



VEHICLE RECYCLING SYSTEM

HYUNDAI
HX180 L
powerhand®
VRS 180



Dyke Nook, Sandford
Appleby, Cumbria, CA16 6NS
Tel: 017683 41400
Web: www.t-and-b.co.uk

WELCOME TO THE FUTURE OF VEHICLE DISMANTLING

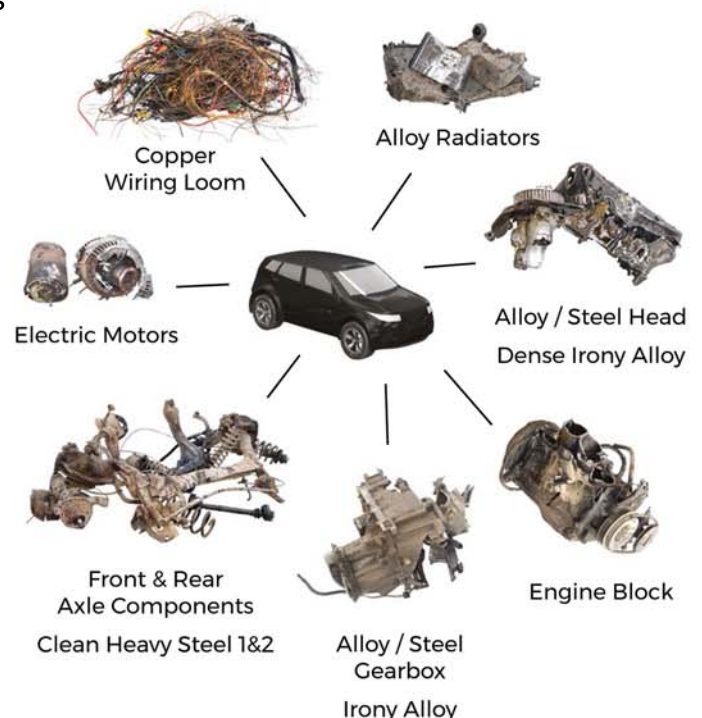


Traditional manual methods of removing high value materials from ELVs can be labour intensive and costly, in many cases making the process economically unviable. Although a four-tine scrap grab will allow extraction of the engine, much of the added value materials are left behind, resulting in the end of life vehicle dismantler missing out on great potential profit.

Like a vulture would dissect its prey, the VRS clamp arms pin down the vehicle to allow the grapple to systematically pull the valuable materials away from the lower value vehicle body shell. The knife blades on the clamp arms of the VRS 200 allow engine and transmission assemblies to be split from the engine block.

The Powerhand VRS is the ultimate combination of power and dexterity. The grapple features a slender, plier like shape providing an unbroken line of sight from the operator to the vehicle, allowing valuable materials like the copper wiring loom to be extracted from even the tightest of areas. High power hydraulic cylinders and high torque rotation unit gives the VRS the power to effortlessly dissect the vehicle.

We understand that in a demanding, fast paced industry, productivity is paramount. That's why the VRS is built to work, all day, every day. Manufactured 100% from high strength Swedish alloy steels, meaning you can maximise your profits without the worry of downtime.



VRS 180



High Speed Rotation Unit



Clamp Legs Raise/Lower to Firmly Grip Vehicle Bodies During Processing
Independent Clamp Leg Movement



