

CARBIDE CIRCULAR SAWS



HYDMECH



**ONE CARBIDE SAW DOES THE WORK OF FIVE CONVENTIONAL
BAND SAWS, WITHOUT SACRIFICING QUALITY.**

**GET THE CLOSE-CUT OFF, LENGTH TOLERANCE, SQUARENESS,
AND FINISH OF CUT THAT YOUR CUSTOMERS DEMAND.**

HIGH SPEED CIRCULAR SAWING MACHINES



CSNC-65

CSNC-80

CSNC-100

CSNC-125

CSNC-150

CSNC-175

CSNC-200

CIRCULAR MACHINES > AUTOMATIC > CARBIDE TIPPED BLADE

0° cuts, suitable for ferrous & non-ferrous metals ■
solid - structural - section round / square / rectangular, hollow tubes ■



STANDARD FEATURES

- Mitsubishi PLC Controller allows for 200 programs to be saved
- Job monitoring with cycle time, job duration, parts count and AMP load setting to protect the saw blade.
- Material library with US steel grades menu with ability to add custom material grades
- Bar feed and roller table with a material gripper feed carriage indexing via ball screw and AC servo drive
- Heavy duty saw head is driven by ball screw and AC servo drive with horizontal and vertical clamping
- Mist exhaust system
- Patent pending blade cooling system
- Bar retracts automatically for contact free return stroke of the saw blade
- Universal Bar Loader for round and square material with safety guard sheets provides inclined storage width of 28.7" (730 mm) for rounds
- PLC controlled automatic oil lubrication of all moving parts
- Output sorting ensures trim cuts and remnant pieces are sorted automatically from good parts
- Variable vise pressure control with dial gauge - two stations
- Remote monitoring of PLC for troubleshooting
- Blade lubrication features triple jet system to

lubricate blade. If the coolant level gets low, the machine will alarm to alert the operator

- Hydraulic rotating wire chip brush rotates in both directions for proper chip removal
- Status light indicating tower
- Chip auger
- Air cooled electric magnetic head break removes all backlash.
- Built in hydraulic tank and power pack
- Tool steel hardened precision blade guides
- Power transformer
- Four blade starter package

OPTIONAL FEATURES

- Universal hydraulic incline adjustment bar loader
- PLC program modification
- Air moisture separator
- Air cooling nozzle
- 2 ton- chain and finger bundle unscrambler
- Chain chip conveyor
- Motorized sliding out-feed conveyor table and guarding in the following lengths - 1000 mm, 2000 mm, and 3000mm
- Maintenance Kit

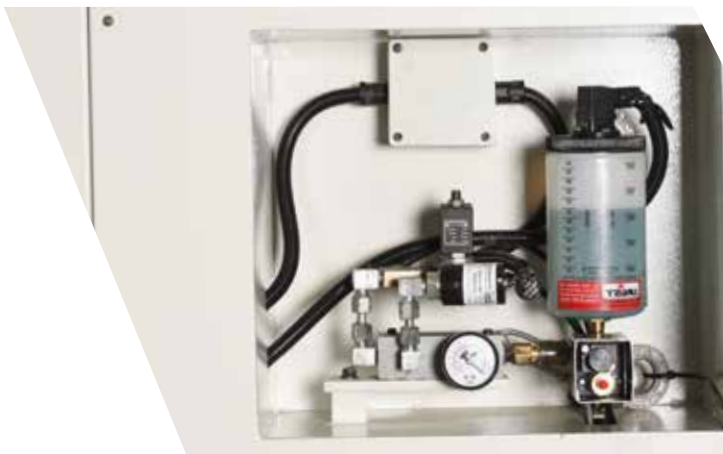
CSNC-65 CSNC-80

DESIGNED FOR SAFETY

The HYDMECH CSNC Series is designed for the safety of the operator. The entire sawing area and bar feed are equipped with safety guards and doors are protected by safety interlocks. The automatic bar loader is guarded along the front side.

