WHAT'S NEW

» **Woodchip and Coal U-Blades for D7E & D7E LGP**

Americas North Product Bulletin

April 2011

Specialty Blades
for Cat® Track-Type Tractors D6T–D11R



- **Maximum production U-blades in coal, woodchips, refuse and reclamation**
- **Optimized production in dozing applications with Variable Radius blades**
- **Cushion dozers for push-loading scrapers**

Cat® offers a range of specialty blades for Track-Type Tractor machines which enhance their productivity in a range of applications. They are based on the three basic blade types: Straight, Semi-U and U.

Dozers are powerful machines used for two basic tasks: ripping material out of the ground or moving huge amounts of material over a distance. The shape of the blade determines which of these two basic tasks it will be most suited for. As one might expect, there is a continuum of applications which fall in between these two absolutes, and blade variations address these discrete applications. Cat specialty blades are tailored to provide the highest production and best efficiency, based on the material and task at hand.

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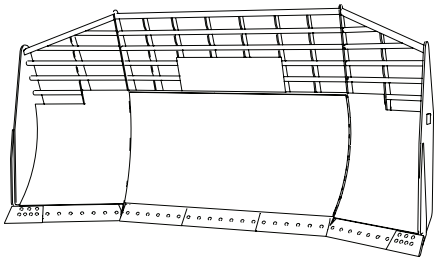
For Dealer Sales Personnel

CAT®

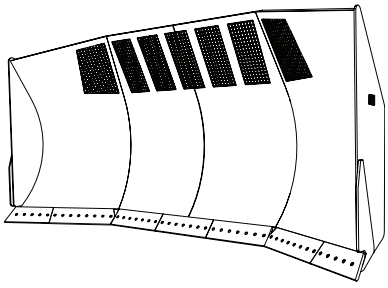
Production U-Blades

These U-blades are designed for pure production: moving bulk material at the lowest cost in time and fuel. The tractor power is channeled to pushing, so failure to get a maximum load means wasting fuel with every pass. The sidebars on the wings are near vertical for penetration into a pile—this lets the operator cut a load loose from a larger mass. The side wings are angled toward the center, and the moldboard is both tall and curved to push the material to the center of the blade and cause it to roll. The rolling action makes the material easier to push (just as rolling a tire is easier than dragging it.) The bottom line is that this blade will move more with less effort than using another blade type.

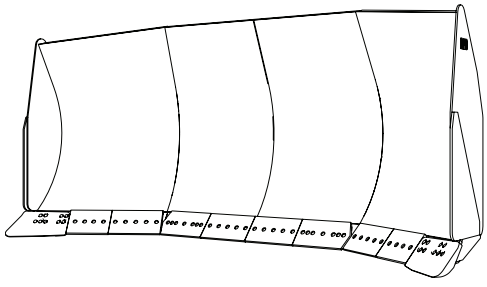
As different materials have different densities and stacking characteristics, different varieties of U-blades are available which have been designed for best performance in particular materials. In order of lightest density material first:



