

# CUT-OFF WHEELS

*Norton Cut-off wheels are pre-engineered to produce the most versatile wheel performance. They are engineered to give you optimum to premium performance in all cut-off applications ranging from production to maintenance.*



## TYPICAL APPLICATIONS

- ▶ Notching
- ▶ Sheet Metal Cutting
- ▶ Pipe Cutting (CI/SS/MS)
- ▶ Foundry Gate/Riser Removal
- ▶ Metal plate dimensioning
- ▶ Bar cutting
- ▶ Sample cutting
- ▶ Rail cutting

## COMMON MACHINES

- ▶ Fixed Stroke type machines are quite common
- ▶ Chopsaw
- ▶ Portable grinders
- ▶ Portable rail cutting machines

## END USER INDUSTRIES

- ▶ Investment castings
- ▶ Steel - Ingot & Bar Manufacturing
- ▶ Construction
- ▶ Foundries
- ▶ Pipe Manufacturing Industry
- ▶ Fabrication

## PRODUCT OFFERINGS

- ▶ **Zirkon** Reinforced Cut-off Wheels are available for the user interested in premium performance on applications like SS Fabrication
- ▶ **SpitFire** Reinforced Cut-off Wheels - These are products engineered for versatile suitability on most cutting applications.
- ▶ **Gemini** Reinforced Cut-off Wheels offer a unique proposition of low thickness to enhance cutting efficiencies and found to be suitable on Riser cutting off applications
- ▶ **SiC** Reinforced Cut-off Wheels for non ferrous applications
- ▶ **Bear** Chopsaw Wheels are available for the new age light horsepower chopsaw machines
- ▶ **BDX** range of Extra Thin Wheels in less than 2mm thickness for precision easy cutting

## AVAILABILITY RANGE

Diameter	Thickness	Bore
<100	2.5 mm	10
100	3 to 5 mm	10, 12.7, 16
124-230	3 to 7 mm	22.23
300-350	2.5, 3.2 mm	25.4 mm
400 mm	3 to 4 mm	25.4, 31.75, 40 mm

Our stock availability range caters to more than 85% of common applications. In case of customized requirements, please contact our engineers at our closest office.

# SpecCheck



- ▶ Based on the job and cutting required, the machine availability, wheel needs to be chosen.
- ▶ It is recommended that a cut-off machine should have 1 HP for every 25 mm of wheel diameter. Make cuts as quickly as possible.
- ▶ Run wheel at the highest possible speed (marked on the wheel).

# CUT-OFF WHEELS



## STOCK AVAILABILITY TABLE

### Cut-off Wheels (Reinforced)

			BEST		BETTER		GOOD	
Size Dia x Thk x Bore	Std. Pkg.	Speed RPM	Label	Stock No.	Label	Stock No.	Label	Stock No.
63 x 2.5 x 10	80	24250			Spitfire	R38		
76 x 2.5 x 10	225				Norspeed	LT0503		
100 x 4 x 12.7	120	15280			Spitfire	R40		
100 x 3 x 16	180	15280					Gemini	R41
125 x 3 x 22.23	120	12000			Spitfire	RDE04		
180 x 3 x 22.23	65	8500	Zirkon	ZR82	Spitfire	R82	Gemini	R82M
180 x 4 x 22.23	50	8500	Zirkon	ZR44	Spitfire	R44	Gemini	R44
230 x 3.2 x 22.23	25	6700			Spitfire	R45		
300 x 3.2 x 25.4	25	5090			Spitfire	R47	Gemini	R47M
300 x 3.2 x 25.4	25	5090					Bear	LT0153
350 x 3.2 x 25.4	25	4360			Spitfire	R48	Gemini	R48M
350 x 3.2 x 25.4	25	4360					Bear	LT0154
350 x 3.2 x 25.4	25	4360			Spitfire	R49		
400 x 3.2 x 31.75	20	3820			Spitfire	R53		
400 x 4 x 25.4	15	3820			Spitfire	R56		

## TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	SUGGESTED CORRECTION
<b>Poor cutting rate</b>	<ul style="list-style-type: none"> <li>– Insufficient power used</li> <li>– Wheel thickness may be more</li> <li>– Contact area too large</li> </ul>	<ul style="list-style-type: none"> <li>– Increase feed or pressure to full power</li> <li>– Use thinner wheel</li> <li>– Reduce contact area</li> </ul>
<b>Poor quality of cut</b>	<ul style="list-style-type: none"> <li>– Wheel side out of truth</li> <li>– Non-square cuts</li> <li>– Workpiece burn</li> <li>– Wheel too coarse</li> </ul>	<ul style="list-style-type: none"> <li>– Check spindle runout</li> <li>– See “non-square cuts”</li> <li>– See “non-square cuts”</li> <li>– Use finer wheel</li> </ul>
<b>Non-square cuts</b>	<ul style="list-style-type: none"> <li>– Work not clamped well</li> <li>– Misaligned spindle bearings</li> </ul>	<ul style="list-style-type: none"> <li>– Check clamp</li> <li>– Check bearing truth and alignment</li> </ul>
<b>Workpiece burn</b>	<ul style="list-style-type: none"> <li>– Insufficient feed rate</li> <li>– Wheel too hard</li> <li>– Wheel too coarse</li> <li>– Wheel running out</li> <li>– Wheel speed too slow</li> </ul>	<ul style="list-style-type: none"> <li>– Work machine to maximum power</li> <li>– Use softer wheel</li> <li>– Use finer wheel</li> <li>– Check spindle</li> <li>– Ensure no wheel slippage</li> </ul>

## SpecCheck

### Speciality Products for Cut-off Applications

We have the industry's best products for few applications

Application	Specification		
	BEST	BETTER	GOOD
Investment casting	IC Wheel	AIC Wheel	Spitfire
SS Pipe Cutting	IC Wheel	AIC Wheel	Spitfire
Foundry	IC Wheel	AIC Wheel	Spitfire

“ In my 15 years in this line, I have tried out different cut-off wheels, but none has even come close to Spitfire in terms of value and performance.”

– Shop Supervisor, Fabricator

THIN WHEELS

# CUT-OFF WHEELS

## Chopsaw Wheels

*Suitable for low power chopsaw machines. Reinforced wheels with a unique design engineered for free cutting on all kinds of pipes, angles, channels.*



THIN WHEELS

### new STOCK AVAILABILITY TABLE Chopsaw Wheels

Size Dia x Thk x Bore	Std. Pkg.	Speed RPM	Label	Stock No.
300 x 3.2 x 25.4	25	5090	Bear	LT0153
350 x 3.2 x 25.4	25	4350	Bear	LT0154

## Extra Thin Wheels

*Reinforced cut off wheels in Thickness of 1mm to 2mm. These wheels are designed to work at 80 m/s and offer following benefits.*



### new STOCK AVAILABILITY TABLE Extra Thin Wheels

Size Dia x Thk x Bore	Std. Pkg.	Speed RPM	Label	Stock No.
76 x 2.5 x 10	225	20150	Norspeed	LT0503
100 x 1.6 x 16	100	15300	BDX	LT0506
125 x 1.6 x 22	100	12250	BDX	LT0511
125 x 1 x 22	100	12250	BDX	LT0512
180 x 1.6 x 22	40	8500	BDX	LT0513
230 x 1.9 x 22	40	6650	BDX	LT0514

1. High cut rates in view of low thickness
2. Job material savings because of low thickness
3. Lower power consumption
4. Enhanced machine life
5. Minimum burr generation while cutting
6. Double reinforced to provide safety.

Works very well on SS sheet cutting, tube cutting, PCB cutting/dairy industry/investment castings.