OPTIMIZING TOOL LIFE

The fabricated head, motor, and direct drive gear box are mounted on linear bearings on a slanted bed for vibration free cutting to optimize production and tool life. The linear rails are lubricated automatically by the central lubrication system allowing for long service life. An air cooled electro-magnetic powder brake eliminates backlash at the moment the blade makes first contact with the work piece. The saw head feed motion is controlled by Ball Screw & Servo Motor programed through the PLC.



Photos may show optional equipment.



CONTACT FREE BAR ENTRY

After the cut and before the saw blade returns using the blade saver feature, the cut piece moves forward and the raw material moves backward. No scratches or marks are left on the work piece to ensure a smooth cut surface. The 40" multi-indexing gripper feed is mounted on linear bearings and is driven by a servo motor. The new bar entry into the main vise is contact free by hydraulically lifting the bar in shuttle in the horizontal and vertical direction insuring a free entry of distorted material or with burrs (CSNC-65 & CSNC-80)

MITSUBISHI PLC

Sawing conditions can be optimized with output maximized. The controller reduces the set up time and eliminates the need for a skilled operator with sawing experience.

Increase production rates, lengthen tool life and achieve high quality of cuts via the NC control, rather than a machine operator. Machine set up consists of setting blade RPM, and chip load per tooth. This calculation will relate to a cut time that is maintained by the machine via servo motors and CNC controls. The saw head and bar feed gripper are ball screw driven via servo motors.



CSNC-100 CSNC-125

CSNC-150 CSNC-175 CSNC-200



STANDARD FEATURES

- Mitsubishi PLC Controller allows for 200 programs to be saved.
- Job monitoring with cycle time, job duration, parts count and AMP load setting to protect the saw blade
- Material library with US steel grades menu with ability to add custom material grades
- Bar feed features a roller bed with a material gripper feed carriage indexing via ball screw and AC servo drive
- Heavy duty saw head is driven by ball screw and AC servo drive with a patent pending counterbalance feature
- Mist exhaust system
- Patent pending blade cooling system
- Bar retracts automatically for contact free return stroke of the saw blade
- Universal Bar Loader for round and square material with hydraulic incline pitch adjustment and safety guard sheets provides inclined storage width of 55" (1400 mm) for rounds
- PLC controller, automatic oil lubrication of all moving parts
- Output sorting ensures trim cuts and remnant pieces are sorted automatically from good parts
- Variable vise pressure control with dial gauge - two

stations

- Remote monitoring of PLC
- Blade lubrication features triple jet system to lubricate blade tip and sides
- Hydraulic rotating wire chip brush rotates in both directions for proper chip removal
- Status indicating tower
- Chip auger
- Air cooled electric magnetic head break removes all backlash.
- Built in hydraulic tank and power pack
- Tool steel hardened saw guide plates
- Power transformer
- Air moisture separator
- Cooling nozzle
- Four blade starter package

OPTIONAL FEATURES

- Strap style bundle loader - max weight 4 tons
- PLC program change
- Chain chip conveyor
- Maintenance kit
- Long cut bar out feed motorized conveyor table with guarding in the following lengths - 1000 mm, 2000 mm, and 3000 mm

QUALITY AND COST PER CUT ADVANTAGES

VERSATILE SAWING MACHINES

- The CSNC machines can use carbide tipped blades, thin kerf cermet blades and HSS saw blades for superior versatility
- Quick and easy set up of cutting parameters, the CSNC machines deliver high cutting performance on a wide variety of material types including tubing, extruded shapes and solid bars. These machines cut 4 to 5 times faster than a conventional band saw with a clean surface finish that seldom requires a secondary operation.
- The machines have a five piece carbide blade guide set up. Two pairs above and below the point of the cut, and one single guide located at the rear of the saw blade to maintain blade flatness. The blade guides are factory pre-set and do not need any operator adjustment.