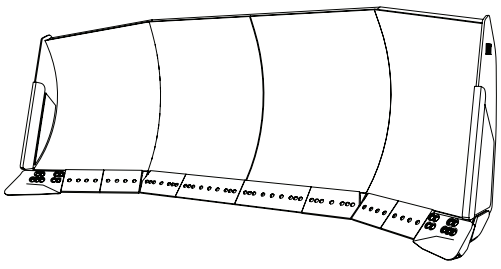
Landfill U-Blades



Woodchip U-Blades



Coal U-Blades



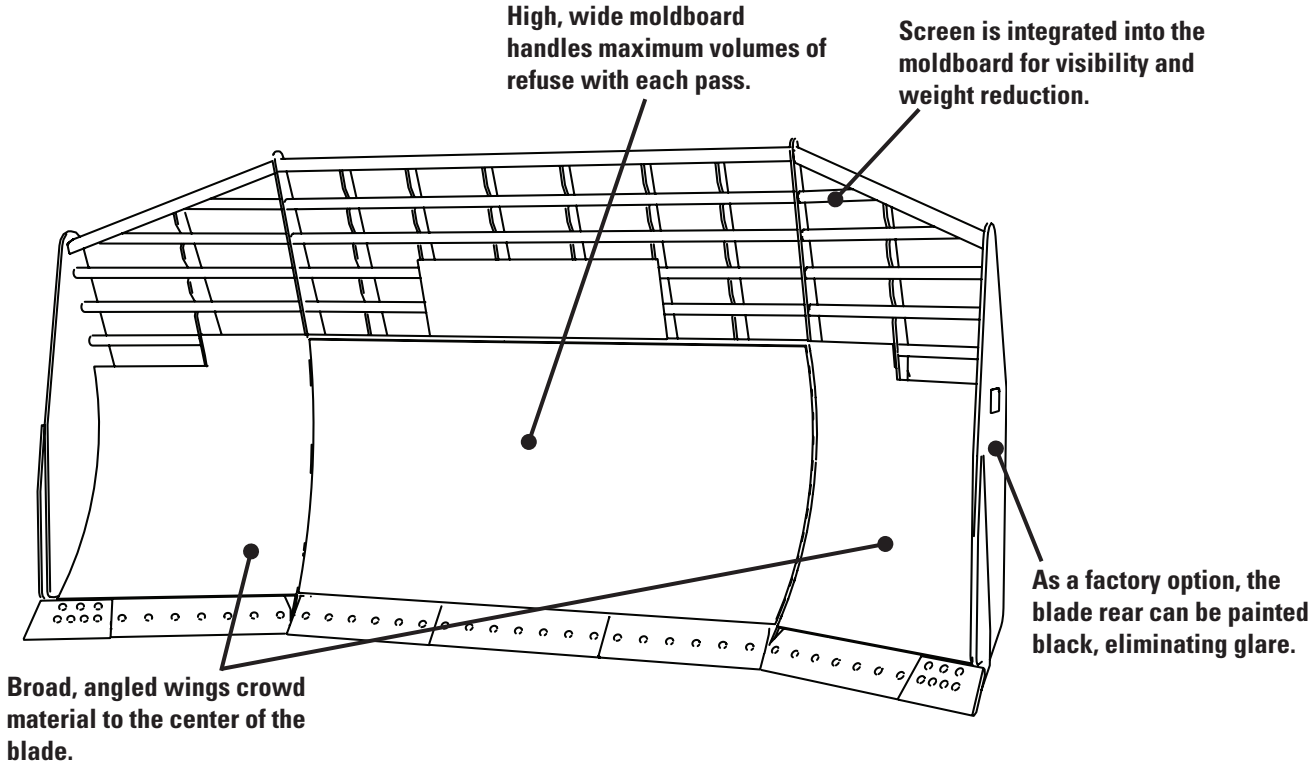
Reclamation U-Blades

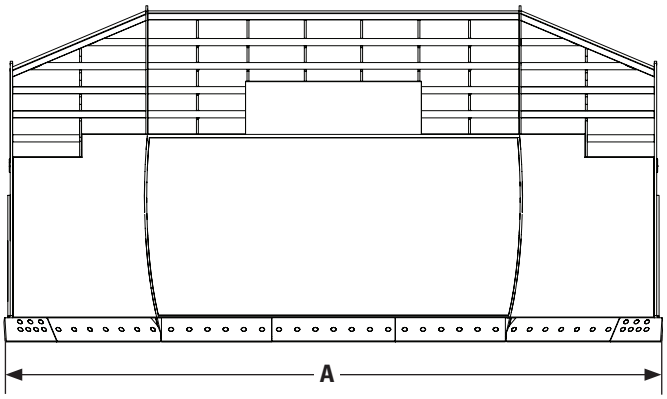
Production U-Blades *(continued)*

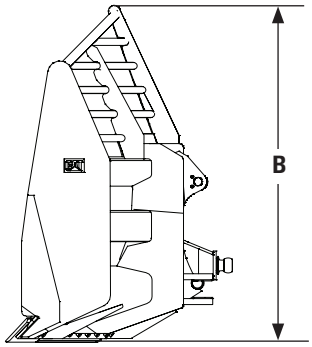
Landfill U-Blades

Typical urban landfill refuse is low density. Unlike other applications, the task at a landfill is not just to move material from the terminal, but also to then spread it over a wide area for compaction and burial.

Cat Landfill U-Blades are tall and wide to roll up the maximum amount of trash. Visibility to the front is provided by the open-frame construction of the upper blade; this also keeps blade weight down. While the blade is optimized for loose material, the edge group and moldboard are strong enough to doze cover material or dig trenches when needed.







Machine Model	Part #	Capacity m³	Capacity (yd³)	(A) Width mm	(A) Width (in)	(B) Height mm	(B) Height (in)	Wing Angle deg	Weight kg	Weight (lbs)
D7R	230-7073	18.4	(23.7)	4267	(168)	2184	(86)	30	2567	(5660)
D8T	262-7671	23.7	(31.0)	5512	(217)	2083	(82)	30	3642	(8030)
D8R	230-7076	23.3	(30.5)	4928	(194)	2286	(90)	30	3311	(7300)
D9T/R	230-7079	38.2	(50.0)	5436	(214)	2184	(86)	30	4218	(9300)

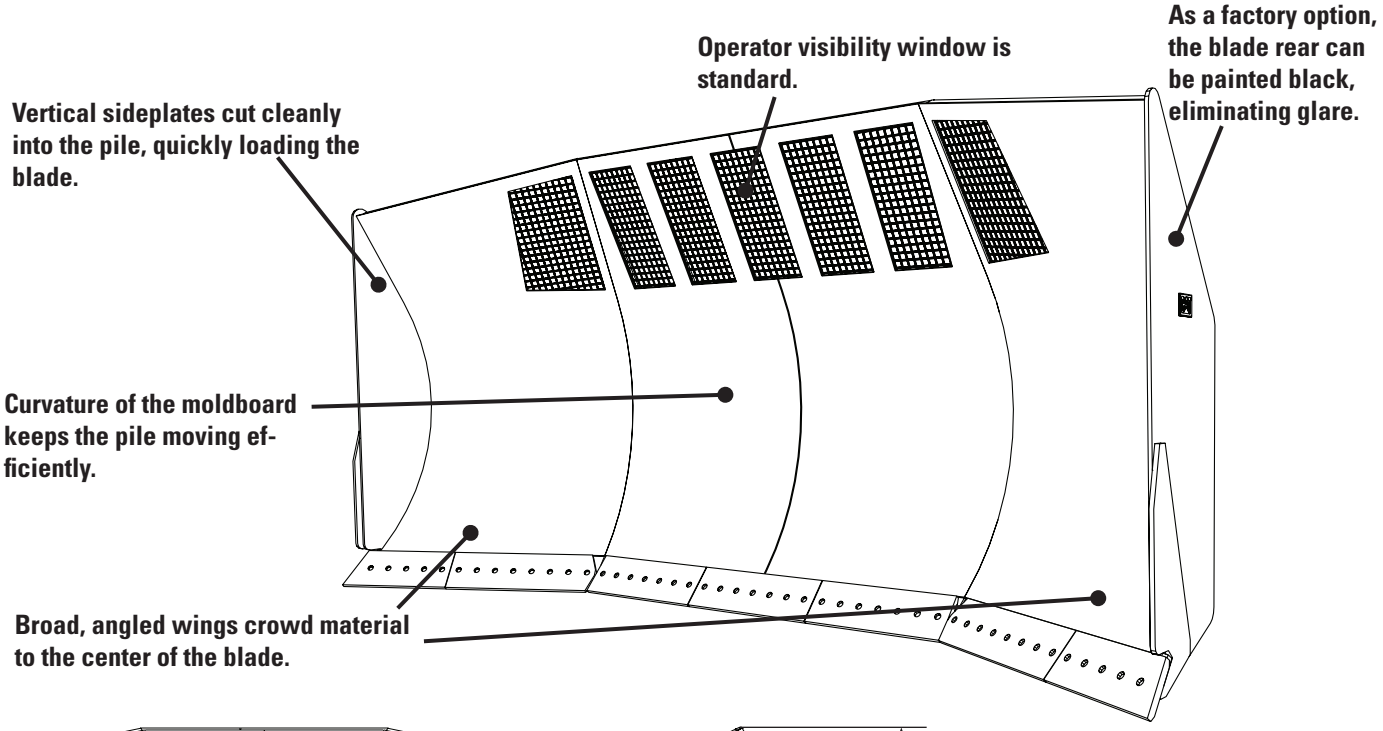
Production U-Blades continued on next page...

