



S115/S128

Mechanical Scrap Shears



CAT[®]

| Shear Model | Cat Excavator | Linkage |
|-------------|---------------|---------|
| S115 | 318B | B |
| | 320B | B/C |
| | 322B | S/D |
| | 325B | C/D |

| Shear Model | Cat Excavator | Linkage |
|-------------|---------------|---------|
| S128 | 330B | D/E |
| | 345B | F/G |

Cat[®] S115, S128 Mechanical Scrap Shear

Quick and cost effective

The excavator bucket cylinder powers the straight mechanical stick mounted shears. This eliminates the cost of a dedicated cylinder and housing as well as the hydraulic installation kit required to operate hydro-mechanical shears.

Although the mechanical shears in general cannot match the cutting force of the hydraulic shears, the extended bucket linkage on the CAT mechanical

shears enhances the power of the bucket cylinder thereby increasing the shear force. Caterpillar Mechanical Shears are designed to reduce tension on the stick to minimize the possibility of cracking or breaking by the higher force.

Application

Mechanical shears provide a low cost alternative to hydro-mechanical shears when rotation of the work tool is not

necessary and when the material to be cut matches the cutting force and the jaw opening of the shears. Applications include items such as automobile tires, cables, and smaller diameter pipe, structural steel like I - Beams up to 10' high and solid rounds up to 3 1/4" in diameter

Speed

The cycle time depends on the flow which is limited to one pump for the bucket cylinder. The larger the cylinder, the more oil is needed, the slower the cycle time. Thus, an S115 on a Cat 320B has a cycle time of less than 6 seconds while the S128 on a Cat 330B completes a cycle in just under 8 seconds.

Commonality

The mechanical grapples, shears and pulverizers utilize the same welded mounting plate on the stick within the same weight class of machines. This compatibility among tools affords cost and time savings.



Mechanical Scrap Shear



Matching Guide

Stick Mounted / Reach Boom

Mechanical Shear

| Model | Cat Excavator | Stick Range meters | Range feet |
|-------------|---------------|--------------------|-------------------|
| S115 | 318B | 2.25 - 3.2 m | 7' 5" - 10' 6" |
| | 320B | 1.9 - 3.9 m | 6' 3" - 12' 9" |
| | 322B | 2.5 - 3.6 m | 8' 2" - 11' 10" |
| | 325B | 2.7 - 3.2 m | 8' 10" - 10' 6" |
| S128 | 330B | 3.3 - 3.9 m | 10' 10" - 12' 10" |
| | 345B | 3.4 - 4.8 m | 11' 2" - 15' 9" |

Specifications

| Model | | S115 | S128 |
|---|------|------------------------------|------------------------------|
| Weight including bracket | | 1600 kg 3,530 lb | 2400 kg 5,290 lb |
| Dimensions | | | |
| Length | | 2600 mm 102.4" | 2950 mm 116.1" |
| Height | | 1420 mm 55.9" | 1670 mm 65.7" |
| Width | | 305 mm 12.0" | 375 mm 14.8" |
| Jaw opening* | min. | 340 mm 13.3" | 400 mm 15.7" |
| | max. | 420 mm 16.5" | 500 mm 19.7" |
| Jaw depth | | 460 mm 18.1" | 570 mm 22.4" |
| Forces | | | |
| At throat* | min. | 1750 kN 200 st | 3000 kN 340 st |
| | max. | 3250 kN 365 st | 4500 kN 505 st |
| Primary blade center* | min. | 920 kN 105 st | 1650 kN 185 st |
| | max. | 1700 kN 190 st | 2400 kN 270 st |
| Excavator size | min. | 15000 kg 33,000 lb | 25000 kg 55,000 lb |
| | max. | 30000 kg 66,000 lb | 40000 kg 88,000 lb |
| The welded mounting plate on the stick is | | G112/G115 | G125/G140 |

Cutting Capacity

| Model | S115 | S128 |
|-----------------------|--------------------------------|----------------------------------|
| Narrow I-beams | Min./Max. | Min./Max. |
| Height | 220/330 mm 9/13" | 360/400 mm 14/15.7" |
| Flange width | 110/160 mm 4.5/6.3" | 170/180 mm 6.7/7.1" |
| Flange thickness | 9/11.5 mm 0.35/0.45" | 12.5/13.5 mm 0.5/0.53" |
| Web thickness | 6/7.5 mm 0.25/0.3" | 8/8.6 mm 0.3/0.34" |
| Wide I-beams | | |
| Height | 13/210 mm 5.2/8.3" | 230/250 mm 9/9.8" |
| Flange width | 140/220 mm 5.5/8.7" | 240/260 mm 9.4/10.2" |
| Flange thickness | 8.5/11 mm 0.33/0.43" | 12/12.5 mm 0.47/0.49" |
| Web thickness | 5.5/7 mm 0.2/0.28" | 7.5/7.5 mm 0.3/0.3" |
| Solid-round | 55/75 mm 2.2/3" | 75/85 mm 3/3.3" |
| Solid-square | 45/65 mm 1.8/2.6" | 65/75 mm 2.6/3" |

The above profiles provide an indication of the shears cutting capability.

The exact cutting dimensions depend on excavator size, the conditions of the shear cutters and jaws and the tensile strength of the steel.

Notes:

*Depends on machine size

Mechanical Scrap Shears

Caterpillar recommends falling object guards in applications where there is a possibility of falling objects. Please consult your Caterpillar dealer for these guards.

GEHQ0167

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Featured machines in photos may include additional equipment.
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