Suretech

DIGGA®

DIGGA MANUFACTURING

NOT JUST ASSEMBLERS WE ARE THE ORIGINAL MANUFACTURER

OUR PHILOSOPHY

Simply, to help our customers be successful.

THE TREND THESE DAYS IS FOR COMPANIES TO OUTSOURCE TO LOW COST COUNTRIES. WE ENDEAVOUR TO MAKE AN AFFORDABLE PRODUCT, BUT ARE NOT WILLING TO SACRIFICE OUR GOALS OR OUR PRODUCT INTEGRITY

QUALITY, SERVICE, RELIABILITY *GUARANTEED*

About Digga™

100% Australian owned, Digga are Australia's largest manufacturer and exporter of gearboxes and attachments for the earthmoving machinery industry. Formed in 1981 by founder, Chairman & Director of Research and Development, Stewart Wright, Digga pioneered Pendulum Drilling in Australia and today produces the largest range of compact high torque planetary drives for Pendulum Drilling and the attachment industry. Digga are a multi-award winning company both for product design and business practices, recognised for their innovative approach to leading edge design and manufacturing quality.

Digga Manufacturing

Digga are not just an assembly plant, we are the original manufacturer. Products are manufactured in Digga's company owned, state of the art 12,500sqm (130,000 sq ft) facility in Brisbane, Australia. Using only the highest grade material and with the strictest of quality control methods. Digga gears, components and attachment range are produced in house through 11 CNC machining centres, 10 gear cutting machines, 6kw fibre laser cutter, 320T brake press and extensive state of the art steel fabrication & robotic processes.

Distribution

Distributed through an extensive worldwide dealer network, Digga products are exported to over 72 different countries. Digga has 4 additional company owned manufacturing plants in Sydney, Melbourne, United Kingdom and Iowa, USA to service our extensive worldwide dealer network.

Research & Development

A full time Research & Development division are committed to new and better methods of manufacturing, product design and new product development. Digga are able to provide end users worldwide with a superior product at an always competitive price.

Digga's 12,500m² (130,000 sq ft) state of the art manufacturing facility, Brisbane Australia.

THE MOST ADVANCED AUGER DRIVE YOU'VE EVER OWNED OR OPERATED

A TRUSTED REPUTATION FOR DELIVERING QUALITY PRODUCTS THAT PERFORM

NOT JUST AN ASSEMBLER, DIGGA ARE THE ORIGINAL DESIGNERS AND MANUFACTURERS

OUR CORE EXPERTISE 2,900Nm – 500,000Nm AND EVERYTHING IN BETWEEN

INTEGRATED MOTOR AND OUTPUT HOUSING

POWERED BY EATON

In a joint effort with Eaton we have developed a range of custom hydraulic motors specifically designed for attachments, utilising EATON Geroler technology. The new designs significantly reduce the weight and overall length of the drives.

The hydraulic motor is integrated into the input housing. By merging the motor with the input housing, allowing direct connection to the gearset, we have eliminated the need for several gearbox components.

The new design significantly reduces the weight and overall length of the drives.

The high flow range (6000 Series) has an integrated pressure relief valve. No more bulky valve block. Eliminating several hydraulic fittings reducing potential leak points.

Hydraulic motor port locations have been relocated to be in the ideal location. This places your hydraulic hoses and fittings at a location and angle that is ideal for drilling.

MORE COMPACT DESIGN, LESS MAINTENANCE

No compromise in quality, gears are precision machined from a high grade alloy steel, specifically formulated for the manufacturing of high performance gears.

Compact design allows for greater length under the drive for augering or pile installation, drives can go down the hole for added length when drilling.

DESIGN AND DEVELOPMENT

Digga utilises advanced 3D modeling software, finite analysis, cyclic testing, and extensive in field testing to ensure a product that performs, day in and day out.

EXTENSIVE WARRANTY

2 PIECE SHAFT DESIGN

The Digga shaft is a separate component to the planetary carrier, isolating the planetary gears from the pushing, pulling and bending forces generated by the machine.

Highest shaft pullout rating in the industry, with heavy duty, custom designed lock nut.

Lifetime warranty on shaft pullout.

HIGHEST SIDE LOAD RATINGS

More than double the side load capacity of any other gearbox on the market. Under torque load, the Digga two piece shaft design ensures there is no increased load on the bearings. The bearings do the job they were designed for, efficiently maintaining axial and side loading.

Features & Benefits

Digga drives come packed with really practical features like top mounted hose ports, cutting edge design, and a 2 piece shaft just to name a few. Hover your mouse over the features´ 'plus' symbol on the diagram below to reveal the respective benefits.

PLANETARY GEARBOX

Digga gearboxes are planetary gear driven. The main reason for their popularity is that planetary gears offer large savings in weight, volume and cost thus permitting compact constructions at competitive prices. Planetary gear drives are also very low maintenance and other than oil changes rarely require any other maintenance.

WHAT IS A DIGGA AUGER DRIVE?

A Digga Auger Drive is a set of gears, shafts, and bearings that are enclosed in a housing and are arranged in a way that resemble a solar system, with one or more planet gears orbiting around a sun gear.

Digga Auger Drive are also known as speed reducers. They convert input speed (typically provided by an hydraulic motor) into a lower output speed while correspondingly creating higher torque. In other words, gearboxes reduce RPM, turning it into power for use in low RPM high-torque applications.

The technical explanation for such reductions is to be found in the sharing of forces among several load bearing components.

