

HYDROMECHANICAL ATTACHMENTS

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HYDRO MECHANICAL TOOLS FOR COMPACT EQUIPMENT

Please reference the Skid Steer Loaders/Multi Terrain Loaders/Compact Track Loaders section for the following hydro mechanical tools:

- Augers
- Backhoes
- Brooms
- Brushcutters
- Cold Planers
- Vibratory Compactors
- Mulchers
- Landscape Rakes
- Power Box Rakes
- Wheel Saws
- Snow Blowers
- Stump Grinders
- Landscape Tillers
- Trenchers

HYDRAULIC HAMMERS

H25D Hammer Features:

- **Streamlined Shape** fits into narrow places.
- **Simple Design** has only two moving parts for minimal maintenance.
- **High Blow Rate** translates to high productivity.
- **Lower Tool Bushing** can be replaced in minutes in the field.

H35E s-H65E s Hammer Features:

- **Available** in both side plate and silenced versions.
- **Mounting Options** include integral pin-on and flat-top.
- **Gas-fired Operating Cycle** delivers consistent, reliable performance over time.
- **Auto Shut Off (ASO)** — Instantly stops the piston when breaking through material. Prevents blank firing, which is a top cause of hammer wear.
- **Plug and Perform** — No adjustment to pressures or flows is needed.
- **Dual Ports** optimize hose runs on HEX, BHL and SSL/MTL machines.
- **One-piece Body** reduces components, eliminates tie rods and nuts.
- **Single Bushing** design is slip fit and field-replaceable.
- **Tri-suspension System** guides the power cell and gives manageable, smooth performance.
- **Grease Point** is ergonomically located at standing height.
- **Cylinder Sleeve** provides replaceable protection for the cylinder, and drastically cuts labor for rebuilds.
- **Designed to Be Easily Rebuilt**, providing lasting value for your hammer investment.

H75E s-H95E s Hammer Features:

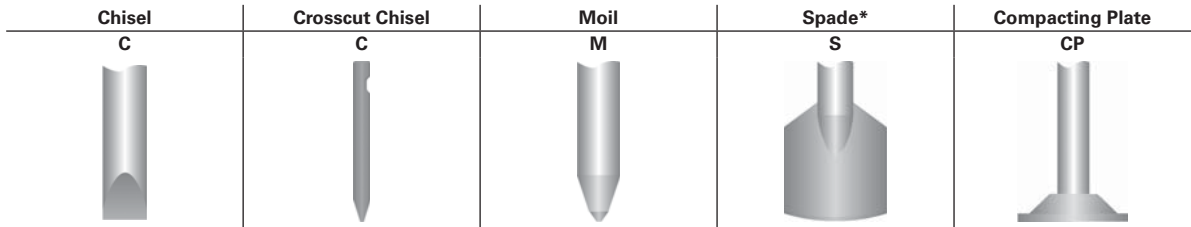
- **Silencing** is standard on all H75E s and H95E s hammers.
- **Tri-suspension System** buffers the power cell, reducing noise and vibration.
- **Integral Accumulator** dampens pressure peaks and pulsation, thus protecting carrier hydraulic system.
- **Gas-fired Operating Cycle** delivers consistent, reliable performance over time.
- **Automatic Shut-off** protects the hammer from blank firing and reduces internal wear, protecting the hammer from less experienced operators.
- **Fully Enclosed Housing** protects the power cell, and is designed to eliminate stress points.
- **Gas Seal System** assures constant power is maintained between service intervals.
- **Single Grease Point** provides hammer paste to tool bushings. Grease point is ergonomically located at standing height making it comfortable for the operator to access.
- **Tool Changes** are simple: easily accomplished with common hand tools. Lower tool bushing can be serviced in the field.
- **Slip Fit Lower Tool Bushing** provides positive tool alignment, is field replaceable and rotatable.
- **Easy to Maintain** — Gas charges can be checked and filled with the hammer mounted on the machine.
- **Designed to Be Easily Rebuilt**, providing lasting value for your hammer investment.

H110E s-H180E s Hammer Features:

- **Unique Suspension System** — Improved recoil, support and guidance protects the carrier, increases hammer durability. Entire power cell is secured firmly inside housing. Noise suppression, operator feel and control is improved.
- **Auto Shut Off (ASO)** — Instantly stops the piston when breaking through material. Prevents blank firing, which is a top cause of hammer wear. Reducing wear improves maintenance and more productive hours of work.
- **Accumulator** — Self-contained membrane accumulator designed for long life. Port is accessible while hammer is mounted on the machine making testing and recharging a routine task achievable in the field.
- **Hydraulic Valves** — A Pressure Control Valve (PCV) maintains maximum hydraulic pressure to ensure the hammer delivers all blows at full power. PCV can be easily checked and adjusted from outside the hammer in about 30 minutes. A check valve (not shown) isolates harmful pulsation spikes from the carrier hydraulic circuit.
- **Autolube Connection and Grease Channel** — Provides grease to the upper and lower tool bushings to ensure proper greasing, longer life for bushings and tool.
- **Seal Carrier** — Contains special high performance seals to extend leak-proof operation.
- **Piston** — Long piston transfers a long shock wave into the rock. Tool-piston diameters are matched for maximum energy transfer.
- **Tie-Rods** — Larger threads improve load carrying capability, durability and reliability.
- **Cylinder** — Engineered to be durable and reliable with minimal maintenance and downtime.
- **Upper Tool Bushing** — Guides the tool to optimize in-line piston to tool contact.
- **Tool Retaining Pins and Keepers** — Tool removal process is simplified, achievable with common hand tools. Removal time reduced by 40% over previous models.
- **Lower Tool Bushing** — As bushing reaches the wear limit, it can be easily rotated (90°) or replaced to bring it back into specification. Dust seals keep contaminants out.

NOTE: Internal components of hammers are machined to close tolerances and require clean oil with full lubricating properties. When operating in high ambient temperatures or extreme temperature applications (e.g. foundries), higher viscosities are recommended to extend hammer life and improve performance. Hammers tend to shear multigrade mineral oil so that oil viscosity decreases. Contamination, water in oil, and decreased viscosity lead to earlier oil deterioration and the need for more frequent oil changes than normally recommended for the excavator. Extra care should be taken to avoid the entry of dust or dirt when installing or removing a hammer in the field.

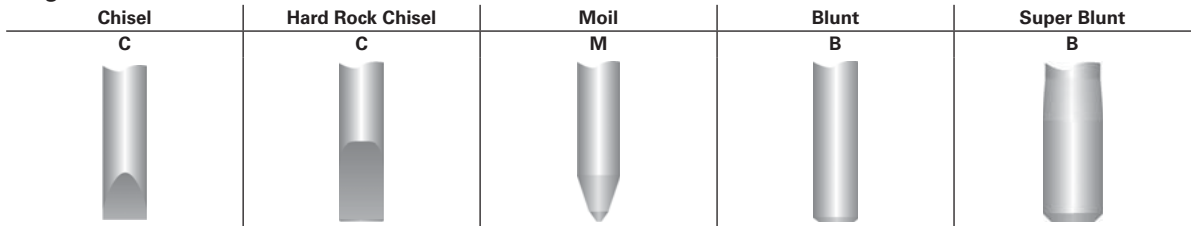
Small Hammer Tools



	H25D	H35E/Es	H45E/Es	H55E/Es	H65E/Es	H75 s	H95 s
Road building/construction							
Breaking of road surface	C, M	C, M, S	C, M, S	C, M, S	C, M, S	C, M, S	C, M
Asphalt cutting	C	C, S	C, S	C, S	C, S	C, S	C
Trench excavation for drainage						C, M	C, M
Demolition of bridges	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Compacting soils		CP	CP	CP	CP	CP	
Making holes (for traffic signs, lamp posts)		M	M	M	M	M	M
Breaking of frozen ground	C, M	C, M, S	C, M, S	C, M, S	C, M, S	C, M, S	C, M
Demolition/housing development							
Demolition of concrete walls, roofs, floors	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Demolition of light, reinforced concrete [<0.5 m (<20")]	M	M	M	M	M	M	M
Brick walls	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Rock trenches for mains/water supply/utilities						C, M	C, M
Rock excavation for foundation							C, M
Separating rebar from concrete (for recycling)	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Quarrying/open cast mining							
Breaking over sizes on a crusher/feeder/feed chute							C, M
Scaling						C	C
Metallurgical applications							
Breaking of slag in casting ladles							C, M
Cleaning of castings							C, M
Breaking of refractory linings in furnaces	C, M	C, M	C, M	C, M	C, M	C, M	C, M

*Spade available as parallel (parallel with the boom) and transverse (perpendicular to the boom).

Large Hammer Tools



	H110E s	H115E s	H120E s	H130E s	H140E s	H160E s	H180E s
Road building/construction							
Breaking of road surface	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Breaking uneven bedrock to lay a road	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Primary breaking to prepare road bed					C, M	C, M	C, M
Trench excavation for drainage	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Demolition of bridges	C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M
Heavily reinforced bridge pillars					B	B	B
Making holes (for traffic signs, lamp posts)	M	M	M	M	M	M	M
Breaking of frozen ground	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Demolition/housing development							
Demolition of concrete walls, roofs, floors	C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M
Demolition of light, reinforced concrete [<0.5 m (<20")]	M	B, M	B, M	B, M			
Brick walls	C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M
Rock trenches for mains/water supply/utilities	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Rock excavation for foundation	C, M	C, M	C, M	C, M	C, M	C, M	C, M
Mass excavation of rock for industrial building bases				C, M	C, M	C, M	C, M
Massive reinforced concrete foundations					M	M	M
Separating rebar from concrete (for recycling)	C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M
Quarrying/open cast mining							
Secondary boulder breaking	B	B	B	B	B	B	B
Primary breaking of rock				C, M	C, M	C, M	C, M
Breaking over sizes on a crusher/feeder/feed chute	C, M	B, C, M	B, C, M	B, C, M	B, C, M	B, C, M	
Underground applications							
Scaling	C	C					
Metallurgical applications							
Breaking of slag in casting ladles	C, M	C, M					
Breaking of slag in converter openings	C, M	C, M	C, M	C, M	C, M		
Cleaning of castings	C, M	C, M					
Breaking of massive steel slag						C, M	C, M
Breaking of aluminum electrolyze slag	C, M	C, M	C, M	C, M	C, M		
Other applications							
Demolition/rock breaking under water		C, M	C, M	C, M	C, M	C, M	C, M

Model	H25D		H35E/H35E s		H45E/H45E s		H55E/H55E s	
Working weight ¹	70 kg	154 lb	125-130 kg	276-287 lb	145-250 kg	276-287 lb	220-345 kg	485-761 lb
Impact frequency ²	1000-1900 bpm		600-1800 bpm		780-1800 bpm		600-1680 bpm	
Hammer operating pressure ³	12 000 kPa	1740 psi	16 500 kPa	2393 psi	16 500 kPa	2393 psi	17 000 kPa	2465 psi
Acceptable oil flow	15-25 L/min	4-6.6 gpm	12-35 L/min	3-9 gpm	25-62 L/min	6.6-16 gpm	30-85 L/min	7.9-22 gpm
Carrier weight class	0.8-1.1 t	1764-2430 lb	1.1-2.4 t	2430-5300 lb	1.5-3.2 t	3310-7060 lb	2.5-6.0 t	5500-13,200 lb

Model	H65E/H65E s		H75E s		H95E s		H110E s	
Working weight ¹	260-390 kg	573-860 lb	500 kg	1103 lb	627 kg	1382 lb	830 kg-1017 kg	1826 lb-2237 lb
Impact frequency ²	720-1740 bpm		840-1650 bpm		700-1260 bpm		450-1000 bpm	
Hammer operating pressure ³	17 000 kPa	2465 psi	14 500 kPa	2100 psi	14 500 kPa	2100 psi	16 000 kPa	2320 psi
Acceptable oil flow	40-115 L/min	10-30 gpm	70-130 L/min	18-34 gpm	70-150 L/min	18-40 gpm	60-120 L/min	16-32 gpm
Carrier weight class	3-9 t	6600-19,800 lb	6-10 t	13,200-22,100 lb	7-14 t	15,400-30,900 lb	7-16 t	17,600-35,200 lb

Model	H115E s		H120E s		H130E s	
Working weight ¹	1000-1180 kg	2200-2596 lb	1300-1580 kg	2860-3476 lb	1700-1890 kg	3740-4158 lb
Impact frequency ²	370-800 bpm		350-620 bpm		320-600 bpm	
Hammer operating pressure ³	15 000 kPa	2175 psi	15 000 kPa	2175 psi	15 000 kPa	2175 psi
Acceptable oil flow	70-130 L/min	18-34 gpm	100-170 L/min	26-45 gpm	120-220 L/min	32-58 gpm
Carrier weight class	12-20 t	26,400-44,000 lb	17-26 t	37,400-57,200 lb	19-32 t	41,800-70,400 lb

Model	H140E s		H160E s		H180E s	
Working weight ¹	2475 kg	5457 lb	3337 kg	7358 lb	4251 kg	9373 lb
Impact frequency ²	360-505 bpm		380-560 bpm		270-410 bpm	
Hammer operating pressure ³	16 000 kPa	2320 psi	16 000 kPa	2320 psi	16 000 kPa	2320 psi
Acceptable oil flow	160-230 L/min	42-60 gpm	220-300 L/min	58-79 gpm	220-300 L/min	58-79 gpm
Carrier weight class	24-42 t	52,920-92,610 lb	32-55 t	70,560-121,275 lb	42-76 t	92,610-167,580 lb

¹ Includes power cell, side plates/housing, average mounting bracket, where required, and standard tool.

² Approximate value, actual impact frequency depends on oil flow, oil viscosity, temperature, and hardness of material to be broken.

³ Approximate value, operating pressure depends on oil flow, oil viscosity, temperature, material to be broken, and back pressure. Operating pressure is the result of correct low pressure adjustment.

Oil temperature working range for all models: -20° C to +80° C (-4° F to +176° F).

Oil viscosity at operating oil temperature: 15 to 1000 cSt.

Principles of Selection

Key to the successful sale of a hammer is proper hammer selection.

Background Information

Collection of background information is the first step. The following information will assist in being sure the customer receives the correct hammer and that he has a positive hammer experience. The following issues should be examined...

1. If any, what brand and model hammer was previously used and how did the hammer perform?
2. What % of time will the hammer be used on the machine?
3. Will the hammer be used in primary breaking or secondary breaking? (mainly an issue for large hammers)
4. What machine will the hammer be used on and what are the hydraulic flow and pressures of this machine?
5. What is the type of material to be broken and production required from the hammer? (best to obtain this from the end user but a table is available at the end of this section)

Hammer Selection Process

1. Using Cat carrier matching matrix on next page identify 2 or 3 possible hammers for your application (for competitive carriers use carrier weight class as reference).
2. Compare machine/carrier flow and pressures to those of the hammer candidates to validate compatibility. Eliminate hammers outside carrier specs.
3. If hammer is to be used in primary breaking consider larger of hammer candidates.
4. Check productivity guidance tables at the back of this section. Identify hammer most compatible with requirements.
5. Determine if the application requires special hammer modifications, i.e. steel mill, underwater, tunneling, etc.

Other Issues

Once the hammer has been chosen, other elements need to be considered to have a successful hammer experience.

1. Select the correct hammer tool for the application (see tool application chart in this section).
2. Check to be sure the correct hammer bracket and hoses are specified. Be sure correct carrier oil is specified for hammer use (particularly important in high ambient areas).
3. Consider supplemental carrier cooling in areas of high ambient temperature.

Actual operating pressure and back pressure **MUST** be checked when the hammer is fitted to the carrier (just as important if the hammer goes on a competitive carrier or is installed by the contractor at his shop).

