

# HARDMETALS



## DRILL BITS & ACCESSORIES



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## COMPANY OVERVIEW

Hard Metals Australia PTY Limited (HMA) is a precision engineering company specialising in the design and manufacture of Tungsten Carbide and Polycrystalline diamond tools for the drilling, construction, mining and agricultural industries. Formed in 1982 as Australian distributor for a world leading Tungsten Carbide manufacturer, HMA was instrumental in the 80's and early 90's. Since our product, range has significantly increased.

HMA now manufactures tungsten carbide tools for,

- Mining and Exploration
- Foundation and Piling drilling tools
- Trenching and Road profiling tools
- Horizontal Directional Drilling (HDD)
- Agricultural tillage tools
- Forestry and Recycling industry tools
- Special or Custom designed wear parts

- Cable or rock bolt installation for roof support and strata stabilisation
- Geotechnical bores
- Coal Seam Gas and drainage
- Horizontal & Directional Drilling
- Exploration

## DRILL BIT APPLICATIONS



Geotechnical



Cable/Rock



Percussive



Mining Bits



Geotechnical



PDC Bits





## STOCK CODE EXPLANATION

STOCK CODE	DESCRIPTION
1	Standard Stock Item / Min Stock is required to be kept on hand
3	Irregular stock item / Minimum order quantity may be required
6	New Stock Item / Stock code undefined
8	Non stock Item / Minimum quantity required

# Polycrystalline Diamond Composite (PDC) Drill Bits

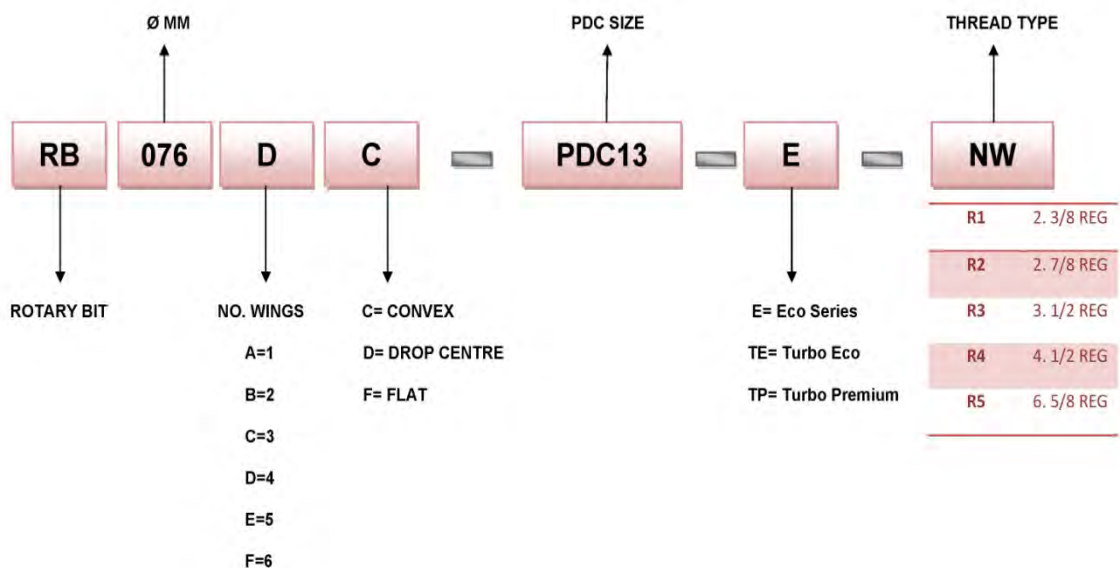


PDC integrated drill bits have been a staple in the drilling industry for many years. Originally very expensive, the manufacturing techniques have been refined and PDC bits are now far more cost effective, often showing significant economic advantages over tricone, regular drag and percussive bits.

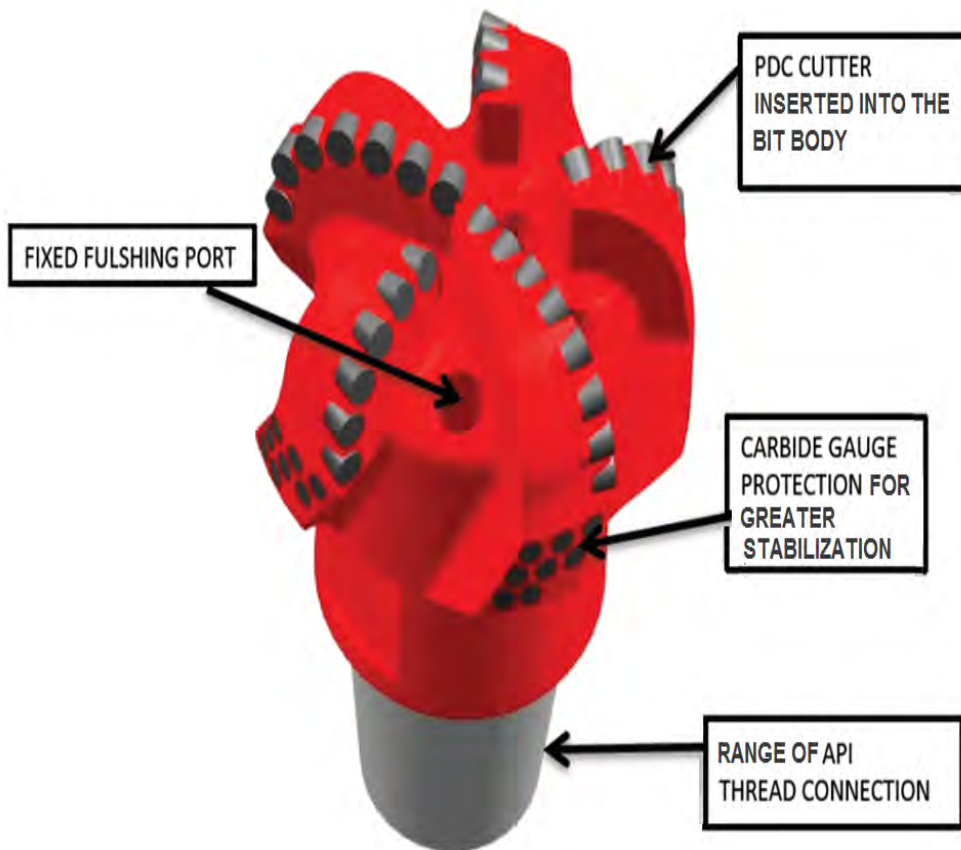
Available in 3, 4, 5 & 6 blade configuration in sizes 27mm (1 1/16") – 470mm (18 1/2"). These bits feature the latest geometries for efficient flushing and stable drilling in a broad range of strata.

## HARDMETALS

### PDC DRILL BIT NOMENCLATURE



## ECO SERIES



*Note: 3, 4, 5 and 6 Blade configuration as standard*

*Convex, flat face and drop centre styles available.*

*A range of additional sizes is available on request*

### Eco Series

**Profile delivers consistent performance in a wide range of vertical and horizontal applications. With fixed flushing ports and carbide gauge protection for extended service life.**

# ECO SERIES



## 3 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB076CC-PDC13-E-NW	3"	3	Convex	13	Eco	NW
RB089CC-PDC13-E-R1	3 1/2"	3	Convex	13	Eco	2 3/8"
RB096CC-PDC13-E-R1	3 3/4"	3	Convex	13	Eco	2 3/8"
RB099CC-PDC13-E-R1	3 7/8"	3	Convex	13	Eco	2 3/8"
RB108CC-PDC13-E-R1	4 1/4"	3	Convex	13	Eco	2 3/8"
RB114CC-PDC13-E-R2	4 1/2"	3	Convex	13	Eco	2 7/8"
RB117CC-PDC13-E-R2	4 5/8"	3	Convex	13	Eco	2 7/8"
RB121CC-PDC13-E-R2	4 3/4"	3	Convex	13	Eco	2 7/8"
RB130CC-PDC13-E-R2	5 1/8"	3	Convex	13	Eco	2 7/8"
RB140CC-PDC13-E-R2	5 1/2"	3	Convex	13	Eco	2 7/8"
RB143CC-PDC13-E-R2	5 5/8"	3	Convex	13	Eco	3 1/2"



## 4 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB089DC-PDC13-E-R1	3 1/2"	4	Convex	13	Eco	2 3/8"
RB096DC-PDC13-E-R1	3 3/4"	4	Convex	13	Eco	2 3/8"
RB099DC-PDC13-E-R1	3 7/8"	4	Convex	13	Eco	2 3/8"
RB108DC-PDC13-E-R1	4 1/4"	4	Convex	13	Eco	2 3/8"
RB114DC-PDC13-E-R2	4 1/2"	4	Convex	13	Eco	2 7/8"
RB117DC-PDC13-E-R2	4 5/8"	4	Convex	13	Eco	2 7/8"
RB121DC-PDC13-E-R2	4 3/4"	4	Convex	13	Eco	2 7/8"
RB130DC-PDC13-E-R2	5 1/8"	4	Convex	13	Eco	2 7/8"
RB140DC-PDC13-E-R2	5 1/2"	4	Convex	13	Eco	2 7/8"
RB143DC-PDC13-E-R3	5 5/8"	4	Convex	13	Eco	3 1/2"
RB149DC-PDC13-E-R3	5 7/8"	4	Convex	13	Eco	3 1/2"
RB152DC-PDC13-E-R3	6"	4	Convex	13	Eco	3 1/2"
RB165DC-PDC13-E-R3	6 1/2"	4	Convex	13	Eco	3 1/2"



