



HAND TOOLS-STEEL FILES

Your speedy effortless tool ▶

Profile

JK Files (India) Limited is a 63-year old company built on a legacy of excellence synonymous with Raymond's Limited. With five ISO 9001:2008 certified plants, at Ratnagiri, Chiplun, Pithampur, Vapi and Kolkata, our products are marketed all over the country by 600 dealers. Our footprint extends to countries in Europe as well as USA, UK and Latin America with a product range that consists of Files, HSS Drills, Hand Tools, Power Tools, Solid Carbide Tools, HSS Taps and End Mills.

We are committed to combining mechanical and digital engineering to produce innovative solutions for you. Blending the brand's core ideals with the changing requirement of times, we are launching a new outlook with JK Superdrive. This is not just a change in name but also a change in the way we will do our business. It promises new tamper-proof packaging, renewed marketing support and open channels of communication.

Our promise of being your speedy effortless tool combines cutting edge technology with reliability and quality. As you set forth to build a new tomorrow, you will find a reliable partner by your side.

We welcome you to the world of JK Superdrive.



JK Files (India) Limited
(A Subsidiary of **Raymond Limited**)

We shall provide products and services that meets our Customers' requirements on time, every time.

We shall provide all possible assistance to our Customers wherever required to get benefits from the use of our products.

*We shall continually improve our processes to understand changing customer needs of **QUALITY, COST and DELIVERY** which is vital for our continued growth and success.*
























































*We will continually improve the effectiveness and compliance of our **QUALITY MANAGEMENT SYSTEM** with the involvement of employees at all levels.*

We are committed to ensure safety of all our facilities.



S Ganeshkumar
C.E.O.

Index

MACHINIST Limes de mécanique Limas de mecánico		SAW Limes pour scies Limas para sierra		SAW Limes pour scies Limas para sierra		RASP Râpes à bois Escof Inas		SPECIAL FILE Limes spéciales Limas para usos especiales		NEEDLE FILE Lime aiguilles Lima aguja		DIAMOND COATED NEEDLE FILES Limes agujae diamantées Limas de agujae diamantadas	
NAME	SECTION	NAME	SECTION	NAME	SECTION	NAME	SECTION	NAME	SECTION	NAME	SECTION	NAME	SECTION
PAGE NO. -1-3		PAGE NO. -4-5		PAGE NO. -6-7		PAGE NO. -8-10		PAGE NO. -11-21		PAGE NO. -23-24		PAGE NO. -25-26	
FLAT		MILL REGULAR TWO SQUARE EDGE		DOUBLE ENDED SAW		FLAT		FLAT WITH CHIP BREAKER		FLAT		FLAT	
HAND		MILL BLUNT TWO ROUND EDGE		PIT SAW		HALF ROUND		HOBBY RASP		HAND		HAND	
HALF ROUND		MILL BLUNT ONE ROUND EDGE		FEATHER EDGE SAW		ROUND		FILE & RASP COMBINATION		HALF ROUND		HALF ROUND	
ROUND		MILL BLUNT TWO SQUARE EDGE		ROUND CHAIN SAW		CABINET RASP		HANDY FILE		ROUND		ROUND	
SQUARE		HEAVY TAPER				SHOE RASP		FLAT HANDLE		SQUARE		SQUARE	
THREE SQUARE		REGULAR TAPER				HORSE RASP WITH TANG		FLAT HANDLE WITH HEAVY		THREE SQUARE		THREE SQUARE	
WARDING		SLIM TAPER				HORSE RASP WITHOUT TANG		FLAT SUPERLIGHT 2ND CUT		KNIFE		KNIFE	
KNIFE		EXTRA SLIM TAPER								BARRETTE			
		DOUBLE EXTRA SLIM TAPER								CROSSING			
		BAND SAW								SLITTING			
										CROCHET			
										HAND WITH ROUND EDGE			