Guarding Recommendation

Hammers used in hazardous applications like demolition, quarrying, and scaling, can create a need for special operator guarding due to flying objects. When using a hammer, additional protective devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.

		H25D	H35E H35E s	H45E H45E s	H55E Pin-on	H55E H55E s Flat Top	H65E Pin-on	H65E H65E s Flat Top	H75E s
Carrier weight									
Minimum	mt	0.8	1.1	1.5	2.5	2.5	3.0	3.0	6.0
	lb	1760	2430	3310	5500	5500	6610	6610	13,200
Maximum	mt	1.1	2.4	3.2	6.0	6.0	9.0	9.0	10.0
	lb	2430	5300	7060	13,200	13,200	19,800	19,800	22,100
Excavators									
300.9D		•							
301.4C			•						
301.7D CR			•	•					
301.8C			•	•					
302.2D			•	•					
302.4D			•	•					
302.5C				•	•	•*			
302.7D CR				•	•	•*			
303.5D CR/303.5E CR					•	•	•		
304D CR/304E CR					•	•	•		
305D CR/305E CR					•	•	•	•	
305.5D CR/305.5E CR					•	•	•	•	
307D								•**	•
308D CR/308E CR SB/308E2 CR SB								•**	•
311D RR									
312D/312D L/312E/312E L									
314D CR/314E CR									
315D									
316E									
318E									
319D									
320D/320E									
320D RR/320E RR									
321D LCR									
324D									
324E									
328D LCR									
329D/329E									
336D/336E/336EH									
345D									
349E									
365C									
374D									

*Installation of add-on optional counterweight to machine is required.

**Hydraulic flows and pressures must be checked to verify they match the requirements for the hammer being installed.

NOTE: Caterpillar recommends the use of a suitable shield/guard system to insure operator has adequate protection from flying debris.

NOTE: These matches are for general reference purposes for Cat machines only. When special boom and quick coupler arrangements are used, these matches may not apply.

NOTE: When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match.

		H95E s	H110E s	H115E s	H120E s	H130E s	H140E s	H160E s	H180E s
Carrier weight									
Minimum	mt	7.0	11.0	12.0	16.0	18.0	24.0	32.0	42.0
	lb	15,400	24,300	26,500	35,300	39,700	52,920	70,600	92,600
Maximum	mt	14.0	18.0	20.0	27.0	36.0	42.0	55.0	76.0
	lb	30,900	39,700	44,100	59,500	79,400	92,600	121,300	167,600
Excavators									
300.9D									
301.4C									
301.7D CR									
301.8C									
302.2D									
302.4D									
302.5C									
302.7D CR									
303.5D CR/303.5E CR									
304D CR/304E CR									
305D CR/305E CR									
305.5D CR/305.5E CR									
307D		•							
308D CR/308E CR SB/308E2 CR SB		•							
311D RR		•	•						
312D/312D L/312E/312E L		•	•	•					
314D CR/314E CR			•	•					
315D			•	•	•				
316E			•	•	•				
318E				•	•	•			
319D				•	•	•			
320D/320E				•	•	•			
320D RR/320E RR				•	•	•			
321D LCR					•	•			
324D					•	•	•		
324E					•	•	•		
328D LCR						•	•		
329D/329E					•	•	•		
336D/336E/336EH							•	•	
345D								•	•
349E								•	•
365C									•
374D									•

*Installation of add-on optional counterweight to machine is required.

**Hydraulic flows and pressures must be checked to verify they match the requirements for the hammer being installed.

NOTE: Caterpillar recommends the use of a suitable shield/guard system to insure operator has adequate protection from flying debris.

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		H25D	H35E H35E s	H45E H45E s	H55E Pin-on	H55E H55E s Flat Top	H65E Pin-on	H65E H65E s Flat Top	H75E s
Carrier weight									
Minimum	mt	0.8	1.1	1.5	2.5	2.5	3.0	3.0	6.0
	lb	1760	2430	3310	5500	5500	6610	6610	13,200
Maximum	mt	1.1	2.4	3.2	6.0	6.0	9.0	9.0	10.0
	lb	2430	5300	7060	13,200	13,200	19,800	19,800	22,100
Wheeled Excavators									
M313C/M313D									
M315C/M315D									
M316C/M316D									
M318C/M318D									
M322C/M322D									
Skid Steer and Multi-Terrain Loaders									
216B2/216B3					•	•	•	•	
226B2/226B3					•	•	•	•	
236B3/236D					•	•	•	•	
242B3/242D					•	•	•	•	
246C/246D					•	•	•	•	
247B2/247B3					•	•	•	•	
252B2/252B3					•	•	•	•	
257B3/257D					•	•	•	•	
259B3/259D					•	•	•	•	
262C2/262D					•	•	•	•	
272D/272D XHP					•	•	•	•	
277C2/277D					•	•	•	•	
279C2/279D					•	•	•	•	
287C2/287D					•	•	•	•	
289C2/289D					•	•	•	•	
297C					•	•	•	•	
299C/299D/299D XHP					•	•	•	•	
Backhoes									
BH30/BH30W					•	•			
BH150/BH160					•	•	•		
Backhoe Loaders									
416E/416F								•**	•
420E/420F								•**	•
430E/430F								•**	•
446D									
450E/450F									

*Installation of add-on optional counterweight to machine is required.

**Hydraulic flows and pressures must be checked to verify they match the requirements for the hammer being installed.

NOTE: Caterpillar recommends the use of a suitable shield/guard system to insure operator has adequate protection from flying debris.

NOTE: These matches are for general reference purposes for Cat machines only. When special boom and quick coupler arrangements are used, these matches may not apply.

NOTE: When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match.

		H95E s	H110E s	H115E s	H120E s	H130E s	H140E s	H160E s	H180E s
Carrier weight									
Minimum	mt	7.0	11.0	12.0	16.0	18.0	24.0	32.0	42.0
	lb	15,400	24,300	26,500	35,300	39,700	52,920	70,600	92,600
Maximum	mt	14.0	18.0	20.0	27.0	36.0	42.0	55.0	76.0
	lb	30,900	39,700	44,100	59,500	79,400	92,600	121,300	167,600
Wheeled Excavators									
M313C/M313D			•	•					
M315C/M315D			•	•	•				
M316C/M316D			•	•	•				
M318C/M318D				•	•	•			
M322C/M322D				•	•	•			
Skid Steer and Multi-Terrain Loaders									
216B2/216B3									
226B2/226B3									
236B3/236D									
242B3/242D									
246C/246D									
247B2/247B3									
252B2/252B3									
257B3/257D									
259B3/259D									
262C2/262D									
272D/272D XHP									
277C2/277D									
279C2/279D									
287C2/287D									
289C2/289D									
297C									
299C/299D/299D XHP									
Backhoes									
BH30/BH30W									
BH150/BH160									
Backhoe Loaders									
416E/416F			•						
420E/420F			•						
430E/430F			•						
446D			•	•					
450E/450F			•	•					

*Installation of add-on optional counterweight to machine is required.

**Hydraulic flows and pressures must be checked to verify they match the requirements for the hammer being installed.

NOTE: Caterpillar recommends the use of a suitable shield/guard system to insure operator has adequate protection from flying debris.

NOTE: These matches are for general reference purposes for Cat machines only. When special boom and quick coupler arrangements are used, these matches may not apply.

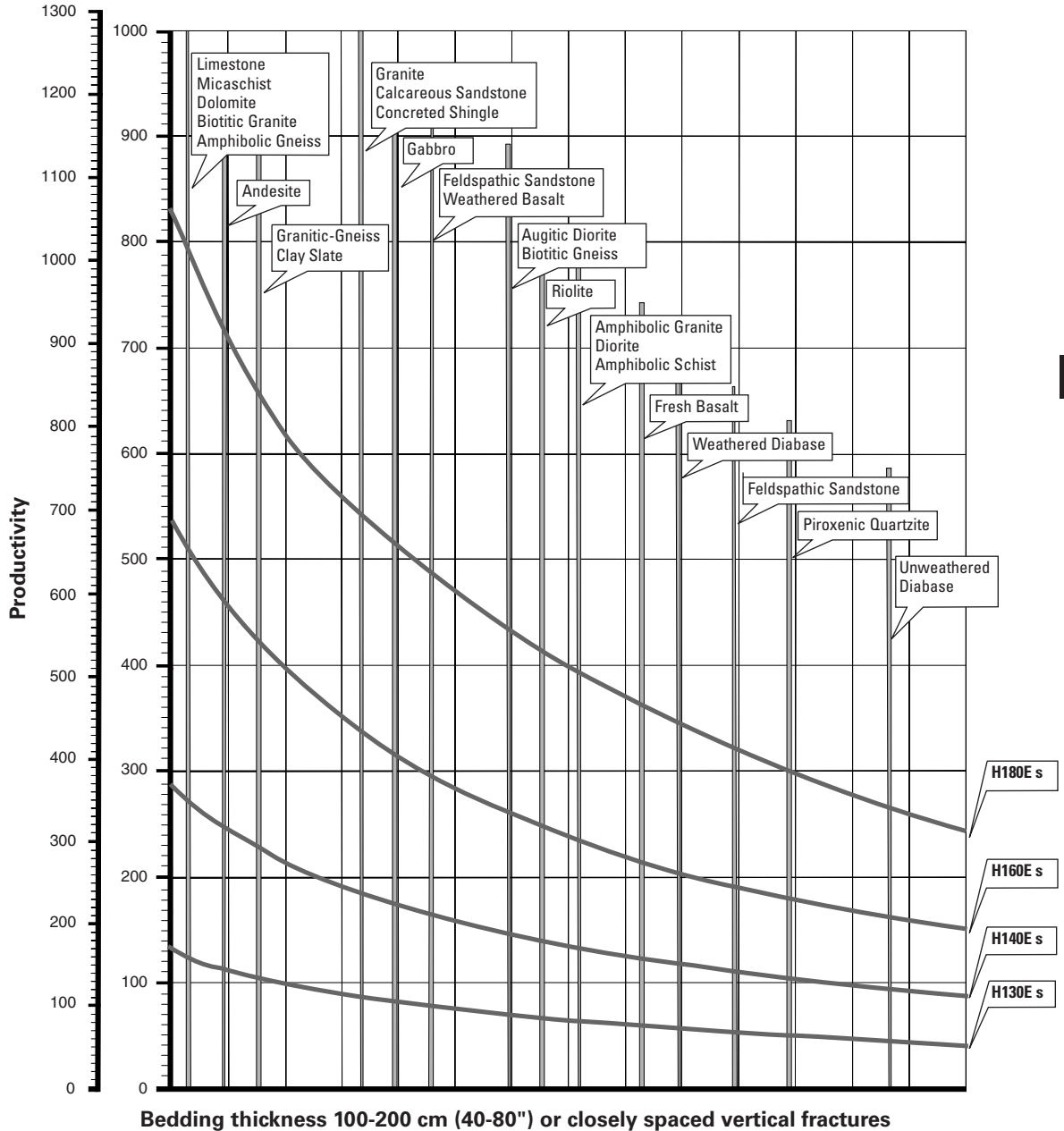
NOTE: When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match.

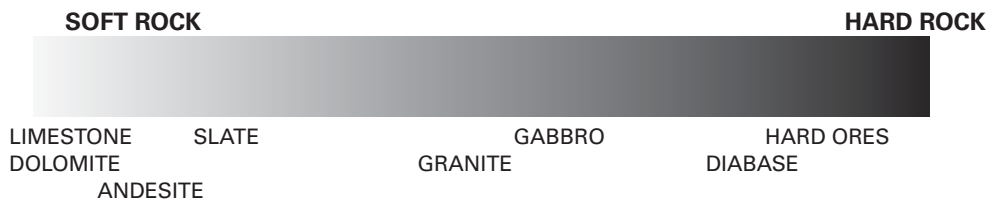
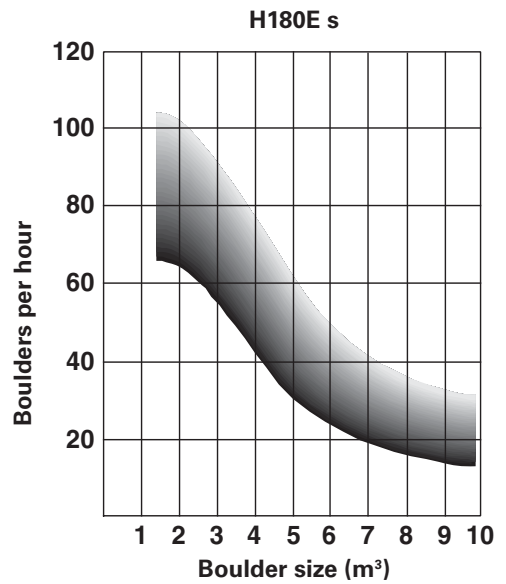
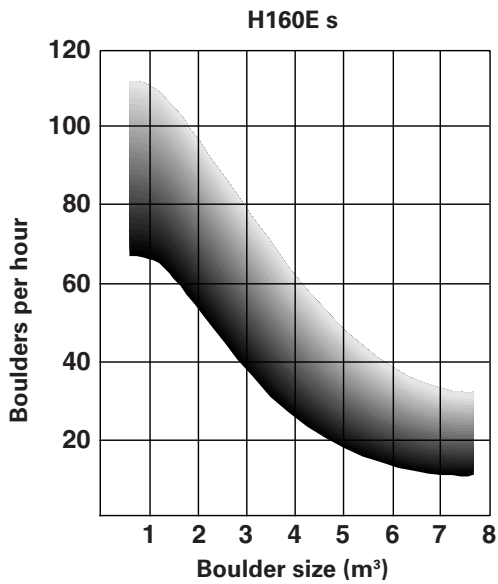
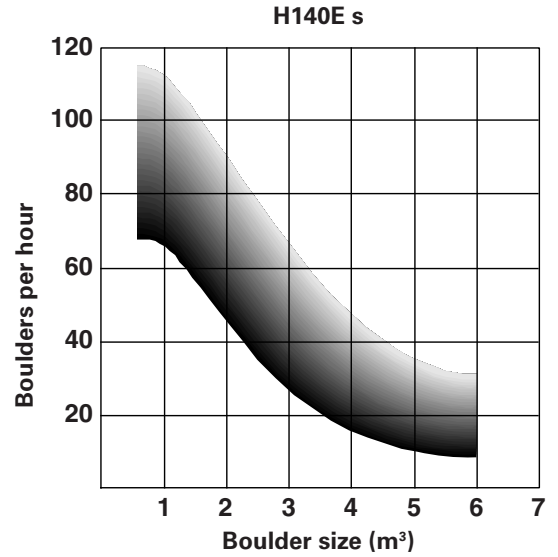
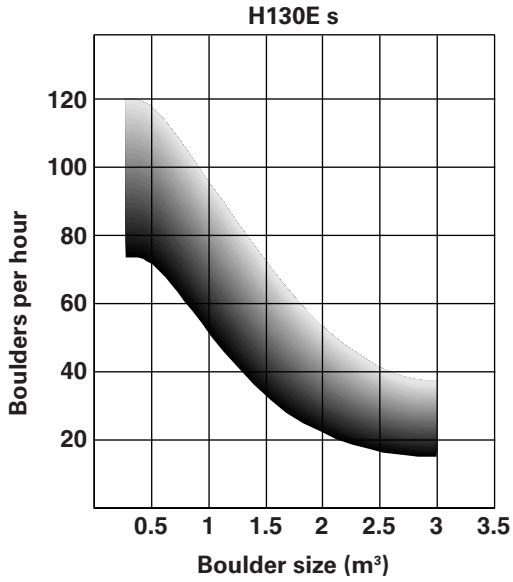
Productivity Rates: 8 hour shift

Production rates listed are for general estimation purposes only and must not be used to guarantee any production figure to the customer. The actual working results may vary according to the quality and structure of the material to be broken, required degree of material size reduction, installation, condition of the carrier, conditions at the work site, haulage of the broken material, skills of the operator, etc.

