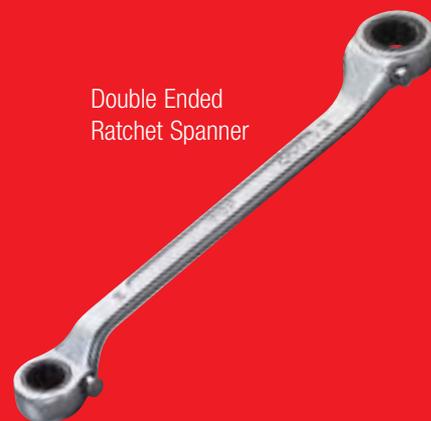
Top quality Chrome Vanadium steel construction makes these spanners an invaluable aid in all industries.

Size	Weight	Metric Nut	
		Size	Equivalent
10 x 11mm	120g	M6	–
10 x 12mm	130g	M6	–
12 x 14mm	190g	–	–
13 x 17mm	270g	M8	–
15 x 16mm	290g	–	–
17 x 19mm	360g	M10	M12
19 x 21mm	445g	M12	M14
19 x 22mm	435g	M12	–
21 x 23mm	560g	M14	–
21 x 26mm	620g	M14	–
24 x 27mm	700g	M16	M18
24 x 30mm	780g	M16	M20
30 x 32mm	1050g	M20	–

PRW Quad Spanners

A new addition to the range of Clydesdale ratchet spanners, these handy 4 way ratchet spanners are small and compact. They feature reversible ratchet actions in four sizes per spanner.

Part No.	Size				Length	Weight
	1	2	3	4		
CLY 362 01	5.5	7	6	8	115mm	0.065kg
CLY 362 02	9	11	10	12	140mm	0.115kg
CLY 362 03	8	10	12	13	146mm	0.130kg
CLY 362 04	10	12	13	14	165mm	0.150kg
CLY 362 05	13	15	14	17	190mm	0.220kg
CLY 362 06	13	17	19	21	215mm	0.305kg
CLY 362 07	19	21	22	24	240mm	0.370kg



Double Ended Ratchet Spanner



PRW Spanner



HW-300



361 0112



364 MA-880



365 ML-300AM



111 001

One Hand Wrench

Allows the pipe to be gripped with one hand so that you have the other hand free, due to the fact that no screw adjustment is required for the jaw opening. The slim head makes it ideal for working in confined spaces. The ratcheting mechanism makes it possible to work on rusted or seized bolts. High quality cast alloy head.

Part No.	Pipe Diameter	Length	Weight
CLY 365 HW-300	11 - 43mm	335mm	0.85kg
CLY 365 HW-350	22 - 49mm	385mm	1.01kg
CLY 365 HW-450	27 - 60mm	490mm	1.93kg

Adjustable Shifting Spanner

With the head angled to 23° this spanner has been designed for maximum usage. Chrome Vanadium finish extends life of spanner. Overall length is 300mm (12") and the maximum jaw opening is 34mm.

Part No. CLY 361 0112

Heavy Duty Linesmans Pliers

Combines all three features required in a set of pliers by Linesmen. 9" Long, diamond pattern nose grip, radiused chain grip, extra long cutter blades, nut turning hex and crimping head. Capable of crimping 2.5 to 6.0mm². This tool is available insulated to ESI 26-3 (1000V).

Part No. CLY 364 MA-880

Magnetic Spirit Level

Ingenious tool, that is proving to be an invaluable aid to linesmen all over the country. It simply grips metal objects (including X-Arms) by means of the two magnetic strips on its base (not shown). It also features a moveable angle indication vial. Very robust due to its steel construction. Available in two sizes from stock.

Part No.	Length
CLY 365 ML-300AM	300mm
CLY 365 ML-600AM	600mm

Non-Conductive Tape Measure

There are no metal parts within this tape measure, as it is not insulated it is non-conductive, this I am sure you realise is a great difference, the tape will not hold a current, therefore can be used in all sorts of circumstances.

The tape itself is made from the highest quality FRP material, that will not stretch or tear, enabling the tape to last for several years of steady use. Proof tested to 20kV this tape is proving to be an invaluable aid in the utilities industry the world over.

Standard length of tape is 3.5m.

Part No. CLY 111 001

Pole Turning Arm

The Pole Turning Arm greatly reduces the effort required to turn wood poles to the correct position. It is both safer and quicker than more traditional methods. Manufactured from high quality steel the unit is fully adjustable for all pole diameters. Due to a request from one of the electricity companies the pole Turning Arm now comes in 2 versions, chain or webbing strap. The webbing strap has been used so as to reduce any damage to the pole caused during the turning operation.

	Part No.	Weight	Length	
			Closed	Open
Pole Turning Arm – Link Chain	CLY 1007	7.5kg	1100mm	1400mm
Pole Turning Arm – Webbing Strap	CLY 1008	6.5kg	1100mm	1400mm

Patent App No. 9714401.8



CLY 1007

Cable Bending Tool

Ideal tool to take the backache out of bending cables. Bends the cable to the desired radius simply and easily. Telescopic handle aids use and storage. Be aware of cable's minimum bending radius before bending process commences.

Part No.	Weight
CLY 1005	5.5kg



CLY 1005

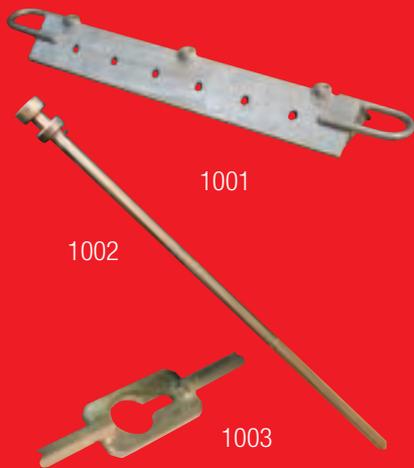
Jointer's Cable Stand

Makes the working on cables easier by raising the cable to handier levels. Simply ratchet the clamps into place to hold the cable firmly, thus allowing the cable to be worked on. Virtually all sizes of cable can be fitted into the clamps.

Part No. CLY 640 930 1824



640 930 1824



Ground Dog (Anchoring System)

The dog itself is constructed of high quality steel and galvanised for long life. Its unique shape hugs the ground to give maximum holding power. The ground pins are made of very high tensile steel giving tremendous strength and can be used for all manor of purposes not only with the dog. The extractor key makes removal of the ground pins easy.

	Part No.	Weight	SWL
Ground Dog	CLY 1001	28kg	2,000kg
Ground Pin	CLY 1002	2.0kg	n/a
Extractor Key	CLY 1003	2.5kg	n/a



Staywire Frame

Allows staywire be stored under tension and handled with complete safety, construction includes tubular steel frame and ball race hub suspension. Galvanised against corrosion.

Part No.	Weight	Diameter	Height
CLY 1004	7.5kg	850mm	410mm

Pole Bogie

Manufactured from high quality steel, the pole bogie can handle poles with ease, the two webbing securing chains being adjustable to suit individual pole diameters. The wheels have ball race suspension.

Part No.	Weight	Length	Width	Ground Clearance
CLY 1009	30kg	122cm	91cm	25cm



Running Earth

Cast Aluminium base with 2 ball raced pulley designed to be put between winch and first pole during stringing operations. When connected to an earth this device provides extra protection against back feed or lightning strikes.

Part No.	Weight
CLY 1006	2kg

Phase Rotation Indicator

Robin K8031F is now widely used across the electricity industry because of its easy to use format and reliability. Provides instant indication of phase sequence on three phase systems to ensure correct connection. Can also be used to confirm direction of motor rotation prior to connection of supply.

Part No. CLY 310 8031F



310 8031F

Cable Avoidance Tool and Signal Generator (CAT & Genny)

The Cable Avoidance Tool (CAT) is used to detect the signal generated by the signal generator (Genny). The Genny is placed at the end of a duct rod and pushed through a duct, then when the blockage is reached the CAT is used to detect its location and hence valuable time is saved. Also can be used when the route of a duct is not plotted, simply use the CAT to follow the route of the Genny plotting as you go.

Part No.	Description
CLY 305 10-01	Cable Avoidance Tool (CAT)
CLY 305 10-02	Signal Generator (Genny)



305 10-01

Digging Equipment

Clydesdale is able to supply most tools necessary for the digging of trenches, pole holes and other pits. Illustrated here is just a brief array of the variations available. Variations include fibreglass handles and shafts, as required under certain safety notices.

Part No.	Description	Handle Length / Fibreglass	Blade (Depth x Width)
CLY 120 001	Square Mouth Shovel	712mm / Yes	320 x 255mm
CLY 120 002	Tapered Mouth Shovel	712mm / Yes	320 x 215mm
CLY 120 003	Rounded Mouth Shovel	712mm / Yes	320 x 267mm
CLY 120 004	Trenching Shovel	712mm / Yes	280 x 190mm
CLY 120 005	Cable Layers Shovel	712mm / Yes	280 x 114mm
CLY 120 006	Newcastle Draining Shovel	712mm / Yes	320 x 267mm
CLY 120 007	Trenching Fork	712mm / Yes	310 x 210mm
CLY 120 008	12lb Rammer / Punner	1140mm / No	n/a
CLY 120 009	Rabbiting Spade	1675mm / No	320 x 124mm



120 004



120 006



120 008



120 007

Not to scale



111 004



111 007



305 SR600E

305 01-73/77



Conductor Height Measuring Pole

Made from high quality, light durable fibreglass, these telescopic poles are ideal for the measuring of conductor heights, or indeed any other overhead object. The dial features a metric display, which makes allowance for the length of the rod, so you only have to line up with the top of the object to get your measurement. Base and tops are sealed with a special agent to ensure the poles are dust and water-resistant.