GEAR SET

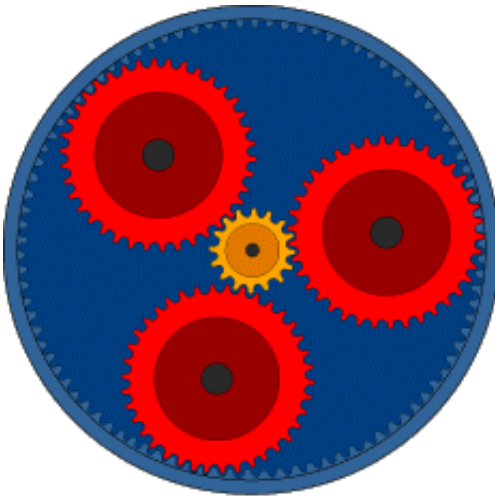
A gear set comprises of an internal cut ring gear and a planet carrier, with normally three gears mounted on to the carrier via needle roller bearings. These are driven by the input or sun gear. That is, the three gears on the planet carrier travel around, driven by the sun gear, driving off the outer ring and thus driving the output shaft. Hence the term “planetary”. Digga have multiple types of gear sets with multiple gearings including 3 planet, 4 planet and 5 planet gear sets.

Sun: (Yellow) The central gear

Planet Gear: (Red) Can be three, four or five gears that are held by the planet carrier and orbit around the sun gear.

Ring Gear: (Light Blue) An outer ring with inward-facing teeth that mesh with the planet gears.

Carrier: (Dark Blue) Holds one or more peripheral planet gears, of the same size, meshed with the sun gear

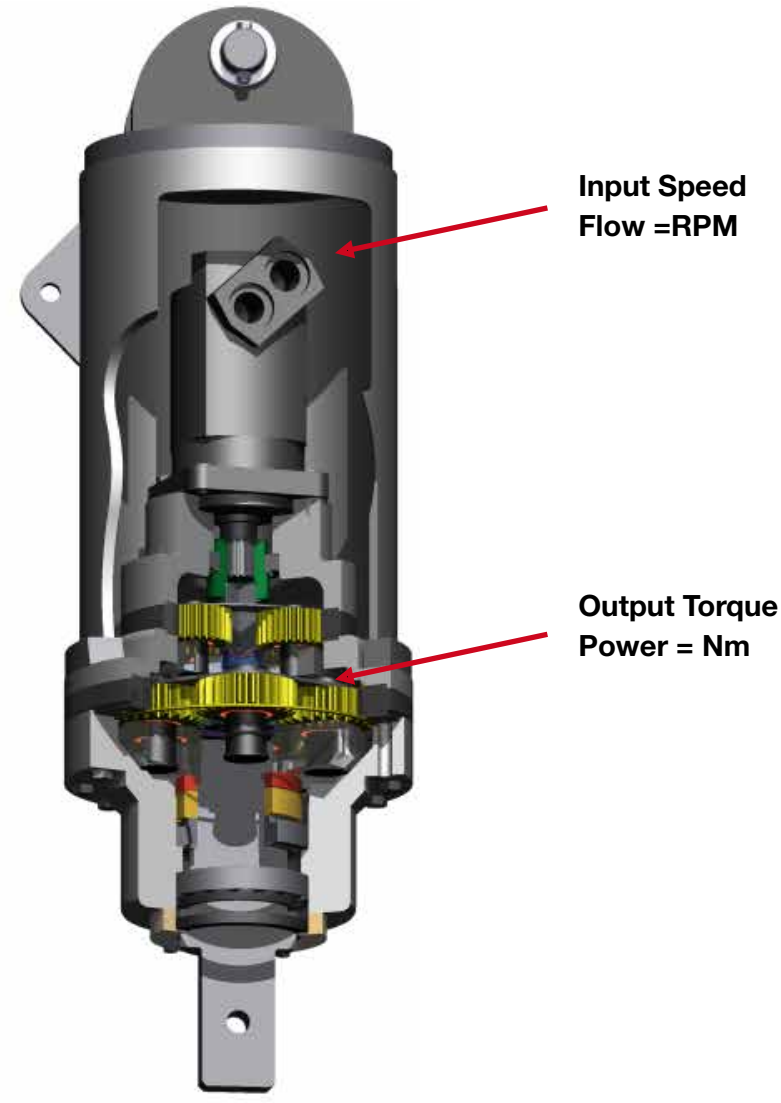


WHY USE PLANETARY GEARS

- Large savings in weight, volume and cost.
- Permit compact constructions at competitive prices.
- Very low maintenance, other than oil changes rarely require any other maintenance.
- Allows unlimited variable to occur ie. Different combinations of gear ratios and motor sizes for a more varied range.

GEARBOXES ARE KNOWN AS SPEED REDUCERS OR TORQUE MULTIPLIERS

- They convert input speed (typically provided by a hydraulic motor) into a lower output speed while correspondingly multiplying higher torque.
- In other words, gearboxes reduce RPM, turning it into power for use in low Speed high-torque applications.



The Gear Ratio is determined by the number of teeth on the Ring Gear (Blue gear) divided by the number of teeth on the yellow gear (the sun gear) + 1. Ie. GF= ratio of the gearbox X ci of the motor - 3.48 X 7.6 ci =26.44 GF

GEAR FACTOR

26.44 GF basically delivers the same power and speed as a 26.44ci motor.

The higher the Gearfactor the more power produced & less speed for a given flow & constant pressure ie PD50 is a GF 521. The lower the Gearfactor the more speed and less power for the same flow & constant pressure ie PD4 is GF 70.

BENEFITS OF GB/MOTOR COMBINATION OVER MOTOR ONLY

- Motor and gearbox is smaller and more compact than the motor only.
- Major cost benefits of GB/Motor combination over Motor only.
- Increased bearing sizes can go in Gearboxes for increasing our side load.

TORQUE

Is a force causing rotation. A drive unit's power consists of speed and torque. Torque is measured in Nm – Newton metres (metric). Torque, (pronounced tork), is the amount of pressure forced on the object, ie auger, screw anchor, core barrel.
1 pound-force foot (often "pound-feet") = 1.3558179 Nm

HYDRAULIC OIL FLOW (FLOW)

Flow = Speed
This is the amount of hydraulic oil that your machine is capable of pumping, the more flow the faster a drive unit will go. Measured in gallons per minute (GPM) or litres per minute (LPM).