Hammer Models	Non-Reinforced Concrete		Reinforced Concrete		Sedimentary Rock		Volcanic Rock	
H35E/E s	6-12 m ³	8-16 yd³						
H45E/E s	8-18 m ³	10-23 yd³						
H55E/E s	14-23 m ³	18-30 yd³						
H65E/E s	45-90 m ³	34-69 yd³						
H75E s	65-107 m ³	85-140 yd³	19-46 m ³	25-60 yd³				
H95E s	69-122 m ³	90-160 yd³	38-61 m ³	50-80 yd³				
H110E s	99-214 m ³	130-280 yd³	96-134 m ³	125-175 yd³	84-121 m ³	110-250 yd³	42-99 m ³	55-130 yd³
H115E s	115-287 m ³	150-375 yd³	107-184 m ³	140-240 yd³	126-229 m ³	165-300 yd³	57-115 m ³	75-150 yd³
H120E s	153-344 m ³	200-450 yd³	122-229 m ³	160-300 yd³	153-260 m ³	200-340 yd³	84-153 m ³	110-200 yd³
H130E s	210-375 m ³	275-490 yd³	153-268 m ³	200-350 yd³	191-306 m ³	250-400 yd³	103-210 m ³	135-210 yd³
H140E s			191-497 m ³	250-650 yd³	229-535 m ³	300-700 yd³	115-268 m ³	150-350 yd³
H160E s			229-650 m ³	300-850 yd³	268-688 m ³	350-900 yd³	153-459 m ³	200-600 yd³
H180E s			295-1301 m ³	385-1705 yd³	337-1345 m ³	440-1760 yd³	210-757 m ³	275-990 yd³

The figures are for comparison and evaluation purposes only. Results will vary depending on operator, carrier and job conditions.





MOBILE SCRAP AND DEMOLITION SHEARS

C Series Shears incorporate a bolt-on piercing tip — a key feature for enhancing up time for shears.

- Changeable with common hand tools.
- Dual-sided protecting the moving jaw on both sides.
- Fully reversible tip and blades.

Cat Mobile Scrap and Demolition Shears are available in six sizes and feature:

- Straight lower, apex upper jaw design.
- 360 degree bidirectional rotation system.
- Adjustable hub allows users to maintain tolerances between the jaws in the field.
- High force to weight ratio.
- Long wearing alloy steel blades.
- Cutting edges mounted on the side of the shear jaws and are visible to the operator.
- Shears can be mounted on boom or stick.

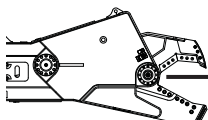
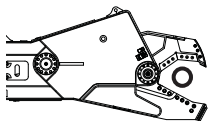
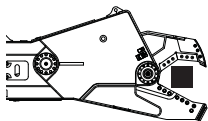
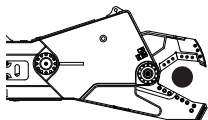
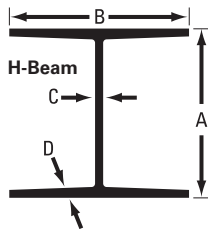
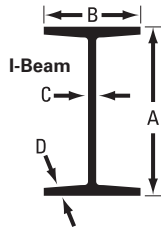
Applications:

Cat Mobile Scrap and Demolition Shears are designed to cut and reduce the size of metal items commonly found in scrap yards, buildings, and other structures.

The profiles on the next page approximate shear cutting capacity. The cutting capacities listed on the next page were achieved by cutting the specified steel profiles with a shear operating pressure at 35 000 kPa (5075 psi) and knives in slightly used condition. Lower operating pressures, dull knife edges, and harder steels will obviously reduce cutting capability.

Guarding Recommendation

Shears used in hazardous applications like demolition, and scrap and material handling can create a need for special operator guarding due to flying or falling objects. When using a shear, additional protective devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.



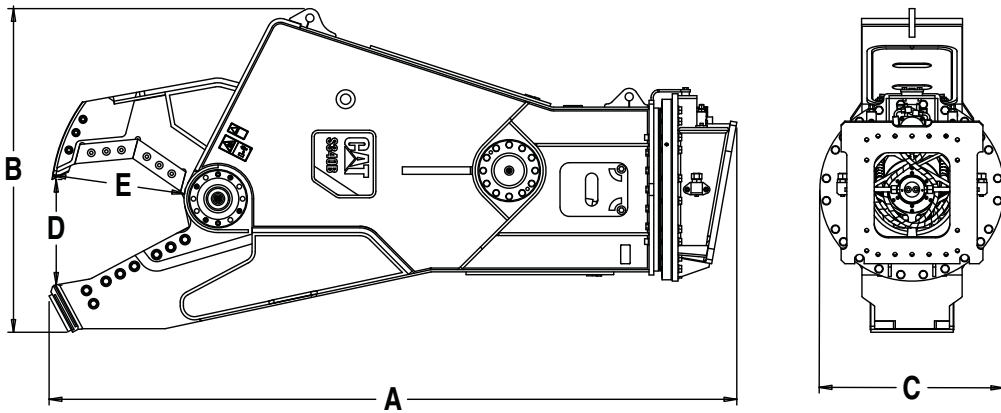
Model		S385C	S365C	S340B	S325B	S320B	S305
I-Beams							
A Height	mm (in)	635 (25)	612 (24.1)	457.2 (18)	407 (16)	358 (14.1)	207 (8.1)
B Flange width	mm (in)	329 (13)	229 (9)	191 (7.5)	178 (7.0)	172 (6.8)	112 (4.4)
C Web thickness	mm (in)	18 (0.7)	12 (0.5)	9.017 (0.4)	7.7 (0.3)	7.8 (0.3)	5.8 (0.2)
D Flange thickness	mm (in)	31 (1.2)	20 (0.8)	15.24 (0.6)	12.7 (0.5)	12.7 (0.5)	8.4 (0.3)
Weight	kg/m (ft-lb)	241 (162)	125 (84)	74.4 (50)	59.5 (40)	56.5 (38)	22.3 (15)
Wide I-Beams							
A Height	mm (in)	476 (18.7)	472 (18.6)	311 (12.2)	256 (10.1)	204 (8)	107 (4.2)
B Flange width	mm (in)	284 (11.2)	284 (11.2)	306 (12)	255 (10)	206 (8.1)	103 (4.1)
C Web thickness	mm (in)	24 (0.9)	13 (0.5)	10.9 (0.4)	9.4 (0.4)	7.9 (0.3)	7.11 (0.3)
D Flange thickness	mm (in)	15 (0.6)	22 (0.9)	10.9 (0.4)	9.4 (0.4)	7.9 (0.3)	8.8 (0.3)
Weight	kg/m (ft-lb)	158 (106)	144 (97)	107 (71.9)	80 (53.8)	52 (34.9)	19.4 (13)
H-Beams							
A Height	mm (in)	476 (18.7)	472 (18.6)	311 (12.2)	256 (10.1)	204 (8)	107 (4.2)
B Flange width	mm (in)	284 (11.2)	284 (11.2)	306 (12)	255 (10)	206 (8.1)	103 (4.1)
C Web thickness	mm (in)	24 (0.9)	13 (0.5)	10.9 (0.4)	9.4 (0.4)	7.9 (0.3)	7.11 (0.3)
D Flange thickness	mm (in)	15 (0.6)	22 (0.9)	10.9 (0.4)	9.4 (0.4)	7.9 (0.3)	8.8 (0.3)
Weight	kg/m (ft-lb)	158 (106)	144 (97)	107 (71.9)	80 (53.8)	52 (34.9)	19.4 (13)

Round							
Diameter	mm (in)	125 (5)	120 (4.75)	115 (4.5)	100 (4)	90 (3.5)	50.8 (2)

Square							
Width	mm (in)	120 (4.75)	100 (4)	90 (3.5)	90 (3.5)	65 (2.5)	40 (1.5)

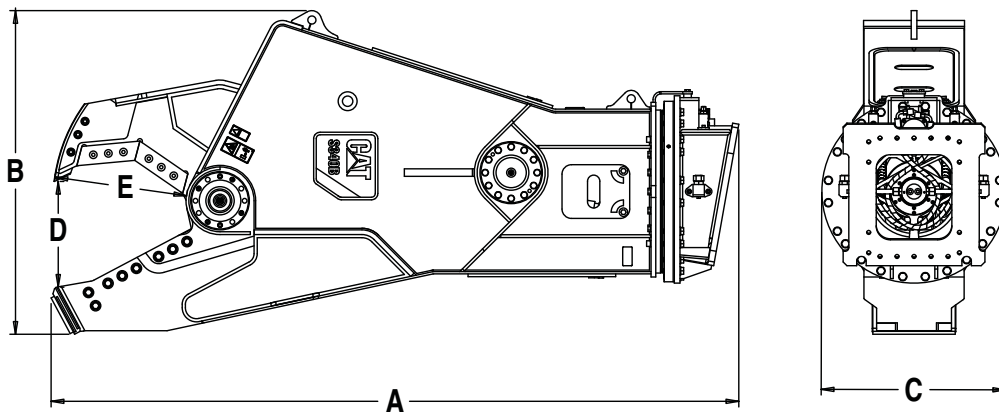
Pipe (Schedule 40)							
Diameter	mm (in)	508 (20)	458 (18)	406 (16)	356 (14)	325 (12.8)	220 (8.6)
Wall thickness	mm (in)	15 (0.6)	15 (0.6)	13 (0.5)	11 (0.4)	10 (0.4)	8 (0.3)

Piercing							
Thickness	mm (in)	33 (1.38)	27 (1.25)	22 (0.88)	19 (0.75)	16 (0.63)	10 (0.38)



Model		S385C	S365C	S340B	S325B	S320B	S305
Weight*, boom-mount	kg	8320	6870	4695	3390	2570	608
	(lb)	(18,345)	(15,145)	(10,351)	(7474)	(5666)	(1340)
Weight*, stick-mount	kg	7975	6700	4386	2996	2165	580
	(lb)	(17,580)	(14,770)	(9670)	(6604)	(4774)	(1280)
Dimensions							
A Length	mm	4260	3840	3638	3177	2792	1709
	(in)	(168)	(151)	(143)	(125)	(110)	(67.3)
B Height	mm	2121	1900	1723	1525	1340	660
	(in)	(84)	(75)	(68)	(60)	(53)	(26)
C Width	mm	1400	1180	975	792	792	390
	(in)	(55)	(46)	(38)	(31)	(31)	(15)
Jaw width, fixed	mm	466	466	396	342	304	230
	(in)	(18)	(18)	(16)	(13)	(12)	(9)
Jaw width, moving	mm	150	150	120	100	90	60
	(in)	(6)	(6)	(5)	(4)	(3)	(2)
D Jaw opening	mm	879	845	563	528	409	240
	(in)	(35)	(33)	(22)	(21)	(16)	(9.4)
E Jaw depth	mm	903	840	703	571	459	290
	(in)	(35)	(33)	(28)	(22)	(18)	(11.4)

*Weight includes mounting bracket.



Model		S385C	S365C	S340B	S325B	S320B	S305
Shear Forces*							
Throat**	kN	12 509	10 342	6818	5562	3706	1812
	(st)	(1405)	(1162)	(766)	(625)	(417)	(204)
Apex	kN	4413	3576	2751	2221	1583	653
	(st)	(496)	(402)	(309)	(250)	(178)	(73)
Tip	kN	2455	1975	1558	1274	892	385
	(st)	(276)	(222)	(175)	(143)	(100)	(43)
Shear arm torque	kN·m	2779	2083	1374	931	534	140
	(lbf·ft)	(2,050,000)	(1,536,000)	(1,013,700)	(686,900)	(394,100)	(103,600)
Cycle time, open	seconds	5	5	5	5	4	3.5
Cycle time, close	seconds	3	3	3	3	3	2.5
Hydraulic Requirements, Cutting Circuit							
Maximum relief pressure	kPa	35 000	35 000	35 000	35 000	35 000	25 000
	(psi)	(5075)	(5075)	(5075)	(5075)	(5075)	(3625)
Maximum recommended flow	L/min	690	530	300	200	150	60
	(gpm)	(182)	(140)	(79)	(53)	(40)	(16)
Hydraulic Requirements, Rotation Circuit							
Maximum relief pressure	kPa	14 000	14 000	14 000	14 000	14 000	10 000
	(psi)	(2030)	(2030)	(2030)	(2030)	(2030)	(1450)
Maximum recommended flow	L/min	80	80	40	40	40*	20
	(gpm)	(21)	(21)	(11)	(11)	(11*)	(5)

*Calculated with a maximum operating pressure of 35 MPa (5075 psi).

**Measured at innermost cutting point of the jaw.

Matching Guide

Pin-On matches are shown below.

Matches are based on counterweight and grouser width on standard machines.

Wheeled excavator matches are calculated with all four stabilizers down.

Stick-Mount

Cat Excavator	Boom	Stick		S385C	S365C	S340B	S325B	S320B	S305
		m	(ft/in)						
390D L	GP	5.5	(18'1")		X				
		4.4	(14'5")	X	X				
		3.4	(11'2")	X	X				
		3.7	(12'2")	X	X				
		2.92	(9'7")	X	X				
374D L	Reach	4.15	(13'7")		X				
		3.6	(11'10")		X				
		2.84	(9'4")		X				
345D L – VG	Reach	3.9	(12'10")			X			
		3.35	(11'0")			X			
345D – FIX	Reach	3.9	(12'10")			X	X		
		3.3	(11'0")			X	X		
345C – DEM		28	(91'9")					X	
		26	(85'0")					X	
336D L/330D L	Reach	3.9	(12'10")				X	X	
		3.2	(10'6")				X	X	
329D L/325D L	Reach	3.2	(10'6")				X	X	
							X	X	
		2.65	(8'8")				X	X	
328D LCR	Reach	3.76	(12'4")					X	
		3.2	(10'6")				X	X	
		2.65	(8'8")				X	X	
324D L	Reach	3.6	(11'10")					X	
		2.95	(9'8")				X	X	
		2.5	(8'2")				X	X	
321D LCR	Reach	2.92	(9'6")					X	
		2.5	(8'2")					X	
320D L	Reach	2.92	(9'6")					X	
		2.5	(8'2")					X	
320D LRR	Reach	2.92	(9'6")					X	
		2.5	(8'2")					X	
	Reach-HD	2.92	(9'6")					X	
		2.5	(8'3")					X	
319D L	Reach	2.7	(8'10")					X	
		2.25	(7'5")					X	
M322D	One-Piece	2.5	(8'2")					X	
		2.2	(7'3")					X	
M318D	One-Piece	2.8	(9'2")					X	
		2.5	(8'2")					X	
		2.2	(7'3")					X	
M316D	One-Piece	2.4	(7'10")					X	
		2.1	(6'11")					X	
M315D	One-Piece	2.4	(7'10")					X	
		2.1	(6'11")					X	
308D CR	One-Piece	2.2	(7'3")						X
		1.7	(5'6")						X
307D	One-Piece	2.2	(7'3")						X
		1.7	(5'6")						X

Pin-on matches are shown above. Please reference bulletin GEJH0016 for matching information when utilizing a pin-grabber or dedicated coupler.

DEM = Demolition machine

VG = Variable wide gauge undercarriage

FIX = Fixed undercarriage

Matching Guide

Matches are based on counterweight and grouser width on standard machines.
Wheeled excavator matches are calculated with all four stabilizers down.