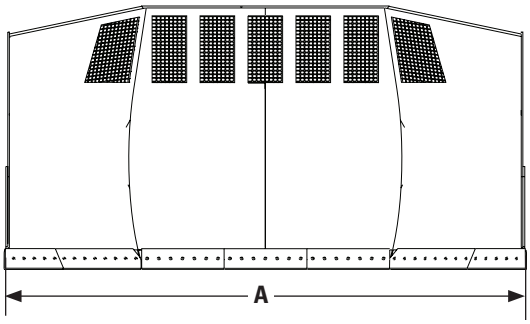
Production U-Blades *(continued)*

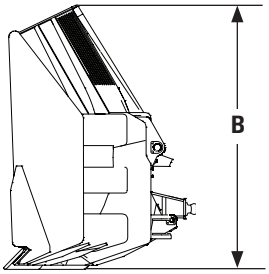
Woodchip U-Blades

Wood-fueled power plants, pulp mills or paper mills are likely places to find these at work, usually moving wood chips from where they are dropped off by truck or rail car into a stockpile, or directly to a conveyor for use in the plant.

As wood chips are relatively low-density, getting a large enough load means saving fuel with every pass. Wood chips pile high when pushed. Accordingly, the blades are tall across their entire width, with screen insert so that the operator can see through the blade. The sidebars on the wings are near vertical for penetration into a pile, this lets the operator cut a load loose from a larger mass of wood chips. The side wings are angled in to the center, and the moldboard is curved to push the material to the center of the blade and keep it rolling. The rolling action makes the material easier to push. The bottom line is that this blade will move more with less effort than using a standard U-blade in wood chips.







Machine Model	Part #	Capacity m³	Capacity (yd³)	(A) Width mm	(A) Width (in)	(B) Height mm	(B) Height (in)	Wing Angle deg	Weight kg	Weight (lbs)
D6T	1Q-2892	15.3	(20.0)	4267	(168)	1880	(74)	30	1905	(4200)
D7E	357-4283	23.8	(30.8)	4902	(193)	2279	(90)	30	2731	(6020)
D7E LGP	329-8642	23.8	(30.8)	4902	(193)	2284	(90)	30	2896	(6384)
D8T	262-7672	28.3	(37.0)	5486	(216)	2337	(92)	30	3499	(7713)
D8R	200-2225	28.3	(37.0)	5486	(216)	2337	(92)	30	2926	(6450)
D9T/R	230-5848	45.9	(60.0)	5461	(215)	3099	(122)	30	5080	(11200)
D10T/R, D10N	343-8765	72.6	(95.0)	6731	(265)	3353	(132)	30	7530	(16600)

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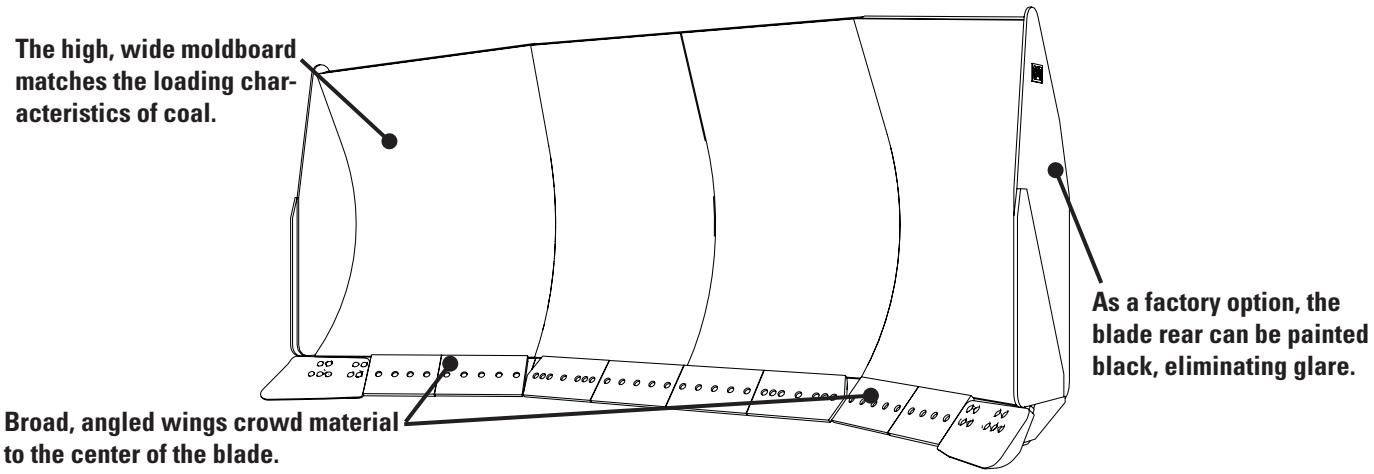
Production U-Blades *(continued)*