Tested to 75kV per 30cm for 5 minutes, it is possible to check the heights of conductors even when they are live. Resistant to hot and cold (Temp range -50°C to +150°C). Supplied complete in its own handy nylon carry bag, to aid life expectancy.

Part No.	Length (Retracted)	Length (Max. Extended)	Weight
CLY 111 003	1.42m	8m	1.95kg
CLY 111 004	1.42m	12m	2.76kg

Digital Surveyor's Measuring Wheel

The compact retractable design means that the need for cumbersome wheels is no longer necessary. The counter is sealed in a waterproof case for its own protection. Range is 0.1m to 1,000m.

Part No.	Weight
CLY 111 007	630g

Digital Electronic Conductor Height Measurer

This device measures the height of conductors from the ground, thus reducing the risk of electrocution. With accuracy better than 99%, this device can measure the height of upto 3 successive conductors in one operation by pressing just one button. The maximum operating height is 20m vertically or 46m horizontally.

The device has an auto shut down which will turn the device off after 3 minutes. Battery life is in excess of 50,000 operations. (Battery type 1x LR61). Device complete with its own leather case and 12 month warranty.

Part No.	Weight
CLY 305 SR600E	600g

Multimeters

Industry standard Fluke 70 Series III Multimeter supplied complete with a set of fused leads. This Multimeter does everything you would expect it to do, Voltage (AC/DC), Current (AC/DC) and resistance. The Fluke 73 and 77 offer exactly the right fit for a wide range of measurements. They are truly all-round performers. The 73 III is perfectly suited for many electronic applications and has the 'classic' 70 series design with removable holster. The 77 III has all the features and functions for a wide range of industrial applications packaged in an ergonomic case with integrated holster. Both models come with the unique lifetime warranty.

Part No.	Max. Volt AC/DC	Max. Curr AC/DC	Max. Resistance	Dimensions	Weight
CLY 305 01-73	600V	10A	32MW	166x75x28mm	340g
CLY 305 01-77	1000V	10A	32MW	190x89x37mm	365g

Overhead Line Hardware



Bird Flight Diverter

These diverters really do work, perhaps despite of their unusual appearance, by causing birds, especially Swans, to veer upwards in flight. Large birds lack the manoeuvrability to avoid overhead power lines, the Bird Flight Diverter simply makes the line look bigger, so that it really is giving the bird more opportunity to change direction and hence save its life and your power line.

The BFD can be fitted from the ground using switching rods using the special adapter shown. This saves both time and cost, in that there is no need for an outage at any stage. The clamp itself is designed to securely grip all conductors up to a diameter of 70mm, so almost all Overhead lines from LV to EHV can be protected.

Greatly improved recently, we now use stainless steel rings to attach the roundel, gripper hands have been added to aid opening of the jaws, as well as many other new features that have improved this unbeatable nature preserver.

Part No.	Descriptions	Weight
CLY KL 70 FASTE	Bird Flight Diverter	0.2kg
CLY E06 683 301	BFD Operating Tool	0.4kg

Staywire Markers

Ideal for use on stays that cross public footways or golf courses, both types of Clydesdale staymarker can be easily fitted and clearly identify the location of stays. This helps to avoid injury to both employees as well as the public and warns hedge trimmers of the possible hazard.

The Clydesdale staymarker consists of a pack of eight markers (2 small yellow, 2 small black, 2 large yellow & 2 large black) that just simply snap over the stay. The advantage of this type of staymarker is threefold – easy to store (both in the vehicle and at the warehouse), easy to use and its low cost (approx. 1/3 of a traditional staymarker).

The American or more traditional staymarker consists of a single yellow 8 foot length that snaps over the stay and then is tightened in place by either the means of a cable tie or nut and bolt assembly.

Part No.	Descriptions
970 000	Clydesdale Staymarker (Pack of 8)
970 OCPU PV-01H	American Staymarker 8' Bolt Type
970 OCPU PV-01T	American Staymarker 8' Tie Type

Line Markers

Used to make an overhead line more visible to aircraft on distribution voltage overhead lines. The sphere is positioned on the line by the use of a shotgun or grip all stick. Simply attach the stick to the hook and screw the piercing connector onto the conductor. As with the Clydesdale Bird Flight Diverter the Line Marker can be installed under live conditions.

Part No.	Colour	Diameter	Weight
CLY 212 02-01	Red	200mm	0.4kg
CLY 212 02-10	White	200mm	0.4kg
CLY 212 02-11	Red / White	200mm	0.4kg
CLY 212 06-01	Red	600mm	7.0kg
CLY 212 06-10	White	600mm	7.0kg
CLY 212 06-11	Red / White	600mm	7.0kg



Operating Tool



Bird Flight Diverter



Clydesdale



American



212 02-01

CLYDESDALE

Powering the Future



263 2500

Powerplate Labelling System

Guaranteed Not to fade for at least 10 years.

Ideal for the labelling of Overhead Line Poles, Switches, Terminals etc. The Clydesdale range of Powerplate signs comes in 5 sizes – H10 (character height 10mm), H25 (25mm), H50 (50mm), H80 (80mm) & H160 (160mm). Made from specially lacquered yellow painted anodised aluminium these signs are guaranteed not to fade for up to 10 years.

H25, the most popular size, ideal for pole labelling, consists of a punched out character. When this character is slid into the black painted anodised aluminium baseplate it gives the effect of a black character on a yellow background.

H10, H50, H80 & H160 are made from the same material but are actually black screen printed characters onto a yellow surface, these signs are also treated with the special lacquer giving at least the guaranteed 10 year lifetime.

Characters available are all numbers 0-9, letters A-Z as well as various punctuation symbols and blanks for spacing. Baseplates are available in 2 lengths 500mm and 1000mm.

The signs can be mounted either vertically or horizontally. Simply by mounting H25 characters in the H10 baseplate the sign will read vertically, the same applies by mounting the following – H50 in H25 baseplate, H80 in H50 baseplate & H160 in H80 baseplate.

The special Combi-Crimp tool provides the perfect accompaniment to the system as it cuts and seals the baseplate as well as piercing a nail hole in the baseplate so that erection of the sign is simplicity itself. The Combi-Crimp tool works on all sizes of characters except H160.

Please use part number chart opposite.

Baseplates

As mentioned above the Powerplate sign is positioned into the baseplate. The baseplate is also manufactured from anodised Aluminium to guarantee a long life. The baseplate can be used in either a horizontal or vertical plain depending on requirement.

Part No.	Length	Use
CLY 261 010 01	330mm	H10 – Horizontal
CLY 261 025 01	500mm	H25 – Horizontal
CLY 261 025 02	500mm with Slots	H25 – Horizontal
CLY 261 025 03	1,000mm	H25 – Horizontal
CLY 261 025 04	330mm	H25 – Vertical
CLY 261 050 01	500mm	H50 – Horizontal
CLY 261 050 02	500mm	H50 – Vertical
CLY 261 080 01	1,000mm	H80 – Horizontal
CLY 261 080 01	1,000mm	H80 – Horizontal

H25 Starter Kits

The ideal way to get started or indeed to store your equipment, the Powerplate labelling system can be supplied in a handy easy to use starter kit form. Each kit comprises 25 of every character 0-9, A-Z as well as ./:-, plus 10 of the 500mm baseplates and a Combi-Crimp tool.

Part No. CLY 263 2500

If the kit contents do not exactly match your requirements, please tell us as special kits can be made up very easily.

Whilst the H25 starter kit is a standard product kit, product kits are also available for the other 4 sizes of Powerplate labelling system H10, H50, H80 & H160.