Available Cuts: ■ Bastard ■ Second Cut ■ Smooth

▬ File Cut — Safe Edge ▲▲▲▲ Rasp Cut



Machinist Files

Limes de Mécanique

Limas de Mecânica



Machinist Files

Limes de Mécanique

Limas de Mecánica



FLAT - Plate pointue
- Plana punta

HAND - Plate à main
- Plana paralela

HALF ROUND - Mironde
- Mediacaña

ROUND - Ronde
- Redonda



FLAT - Plate pointue - Plana punta



	SIZE INCHES	4	6	8	10	12	14
	MM	100	150	200	250	300	350
	W MM	12	16	20.5	25.0	29.8	35.5
	T MM	3	4	4.45	5.80	6.1	7.1

HAND - Plate à main - Plana paralela



	SIZE INCHES	4	6	8	10	12	14
	MM	100	150	200	250	300	350
	W MM	12	16	20.5	25.0	29.8	35.5
	T MM	3	4	4.45	5.80	6.1	7.1

HALF ROUND - Mironde - Mediacaña



	SIZE INCHES	4	6	8	10	12	14
	MM	100	150	200	250	300	350
	W MM	12	16.1	19.8	24.6	29.55	34.5
	T MM	4	4.7	5.9	7.3	8.6	10.0

ROUND - Ronde - Redonda



	SIZE INCHES	4	6	8	10	12	14
	MM	100	150	200	250	300	350
	T MM	3.8	6.3	7.15	9.25	12	16

**SQUARE - Carrée
- Cuadrada**

**THREE SQUARE (TRIANGULAR)
- Triangulaire - Triangular**

**WARDING
- Entrée - Delgada**

**KNIFE - Couteau
- Cuchillo**



SQUARE - Carrée - Cuadrada



	SIZE	INCHES	4	6	8	10	12	14
		MM	100	150	200	250	300	350
	T	MM	3.9	6	7.7	9.6	12.2	15.9

THREE SQUARE (TRIANGULAR) - Triangulaire - Triangular



	SIZE	INCHES	4	6	8	10	12	14
		MM	100	150	200	250	300	350
	W	MM	8.8	12	15.0	19.0	21.6	24.6

WARDING - Entrée - Delgada



	SIZE	INCHES	3	3.5	4	6	8
		MM	75	90	100	150	200
	W	MM	10	9.5	12.1	16.4	20.5
	T	MM	1.5	1	1.4	2.3	2.9

KNIFE - Couteau - Cuchillo



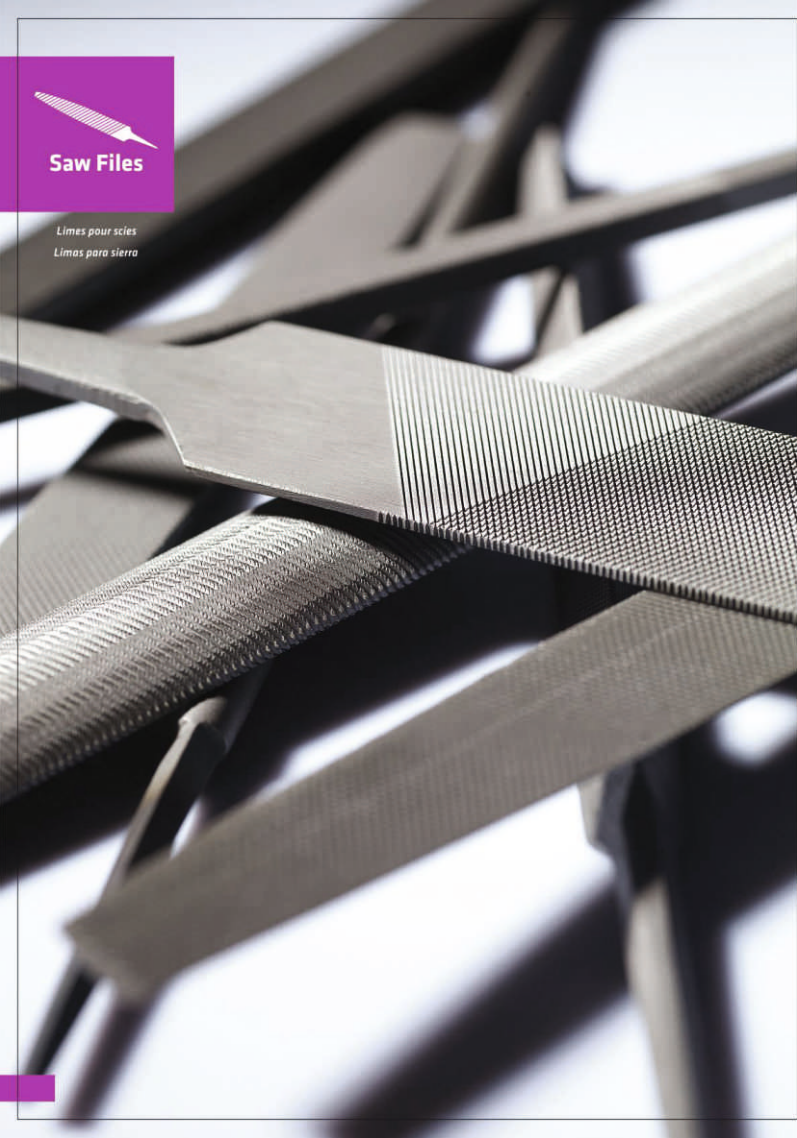
	SIZE	INCHES	4	6	8	10
		MM	100	150	200	250
	W	MM	12.9	17.4	22.3	27.4
	T	MM	3.3	4.4	5.4	6.6

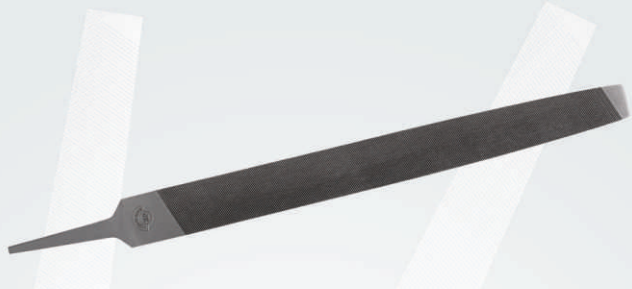


Saw Files

Limes pour scies

Limas para sierra





MILL REGULAR TSE

Plaque pour scies régulières
- 2 bords plats

Plano regular
- Dos cantos planos

MILL BLUNT TRE

Plaque pour scies
- 2 bords ronds

Plano paralela sierra - Dos cantos redondos

MILL BLUNT ORE

Plaque pour scies
- 1 bord rond

Plano paralela sierra - Un canto redondo

MILL BLUNT TSE

Plaque pour scies
- 2 bords plats

Plano paralela sierra - Dos cantos planos



Length
Inches

Length
MM

W X T

W X T

W X T

W X T

4

100

11.5 X 1.9

-

-

-

6

150

16.0 X 3.0

16.0 X 3.0

16.0 X 3.0

16.0 X 3.0

7

175

18.0 X 3.2

18.0 X 3.2

18.0 X 3.2

18.0 X 3.2

8

200

20.4 X 3.5

20.4 X 3.5

20.4 X 3.5

20.4 X 3.5

9

225

-

24.0 X 3.8

24.0 X 3.8

24.0 X 3.8

10

250

25.1 X 4.8

25.1 X 4.8

25.1 X 4.8

25.1 X 4.8

12

300

30.3 X 5.3

30.3 X 5.3

30.3 X 5.3

30.3 X 5.3

14

350

36.0 X 6.5

-

-

36.0 X 6.5



Saw Files

Limes pour scies

Limas para sierra



	HEAVY TAPER <i>Triangulaire pour scies lourde (Tiers-point)</i> <i>Triangular pesada</i>	REGULAR TAPER <i>Triangulaire pour scies régulier</i> <i>Triangular normal</i>	SLIM TAPER <i>Triangulaire pour scies effilée</i> <i>Triangular delgada</i>	EXTRA SLIM TAPER <i>Triangulaire pour scies très effilée</i> <i>Triangular extra delgada</i>	DOUBLE EXTRA SLIM <i>Triangulaire pour scies double extrême effilée</i> <i>Triangular delgadísima</i>	BAND SAW <i>Triangulaire pour machine à ruban bords ronds</i> <i>Sierra de cinta</i>
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Length Inches	Length MM	W	W	W	W	W	W

3	75	-	7.2	-	-	-	-
3.5	90	8.8	7.2	-	-	-	-
4	100	10.0	8.8	6.1	5.0	4.5	-
4.5	110	10.5	10.0	7.2	6.1	-	-
5	125	12	10.5	7.2	6.1	5.0	10.5
6	150	13.5	12	8.8	7.2	6.1	12
7	175	15.0	14.5	10.5	8.8	7.2	13.5
8	200	16.0	15.0	12	10.5	8.8	15.0
9	225	19.0	16.0	13.5	-	-	-
10	250	21.6	19.0	15.0	-	-	-