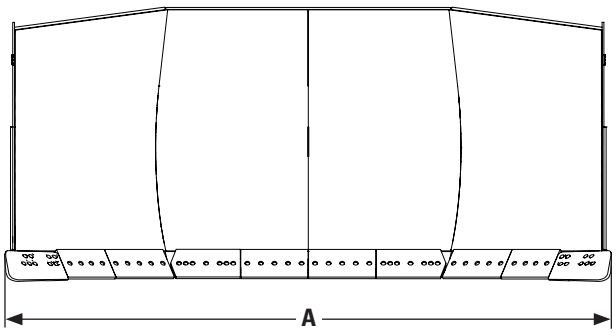
Coal U-Blades

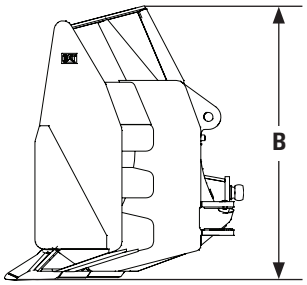
Like Woodchip U-Blades, coal blades are production oriented: move as much coal as efficiently as possible. Power plants and coal stockpiles are their milieu, working to move coal from where it's dropped off by rail car, to a stockpile or straight into a conveyor feeding the plant.

Coal is more dense than wood, and does not pile as high, accordingly the moldboard is shorter. The sidebars are vertical through half their length, and angled above for penetration into coal piles without excessive drag or weight. Blade height is lower than the woodchip or landfill.

Moving coal has some unique challenges, stainless steel liners are available on some blades to resist corrosion of acidic coal. Some blades are equipped with center push-plates for tandem pushing of another tractor.







Machine Model	Part #	Capacity m³	Capacity (yd³)	(A) Width mm	(A) Width (in)	(B) Height mm	(B) Height (in)	Wing Angle deg	Weight kg	Weight (lbs)
D6T	5Q-5935	9.7	(12.6)	4267	(168)	1473	(58)	30	1497	(3300)
D7E	372-7888	14.8	(19.4)	4902	(193)	1767	(70)	30	2420	(5335)
D7E LGP	372-7904	14.8	(19.4)	4902	(193)	1772	(70)	30	2592	(5714)
D7R	140-8186	13.4	(17.5)	4953	(195)	1626	(64)	30	2404	(5300)
D8T	262-7670	21.4	(28.0)	5512	(217)	1981	(78)	30	3524	(7770)
D8R	105-1458	21.4	(28.0)	5537	(218)	1981	(78)	30	3198	(7050)
D8R LGP	161-0169	21.4	(28.0)	5537	(218)	1981	(78)	30	3198	(7050)
D9T/R	141-3036	36.7	(48.0)	5740	(226)	2565	(101)	30	4491	(9900)
D9T/R	216-3386*	36.7	(48.0)	5740	(226)	2565	(101)	30	5080	(11200)
D10T/R/N	147-5008	52.0	(68.0)	6731	(265)	2794	(110)	30	6895	(15200)
D11T/R	190-0047	63.5	(83.0)	6858	(270)	3073	(121)	30	10659	(23500)
D11T/R	209-0147	65.8	(86.0)	7366	(290)	3048	(120)	30	10659	(23500)
D11T/R	185-7085	74.9	(98.0)	8179	(322)	3048	(120)	30	11503	(25360)