Boom-Mount

Cat Excavator	Boom	S385C	S365C	S340B	S325B	S320B	S305
365C L	Reach	X					
345D L – VG	Reach	X	X				
345D – FIX	Reach	X	X				
336D L/330D L	Reach		X	X			
329D L/325D L	Reach			X			
328D L CR	Reach			X			
324D L	Reach			X			
321D L CR	Reach						
320D L	Reach				X		
320D LRR	Reach				X		
	Reach-HD				X		
319D L	Reach				X	X	
315D L	Reach				X	X	
314D CR	Reach					X	
312D L	Reach					X	
311D LRR	Reach					X	
M322D	One-Piece			X			
M318D	One-Piece			X	X		
M316D	One-Piece			X	X		
M315D	One-Piece				X	X	
M313D	One-Piece				X	X	
305D CR	One-Piece						X
304D CR	One-Piece						X
303.5D CR	One-Piece						X

Cat S305 is a match for all Skid Steer Loaders 236B2 and larger and all Multi-Terrain Loaders.

Please reference bulletin GEJH0016 for matching information when utilizing a pin-grabber or dedicated coupler.
VG = Variable wide gauge undercarriage
FIX = Fixed undercarriage

MULTI-PROCESSORS

Features:

- **Wide selection** of interchangeable jaws.
- **Lifting eye placement** and adjustable stop bolts allow quick jaw changes.
- **Single, large diameter** cross mounted cylinder provides exceptional cutting and crushing force.
- **Jaws are manufactured** of high quality tool steel with outstanding tensile strength.
- **Non impact** tools that work at a relatively low noise level.

Applications:

The Cat Multi-Processors can be used to accomplish most tasks on a demolition job. One common housing with a wide selection of interchangeable jaws allows the tool to cut, crush or pulverize the toughest of materials. Highly reinforced concrete, structural steel beams, pipes, cable, steel plate and storage tanks.

Matching Guide

Stick Mounted/Reach Boom

Multi-Processors Model	Cat Excavator
MP318	318E, 319D, 320D/E, 320D/E RR, 321D CR, 323D/E, 324D/E M315D, M316D, M318D, M322D, M318D MH, M322 MH DEM50, DEM70, DEM100
MP324	323D, 324D/E, 328D CR, 329D/E, 336D/E DEM50, DEM70, DEM100
MP30	330D 345C 365C UHD, 385C UHD
MP40	365C, 385C

These matches are for general reference purpose for Cat machines only. Please always check the stability of the machine-tool configuration. The stability depends on application, tool used and your machine configuration. For questions please contact your Cat dealer. When choosing between various multi-processor models that can be installed onto the same machine configuration, consider work tool application, productivity requirements, and durability.

CAT MULTI-PROCESSOR INTERCHANGEABLE JAWS

Concrete Cutter Jaws (CC)

- For precise demolition/cutting of heavily reinforced concrete structures.
- Cuts structural steel and pipe.
- Equipped with replaceable concrete crusher teeth and reversible steel cutting knives.

Shear Jaws (S)

- For demolition of steel structures.
- Cuts angle and channel iron, beams, pipe, rebar, cable and tires.
- Knives are reversible.

Tank Shear Jaws (TS)

- Quickly cuts steel plate on barges, railway cars, grain, water, oil, and fuel tanks. Dual knives on the moving and static jaws produce smooth, straight edges.
- All knives are reversible.
- Available for MP20 and MP30 only.

Crusher Jaws (CR)

- For demolition of moderately reinforced concrete structures. Capable of crushing concrete and cutting rebar.
- Replaceable crusher teeth and reversible knives.

Primary Pulverizer Jaws (PP)

- Combines capability to demolish and recycle moderately reinforced concrete structures. Pulverizes concrete, cuts rebar and separates rebar from concrete. (Not available for MP40.)
- Replaceable crusher teeth and reversible knives.

Secondary Pulverizer Jaws (PS)

- Recycles demolished concrete by pulverizing concrete, separating concrete and rebar, and cutting rebar as needed.

All jaw sets can be interchanged quickly with the lifting eyes and the adjustable stopbolts on jaws and body.

Guarding Recommendation

Multi-Processors used in hazardous applications like demolition, and scrap and material handling can create a need for special operator guarding due to flying or falling objects. When using a Multi-Processor, additional protective devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.

Specifications (All dimensions are approximate.)

Model	MP318		MP324	
Carrier weight	18-25 mt	39,500-55,000 lb	24-35 mt	53,000-77,000 lb
Housing weight, jaw	1930 kg	4255 lb	2610 kg	5754 lb
Weight of the jaw	660-850 kg	1455-1874 lb	940-1160 kg	2072-2557 lb
Maximum pressure (open/close)	350 bar	5076 psi	350 bar	5076 psi
Flow (open/close)	150 L/min	33 gpm	225 L/min	50 gpm
Pressure rotation	140 bar	2030 psi	140 bar	2030 psi
Flow rotation	40 L/min	10.6 gpm	40 L/min	10.6 gpm
Return flow opening	240 L/min	53 gpm	370L/min	81 gpm
Cycle time (open/close)	1.6/1.0 sec		1.8/1.2 sec	
Model	MP30		MP40	
Weight total — housing, jaw and bracket	3850 kg	8190 lb	6370 kg	14,045 lb
Weight of the jaw	1260 kg	2780 lb	2230 kg	4915 lb
Dimensions:				
Length	2800 mm	110.2"	3500 mm	137.8"
Height	1980 mm	78"	2340 mm	92.1"
Width	1010 mm	39.8"	1180 mm	46.5"
Jaw width (fixed)	380 mm	15"	460 mm	18.1"
Jaw width (moving)	130 mm	5.1"	160 mm	6.3"
Jaw opening	975 mm	38.4"	1280 mm	50.4"
Jaw depth	890 mm	35"	1100 mm	43.3"
Cutter length	520 mm	20.5"	600 mm	23.6"
Maximum crushing/shear force:				
Tooth — jaw tip	1250 kN	140 st	1500 kN	168 st
Front cutter tip	1850 kN	208 st	2200 kN	247 st
Primary blade center	4100 kN	460 st	4400 kN	494 st
Maximum oil flow:				
Hydraulic cylinder	300 L/min	79 gpm	400 L/min	106 gpm
Cycle time (open, close, open)	6.5 sec		7.5 sec	
Rotation	40 L/min	11 gpm	80 L/min	22 gpm
Maximum working pressure:				
Hydraulic cylinder	35 000 kPa	5075 psi	35 000 kPa	5075 psi
Rotation	14 000 kPa	2030 psi	14 000 kPa	2030 psi

Specifications (All dimensions are approximate.)

Jaw Type	MP318-CC		MP318-D		MP318-P		MP318-S		MP318-U	
Housing weight, jaw	1930 kg	4255 lb	1910 kg	4211 lb	2030 kg	4475 lb	1840 kg	4056 lb	1980 kg	4365 lb
Weight of the jaw	750 kg	1653 lb	730 kg	1609 lb	850 kg	1874 lb	660 kg	1455 lb	770 kg	1697 lb
Closing force:										
Tooth tip	75 mt	83 st	75 mt	83 st	75 mt	83 st	100 mt	110 st	85 mt	94 st
Cutter tip/tooth	110 mt	121 st	110 mt	121 st	110 mt	121 st	170 mt	187 st	160 mt	176 st
Primary cutter	225 mt	248 st	230 mt	248 st	250 mt	248 st	370 mt	408 st	300 mt	331 st
Jaw opening	685 mm	26.96"	740 mm	29.13"	820 mm	32.28"	350 mm	13.77"	470 mm	18.50"
Jaw depth	650 mm	25.59"	650 mm	25.59"	670 mm	26.37"	500 mm	19.68"	570 mm	22.44"
Cutting capacity:										
Narrow I-beams	IPE300		N/A		N/A		IPE300		N/A	
Wide I-beams	HE-A200		N/A		N/A		HE-A200		N/A	
Round bar	65 mm	2.55"	N/A		N/A		65 mm	2.55"	N/A	
Square bar	60 mm	2.36"	N/A		N/A		60 mm	2.36"	N/A	
Plate	N/A		N/A		N/A		219 x 8 mm	8.62 x 0.31"	N/A	
Crushing capacity:										
Concrete thickness	550 mm	21.65"	600 mm	23.62"	550 mm	21.65"	N/A		450 mm	17.71"

Specifications (All dimensions are approximate.)

Jaw Type	MP324-CC		MP324-D		MP324-P	
Housing weight, jaw	2610 kg	5754 lb	2640 kg	5820 lb	2740 kg	6040 lb
Weight of the jaw	1030 kg	2270 lb	1060 kg	2327 lb	1160 kg	2327 lb
Closing force:						
Tooth tip	105 mt	116 st	105 mt	116 st	105 mt	116 st
Cutter tip/tooth	150 mt	165 st	150 mt	165 st	150 mt	165 st
Primary cutter	320 mt	353 st	320 mt	353 st	340 mt	353 st
Jaw opening	830 mm	32.67"	905 mm	35.62"	970 mm	38.18"
Jaw depth	760 mm	29.92"	760 mm	29.92"	760 mm	29.92"
Cutting capacity:						
Narrow I-beams		IPE400		N/A		N/A
Wide I-beams		HE-A260		N/A		N/A
Round bar	80 mm	3.14"		N/A		N/A
Square bar	70 mm	2.75"		N/A		N/A
Crushing capacity:						
Concrete thickness	650 mm	25.59"	700 mm	27.55"	650 mm	25.59"

Specifications (All dimensions are approximate.)

Jaw Type	MP324-S		MP324-U		MP324-TS	
Housing weight, jaw	2530 kg	5577 lb	2690 kg	5930 lb	2740 kg	6040 lb
Weight of the jaw	940 kg	2072 lb	1100 kg	2425 lb	1130 kg	2492 lb
Closing force:						
Tooth tip	130 mt	143 st	115 mt	127 st	110 mt	121 st
Cutter tip/tooth	230 mt	254 st	160 mt	176 st	130 mt	143 st
Primary cutter	390 mt	430 st	350 mt	386 st	300 mt	331 st
Jaw opening	400 mm	15.74"	650 mm	25.59"	500 mm	19.68"
Jaw depth	620 mm	24.40"	680 mm	26.77"	490 mm	19.29"
Cutting capacity:						
Narrow I-beams		IPE400		N/A		N/A
Wide I-beams		HE-A260		N/A		N/A
Round bar	80 mm	3.14"		N/A		N/A
Square bar	70 mm	2.75"		N/A		N/A
Crushing capacity:						
Concrete thickness		N/A	600 mm	23.62"		N/A

Specifications (All dimensions are approximate.)

Model	MP30		MP40	
Weight total — housing, jaw and bracket	3890 kg	8575 lb	6430 kg	14,175 lb
Weight of the jaw	1300 kg	2865 lb	2200 kg	4850 lb
Dimensions:				
Length	2700 mm	106.3"	3400 mm	133.9"
Height	1680 mm	66.1"	1980 mm	78"
Width	1010 mm	39.8"	1180 mm	46.5"
Jaw width (fixed)	370 mm	14.6"	460 mm	18.1"
Jaw width (moving)	120 mm	4.7"	150 mm	5.9"
Jaw opening	470 mm	18.5"	630 mm	24.8"
Jaw depth	710 mm	28"	880 mm	34.6"
Cutter length	600 mm	23.6"	760 mm	29.9"
Maximum shear force:				
At tip	1600 kN	180 st	1900 kN	213 st
Primary blade center	3750 kN	421 st	4750 kN	534 st
At throat	7100 kN	798 st	8950 kN	1006 st
Maximum oil flow:				
Hydraulic cylinder	300 L/min	79 gpm	400 L/min	106 gpm
Cycle time (open, close, open)		6.5 sec		7.5 sec
Rotation	40 L/min	11 gpm	80 L/min	22 gpm
Maximum working pressure:				
Hydraulic cylinder	35 000 kPa	5075 psi	35 000 kPa	5075 psi
Rotation	14 000 kPa	2030 psi	14 000 kPa	2030 psi

Specifications (All dimensions are approximate.)

Model	MP20		MP30	
Weight total — housing, jaw and bracket	2740 kg	6040 lb	4380 kg	9655 lb
Weight of the jaw	1010 kg	2225 lb	1790 kg	3945 lb
Dimensions:				
Length	2400 mm	94.5"	2800 mm	110.2"
Height	1750 mm	68.9"	2100 mm	82.7"
Width	800 mm	31.5"	1180 mm	46.5"
Jaw width (fixed)	290 mm	11.4"	340 mm	13.4"
Jaw width (moving)	120 mm	4.7"	150 mm	5.9"
Jaw opening	440 mm	17.3"	510 mm	20.1"
Jaw depth	460 mm	18.1"	580 mm	22.8"
Cutter length	460 mm	18.1"	580 mm	22.8"
Maximum shear force:				
At tip	1400 kN	157 st	1900 kN	213 st
At jaw center	2200 kN	247 st	4000 kN	449 st
At throat	4400 kN	494 st	6350 kN	714 st
Cutting capacity plate steel	25 mm	1"	30 mm	1.2"
Maximum oil flow:				
Hydraulic cylinder	200 L/min	53 gpm	200 L/min	53 gpm
Cycle time (open, close, open)		6 sec		6.5 sec
Rotation	40 L/min	11 gpm	40 L/min	11 gpm
Maximum working pressure:				
Hydraulic cylinder	35 000 kPa	5075 psi	35 000 kPa	5075 psi
Rotation	14 000 kPa	2030 psi	14 000 kPa	2030 psi

Specifications (All dimensions are approximate.)

Model	MP30		MP40	
Weight total — housing, jaw and bracket	3860 kg	8510 lb	6370 kg	14,045 lb
Weight of the jaw	1270 kg	2800 lb	2230 kg	4915 lb
Dimensions:				
Length	2770 mm	102"	3500 mm	137.8"
Height	1980 mm	78"	2380 mm	93.7"
Width	1010 mm	39.8"	1180 mm	46.5"
Jaw width (fixed)	380 mm	15"	460 mm	18.1"
Jaw width (moving)	130 mm	5.1"	160 mm	6.3"
Jaw opening	1050 mm	41.3"	1320 mm	52"
Jaw depth	920 mm	36.2"	1100 mm	43.3"
Cutter length	260 mm	10.2"	250 mm	9.8"
Maximum crushing/shear force:				
Tooth — jaw tip	1250 kN	140 st	1500 kN	168 st
At 2 nd tooth	1750 kN	197 st	2200 kN	247 st
Primary blade center	3800 kN	427 st	4650 kN	523 st
Maximum oil flow:				
Hydraulic cylinder	300 L/min	79 gpm	400 L/min	106 gpm
Cycle time (open, close, open)		6.5 sec		7.5 sec
Rotation	40 L/min	11 gpm	80 L/min	22 gpm
Maximum working pressure:				
Hydraulic cylinder	35 000 kPa	5075 psi	35 000 kPa	5075 psi
Rotation	14 000 kPa	2030 psi	14 000 kPa	2030 psi

Specifications (All dimensions are approximate.)

Model	MP30	
Weight total — housing, jaw and bracket	4180 kg	9215 lb
Weight of the jaw	1590 kg	3505 lb
Dimensions:		
Length	2800 mm	110.2"
Height	1980 mm	78"
Width	1010 mm	39.8"
Jaw width (fixed)	610 mm	24"
Jaw width (moving)	370 mm	14.6"
Jaw opening	960 mm	37.8"
Jaw depth	940 mm	37"
Cutter length	250 mm	9.8"
Maximum crushing/shear force:		
Tooth — jaw tip	1250 kN	140 st
At 2 nd tooth	1550 kN	174 st
Primary blade center	3950 kN	444 st
Maximum oil flow:		
Hydraulic cylinder	300 L/min	79 gpm
Cycle time (open, close, open)	6.5 sec	
Rotation	40 L/min	11 gpm
Maximum working pressure:		
Hydraulic cylinder	35 000 kPa	5075 psi
Rotation	14 000 kPa	2030 psi

Specifications (All dimensions are approximate.)