TOOL MANAGEMENT PROGRAM

The HYDMECH CSNC Series PLC has a tool management program. Tool data management records all cutting data of the blade being used. It displays running time in hours, cutting life in square cm or square inches, amperage draw, and cutting performance in cm^2/mm .

The PLC displays cut time, cycle time and expected end of the current cutting job. The split screen display shows both metric and imperial.

AUTOMATIC LUBRICATION

All moving parts on the machine are automatically lubricated at pre-set time intervals. This provides a longer life to all moving and wear parts of the machine. It also eliminates the need for any plant maintenance.

If the oil reservoir becomes empty or the oil pressure is low, the machine will sound an alarm.

PRODUCTIVITY EXAMPLES OF CSNC CIRCULAR SAWING MACHINES

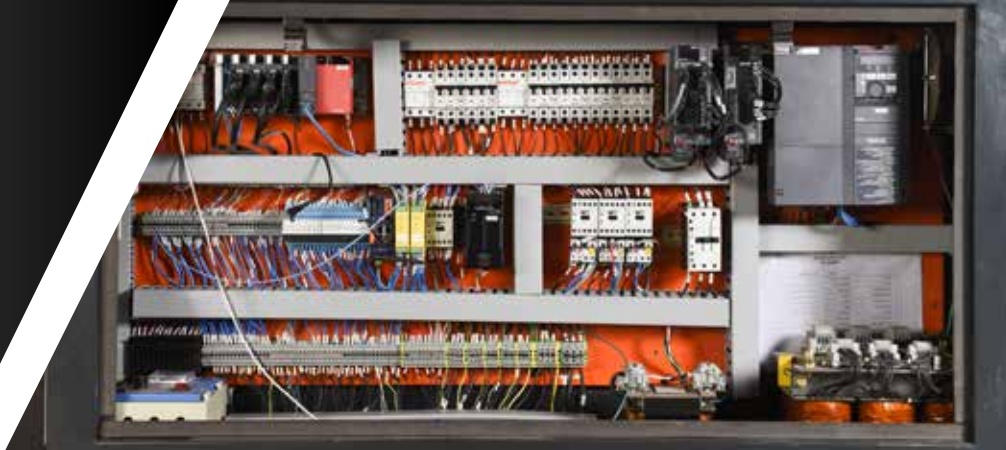
MODEL	DIA (MM)	CUTTING TIME (SEC)	NUMBER OF CUT PIECES/HOUR*
CSNC-65	40	3.7	415
CSNC-80	80	8.6	230
CSNC-100	100	13.4	180
CSNC-125	125	21.06	128
CSNC-150	150	30.27	100
CSNC-175	175	41.21	75
CSNC-200	200	53.8	60

*Conditions apply. Material considered C-35 normalized, cut length consider - 100mm

ACCESSIBLE PARTS

The HYDMECH CSNC series Carbide circular saws are manufactured with global brand name component's that can be purchased at local supply houses

- Electronic and electrical components-, servo motors, PLC, VFD and Interface HMI are all Mitsubishi
- Contactors are all Siemens, Safety relays are all Omron/Finder
- Mechanical- Ball Screws and linear bearings are all HIWIN
- Hydraulics- Valves and power pack are all Vickers



Photos may show optional equipment.

LOADING TABLE SAVES TIME

The inclined loading table is designed to work in fully automatic cycle.

After a bar length has reached the remnant end, the loading table will introduce a new bar on the in feed conveyor. The gripper vise will locate bar and feed it to the trim cut position. During this cycle the remnant end is discharged into a scrap bin, and the trim cut is made and also discarded into a scrap bin. The machine will then feed to proper cut length and continue production. The machine will continue to cycle as long as bars remain on the table or until a pre-determined number of cuts are made.