Conversion calculation 1 GPM = 3.7843 LPM

LPM (metric)	GPM (imperial)
15	4
30	8
45	12
55	15
90	24
125	33
150	44
230	60

Approx conversions

HYDRAULIC OIL PRESSURE (PRESSURE)

Pressure = Power (torque Nm or ft lbs) The amount of pressure that the system will produce before the pre-set relief will activate. This relief provides a built in safety for avoiding damage. Measured in PSI or (BAR). Conversion Calculation 1 psi = .069 bar 1 bar = 14.504psi

Bar (metric)	PSI (imperial)
205	3000
220	3200
230	3360
240	3500
275	4000

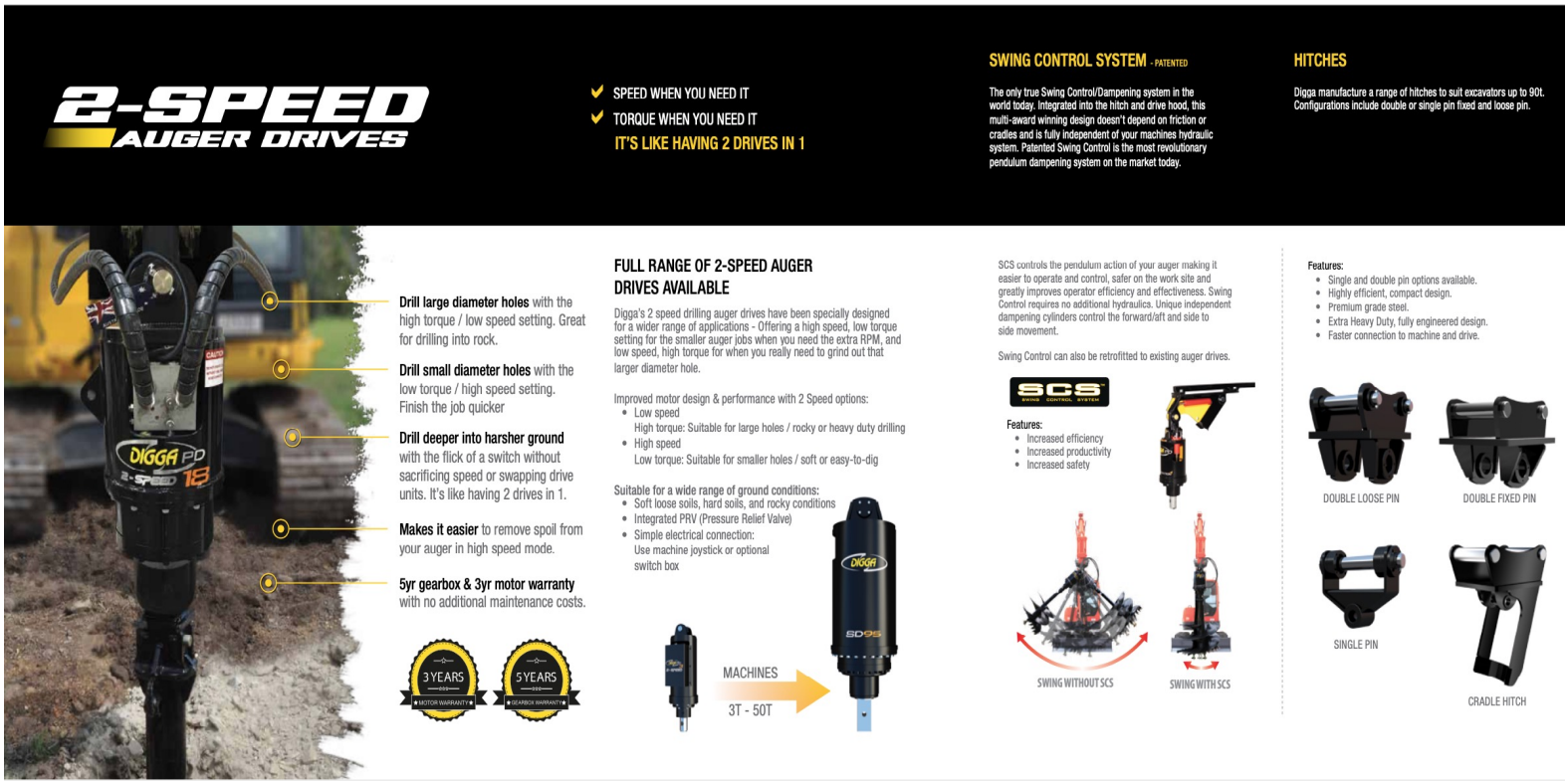
Approx conversions

SUMMING UP

Flows and pressure work hand in hand. The more flow (speed) you have the less pressure (power).

	ORDER CODE	REC FLOW (LPM)	REC PRESSURE (BAR)	
MACHINES UP TO 2T	PDD	15-45	125-240	
	PDX	20-50	125-240	
	PDX2	30-50	125-240	
MACHINES 2 TO 4T	PD3	45-75	175-240	
	PD4	50-85	175-240	2 KW MOTOR
MACHINES 4 TO 11T	PD4	60-90	175-240	
	PD5	70-115	175-240	
	PD6	75-115	175-240	
	PD7	80-115	175-240	
	PD8	80-115	175-240	
	PD10	80-115	175-240	
	PRESSURE RELIEF VALVE(PRV) RECOMMENDED WHEN FITTED TO EXCAVATORS			
	PD6HF	70-230	240 PRV	
	PD8HF	100-230	240 PRV	
	PD10HF	100-230	240 PRV	
MACHINES 12 TO 15T	PD12	110-230	240 PRV	
	PD15	125-230	240 PRV	6 KW MOTOR
MACHINES 15 TO 24T	PD18	130-230	240 PRV	
	PD22	140-230	240 PRV	
MACHINES 25 TO 50T	PD25	140-230	240 PRV	
	PD30	140-230	240 PRV	
	PD40	150-230	240 PRV	
	PD50	150-230	240 PRV	
	PRESSURE RELIEF VALVE(PRV) FITTED AS STANDARD			

Ideally drive units are coded to approximately match the machine tonnage. Please be aware that this is a guide only and it is required to check the Kw's of the machine before confirming the correct drive unit that the customer requires.