Model	MP30		MP40	
Weight total — housing, jaw and bracket	4080 kg	8995 lb	6730 kg	14,835 lb
Weight of the jaw	1490 kg	3285 lb	2590 kg	5710 lb
Dimensions:				
Length	2950 mm	116.1"	3650 mm	143.7"
Height	2200 mm	86.6"	2550 mm	100.4"
Width	1010 mm	39.8"	1180 mm	46.5"
Jaw width (fixed)	580 mm	22.8"	700 mm	27.6"
Jaw width (moving)	420 mm	16.5"	480 mm	18.9"
Jaw opening	1100 mm	43.3"	1400 mm	55.1"
Jaw depth	970 mm	38.2"	1170 mm	46"
Cutter length	200 mm	7.9"	250 mm	9.8"
Maximum crushing/shear force:				
Tooth — jaw tip	1250 kN	141 st	1500 kN	168 st
At 2 nd tooth	1550 kN	174 st	1900 kN	213 st
Primary blade center	4800 kN	539 st	5500 kN	618 st
Maximum oil flow:				
Hydraulic cylinder	300 L/min	79 gpm	400 L/min	106 gpm
Cycle time (open, close, open)		6.5 sec		7.5 sec
Rotation	40 L/min	11 gpm	80 L/min	22 gpm
Maximum working pressure:				
Hydraulic cylinder	35 000 kPa	5075 psi	35 000 kPa	5075 psi
Rotation	14 000 kPa	2030 psi	14 000 kPa	2030 psi

Cutting Capacity

Model	MP30		MP40	
Narrow I-beams:				
Height	500 mm	19.7"	600 mm	23.6"
Flange width	200 mm	7.9"	600 mm	8.7"
Flange thickness	16 mm	0.63"	19 mm	0.75"
Web thickness	10.2 mm	0.4"	12 mm	0.47"
Wide I-beams:				
Height	310 mm	12.2"	390 mm	15.4"
Flange width	300 mm	11.8"	300 mm	11.8"
Flange thickness	15.5 mm	0.61"	19 mm	0.75"
Web thickness	9 mm	0.35"	11 mm	0.43"
Solid-round	90 mm	3.5"	100 mm	3.9"
Solid-square	80 mm	3.1"	90 mm	3.5"

The above profiles provide an indication of the shear's cutting capability. The exact cutting dimensions depend on excavator size, the conditions of the cutters and jaws and the tensile strength of the steel.

CONTRACTOR'S GRAPPLES

Features:

- Fits multiple linkages simply by changing the pin group.
- Designed with less curve allowing material to flow easily out of the grapple, simplifying material loading and unloading.
- Large wear areas made entirely of AR400 steel.
- Matches the entire range of small, medium and large excavators.
- Two-over-three tines interlock to securely grasp and retain more material when sorting and loading.
- Sized to match Cat machines making them able to better realize the machine's maximum performance; both break out and lift capacity.
- One grapple can be used with or without a coupler with no modifications.

Applications:

Contractor's Grapples are built to handle demolition of brick and wood structures, land clearing, sorting and loading of rock, scrap, pipe, waste material and demolition debris.

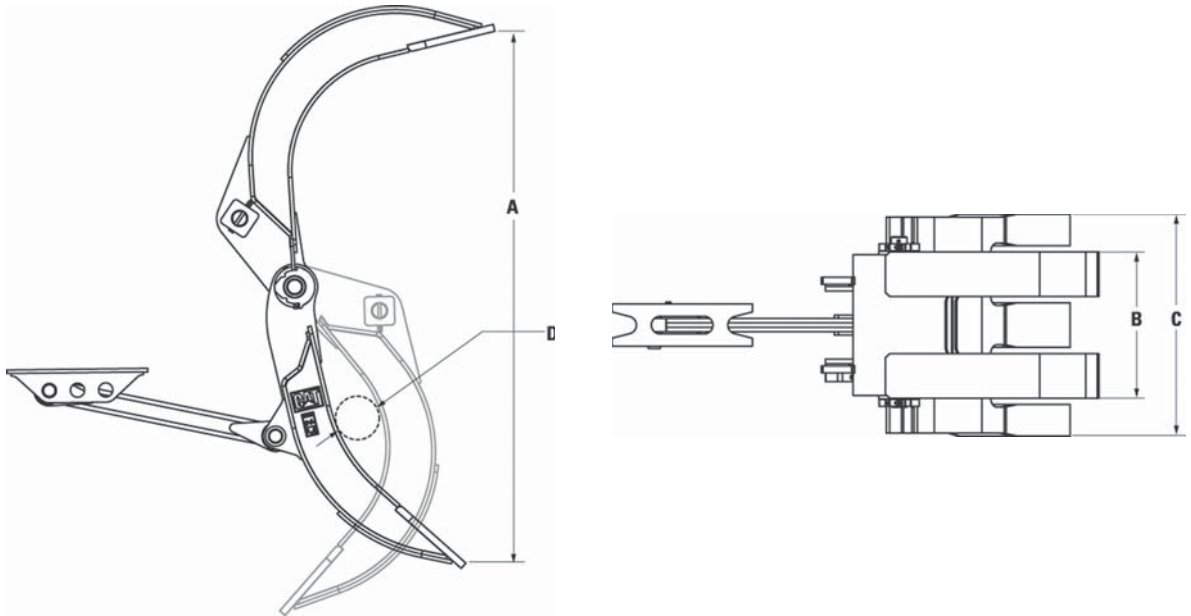
Guarding Recommendation

Contractor's Grapples used in hazardous applications like demolition, and scrap and material handling can create a need for special operator guarding due to flying or falling objects. When using a Contractor's Grapple, additional protective devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.

Matching Guide

Contractor's Grapples

Model	Cat Excavator
G107B	307 CR
G112B	312C
G115B	315C
G120B	320D 322C 324D 325D
G125B	320D 322C 324D 325D
G130B	320D 322C 324D 325D 330D
G145B	345C
G165B	345C 350 365C
G185B	385C



Specifications (All dimensions are approximate.)

Model	G107B		G112B		G115B		G120B		G125B	
Weight	360 kg	794 lb	857 kg	1885 lb	1286 kg	2830 lb	1523 kg	3350 lb	1932 kg	4250 lb
A Jaw Opening	1765 mm	69.5"	2195 mm	86.4"	2555 mm	100.6"	2687 mm	105.8"	3128 mm	123.1"
B Upper Tine Width	435 mm	17.1"	550 mm	21.7"	610 mm	24"	617 mm	24.3"	704 mm	27.7"
C Lower Tine Width	735 mm	28.9"	900 mm	35.4"	1020 mm	40.2"	1031 mm	40.6"	1150 mm	45.3"
D Minimum Opening	134 mm	5.3"	186 mm	7.3"	191 mm	7.5"	199 mm	7.8"	245 mm	9.6"
Inner Wrapper Thickness	8 mm	0.3"	12 mm	0.5"	12 mm	0.5"	16 mm	0.6"	16 mm	0.6"
Outer Wrapper Thickness	8 mm	0.3"	12 mm	0.5"	12 mm	0.5"	12 mm	0.5"	16 mm	0.6"
Wear Tip Thickness	12 mm	0.5"	20 mm	0.8"	25 mm	1"	30 mm	1.2"	40 mm	1.6"
Outer Wear Plate Thickness	12 mm	0.5"	16 mm	0.6"	25 mm	1"	20 mm	0.8"	20 mm	0.8"

Model	G130B		G145B		G165B		G185B	
Weight	2332 kg	5130 lb	3050 kg	6724 lb	4055 kg	8940 lb	4800 kg	10,582 lb
A Jaw Opening	3223 mm	126.9"	3433 mm	135.2"	3860 mm	152"	4076 mm	160.5"
B Upper Tine Width	832 mm	32.8"	865 mm	34.1"	937 mm	36.9"	985 mm	38.8"
C Lower Tine Width	1262 mm	49.7"	1335 mm	52.6"	1406 mm	55.4"	1535 mm	60.4"
D Minimum Opening	319 mm	12.6"	271 mm	10.7"	283 mm	11.1"	337 mm	13.3"
Inner Wrapper Thickness	20 mm	0.8"	20 mm	0.8"	25 mm	1"	25 mm	1"
Outer Wrapper Thickness	20 mm	0.8"	20 mm	0.8"	25 mm	1"	25 mm	1"
Wear Tip Thickness	40 mm	1.6"	40 mm	1.6"	40 mm	1.6"	40 mm	1.6"
Outer Wear Plate Thickness	20 mm	0.8"	25 mm	1"	30 mm	1.2"	30 mm	1.2"

Features:

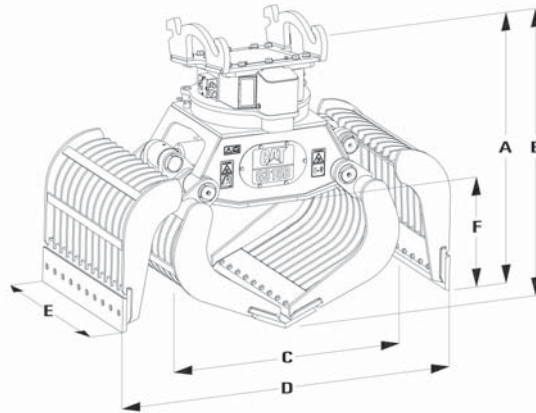
- **360 Degree Rotation.** Slewing ring rotation system is proven and reliable.
- **Wide Jaw Opening** handles large objects and payloads.
- **Jaw Edges** are synchronized, always closing edge to edge in the center. Pick and sort even the smallest material.
- **Grapple Body and Jaws** are made from high-grade impact-resistant steel.
- **Reinforced Jaws** handle extreme use.
- **Outer Jaw Profile** is vertical when open for working against a wall or inside containers.

Matching Guide

Model	Cat Excavator
G310B	311-316
	M313-M316
G315B	318-321
	M315-M322
G320B	324-329
	330-385 UHD
	Apex 70-100
G325B	324-336
	330-385 UHD
	Apex 70-100
G330	329-349
	Apex 70-100

Demolition and Sorting Grapples Americas North and South, Europe, Africa, Middle East

Specifications

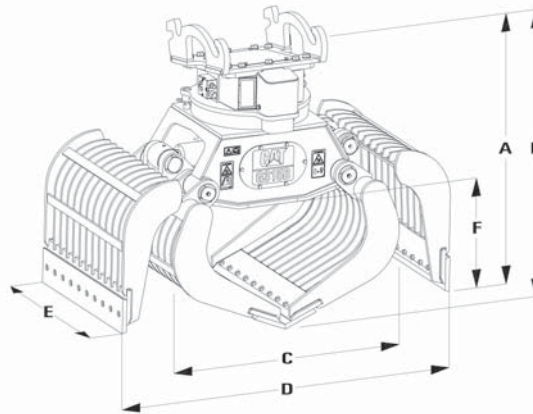


Specifications (All dimensions are approximate.)

Model	G303 (Demolition/ Recycling)		G305 (Demolition/ Recycling)		G310B (Demolition)		G310B (Recycling**)	
	Capacity	140 L	0.18 yd³	140 L	0.18 yd³	375 L	0.49 yd³	400 L
Weight*	420 kg	926 lb	420 kg	926 lb	1030 kg	2270 lb	985 kg	2171 lb
Dimensions:								
A Length	1160 mm	45.6"	1160 mm	45.6"	1350 mm	53"	1350 mm	53"
B Length	1040 mm	41"	1040 mm	41"	1440 mm	57"	1440 mm	57"
C Length	875 mm	34.4"	875 mm	34.4"	1245 mm	49"	1225 mm	48"
D Length	1650 mm	65"	1650 mm	65"	1800 mm	71"	1800 mm	71"
E Width	515 mm	20.3"	515 mm	20.3"	850 mm	33"	850 mm	33"
F Height	—	—	—	—	520 mm	20"	520 mm	20"
Closing force	15 kN	3372 lbf	15 kN	3372 lbf	36 kN	8100 lbf	36 kN	8100 lbf
Hydraulic for open/close:								
Maximum pressure	300 bar	4351 psi	300 bar	4351 psi	350 bar	5076 psi	350 bar	5076 psi
Maximum flow	40 L/min	10.6 gpm	40 L/min	10.6 gpm	60 L/min	15.9 gpm	60 L/min	15.9 gpm
Connection	—	—	—	—	-12	-12	-12	-12
Hydraulic for rotation:								
Maximum pressure	—	—	300 bar	4351 psi	350 bar	5076 psi	350 bar	5076 psi
Optimum flow	—	—	40 L/min	10.6 gpm	60 L/min	15.9 gpm	60 L/min	15.9 gpm
Connection	—	—	—	—	-8	-8	-8	-8
Excavator — class	3.5-6.5 mt	3.9-7.2 st	3.5-6.5 mt	3.9-7.2 st	9.1-14.5 mt	10-16 st	9.1-14.5 mt	10-16 st

*Weights exclude standard Quick Coupler mounting brackets.

**Not available in the Americas.



Specifications (All dimensions are approximate.)

Model	G315B (Demolition)		G315B (Recycling**)		G320B (Demolition)	
	Capacity	550 L	1.3 yd ³	600 L	0.78 yd ³	750 L
Weight*	1400 kg	3086 lb	1350 kg	2976 lb	1875 kg	4133 lb
Dimensions:						
A Length	1455 mm	57"	1455 mm	57"	1630 mm	64"
B Length	1550 mm	61"	1550 mm	61"	1725 mm	68"
C Length	1375 mm	54"	1360 mm	54"	1540 mm	61"
D Length	2000 mm	79"	2000 mm	79"	2200 mm	87"
E Width	1000 mm	39"	1000 mm	39"	1100 mm	43"
F Height	570 mm	22"	570 mm	22"	625 mm	25"
Closing force	52 kN	11,700 lbf	52 kN	11,700 lbf	66 kN	14,850 lbf
Hydraulic for open/close:						
Maximum pressure	350 bar	5076 psi	350 bar	5076 psi	350 bar	5076 psi
Maximum flow	90 L/min	23.8 gpm	90 L/min	23.8 gpm	120 L/min	31.7 gpm
Connection		-12		-12		-16
Hydraulic for rotation:						
Maximum pressure	140 bar	2030 psi	140 bar	2030 psi	140 bar	2030 psi
Optimum flow	40 L/min	10.6 gpm	40 L/min	10.6 gpm	40 L/min	10.6 gpm
Connection		-8		-8		-8
Excavator — class	13.6-20.0 mt	15-22 st	13.6-20.0 mt	15-22 st	18.1-26.3 mt	20-29 st

*Weights exclude standard Quick Coupler mounting brackets. Also available with fixed upperhead version.

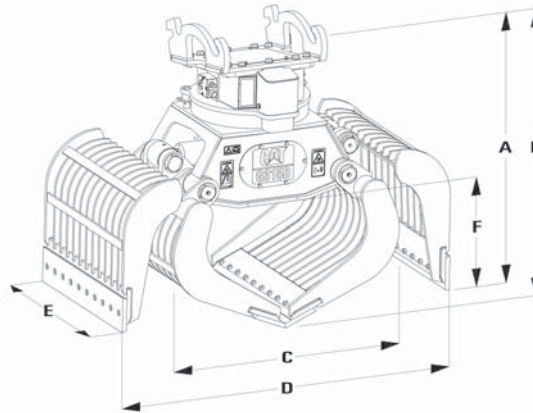
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Model	G315BWH (Waste Handling)		G315B	
Width	1100 mm	43.3"	1000 mm	39.4"
Opening	2200 mm	86.6"	2000 mm	78.7"
Tip force	49.5 kN	11,128 lbf	52 kN	11,690 lbf
BOCE		G320B		G315B
Weight	1450 kg	3190 lb	1405 kg	3091 lb
Volume	800 L	1.0 yd ³	600 L	0.8 yd ³

Matching: M318, M322, 319, 320, 321 and 323.