Powerplate Labelling System Table

Part No. Guide					
Character	H10	H25	H50	H80	H160
0	CLY 260 010 00	CLY 260 025 00	CLY 260 050 00	CLY 260 080 00	CLY 260 160 00
1	CLY 260 010 01	CLY 260 025 01	CLY 260 050 01	CLY 260 080 01	CLY 260 160 01
2	CLY 260 010 02	CLY 260 025 02	CLY 260 050 02	CLY 260 080 02	CLY 260 160 02
3	CLY 260 010 03	CLY 260 025 03	CLY 260 050 03	CLY 260 080 03	CLY 260 160 03
4	CLY 260 010 04	CLY 260 025 04	CLY 260 050 04	CLY 260 080 04	CLY 260 160 04
5	CLY 260 010 05	CLY 260 025 05	CLY 260 050 05	CLY 260 080 05	CLY 260 160 05
6	CLY 260 010 06	CLY 260 025 06	CLY 260 050 06	CLY 260 080 06	CLY 260 160 06
7	CLY 260 010 07	CLY 260 025 07	CLY 260 050 07	CLY 260 080 07	CLY 260 160 07
8	CLY 260 010 08	CLY 260 025 08	CLY 260 050 08	CLY 260 080 08	CLY 260 160 08
9	CLY 260 010 09	CLY 260 025 09	CLY 260 050 09	CLY 260 080 09	CLY 260 160 09
A	CLY 260 010 10	CLY 260 025 10	CLY 260 050 10	CLY 260 080 10	CLY 260 160 10
B	CLY 260 010 11	CLY 260 025 11	CLY 260 050 11	CLY 260 080 11	CLY 260 160 11
C	CLY 260 010 12	CLY 260 025 12	CLY 260 050 12	CLY 260 080 12	CLY 260 160 12
D	CLY 260 010 13	CLY 260 025 13	CLY 260 050 13	CLY 260 080 13	CLY 260 160 13
E	CLY 260 010 14	CLY 260 025 14	CLY 260 050 14	CLY 260 080 14	CLY 260 160 14
F	CLY 260 010 15	CLY 260 025 15	CLY 260 050 15	CLY 260 080 15	CLY 260 160 15
G	CLY 260 010 16	CLY 260 025 16	CLY 260 050 16	CLY 260 080 16	CLY 260 160 16
H	CLY 260 010 17	CLY 260 025 17	CLY 260 050 17	CLY 260 080 17	CLY 260 160 17
I	CLY 260 010 18	CLY 260 025 18	CLY 260 050 18	CLY 260 080 18	CLY 260 160 18
J	CLY 260 010 19	CLY 260 025 19	CLY 260 050 19	CLY 260 080 19	CLY 260 160 19
K	CLY 260 010 20	CLY 260 025 20	CLY 260 050 20	CLY 260 080 20	CLY 260 160 20
L	CLY 260 010 21	CLY 260 025 21	CLY 260 050 21	CLY 260 080 21	CLY 260 160 21
M	CLY 260 010 22	CLY 260 025 22	CLY 260 050 22	CLY 260 080 22	CLY 260 160 22
N	CLY 260 010 23	CLY 260 025 23	CLY 260 050 23	CLY 260 080 23	CLY 260 160 23
O	CLY 260 010 24	CLY 260 025 24	CLY 260 050 24	CLY 260 080 24	CLY 260 160 24
P	CLY 260 010 25	CLY 260 025 25	CLY 260 050 25	CLY 260 080 25	CLY 260 160 25
Q	CLY 260 010 26	CLY 260 025 26	CLY 260 050 26	CLY 260 080 26	CLY 260 160 26
R	CLY 260 010 27	CLY 260 025 27	CLY 260 050 27	CLY 260 080 27	CLY 260 160 27
S	CLY 260 010 28	CLY 260 025 28	CLY 260 050 28	CLY 260 080 28	CLY 260 160 28
T	CLY 260 010 29	CLY 260 025 29	CLY 260 050 29	CLY 260 080 29	CLY 260 160 29
U	CLY 260 010 30	CLY 260 025 30	CLY 260 050 30	CLY 260 080 30	CLY 260 160 30
V	CLY 260 010 31	CLY 260 025 31	CLY 260 050 31	CLY 260 080 31	CLY 260 160 31
W	CLY 260 010 32	CLY 260 025 32	CLY 260 050 32	CLY 260 080 32	CLY 260 160 32
X	CLY 260 010 33	CLY 260 025 33	CLY 260 050 33	CLY 260 080 33	CLY 260 160 33
Y	CLY 260 010 34	CLY 260 025 34	CLY 260 050 34	CLY 260 080 34	CLY 260 160 34
Z	CLY 260 010 35	CLY 260 025 35	CLY 260 050 35	CLY 260 080 35	CLY 260 160 35
.	CLY 260 010 36	CLY 260 025 36	CLY 260 050 36	CLY 260 080 36	CLY 260 160 36
BLANK	CLY 260 010 37	CLY 260 025 37	CLY 260 050 37	CLY 260 080 37	CLY 260 160 37
/	CLY 260 010 38	CLY 260 025 38	CLY 260 050 38	CLY 260 080 38	CLY 260 160 38
:	CLY 260 010 39	CLY 260 025 39	CLY 260 050 39	CLY 260 080 39	CLY 260 160 39
-	CLY 260 010 40	CLY 260 025 40	CLY 260 050 40	CLY 260 080 40	CLY 260 160 40



Speciality Signs

Due to our experience we have made many variations of the Powerplate sign, from coloured phase plates (blue, red and yellow) to specific pole decay signs. Examples of some of these signs are given here, however, if you require something different please contact Clydesdale and specify your requirements.

Part No.	Description	Suggested Use
CLY 262 101	Blue, Red & Yellow Phase Plate mounted in Baseplate	Transformer Plate
CLY 262 102	Blue Phase Plate mounted in Baseplate	Transformer Plate
CLY 262 103	Red Phase Plate mounted in Baseplate	Transformer Plate
CLY 262 104	Yellow Phase Plate mounted in Baseplate	Transformer Plate
CLY 262 011	Blue Phase Plate with Nail Hole	Phase Plate
CLY 262 012	Red Phase Plate with Nail Hole	Phase Plate
CLY 262 013	Yellow Phase Plate with Nail Hole	Phase Plate
CLY 262 104	Red H50 D mounted in Baseplate	Decayed Pole Sign
CLY 262 014	Yellow H50 D with 4 Nail Holes	Decayed Pole Sign



Danger Plates

Due to our experience we have made many variations of the Powerplate sign, from coloured phase plates (blue, red and yellow) to specific pole decay signs. Examples of some of these signs are given here, however, if you require something different please contact Clydesdale and specify your requirements.

Part No.	Description	Size
CLY 264 001	Pole Sign – Danger of Death / Do Not Climb	240 x 480mm
CLY 264 002	Pole Sign – Danger of Death / Keep Off	240 x 480mm
CLY 264 003	Tower Sign – Danger of Death / Do Not Climb	480 x 480mm
CLY 264 004	Substation Sign – Danger of Death / Keep Out	480 x 480mm



Danger Plate Installation Clamp

An invaluable clamp used to attach danger signs / notices to towers without the need for specific holes to be drilled, these revolutionary clamps are guaranteed to stay in place and are not a temporary but a completely permanent attaching tool. These clamps offer obvious safety as opposed to the more traditional steel punching devices often used specifically for this purpose. Sold in packs of 10.

Part No. CLY 264 999



Woodpecker Scarer

If you live in an area where there is a high concentration of woodpeckers you will no doubt be aware of the damage that they can cause to overhead line wood poles. This device works on the woodpeckers inherent fear of large males of the species, originating from Scandinavia this sign is simply bolted in place and is proven to have worked very successfully in banishing woodpeckers from its vicinity.

Part No. CLY 264 500

Plastic Bird Protector for Bushings, Jumpers, Insulators and Conductors

Made from weather and UV resistant plastic these variations of the plastic guard are ideal for the protection of various parts of the Overhead Line Network. Each set is complete and ready for installation, supplied with all necessary cable ties. Each type has its own specific benefit, for further details please do not hesitate to contact Clydesdale.

Part No.	Dimensions	Package	Weight
ENS SP 31-3	647mm L	Complete Set of 3	660g
ENS SP 36-3	Dome 168mm Ø	Complete Set of 3	550g
ENS SP 38-3	100mm H Dome 70mm Ø	Complete Set of 3 Flat Packed	550g

Plastic Pole Hat

Used to protect the top wooden poles, normally left un-creosoted by suppliers. Hats are nailed in place by means of the three hot dip galvanised nails supplied with the hats. Made from weather and UV resistant plastic

Part No.	Diameter	Weight
ENS SP 18	180mm	47g
ENS SP 19	220mm	55g
ENS SP 20	270mm	90g

Silicon Rubber Insulators

The advantages of Silicon Rubber Insulators against the more traditional porcelain type are now well known. In short, they are significantly less prone to damage through mishandling or vandalism whilst having improved electrical properties. Clydesdale is able to supply a wide range of Silicon Rubber Insulators, illustrated here is just a brief outline of the most common types. It is possible for us to have units manufactured to your exact requirements, quantity dependant, so if your specification is not listed below then please let us know.

Flying Section Line Insulators	15 to 46kV
Distribution Dead End / Suspension Insulators	15 to 46kV
Transmission Dead End / Suspension Insulators	69 to 138kV
Extended Length Dead End Insulators	15 to 351kV
Liner Spacer Insulators	15 to 46kV
Line Post Insulators	15 to 69kV
Pin Insulators	15 to 46kV
Stay Insulators	15 to 46kV



SP 31-3



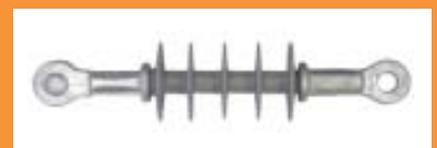
SP 36-3



SP 38-3



SP 18



Main Features

- Modular Design
- Fits any X-Arm
- 3 Types of insulator material Porcelain, Epoxy or Silicon
- Telescopic Op Rods
- Approx. 5 week lead time
- Based on IEC 129
- Designed and Manufactured under ISO 9000
- Lightweight
- Easy to erect
- Widely used throughout Europe
- Many Accessories
- Assembly instructions included



Air Break Switch Disconnectors (ABSD)

Air Break Switch Disconnectors are a vital part of any overhead line network, providing crucial points of isolation. Most overhead line networks are designed so that when a fault occurs or maintenance work needs to be carried out it is relatively simple, by means of a systematic series of switching operations, to isolate a certain section of overhead line. When this switching process is carried out it is absolutely imperative that the Air Break Switch Disconnecter is reliable and effective.