CHOOSING A DRIVE

HOW TO FIT THE CORRECT DRIVE UNIT TO A PARTICULAR MACHINE AND APPLICATION

Digga Auger Drives are named according to the machine they best suit i.e. A PD-5 best suits a 5 tonne machine. A PD-22 best suits a 22 tonne machine and so on.

If a customer was wanting to order a drive unit for a 4 tonne excavator we would start with a PD-4. If they was digging small diameter holes in soft ground conditions we could offer them a PD-3. This would give them more speed but less power (torque). If they was digging a large diameter hole in hard ground, we would match a PD-5 to their machine. This will give them less speed but more power insuring the auger does not stall inside the hole.

1. Match drive unit to the machine type
2. Fine tune the choice depending on intended use
3. Check that flows and pressure are suitable for the host machine

QUESTIONS TO ASK

dr. digger

What is the intended use of the auger drive?

what tonnage is your machine?

What is the ground condition?

What torque do you require? (If screw anchoring)

What is the maximum size auger you would like to drill with?

Machine make and model?

What depth do you need to drill down to?

AUGER DRIVES - THE FACTS

BENEFITS

With over 33 years of experience in pendulum drilling, Digga are the industry leaders worldwide in auger drive technology. Digga have the most diverse range of drives available on the market. Broken up into four categories.

AUGER DRIVES			
Premium Drives	**Supa Drives**	**Mega Drives**	**I Drive**
Digga's Premium Drive range for the ultimate in performance, quality and cost effectiveness. The highest quality range on the market today. Incorporating a quality Digga manufactured Planetary gearbox and powered by Eaton hydraulic motors.	For the serious drilling operator, Digga's range of Supa Drives provide the most versatile selection of supreme planetary drives combining greater power and speed than ever before. Torques from 50,000Nm up to 150,000Nm. Fully Australian made with Heavy Duty Digga manufactured Planetary Gearbox	The Digga Mega Drive range is not for the faint hearted and is the ultimate in mega high torque performance from 160,000 up to 300,000Nm. Incorporating leading edge design technology, a choice of single speed, dual speed, or the latest in advanced drilling multispeed. Delivering up to 12 levels of torque and speed for the ultimate in drive technology and performance. Customised units are our speciality. Fully Australian made, with mega heavy duty Digga manufactured planetary gearbox.	The World First, award winning, Digga 'I-Drives' are high capacity compact hydraulic drive systems. Designed & manufactured in Australia for the drilling, construction & earthmoving industries. Their principal function is to efficiently convert the total available machine hydraulic power (kw/hp) into rotary motion.
Suit Machine Types	**Suit Machine Types**	**Suit Machine Types**	**Suit Machine Types**
Micro excavators Mini machines Mini excavators Skid steer loaders HF skid steer loaders Wheeled loaders Tractors Backhoes Tele- handlers Truck cranes Front end loaders Excavators	Excavators up to 40T	Excavators up to 60T	Excavators up to 12-50T
Applications	**Applications**	**Applications**	**Applications**
Fencing Drilling Tree planting Post holes Sound barriers Foundation drilling Screw anchoring	Foundation drilling Screw anchoring Core barrelling Custom drilling rigs	Screw anchoring Core barrelling Custom drilling Drill rig top drives.	Screw anchoring Core barrelling Foundation drilling

CONNECTING

HOW DO ATTACHMENTS CONNECT TO THE HOST MACHINE?

Digga attachments are fitted to a machine usually by one of two methods either a frame or a hitch, hydraulic hoses are then connected:

FRAME

Used primarily on machinery such as Skid Steer Loaders, Tele-handlers, Front End Loaders.

A hitch specification form is filled out by the client upon placing an order. **Critical specifications you need filled out include; Pin Centers, Pin Diameter and width between the ears for every hitch order taken.**

Different terminologies used in the industry for a hitch; head brackets, quick hitch, adaptor, dog bone, knuckle joint, universal joint.

HITCH

Used on machinery such as Excavators, Backhoes, Wheeled loaders & Truck Cranes. Hitch designs vary from machine to machine and are reliant upon critical measurements supplied by the customer or dealer. There is no universal design or size for a hitch. A hitch is constructed from heavy duty mild steel and incorporated side plates, bushes and a mounting plate. There are several types of hitches that can be used:

Single Pin Hitch (fixed or removable pins)

Double Pin Hitch (fixed or removable pins)

If Removable pins are requested then usually the hitch is being connected directly to the machine.
If fixed pins are requested they are usually being connected to the quick hitch mechanism attached to the machine.

AUGERS & WEARPARTS

MODULE 2

WHAT IS AN AUGER?

An auger is a device for moving material or by means of rotating auger flighting. A Digga auger consists of a hub, tube, boring (cutting) head and flighting. The auger is attached to the shaft of an auger drive usually with a pin and clip to secure it into place. Also known or referred to as drill, bit, screw, pigs tail, drill bit.

AUGER FLIGHTING

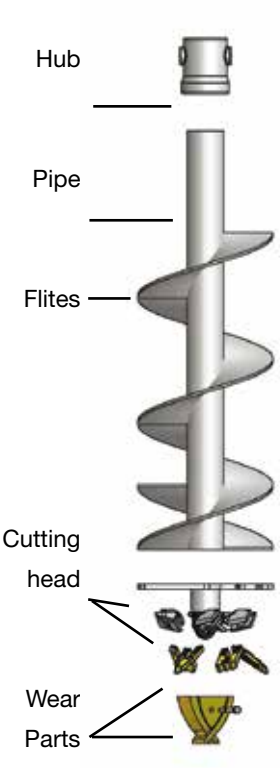
Circular shaped steel sections (pies) with a central hole and single division cut, cut from plate steel of varying thicknesses. The two ends are then pulled or pressed in opposite directions to form helical shapes of varying pitches (distances apart). Flighting is fitted to the auger pipe and welded at the join.