**Demolition and
Sorting Grapples
Americas North and South,
Europe, Africa, Middle East**

Specifications

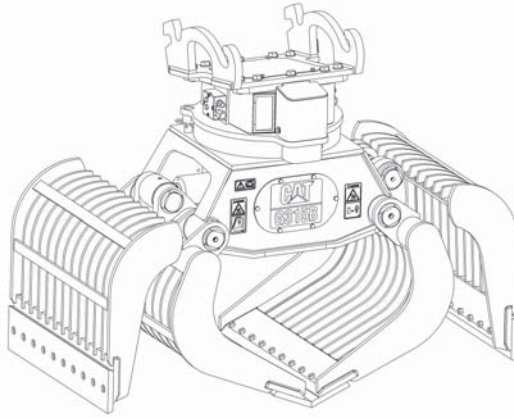


Specifications (All dimensions are approximate.)

Model	G320B (Recycling**)		G325B (Demolition)		G325B (Recycling**)	
	Capacity	800 L	1.05 yd ³	900 L	1.18 yd ³	900 L
Weight*	1820 kg	4012 lb	2040 kg	4497 lb	2090 kg	4607 lb
Dimensions:						
A Length	1630 mm	64"	1630 mm	64"	1630 mm	64"
B Length	1725 mm	68"	1725 mm	68"	1725 mm	68"
C Length	1505 mm	59"	1540 mm	61"	1540 mm	61"
D Length	2200 mm	87"	2200 mm	87"	2200 mm	87"
E Width	1100 mm	43"	1350 mm	53"	1350 mm	53"
F Height	625 mm	25"	625 mm	25"	625 mm	25"
Closing force	66 kN	14,850 lbf	66 kN	14,850 lbf	66 kN	14,850 lbf
Hydraulic for open/close:						
Maximum pressure	350 bar	5076 psi	350 bar	5076 psi	350 bar	5076 psi
Maximum flow	120 L/min	31.7 gpm	120 L/min	31.7 gpm	120 L/min	31.7 gpm
Connection		-16		-16		-16
Hydraulic for rotation:						
Maximum pressure	140 bar	2030 psi	140 bar	2030 psi	140 bar	2030 psi
Optimum flow	40 L/min	10.6 gpm	40 L/min	10.6 gpm	40 L/min	10.6 gpm
Connection		-8		-8		-8
Excavator — class	18.1-26.3 mt	20-29 st	25-38 mt	27.5-41.8 st	25-38 mt	27.5-41.8 st

*Weights exclude standard Quick Coupler mounting brackets. G320B is also available with fixed upperhead version.

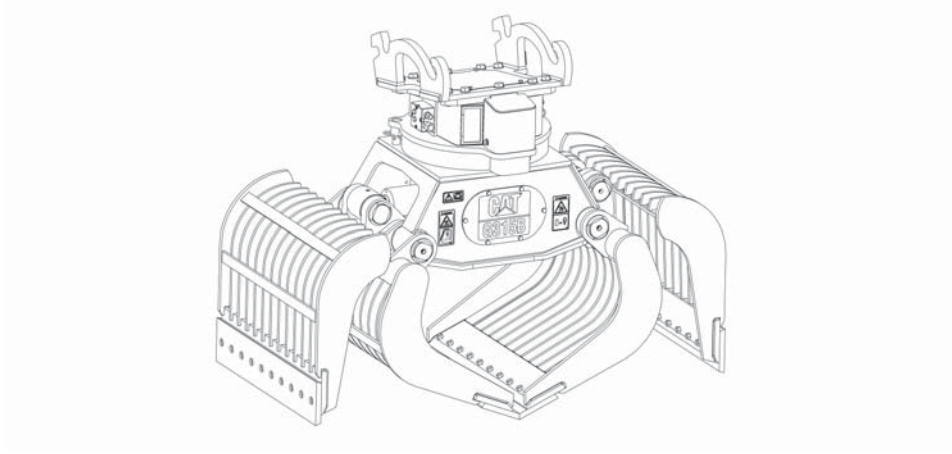
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Specifications (All dimensions are approximate.)

Model	Fixed Upper Head					
	G310 GC		G313 GC		G315 GC	
Operating weight	865 kg	1903 lb	895 kg	1969 lb	1200 kg	2640 lb
Height open	1272 mm	50"	1272 mm	50"	1365 mm	54"
Height closed	1365 mm	54"	1365 mm	54"	1475 mm	58"
Shell width	850 mm	33"	950 mm	37"	1000 mm	39"
Capacity	400 L	0.52 yd³	450 L	0.59 yd³	600 L	0.78 yd³
Operating maximum pressure						
Open/closing	35 000 kPa	5076 psi	35 000 kPa	5076 psi	35 000 kPa	5076 psi
Rotation	22 000 kPa	3191 psi	22 000 kPa	3191 psi	22 000 kPa	3191 psi
Operating flow						
Open/closing	60 L/min	16 gpm	60 L/min	16 gpm	90 L/min	24 gpm
Rotation	40 L/min	11 gpm	40 L/min	11 gpm	40 L/min	11 gpm
Closing force	36 kN	8093 lbf	36 kN	8093 lbf	52 kN	11,690 lbf

**Demolition and
Sorting Grapples
Americas North and South,
Europe, Africa, Middle East**

Specifications

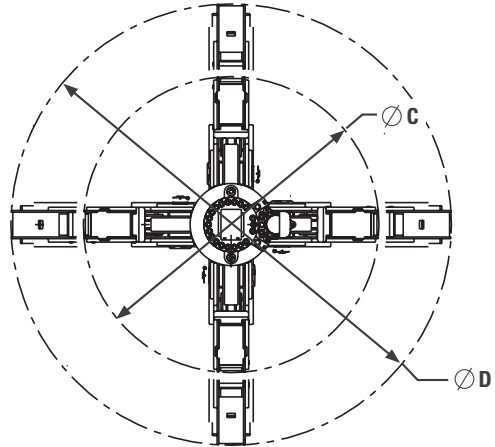
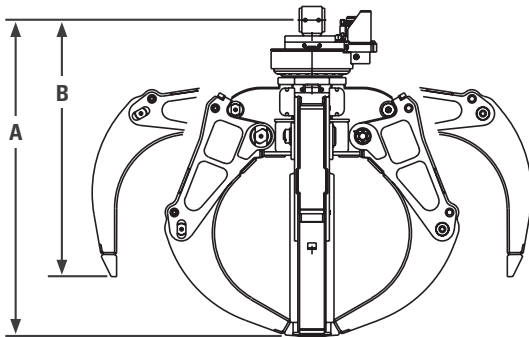


Specifications (All dimensions are approximate.)

Model	Flat Top Upper Head					
	G310 GC		G313 GC		G315 GC	
Operating weight	814 kg	1791 lb	845 kg	1859 lb	1142 kg	2512 lb
Height open	1223 mm	48"	1223 mm	48"	1326 mm	52"
Height closed	1315 mm	52"	1315 mm	52"	1427 mm	56"
Shell width	850 mm	33"	950 mm	37"	1000 mm	39"
Capacity	400 L	0.52 yd³	450 L	0.59 yd³	600 L	0.78 yd³
Operating maximum pressure						
Open/closing	35 000 kPa	5076 psi	35 000 kPa	5076 psi	35 000 kPa	5076 psi
Rotation	22 000 kPa	3191 psi	22 000 kPa	3191 psi	22 000 kPa	3191 psi
Operating flow						
Open/closing	60 L/min	16 gpm	60 L/min	16 gpm	90 L/min	24 gpm
Rotation	40 L/min	11 gpm	40 L/min	11 gpm	40 L/min	11 gpm
Closing force	36 kN	8093 lbf	36 kN	8093 lbf	52 kN	11,690 lbf

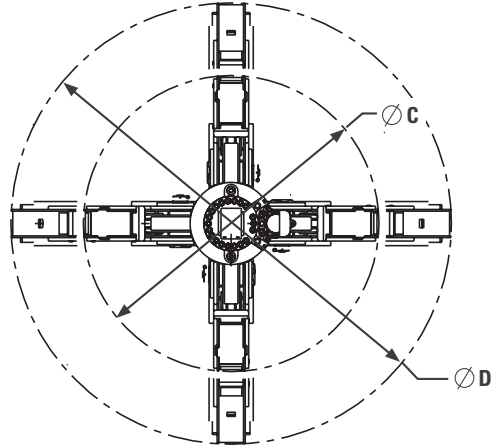
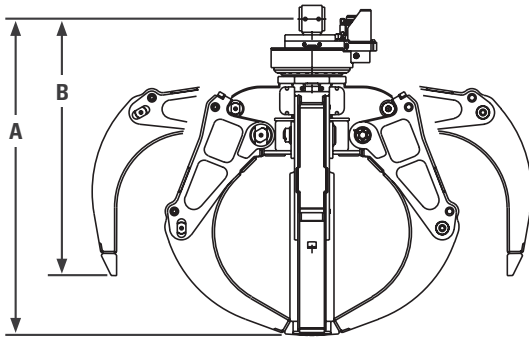
Features:

- Continuous, bi-directional 360° hydraulic rotation.
- Heavy-duty, fully protected cylinders.
- Tines constructed of high-strength wear-resistant steel.



Model		GSH15B	GSH20B		GSH22B		
Part number		293-3202	292-6768	292-7730	292-7743	259-9691	259-9704
Industry capacity class	L (yd ³)	600 (0.75)	600 (0.75)	800 (1.00)	1000 (1.25)	1000 (1.50)	1500 (2.00)
Operating weight	kg (lb)	1215 (2679)	1575 (3472)	1615 (3560)	1660 (3660)	2390 (5269)	2410 (5313)
Maximum lift capacity	kg (lb)	4000 (8818)	8000 (17,637)	8000 (17,637)	8000 (17,637)	12 000 (26,455)	12 000 (26,455)
Dimensions							
A Height — tines closed*	mm (in)	1740 (68.50)	1720 (67.72)	1860 (73.23)	2010 (79.13)	2175 (85.63)	2265 (89.17)
B Height — tines open*	mm (in)	1385 (54.53)	1440 (56.69)	1510 (59.45)	1590 (62.60)	1830 (72.05)	1880 (72.36)
C Diameter — tines closed	mm (in)	1540 (60.63)	1735 (68.31)	1735 (68.31)	1735 (68.31)	2050 (80.71)	2050 (80.71)
D Diameter — tines open	mm (in)	2415 (95.08)	2390 (94.09)	2595 (101.97)	2855 (102.40)	2950 (116.14)	3050 (120.08)

*Includes hydraulic rotator, excludes machine link.



Model		GSH15B	GSH20B		GSH22B		
Part number		293-3202	292-6768	292-7730	292-7743	259-9691	259-9704
Dimensions							
Ground clearance — tines open	mm (in)	640 (25.20)	645 (25.40)	715 (28.15)	790 (31.10)	900 (35.43)	955 (37.60)
Pin diameter	mm (in)	70 (2.76)	80 (3.15)	80 (3.15)	80 (3.15)	90 (3.54)	90 (3.54)
Width of crosshead	mm (in)	114 (4.49)	150 (5.91)	150 (5.91)	150 (5.91)	200 (7.87)	200 (7.87)
Overall width	mm (in)	1810 (71.26)	1800 (70.87)	1930 (75.98)	2125 (83.66)	2230 (87.80)	2320 (91.34)
Maximum opening	mm (in)	2121 (83.50)	2064 (81.26)	2305 (90.75)	2552 (100.47)	2522 (99.29)	2675 (105.31)
Hydraulic Open/Close							
Maximum pressure	bar (psi)	350 (5076)	350 (5076)	350 (5076)	350 (5076)	350 (5076)	350 (5076)
Optimum flow	L/min (gpm)	100 (26.42)	150 (39.63)	150 (39.63)	150 (39.63)	200 (52.83)	200 (52.83)
Hydraulic Rotation							
Maximum pressure	bar (psi)	180 (2610)	200 (2900)	200 (2900)	200 (2900)	200 (2900)	200 (2900)
Optimum pressure	bar (psi)	140 (2030)	160 (2320)	160 (2320)	160 (2320)	160 (2320)	160 (2320)
Optimum flow	L/min (gpm)	20 (5.28)	20 (5.28)	20 (5.28)	20 (5.28)	20 (5.28)	20 (5.28)

Matching Guide

	Boom Length		Stick Length		GSH15B	GSH20B			GSH22B	
	m	(ft/in)	m	(ft/in)	0.57 m ³ (0.75 yd ³)	0.57 m ³ (0.75 yd ³)	0.76 m ³ (1.00 yd ³)	0.96 m ³ (1.25 yd ³)	1.15 m ³ (1.50 yd ³)	1.53 m ³ (2.00 yd ³)
M318C MH	6.2	(20'3")	4.9	(16'1")	X					
M318D MH	6.2	(20'3")	4.9	(16'1")	X					
M322C MH	6.8	(22'3")	4.9	(16'1")	X	+	+	+		
			5.9	(19'4")	-	-	X			
M322D MH	6.8	(22'4")	4.9	(16'1")	X	+	+	+		
			5.9	(19'4")	-	-	X			
M325C MH	8.9	(29'0")	6.0	(19'8")		-	X	+		
			7.4	(24'4")		X				
M325C L MH	8.9	(29'0")	6.0	(19'8")		-	X	+		
			7.4	(24'4")		-	X			
M325D MH	8.9	(29'0")	6.0	(19'8")		-	X	+		
			7.4	(24'4")		X				
M325D L MH	8.9	(29'0")	6.0	(19'8")		-	-	X	+	
			7.4	(24'4")		-	X			
320C MH	6.7	(21'10")	5.5	(17'11")	X					
325C MH	8.4	(27'5")	5.5	(17'11")		-	X			
	8.85	(29'0")	6.0	(19'8")		X				
325D MH	8.85	(29'0")	6.0	(19'8")		-	X			
			7.4	(24'4")		X				
330C MH	9.1	(29'10")	6.0	(19'8")		-	X			
330D MH	9.2	(30'2")	6.1	(20'0")		-	-	-	X	
			7.6	(24'11")		-	-	X		
W345C MH	9.9	(32'6")	7.4	(24'4")					-	X
			9.1	(29'10")					-	X
345C MH	9.9	(32'6")	7.4	(24'4")					-	X
			9.1	(29'10")					X	

- X Primary match for good stability in average scrap handling situations. Considers a material density in the 1200 kg/m³ (2000 lb/yd³) range.
- + Secondary match for **less** dense material.
- Secondary match for **more** dense material.

Guarding Recommendation

Orange Peel Grapples used in hazardous applications like scrap and material handling can create a need for special operator guarding due to flying objects. When using an Orange Peel Grapple, additional protective

devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.

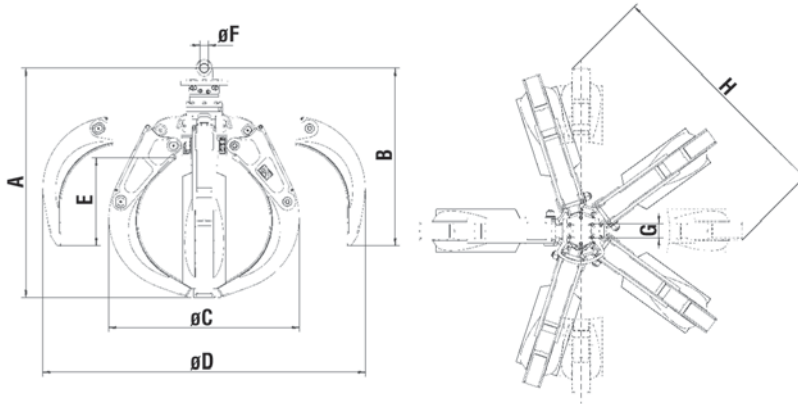
Features:

- Suitable for a wide range of applications.
- Maximum component protection; lower operating cost.
- Low profile.
- High stability.
- Protected hydraulics.
- Connection lines protection guard.
- Tines constructed of high-strength wear resistant steel.
- Continuous, bi-directional 360° hydraulic rotator.
- Pressure limiting valve for opening and closing.
- Heavy-duty, cushioned cylinders with swing bearings on both sides.
- Maintenance covers for easy access to all maintenance points.
- Weld-on replaceable tips.
- High commonality of parts between 5 and 4 tine configurations.
- Hardened steel-alloy pins.
- High closing force.
- Excellent material penetration.
- Superior lifting capacity.