DOUBLE ENDED SAW - Triangulaire
pour scies double - Triangular doble

PIT SAW - Barboche
- Semiredonda

FEATHER EDGE - Pignon á languette
- Serrucho de canto de lengüeta

ROUND CHAIN SAW
- Onde pour scier á chaîne
- Redonda para cadenas



DOUBLE ENDED SAW - Triangulaire pour scies double - Triangular doble

	SIZE	INCHES	6	7	8	9	10
		MM	150	175	200	225	250
	W	MM	6.1	6.1	7.2	8.8	10.0

PIT SAW - Barboche - Semiredonda

	SIZE	INCHES	4	4.5	5	6
		MM	100	110	125	150
	W	MM	8.3	9.3	10.3	11.3
	T	MM	4.2	4.7	5.2	5.7

FEATHER EDGE - Pignon á languette - Serrucho de canto de lengüeta

	SIZE	INCHES	5	6
		MM	125	150
	W	MM	27.3	27.3
	T	MM	9.6	9.6

ROUND CHAIN SAW - Onde pour scier á chaîne - Redonda para cadenas

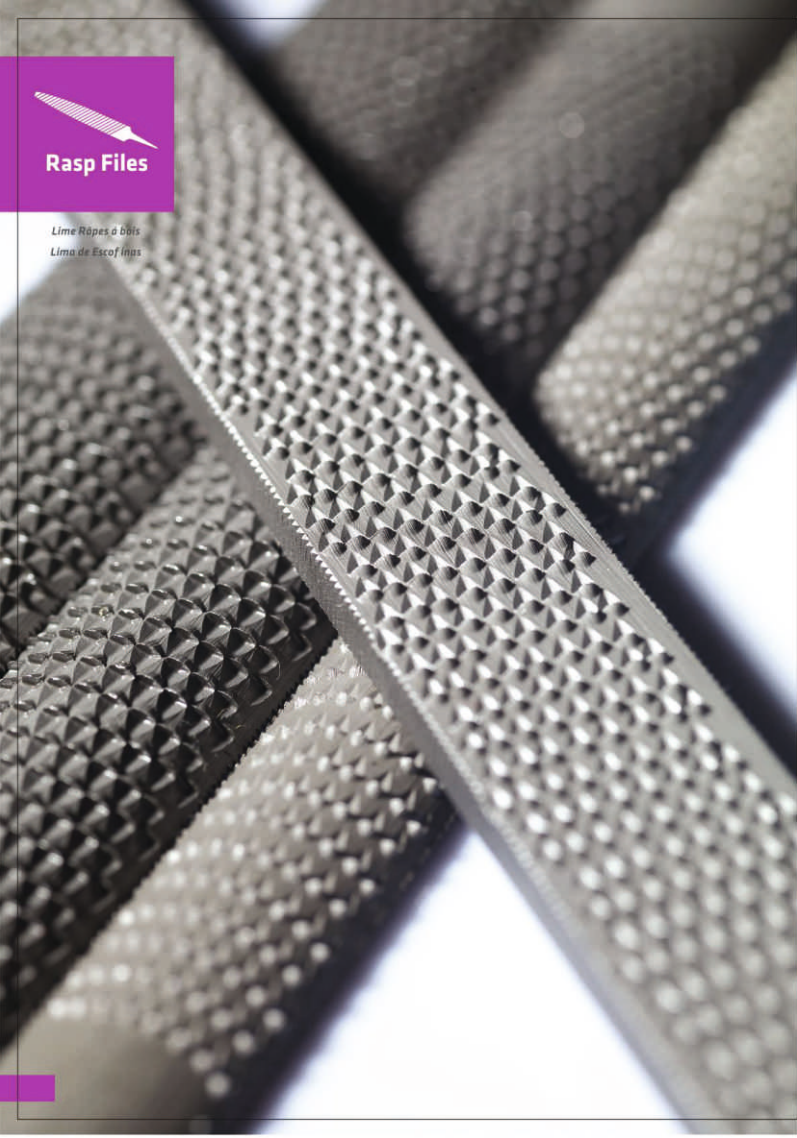
	SIZE	INCHES	6 DIA 1/8	9/64	5/32	11/64			
		MM	150 T	3.2	3.5	4.0	4.5		
	W	INCHES	8 DIA 3/16	13/64	7/32	15/64	1/4	5/16	3/8
	T	MM	200 T	4.8	5.16	5.5	6.0	6.3	8.0



Rasp Files

Lime Râpes à bois

Lima de Escofinas



FLAT - Plate pointue
- Plana punta

HALF ROUND - Mironde
- Mediacaña

ROUND - Ronde
- Redonda

CABINET RASP
- Râpe chaisière
- Escofina de ebanista



FLAT - Plate pointue - Plana punta



	SIZE	INCHES	6	8	10	12	14
		MM	150	200	250	300	350
	W	MM	16.0	20.5	25.0	29.8	35.5
	T	MM	4.0	4.45	5.8	6.1	7.1

HALF ROUND - Mironde - Mediacaña



	SIZE	INCHES	6	8	10	12	14
		MM	150	200	250	300	350
	W	MM	16.1	19.8	24.6	29.55	34.5
	T	MM	4.7	5.9	7.3	8.6	10.0

ROUND - Ronde - Redonda



	SIZE	INCHES	6	8	10	12	14
		MM	150	200	250	300	350
	T	MM	6.3	8	10	12	16

CABINET RASP - Râpe chaisière - Escofina de ebanista



	SIZE	INCHES	6	8	10	12	14
		MM	150	200	250	300	350
	W	MM	19.5	23.5	29	34.5	39
	T	MM	3.5	4.5	6	6.5	8.5



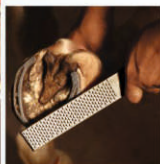
Rasp Files

Lime Râpes à bois
Lima de Escofinas

SHOE RASP - Râpe bottier
- Raspa de zapatero



HORSE RASP
- Râpe maréchale
- Raspa de herrador



SHOE RASP - Râpe bottier - Raspa de zapatero



SIZE	INCHES	8	10
	MM	200	250
W	MM	19.8	24.6
T	MM	5.9	7.3

HORSE RASP - Râpe maréchale - Raspa de herrador



WITH TANG - À queue - Con cola			
SIZE	INCHES	12	14
	MM	300	350
W	MM	39.8	42.0
T	MM	8.8	5.5

WITHOUT TANG - Sans queue - Sin cola			
SIZE	INCHES	12	14
	MM	300	350
W	MM	35.7	39.8
T	MM	7.7	8.8



Special Files

*Limes spéciales
Limas para usos
especiales*

Special Files

Limes spéciales
Limas para usos
especiales

FLAT WITH CHIP BREAKING GROOVE - Plate pointue
à casse copeaux - Plana con ranura para descañar