High Force Gripping Jaws



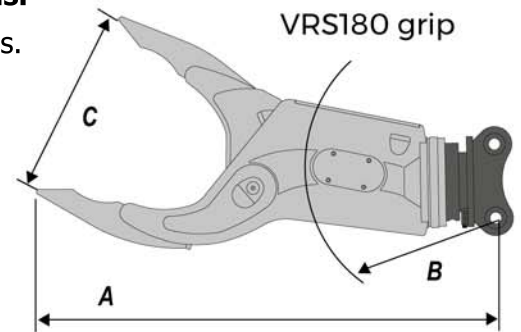
Wire Stripper



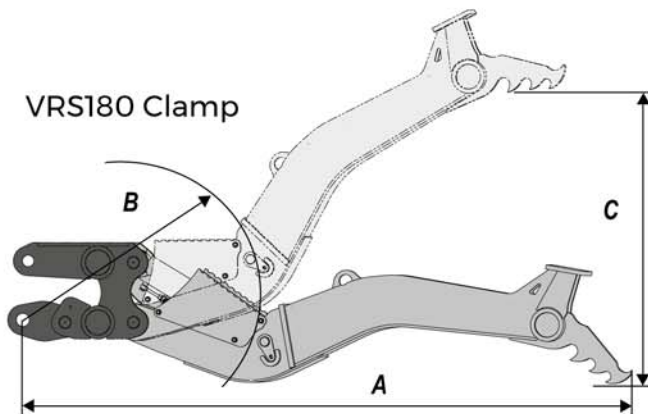
Well Protected Hydraulic Cylinders

Increase profitability by using the VRS to quickly remove higher grade materials such as engine/transmission assemblies, axle/suspension components from lower grade vehicle body materials.

- Hold down and clamp vehicles using the machine mounted clamp arms.
- Robust enough to handle heavy materials, yet the nimble jaws of the grapple allow easy removal of wiring looms, starter motors and alternators. Once the valuable wiring loom has been removed, use the multi-tool to strip off any unwanted electrical components.
- Independent clamp leg movement.
- High speed rotation unit.
- Manufactured from high strength Swedish alloy steel.



Overall Height	A	2560mm
Centre of Gravity	B	1050mm
Max Jaw Opening	C	1050mm
Weight		1400kg



Overall Length	A	3400mm
Centre of Gravity	B	1400mm
Max Height	C	1850mm
Weight		1850kg

Suitable for fitting to most machines in the range of 16-18 tonnes.

Grapple requires two hydraulic services:

Open/Close 350Bar, 80-120 l/min
Rotate 250Bar, 40 l/min

Clamp arms:

Raise/Lower 350Bar, 80-120 l/min

HYUNDAI HX180 L



Full service and support throughout the life time of your machine

**Combined with the power & versatility of the
HYUNDAI HX180 L**

the future of vehicle dismantling is in safe hands

Note: HX180L Model shown
with VRS200 attachments

HYUNDAI HX180 L SPECIFICATION

ENGINE

Maker / Model	Perkins / 1204F		
Type	Water-cooled, 4-cycle diesel, 4-cylinder in-line, Direct injection, Turbocharged, Charge and air cooled		
Rated flywheel horse power	SAE	J1995 (gross)	102.1 kW (137 HP) at 2,050 rpm
		J1349 (net)	96 kW (128 HP) at 2,050 rpm
	DIN	6271/1 (gross)	102.1 kW (139 PS) at 2,050 rpm
		6271/1 (net)	96 kW (130 PS) at 2,050 rpm
Max. torque	57.1 kgf-m (413 lbf-ft) at 1,400 rpm		
Bore x stroke	105 x 127 mm (4.13" x 5.0")		
Piston displacement	4,400 cc (268.5 cu in)		
Batteries	2 x 12 V x 100 Ah		
Starting motor	24 V - 4.5 kW		
Alternator	24 V - 100 A		

HYDRAULIC SYSTEM

MAIN PUMP

Type	Two variable displacement piston pumps
Max. flow	2 x 164 l/min (43.3 US gpm / 36.1 UK gpm)
Sub-pump for pilot circuit	Gear pump

Cross-sensing and fuel saving pump system

HYDRAULIC MOTORS

Travel	Two speed axial pistons motor with brake valve and parking brake
Swing	Axial piston motor with automatic brake

RELIEF VALVE SETTING

Implement circuits	350 kgf/cm ² (4,980 psi)
Travel	350 kgf/cm ² (4,980 psi)
Power boost (boom, arm, bucket)	380 kgf/cm ² (5,400 psi)
Swing circuit	285 kgf/cm ² (4,054 psi)
Pilot circuit	40 kgf/cm ² (570 psi)
Service valve	Installed