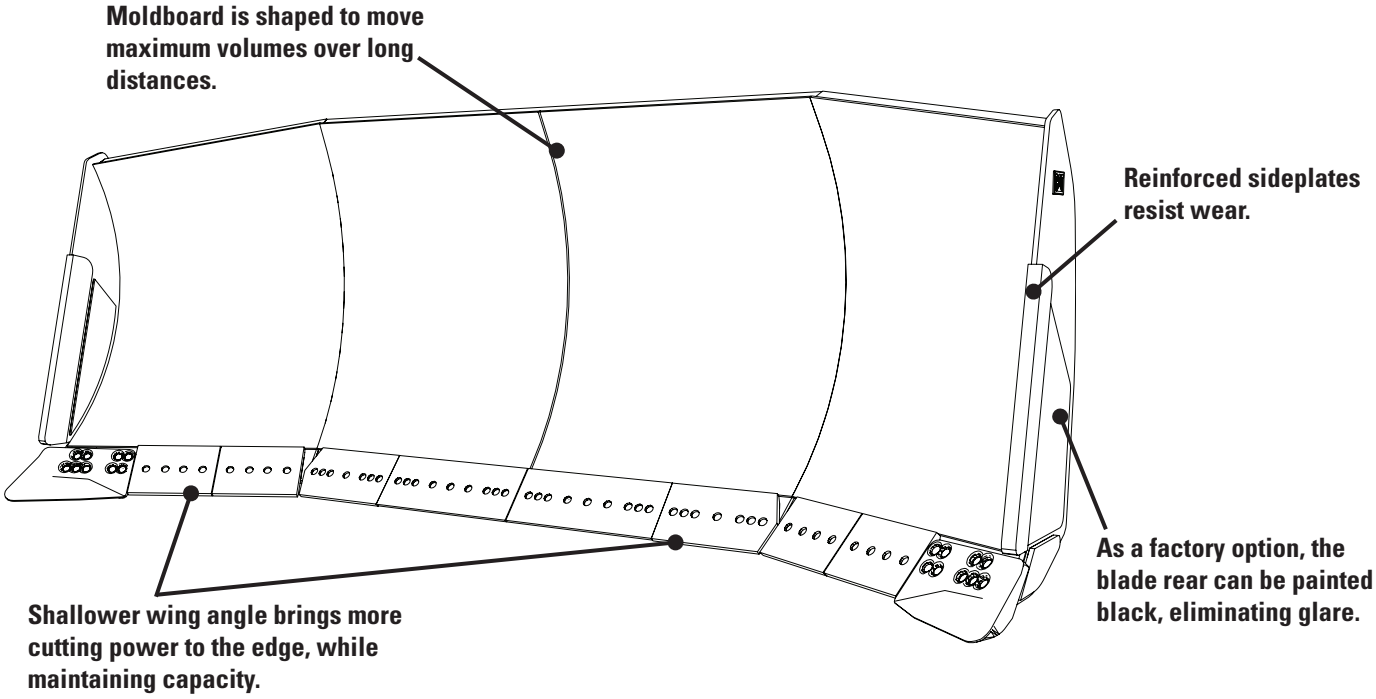
*includes 0.188" stainless steel liner

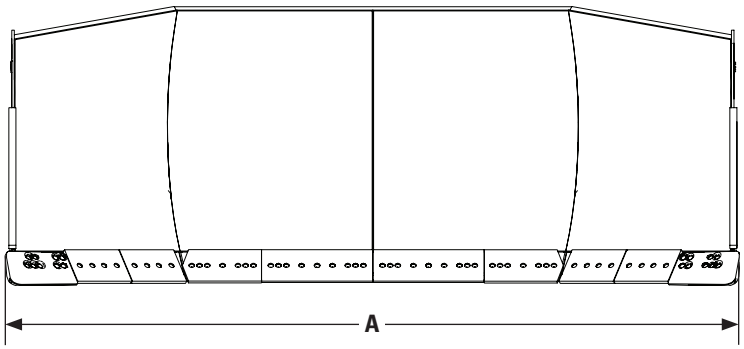
Production U-Blades continued on next page...

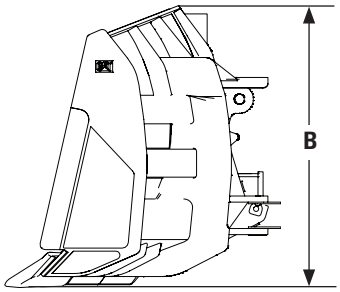
Production U-Blades *(continued)*

Reclamation U-Blades

As mines close down, there is a need to reclaim the land by replacing cover material and re-shaping the ground contours to match previously existing conditions. Much of this material has been in place for years and is fairly dense. Reclamation blades are shorter, narrower and shallower than other U-blades, putting more machine power into the cutting edge in order to rip settled material free from the ground. However, they still have the overall U-blade shape which keeps the load rolling as its moved.







Machine Model	Part #	Capacity m³	Capacity (yd³)	(A) Width mm	(A) Width (in)	(B) Height mm	(B) Height (in)	Wing Angle deg	Weight kg	Weight (lbs)
D8R	230-7074	16.4	(21.5)	4877	(192)	1880	(74)	28	3810	(8400)
D10T/R, D10N	1Q-2875	30.6	(40.0)	5690	(224)	2413	(95)	28	6441	(14200)
D11T/R	192-0000	53.5	(70.0)	7290	(287)	2794	(110)	30	11476	(25300)