HOBBY RASP

FILE & RASP COMBINATION
- Lime et râpe combinée
- Lima y escofin à combinado

HANDY FILE
- Lime handy - Lima handy



FLAT WITH CHIP BREAKING GROOVE - Plate pointue à casse copeaux - Plana con ranura para descañar

SIZE	INCHES	6	8	10	12	14
		MM	150	200	250	300
W	MM	16	20.5	25.0	29.8	35.5
T	MM	4	4.45	5.8	6.1	7.1

HOBBY RASP

SIZE	INCHES	8	10
MM		200	250
W	MM	24.8	24.8
T	MM	6.0	6.0

FILE & RASP COMBINATION - Lime et râpe combinée - Lima y escofin à combinado

SIZE	INCHES	6	8
MM		150	200
W	MM	16.0	20.5
T	MM	4.0	4.45

HANDY FILE - Lime handy - Lima handy

SIZE	INCHES	6	8	10	12
MM		150	200	250	300
W	MM	20.4	25.1	30.3	30.3
T	MM	3.5	4.8	5.3	5.3

FLAT HANDLE

FLAT HANDLE HEAVY

FLAT SUPER LIGHT 2ND CUT



FLAT HANDLE



SIZE	INCHES				
		6	8	10	12
	MM	150	200	250	300
W	MM	16.0	20.4	25.1	30.3
T	MM	3.0	3.5	4.8	5.3

FLAT HANDLE HEAVY



SIZE	INCHES				
		6	8	10	12
	MM	150	200	250	300
W	MM	16.0	20.5	25.0	29.8
T	MM	4.0	4.45	5.8	6.1

FLAT SUPER LIGHT 2ND CUT



SIZE	INCHES				
		6	8	10	12
	MM	150	200	250	300
W	MM	16.0	20.4	25.1	30.3
T	MM	3.0	3.5	4.8	5.3

Special Files

Limes spéciales
Limas para usos
especiales

PILLAR REGULAR - Pilièr regulier
- Pilares regular

ALUMINIUM FLAT - Plate pointue
pour aluminium - Plana aluminio

ALUMINIUM HALF ROUND
- Mironde pour aluminium
- Mediaçana aluminio

LONG ANGLE LATHE FILE
- Plate pour tour - Lima De
angulo largo para torno



PILLAR REGULAR - Pilièr regulier - Pilares regular

SIZE	INCHES	6				8				10				12			
		MM				MM				MM				MM			
W	MM	11.3	14.5	18	21												
T	MM	5.7	7.3	9	10.6												

Highlights: These files are narrower than hand files. One safe edge. Double Cut.

Application: Pillar files are used by millwrights and machinists for filing keyways, slots, etc.

ALUMINIUM FLAT - Plate pointue pour aluminium - Plana aluminio

SIZE	INCHES	6		8		10		12		14		
		MM		MM		MM		MM		MM		
W	MM	16	20.5	25	29.8	35.5						
T	MM	4	4.45	5.8	6.1	7.1						

Highlights: Teeth are designed for fast cutting and to minimise clogging of metal. Double Cut.

Application: These are primarily used for filing flat surfaces of aluminium alloy and other non-ferrous metals.

ALUMINIUM HALF ROUND - Mironde pour aluminium - Mediaçana aluminio

SIZE	INCHES	6		8		10		12		14		
		MM		MM		MM		MM		MM		
W	MM	16.1	19.8	24.6	29.55	34.5						
T	MM	4.7	5.9	7.3	8.6	10						

Highlights: One side is half round and the other side is flat. Teeth are designed for fast cutting and to minimise clogging of metal. Double Cut.

Application: These are primarily used for filing flat as well as curved surfaces of aluminium alloy and other non-ferrous metals.

LONG ANGLE LATHE FILE - Plate pour tour - Lima De angulo largo para torno

SIZE	INCHES	10		12		14		
		MM		MM		MM		
W	MM	25	29.8	35.5				
T	MM	5.8	6.1	7.1				

Highlights: These files have long angle cuts. The uncut edges permit filing closer to shoulder without damage. Single Cut.

Application: Long angle lathe files are used for obtaining smoother finishes combined with fast stock removal on lathe work.

DOUBLE EDGE SAW
- Pignón Serrucho de canto doble

CROSS CUT
- Couteau américain Lima de doble talla

FARMERS OWN
- Plaque fermière Plana con cabo

CONTACT FILE "A" - Lime pour contact "A" - Lima para contactos "A"



DOUBLE EDGE SAW - Pignón Serrucho de canto doble



	SIZE	INCHES	5	6
		MM	125	150
	W	MM	18	18
	T	MM	6	6

Highlights: Single Cut.

Application: These files are used for sharpening saws with less than 60° angle.

CROSS CUT - Couteau américain Lima de doble talla



	SIZE	INCHES	6	8	10
		MM	150	200	250
	W	MM	14.3	18.1	21.8
	T	MM	6.6	8.2	10.1

Highlights: The rounded back of Cross cut file is used for deepening rounded gullets of "Great American" style saw. Single Cut.

Application: Cross Cut Saw files are for sharpening cross-cut saws of the "Great American" style.

FARMERS OWN - Plaque fermière Plana con cabo



	SIZE	INCHES	6	8	10	12
		MM	150	200	250	300
	W	MM	20.4	25.1	30.3	30.6
	T	MM	3.5	4.8	5.6	5.6

Highlights: These files have poodle handle and uncut Cut.

Application: Used for sharpening agricultura; tools and knives of reaping and mowing machinery.

CONTACT FILE "A" - Lime pour contact "A" - Lima para contactos "A"



	SIZE	INCHES	3	3.5
		MM	75	90.5
	W	MM	8.5	8.5
	T	MM	1	1

Highlights: Thin rectangular shape with paddle handle. Double Cut.

Application: Designed for dressing of distributor points of spark plugs.



Special Files

Limes spéciales
Limas para usos
especiales

MILLED STRAIGHT TOOTH FILE

CAR BODY FILE - Pour carrossier
Limas carrozera

MILLED CUT RIGID TYPE FILE
Type rigide - Tipo rígido

CONTACT FILE "B" - Lime pour contact
contact "B" - Lima para contactos "B"



MILLED STRAIGHT TOOTH FILE



SIZE	INCHES	8 10 12 14			
		MM	200	250	300
W	MM	20.5	25.4	30.6	35.5
T	MM	4.75	6	6.6	7.1

Highlights: These files are milled cut and have straight tooth.

Application: These files are mainly used on soft material and carbon steel.