The auger flights provide the vehicle for moving the spoil/dirt out of the drilling hole. They are not for the purpose of cutting out the hole.

Auger flights can be either right-handed or left-handed. With the line of sight being the augers axis, if clockwise movement of the auger corresponds to axial movement away from the observer, then it is a right-handed helix.

If counter-clockwise movement corresponds to axial movement away from the observer, it is a left-handed helix. A right-handed flight cannot be turned or flipped to look like a left-handed one. The most common augers are right handed.

Typically left handed flights are fitted to truck crane mount or pro-line style augers. (Pro-line used to make truck cranes and the name just stuck.)



Pitch of Flight

SHALLOW PITCH

On a single flighted auger, the shallower (flatter) the pitch the more spoil it will hold but the slower the lift. In sticky conditions the auger can become hard to clear especially around the cutting head.

STEEP PITCH

Normally on double flighted augers. If the pitch is to shallow the auger can bog up and become difficult to clear. Steeper Pitch moves the spoil faster.

DIGGA STANDARDS

Digga flights tend to be a medium pitch
All Augers up to 8” are single flighted
All augers except A1 are Double Start over 8”
All augers except A1 model, above 450mm (18”) are double flighted on the whole auger

TYPES OF AUGERS

SINGLE CUT – WHAT IS IT AND WHY WOULD YOU USE IT?

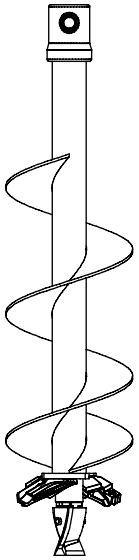
Single cut augers are designed to give less resistance and require less down pressure from the operator or machine.

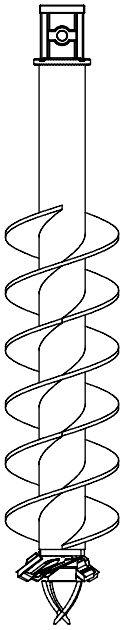
The flat plate with cutting teeth on one side only on the head plate reduces jamming.

Ideally suited for one man post hole borers and gravity drop 3 PTL borers

DOUBLE START/ SINGLE HELIX

When flighting comes from both sides of the head, one side will only be one or ½ sections the rest will be fully flighted.





DOUBLE FLIGHTED/ DOUBLE HELIX

Identical flighting going up both sides of the auger to the same level. All Digga augers over 450mm (18”) are double flighted.

DOUBLE CUT – WHAT IS IT AND WHY WOULD YOU USE IT?

Double cut refers to the cutting head of the auger. A double cut auger has pockets and replaceable teeth fitted to both sides of the cutting head to give all round performance in varying ground conditions. These augers will cut cleanly and efficiently through soft soils, clays and soft compacted ground and with the change of cutting tooth style will also cut through harder clays, shale and soft rock.

Fitted to a wide range of drive units and machine types. The shaft size, flight thickness and cutting head type would vary depending on tonnage of parent machine and nature of job intended.

DOUBLE FLIGHTED AUGER - WHAT IS IT, WHAT THE ADVANTAGES OF IT, WHAT ARE THE DISADVANTAGES OF IT, WHO WOULD ORDER IT?

ADVANTAGES

A double flighted auger has full spirals of flights continuing up the auger off both sides of the cutting head. This is advantageous to the contractor if he is mainly drilling in soft soils or dry clays as the spoil tends to hold onto the auger flights and thus digs a cleaner hole and requires minimal clean out movements.

DISADVANTAGES

A disadvantage of the double flighted auger is clay becoming compacted into the flights which does not allow the clay and soil to be flicked off when clearing.

Large loose rocks and brick bats can also be jammed into the flights causing obstruction.

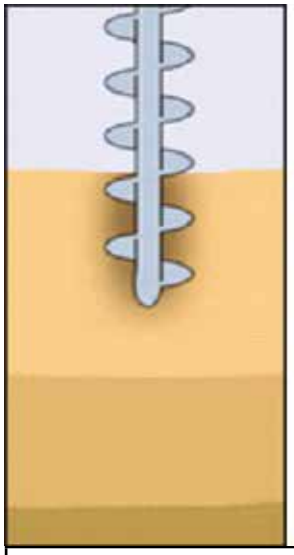
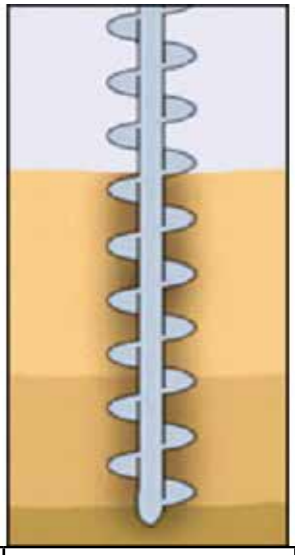
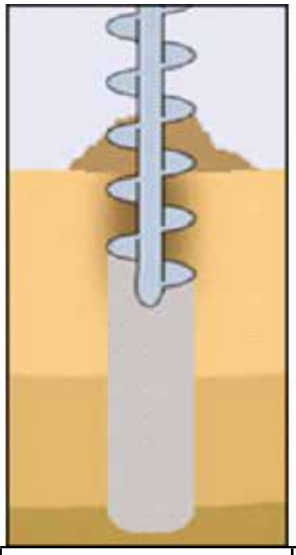
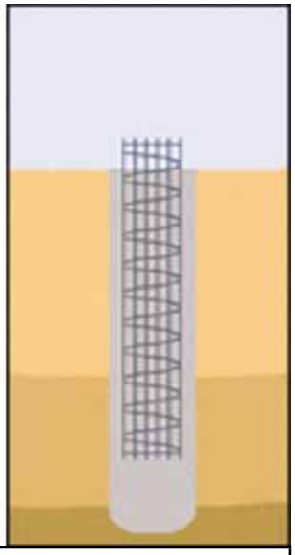
Main users of these types of augers would be contractors drilling for slab foundation where the number of lineal metres drilled is important.