## 5 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB114EC-PDC13-E-R2	4 1/2"	5	Convex	13	Eco	2 7/8"
RB117EC-PDC13-E-R2	4 5/8"	5	Convex	13	Eco	2 7/8"
RB121EC-PDC13-E-R2	4 3/4"	5	Convex	13	Eco	2 7/8"
RB130EC-PDC13-E-R2	5 1/8"	5	Convex	13	Eco	2 7/8"
RB140EC-PDC13-E-R2	5 1/2"	5	Convex	13	Eco	2 7/8"
RB143EC-PDC13-E-R3	5 5/8"	5	Convex	13	Eco	3 1/2"
RB149EC-PDC13-E-R3	5 7/8"	5	Convex	13	Eco	3 1/2"
RB152EC-PDC13-E-R3	6"	5	Convex	13	Eco	3 1/2"
RB165EC-PDC13-E-R3	6 1/2"	5	Convex	13	Eco	3 1/2"
RB171EC-PDC13-E-R3	6 3/4"	5	Convex	13	Eco	3 1/2"
RB184EC-PDC13-E-R3	7 1/4"	5	Convex	13	Eco	3 1/2"
RB191EC-PDC16-E-R4	7 1/2"	5	Convex	16	Eco	4 1/2"
RB200EC-PDC16-E-R4	7 7/8"	5	Convex	16	Eco	4 1/2"



## 6 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB130FC-PDC13-E-R2	5 1/8"	6	Convex	13	Eco	2 7/8"
RB140FC-PDC13-E-R2	5 1/2"	6	Convex	13	Eco	2 7/8"
RB143FC-PDC13-E-R3	5 5/8"	6	Convex	13	Eco	3 1/2"
RB149FC-PDC13-E-R3	5 7/8"	6	Convex	13	Eco	3 1/2"
RB152FC-PDC13-E-R3	6"	6	Convex	13	Eco	3 1/2"
RB165FC-PDC13-E-R3	6 1/2"	6	Convex	13	Eco	3 1/2"
RB171FC-PDC13-E-R3	6 3/4"	6	Convex	13	Eco	3 1/2"
RB184FC-PDC13-E-R3	7 1/4"	6	Convex	13	Eco	3 1/2"
RB191FC-PDC16-E-R4	7 1/2"	6	Convex	16	Eco	4 1/2"
RB200FC-PDC16-E-R4	7 7/8"	6	Convex	16	Eco	4 1/2"



## TURBO ECO

INTERCHANGABLE  
NOZZLES FOR  
CONTROLLED FLOW  
RATE

PDC CUTTER  
INSERTED INTO THE  
BIT BODY



CARBIDE GAUGE  
PROTECTION FOR  
GREATER  
STABILIZATION

RANGE OF API  
THREAD CONNECTION

*Note: 4, 5 and 6 Blade configuration as standard*

*Convex, flat face and drop centre styles available.*

*A range of additional sizes is available on request*

### Turbo Eco

**Profile delivers consistent ROP and excellent steer ability for the transition between vertical and horizontal drilling. Interchangeable flushing ports and carbide gauge protection for extended service life.**

# TURBO ECO SERIES

## 4 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB089DC-PDC13-TE-R1	3 1/2"	4	Convex	13	Turbo Eco	2 3/8"
RB095DC-PDC13-TE-R1	3 3/4"	4	Convex	13	Turbo Eco	2 3/8"
RB099DC-PDC13-TE-R1	3 7/8"	4	Convex	13	Turbo Eco	2 3/8"
RB108DC-PDC13-TE-R1	4 1/4"	4	Convex	13	Turbo Eco	2 3/8"
RB114DC-PDC13-TE-R2	4 1/2"	4	Convex	13	Turbo Eco	2 7/8"
RB117DC-PDC13-TE-R2	4 5/8"	4	Convex	13	Turbo Eco	2 7/8"
RB121DC-PDC13-TE-R2	4 3/4"	4	Convex	13	Turbo Eco	2 7/8"
RB130DC-PDC13-TE-R2	5 1/8"	4	Convex	13	Turbo Eco	2 7/8"
RB140DC-PDC13-TE-R2	5 1/2"	4	Convex	13	Turbo Eco	2 7/8"
RB143DC-PDC13-TE-R3	5 5/8"	4	Convex	13	Turbo Eco	3 1/2"
RB149DC-PDC13-TE-R3	5 7/8"	4	Convex	13	Turbo Eco	3 1/2"
RB152DC-PDC13-TE-R3	6"	4	Convex	13	Turbo Eco	3 1/2"
RB165DC-PDC13-TE-R3	6 1/2"	4	Convex	13	Turbo Eco	3 1/2"

## 5 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB114EC-PDC13-TE-R2	4 1/2"	5	Convex	13	Turbo Eco	2 7/8"
RB117EC-PDC13-TE-R2	4 5/8"	5	Convex	13	Turbo Eco	2 7/8"
RB121EC-PDC13-TE-R2	4 3/4"	5	Convex	13	Turbo Eco	2 7/8"
RB130EC-PDC13-TE-R2	5 1/8"	5	Convex	13	Turbo Eco	2 7/8"
RB140EC-PDC13-TE-R2	5 1/2"	5	Convex	13	Turbo Eco	2 7/8"
RB143EC-PDC13-TE-R3	5 5/8"	5	Convex	13	Turbo Eco	3 1/2"
RB149EC-PDC13-TE-R3	5 7/8"	5	Convex	13	Turbo Eco	3 1/2"
RB152EC-PDC13-TE-R3	6"	5	Convex	13	Turbo Eco	3 1/2"
RB165EC-PDC13-TE-R3	6 1/2"	5	Convex	13	Turbo Eco	3 1/2"
RB171EC-PDC13-TE-R3	6 3/4"	5	Convex	13	Turbo Eco	3 1/2"
RB184EC-PDC13-TE-R3	7 1/4"	5	Convex	13	Turbo Eco	3 1/2"
RB191EC-PDC16-TE-R4	7 1/2"	5	Convex	16	Turbo Eco	4 1/2"
RB200EC-PDC16-TE-R4	7 7/8"	5	Convex	16	Turbo Eco	4 1/2"
RB216EC-PDC16-TE-R4	8 1/2"	5	Convex	16	Turbo Eco	4 1/2"
RB222EC-PDC16-TE-R4	8 3/4"	5	Convex	16	Turbo Eco	4 1/2"
RB235EC-PDC16-TE-R4	9 1/4"	5	Convex	16	Turbo Eco	4 1/2"

## 6 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB130FC-PDC13-TE-R2	5 1/8"	6	Convex	13	Turbo Eco	2 7/8"
RB140FC-PDC13-TE-R2	5 1/2"	6	Convex	13	Turbo Eco	2 7/8"
RB143FC-PDC13-TE-R3	5 5/8"	6	Convex	13	Turbo Eco	3 1/2"
RB149FC-PDC13-TE-R3	5 7/8"	6	Convex	13	Turbo Eco	3 1/2"
RB152FC-PDC13-TE-R3	6"	6	Convex	13	Turbo Eco	3 1/2"
RB165FC-PDC13-TE-R3	6 1/2"	6	Convex	13	Turbo Eco	3 1/2"
RB171FC-PDC13-TE-R3	6 3/4"	6	Convex	13	Turbo Eco	3 1/2"
RB184FC-PDC13-TE-R3	7 1/4"	6	Convex	13	Turbo Eco	3 1/2"
RB191FC-PDC16-TE-R4	7 1/2"	6	Convex	16	Turbo Eco	4 1/2"
RB200FC-PDC16-TE-R4	7 7/8"	6	Convex	16	Turbo Eco	4 1/2"
RB216FC-PDC16-TE-R4	8 1/2"	6	Convex	16	Turbo Eco	4 1/2"
RB222FC-PDC16-TE-R4	8 3/4"	6	Convex	16	Turbo Eco	4 1/2"
RB235FC-PDC16-TE-R4	9 1/4"	6	Convex	16	Turbo Eco	4 1/2"
RB251FC-PDC16-TE-R4	9 7/8"	6	Convex	16	Turbo Eco	4 1/2"
RB270FC-PDC16-TE-R4	10 5/8"	6	Convex	16	Turbo Eco	4 1/2"
RB279FC-PDC16-TE-R4	11"	6	Convex	16	Turbo Eco	4 1/2"
RB295FC-PDC16-TE-R4	11 5/8"	6	Convex	16	Turbo Eco	4 1/2"
RB311FC-PDC16-TE-R5	12 1/4"	6	Convex	16	Turbo Eco	6 5/8"
RB343FC-PDC16-TE-R5	13 1/2"	6	Convex	16	Turbo Eco	6 5/8"
RB375FC-PDC16-TE-R5	14 3/4"	6	Convex	16	Turbo Eco	6 5/8"
RB394FC-PDC16-TE-R5	15 1/2"	6	Convex	16	Turbo Eco	6 5/8"
RB406FC-PDC16-TE-R5	16"	6	Convex	16	Turbo Eco	6 5/8"
RB444FC-PDC16-TE-R5	17 1/2"	6	Convex	16	Turbo Eco	6 5/8"
RB470FC-PDC16-TE-R5	18 1/2"	6	Convex	16	Turbo Eco	6 5/8"