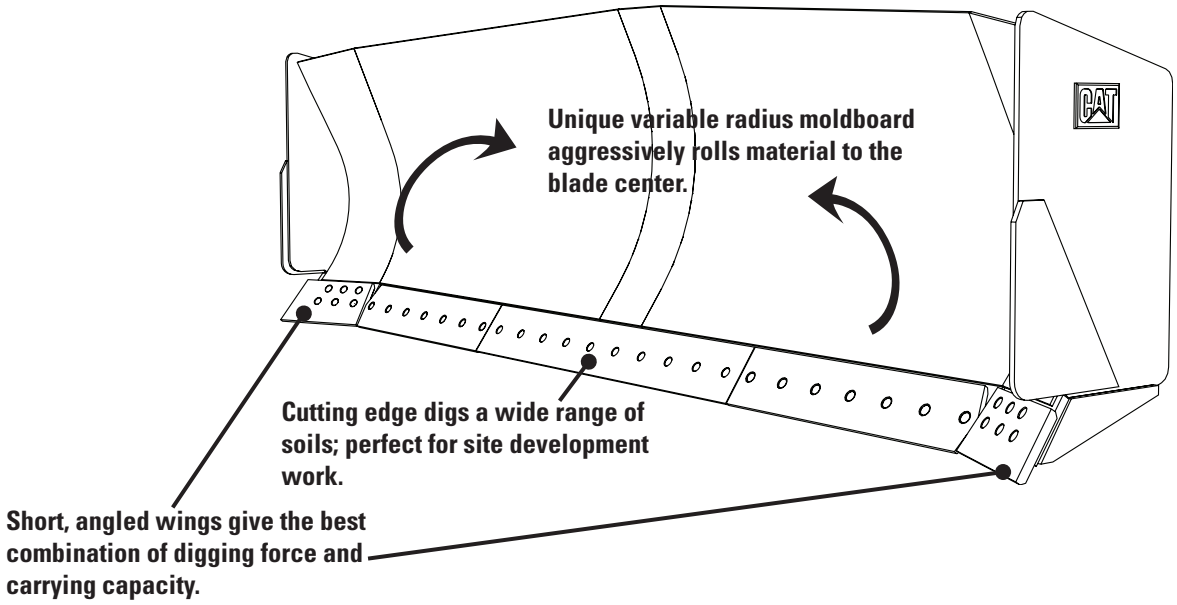
Semi-U Blades

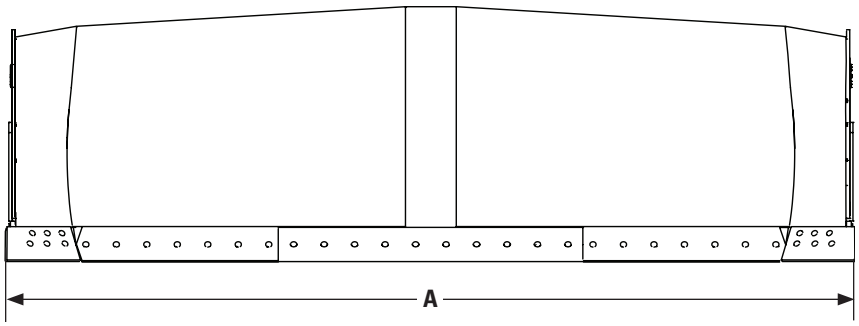
Semi-U blades bring much of the penetration power of a straight blade, in combination with the load retention characteristics of a U-blade. This is achieved with short, angled wings and sideplates, and a medium-height moldboard.

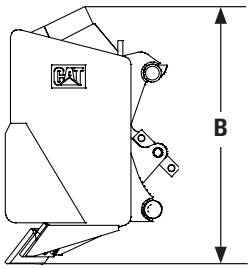
Variable Radius(VR) Semi-U Blades

VR Blades have a unique design which gives even better material retention than a standard semi-u blade, without reducing penetration power. The moldboard has been made with a varying curvature radius, from very tight at either end to open in the center. This funnels material to the center of the blade, keeping the pile centered and rolling as its moved. However, as the wings remain narrow, penetration power is maintained.

These blades are an ideal choice for site development and general construction, where the ground must be first dug up then dozed into the required contour, and the material conditions vary widely. With the VR blade, one machine can efficiently accomplish both tasks, regardless of the ground conditions.







Machine Model	Part #	Capacity m³	Capacity (yd³)	(A) Width mm	(A) Width (in)	(B) Height mm	(B) Height (in)	Wing Angle deg	Weight kg	Weight (lbs)
D6T LGP	304-5881	6.9	(9.0)	4267	(168)	1270	(50)	25	1905	(4200)
D7R LGP	198-6424	7.8	(10.3)	4496	(177)	1397	(55)	30	1928	(4250)

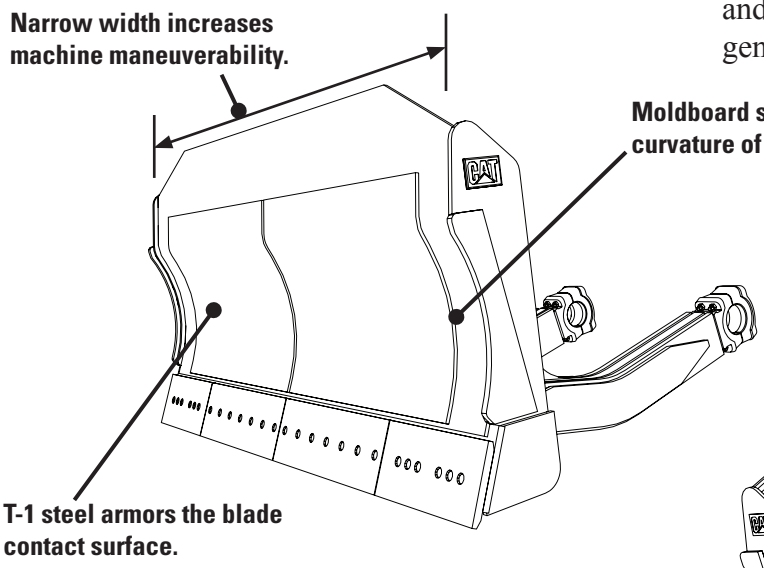
Cushion Dozer Blades

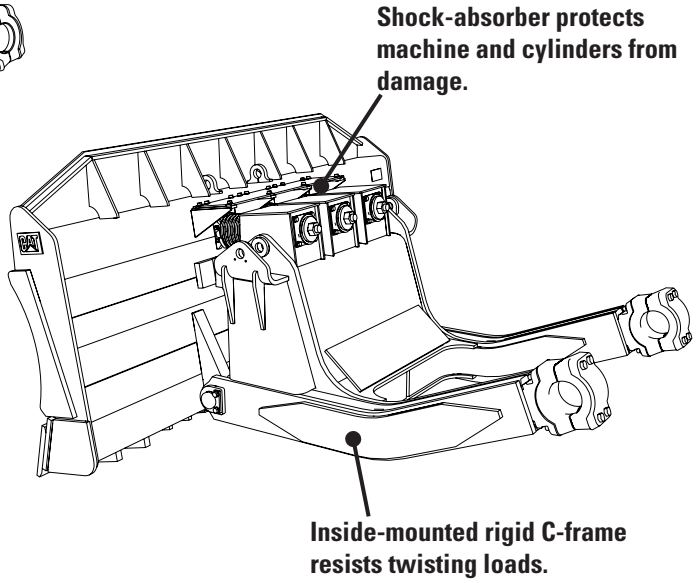
Straight blades put full machine power across the narrowest useful area, for maximum penetration power. This design has been enhanced in the Cushion Dozer Blade in order to put tractor power to work push-loading tractor scrapers or other track-type tractors.