TYPES OF AUGERS

FULLY FLIGHTED (CFA – CONTINUOUS FLIGHT AUGER)

Continuous flighted augers are commonly used in softer sandy soils where a sample of soil is required form various depths of the hole cut.

These augers are also used where ground conditions do not allow for the auger to be retracted each time the auger requires clearing. Larger production borer type rigs would use a auger of this type to grout inject concrete into the hole. This is achieved via a grout/concrete pump that push's grout/concrete down the centre of the auger and is deposited at the base of the hole and follows the auger up as it is extracted, leaving a formed concrete pier after the auger is out of the ground.

			
The digging head of the auger is fitted with a expendable cap	The auger is screwed into the ground to the required depth.	Concrete is pumped through the hollow stem, blowing off the expendable cap under pressure.	Maintaining positive concrete pressure the auger is withdrawn and the reinforcement is placed into the pile up to the required depth.

SECTIONAL CFA

Used in areas with limited headroom sectional auger rotary piles up to 600mm diameter, literally they are sections of CFA normally 1-1.5m and section by section they are joined and put down the hole. They are then withdrawn the same way, it is a slow process but necessary if one intends to get down to depth with low headroom to get a machine under.

FULLY FLIGHTED AUGER – WHAT IS IT, WHAT THE ADVANTAGES OF IT AND WHY WOULD PEOPLE USE IT, WHAT ARE THE DISADVANTAGES OF IT, WHO WOULD ORDER IT?

Fully flighted augers is where the flighting travels the full length of the auger body. This allows the full length of the auger to be drilled into the ground and removed in one lift. Commonly used where maximum spoil removal is important when drilling in soft ground.

TYPES OF AUGERS - FAQ

WHY DON'T WE DOUBLE FLIGHT ALL OUR AUGERS?

The cost of this would make augers substantially more expensive, augers would be much heavier and in wet, gluggy or clay type conditions the material can compact into the auger and make it very difficult to clean.

HARD FACING – WHAT IS IT AND WHY IS IT USED?

Hardfacing is essentially welding a hard alloy steel to the outside of the flights or pockets to decrease wear.

WHAT DETERMINES THE LENGTH OF AN AUGER?

The depth of hole to be drilled.

The length of an auger is determined in a number of ways.

A customers specific requirement may call for a short or long auger.

The maximum lift out of the parent machine whether this be the skid steer loader arms or excavator boom also will determine the overall length of the auger (OAL).

Augers fitted to skid steer loaders will generally be around 1200mm OAL. This fitted with an 800mm extension will give the operator a drilling depth of approx. 2500mm if the drive unit is able to be

Inserted into the diameter of the hole.

Augers fitted to excavators are only governed by the maximum lift of the boom and any number of combinations of extensions can be fitted to achieve maximum drilling depth.

WHICH WAY DO THESE TEETH GO ON SO THEY CUT PROPERLY?

The best guide to ensure for the correct fitment of teeth to your auger is too fit the pilot first and use the direction of the teeth on the pilot as your indicator. The cutting direction and action of the

Tungsten tips should be the same on both the pilot and teeth.

On the latest version of TS-3 (D535) the Digga D535 cast into the tooth should be looking at the sky when the auger is in a digging position.

AUGERS				
Digga's range of augers guide				
STD RANGE	**OAL/FLIGHT THICKNESS**	**STANDARD SIZES AVAILABLE**	**TEETH & PILOTS TO SUIT**	**SUITS EQUIPMENT RANGE**
A1	900mm/6mm	50mm (2") – 325mm (13")	TS/PS	One Man Machine
A3	1200mm/6mm	100mm (4") – 600mm (24")	TS/PS	Agricultural Equipment
A4	1200mm/6mm	100mm (4") – 900mm (36")	TS/PS	PDD – PD4
A5	1500mm/8mm	150mm (6") – 1000mm (40")	TS/MSQ.	PD4 – PD7
A6	1500mm/8mm	150mm (6") – 1200mm (48")	TM/PMSQ.	PD4 – PD10
A7C	1500mm/8mm	150mm (6") – 1000mm (40")	TTC/PMHX	PD5 – PD10
A7D	1500mm/8mm	150mm (6") – 1000mm (40")	TTD/PMHX	PD5 – PD10
A8	1500mm/10mm	150mm (6") – 1500mm (60")	TM/PH3	PD12 – PD20
A9	1500mm/10mm	150mm (6") – 1500mm (60")	TTD/PH3	PD12 – PD20
A10	1550mm/12mm	150mm (6") – 1500mm (60")	TTD/PH3	PD25 – PD50
A11	1550mm/12mm	150mm (6") – 1500mm (60")	TTL/PH3	PD25 – PD50

BORING HEAD (CUTTING HEAD)

Either welded or bolted onto the end of an auger. The boring head is constructed from a shaped plasma cut steel plate that has pockets, and a socket or drive lug welded to the centre of it. Teeth are inserted into the pockets and held in place by a friction devise of some sort either padlock, rubber or a taper design. A pilot is either inserted into the central socket, or placed over the drive lug and held in position with a bolt and lock nut. The pockets are set at a unique angle of 35°-50° as designed by Digga to optimise the cutting effectiveness of the teeth.

Double cut refers to the cutting head of the auger having pockets and replaceable teeth fitted to both sides of the cutting head to give all round performance in varying ground conditions.

Single cut refers to the cutting head of the auger having pockets only on one side of the cutting head. The flat plate with cutting teeth on one side only on the head plate reduces jamming.