The bar feed and stationary fixed vises hold the material on three points by the use of hydraulically operated 45 degree vise jaws. The bar feed is operated by a ball screw with servo motor, on linear Hiwin bearings and rails.



SPECIFICATIONS

		CSNC-65	CSNC-80	CSNC-100	CSNC-125
Cutting Capacity Round	90°	0.4" - 2.55" / 10-65 mm	0.4" - 3.15" / 10-80 mm	1" - 4" / 25 - 100 mm	1" - 5" / 25 - 125 mm
Cutting Capacity Square	90°	0.4" - 1.96" / 10-50 mm	0.40" - 2.36" / 10-60 mm	1" - 3.15" / 25 - 80 mm	1" - 3.54" / 25 - 90 mm
Blade Drive		10 HP / 7.5 kW	15 HP / 11 kW	20 HP / 14.7 kW	25 HP / 18.3 kW
Blade Speed		164-656 SFM / 50-200 MPM	164-656 SFM / 50-200 MPM	164-656 SFM / 50-200 MPM	164-656 SFM / 50-200 MPM
Blade Size		Carbide/ Cermet tipped: 250mm x 1.7 mm kerf	Carbide/ Cermet tipped: 285mm x 1.7 mm kerf	Carbide/ Cermet tipped: 360 mm x 2.6 mm kerf	Carbide/ Cermet tipped: 460mm x 2.7 mm kerf
Bar Stock Length		10'-20' / 3-6 m	10'-20' / 3-6 m	10'-20' / 3-6 m	10'-20' / 3-6 m
Trim Cut		Zero or programmable from 0.4" (10 mm) or longer	Zero or programmable from 0.4" (10 mm) or longer	Zero or programmable from 0.4" (10 mm) or longer	Zero or programmable from 0.4" (10 mm) or longer
Cut Off Length		Min 0.4"(10 mm) up to full bar length	Min 0.4"(10 mm) up to full bar length	Min 0.4"(10 mm) up to full bar length	Min 0.4"(10 mm) up to full bar length
Single Stroke		20" / 508 mm	40" / 1016 mm	40" / 1016 mm	40" / 1016 mm
Remnant Length		1.57" / 40 mm + cut length	3.14" / 80 mm + cut length	3.54" / 90 mm + cut length	3.54" / 90 mm + cut length
Hydraulic Motor		3 HP / 2.2 kW	3 HP / 2.2 kW	3 HP / 2.2 kW	3 HP / 2.2 kW - 5 HP with non-round loader
Bar Loading Magazine		inclined storage width of 28.7" (730 mm) for rounds	inclined storage width of 28.7" (730 mm) for rounds	inclined storage width of 55" (1400 mm) for rounds	inclined storage width of 55" (1400 mm) for rounds
Bar Loader Capacity		4400 lbs / 2000 kg	6613 lbs / 3000 kg	11,000 lbs / 5000 kg	13,220 lbs / 6,000 kg
Weight		5,500 lbs / 2500 kg	6,613 lbs / 3000 kg	8,818 lbs / 4000 kg	9,920 lbs / 4500 kg
Dimensions	Width	62" / 1565 mm	98" / 2500 mm	988" / 2500 mm	113" / 2870 mm
	Length	97" / 2460 mm	98" / 2500 mm	118" / 3000 mm	287" / 7289 mm
	Height	71" / 1800 mm	71" / 1800 mm	71" / 1800 mm	70" / 1778 mm
		CSNC-150	CSNC-175	CSNC-200	
Cutting Capacity Round	90°	1.18" - 6" / 30 - 150 mm	1.96" - 7" / 50 - 175 mm	1.96" - 7.87" / 50 - 200 mm	
Cutting Capacity Square	90°	1.18" - 5.11" / 30 - 130 mm	1.96" - 5.11" / 50 - 130 mm	1.96" - 6.49" / 50 - 165 mm	
Blade Drive		40 HP / 29.4 kW	40 HP / 29.4 kW	50 HP / 36.6 kW	
Blade Speed		164-656 SFM / 50-200 MPM	164-656 SFM / 50-200 MPM	164-656 SFM / 50-200 MPM	
Blade Size		Carbide/ Cermet tipped: 460 mm x 2.7 mm kerf	Carbide/ Cermet tipped: 560 mm x 3 mm kerf	Carbide/ Cermet tipped: 650 mm x 3.2 mm kerf	
Bar Stock Length		10'-20' / 3-6 m	10'-20' / 3-6 m	10'-40' / 3 m - 12m*	*6 and 12 m optional
Trim Cut		Zero or programmable from 0.4" (10 mm) or longer	Zero or programmable from 0.4" (10 mm) or longer	Zero or programmable from 0.4" (20 mm) or longer	
Cut Off Length		Min 0.4"(10 mm) up to full bar length	Min 0.4"(10 mm) up to full bar length	Min 0.78"(20 mm) up to 6000 mm	
Single Stroke		40" / 1016 mm	40" / 1016 mm	40" / 1000 mm	
Remnant Length		4.72" / 120 mm + cut length	4.72" / 120 mm + cut length	4.72" / 120 mm + cut length	
Hydraulic Motor		3 HP / 2.2 kW - 5 HP with non-round loader	3 HP / 2.2 kW - 5 HP with non-round loader	5 HP / 3.6 kW	
Bar Loading Magazine		inclined storage width of 55" (1400 mm) for rounds	inclined storage width of 55" (1400 mm) for rounds	inclined storage width of 55" (1400 mm) for rounds	
Bar Loader Capacity		16,535 lbs / 7500 kg	19,800 lbs / 9000 kg	10,000kg / 22,050 lbs	
Weight		11,000 lbs / 5000 kg	12,100 lbs / 5,500 kg	14,770 lbs / 6,700 kg	
Dimensions	Width	97" / 2475 mm	97" / 2475 mm	108" / 2200 mm	
	Length	100" / 2560 mm	104" / 2650 mm	108" / 2450 mm	
	Height	71" / 1800 mm	71" / 1800 mm	80" / 2200 mm	