CAR BODY FILE - Pour carrossier - Limas carrozera



SIZE	INCHES	8 10 12 14			
		MM	200	250	300
W	MM	20.6	25.4	30.6	34
T	MM	3.7	4.8	5.5	4.8

Highlights: These files are milled cut and because of their curved tooth, have easy clearance for chips. Fixed on J K Holder, they can be flexed to required curvature.

Application: They are very suitable for filing large surfaces where other files cannot be used. These files are mainly for filing automobile / car body.

MILLED CUT RIGID TYPE FILE - Type rigide - Tipo rígido



SIZE	INCHES	8 10 12 14			
		MM	200	250	300
W	MM	20.6	25.4	30.6	33.5
T	MM	5	6	6.6	7.1

Highlights: These files are milled cut and are with tang. Specially designed curved tooth gives a free clearance for the chips.

Application: These files are mainly used on soft material and carbon steel.

CONTACT FILE "B" - Lime pour contact "B" - Lima para contactos "B"



SIZE	INCHES	3
MM		75
W	MM	11
T	MM	1

Highlights: Thin rectangular shape without tang. Double cut.

Application: Designed for dressing of distributor points of spark plugs.

FLAT CHAIN SAW -
Plate a chaîne - Sierra de cadena

BAND SAW BLUNT - Triangulaire pour parallele - Sierra de cinta paralela

FARRIER RASP FILE - Lime Rape marechaux - Herrero Escofina Lima



FLAT CHAIN SAW - Plate a Chaîne - Sierra de cadena



	SIZE	INCHES	6
		MM	150
	W	MM	16
	T	MM	4

Highlights: These are single cut, mill blunt files with two uncut round edges.

Application: Chain Saw files are for sharpening flat portion of Chain Saws.

BAND SAW BLUNT - Triangulaire pour parallele - Sierra de cinta paralela



	SIZE	INCHES	4.5	5	6	7	8
		MM	110	125	150	175	200
	W	MM	10	10.5	12	13.5	15

Highlights: These files are parallel towards the point unlike other saw files. Their edges are rounded and cut. Uncut edges are also available on request. Single Cut.

Application: Bandsaw blunt are for sharpening bandsaw blades having well rounded gullets.

FARRIER RASP FILE - Lime Rape marechaux - Herrero Escofina Lima



	SIZE	INCHES	14
		MM	350
	W	MM	45.5
	T	MM	5.2

Highlights: They have rasp cut on one side and file cut on the other side. Double Cut.

Application: These are used in shoeing horses. The rasp teeth on one side are for shaping the hoof; the file teeth on the opposite side are for filing the nails, shoes and general finishing.



Special Files

Limes spéciales
Limas para usos
especiales



FLAT BUMPER WITH SLEEVE



FLAT BUMPER WITH SLEEVE (Side)



HALF ROUND BUMPER
WITH SLEEVE



HALF ROUND BUMPER
WITH SLEEVE (Side)

FLAT BUMPER WITH SLEEVE-14"

	Length (mm)	350
	Width (mm)	35.5
	Thickness (mm)	7.1

HALF ROUND Bumper with Sleeve-14"

	Length (mm)	350
	Width (mm)	34.5
	Thickness (mm)	10.0

STAIR CASE MAKER RASP "U" TYPE (Front)



STAIR CASE MAKER RASP "U" TYPE (Side)



**STAIR CASE MAKER
RASP "U" TYPE (Side)**



**STAIR CASE MAKER
RASP "U" TYPE (Top)**



STAIR CASE MAKER RASP "U" TYPE-10"

Length (mm)	250
Width (mm)	24.6
Thickness (mm)	7.3



Special Files

Limes especiales
Limas para usos
especiales

GALVANIZING FILE (Front)

GALVANIZING FILE (Side)

STAIR CASE MAKER RASP
"OVAL TYPE" (Top)

STAIR CASE MAKER RASP
"OVAL TYPE" (Side)

GALVANIZING FILE - 8"

	Length (mm)	200
	Width (mm)	25
	Thickness (mm)	5.8

STAIR CASE MAKER RASP "OVAL TYPE" - 10"

Length (mm)	250
Width (mm)	24.6
Thickness (mm)	7.3


RAPID CROSS CUT FILE




FLAT CHIP BRAKING FILE



RAPID CROSS CUT FILE-10"

	Length (mm)	250
	Width (mm)	25.1
	Thickness (mm)	4.8

FLAT CHIP BRAKING FILE-10"

	Length (mm)	250
	Width (mm)	25
	Thickness (mm)	5.8



ENGINEERS FILE SET

*Jeux de limes de
mecanique Juego de
limas para Ingenieros*



*ENGINEERS FILE SET - Jeux de limes de mecanique
Juego de limas para ingenieros*

ENGINEERS FILE SET - Jeux de limes de mecanique juego de limas para ingenieros

		SIZE	INCHES	6	8
			MM	150	200
ROUND		W	MM	6.3	7.15
HAND		W	MM	16 X 4	20.5 X 4.45
HALF ROUND		W	MM	16.1 X 4.7	19.8 X 5.9
FLAT		W	MM	16 X 4	20.5 X 4.45
THREE SQUARE		W	MM	12	15
SQUARE		W	MM	6	7.2

Highlights: Assortment of different files of different cross section. Also available in 5 pieces.

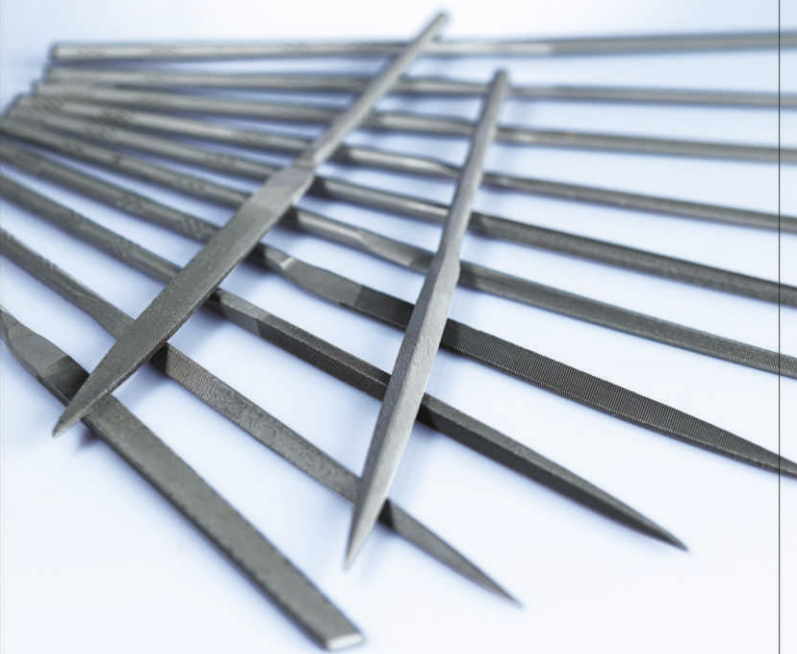
Application: General Applications.