Selection by Application

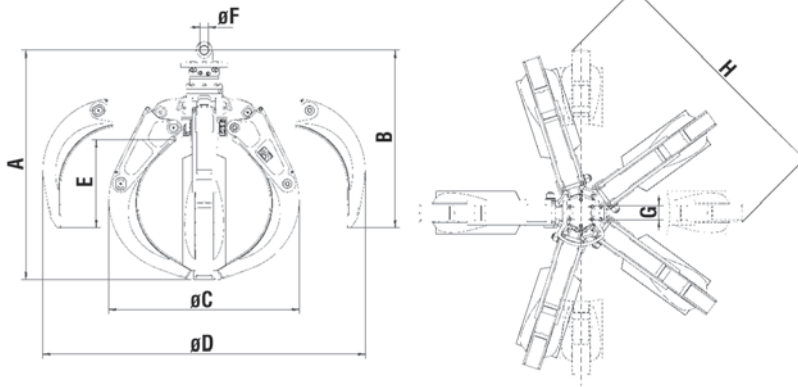
Grapple Application		4 Tines				5 Tines			
		O	S	C	N	O	S	C	N
Handling Scrap, Iron and Steel	Small-sized pieces (shredded)	x				x			
	Large-sized pieces up to 1000 × 1000 mm (39" × 39") (steel scrap, wrought iron, white goods, motor blocks)								
	Heavy/long-sized pieces (I-beams, pipes, plates)			x				x	
	Car bodies			x				x	
Handling Nonferrous Scrap Metals	Small-sized pieces (beverage cans, electric devices)	x				x			
	Large-sized pieces (car radiators, batteries)								
	Wires and cables (copper, lead)								
Other Nonferrous Materials	Waste								
	Rocks, concrete blocks			x				x	

Very good
 Good
 Not Recommended
 O Open
 S Semi-closed
 C Closed
 N Narrow



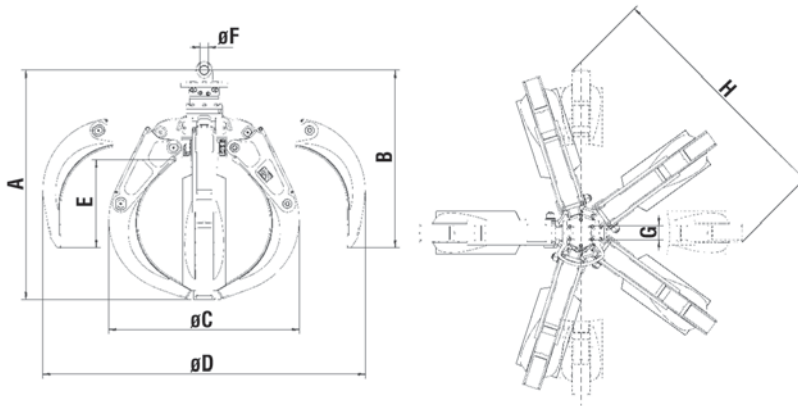
Specifications (All dimensions and weights are approximate.)

Model	GSH15B		GSH15B		GSH15B		GSH15B	
Type	400		500		600		800	
Recommended carrier weight:								
Excavator	15-21 mt	16.5-23.1 st	15-21 mt	16.5-23.1 st	15-21 mt	16.5-23.1 st	15-21 mt	16.5-23.1 st
Material Handler	18-25 mt	19.8-27.6 st	18-25 mt	19.8-27.6 st	18-25 mt	19.8-27.6 st	18-25 mt	19.8-27.6 st
Capacity	0.4 m ³	1.0 yd³	0.5 m ³	1.0 yd³	0.6 m ³	0.75 yd³	0.8 m ³	1.0 yd³
5 Tines								
Operating weight:								
open	1375 kg	3027 lb	1380 kg	3043 lb	1395 kg	3076 lb	1465 kg	3230 lb
semi-closed	1445 kg	3186 lb	1455 kg	3208 lb	1475 kg	3252 lb	1545 kg	3407 lb
closed	1530 kg	3374 lb	1540 kg	3411 lb	1575 kg	3473 lb	1655 kg	3655 lb
narrow	—	—	—	—	1450 kg	3386 lb	1515 kg	3341 lb
4 Tines								
Operating weight:								
open	1155 kg	2538 lb	1160 kg	2558 lb	1175 kg	2591 lb	1210 kg	2668 lb
semi-closed	1225 kg	2701 lb	1235 kg	2723 lb	1250 kg	2756 lb	1300 kg	2867 lb
closed	1355 kg	2988 lb	1375 kg	3032 lb	1410 kg	3109 lb	1495 kg	3296 lb
narrow	—	—	—	—	1215 kg	2679 lb	1260 kg	2778 lb
Dimensions:								
A	1670 mm	66"	1700 mm	67"	1760 mm	69"	1890 mm	74"
B	1350 mm	53"	1370 mm	54"	1400 mm	55"	1460 mm	57"
C	1500 mm	59"	1500 mm	59"	1500 mm	59"	1500 mm	59"
D	2190 mm	86"	2250 mm	89"	2340 mm	92"	2550 mm	100"
E	600 mm	24"	620 mm	24"	650 mm	26"	710 mm	28"
F	70 mm	3"	70 mm	3"	70 mm	3"	70 mm	3"
G	114 mm	4"	114 mm	4"	114 mm	4"	114 mm	4"
H	1440 mm	57"	1480 mm	58"	1540 mm	57"	1670 mm	66"
I	2085 mm	82"	2145 mm	84"	2230 mm	88"	2430 mm	96"
H (4 tines)	1700 mm	67"	1740 mm	69"	1810 mm	71"	1970 mm	78"
Hydraulic open/close:								
Maximum pressure	350 bar	5075 psi	350 bar	5075 psi	350 bar	5075 psi	350 bar	5075 psi
Optimum flow	100 L/min	26 gpm	100 L/min	26 gpm	100 L/min	26 gpm	100 L/min	26 gpm
Hydraulic rotation:								
Maximum pressure	140 bar	2030 psi	140 bar	2030 psi	140 bar	2030 psi	140 bar	2030 psi
Optimum flow	20 L/min	5 gpm	20 L/min	5 gpm	20 L/min	5 gpm	20 L/min	5 gpm



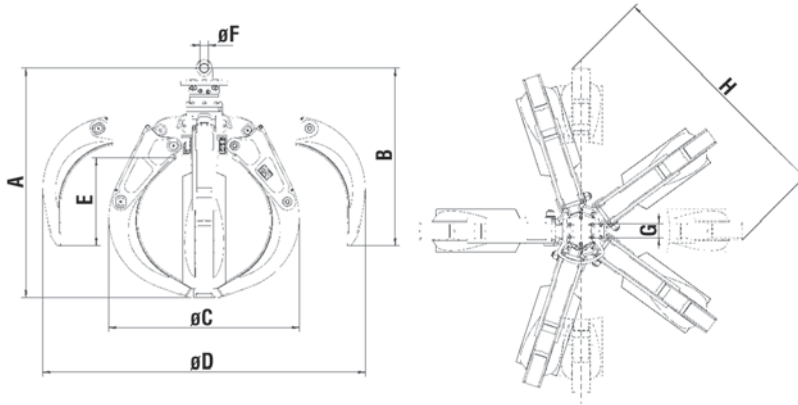
Specifications (All dimensions and weights are approximate.)

Model	GSH20B		GSH20B		GSH20B	
Type	600		800		1000	
Recommended carrier weight:						
Excavator	20-30 mt	22-33.1 st	20-30 mt	22-33.1 st	20-30 mt	22-33.1 st
Material Handler	25-35 mt	27.6-49.6 st	25-35 mt	27.6-49.6 st	25-35 mt	27.6-49.6 st
Capacity	0.6 m ³	0.75 yd³	0.8 m ³	1.0 yd³	1.0 m ³	1.25 yd³
5 Tines						
Operating weight:						
open	1820 kg	4013 lb	1855 kg	4090 lb	1900 kg	4190 lb
semi-closed	1905 kg	4201 lb	1955 kg	4311 lb	2020 kg	4454 lb
closed	1985 kg	4377 lb	2055 kg	4531 lb	2145 kg	4730 lb
narrow	1870 kg	4123 lb	1920 kg	4234 lb	1975 kg	4355 lb
4 Tines						
Operating weight:						
open	1545 kg	3407 lb	1570 kg	3462 lb	1605 kg	3539 lb
semi-closed	1615 kg	3561 lb	1655 kg	3649 lb	1705 kg	3760 lb
closed	1745 kg	3848 lb	1820 kg	4013 lb	1910 kg	4212 lb
narrow	1575 kg	3473 lb	1615 kg	3561 lb	1660 kg	3660 lb
Dimensions:						
A	1720 mm	68"	1860 mm	73"	2010 mm	79"
B	1440 mm	57"	1510 mm	59"	1590 mm	63"
C	1735 mm	68"	1735 mm	68"	1735 mm	68"
D	2390 mm	94"	2595 mm	102"	2855 mm	112"
E	645 mm	25"	715 mm	28"	790 mm	31"
F	80 mm	3"	80 mm	3"	80 mm	3"
G	150 mm	6"	150 mm	6"	150 mm	6"
H	1530 mm	60"	1640 mm	65"	1800 mm	71"
I	2210 mm	87"	2395 mm	94"	2635 mm	104"
H (4 tines)	1800 mm	71"	1930 mm	76"	2125 mm	84"
Hydraulic open/close:						
Maximum pressure	350 bar	5075 psi	350 bar	5075 psi	350 bar	5075 psi
Optimum flow	150 L/min	40 gpm	150 L/min	40 gpm	150 L/min	40 gpm
Hydraulic rotation:						
Maximum pressure	200 bar	2900 psi	200 bar	2900 psi	200 bar	2900 psi
Optimum flow	20 L/min	5 gpm	20 L/min	5 gpm	20 L/min	5 gpm



Specifications (All dimensions and weights are approximate.)

Model	GSH22B		GSH22B		GSH22B	
Type	600		800		1000	
Recommended carrier weight:						
Excavator	22-50 mt	24.3-55.1 st	22-50 mt	24.3-55.1 st	22-50 mt	24.3-55.1 st
Material Handler	35-60 mt	38.6-66.1 st	35-60 mt	38.6-66.1 st	35-60 mt	38.6-66.1 st
Capacity	0.6 m ³	0.75 yd³	0.8 m ³	1.0 yd³	1.0 m ³	1.25 yd³
5 Tines						
Operating weight:						
open	2660 kg	5865 lb	2715 kg	4796 lb	2740 kg	6042 lb
semi-closed	2770 kg	6108 lb	2855 kg	6295 lb	2890 kg	6372 lb
closed	2860 kg	6306 lb	2980 kg	6571 lb	3030 kg	6681 lb
narrow	—	—	—	—	2855 kg	6295 lb
4 Tines						
Operating weight:						
open	2255 kg	4972 lb	2295 kg	5060 lb	2315 kg	5105 lb
semi-closed	2350 kg	5182 lb	2415 kg	5325 lb	2440 kg	5380 lb
closed	2530 kg	5696 lb	2650 kg	5843 lb	2700 kg	5954 lb
narrow	—	—	—	—	2390 kg	5270 lb
Dimensions:						
A	1970 mm	70"	2100 mm	83"	2175 mm	86"
B	1710 mm	67"	1785 mm	70"	1830 mm	72"
C	2050 mm	81"	2050 mm	81"	2050 mm	81"
D	2640 mm	104"	2840 mm	112"	2950 mm	116"
E	780 mm	31"	860 mm	34"	900 mm	35"
F	90 mm	4"	90 mm	4"	90 mm	4"
G	200 mm	8"	200 mm	8"	200 mm	8"
H	1530 mm	60"	1840 mm	72"	1900 mm	75"
I	2450 mm	96"	2635 mm	104"	2730 mm	107"
H (4 tines)	2010 mm	79"	2160 mm	85"	2230 mm	88"
Hydraulic open/close:						
Maximum pressure	350 bar	5075 psi	350 bar	5075 psi	350 bar	5075 psi
Optimum flow	200 L/min	53 gpm	200 L/min	53 gpm	200 L/min	53 gpm
Hydraulic rotation:						
Maximum pressure	200 bar	2900 psi	200 bar	2900 psi	200 bar	2900 psi
Optimum flow	20 L/min	5 gpm	20 L/min	5 gpm	20 L/min	5 gpm



Specifications (All dimensions and weights are approximate.)

Model	GSH22B		GSH22B	
Type	1250		1500	
Recommended carrier weight:				
Excavator	22-50 mt	24.3-55.1 st	22-50 mt	24.3-55.1 st
Material Handler	35-60 mt	38.6-66.1 st	35-60 mt	38.6-66.1 st
Capacity	1.25 m ³	1.65 yd³	1.5 m ³	2.0 yd³
5 Tines				
Operating weight:				
open	2780 kg	6130 lb	—	—
semi-closed	2945 kg	6494 lb	—	—
closed	3095 kg	6813 lb	—	—
narrow	—	—	2880 kg	6350 lb
4 Tines				
Operating weight:				
open	2350 kg	5182 lb	—	—
semi-closed	2485 kg	5479 lb	—	—
closed	2760 kg	6086 lb	—	—
narrow	—	—	2410 kg	5314 lb
Dimensions:				
A	2245 mm	88"	2265 mm	89"
B	1870 mm	74"	1880 mm	74"
C	2085 mm	82"	2050 mm	80"
D	3060 mm	120"	3050 mm	120"
E	940 mm	37"	955 mm	38"
F	90 mm	4"	90 mm	4"
G	200 mm	8"	200 mm	8"
H	1980 mm	78"	1980 mm	78"
I	2830 mm	111"	2820 mm	111"
H (4 tines)	2320 mm	91"	2320 mm	91"
Hydraulic open/close:				
Maximum pressure	350 bar	5075 psi	350 bar	5075 psi
Optimum flow	200 L/min	53 gpm	200 L/min	53 gpm
Hydraulic rotation:				
Maximum pressure	200 bar	2900 psi	200 bar	2900 psi
Optimum flow	20 L/min	5 gpm	20 L/min	5 gpm

Work Tools Matching Guide

Choosing the proper Orange Peel Grapple can increase productivity and lower your cost per ton.

Matching information not available. Please see marketing literature for current matching information.

Multi-Functional Concrete Crushers Europe, Africa, Middle East

Features Guarding Recommendation Matching Guide

Features:

- Multi-functional operation, the crusher combines several demolition operations in one piece of equipment. Breaking out concrete from fixed structures, pulverizing concrete and cutting reinforcement rods and small steel profiles.
- High force-to-weight ratio, the crusher's special cylinder position allows it to maintain the same power with significantly lower weight.
- Enhanced performance, the standard speed valve enables cutting/crushing with great force and in even shorter cycle times.
- Optimized serviceability, the teeth and blades are replaceable and the hydraulics is easy accessible through bolted hatches.