Clydesdale distributes a range of Air Break Switch Disconnectors manufactured by AB Gevea of Sweden. In Scandinavia the distribution network is rated slightly differently to that in the UK, as such the Air Break Switch Disconnectors that are supplied by Clydesdale are rated at 24 and 36kV. Effectively what this means is that if a 24kV Air Break Switch Disconnecter is installed on an 11 or 20kV network then there is inherently more protection being built into the network.

The Clydesdale range of Air Break Switch Disconnectors is of a lightweight modular design, the base of this modular design being the phase elements themselves. Onto the phase elements you can add numerous accessories for the attachment of cables or fusegear. The possibilities are almost endless, for example, if you are contracted to purchase an Air Break Switch Disconnecter without loadbreaking (interrupter) heads, but you have a specific location that requires this loadbreaking facility, then simply contact Clydesdale and we will supply the loadbreaking heads as a bolt on accessory.

Technical Specifications	GDS20	GDS36
Rated Voltage	24kV	36kV
Impulse withstand Voltage phase-earth	125kV	170kV
Power frequency withstand Voltage	50kV	70kV
Rated Current	630A	630A
Peak withstand Current	50kA	50kA
Short time Current – 1 sec	20kA	20kA
Short time Current – 3 sec	16kA	16kA
Breaking capacity mainly active load COϕ = 0.7		
With breaking whip	25A	16A
With Loadbreaking Head	630A	400A
Short circuit-making capacity with main contact	5kA	5kA

All Clydesdale Air Break Switch Disconnectors have been tested to open / close when covered with 10mm of ice as is common in Scandinavian winters.

Air Break Switch Disconnecter – Insulators

Clydesdale is able to supply its Air Break Switch Disconnectors with a choice of three types of insulator material Porcelain, Outdoor Epoxy Resin or Silicon Rubber. The Porcelain Insulators are of low weight design and provide the most traditional look of an Air Break Switch Disconnecter. The next grades of insulators are cycloalifatic epoxy resin, are also of a low weight design and are less susceptible to damage through mishandling or vandalism. Finally the highest grade of insulator is of Silicon Rubber which has the lowest weight of the three grades and also the highest resistance to damage through mishandling or vandalism.

Air Break Switch Disconnecter – Operating Mechanisms

Clydesdale is obviously able to supply the traditional ground level handle mechanism which has the built in padlocking capability (padlock not supplied). Alternatively Clydesdale is able to supply a Hotstick Operating Mechanism. The Hotstick Mechanism is designed to overcentre towards the open position so if good contact is lost by the operating Hotstick the Air Break Switch Disconnecter will not fall into the closed position.

Part No.	Description
CLY 202 A6941	Handle Operating Mechanism (Lockable)
CLY 202 A7380	Hotstick Operating Mechanism
CLY 202 A6941-01	Handle Operating Mechanism (Lockable) with Interlocking Wheel – Disconnecter
CLY 202 A6941-02	Handle Operating Mechanism (Lockable) with Interlocking Wheel – Earth Switch

Air Break Switch Disconnecter – Loadbreaking (Interrupter) Heads

The Clydesdale Loadbreaking Head is of the dry construction type where a specially formulated plastic is used to extinguish the arc during the loadbreaking process. The Clydesdale Loadbreak head can be mounted in either the traditional horizontal or vertical positions. The Loadbreak head is attached to the phase element by the means of four bolts, is easily adjusted and can be supplied as a retro fit accessory. Loadbreak Heads are sold as individual units (1 required per phase).

Part No.	Description	Breaking Capacity
CLY 202 GLBD1	Loadbreak Head 24kV	630A
CLY 202 GLBD2	Loadbreak Head 36kV	400A





Air Break Switch Disconnecter – Operating Rods

One unique feature of the Clydesdale Air Break Switch Disconnecter is the telescopic operating rods that are used in conjunction with the ground level handle mechanism. The advantage of this telescopic operating rod is that the rod extends by upto 2m ensuring that the Air Break Switch Disconnecter is set to operate perfectly. This telescopic rod also avoids the necessity of cutting the operating rod to length as is required by some competitor rod sets. In conjunction with the telescopic rod Clydesdale also supplies a fixed length rod (Top Rod), this clamps to the phase coupling tube which opens / closes the Air Break Switch Disconnecter on the operation of the Handle Operating Mechanism.

Part No.	Description	Length
CLY 202 A7352-1	Top Rod – with Fork	3.25m
CLY 202 A7552-2	Intermediate Rod	3.25m
CLY 202 A7352-3	Lower Telescoping Rod	1.7m extending to 3.5m
CLY 202 A7352-4	Extension Rod with Socket & extra Guide	2.00m
CLY 202 A7373	Hotstick Op Rod – Fork both ends	2.0m extending to 3.8m
CLY 202 A7435	Complete Rod Set with Top & Lower	7.3m extending to 9.1m
CLY 202 2862032	Complete Rod Set with Top & Lower	5.8m extending to 7.6m

Please note that neither individual rods (except CLY 202 A7352-4) nor complete rod sets are supplied with any joining piece, please specify joining piece required from the detailed alternatives below.

Air Break Switch Disconnecter – Phase Coupling Tubes

Mounted between the phase elements and connected to the operating rod by the axis coupling the phase coupling tube is a box section rod which turns to open / close the Air Break Switch Disconnecter. For 36kV rated Air Break Switch Disconnecter the phase coupling tube is double lined to ensure sufficient torque strength.

Part No.	Description	Length
CLY 202 A6616-01	Phase Coupling Tube – 24kV	1.25m
CLY 202 A6616-02	Phase Coupling Tube – 24kV	1.65m
CLY 202 A6616-03	Phase Coupling Tube – 24kV	2.00m
CLY 202 A6616-04	Phase Coupling Tube – 24kV	2.50m
CLY 202 A6616-11	Phase Coupling Tube – 36kV	2.00m
CLY 202 A6616-12	Phase Coupling Tube – 36kV	2.50m
CLY 202 A6616-13	Phase Coupling Tube – 36kV	3.00m
CLY 202 A6616-14	Phase Coupling Tube – 36kV	3.30m

Air Break Switch Disconnecter – Earth Switches

Predominantly on the 33kV overhead line network it is necessary to add the provision of an earth switch to the Air Break Switch Disconnecter, this is also available from Clydesdale.

Air Break Switch Disconnecter – Other Spare Parts

Part No.	Description	Pack Size
CLY 202 A6742	Silicon Rubber Rod Insulator upto 24kV	1 piece
CLY 202 A7550	Silicon Rubber Rod Insulator upto 36kV	1 piece
CLY 202 A6734	Operating lever / Axis – Disconnecter Blade	1 piece
CLY 202 A7635	Operating lever / Axis – Earth Blades	1 piece
CLY 202 A6743	Guide for Operating Rod	1 piece
CLY 202 A7354	Operating Rod Coupling Socket	1 piece
CLY 202 A7435SW	Temporary steelwork for H/S Op	1 piece
CLY 202 A7335	Connection Palm / Starplate	1 piece
CLY 202 A7460	Auxiliary Contact Block (1xNO / 1xNC)	1 piece



A6742



A6734



A6743

Air Break Switch Disconnecter – Complete Units

Obviously the vast array of possibilities make it almost impossible to list every possible variation of Air Break Switch Disconnecter within these pages, however, listed below are the most common units supplied by Clydesdale, if the exact specification required is not listed please refer to Clydesdale for further assistance.