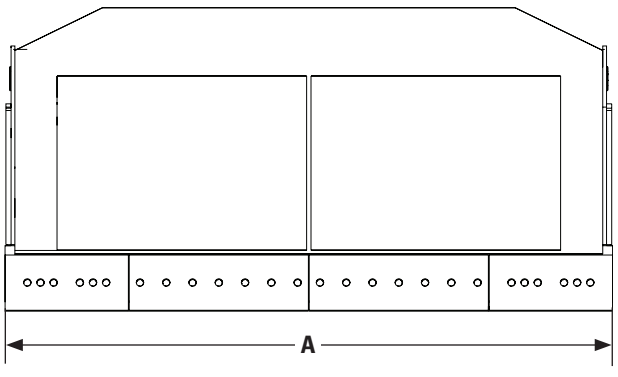
The heavy-duty design includes reinforcement to transfer machine power without damaging the blade or the tractor. Between the tractor and the blade is an inside-mounted rigid C-frame. The inside mounting keeps the frame narrow and rigid, to resist flexing and limit loads on the tractor frame. Blade lift cylinders are pinned to the C-frame, and the blade height is such that the blade cylinders are isolated from shock. Between the C-frame and the blade is a massive shock-absorbing mechanism, further protecting the machine.

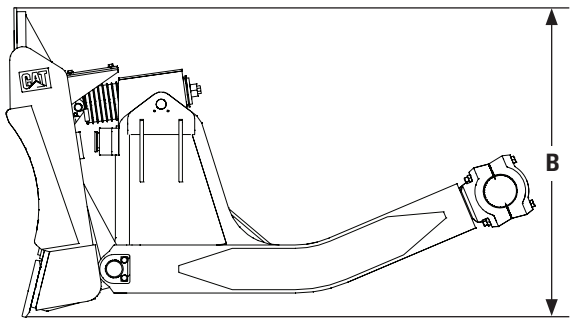
Blade height is set so that pushing is done from a higher position, increasing productivity by keeping the blade out of the dirt. The blade curvature is matched to the curve of standard Cat push blocks for maximum contact area, preventing the block from riding over the top of the blade. The center of the blade is armored with T-1 plate steel for maximum service life. The narrow width of the cushion blade increases machine maneuverability in congested cuts and reduces the possibility of cutting tires associated with SU and U-blades.

The cushion dozer is equipped with a cutting edge, and can be used for cut maintenance and other general dozing jobs.









Machine Model	Part #	(A) Width mm	(A) Width (in)	(B) Height mm	(B) Height (in)	Weight kg	Weight (lbs)
D9T/R	1Q-2884	3048	(120)	1575	(62)	4273	(9420)
D10T/R	221-1677	3505	(138)	1778	(70)	6114	(13480)

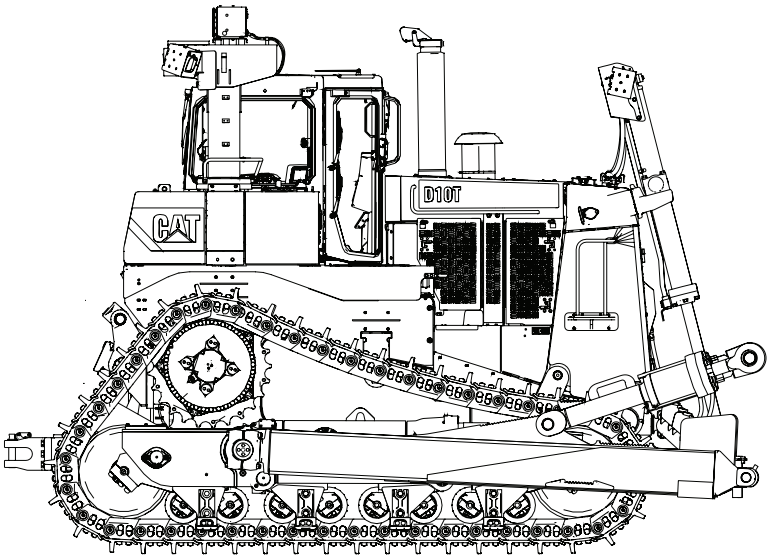
Ordering Information

U-Blades and Variable Radius Blades

In the case of all U-Blades and the VR Semi-U blade, the specialty blade will use the standard push arms and cylinders which come with the machine.

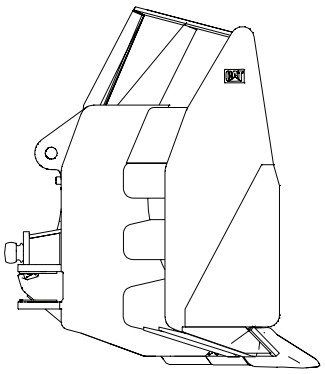
When ordering a new machine to go with a specialty blade, order that machine and less off the blade group. In some cases, machine arrangements are offered which do not include a blade; order those arrangements when available. Arrangements specific to each machine are called out in the blade spec tables.