HYDRAULIC CYLINDERS

No. of cylinder bore x stroke	Boom: 2 - 115 x 1,090 mm (4.5" x 42.9")
	Arm: 1 - 120 x 1,355 mm (4.7" x 53.3")
	Bucket: 1 - 110 x 995 mm (4.3" x 39.2")
	Dozer Blade: 2 - 110 x 320 mm (4.3" x 12.6")
	2-Piece Boom 1st: 2 - 115 x 960 mm (4.5" x 37.8") 2nd: 1 - 160 x 650 mm (6.3" x 25.6")

DRIVES & BRAKES

Drive method	Fully hydrostatic type
Drive motor	Two speed axial pistons motor
Reduction system	Planetary reduction gear
Max. drawbar pull	17,000 kgf (37,500 lbf)
Max. travel speed (high / low)	5.3 km/hr (3.3 mph) / 3.2 km/hr (2.0 mph)
Gradeability	35° (70%)
Parking brake	Multi wet disc

CONTROL

Pilot pressure operated joysticks and pedals with detachable lever provide almost effortless and fatigueless operation.

Pilot control	Two joysticks with one safety lever (LH): Swing and arm (RH): Boom and bucket (ISO)
---------------	---

CONTROL

Traveling and steering	Two levers with pedals
Engine throttle	Electric, Dial type
Lights	Two lights mounted on the boom, Two on the upper frame

SWING SYSTEM

Swing motor	Axial piston motor
Swing reduction	Planetary gear reduction
Swing bearing lubrication	Grease-bathed
Swing brake	Multi wet disc
Swing speed	10.3 rpm

SERVICE REFILL CAPACITIES

Re-filling	liter	US gal	UK gal
Fuel tank	290	76.6	63.8
Engine coolant	27.5	7.3	6.0
Engine oil	10.5	2.8	2.3
Swing device - gear oil	6.2	1.6	1.4
Final drive (each) - gear oil	5.8	1.5	1.3
Hydraulic system (including tank)	240	63.4	52.8
Hydraulic tank	125	33.0	27.5
DEF/AdBlue* tank	19	5.0	4.2

UNDERCARRIAGE

The X-leg type center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricated rollers, idlers, track adjusters with shock absorbing springs and sprockets and a track chain with double or triple grouser shoes.

Center frame	X - leg type
Track frame	Pentagonal box type
No. of shoes on each side	51 EA
No. of carrier roller on each side	2 EA
No. of track roller on each side	7 EA
No. of rail guard on each side	1 EA

OPERATING WEIGHT (APPROXIMATE)

Operating weight, including 5,100 mm (16' 9") boom; 2,600 mm (8' 6") arm; SAE heaped 0.76 m³ (0.99 yd³) bucket, lubricant, coolant, full fuel tank, full hydraulic tank and all standard equipments.

OPERATING WEIGHT

Shoes	Type	Width mm (in)	Operating weight		Ground pressure kgf / cm ² (psi)
			kg (lb)		
Triple grouser	500 (20")	HX180L	18,540 (40,870)	0.51 (7.25)	
		HX180LD	19,440 (42,860)	0.54 (7.68)	
		HX180NL	18,440 (40,650)	0.51 (7.25)	
	600 (24")	HX180L	18,800 (41,450)	0.43 (6.11)	
		HX180LD	19,700 (43,430)	0.45 (6.40)	
		HX180NL	18,700 (41,230)	0.43 (6.11)	
700 (28")	HX180L	19,050 (42,000)	0.38 (5.40)		
	HX180LD	19,950 (43,980)	0.39 (5.55)		
	HX180NL	18,950 (41,780)	0.37 (5.26)		
	HX180L	19,310 (42,570)	0.33 (4.69)		
800 (32")	HX180LD	20,210 (44,560)	0.35 (4.98)		
	HX180NL	19,210 (42,350)	0.33 (4.69)		

**Dyke Nook, Sandford,
Appleby, Cumbria, CA16 6NS
Tel: 017683 41400
Web: www.t-and-b.co.uk**