Line Switches – with Silicon Rubber Insulators

Part No.	Description	Voltage	Interrupting Capacity	Specification
CLY 200 A7435S	Line Loadbreak Switch – 630A Ground Level Handle Operation	24kV	630A at 24kV	Phase Elements fixed connections on both sides Includes Rods, Rod Guides and Rod Insulator, Mounting X-Arm for underslung installation
CLY 200 A7435HS	Line Loadbreak Switch – 630A Hotstick Operation	24kV	630A at 24kV	Phase Elements fixed connections on both sides Includes Rod & Rod Guide, Mounting X-Arm for underslung installation
CLY 200 A7522-1S	Line Disconnecter – 630A Ground Level Handle Operation	24kV	25A at 24kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for mounting on standard C-channels Suitable for mast head or underslung installation, also includes Rods, Rod Guides and Rod Insulator

Line Switches – with Porcelain Insulators

Part No.	Description	Voltage	Interrupting Capacity	Specification
CLY 200 A7611	Line Disconnecter – 630A Ground Level Handle Operation	24kV	25A at 24kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for underslung installation also includes Rods, Rod Guides and Rod Insulator
CLY 200 A7612	Line Disconnecter – 630A Ground Level Handle Operation	24kV	630A at 24kV	Phase Elements fixed connections on sides Includes X-Arm clamps for underslung installation also includes Rods, Rod Guides and Rod Insulator
CLY 200 A7522-1	Line Disconnecter – 630A Ground Level Handle Operation	24kV	25A at 24kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for mounting on standard C-channels Suitable for mast head or underslung installation also includes Rods, Rod Guides and Rod Insulator
CLY 201 A7411	Line Disconnecter – 800A Ground Level Handle Operation Mast Head Installation	36kV	16A at 36kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for mounting on 2 x U-channels Phase Distance Max. 1450mm Max. Installation Height above ground 10m also includes Rods, Rod Guides and Rod Insulator
CLY 201 A7411L	Line Loadbreak Switch – 800A Ground Level Handle Operation Mast Head Installation	36kV	400A at 36kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for mounting on 2 x U-channels Phase Distance Max. 1450mm Max. Installation Height above ground 10m also includes Rods, Rod Guides and Rod Insulator
CLY 201 A7411E	Line Disconnecter – 800A Ground Level Handle Operation Mast Head Installation Earth Switch	36kV	16A at 36kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for mounting on 2 x U-channels Phase Distance Max. 1450mm Max. Installation Height above ground 10m also includes Rods, Rod Guides and Rod Insulator Mechanical Interlock between Earth Blades and Disconnecter
CLY 201 A7411LE	Line Disconnecter – 800A Ground Level Handle Operation Mast Head Installation Earth Switch	36kV	400A at 36kV	Phase Elements fixed connections on both sides Includes X-Arm clamps for mounting on 2 x U-channels Phase Distance Max. 1450mm Max. Installation Height above ground 10m also includes Rods, Rod Guides and Rod Insulator Mechanical Interlock between Earth Blades and Disconnecter

Substation Switches

Substation Switches are supplied with porcelain insulators as standard, Silicon Rubber Insulators are available upon request.

Part No.	Description	Voltage	Interrupting Capacity	Specification
CLY 201 A7784	Substation Disconnecter – 800A Ground Level Handle Operation	36kV	16A at 36kV	Phase Elements fixed connections on both sides Includes clamps for installation on Steel Structure Phase Distance Max. 1200mm Installation Height 3.5-4.5m Includes clamps for handle to structure and Operating Rod
CLY 201 A7784L	Substation Loadbreak Switch – 800A Ground Level Handle Operation	36kV	400A at 36kV	Phase Elements fixed connections on both sides Includes clamps for installation on Steel Structure Phase Distance Max. 1200mm Installation Height 3.5-4.5m Includes clamps for handle to structure and Operating Rod
CLY 201 A7784E	Substation Disconnecter – 800A Ground Level Handle Operation Earth Switch	36kV	16A at 36kV	Phase Elements fixed connections on both sides Includes clamps for installation on Steel Structure Phase Distance Max. 1200mm Installation Height 3.5-4.5m Includes clamps for handle to structure and Operating Rod Includes clamps for handle to structure, Operating Rod and Mechanical Interlock between Earth Blades and Disconnecter
CLY 201 A7784LE	Substation Loadbreak Switch – 800A Ground Level Handle Operation Earth Switch	36kV	400A at 36kV	Phase Elements fixed connections on both sides Includes clamps for installation on Steel Structure Phase Distance Max. 1200mm Installation Height 3.5-4.5m Includes clamps for handle to structure and Operating Rod Includes clamps for handle to structure, Operating Rod and Mechanical Interlock between Earth Blades and Disconnecter





34-95



118-1202



21-01



PD 2-2



SOT 28-2



ST 31

ABC Anchor Clamps

Used for the termination of the 2 or 4 core type ABC (Aerial Bundled Conductor), to poles or walls by means of standard hook. The clamps are easy to install and have been tested to international standards including ESI 43-14. The plastic parts are made of frost, heat and UV resistant material and the aluminium parts are of a weather resistant type.

As well as the standard type anchor clamp, there is also the range taking variation which handle all core sizes from 50 to 120mm².

Part No.	For Conductors	Torque	Weight
ENS SO 34-225	2 x 25	25	0.30kg
ENS SO 34-25	4 x 25	25	0.41kg
ENS SO 34-250	2 x 25	48	0.80kg
ENS SO 34-50	4 x 50	48	0.93kg
ENS SO 34-295	2 x 95	80	1.10kg
ENS SO 34-95	4 x 95	80	1.69kg
ENS SO 118-1202	4 x 50 - 120	44	1.20kg

Suspension Hooks

Part No.	Diameter	Length	Weight
ENS SOT 21-00	M20	200mm	1.22kg
ENS SOT 21-01	M20	240mm	1.32kg
ENS SOT 21-02	M20	320mm	1.51kg
ENS SOT 21-03	M20	350mm	1.58kg

Nut Hooks

Part No.	Diameter	Length	Weight
ENS PD 2-3	M16	76mm	0.44kg
ENS PD 2-2	M20	76mm	0.55kg
ENS PD 3-3	M16	200mm	1.50kg
ENS PD 3-2	M20	200mm	1.90kg
ENS SOT 74	M24	290mm	3.40kg

Hook Plates

Part No.	Diameter	Length	Weight
ENS SOT 28-2	M16	65mm	0.69kg
ENS SOT 29	M16	85mm	0.61kg

ABC Wedge Set

Ideal for splitting up the cores of ABC when installing a connector, anchor or suspension clamp.

Part No.	Weight
ENS ST 31	0.10kg

Range Taking & Multi Purpose ABC Fittings

These fittings will revolutionise the way that ABC is installed in the future. Now instead of the confusing variety of fittings, you need, broadly speaking, only need one suspension clamp – SO 99, one anchor clamp – SO 118-1202 and one wall bracket – SO 125. All fittings shown on this page have been extensively tested to and comply with ESI 43-14.

ABC Suspension Clamp – Range Taking

The SO 130 & SO 136 are along the lines of traditional suspension clamps, however, these clamps will take almost every size of ABC. This is achieved by the integral insert replacing the traditional rubber insert. This means no mistakes by linesman taking the wrong equipment to site and vastly reduced quantities of stock both centrally and regionally.

The SO 99 is a completely new design, the same as the SO 130 & SO 136 in that it takes almost all sizes of ABC it also has in-built rollers, which allows the clamp to act as the intermediate roller during erection as well. Used with the extension roller ST 26-99 it can also act at an angle upto 90°.

Part No.	ABC Sizes	Angle upto	Weight
ENS SO 130	2 x 50-120 / 4 x 25-120	60°	0.3kg
ENS SO 136	2 x 50-120 / 4 x 25-120	90°	0.5kg
ENS SO 99	2 x 50-120 / 4 x 25-120	30°	0.9kg
ENS ST 26-99	n/a	90°	2.3kg

ABC Wall Clamp – Range Taking

Works on the same basis of as the range taking Suspension Clamps in that there is an in-built rubber insert and accepts almost all sizes of ABC.

Part No.	ABC Sizes	Angle upto	Weight
ENS SO 125	2 x 50-120 / 4 x 25-120	30°	0.5kg

Distance Nail

Used to position ABC away from a wall or a structure thus avoiding cable damage.

Part No. ENS SO 70.11

ABC End Caps – Range Taking

These grease filled end caps fit every size of ABC (including 120mm²), the grease is designed to prevent water entry and seal the conductor tightly and securely.

Part No. ENS PK 99-2595 (Supplied in packs of 3)

SO 130



SO 99



SO 125



SO 70.11



PK 99-2595

Technical Information

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Technical Spec. for Aerial Bundled Conductor (ABC) to ESI 43-13 Issue 2 : 1990

Nominal CSA of Conduction	No. of Cores	Nom. no. of wires in Cores	Cove		Overall Ø	Weight	Calculated Breaking Load	Calculated dc resistance @ 20°C	Min. bending radius of bundle
			Min	Max					
mm ²	mm ²	m	mm	mm	m	kg/m	kN	Uohms/km	m
25	2	7	5.6	6.5	19.9	0.20	8.1	1200	159
35	2	7	6.6	7.5	21.9	0.26	11.3	868	175
50	2	19	7.7	8.5	24.7	0.35	15.3	641	198
70	2	19	9.3	10.2	28.1	0.48	22.1	443	225
95	2	19	11.0	12.0	32.7	0.65	30.6	320	262
25	4	7	5.6	6.5	23.8	0.40	16.3	1200	190
35	4	7	6.6	7.5	26.2	0.52	22.4	868	210
50	4	19	7.7	8.5	29.6	0.70	30.4	641	237
70	4	19	9.3	10.2	33.7	0.96	44.0	443	270
95	4	19	11.0	12.0	39.3	1.30	61.2	320	314
120	4	19	12.9	13.1	42.0	1.55	79.6	253	336