Needle Files

Limes aiguilles

Limas aguja





Needle Files

Limes aiguilles

Limas aguja



SIZE	140/160 MM
CUT	0 1 2
NUMBER OF	20 25

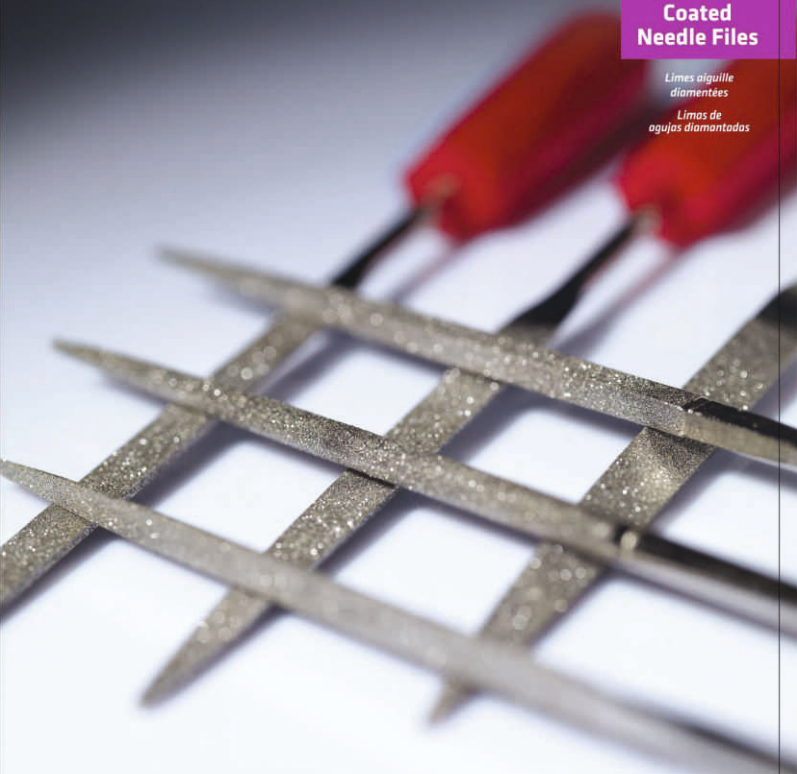
1 FLAT Plata pointue Plano punta		2 HAND Plata à main Plano paralelo		3 HALF ROUND Mironde Mediacano		4 ROUND Ronde Redonda	
5 SQUARE Carre Cuadrado		6 THREE SQUARE (TRIANGULAR) Triangulaire Triangular		7 KNIFE Couteau Cuchilla		8 BARRETTE Barette Barreta	
9 CROSSING Feuille de sauge Almendra		10 SLITTING Lime à fendre Para ranurar		11 CROCHET Crochet Crochet		12 HAND WITH ROUND EDGE Pilier à bords ronds Plano paralelo con canto redondo	



Diamond Coated Needle Files

*Limes aiguille
diamantées*

*Limas de
agujas diamantadas*





Diamond Coated Needle Files

Limes aiguille
diamantées

Limas de
agujas diamantadas



1	FLAT Plata pintue Plano punta		2	HAND Plata à main Plano paralelo		3	HALF ROUND Mironda Mediacana		4	ROUND Ronde Redonda	
5	SQUARE Carree Cuadrada		6	THREE SQUARE (TRIANGULAR) Triangulaire Triangular		7	KNIFE Couteau Cuchillo				

SIZE	140/160 MM
CUT	0 2



Handle

Manche Mango

DUAL COMPONENT HANDLE

PLASTIC HANDLE

WOODEN HANDLE

ECONOMY HANDLE



■ Standard weight per dozen in kgs.

■ Packing per case in dozens.

MM Inch	100 4" kg	Dozen	125 5" kg	Dozen	150 6" kg	Dozen	200 8" kg	Dozen	250 10" kg	Dozen	300 12" kg	Dozen	350 14" kg	Dozen	400 16" kg	Dozen
Flat	0.33	100	0.41	75	0.81	50	1.60	30	2.98	20	4.62	12½	7.48	6	11.52	6
Hand	0.33	100	0.41	75	0.81	50	1.68	30	3.18	20	4.70	12½	7.74	6	11.52	6
Half Round	0.33	100	0.41	75	0.73	50	1.56	30	2.76	20	4.86	12	8.16	6	11.52	6
Square	0.19	100	0.24	80	0.40	75	0.90	50	1.85	35	3.72	12½	7.18	8	11.37	6
Round	0.16	100	0.20	80	0.32	75	0.79	50	1.36	35	2.68	15	5.92	8	9.52	6
Three Square (Triangular)	0.33	100	0.54	70	0.96	50	1.68	30	3.32	20	5.06	12	8.88	7	12.15	6
Warding	0.15	100	0.30	80	0.43	75	0.82	50	1.77	35	-	-	-	-	-	-
Knife	0.26	100	-	-	0.60	50	1.32	30	2.60	20	4.40	12	-	-	-	-
Mill Regular	0.28	100	-	-	0.55	50	1.17	35	2.34	20	3.76	12	6.74	8	-	-
Mill Blunt	-	-	-	-	0.78	50	1.22	35	2.58	20	4.36	12	6.90	8	-	-
Farmers Own	-	-	-	-	1.26	45	2.82	24	4.56	15	-	-	-	-	-	-
Heavy Taper	0.42	100	0.80	60	1.03	50	2.04	25	4.36	15	-	-	-	-	-	-

Standard weight per dozen in kgs.

Packing per case in dozens.