## TURBO PREMIUM

INTERCHANGEABLE  
NOZZLES FOR  
CONTROLLED FLOW  
RATE

PDC CUTTER  
INSERTED INTO THE  
BIT BODY

CARBIDE SHOCK  
STUDS FOR  
IMPACT  
RESISTANCE &  
WEAR  
PROTECTION

CARBIDE GAUGE  
PROTECTION FOR  
GREATER  
STABILIZATION

BACK REAMING  
CUTTERS FOR  
FAST  
RETRIEVAL &  
PEACE OF MIND

RANGE OF API  
THREAD CONNECTION

*Note: 4, 5 and 6 Blade configuration as standard*

*Convex, flat face and drop centre styles available.*

*A range of additional sizes is available on request*

## Turbo Premium

**Profile delivers excellent steer ability and penetration rates. Interchangeable flushing ports, carbide gauge protection, carbide Shock stud protection and back reaming inserts for maximum service life.**

# TURBO PREMIUM

## 4 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB089DC-PDC13-TP-R1	3 1/2"	4	Convex	13	Premium	2 3/8"
RB095DC-PDC13-TP-R1	3 3/4"	4	Convex	13	Premium	2 3/8"
RB099DC-PDC13-TP-R1	3 7/8"	4	Convex	13	Premium	2 3/8"
RB108DC-PDC13-TP-R1	4 1/4"	4	Convex	13	Premium	2 3/8"
RB114DC-PDC13-TP-R2	4 1/2"	4	Convex	13	Premium	2 7/8"
RB117DC-PDC13-TP-R2	4 5/8"	4	Convex	13	Premium	2 7/8"
RB121DC-PDC13-TP-R2	4 3/4"	4	Convex	13	Premium	2 7/8"
RB130DC-PDC13-TP-R2	5 1/8"	4	Convex	13	Premium	2 7/8"
RB140DC-PDC13-TP-R2	5 1/2"	4	Convex	13	Premium	2 7/8"
RB143DC-PDC13-TP-R3	5 5/8"	4	Convex	13	Premium	3 1/2"
RB149DC-PDC13-TP-R3	5 7/8"	4	Convex	13	Premium	3 1/2"
RB152DC-PDC13-TP-R3	6"	4	Convex	13	Premium	3 1/2"
RB165DC-PDC13-TP-R3	6 1/2"	4	Convex	13	Premium	3 1/2"

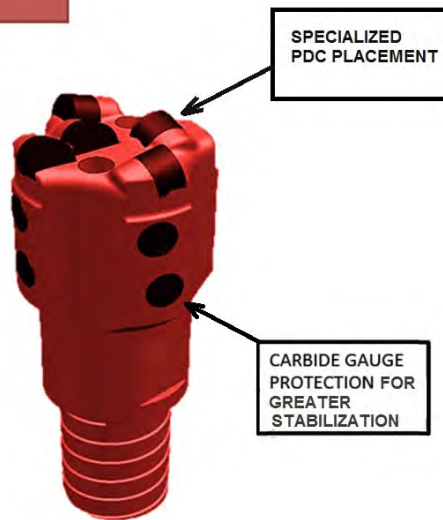
## 5 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB114EC-PDC13-TP-R2	4 1/2"	5	Convex	13	Premium	2 7/8"
RB117EC-PDC13-TP-R2	4 5/8"	5	Convex	13	Premium	2 7/8"
RB121EC-PDC13-TP-R2	4 3/4"	5	Convex	13	Premium	2 7/8"
RB130EC-PDC13-TP-R2	5 1/8"	5	Convex	13	Premium	2 7/8"
RB140EC-PDC13-TP-R2	5 1/2"	5	Convex	13	Premium	2 7/8"
RB143EC-PDC13-TP-R3	5 5/8"	5	Convex	13	Premium	3 1/2"
RB149EC-PDC13-TP-R3	5 7/8"	5	Convex	13	Premium	3 1/2"
RB152EC-PDC13-TP-R3	6"	5	Convex	13	Premium	3 1/2"
RB165EC-PDC13-TP-R3	6 1/2"	5	Convex	13	Premium	3 1/2"
RB171EC-PDC13-TP-R3	6 3/4"	5	Convex	13	Premium	3 1/2"
RB184EC-PDC13-TP-R3	7 1/4"	5	Convex	13	Premium	3 1/2"
RB191EC-PDC16-TP-R4	7 1/2"	5	Convex	16	Premium	4 1/2"
RB200EC-PDC16-TP-R4	7 7/8"	5	Convex	16	Premium	4 1/2"
RB216EC-PDC16-TP-R4	8 1/2"	5	Convex	16	Premium	4 1/2"
RB222EC-PDC16-TP-R4	8 3/4"	5	Convex	16	Premium	4 1/2"
RB235EC-PDC16-TP-R4	9 1/4"	5	Convex	16	Premium	4 1/2"

## 6 Blade Design

Part Number	Diameter	Blades	Shape	PDC	Series	Thread
RB130FC-PDC13-TP-R2	5 1/8"	6	Convex	13	Premium	2 7/8"
RB140FC-PDC13-TP-R2	5 1/2"	6	Convex	13	Premium	2 7/8"
RB143FC-PDC13-TP-R3	5 5/8"	6	Convex	13	Premium	3 1/2"
RB149FC-PDC13-TP-R3	5 7/8"	6	Convex	13	Premium	3 1/2"
RB152FC-PDC13-TP-R3	6"	6	Convex	13	Premium	3 1/2"
RB165FC-PDC13-TP-R3	6 1/2"	6	Convex	13	Premium	3 1/2"
RB171FC-PDC13-TP-R3	6 3/4"	6	Convex	13	Premium	3 1/2"
RB184FC-PDC13-TP-R3	7 1/4"	6	Convex	13	Premium	3 1/2"
RB191FC-PDC16-TP-R4	7 1/2"	6	Convex	16	Premium	4 1/2"
RB200FC-PDC16-TP-R4	7 7/8"	6	Convex	16	Premium	4 1/2"
RB216FC-PDC16-TP-R4	8 1/2"	6	Convex	16	Premium	4 1/2"
RB222FC-PDC16-TP-R4	8 3/4"	6	Convex	16	Premium	4 1/2"
RB235FC-PDC16-TP-R4	9 1/4"	6	Convex	16	Premium	4 1/2"
RB251FC-PDC16-TP-R4	9 7/8"	6	Convex	16	Premium	4 1/2"
RB270FC-PDC16-TP-R4	10 5/8"	6	Convex	16	Premium	4 1/2"
RB279FC-PDC16-TP-R4	11"	6	Convex	16	Premium	4 1/2"
RB295FC-PDC16-TP-R4	11 5/8"	6	Convex	16	Premium	4 1/2"
RB311FC-PDC16-TP-R5	12 1/4"	6	Convex	16	Premium	6 5/8"
RB343FC-PDC16-TP-R5	13 1/2"	6	Convex	16	Premium	6 5/8"
RB375FC-PDC16-TP-R5	14 3/4"	6	Convex	16	Premium	6 5/8"
RB394FC-PDC16-TP-R5	15 1/2"	6	Convex	16	Premium	6 5/8"
RB406FC-PDC16-TP-R5	16"	6	Convex	16	Premium	6 5/8"
RB444FC-PDC16-TP-R5	17 1/2"	6	Convex	16	Premium	6 5/8"
RB470FC-PDC16-TP-R5	18 1/2"	6	Convex	16	Premium	6 5/8"

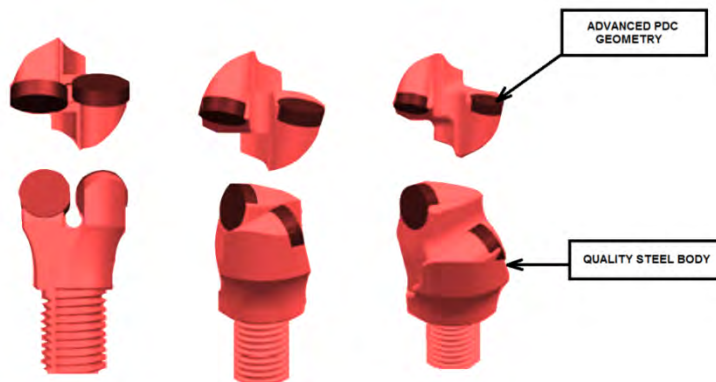
## MINING BITS



*PDC Drill Bits-AW, NW, API Thread  
Range Ø52mm- Ø124mm*

Part Number	Stock Code	Nominal Size(inch)	No. Of Blades	Pin Type
RB051DF-PDC13E-AW	6	2"	4	AW
RB057DF-PDC13E-AW	6	2 1/4"	4	AW
RB076DF-PDC13E-NW	1	3"	4	NW
RB089DF-PDC13E-NW	3	3 1/2"	4	NW
RB096DF-PDC13E-NW	6	3 3/4"	4	NW
RB099DF-PDC13E-NW	1	3 7/8"	4	NW
RB102DF-PDC13E-NW	6	4"	4	NW

## PDC 2 WING BITS



Part Number	Stock Code	Ø Diameter Size(inch)	No. Of Wings	Thread Type
RPTW-27-M16	6	1.06"	2	M16
RPTW-28-M16	6	1.10"	2	M16
RPTW-32-M16	6	1.26"	2	M16
RPTW-35-M16	6	1.38"	2	M16
RPTW-38-M16	6	1.50"	2	M16
RPTW-40-M16	6	1.57"	2	M16
RPTW-42-M16	6	1.65"	2	M16
RPTW-45-M16	6	1.77"	2	M16
RPTW-50-M16	6	1.97"	2	M16

## Mining Bits

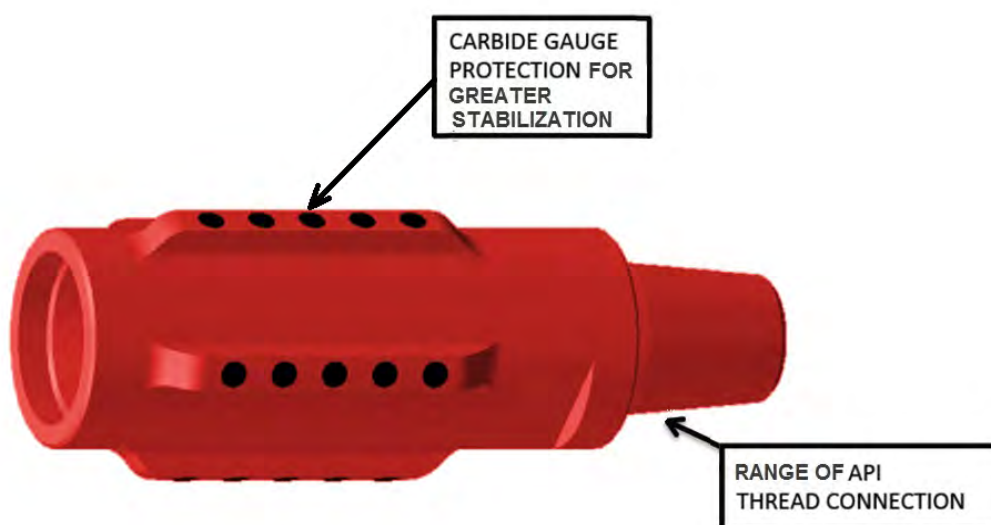
**Delivering consistent penetration through a wide range of strata, Our stable bit design will keep you turning.**

## PDC 2 Wing Bits

**Quality design and manufacturing to ensure limited down time and maximum service life.**



## STABILIZERS



Part Number	Stock Code	Ø Diameter Size(mm)	No. Of Wings	Thread Type
SLZR-095-R1	9	95	4	2 3/8" Reg
SLZR-100-R1	9	100	4	2 3/8" Reg
SLZR-112-R2	9	112	4	2 7/8" Reg
SLZR-125-R2	9	125	4	2 7/8" Reg
SLZR-138-R2	9	138	4	2 7/8" Reg
SLZR-150-R3	9	150	5	3 1/2" Reg
SLZR-163-R3	9	163	5	3 1/2" Reg
SLZR-182-R3	9	182	5	3 1/2" Reg
SLZR-198-R4	9	198	5	4 1/2" Reg
SLZR-214-R4	9	214	5	4 1/2" Reg

*A range of additional sizes is available on request.  
Stabilizers to suit HDD and vertical applications*

## Stabilizers

We manufacture a range of stabilizers vertical and horizontal drilling.

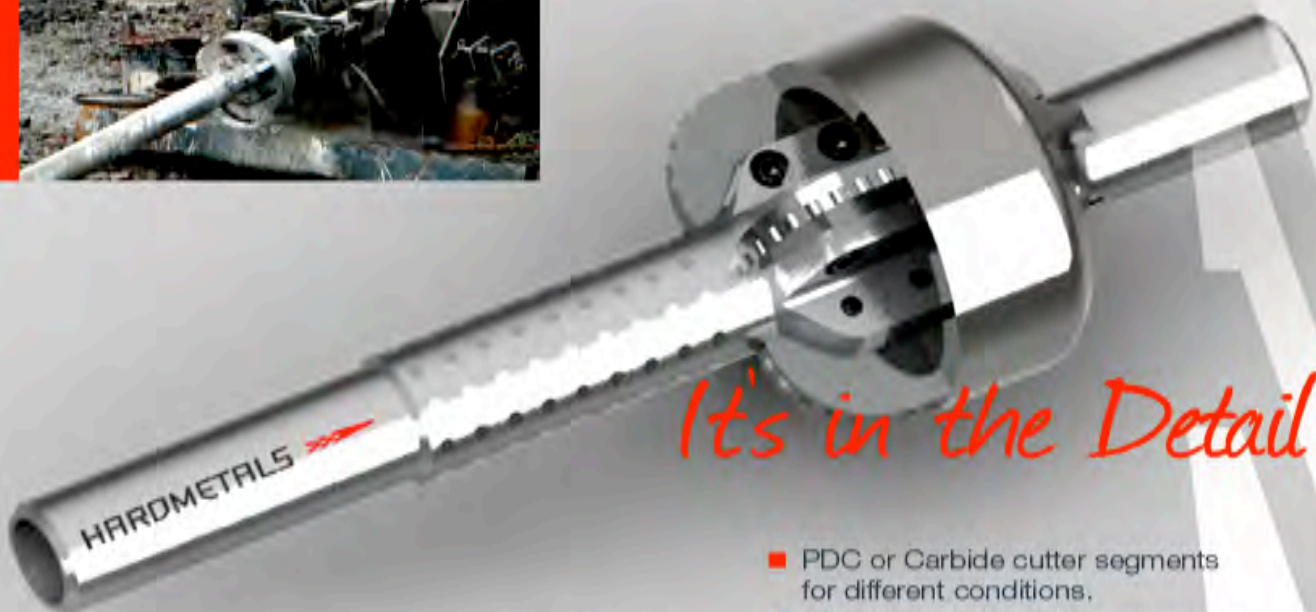
Call us to discuss your requirements.

HIGH PERFORMANCE

# PDC HOLE OPENERS

US AND OTHER PATENTS APPLY

NEW



*It's in the Detail*

The **Wombat** Hole Opener is a significant step forward in the art of reaming and hole opening. With inbuilt stabilisation, the flexibility of simple replacement of cutter type and diameter in the field combined with excellent down the hole performance make this a worthy accessory to any drillers tool box.

- PDC or Carbide cutter segments for different conditions.
- Field replaceable cutting segments.
- Easy change of hole diameter on the same cutter body.
- Available in sizes Ø250mm – Ø600mm.
- Unique flange to wing cutting locking system for ultimate reliability.
- Wombat Hole Openers – Designed, developed and manufactured in Australia.
- Excellent ROP.
- Suited to forward or back reaming.

## WOMBAT

**Stripping & Reassembly-** is one of the outstanding features of the reamer. The entire assembly should be completed under an hour.

■ Step One : Remove fasteners



Figure 1A

■ Step Two : Slide back the stabilizer ring



Figure 1B

■ Step Three : Remove cutters

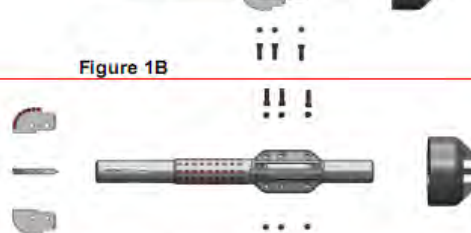


Figure 1C

■ Step Four : Insert new or different size cutters



Figure 1D

■ Step Five : Slide back the stabilizer ring



Figure 1E

■ Step Six : Insert fasteners & torque to specifications



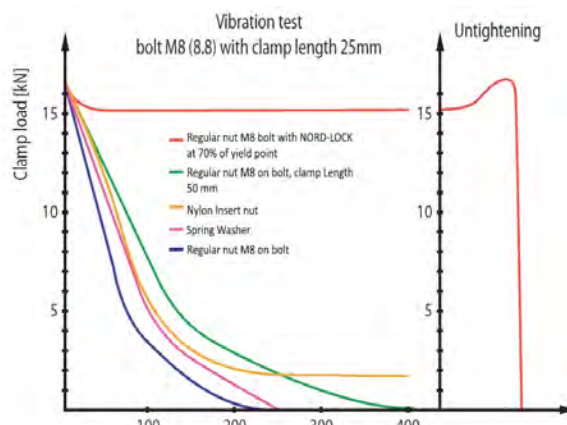
Figure 1F

## Fastener Locking System

Wombat reamers utilize the unique Nordlock system to secure the castings.

Proven in the junker vibration test, according to Nordlock, is considered one of the best quality locking system in the world.

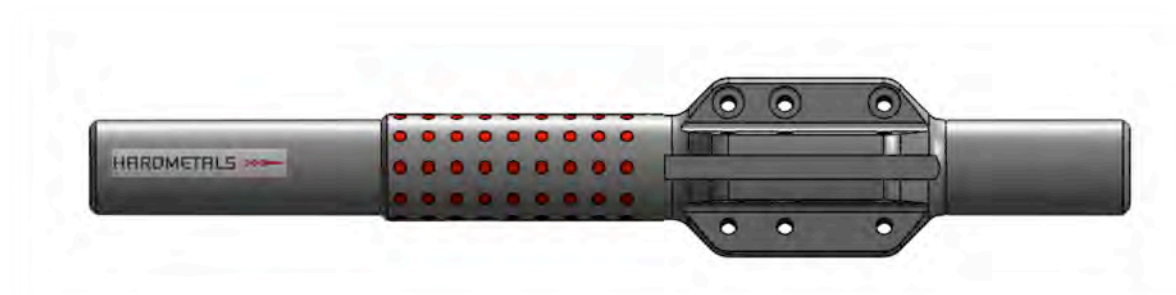
Reference to Figure 2 shows the performance of the Nord-Lock system to be the most reliable to securely lock the fastener in a joint which is subjected to extreme vibration or dynamic loads.



# WOMBAT REAMER BODY

## WOMBAT PDC & TUNGSTEN HOLE OPENERS

### Wombat Reamer Body



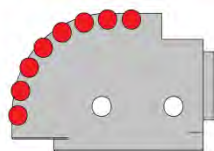
Product Code	Stock Code	Item Description
<b>RB1.S4</b>	1	Wombat Reamer Body 2 3/8" IF D=10"-16"
<b>RB2.S4</b>	6	Wombat Reamer Body 2 3/8" IF D=16"-22"
<b>RC1.S4</b>	2	Wombat Reamer Body 2 7/8" IF D=10"-16"
<b>RC2.S4</b>	1	Wombat Reamer Body 2 7/8 " IF D=16"-22"
<b>RD1.S4</b>	2	Wombat Reamer Body 3 1/2" IF D=12"-18"
<b>RD2.S4</b>	2	Wombat Reamer Body 3 1/2" IF D=18"-26"

- ✓ Complete with fasteners and Nordlock system.
- ✓ For replacement blades, refer page 20
- ✓ For stabilising ring, refer page 22
- ✓ Stabilising ring size must match the cutter size.

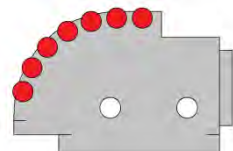


# WOMBAT REAMER WINGS

## Wombat Reamer Wings



Product Code	Stock Code	Item Description
<b>RB1.S4-B10FW(SET)</b>	3	Wombat TC B/R Wings D=10" - Set Of 4
<b>RB1.S4-B12FW(SET)</b>	3	Wombat TC B/R Wings D=12" - Set Of 4
<b>RB1.S4-B13FW(SET)</b>	3	Wombat TC B/R Wings D=13" - Set Of 4
<b>RB1.S4-B14FW(SET)</b>	3	Wombat TC B/R Wings D=14" - Set Of 4
<b>RB1.S4-B16FW(SET)</b>	3	Wombat TC B/R Wings D=16" - Set Of 4
<b>RB1.S4-B10PDC(SET)</b>	1	Wombat PDC B/R Wings D=10" - Set Of 4
<b>RB1.S4-B12PDC(SET)</b>	1	Wombat PDC B/R Wings D=12" - Set Of 4
<b>RB1.S4-B13PDC(SET)</b>	1	Wombat PDC B/R Wings D=13" - Set Of 4
<b>RB1.S4-B14PDC(SET)</b>	1	Wombat PDC B/R Wings D=14" - Set Of 4
<b>RB1.S4-B16PDC(SET)</b>	1	Wombat PDC B/R Wings D=16" - Set Of 4
<b>RB1.S4-F10PDC(SET)</b>	1	Wombat PDC F/R Wings D=10" - Set Of 4
<b>RB1.S4-F12PDC(SET)</b>	1	Wombat PDC F/R Wings D=12" - Set Of 4
<b>RB1.S4-F13PDC(SET)</b>	1	Wombat PDC F/R Wings D=13" - Set Of 4
<b>RB1.S4-F14PDC(SET)</b>	1	Wombat PDC F/R Wings D=14" - Set Of 4

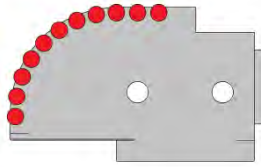


Product Code	Stock Code	Item Description
<b>RC1.S4-B10FW(SET)</b>	3	Wombat TC B/R Wings D=10" - Set Of 4
<b>RC1.S4-B12FW(SET)</b>	3	Wombat TC B/R Wings D=12" - Set Of 4
<b>RC1.S4-B13FW(SET)</b>	3	Wombat TC B/R Wings D=13" - Set Of 4
<b>RC1.S4-B14FW(SET)</b>	3	Wombat TC B/R Wings D=14" - Set Of 4
<b>RC1.S4-B16FW(SET)</b>	3	Wombat TC B/R Wings D=14" - Set Of 4
<b>RC1.S4-B10PDC(SET)</b>	1	Wombat PDC B/R Wings D=10" - Set Of 4
<b>RC1.S4-B12PDC(SET)</b>	1	Wombat PDC B/R Wings D=12" - Set Of 4
<b>RC1.S4-B13PDC(SET)</b>	1	Wombat PDC B/R Wings D=13" - Set Of 4
<b>RC1.S4-B14PDC(SET)</b>	1	Wombat PDC B/R Wings D=14" - Set Of 4
<b>RC1.S4-B16PDC(SET)</b>	3	Wombat PDC B/R Wings D=16" - Set Of 4

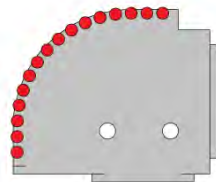
*A range of additional sizes is available on request*



# WOMBAT REAMER WINGS



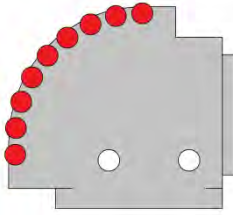
Product Code	Stock Code	Item Description
<b>RB2.S4-B16FW(SET)</b>	3	Wombat TC B/R Wings D=16" - Set Of 4
<b>RB2.S4-B16PDC(SET)</b>	1	Wombat PDC B/R Wings D=16" - Set Of 4
<b>RB2.S4-B18FW(SET)</b>	3	Wombat TC B/R Wings D=18" - Set Of 4
<b>RB2.S4-B18PDC(SET)</b>	1	Wombat PDC B/R Wings D=18" - Set Of 4
<b>RB2.S4-B20FW(SET)</b>	3	Wombat TC B/R Wings D=20" - Set Of 4
<b>RB2.S4-B20PDC(SET)</b>	1	Wombat PDC B/R Wings D=20" - Set Of 4
<b>RB2.S4-B22FW(SET)</b>	3	Wombat TC B/R Wings D=22" - Set Of 4
<b>RB2.S4-B22PDC(SET)</b>	1	Wombat PDC B/R Wings D=22" - Set Of 4
<b>RB2.S4-B24FW(SET)</b>	3	Wombat TC B/R Wings D=22" - Set Of 4
<b>RB2.S4-B24PDC(SET)</b>	3	Wombat PDC B/R Wings D=24" - Set Of 4



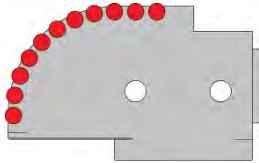
Product Code	Stock Code	Item Description
<b>RC2.S4-B16FW(SET)</b>	6	Wombat TC B/R Wings D=16" - Set Of 5
<b>RC2.S4-B16PDC(SET)</b>	1	Wombat PDC B/R Wings D=16" - Set Of 5
<b>RC2.S4-B18FW(SET)</b>	6	Wombat TC B/R Wings D=18" - Set Of 5
<b>RC2.S4-B18PDC(SET)</b>	1	Wombat PDC B/R Wings D=18" - Set Of 5
<b>RC2.S4-B20FW(SET)</b>	6	Wombat TC B/R Wings D=20" - Set Of 5
<b>RC2.S4-B20PDC(SET)</b>	1	Wombat PDC B/R Wings D=20" - Set Of 5
<b>RC2.S4-B22FW(SET)</b>	6	Wombat TC B/R Wings D=22" - Set Of 5
<b>RC2.S4-B22PDC(SET)</b>	1	Wombat PDC B/R Wings D=22" - Set Of 5
<b>RC2.S4-B24FW(SET)</b>	6	Wombat TC B/R Wings D=24" - Set Of 5
<b>RC2.S4-B24PDC(SET)</b>	1	Wombat PDC B/R Wings D=24" - Set Of 5
<b>RC2.S4-F22PDC(SET)</b>	1	Wombat PDC B/R Wings D=22" - Set Of 5

*A range of additional sizes is available on request*

# WOMBAT REAMER WINGS



Product Code	Stock Code	Item Description
RD1.S4-B10FW(SET)	3	Wombat TC B/R Wings D=10" - Set Of 4
RD1.S4-B10PDC(SET)	1	Wombat PDC B/R Wings D=10" - Set Of 4
RD1.S4-B12FW(SET)	3	Wombat TC B/R Wings D=12" - Set Of 4
RD1.S4-B12PDC(SET)	1	Wombat PDC B/R Wings D=12" - Set Of 4
RD1.S4-B13FW(SET)	3	Wombat TC B/R Wings D=13" - Set Of 4
RD1.S4-B13PDC(SET)	1	Wombat PDC B/R Wings D=13" - Set Of 4
RD1.S4-B14FW(SET)	3	Wombat TC B/R Wings D=14" - Set Of 4
RD1.S4-B14PDC(SET)	1	Wombat PDC B/R Wings D=14" - Set Of 4
RD1.S4-B16FW(SET)	3	Wombat TC B/R Wings D=16" - Set Of 4
RD1.S4-B16PDC(SET)	3	Wombat PDC B/R Wings D=16" - Set Of 4
RD1.S4-F10FW(SET)	3	Wombat TC F/R Wings D=10" - Set Of 4
RD1.S4-F10PDC(SET)	1	Wombat PDC F/R Wings D=10" - Set Of 4
RD1.S4-F13PDC(SET)	1	Wombat PDC F/R Wings D=13" - Set Of 4
RD1.S4-F16PDC(SET)	3	Wombat PDC B/R Wings D=16" - Set Of 4



Product Code	Stock Code	Item Description
RD2.S4-B16PDC(SET)	6	Wombat PDC B/R Wings D=16" - Set Of 5
RD2.S4-B18PDC(SET)	6	Wombat PDC B/R Wings D=18" - Set Of 5
RD2.S4-B20PDC(SET)	6	Wombat PDC B/R Wings D=20" - Set Of 5
RD2.S4-B22PDC(SET)	6	Wombat PDC B/R Wings D=22" - Set Of 5
RD2.S4-B24PDC(SET)	6	Wombat PDC B/R Wings D=24" - Set Of 5
RD2.S4-F16PDC(SET)	3	Wombat PDC F/R Wings D=16" - Set Of 5
RD2.S4-F18PDC(SET)	6	Wombat PDC F/R Wings D=18" - Set Of 5

*A range of additional sizes is available on request*

# WOMBAT STABILIZER RINGS

## Wombat Stabilizer Rings



Product Code	Stock Code	Item Description
RB1.S4-SR10	1	Wombat Stabilizer Ring D=10"
RB1.S4-SR12	1	Wombat Stabilizer Ring D=12"
RB1.S4-SR14	1	Wombat Stabilizer Ring D=14"
RB1.S4-SR16	1	Wombat Stabilizer Ring D=16"
RB2.S4-SR16	1	Wombat Stabilizer Ring D=16"
RB2.S4-SR18	1	Wombat Stabilizer Ring D=18"
RB2.S4-SR20	1	Wombat Stabilizer Ring D=20"
RB2.S4-SR22	1	Wombat Stabilizer Ring D=22"
RB2.S4-SR24	3	Wombat Stabilizer Ring D=24"
RC1.S4-SR10	1	Wombat Stabilizer Ring D=10"
RC1.S4-SR12	1	Wombat Stabilizer Ring D=12"
RC1.S4-SR13	1	Wombat Stabilizer Ring D=13"
RC1.S4-SR14	1	Wombat Stabilizer Ring D=14"
RC1.S4-SR16	1	Wombat Stabilizer Ring D=16"
RC2.S4-SR16	6	Wombat Stabilizer Ring D=16"
RC2.S4-SR18	6	Wombat Stabilizer Ring D=18"
RC2.S4-SR20	6	Wombat Stabilizer Ring D=20"
RC2.S4-SR22	6	Wombat Stabilizer Ring D=22"
RC2.S4-SR24	6	Wombat Stabilizer Ring D=24"
RD1.S4-SR10	1	Wombat Stabilizer Ring D=10"
RD1.S4-SR12	1	Wombat Stabilizer Ring D=12"
RD1.S4-SR13	1	Wombat Stabilizer Ring D=13"
RD1.S4-SR14	1	Wombat Stabilizer Ring D=14"
RD1.S4-SR16	1	Wombat Stabilizer Ring D=16"
RD2.S4-SR16	6	Wombat Body Stabilizer Ring D=16"
RD2.S4-SR18	6	Wombat Body Stabilizer Ring D=16"
RD2.S4-SR20	6	Wombat Body Stabilizer Ring D=20"
RD2.S4-SR22	6	Wombat Body Stabilizer Ring D=22"
RD2.S4-SR24	6	Wombat Body Stabilizer Ring D=24"

*A range of additional sizes is available on request*

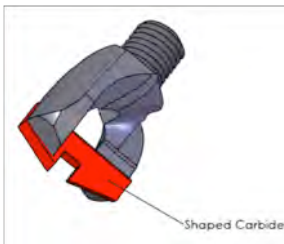
## *CABLE & ROCK BOLT BITS*



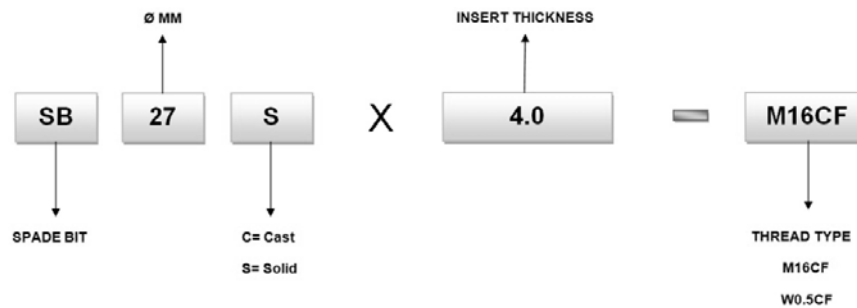
# CABLE & ROCK BOLT BITS

## CABLE &/OR ROCK BOLT BITS

### SPADE BITS



#### SPADE BITS NOMENCLATURE

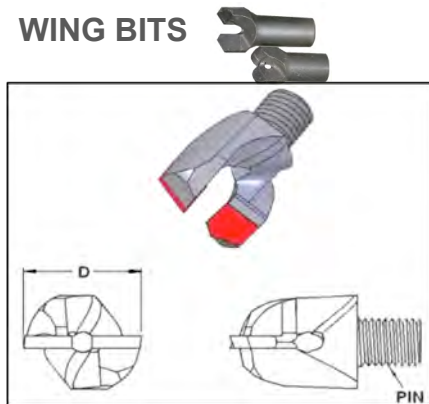


Product Code	Stock Code	Diameter (D) Inch	Pin
SBC27SX4.0-M16CF	3	1"	M16
SBS27KX3.5-M16CF	8	1"	M16
SBS27KX3.5-W0.5CF	9	1"	½" BSW
SBS27SX3.5-M16CF	8	1"	M16
SBS27SX4.5V1-M16CF	6	1"	M16
SBC28SX4.0-M16CF	3	1 1/10"	M16
SBS28KX3.5-M16CF	8	1 1/10"	M16
SBC35SX4.0-M16CF	1	1 2/5"	M16

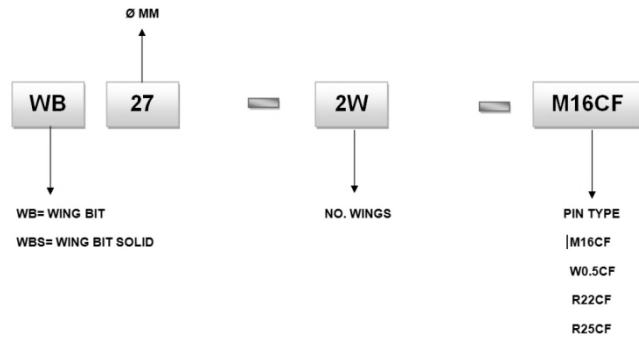


# WING BITS

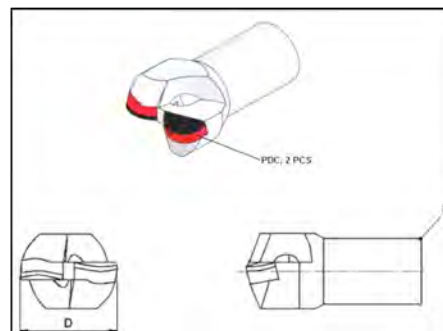
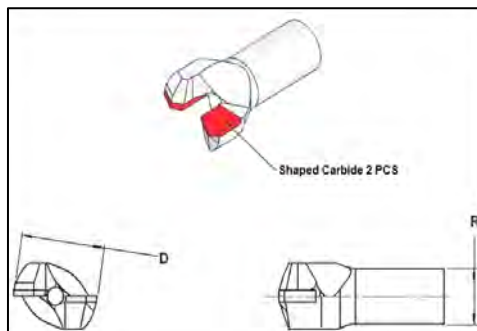
## WING BITS



## WING BITS NOMENCLATURE



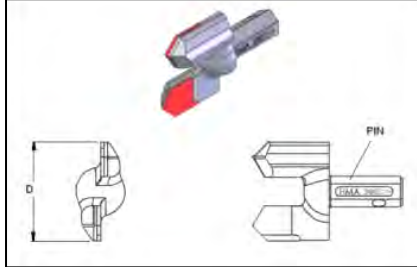
Product Code	Stock Code	Diameter (D) Inch	Pin
WBS27-2W-M16CF	3	1"	M16
WBS27-2W-W0.5CF	9	1"	½" BSW
WBC27-2W-M16CF	3	1"	M16
WBC27-2W-W0.5CF	9	1"	½" BSW
WBC28-2W-M16CF	8	1 1/10"	M16
WBC28-2W-W0.5CF	9	1 1/10"	½" BSW
WBS30-2W-M16CF	8	1 1/5"	M16
WBS32-2W-M16CF	8	1 3/10"	M16
WBS35-2W-M16CF	8	1 2/5"	M16



Product Code	Stock Code	Diameter (D) Inch	Box Connection
WB42-2W-R22CF	3	1 3/5"	R22
WB52-2W-R22CF	3	2"	R22
WB52-2W-R25CF	3	2"	R25
WB55-2W-R22CF	3	2 1/5"	R22
WB55-2W-R25CF	3	2 1/5"	R25
WBS27-2PDC-M16CF	3	1"	M16
WBS32-2PDC-M16CF	8	1 3/10"	M16
WBS35-2PDC-M16CF	3	1 2/5"	M16
WBS38-2PDC-M16CF	8	1 1/2"	M16
WBS42-2PDC-R22CF	1	1 3/5"	R22
WBS45-2PDC-R22CF	8	1 3/4"	R22

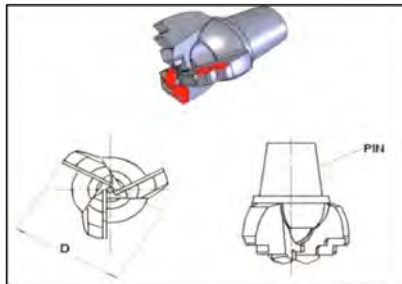
# WING BITS

## 2 WING BITS



Product Code	Stock Code	Diameter (D) Inch	Hex A/F Inch
<b>WB098-2W-HX28</b>	3	3 <sup>7</sup> / <sub>8</sub> "	1.10"
<b>WB102-2W-HX28</b>	1	4"	1.10"
<b>WB114-2W-HX28</b>	1	4 <sup>1</sup> / <sub>2</sub> "	1.10"
<b>WB127-2W-HX38</b>	1	5"	1.50"
<b>WB127-2W-HX41</b>	3	5"	1.60"

## 3 WING BITS

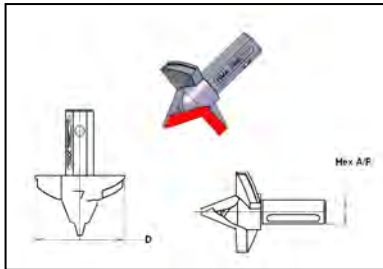


Product Code	Stock Code	Diameter (D) Inch	Pin
<b>WB121-3W-2.375REG</b>	3	4 <sup>4</sup> / <sub>5</sub> "	2 <sup>3</sup> / <sub>8</sub> " REG
<b>WB127-3W-T51</b>	9	5"	T51 (LEFT HAND)
<b>WB152-3W-T51</b>	9	6"	T51 (LEFT HAND)

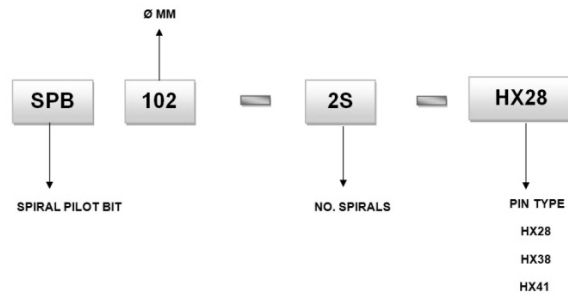
# SPIRAL BITS

## GEOTECHNICAL BITS

### SPIRAL PILOT BIT

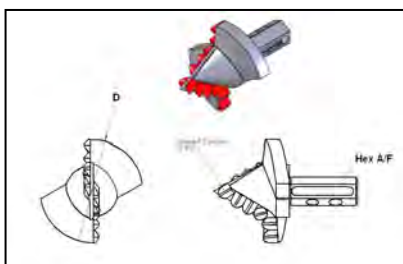


### SPIRAL PILOT BITS NOMENCLATURE



Product Code	Stock Code	Diameter (D) Inch	Hex A/F Inch
SPB075-2S-HX28	8	3"	1.10"
SPB089-2S-HX28	3	3.5"	1.10"
SPB095-2S-HX28	1	3 3/4"	1.10"
SPB098-2S-HX28	8	3 7/8"	1.10"
SPB102-2S-HX28	1	4"	1.10"
SPB114-2S-HX28	1	4 1/2"	1.10"
SPB114-2S-HX38	1	4 1/2"	1.50"
SPB121-2S-HX38	3	4 3/4"	1.50"
SPB127-2S-HX38	1	5"	1.50"
SPB127-2S-HX41	1	5"	1.61"
SPB153-2S-HX41	3	6"	1.625"

### SPIRAL PILOT BIT-FW

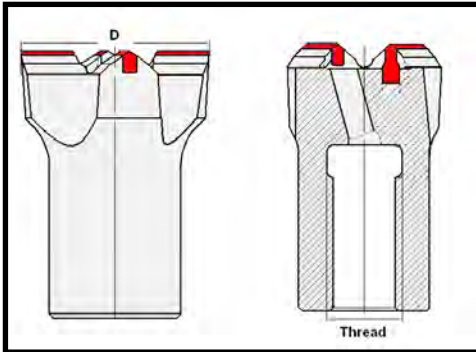


Product Code	Stock Code	Diameter (D) Inch	Hex A/F Inch
SPB075-2S-HX28-FW	8	3"	1.125"
SPB089-2S-HX28-FW	8	3.5"	1.125"
SPB095-2S-HX28-FW	1	3 3/4"	1.125"
SPB102-2S-HX28-FW	1	4"	1.10"
SPB114-2S-HX28-FW	8	4 1/2"	1.10"
SPB114-2S-HX38-FW	1	4 1/2"	1.10"
SPB121-2S-HX38-FW	3	4 3/4"	1.50"
SPB127-2S-HX28-FW	3	5"	1.50"
SPB127-2S-HX38-FW	1	5"	1.50"
SPB127-2S-HX41-FW	3	5"	1.50"

# CROSS BITS

## PERCUSSIVE DRILL BITS

### CROSS BITS



### Designation System

Product Code	Stock Code	Diameter (D) Inch	Thread Type
T45-089XHD	8	3 1/2"	T45
T45-102XHD	8	4"	T45
T45-115XHD	8	4 1/2"	T45
T45-127XHD	8	5"	T45
T51-089XHD	8	3 1/2"	T51
T51-102XHD	3	4"	T51
T51-115XHD	8	4 1/2"	T51
T51-127XHD	1	5"	T51
T51-140XHD	8	5 1/2"	T51
T51-152XHD	3	6"	T51

# PERCUSSIVE DRILL BITS & ACCESSORIES

Developed to perform in some of the earth's hardest drilling conditions and manufactured to world's best standards with top-level materials, DG Percussive Bits and Accessories offer a viable and valuable alternative to competitor programs.






# R32 BUTTON BITS

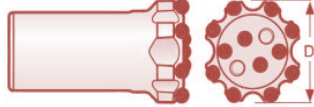
## BUTTON BITS

### R32 FLAT FACE

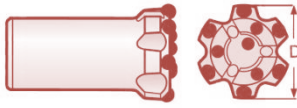
Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
FFA041SN	6	1 5/8"	Spherical	
FFA041BN	6	1 5/8"	Ballistic	
FFA045SN	6	1 3/4"	Spherical	
FFA045BN	6	1 3/4"	Ballistic	
FFA051SN	6	2"	Spherical	
FFA051BN	6	2"	Ballistic	
FFA057SN	6	2 1/4"	Spherical	
FFA057BN	6	2 1/4"	Ballistic	
FFA064SN	6	2 1/2"	Spherical	
FFA064BN	6	2 1/2"	Ballistic	
FHA045SN	6	1 3/4"	Spherical	
FHA045BN	6	1 3/4"	Ballistic	
FHA045PN	6	1 3/4"	Parabolic	
FHA051SN	6	2"	Spherical	
FHA051BN	6	2"	Ballistic	
FHA051PN	6	2"	Parabolic	
FHA057BN	6	2 1/4"	Ballistic	
FHA057SN	6	2 1/4"	Spherical	
FHA064SN	6	2 1/2"	Spherical	
FHA064BN	6	2 1/2"	Ballistic	
FHA064PN	6	2 1/2"	Parabolic	
FHA076BN	6	3"	Ballistic	

# T38 BUTTON BITS

## T38 Flat Face


Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
FFC064SN	6	2 1/2"	Spherical	
FFC064BN	6	2 1/2"	Ballistic	
FFC076SN	6	3"	Spherical	
FFC076BN	6	3"	Ballistic	
FFC089SN	6	3 1/2"	Spherical	
FFC089BN	6	3 1/2"	Ballistic	
FFC102SN	6	4"	Spherical	
FFC102BN	6	4"	Ballistic	
FHC064PN	6	2 1/2"	Parabolic	
FHC064PN	6	2 1/2"	Parabolic	

## T38 Drop Centre

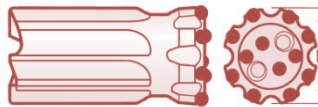
Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
DCC064SN	6	2 1/2"	Spherical	
DCC064BN	6	2 1/2"	Ballistic	
DCC076SN	6	3"	Spherical	
DCC076BN	6	3"	Ballistic	
DHC076SN	6	3"	Spherical	
DHC076BN	6	3"	Ballistic	
DHC089SN	6	3 1/2"	Spherical	
DHC089BN	6	3 1/2"	Ballistic	
DHC102SN	6	4"	Spherical	
DHC102BN	6	4"	Ballistic	

# T38 BUTTON BITS

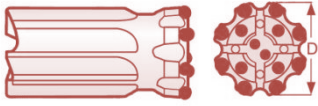
## T38 Heavy Duty

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
FFC064SH	6	2 1/2"	Spherical	
FFC076SH	6	3"	Spherical	
FFC089SH	6	3 1/2"	Spherical	

## T38 Retractable Bit

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
REC064SN	6	2 1/2"	Spherical	
REC064BN	6	2 1/2"	Ballistic	
REC076SN	6	3"	Spherical	
REC076BN	6	3"	Ballistic	
REC089SN	6	3 1/2"	Spherical	
REC089BN	6	3 1/2"	Ballistic	
REC102SN	6	4"	Spherical	
REC102BN	6	4"	Ballistic	

## T38 Retractable Drop Centre

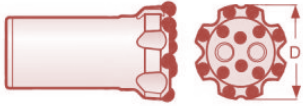
Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
DRC064SN	6	2 1/2"	Spherical	
DRC064BN	6	2 1/2"	Ballistic	
DRC076SN	6	3"	Spherical	
DRC076BN	6	3"	Ballistic	
DRC089SN	6	3 1/2"	Spherical	
DRC089BN	6	3 1/2"	Ballistic	
DRC102SN	6	4"	Spherical	
DRC102BN	6	4"	Ballistic	
DRC117BN	6	4 3/5"	Ballistic	
DRC127BN	6	5"	Ballistic	

## T38 Retractable Drop Centre- Heavy Duty


Product Code	Stock Code	Nominal Size (Inch)	Carbide Design
DRC089SH	6	3 1/2"	Spherical
DRC089BH	6	3 1/2"	Ballistic
DRC095SH	6	3 3/4"	Spherical
DRC095BH	6	3 3/4"	Ballistic

# T45 BUTTON BITS

## T45 Flat Face

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
FFD076SN	6	3"	Spherical	
FFD076BN	6	3"	Ballistic	
FFD089SN	6	3 1/2"	Spherical	
FFD089BN	6	3 1/2"	Ballistic	
FFD102SN	6	4"	Spherical	
FFD102BN	6	4"	Ballistic	
FFD115SN	6	4 1/2"	Spherical	
FFD115BN	6	4 1/2"	Ballistic	


## T45 Drop Centre

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
DHD076SN	6	3"	Spherical	
DHD076BN	6	3"	Ballistic	
DHD089SN	6	3 1/2"	Spherical	
DHD089BN	6	3 1/2"	Ballistic	
DHD102SN	6	4"	Spherical	
DHD102BN	6	4"	Ballistic	
DHD115SN	6	4 1/2"	Spherical	
DHD115BN	6	4 1/2"	Ballistic	
DHD127SN	6	5"	Spherical	
DHD127BN	6	5"	Ballistic	


## T45 Heavy Duty

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
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<b>FFD076SH</b>	6	3"	Spherical	
<b>FFD089SH</b>	6	3 1/2"	Spherical	

## T45 Retractable Bit

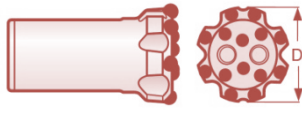

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
<b>RED076SN</b>	6	3"	Spherical	
<b>RED076BN</b>	6	3"	Ballistic	
<b>RED089SN</b>	6	3 1/2"	Spherical	
<b>RED089BN</b>	6	3 1/2"	Ballistic	
<b>RED102SN</b>	6	4"	Spherical	
<b>RED102BN</b>	6	4"	Ballistic	
<b>RED115SN</b>	6	4 1/2"	Spherical	
<b>RED115BN</b>	6	4 1/2"	Ballistic	

## T45 Retractable Drop Centre

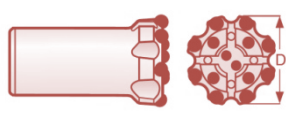
Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
<b>DRD076SN</b>	6	3"	Spherical	
<b>DRD076BN</b>	6	3"	Ballistic	
<b>DRD089SN</b>	6	3 1/2"	Spherical	
<b>DRD089BN</b>	6	3 1/2"	Ballistic	
<b>DRD102SN</b>	6	4"	Spherical	
<b>DRD102BN</b>	6	4"	Ballistic	
<b>DRD115SN</b>	6	4 1/2"	Spherical	
<b>DRD115BN</b>	6	4 1/2"	Ballistic	

# T51 BUTTON BITS

## T51 Flat Face

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
<b>FFE089SN</b>	6	3 1/2"	Spherical	
<b>FFE102SN</b>	6	4"	Spherical	
<b>FFE115SN</b>	6	4 1/2"	Spherical	
<b>FFE127SN</b>	6	5"	Spherical	
<b>FHE089SN</b>	6	3 1/2"	Spherical	
<b>FHE089BN</b>	6	3 1/2"	Ballistic	
<b>FHE102SN</b>	6	4"	Spherical	
<b>FHE102BN</b>	6	4"	Ballistic	
<b>FHE115SN</b>	6	4 1/2"	Spherical	
<b>FHE115BN</b>	6	4 1/2"	Ballistic	
<b>FHE127SN</b>	6	5"	Spherical	
<b>FHE127BN</b>	6	5"	Ballistic	


## T51 Drop Centre

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
<b>DHE089SN</b>	6	3 1/2"	Spherical	
<b>DHE089BN</b>	6	3 1/2"	Ballistic	
<b>DHE102SN</b>	6	4"	Spherical	
<b>DHE102BN</b>	6	4"	Ballistic	
<b>DHE115SN</b>	6	4 1/2"	Spherical	
<b>DHE115BN</b>	6	4 1/2"	Ballistic	
<b>DHE127SN</b>	6	5"	Spherical	
<b>DHE127BN</b>	6	5"	Ballistic	

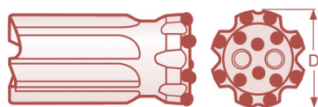


# T51 BUTTON BITS


## T51 Heavy Duty

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
FFE089SH	6	3 1/2"	Spherical	
FFE102SH	6	4"	Spherical	

## T51 Retractable Bit

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
REE089SN	6	3 1/2"	Spherical	
REE089BN	6	3 1/2"	Ballistic	
REE102SN	6	4"	Spherical	
REE102BN	6	4"	Ballistic	
REE115SN	6	4 1/2"	Spherical	
REE115BN	6	4 1/2"	Ballistic	
REE127SN	6	5"	Spherical	
REE127BN	6	5"	Ballistic	

## T51 Retractable Drop Centre

Product Code	Stock Code	Nominal Size (Inch)	Carbide Design	Drawing
DRE089SN	6	3 1/2"	Spherical	
REE089BN	6	3 1/2"	Ballistic	
REE102SN	6	4"	Spherical	
REE102BN	6	4"	Ballistic	
REE115SN	6	4 1/2"	Spherical	
REE115BN	6	4 1/2"	Ballistic	
REE127SN	6	5"	Spherical	
REE127BN	6	5"	Ballistic	

## Appendix A – Imperial / Metric conversion.

INCHES AND FRACTIONS — MILLIMETERS											
Inches	Millimetres	Inches	Millimetres	Inches	Millimetres	Inches	Millimetres	Inches	Millimetres	Inches	Millimetres
1/16	1.5875	2-1/16	52.3876	4-1/16	103.188	6-1/1	153.988	8-1/1	204.788	10-1/16	255.588
1/8	3.1750	2-1/8	53.9751	4-1/8	104.775	6-1/8	155.575	8-1/8	206.375	10-1/8	257.176
3/16	4.7625	2-3/16	55.5626	4-3/16	106.363	6-3/16	157.163	8-3/16	207.963	10-3/16	258.763
1/4	6.3500	2-1/4	57.1501	4-1/4	107.950	6-1/4	158.750	8-1/4	209.550	10-1/4	260.351
5/16	7.9375	2-5/16	58.7376	4-5/16	109.538	6-5/1	160.338	8-5/1	211.138	10-5/16	261.938
3/8	9.5250	2-3/8	60.3251	4-3/8	111.125	6-3/8	161.925	8-3/8	212.725	10-3/8	263.526
7/16	11.1125	2-7/16	61.9126	4-7/16	112.713	6-7/16	163.513	8-7/16	214.313	10-7/16	265.113
1/2	12.7000	2-1/2	63.5001	4-1/2	114.300	6-1/2	165.100	8-1/2	215.900	10-1/2	266.701
9/16	14.2875	2-9/16	65.0876	4-9/16	115.888	6-9/16	166.688	8-9/16	217.488	10-9/16	
5/8	15.8750	2-5/8	66.6751	4-5/8	117.475	6-5/8	168.275	8-5/8	219.075	10-5/8	268.288
11/16	17.4625	2-11/16	68.2626	4-11/16	119.063	6-11/16	169.863	8-11/16	220.663	10-11/16	269.876
3/4	19.0500	2-3/4	69.8501	4-3/4	120.650	6-3/4	171.450	8-3/4	222.250	10-3/4	271.463
13/16	20.6375	2-13/16	71.4376	4-13/16	122.238	6-13/16	173.038	8-13/16	223.838	10-13/16	273.051
7/8	22.2250	2-7/8	73.0251	4-7/8	123.825	6-7/8	174.625	8-7/8	225.425	10-7/8	274.638
15/16	23.8125	2-15/16	74.6126	4-15/16	125.413	6-15/16	176.213	8-15/16	227.013	10-15/16	276.226
1	25.4001	3	76.2002	5	127.00	7	177.800	9	228.600	11	277.813
											279.401
1-1/16	26.9876	3-1/16	77.7877	5-1/16	128.588	7-1/1	179.388	9-1/1	230.188	11-1/16	
1-1/8	28.5751	3-1/8	79.3752	5-1/8	130.175	7-1/8	180.975	9-1/8	231.775	11-1/8	
1-3/16	30.1626	3-3/16	80.9627	5-3/16	131.763	7-3/16	182.563	9-3/16	233.363	11-3/16	280.988
1-1/4	31.7501	3-1/4	82.5502	5-1/4	133.350	7-1/4	184.150	9-1/4	234.950	11-1/4	282.576
1-5/16	33.3376	3-5/16	84.1377	5-5/16	134.938	7-5/1	184.738	9-5/1	236.538	11-5/16	284.163
1-3/8	34.9251	3-3/8	85.7252	5-3/8	136.525	7-3/8	187.325	9-3/8	238.125	11-3/8	285.751
1-7/16	36.5126	3-7/16	87.3127	5-7/16	138.113	7-7/1	188.913	9-7/1	239.713	11-7/16	287.338
1-1/2	38.1001	3-1/2	88.9002	5-1/2	139.700	7-1/2	190.500	9-1/2	241.300	11-1/2	288.926
											290.513
1-9/16	39.6876	3-9/16	90.4877	5-9/16	141.288	7-9/1	192.088	9-9/1	242.888	11-9/16	292.101
1-5/8	41.2751	3-5/8	92.0752	5-5/8	142.875	7-5/8	193.675	9-5/8	244.475	11-5/8	
1-11/16	42.8626	3-11/16	93.6627	5-11/16	144.463	7-11/16	195.263	9-11/16	246.063	11-11/16	
1-3/4	44.4501	3-3/4	95.2502	5-3/4	146.051	7-3/4	196.850	9-3/4	247.650	11-3/4	293.688
1-13/16	46.0376	3-13/16	96.8377	5-13/16	147.638	7-13/16	198.438	9-13/16	249.238	11-13/16	295.276
1-7/8	47.6251	3-7/8	98.4252	5-7/8	149.225	7-7/8	200.025	9-7/8	250.825	11-7/8	296.863
1-15/16	49.2126	3-15/16	100.013	5-15/16	150.813	7-15/1	201.613	9-15/1	252.413	11-15/16	298.451
2	50.8001	4	101.600	6	152.400	8	203.200	10	254.001	12	300.038

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