Technical Specification for Hard Drawn Copper to BS 125

Nominal Area	Nominal Imperial Cu. Equivalent	Stranding Ø	Overall Ø	Weight	Calculate Breaking Load
mm ²	in ²	mm	mm	kg/km	kN
16	0.025	3/2.65	5.69	148.3	672.0
32	0.05	3/3.75	8.05	296.9	1296
70	0.1	7/3.55	10.65	621.0	2741
100	0.15	7/4.30	12.9	911.2	3838
125	0.2	19/2.90	14.5	1130	4929

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Technical Specification for All Aluminium Alloy Conductor (AAAC) to BS 3242:1970

Code Name	Nominal Al area	Stranding & wire Ø	Actual area	Overall Ø	Weight	Calculated Breaking Load		Calculated dc resistance @ 20°	Breaking Length
	mm ²					m	mm ²		
–	10	7/1.47	11.88	4.41	32	340	3.33	2.771	10.63
Box	15	7/1.85	18.82	5.55	51	537	5.27	1.749	10.53
Acacia	20	7/2.08	23.79	6.24	65	680	6.67	1.384	10.46
Almond	25	7/2.34	30.10	7.02	82	861	8.44	1.093	10.5
Cedar	30	7/2.54	35.47	7.62	97	1014	9.94	0.9281	10.45
–	35	7/2.77	42.18	8.31	115	1205	11.82	0.7804	10.48
Fir	40	7/2.95	47.84	8.85	131	1367	13.41	0.6881	10.44
Hazel	50	7/3.30	59.87	9.90	164	1711	16.78	0.5498	10.43
Pine	60	7/3.61	71.65	10.83	196	2048	20.08	0.4594	10.45
–	70	7/3.91	84.05	11.73	230	2402	23.56	0.3917	10.44
Willow	75	7/4.04	89.73	12.12	245	2564	25.15	0.3669	10.47
–	80	7/4.19	96.52	12.57	264	2758	27.05	0.3411	10.45
–	90	7/4.45	108.9	13.35	298	3112	30.52	0.3023	10.44
Oak	100	7/4.65	118.9	13.95	325	3398	33.32	0.2769	10.46
–	100	19/2.82	118.7	14.10	326	3393	33.27	0.2787	10.41
Mulberry	125	19/3.18	150.9	15.90	415	4312	42.29	0.2192	10.39
Ash	150	19/3.48	180.7	17.40	497	5164	50.64	0.1831	10.39
Elm	175	19/3.76	211.0	18.80	580	6030	59.13	0.1568	10.4
Poplar	200	32/2.87	239.4	20.09	659	6841	67.09	0.1385	10.38
–	225	37/3.05	270.3	21.35	744	7724	75.75	0.1227	10.38
Sycamore	250	37/3.23	303.2	22.61	835	8664	84.97	0.1093	10.38
Upas	300	37/3.53	362.1	24.71	997	10350	101.5	0.09156	10.38
Walnut	350	37/3.81	421.8	26.67	1162	12053	118.2	0.07860	10.37
Yew	400	37/4.06	479.0	28.42	1319	13685	134.2	0.06921	10.38
Totara	425	37/4.14	498.1	28.98	1372	14233	139.6	0.06656	10.37
Rubus	500	61/3.50	586.9	31.50	1620	16771	164.5	0.05662	10.35
Araucaria	700	61/4.14	821.1	37.26	2266	23450	230.0	0.04047	10.35

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Technical Specification for Aluminium Conductor Steel Reinforced (ACSR) to BS 215 Part 2:1970

Code Name	Nominal Al area	Al	Steel	Actual Area	Weight	Calculated Breaking Load		Calculated dc resistance @ 20°	Breaking Length
	mm ²					m	m		
Mole	10	6/1.50	1/1.50	4.50	43.4	421	4.13	2.707	9.79
Squirrel	20	6/2.11	1/2.11	6.33	85.7	807	7.91	1.368	9.49
Gopher	25	6/2.36	1/2.36	7.08	106.9	979	9.60	1.093	9.24
Weasel	30	6/2.59	1/2.59	7.77	129.0	1167	11.44	0.9077	9.12
Fox	35	6/2.79	1/2.79	8.37	150.2	1342	13.16	0.7823	9.01
Ferret	40	6/3.00	1/3.00	9.00	172.4	1553	15.23	0.6766	9.08
Rabbit	50	6/3.35	1/3.35	10.05	215.7	1872	18.36	0.5426	8.75
Mink	60	6/3.66	1/3.66	10.98	257.1	2223	21.8	0.4545	8.72
Skunk	60	12/2.59	7/2.59	12.95	470.7	5396	52.92	0.4568	11.6
Beaver	70	6/3.99	1/3.99	11.97	305.5	2626	25.75	0.3825	8.67
Horse	70	12/2.79	7/2.79	13.95	545.8	6240	61.19	0.3936	11.6
Raccoon	75	6/4.10	1/4.10	12.30	322.6	2774	27.2	0.3622	8.67
Otter	80	6/4.22	1/4.22	12.66	341.8	2939	28.82	0.3419	8.67
Cat	90	6/4.50	1/4.50	13.50	389.2	3330	32.66	0.3007	8.63
Hare	100	6/4.72	1/4.72	14.16	428.5	3666	35.95	0.2733	8.63
Dog	100	6/4.72	7/1.57	14.15	396.5	3332	32.68	0.2733	8.46
Hyena	100	7/4.39	7/1.93	14.57	456.7	4183	41.02	0.2728	9.23
Cougar	125	18/3.05	1/3.05	15.25	428.3	3062	30.03	0.2190	7.31
Leopard	125	6/5.28	7/1.75	15.81	496.1	4156	40.76	0.2184	8.43
Tiger	125	30/2.36	7/2.36	16.52	620.0	5914	58.00	0.2203	9.81
Dingo	150	18/3.35	1/3.35	16.75	517.0	3642	35.72	0.1814	7.20
Wolf	150	30/2.59	7/2.59	18.13	746.0	7061	69.24	0.1828	9.73
Caracal	175	18/3.61	1/3.61	18.05	600.0	4191	41.10	0.1563	7.14
Lynx	175	30/2.79	7/2.79	19.53	865.0	8136	79.79	0.1576	9.66
Jaguar	200	18/3.86	1/3.86	19.30	686.0	4749	46.57	0.1367	7.08
Panther	200	30/3.00	7/3.00	21.00	1001	9407	92.25	0.1362	9.66
Lion	225	30/3.18	7/3.18	22.26	1125	10248	100.5	0.1213	9.36
Bear	250	30/3.35	7/3.35	23.45	1248	11339	111.2	0.1093	9.34
Goat	300	30/3.71	7/3.71	25.97	1530	13848	135.8	0.08911	9.30
Sheep	350	30/3.99	7/3.99	27.93	1771	15938	156.3	0.07704	9.25
Antelope	350	54/2.97	7/2.97	26.73	1467	12084	118.5	0.07727	8.55
Bison	350	54/3.00	7/3.00	27.00	1497	12328	120.9	0.07573	8.54
Deer	400	30/4.27	7/4.27	29.89	2027	18202	178.5	0.06727	9.23
Zebra	400	54/3.18	7/3.18	28.62	1683	13450	131.9	0.06740	8.29
Elk	450	30/4.50	7/4.50	31.50	2251	20221	198.3	0.06057	9.23
Camel	450	54/3.35	7/3.35	30.15	1849	14878	145.9	0.06073	9.25
Moose	500	54/3.35	7/3.53	31.77	2025	16417	161.00	0.0547	9.41

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Metric to Imperial Conversion Chart

To Convert	Multiply by
Centimetre to inches	0.3937
Metres to feet	3.2810
Metres to yards	1.0940
Kilometres to miles	0.6214
Sq.cm to sq. inches	0.1550
Sq.m to sq. feet	10.760
Sq.m to sq. yards	1.1960
Sq.km to sq. miles	0.3861
Hectares to acres	2.4710
Sq.km to acres	247.105
Cu.cm to cu. inches	0.0610
Cu.m to cu. feet	35.310
Cu.m to cu. yards	1.3080
Litres to cu. inches	61.0300
Litres to UK pints	1.7598
Litres to gallons	0.2200
Grams to grains	15.430
Grams to ounces	0.0352
Grams to pounds	0.0022
Kilograms to pounds	2.2050
Kilograms to tons	0.0009
Tonnes to tons	0.9842
Feet per minute to miles per hour	0.1134
Kilometres per hour to miles per hour	0.6213
Kg per sq.cm to lb. per sq.inch	14.200

Technical Specification for the selection of Voltage Class to ASTM D120

ASTM Voltage Class	Label Colour	Proof Test Voltage (kV)		Max. Use Voltage
		AC	DC	
0	Red	5	20	1000V
1	White	10	40	7500V
2	Yellow	30	50	17000V
3	Green	30	60	26500V
4	Orange	40	70	36000V

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Temperature

°F	32	40	50	60	70	75	85	95	105	140	175	212
°C	0	5	10	15	20	25	30	35	40	60	80	100

Speed

mph	20	30	40	50	60	70	80	90	100	110	120	130
km/h	32	48	64	80	96	112	128	144	160	176	192	208