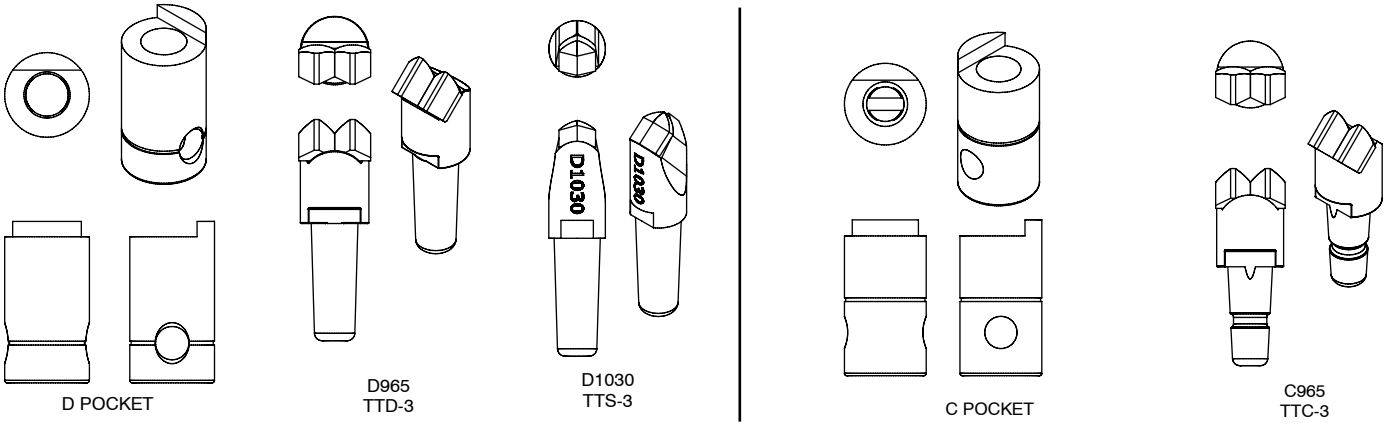
Ideally suited for One Man Post Hole Borers and Gravity Drop 3 PTL Borers

WHAT IS THE DIFFERENCE BETWEEN A C & D POCKET?

D is the universal used tooth and pocket system used.

C pockets should only be used when specifically requested by the customer. The C - Tooth is identified by a machined ring or groove in the tapered shank. C - Pocket had a machined ring or groove half way up on the body of the pocket.

D - Tooth has a smooth tapered shank. D - Pocket has a machined groove through knock-out holes.



D POCKET

D965
TTD-3

D1030
TTS-3

C POCKET

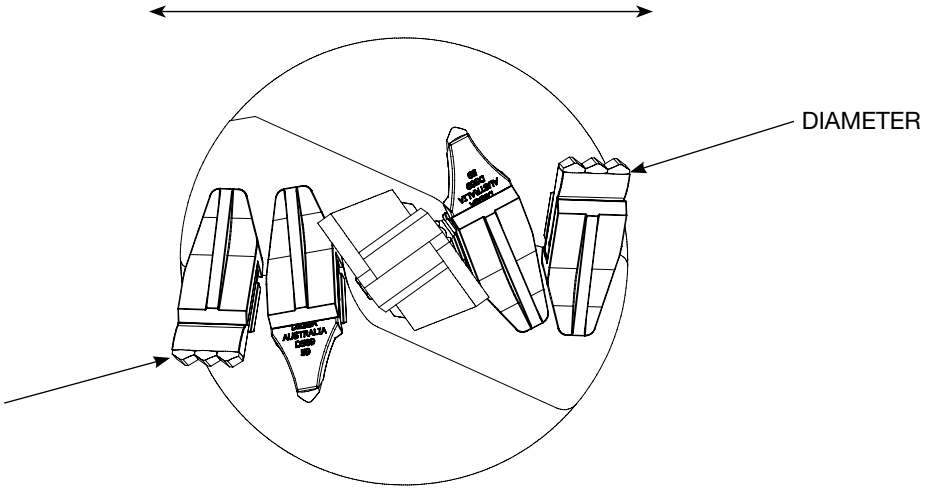
C965
TTC-3

TUNGSTEN CARBIDE

Monotungsten carbide, WC, or Ditungsten Carbide, W2C, is a chemical compound containing tungsten and carbon, similar to titanium carbide.

Its extreme hardness makes it useful in the manufacture of cutting tools, abrasives and bearings, as a cheaper and more heat-resistant alternative to diamond. Tungsten provides extended wear life and performance of the Digga teeth and pilots.

HOW TO MEASURE THE DIAMETER OF THE AUGER



DIGGALIGN - INCLINOMETER

The New Diggalign inclinometer was developed for contractors where accuracy is key. Ideal for drilling, screw piling & core barrelling applications. Designed to show the operator when the top of the pylon/pile/auger is off plumb, and helps to maintain accuracy throughout the installation.

ENERGY CONTROL VALVE (ECV)

Turn your auger drive into a dedicated screw anchor drive by installing an Energy Control Valve (ECV).

AUGERS

TRUE-CUT DIGGA AUGERS CUT A TRUE SIZED HOLE, NOT AN OVERSIZED HOLE

True-Cut design ensures a 300mm auger drills a 300mm hole. DIGGA'S True Cut augers boast a heavy duty design with high efficiency cutting heads to maximise your drilling performance. Fitted with a range of quality wear parts providing superior wear and performance.

DIGGA CUTTING SYSTEMS

The cutting head is the most crucial part of the auger and this is where Digga technology exceeds the rest of the market. Digga cutting heads are optimised for the most efficient cutting angles and rotational cutting efficiency. Choosing the right cutting head with correct teeth and pilot combinations is essential to ensuring maximum customer satisfaction.

DIGGA CUTTING SYSTEMS

Digga augers are measured from tip to tip of the teeth. The cutting head is what cuts the hole.