From the Factory



1. Order machine with Bulldozer arrangement, but less off any blade

Loose



2. Order blade

Machine Model	Type	Part #	Capacity m^3	Capacity (yd^3)	Instructions
D6T	Coal U-Blade	5Q-5935	9.7	(12.6)	Order the machine with 6U STD Bulldozer Components, less any blade.
	Woodchip U-Blade	1Q-2892	15.3	(20.0)	
D6T LGP	Variable Radius Semi-U Blade	304-5881	6.9	(9.0)	Order machine with 6S LGP Bulldozer, less the blade
D7E	Coal U-Blade	372-7888	14.8	(19.4)	Order the machine with 7U STD Bulldozer Components, less any blade.
	Woodchip U- Blade	357-4283	23.8	(30.8)	
D7R	Coal U-Blade	140-8186	13.4	(17.5)	
	Landfill U- Blade	230-7073	18.4	(24.0)	
D7E LGP	Coal U-Blade	372-7094	14.8	(19.4)	Order machine with 7S LGP Bulldozer Components, less the blade
	Woodchip U- Blade	329-8642	23.8	(30.3)	
D7R LGP	Variable Radius Semi-U Blade	198-6424	7.8	(10.3)	

Ordering Information continued on next page...

U-Blades and Variable Radius Blades (cont.)

Machine Model	Type	Part #	Capacity m^3	Capacity (yd^3)	Instructions
D8T	Coal U-Blade	262-7670	21.4	(28.0)	Order the machine with the 8SU/U Bulldozer Installation Package
	Landfill U- Blade	262-7671	23.7	(31.0)	
	Woodchip U-Blade	262-7672	28.3	(37.0)	
D8R	Coal U-Blade	105-1458	21.4	(28.0)	Machine must be equipped with 8SU/U Bulldozer Installation Package
	Landfill U- Blade	230-7076	23.3	(30.5)	
	Reclamation U-Blade	230-7074	16.4	(21.5)	
	Woodchip U-Blade	200-2225	28.3	(37.0)	
D8R LGP	Coal U-Blade	161-0169	21.4	(28.0)	Machine must be equipped with 8LGP Bulldozer Installation Package
D9T/R	Coal U-Blade	141-3036	36.7	(48.0)	Order machine with 9SU/9U Bulldozer Package (both single or dual tilt packages will work with this blade)
	Coal U-Blade w/ 0.188" stainless steel liner	216-3386	36.7	(48.0)	
	Landfill U- Blade	230-7079	38.2	(50.0)	
	Woodchip U-Blade	230-5848	45.9	(60.0)	
D10T/R/N	Coal U-Blade	147-5008	52.0	(68.0)	Order machine with 10U Bulldozer Components, less any blade.
	Reclamation U-Blade	1Q-2875	30.6	(40.0)	
	Woodchip U-Blade	343-8765	72.6	(95.0)	
D11T/R	Coal U-Blade	190-0047	63.5	(83.0)	Order machine with 11SU/U Bulldozer Components, less any blade.
	Coal U-Blade	209-0147	65.8	(86.0)	
	Coal U-Blade	185-7085	74.9	(98.0)	
	Reclamation U-Blade	192-0000	53.5	(70.0)	

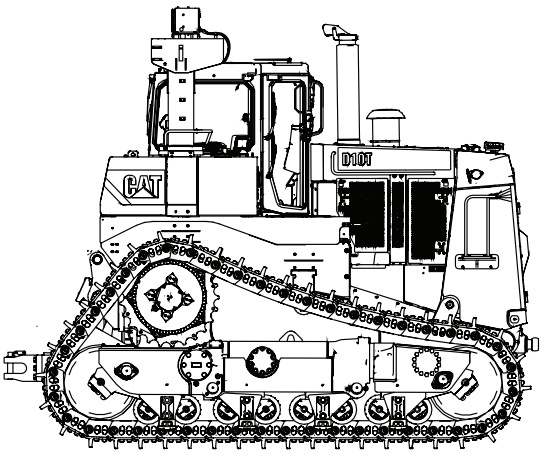
Cushion Dozers

Cushion dozers are a special case, as they are inside-mounted, also the cushion blade group includes push arms. It will be necessary to order the machine without ANY push arm or blade assemblies, and then add back the lift cylinders, cylinder mountings, hydraulic lines and trunnions and trunnion covers.

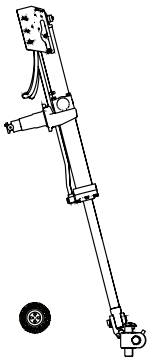
The chart calls out the current part numbers from the Cat Machine Price List; however check the MPL carefully for any updates to these numbers.

From the Factory

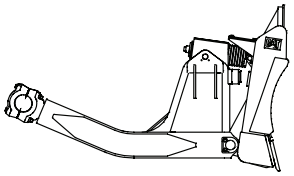
Loose



1. Order machine without any dozer group or blade



2. Also order lift cylinders, clyinder mounts, hydraulics, inside trunnions, and trunnion covers.



3. Order cushion dozer

Machine Model	Part #	Width mm (in)	Height mm (in)	Weight kg (lbs)	
D9T/R	1Q-2884	3048 (120)	1575 (62)	4273 (9420)	Requires: lift cylinders, cylinder mountings, hydraulic lines and trunion covers D9T requires 241-3360 trunnions for differential steer machine D9R requires 164-5056 trunnions for clutch brake machine D9R requires 164-5055 trunnions for differential steer machine Options: 1Q-2886 rear cushion push block and 230-7078 trunnion group
D10T/R	221-1677	3505 (138)	1778 (70)	6114 (13480)	Factory requirements: lift cylinders, cylinder mountings, hydraulic lines and trunnion covers. Order 238-4490 trunnions Options: 230-7081 hardware kit, 230-7083 push block, 230-7082 trunnion group

This bulletin is intended as a guide to information surrounding Specialty Blades for Track-Type Tractors. For assistance in selecting and ordering blades and work tools, please contact CWTS order analysts at 1-800-255-2372.

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