Pressure

lb./sq. ins	20	22	24	26	28	30	32	34	36	38	40	42
kg/sq.cm	1.41	1.55	1.69	1.83	1.97	2.11	2.24	2.39	2.53	2.67	2.81	2.95

Shoe Size Converter

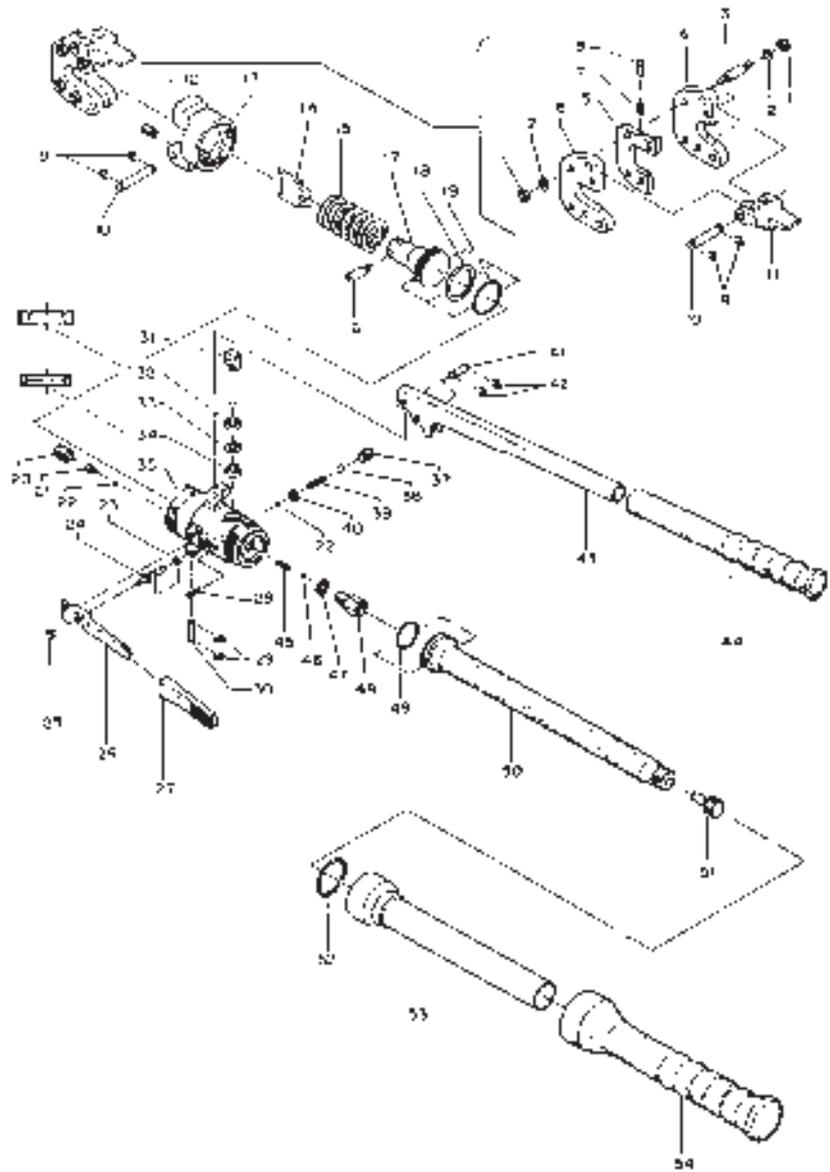
UK	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	12
USA	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12.5
EURO	39	40	40.5	41	42	42.5	43	44	44.5	45	45.5	46	47

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No.	Description	Code	Qty
1	M6 Hex. Nut	16-01	8
2	M6 Lock Washer	16-02	8
3	Stud Bolt (1)	16-03	4
4	Head Shear	20-02	1
5	Spacer	20-70	1
6	Main Head	20-04	1
7	Spring (144)	85-37	1
8	Slide Pin	20-71	1
9	CE-8 Snap Ring	16-09	4
10	Pin (46)	16-10	2
11	Latch	16-11	1
12	M5 x 10 Screw (D.P)	55A-11	1
13	Body Head	20A-01	1
14	Blade	20-07	1
15	Spring (75)	16-17	1
16	Blade Screw	16-19	1
17	Ram	16-21	1
18	P-29 Back-Up Ring (B.C)	16-22	1
19	P-29 O-Ring	16-23	1
20	Valve Screw (3)	16-24	1
21	Spring (2)	16-25	1
22	7/32" Ball	16-26	2
23	P-3 O-Ring	16-36	1
24	Release Valve Stem	16-35	1
25	E-3.2 Snap Ring	16-33	1
26	Release Lever	20-08	1
27	Release Lever Insulation	20-09	1
28	Spring (77)	16-37	1
29	E-2.5 Snap Ring	16-28	2
30	Pin (26)	16-27	1
31	Pump Piston	16-47	1
32	VC8 Oil Seal	40A-05	1
33	P-8 Back-Up Ring (B.C)	85-33	1
34	PS-8 Pent Steal	16-44	1
35	Body	20A-02	1
36	M4 x 6 Screw (F.P)	16-42	1
37	M10 x 10 Screw (F.P)	16-41	1
38	9/32" Ball	16-40	1
39	Spring (76)	16-39	1
40	M3 Flat Washer	16-38	1
41	Pin (47)	16-29	1
42	CE-6 Snap Ring	16-30	4
43	Pump Handle	16-31	1
44	Pump Handle Grip	20-10	1
45	Spring (4)	16-48	1
46	3/16" Ball	16-49	1
47	Copper Gasket	16-50	1
48	Suction Valve Screw Ass'y	16-51	1
49	P-26 O-Ring	16-55	1
50	Oil Reservoir (4)	20A-03	1
51	Reservoir Cap	410-55	1
52	S-36 O-Ring	85-51	1
53	Body Handle	16-63	1
54	Body Handle Grip	20-11	1