MM Inch	100 4" kg	Dozen	125 5" kg	Dozen	150 6" kg	Dozen	200 8" kg	Dozen	250 10" kg	Dozen	300 12" kg	Dozen	350 14" kg	Dozen	400 16" kg	Dozen
Regular Taper	0.33	100	0.53	60	0.90	40	1.76	30	3.36	20	-	-	-	-	-	-
Slim Taper	0.17	100	0.26	100	0.50	75	1.32	35	2.36	20	-	-	-	-	-	-
Extra Slim Taper	0.12	100	0.20	100	0.30	75	0.77	50	-	-	-	-	-	-	-	-
Band Saw	-	-	0.49	60	1.12	50	1.96	30	-	-	-	-	-	-	-	-
Double - Ender	-	-	-	-	0.18	50	0.36	50	0.85	50	-	-	-	-	-	-
Pit Saw	0.23	100	0.48	75	0.72	50	-	-	-	-	-	-	-	-	-	-
Feather Edge Saw	-	-	1.18	20	2.54	20	-	-	-	-	-	-	-	-	-	-
Flat Rasp	-	-	-	-	1.00	40	1.72	25	3.14	20	5.12	10	8.12	6	-	-
Half Round Rasp	-	-	-	-	0.86	40	1.68	25	2.94	20	5.24	10	8.36	6	-	-
Round rasp	-	-	-	-	0.46	75	0.84	50	1.62	30	2.90	15	5.78	8	-	-
Cabinet Rasp	-	-	-	-	0.70	40	1.44	25	2.90	20	4.29	10	7.15	6	-	-

Choosing the Right File

The shape and size of the work piece, the material it is made of and the desired degree of finish will have to be considered when selecting the right file :

File Type

According to the filing application, Files are classified into the following categories :

- Machinist Files - for stock removal and surface finish requirements on machined components.
- Saw Files - for sharpening wood working saws and similar thin edges such as chaff cutter blade, matchets.
- Special Purpose Files - designed and used for specific applications/materials.
- Milled Tooth Files - for rapid stock removal from automobile body or any large surface and soft metals.
- Diamond Needle & Needle Files - for precision filing applications in die making and jewelry.
- Rasps - used on wood by pattern/cabinet makers, leather and similar soft materials for rapid stock removal.

Length

Desired stroke length will determine the length of the file. This is measured exclusive of the tang, from point to heel.



File Shape

The shape of the material to be filed will determine the shape of the Files. e.g. Flat files for flat and concave surface, Round files for enlarging holes, Triangular files for filing corners and angles, etc.

File Cut

- Single Cut - Single Cut files (mostly all Saw Files are Single Cut) are used for sharpening and edging applications e.g. Sharpening of saws where the piece is hard, point of contact is less and finish is required.
- Double Cut - Double Cut files need less effort for filing and also give good surface finish.
- Bastard Cut - for stock removal and coarse finish.
- Second Cut - for moderate stock removal and medium to coarse finish.
- Smooth Cut - for smooth surface finish.
- Rasp Cut - Special cut formation for rapid stock removal from surface or softer materials like wood or leather.

Tips:

- A new file should be used with light pressure in the beginning, preferably on a surface which has been filed earlier.
- In case of clogging of file teeth, clean the teeth with a soft wire brush.
- Use the files for cutting in the forward stroke only.
- Filing jobs should be held rigidly.

Delivery Period

Standard Files : In standard cases 8-10 weeks

Special Files : Against specific enquiries the delivery period & MOQ will be quoted on a case to case basis

Other Range



Hand Tools



Power Tool Accessories



HSS Drills



Power Tools



Solid Carbide Drills



HSS Taps

Contributing to industrial growth for the last 63 years





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**HEAVY MACHINE AND HAND POWER TOOLS
CUTTING DEVICES-HSS DRILLS**

Your speedy effortless tool ▶

Index

Page No	Technical Data	Données Techniques	Datos Técnicos	
	Twist Drill Nomenclature	la nomenclature du Foret Hflicoidal	Nomenclatura de Taladro de Rosca	
	Web Thread	l'amincissement de corps / Ime (Web)	Adelgazamiento de la Red	
	Range of Cutting Tools	Range of Cutting Tools	Range of Cutting Tools	
	HSS Straight Shank Drills	Des Forets Oueue	Tilladros de Varilla Recta de HSS AAV	
	Jobber Series Drill	Forets des Serie Courts	Tilladros de Serie de Trabajo	● ●
	Stub Series Drill	Fouits Strles Extra-courts	Taladros de Serie de Cabe	● ●
II	Long Series Drill	Forets longs	Taladros de Serie Largas	●
II	Extra Long Series Drills	Forets Extra-longs	Tilladros de Serie Extra Largas	●
	HSS Taper Shank Drills	Forets de Conique de HSS	Taladros de Varilla AAV	
●	Standard Drills	Des Forets types	Taladros Estndar	●
III	Long Series Drills	Forets Ionss	Taladros de Serie Larga	●
II	Extra Long Series Drills	Forets htr.i-longs	Taladros de Serie Extra Larga	●
II	HSS Centre Drills	Forets ; Centre de HSS	Taladros de Centro AAV	●
	Sliver 6 Oemini Drill	Des Forets en l'ent et de "demini"	Taladros de Plata Deming	●
II	Double End Drills	O u Forets 1 Deux Bouts	Taladros de Doble Punta	● ●
II	HSS Tool Bits	Uil D'Outill de HSS	Trazos de Herramienta AAV	●
	Masonry Drills Norm.li - Premium - Grilnt	Forets de Milonnerie Norm.li - Premlu m - Grilnt	Taladros de Albañilleria Normal- Premium - Grilnt	●
	Tips for Drilling	Des renseignements utiles pour le perage.	Algunos consejos Utiles para taladrar	
	Trouble Shooting and Remedies	Le Depannage et des Solutions	Solucin de Problemas y Remedios	



HSS Drills Bits

*Cutting-edge
performances*

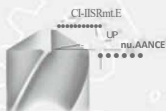
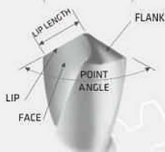
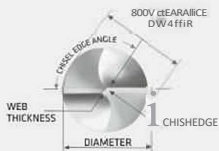
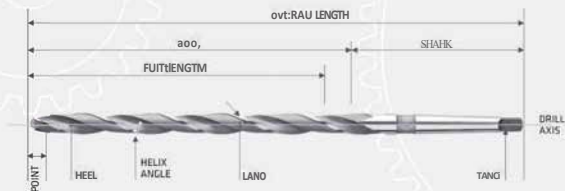


Technical Data

Twist Drill Nomenclature

Lo Nom,ncloctura Du Ford HillcoIdof
Nam1ncloct111Dc Talad,oa ,R d'uo

Catal Trenicas
DorlnhtTtth,rIqua



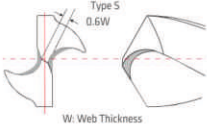
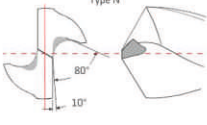
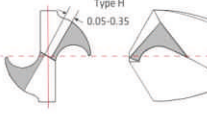
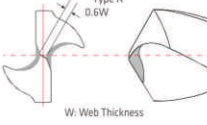
Web Thinning