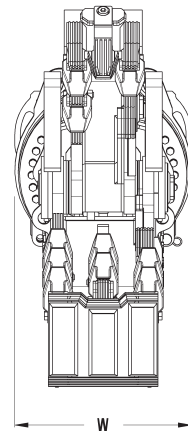
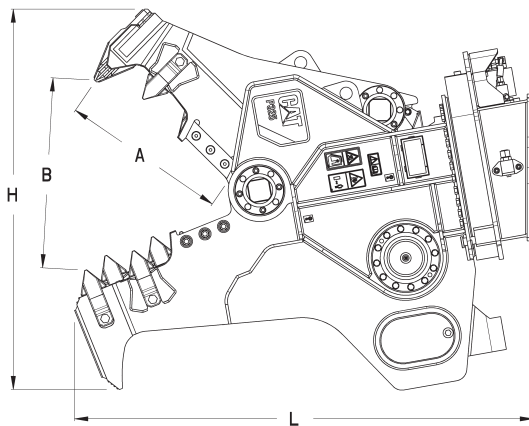
Guarding Recommendation

Multi-Functional Concrete Crushers used in hazardous applications like breaking out concrete from fixed structures, pulverizing concrete and cutting, can create a need for special operator guarding due to flying objects. When using a Multi-Functional Concrete Crusher, additional protective devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.

Matching Guide

Multi-Functional Concrete Crushers

Model	Cat Excavator
P315	315C/D, 318C, 319C/D, 320B/C/D, 322B/C, 323D, 324D, 325B/C, 325UHD C/D, 330UHD B/C/D, 345UHD B/C, 385UHD B/C
P325	320D, 322B/C, 324D, 325B/C/D, 329D, 330B/C/D, 336D, 325UHD C/D, 330UHD B/C/D, 345UHD C, 365UHD B/C, 385UHD B/C
P335	325B/C/D, 329D, 330B/C/D, 336D, 345B/C, 365UHD BII/C, 385 UHD B/C
P360	345B/C, 365B/C, 385B/C



Specifications and Dimensions

Model	P315		P325		P335		P360	
Recommended carrier weight, stick mounted	15-25		25-35		35-60		60-85	
Weight* (approximate)	1890 kg	4170 lb	2550 kg	5620 lb	3550 kg	7825 lb	5230 kg	11,530 lb
Closing force:								
at tooth tip	90 mt	99 st	125 mt	138 st	160 mt	176 st	210 mt	231 st
at primary cutter	190 mt	210 st	295 mt	325 st	355 mt	391 st	455 mt	501 st
Dimensions:								
(L) Length	1927 mm	76"	2060 mm	81"	2398 mm	130"	2737 mm	108"
(H) Height	1543 mm	61"	1710 mm	67"	1897 mm	75"	2312 mm	91"
(W) Width	793 mm	31"	793 mm	31"	750 mm	30"	1180 mm	46"
(A) Jaw depth	657 mm	26"	753 mm	30"	877 mm	35"	933 mm	37"
(B) Jaw opening	731 mm	29"	855 mm	34"	983 mm	39"	1201 mm	47"
Cutter length	200 mm	8"	260 mm	10"	350 mm	14"	350 mm	14"
Maximum pressure:								
Crushing circuit	350 bar	5076 psi	350 bar	5076 psi	350 bar	5076 psi	350 bar	5076 psi
Rotation	140 bar	2030 psi	140 bar	2030 psi	140 bar	2030 psi	140 bar	2030 psi
Optimum flow:								
Crushing circuit	150 L/min	40 gpm	200 L/min	53 gpm	300 L/min	79 gpm	400 L/min	105 gpm
Rotation	40 L/min	11 gpm	40 L/min	11 gpm	40 L/min	11 gpm	80 L/min	21 gpm
Time to close	2 sec		2 sec		2.5 sec		3 sec	
Time to open	3 sec		4 sec		4 sec		4 sec	
Crushing capacity:								
Concrete thickness**	550 mm	22"	650 mm	26"	800 mm	31"	950 mm	37"

*Weight excludes mounting bracket.

**The concrete thickness as published provides an indication of crushing ability. The exact crushing ability depends on proper excavator adjustment, on the tip and amount of rebar, and on the condition of the concrete, jaws and crushers.

Features:

- **Ideal for pulverizing from non fixed structures** — The Secondary Pulverizer is an excellent choice for all those recyclers who need to prepare concrete for fine crushing and is an excellent attachment for secondary demolition. Concrete chunks released during the demolition of concrete structures can be fine-crushed at source. In this process the concrete and the reinforcement are separated. This considerably reduces the transport volume, saving dumping and transportation expenses.
- **Innovative jaw arrangement** — The Cat Secondary Pulverizer offers wide jaws with pick-up tips, large opening, reversible cutting edges and fast closing times that bring a high return on your investment. This high force-to-weight work tool has been specially developed to reduce the largest possible amount of concrete in the shortest possible time.
- **Enhanced performance** — The ripper tooth splits concrete instantly and the large number of teeth have a large pulverizing effect. The cylinder of the pulverizer is equipped with a speed valve as standard. This device controls the speed of the cylinder and enables to cut/crush with great force in short cycle times.
- **Optimized serviceability** — Service and repairs are a necessary part of operating any work tool. So the less time and money needed for both, the better. That's why Caterpillar gives major attention to reducing both. The teeth and blades are replaceable and the hydraulics are easily accessible through bolted hatches. Parts commonality is designed into Cat products to significantly benefit owners of several work tools.
- **Long lifetime** — Cat Work Tools are designed to last long. Precision machined and forged parts, wear protection and stress relieving plates as well as fully protected hydraulic cylinder provide a long lifetime of low cost production.

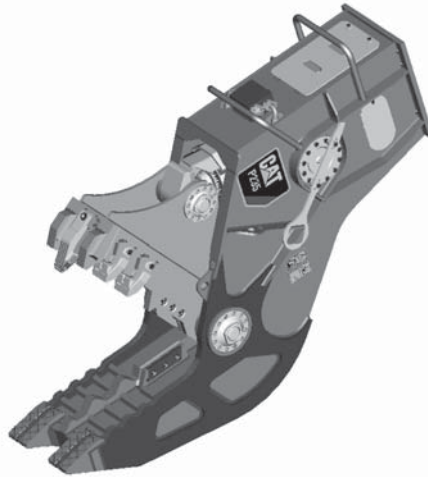
Guarding Recommendation

Hydraulic Concrete Pulverizers are used in hazardous applications like breaking out concrete from fixed structures, pulverizing concrete and cutting; creating a need for special operator guarding due to flying objects. When using these tools, additional protective devices such as a front screen, Falling Object Guarding System (FOGS, includes top and front guarding), thick polycarbonate windshields or a combination of these is recommended by Caterpillar. Contact your Cat dealer for operator guarding options on your machine.

Matching Guide

Hydraulic Concrete Pulverizers

Model	Cat Excavator
P215	315C/D, 318C, 319C/D, 320B/C/D, 322B/C, 323D, 324D, 325B/C/D
P225	320D, 322B/C, 324D, 325B/C/D, 329D, 330B/C/D, 336D
P235	325B/C/D, 329D, 330B/C/D, 336D, 345B/C



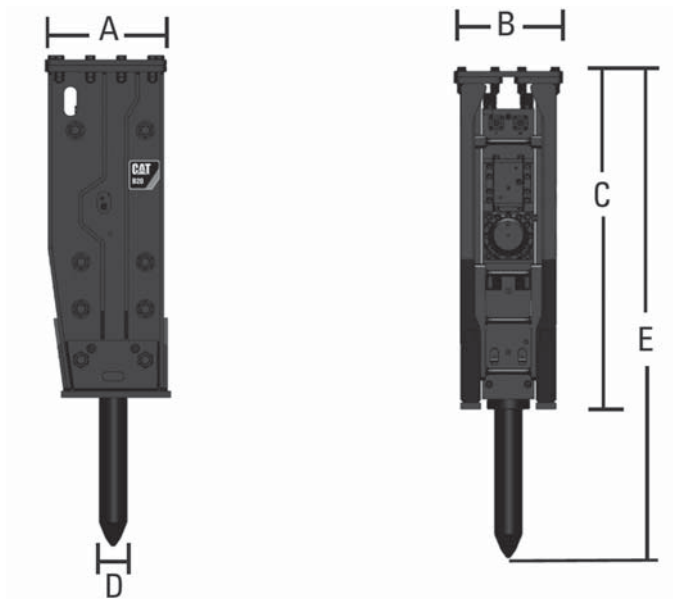
Specifications and Dimensions

Model	P215		P225		P235	
Recommended carrier weight***:						
Stick mounted	15-25		25-35		35-60	
Weight* (approximate)	1683 kg	3710 lb	2480 kg	5467 lb	3421 kg	7542 lb
Closing force:						
at tooth tip	121 mt	133 st	177 mt	195 st	94 mt	104 st
at primary cutter	235 mt	259 st	338 mt	373 st	401 mt	442 st
Dimensions:						
Length	2414 mm	95"	2615 mm	103"	3046 mm	120"
Height	1372 mm	54"	1645 mm	65"	1918 mm	76"
Width	580 mm	23"	624 mm	25"	708 mm	28"
Jaw depth	722 mm	28"	899 mm	35"	1103 mm	43"
Jaw opening	838 mm	33"	1018 mm	40"	1214 mm	48"
Cutter length	200 mm	8"	260 mm	10"	260 mm	10"
Maximum pressure crushing/ cutting	350 bar	5076 psi	350 bar	5076 psi	350 bar	5076 psi
Optimum flow crushing/cutting	150 L/min	40 gpm	200 L/min	53 gpm	300 L/min	79 gpm
Return flow	240 L/min	63 gpm	300 L/min	79 gpm	510 L/min	135 gpm
Time to close	3 sec		3 sec		3.5 sec	
Time to open	4 sec		5 sec		4.5 sec	
Crushing capacity:						
Concrete thickness**	650 mm	26"	750 mm	30"	900 mm	35"

*Weight excludes mounting bracket.

**The concrete thickness provides an indication of the crushing capacity. The exact crushing capability depends on excavator operation pressure and performance, on the tip and amount of rebar, and the condition of the concrete, jaws and cutters.

***The P200 work tool can also be installed on non-Cat carriers in the listed weight classes by installing a mounting bracket with the right pin-on ears, or with hinges to fit the dedicated CW quick coupler.

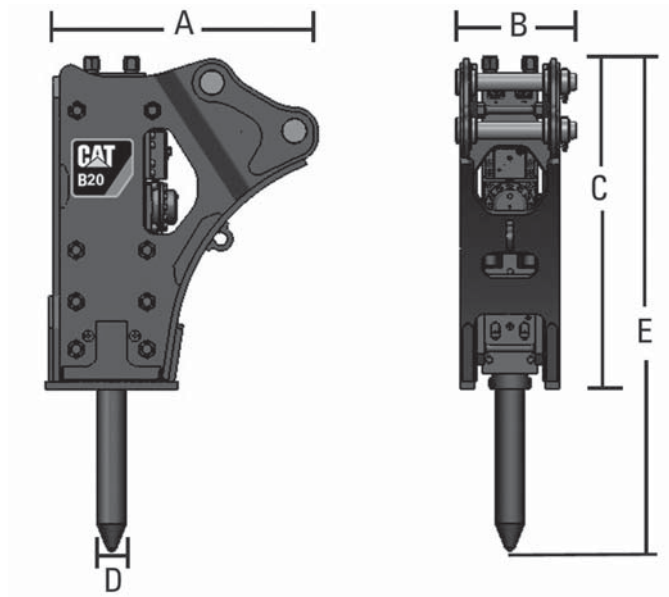


Specifications – Top-mount Style

Model	B8		B20		B30		B35	
Recommended carrier weight (minimum)	6 m tons	6.6 tons	17 m tons	18.7 tons	25 m tons	27.6 tons	30 m tons	33.1 tons
Recommended carrier weight (maximum)	9 m tons	9.9 tons	27 m tons	30 tons	32 m tons	35.3 tons	40 m tons	44.1 tons
Working weight*	438 kg	966 lb	1620 kg	3571 lb	2209 kg/ 2228 kg**	4870 lb/ 4912 lb**	3005 kg	6625 lb
Impact frequency	460-750 bpm		400-800 bpm		350-700 bpm		250-550 bpm	
Acceptable oil flow	45- 85 L/min	12- 22 gpm	125- 150 L/min	33- 40 gpm	160- 190 L/min	42- 50 gpm	180- 220 L/min	48- 58 gpm
Operating pressure	95- 130 bar	1378- 1885 psi	160- 180 bar	2321- 2611 psi	160- 180 bar	2321- 2611 psi	160- 180 bar	2321- 2611 psi
Dimensions:								
A Length	460 mm	18.1"	632 mm	24.9"	655 mm	25.8"	730 mm	28.7"
B Width	346 mm	13.6"	525 mm	20.7"	585 mm	23.0"	635 mm	25.0"
C Height (breaker)	877 mm	34.5"	1634 mm	64.3"	1829 mm	72.0"	1995 mm	78.5"
D Tool diameter	74.5 mm	2.9"	135 mm	5.3"	150 mm	5.9"	153 mm	6.0"
E Tool working length	1481 mm	58.3"	2389 mm	94.1"	2632 mm	103.6"	2798 mm	110.2"

*Working weight includes brackets andmoil tool.

**CB linkage – 2009 kg (4429 lb), DB linkage – 2228 kg (4912 lb).



Specifications – Side-mount Style

Model	B20				B30					
Recommended carrier weight (minimum)	17 m tons		18.7 tons		25 m tons		27.6 tons			
Recommended carrier weight (maximum)	27 m tons		29.8 tons		32 m tons		35.3 tons			
Working weight*	1620 kg		3571 lb		2047 kg		4513 lb			
Impact frequency	400-800 bpm				350-700 bpm					
Acceptable oil flow	125-150 L/min		33-40 gpm		160-190 L/min		42-50 gpm			
Operating pressure	160-180 bar		2321-2611 psi		160-180 bar		2321-2611 psi			
Linkage:	B/B1		CB/CB2		DB		CB/CB2		DB	
Dimensions:										
A Length – top	1270 mm	50"	1302 mm	51.3"	1327 mm	52.2"	1367 mm	53.8"	1367 mm	53.8"
A Length – bottom	620 mm	24.4"	620 mm	24.4"	620 mm	24.4"	650 mm	25.6"	650 mm	25.6"
B Width	457 mm	18"	457 mm	18"	457 mm	18"	524 mm	20.6"	524 mm	20.6"
C Height (breaker)	1539 mm	60.6"	1539 mm	60.6"	1549 mm	60.6"	1725 mm	67.9"	1732 mm	68.2"
D Tool diameter	135 mm	5.3"	135 mm	5.3"	135 mm	5.3"	150 mm	5.9"	150 mm	5.9"
E Tool working length	2294 mm	90.3"	2294 mm	90.3"	2294 mm	90.3"	2530 mm	99.6"	2537 mm	99.9"

*Working weight includes brackets andmoil tool.

Machine Compatibility

Auto-Connect Quick Coupler

Model	Linkage Hydraulic	Excavators
CWAC-40	–	M315D/M316D
CWAC-40	–	M318D/M322D
CWAC-40	–	315D/316E/318E
CWAC-40	–	319D
CWAC-40	B	320D/320E/321D/ 323D/323E

Auto-Connect is fast, fail-safe and reliable, and eliminates the oil spillages common with manual connections. Its design allows for high flows at low back pressures to ensure tools are used most effectively and to maintain optimum performance and matching. The design also ensures a perfect connection by balancing the connecting forces evenly across hoses. And the working pressure of the fluid maintains that connection even more securely.

Auto-Connect automatically connects up to five hydraulic ports (two high pressure and an optional drain) that typically need to be connected and disconnected by hand. That shortens the time for exchanging a hydraulic work tool from around half an hour to just a few seconds. Cutting out manual intervention also avoids potential spillage of hydraulic oil into the environment.