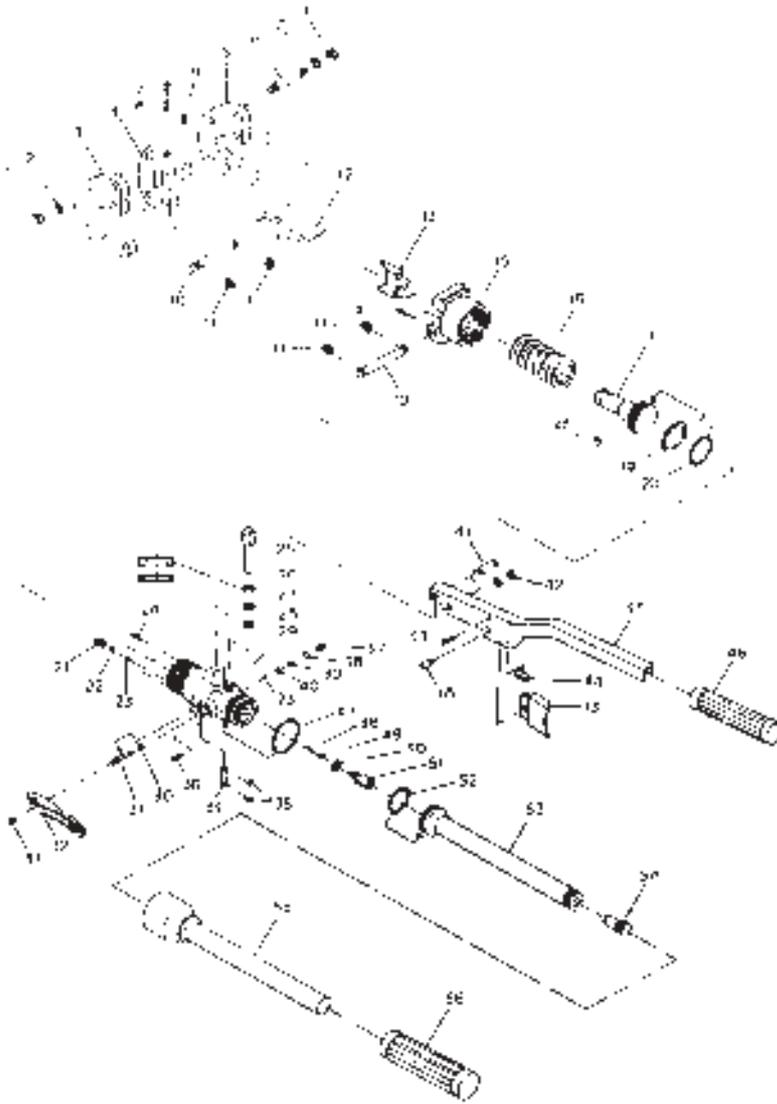
Model S-20 Parts List



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Model S-24 Parts List

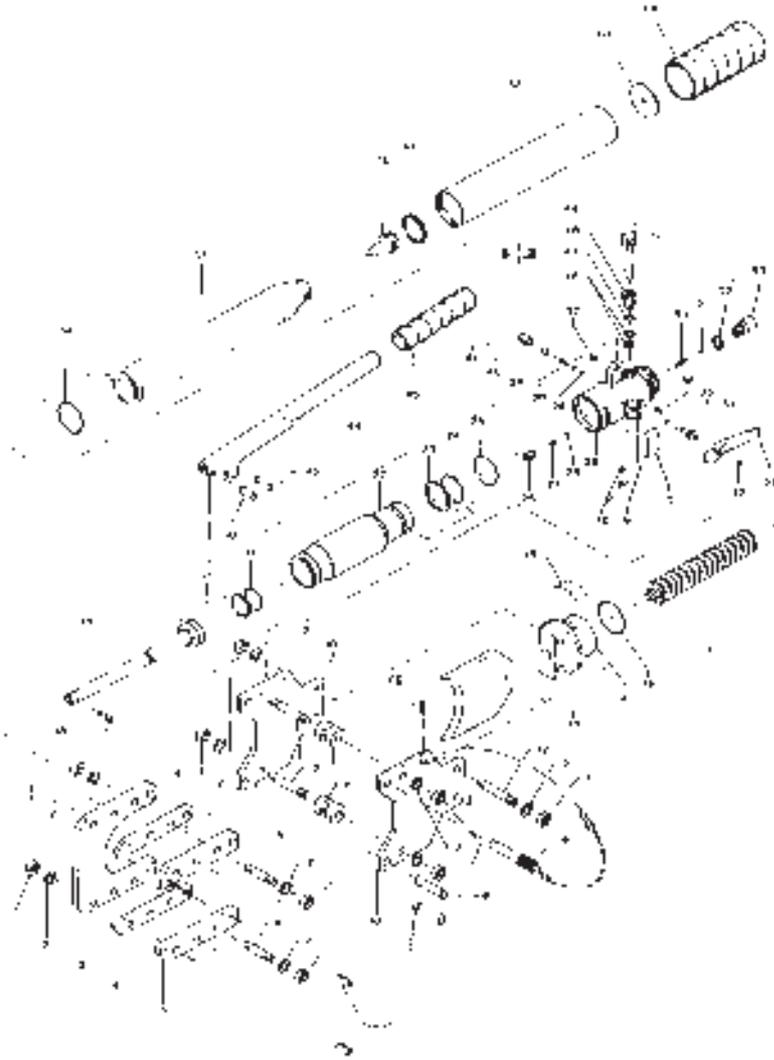


No.	Description	Code	Qty
1	M8 Hex. Nut	40-24	8
2	M8 Lock Washer	40-25	8
3	Main Head	24-02	1
4	Spacer	24-03	1
5	Head Shear	24-04	1
6	Stud Bolt (21)	24-05	4
7	Slide Pin	20-71	1
8	Spring (144)	85-37	1
9	2 x 10 Drive Pin	5-09	1
10	Pin (142)	24-06	2
11	CE-10 Snap Ring	40-16	4
12	Latch	24-07	1
13	Blade	24-08	2
14	M5 X 10 Screw (D.P)	55A-11	1
15	Body Head	24-09	1
16	Spring (375)	24-10	1
17	Ram	24-11	1
18	Blade Screw	16-19	2
19	P-32 Back Up Ring	40-43	1
20	P-32 O-Ring	40-44	1
21	Valve Screw (3)	16-24	1
22	Spring (2)	16-25	1
23	7/32" Ball	16-26	2
24	2.5 x 10 Dowel Pin (D)	40A-03	2
25	Pump Piston	24-12	1
26	VC8 Oil Seal	40A-05	1
27	P-8 Back-Up Ring (B.C)	85-33	1
28	PS-8 Pent Seal	16-44	1
29	Body	24-13	1
30	P-3 O-Ring	16-36	1
31	Release Valve Stem	24-14	1
32	Release Lever	24-15	1
33	E-3.2 Snap Ring	16-33	1
34	Pin (26)	16-27	1
35	E-2.5 Snap Ring	16-28	2
36	Spring (371)	51-17	1
37	M10 x 12 Screw (F.P.)	40-47	1
38	9/32" Ball	16-40	1
39	Spring (76)	16-39	1
40	M3 Flat Washer	16-38	1
41	Pin (131)	51-23	2
42	CE-6 Snap Ring	16-30	4
43	4 x 16 Dowel Pin (G)	24-01	1
44	Rubber	24-16	1
45	Pump Handle	24-17	1
46	Pump Handle Grip	51-25	1
47	S-36 O-Ring	85-51	1
48	Spring (4)	16-48	1
49	3/16" Ball	16-49	1
50	Copper Gasket (6)	16-50	1
51	Suction Valve Screw Ass'y	16-51	1
52	P-26 O-Ring	16-55	1
53	Oil Reservoir (4)	20A-03	1
54	Reservoir Cap	410-55	1
55	Body Handle	24-18	1
56	Body Handle Grip	24-19	1

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Powering the Future

Model S-75 Parts List



No.	Description	Code	Qty
1	M8 Hex. Nut	40-24	20
2	M8 Lock Washer	40-25	20
3	Head Shear	75-01	1
4	Spacer	75-02	2
5	Head Shear Plate	75-03	2
6	Stud Bolt (9)	75-04	6
7	CE-9 Snap Ring	75-05	2
8	Pin (49)	75-06	1
9	Lock Pin	75-07	1
10	Support Plate (2)	75-10	2
11	Roller	75-11	2
12	Stud Bolt (10)	75-12	4
13	Blade	75-13	1
14	Body Head (New Style)	75-15	1
15	Cover	16-12	2
16	1.6 x 120 Piano Wire	75-16	2
17	Spring (93)	75-17	1
18	Blade Screw	75-18	1
19	Ram	75-20	1
20	P-22A Back-Up Ring (B.C)	75-21	1
21	P-22A O-Ring	75-22	1
22	Cylinder (New Style)	75-24	1
23	G-30 Back-Up Ring (B.C)	75-25	1
24	G-30 O-Ring	75-26	1
25	1.6 x 110 Piano Wire	75-28	1
26	Valve Screw (3)	16-24	1
27	Spring (2)	16-25	1
28	7/32" Ball	16-26	2
29	Body	75-30	1
30	E-2.5 Snap Ring	16-28	1
31	Pin (26)	16-27	1
32	E-3.2 Snap Ring	16-33	1
33	Release Lever	16-34	1
34	Release Valve Stem	16-35	1
35	P-3 O-Ring	16-36	1
36	Spring (77)	16-37	1
37	M4 x 6 Screw (F.P)	16-42	1
38	M3 Flat Washer	16-38	1
39	Spring (76)	16-36	1
40	9/32" Ball	16-40	1
41	M10 x 10 Screw (F.P)	16-41	1
42	Pin (47)	16-29	2
43	CE-9 Snap Ring	16-30	4
44	Pump Handle	16-31	1
45	Pump Handle Grip	16-32	1
46	PS-8 Pent Seal	16-44	2
47	P-8 Back-Up Ring (E.L.)	16-45	1
48	Gland	16-46	1
49	Pump Piston	16-47	1
50	Spring (4)	16-48	1
51	3/16" Ball	16-49	1
52	Copper Gasket (6)	16-50	1
53	Suction Valve Screw Ass'y	16-51	1
54	P-26 O-Ring	16-55	1
55	Oil Reservoir	40A-07	1
56	Reservoir Cap	410-55	1
57	M4 x 5 Screw (C.P)	55A-24	1
58	Body Handle	75-31	1
59	Grip Base	40-56	1
60	Body Handle Grip	40-57	1
61	5 x 14 Drive Pin	75-32	2
62	2 x 12 Drive Pin	40-21	1

CLYDESDALE

Powering the Future

No.	Description	Code	Qty
1	M10 Hex. Nut	40-31	8
2	M10 Lock Washer	40-32	8
3	Main Head	32-01	1
4	4 x 36 Drive Pin	26-02	1
5	Pin (31)	26-03	2
6	CE-12.7 Snap Ring	26-04	4
7	Latch	26-05	1
8	Spring Holder	26-06	1
9	Spring (81)	26-07	1
10	Head Shear	32-02	1
11	Stud Bolt (2)	26-09	4
12	Spacer	32-03	1
13	M5 X 10 Screw (D.P)	55A-11	1
14	Body Head	32-05	1
15	Blade	32-06	1
16	Spring (375)	32-07	1
17	Ram	32-08	1
18	Blade Screw	32-09	1
19	P-45 Back Up Ring (B.C)	32-10	1
20	P-45 O-Ring	32-11	1
21	Exhaust Valve Screw	26-19	1
22	Copper Gasket (4)	26-20	1
23	Spring (68)	26-21	1
24	1/4" Ball	26-22	1
25	Spring (4)	16-48	1
26	3/16" Ball	16-49	2
27	M6 x 15 Screw (F.P.I)	32-23	1
28	2.5 x 20 Drive Pin	32-13	1
29	Release Knob Label	32-14	1
30	Release Knob	32-15	1
31	Release Valve Stem	32-16	1
32	P-3 O-Ring	16-36	1
33	7/32" Ball	16-26	1
34	Spring (76)	16-39	1
35	9/32" Ball	16-40	1
36	M10 x 10 Srew (F.P.)	16-41	1
37	PS-9 Pent Seal	32-18	1

Model P-100 Parts List