Features:

- 2 Options available
  - **Standard Definition** with increments in 2°
    - Recommended for piles/drilling under 6m
  - **High Definition** with increments in 0.5°
    - Recommended for piles/drilling over 6m
- Suits all machinery with a variety of harness lengths.
- Can be retrofitted to existing drives.
- Increased job site efficiency.
- Can be calibrated for angles up to 20°.
- Highlights misalignment forward and aft.
- Dual supply cable with both 12V and 24V.

Screw anchors are installed to an engineering torque specification. When installation torque is reached and the operator stops the machine, the pile has built up a rotational energy (somewhat like a rubber band on a wind-up model plane). The pile momentarily 'kicks back', forcing the energy back up the pile through the drive shaft to the gearbox, through to the hydraulic motor. This action causes the motor to effectively turn into a high speed pump, generating cavitation of the motor, in turn causing motor failure and expensive replacement costs. The DIGGA ECV valve controls the release of this energy.

Features:

- Protects motor from rapid oil decompression.
- Easily converts your Digga drilling drive into a dedicated screw anchor drive.
- Energy Control Valve can be fitted to all Digga Premium Drive units for screw anchoring applications.

EARTH AUGERS
BLADED TEETH
EARTH/CLAY/SHALES

ALL PURPOSE EARTH AUGER FOR GENERAL DRILLING

The angle and geometry of the teeth to the pilot is the key to the efficiency in which these augers perform. Available in earth, tungsten (TC) or multi-faced tungsten (MFT) braised onto the face of the teeth, providing longer wear life and greater cutting performance.

NOT SUITED TO HARDER FRACTURABLE ROCK.

ROCK/COMBINATION AUGER
TAPER TEETH
(ALL GROUND CONDITIONS)

TAPER TEETH DESIGNS ARE THE ULTIMATE ALL PERFORMANCE AUGER

No need to have two augers for different conditions. Ideal in all drilling conditions. Cut a clean clear hole in soft earths and clays and have the ultimate ripping ability in fracturable rock.

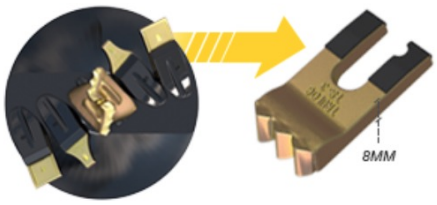
FOR LARGER EXCAVATORS IN HARDER CONDITIONS, TTL - TRIPLE TUNGSTEN TEETH ARE THE RIGHT SELECTION FOR OPTIMUM SOFT ROCK DRILLING.

ROCK AUGER
ROTATING ROCK PICK TEETH
(SHALE/ FRACTURABLE ROCK)

HEAVY DUTY DESIGN AND EFFICIENT CUTTING HEAD MAKE THE ULTIMATE ROCK DRILLING AUGER

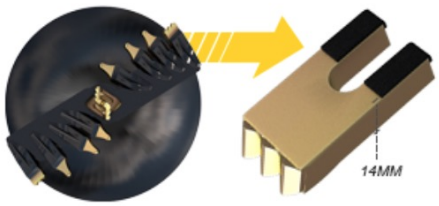
DIGGA'S Rock augers heavy duty engineered design, with high efficiency cutting heads to maximise your drilling performance. Fitted with a range of quality wear parts providing superior wear and performance.

N.B. NOT SUITED FOR EARTH OR CLAY DRILLING.



TS BLADED - 8MM

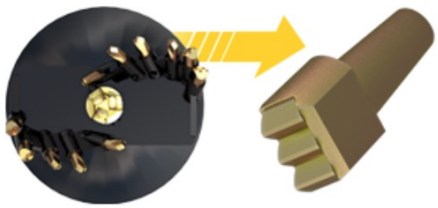
- SUITS TP / A1 / A3 / A4 AUGER
- BLADE / CHISEL - UP TO 5T
- EARTH / TUNGSTEN CARBIDE / MFT



TM BLADED - 14MM

- SUITS A6 / A8 AUGER
- BLADE / CHISEL - UP TO 24T
- TUNGSTEN CARBIDE / MFT

PAD LOC ADVANCED TOOTH LOCKING SYSTEM



TT TAPER LOCK

- SUITS RC4 / RC6 / RC8 / RC10 / RC11 AUGER
- ROUND TAPERED - UP TO 50T
- MULTI FACETED TUNGSTEN (MFT)

PICKS - 19MM/25MM

- SUITS DR4 / DR6 / DR8 / DR11 AUGER
- ROTATING ROCK PICKS - UP TO 50T
- HARDENED TUNGSTEN

EXTENSIONS

The new range of Digga Extensions are built for strength, able to handle the more powerful loads that larger machines produce. With a full range of adaptors there is an extension to suit Digga's complete range of Auger Drives and Augers.

Features

- High quality steel.
- Telescopic design for easier operation and storage.
- Large range of extensions up to 4000mm in length.
- Easy fit design.

Auger teeth & pilots - earth & rock

Our auger wearparts are specially designed to help your auger perform at its best. Our range of auger teeth offers three finishes; standard, flat tungsten, and multi-faced tungsten for tougher ground conditions. Refer below for the wearpart which best suits your auger and ground drilling needs. You can choose between a bladed cutting head, a tapered cutting head, or a rotating rock pick design.

Choosing the correct teeth for your auger

Ground conditions can play a big part when choosing teeth for your auger. If you want your auger to perform at its best, you need to choose the correct teeth. Digga auger teeth can be grouped into four basic types;

1. TS range: Drill into earth, clay, and shale - Up to 5t
2. TM range: Drill into earth, clay, and shale - Up to 24t
3. TT Combination earth & rock: Drill into soft earth and clay / rip into fracturable rock - Up to 50t
4. Rock Picks for rock: Shale, fracturable rock, concrete, and abrasive conditions - Up to 50t

Select from one of the tooth categories above based on your current auger and/or drilling ground conditions.

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