In line with HYDMECH's policy of on-going product improvement, we reserve the right to modify features and specifications.
Note: all machines can be containerized.

STANDARD BLADE CHART - CSNC MODELS

MODEL	DIA (MM)	KERF THICKNESS	BODY THICKNESS	BORE	MIN. DIAMETER TO CUT	MAX. DIAMETER TO CUT	HOLES FOR DOWEL PINS
CSNC-65	250 mm	2.0 mm	1.70 mm	32 mm	10 mm	65 mm	4/9/50
CSNC-80	285 mm	2.0 mm	1.70 mm	32 mm	10 mm	55 mm	4/9/50
	315 mm	2.0 mm	1.70 mm	32 mm	10 mm	80 mm	4/12/90
CSNC-100	360 mm	2.6 mm	2.25 mm	40 mm	25 mm	100 mm	4/12/90
	380 mm*	2.6 mm	2.25 mm	40 mm	25 mm	100 mm	4/12/90
CSNC-125	420 mm*	2.7 mm	2.25 mm	50 mm	25 mm	120 mm	4/15/80
	460 mm	2.7 mm	2.25 mm	50 mm	25 mm	125 mm	4/15/80
CSNC-150	460 mm	2.7 mm	2.25 mm	50 mm	30 mm	150 mm	4/15/80
	520 mm*	2.7 mm	2.25 mm	50 mm	30 mm	150 mm	4/15/80
CSNC-175	560 mm	3.0 mm	2.50 mm	50 mm	50 mm	175 mm	4/15/80
CSNC 200	650 mm	3.5 mm	3.0 mm	80 mm	50 mm	205 mm	4/15/80



RELIABLE SAWS. RELIABLE PEOPLE.

877-276-SAWS www.HYDMECH.com

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Dealer Information: