

## QWIKREAM™

### NEW INTERCHANGEABLE REAMING HEAD SYSTEM



**Ingersoll** is introducing the QwikReam, a new high speed reaming system. The QwikReam consists of an interchangeable carbide reaming head with a unique (patent pending) quick-change bayonet mechanism, suitable for reaming applications of 9.5 up to 32 mm H7 hole tolerance range.



### NO SET-UP TIME AFTER INDEXING!

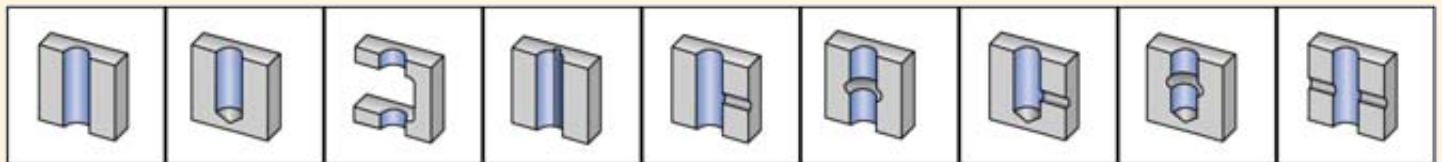
The reaming head is mounted on a steel shank (solid carbide or heavy metal shanks are available on request). The reaming head is attached to the shank by a bayonet screw and a special key is used to clamp and release the reaming head. The reamer has been designed with internal coolant holes for the most efficient head lubrication and extremely long tool life.

## APPLICATION RANGE

The QwikReam system is designed for high speed reaming. In comparison to the conventional method, this advanced solution allows increasing the feeds dramatically (more than 30 times faster). This feature is most advantageous in mass production industries. When large quantities of workpieces are involved, the savings in machining time, labor cost and productivity are multiplied greatly.

The QwikReam system is more expensive when compared to a conventional reamer. However, due to its high productivity, shorter production time and elimination of setup time, the tool cost per part is significantly lower.

## BORE TYPES



The QwikReam can be used for blind and through holes as well as for holes with cross holes or keyways. Moreover, they can be used for a very wide range of workpiece materials. Attached is a table with recommended machining data.

## QWIKREAM ADVANTAGES

- High speed/high production.
- No setup time.
- Low runout (maximum 3µm).
- One shank can be used for a range of hole diameters and various types of cutting edges.
- Durable, due to the combination of a carbide head and steel shank.
- No fear of losing any clamping parts which may fall during indexing.
- Internal coolant directed optimally to the cutting edges.
- Possibility of applying Minimal Quantity Lubrication (MQL) systems.
- No need to remove the tool, due to the frontal indexing system.



## GUIDELINES FOR HIGH SPEED REAMING

As the cutting speed and feed are much higher than in conventional reaming, the following guidelines should be adhered to:

- The machine being used should be in good condition, meaning:
  - Very rigid, to minimize vibration and low runout
  - Equipped with an internal coolant spindle
- The reamers being used for high speed reaming are usually coated or made from PCD/CBN. Users who regrind their reamers should recoat them for further high speed operation.
- Conventional reaming should be considered:
  - When the machine is not sufficiently rigid.
  - If only external cooling can be used.
  - In special applications such as thin walled tubes or when reaming soft materials (plastic, etc).
  - When there is a demand to use floating adapters (GFI).

## GRADES

The reaming heads are available in IN2005 grade which is a submicron substrate, TiAlN PVD coated. IN2005 is Ingersoll's most versatile grade, covering a wide range of workpiece materials and machining conditions. IN2005 features very high fracture and wear resistance which is required for efficient high speed reaming. A special coating process of the TiAlN PVD coating ensures very accurate and uniform coating thickness keeping a sharp cutting edge.

The following grades can be provided on request:

- PCD grade for machining aluminum
- PCBN grade for machining cast iron

### PCD TIP FOR MACHINING ALUMINUM



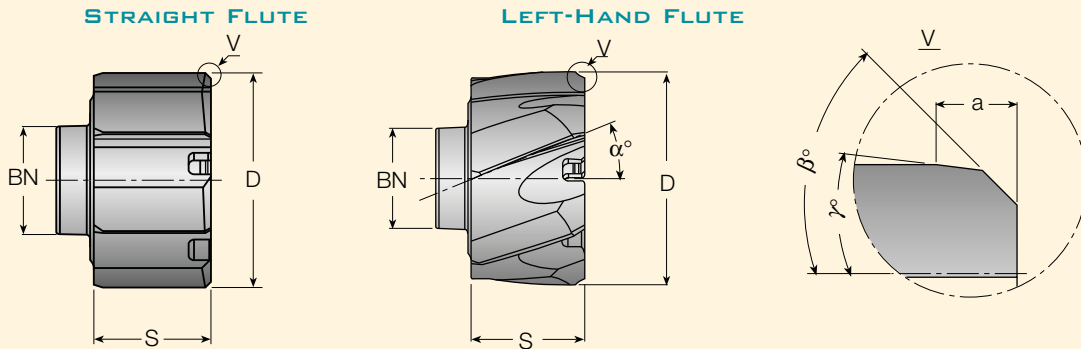
## REGRINDING

Regrinding the QwikReam head is not recommended since the high performance and repeatability will be affected. It is recommended to consider the QwikReam head as an indexable "disposable" insert.

## QWIKREAM RANGE

The standard QwikReam line will cover the range of 9.5 to 32mm. There are 6 bayonet sizes with their corresponding bayonet screws and clamping keys covering this range.

## QWIKREAM



### REAMER HEAD DESIGNATION CODE KEY

# XL - B - 19600 - R - 71 - IN2005

QwikReam Reamer

Flute Type

L = L.H.

S = Straight

Front End Configuration Code

Hole Diameter (9.5 - 32.0)

Right Hand Rotation

8 = H8 Tolerance

7 = 7H Tolerance

6 = 6H Tolerance

Deviation

Grade

#### QWIKREAM RANGE

D Range	BN Size	S
9.600-11.300	BN4	9.0
11.301-13.500	BN5	9.2
13.501-16.000	BN6	9.2
16.001-20.000	BN7	10.5
20.001-25.000	BN8	10.5
25.001-32.000	BN9	13.0

#### FRONT END CONFIGURATION CODE KEY

Chamfer Type/Value	$\beta^\circ$	$\gamma^\circ$	a
A	45	-	0.5
B	25	-	1.07
C	45	8	1.5
D	30	4	1.5

#### HEAD OPTIONS

Flute Type	Flute Angle $\alpha^\circ$	$\beta^\circ$	$\gamma^\circ$	a	Front End Code	IT	Grade
Straight	0	45	-	0.5	*A	H7	IN05S
		45	8	1.5	C		IN2005*
Left-Hand	-20	25	-	1.07	*B		PCD
		30	4	1.5	D		CBN

\* Standard

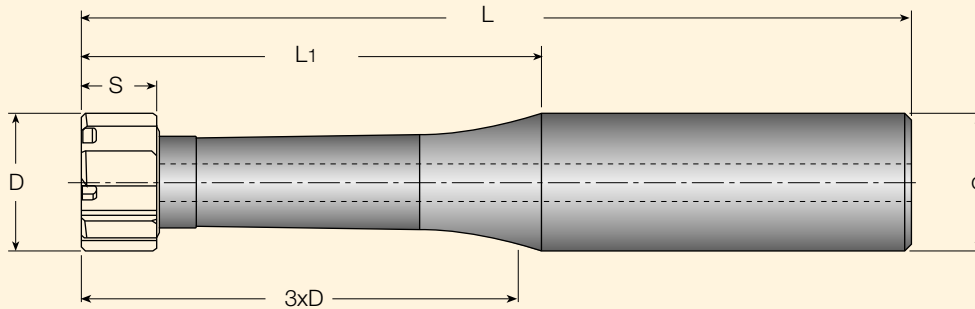
## INCH STANDARD QWIKREAM HEADS

Part Number & Grade	(BN6 Range)	Dia	Flute Type	Front End Code	In Stock
XLB14287R71	IN2005	0.563	LH	B	
XSA14287R71	IN2005	0.563	ST	A	
XLB15875R71	IN2005	0.625	LH	B	
XSA15875R71	IN2005	0.625	ST	A	
Part Number & Grade	(BN7 Range)	Dia	Flute Type	Front End Code	In Stock
XLB17462R71	IN2005	0.688	LH	B	Y
XSA17462R71	IN2005	0.688	ST	A	Y
XLB19050R71	IN2005	0.750	LH	B	Y
XSA19050R71	IN2005	0.750	ST	A	Y
Part Number & Grade	(BN8 Range)	Dia	Flute Type	Front End Code	In Stock
XLB20637R71	IN2005	0.813	LH	B	
XSA20637R71	IN2005	0.813	ST	A	
XLB22225R71	IN2005	0.875	LH	B	
XSA22225R71	IN2005	0.875	ST	A	
XLB23812R71	IN2005	0.938	LH	B	
XSA23812R71	IN2005	0.938	ST	A	
XLB25400R71	IN2005	1.000	LH	B	
XSA25400R71	IN2005	1.000	ST	A	

## METRIC STANDARD QWIKREAM HEADS

Part Number & Grade	(BN6 Range)	Dia	Flute Type	Front End Code	In Stock
XLB13501R71	IN2005	13.501	LH	B	
XSA13501R71	IN2005	13.501	ST	A	
XLB14000R71	IN2005	14.000	LH	B	
XSA14000R71	IN2005	14.000	ST	A	
XLB15000R71	IN2005	15.000	LH	B	
XSA15000R71	IN2005	15.000	ST	A	
XLB16000R71	IN2005	16.000	LH	B	
XSA16000R71	IN2005	16.000	ST	A	
Part Number & Grade	(BN7 Range)	Dia	Flute Type	Front End Code	In Stock
XLB16001R71	IN2005	16.001	LH	B	Y
XSA16001R71	IN2005	16.001	ST	A	Y
XLB17000R71	IN2005	17.000	LH	B	Y
XSA17000R71	IN2005	17.000	ST	A	Y
XLB18000R71	IN2005	18.000	LH	B	Y
XSA18000R71	IN2005	18.000	ST	A	Y
XLB19000R71	IN2005	19.000	LH	B	
XSA19000R71	IN2005	19.000	ST	A	Y
XLB20000R71	IN2005	20.000	LH	B	Y
XSA20000R71	IN2005	20.000	ST	A	Y
Part Number & Grade	(BN8 Range)	Dia	Flute Type	Front End Code	In Stock
XLB20001R71	IN2005	20.001	LH	B	
XSA20001R71	IN2005	20.001	ST	A	
XLB21000R71	IN2005	21.000	LH	B	
XSA21000R71	IN2005	21.000	ST	A	
XLB22000R71	IN2005	22.000	LH	B	
XSA22000R71	IN2005	22.000	ST	A	
XLB23000R71	IN2005	23.000	LH	B	
XSA23000R71	IN2005	23.000	ST	A	
XLB24000R71	IN2005	24.000	LH	B	
XSA24000R71	IN2005	24.000	ST	A	
XLB25000R71	IN2005	25.000	LH	B	
XSA25000R71	IN2005	25.000	ST	A	

## QWIKREAM



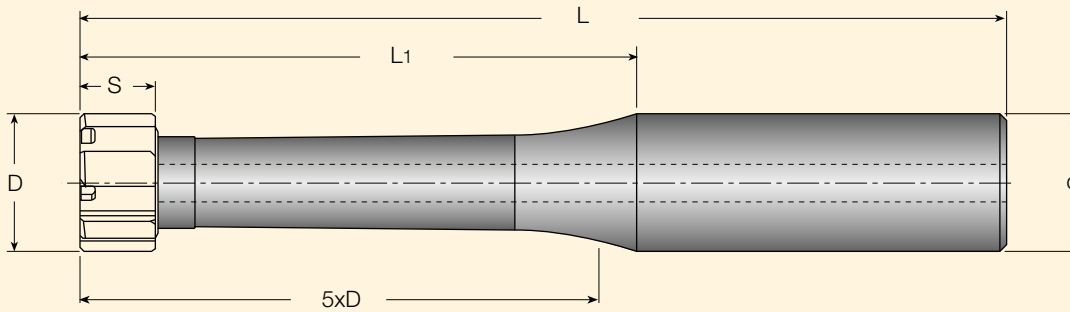
### INCH SHANKS FOR 3xD HOLES

Designation	Diameter Range	BN Size	d	S	L	L1	Shank Type	Shank Material	In Stock
XS6053226S6R01	.531"-.630" (13.501-16mm)	BN6	5/8"	.362"	4.15"	2.26"	Cylindrical	Steel	Y
XS7063278S7R01	.630"-.787" (16.001-20mm)	BN7	3/4"	.413"	4.74"	2.78"	Cylindrical	Steel	
XS8079331S7R01	.787"-.1.0" (20.001-25.4mm)	BN8	3/4"	.413"	5.28"	3.31"	Cylindrical	Steel	

### METRIC SHANKS FOR 3xD HOLES

Designation	Diameter Range	BN Size	d	S	L	L1	Shank Type	Shank Material	In Stock
XS6135057T3R01	13.501-16mm (.531"-.630")	BN6	16	9.2	105.5	57.5	Cylindrical	Steel	Y
XS7160070T4R01	16.001-20mm (.630"-.787")	BN7	20	10.5	120.5	70.5	Cylindrical	Steel	
XS8200084T4R01	20.001-25.4mm (.787"-.1.0")	BN8	20	10.5	134	84	Cylindrical	Steel	Y

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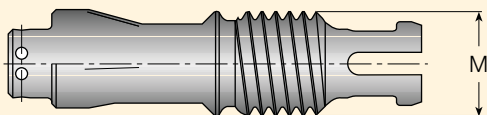
## INCH SHANKS FOR 5XD HOLES

Designation	Diameter Range	BN Size	d	S	L	L1	Shank Type	Shank Material	In Stock
XS605335056R01	.531"-.630" (13.501-16mm)	BN6	5/8"	.362"	5.41"	3.52"	Cylindrical	Steel	Y
XS706343357R01	.630"-.787" (16.001-20mm)	BN7	3/4"	.413"	6.32"	4.35"	Cylindrical	Steel	
XS807953157R01	.787"-.1.0" (20.001-25.4mm)	BN8	3/4"	.413"	7.28"	5.31"	Cylindrical	Steel	Y

## METRIC SHANKS FOR 5XD HOLES

Designation	Diameter Range	BN Size	d	S	L	L1	Shank Type	Shank Material	In Stock
XS6135089T3R01	13.501-16mm (.531"-.630")	BN6	16	9.2	137.5	89.4	Cylindrical	Steel	Y
XS7160110T4R01	16.001-20mm (.630"-.787")	BN7	20	10.5	160.5	110.5	Cylindrical	Steel	Y
XS8200135T4R01	20.001-25.4mm (.787"-.1.0")	BN8	20	10.5	185	135	Cylindrical	Steel	Y

## BAYONET SCREW



Designation	Head Diameter Range	Bayonet Size	M
TM-B4-SCR	9.600-11.300mm	BN4	M4
TM-B5-SCR	11.301-13.500mm	BN5	M5
TM-B6-SCR	13.501-16.000mm	BN6	M6
TM-B7-SCR	16.001-20.000mm	BN7	M7
TM-B8-SCR	20.000-25.000mm	BN8	M8
TM-B9-SCR	25.001-32.000mm	BN9	M9

## CLAMPING KEY



Designation	Head Diameter Range	Bayonet Size
TM-B4-KEY	9.600-11.300mm	BN4
TM-B5-KEY	11.301-13.500mm	BN5
TM-B6-KEY	13.501-16.000mm	BN6
TM-B7-KEY	16.001-20.000mm	BN7
TM-B8-KEY	20.000-25.000mm	BN8
TM-B9-KEY	25.001-32.000mm	BN9