L'amincissement De Corps / Àme (Web)
Adelgazamiento De La Red

Technical
Data

Datos Técnicos

Données Techniques

	Effects		Application	
	Les Effets	Efectos	L'Usage	Aplicación
 <p>Type S 0.6W</p> <p>W. Web Thickness</p>	<ul style="list-style-type: none"> • For general purpose • Easy thinning process • Le but général • Le processus d'amincissement facile • Para propósito general • Proceso de adelgazamiento fácil 	<ul style="list-style-type: none"> • General material • La matière générale • Material General 		
 <p>Type N</p> <p>80° 10°</p> <p>W. Web Thickness</p>	<ul style="list-style-type: none"> • Maintains strength of the point • Excellent cooling effect • Good chip discharge • Maintient la fermeté/ la solidité du point • L'effet excellent de refroidissement • Un bon vidage des éclats/ copeaux • Mantiene la fuerza del punto • Excelente efecto de enfriamiento • Buena descarga de astilla 	<ul style="list-style-type: none"> • Same as type S • For deep-hole drilling • Pareil à type S. • Pour percer un trou profond • Mismo que el tipo S • Para taladro de agujero profundo 		
 <p>Type H 0.05-0.35</p> <p>W. Web Thickness</p>	<ul style="list-style-type: none"> • Large decrease in thrust • Minimized skidding or walking of the drill point when starting a hole • When specially designed heavy web drill • Importante réduction de poussée • Un dérapage et un battage minimisés de la pointe de foret au point de percer un trou • Au moment du perçage/ forage fort du corps/ àme spécialement affecté heavy web drill • Mayor disminución en el empuje. • Deslizamiento o caminado del punto del taladro al iniciar un agujero • Cuando es especialmente diseñada taladro de red pesada 	<ul style="list-style-type: none"> • For deep-hole drilling • Automotive crankshaft • Materials of poor machinability such as stainless steel and heat resistant alloys. (not heavy cutting) • Pour forage de trou profond • Unarbre-manivelle automoteur • Les matière qui ne supporte pas le travail mécanique comme de l'acier inoxydable et des alliages thermoguidés • Para el taladrado de agujeros profundos • Cigüeñal automotriz • Materiales de maneje máquina pobre como el acero inoxidable y aleaciones resistentes al calor (ningún corte pesado) 		
 <p>Type R 0.6W</p> <p>W. Web Thickness</p>	<ul style="list-style-type: none"> • Decreases thrust and prevents chipping of cutting edges. • Diminue/ ralentit de la poussée et évite la fragmentation des tranchants des outils. • Disminuye el empuje y previene el cascado de los bordes de corte 	<ul style="list-style-type: none"> • For heavy cutting • Used mainly for rails and manganese steel • Pour coupage fort. • L'emploi principal pour des barreaux et de l'acier manganésé. • Para corte pesado • Utilizado principalmente para rieles y acero de manganeso 		

HSS Straight Shank Drills

Jobber Series Drills

Ferrite ou Sldt Courts
Tolados d. Strits de Tráboadora

Ofi Fontos o (l)1au1
R1ctm9n1, . HSS
Tolod, os d, Var/b
RutaAAV



S111 C1imtttr			ltnilh mm		S u , Olametr			lrn1th mm		S111 Olamttt1		lt11ilh mm		
mm	inch	diffi	1kM	IM1	mm	inch	dtlli	flull'	IM'rill	mm	inch	lit.lkd	flutt ov.,all	
A50			6	21	1.37			10	5/16	1.0			••	11
055			7	•	•	3/32		10	5/16	.20			••	11
5000			7	11	•			•	5/16	"	1'		••	11
Q6'			8	•	•	•	1	10	5/16	•	1	47	••	11
070			9	•	•	•	•	10	5/16	U 7	11164		•	11
075	1/32		9	28	•80		11	10	5/16	••	1/	•	•	11
080			10	10	•S,		•	10	5/16	••		•	•	11
Q8'			10	•	•	•	•	•	1/2	•.80	16	•	•	11
Q.O			11	11	2.60		•	10	5/16	•	15	•	•	11
Q9'			11	11	•	•	37	11	1/2	•	11	47	••	11
Q0			11	11	1.70		11	11	1/2	4.62		•	•	11
102			11	11	211	1 1/1		11	1/2	110	11	11	80	11
00			12	•	278		11	11	1/2	•	1/18	11	11	••
107			11	•	211		15	11	1/2	•	12	11	••	11
U.,		5/1	11	•	1.80			11	1/2	•	11	11	•	11
UD		1/1	11	•	2.81		11	11	1/2	H.O			••	11
U I		1/1	11	•	1.87			11	1/2	•	10	11	••	11
U1			16	•	•	•	11	11	1/2	••••	9	11	••	11
120			11	38	2.15			11	1/2	••••		11	•	11
1JO		1/1	11	•	1.00			11	1/2	••••	8		••	11
112			16	•	1.05		31	11	1/2	5.11		11	••	11
C-0		••	18	•	1.10			11	1/2	•, 11	7	11	••	11
150			11	•	1.17	1/1		11	1/2	5.16	U/54		11	8
1.51		5/1	11	•	3.20			11	1/2	5.11	6		••	11
i s ,	1/1		20	•	•	•	10	11	1/2	•			••	11
1 00		1/1	11	11	•			11	1/2	•	5	11	••	11
U 1			11	11	•	110		11	1/2	•			••	11
C70		5/1	11	11	•			11	1/2	•	4	5/1	•	11
178		5/1	11	•	3.0			11	1/2	•	5/1	11	•	11
00			11	•	3.7	•••	•	11	1/2	•	3	5/1	11	11
185		•	11	•	1.60		11	11	1/2	5.50		5/1	11	11
C0			11	•	•	•	27	11	1/2	•	7/12	11	11	11
111		1/1	11	•	3.0		11	11	1/2	•		11	11	11
131			11	•	•	•	11	11	1/2	H 1	2		11	11
2 2		•	24	•	1.80		11	43	11	11	5/1	11	11	11
100		•	•	•	•••		•	11	1/2	•	1	11	11	11
111		1/1	11	•	1.90		11	•	1/2	5.10			11	11
•••		•	•	•	3.91		•	•	1/2	•	5/1	11	11	11
210		•	•	•	•	5/32	11	•	1/2	•	A	11	11	11
211		••	27	11	•	•	11	•	1/2	S9S	110/54		11	11
220			27	11	1.00		11	•	1/2	•		11	11	11
111		•	27	11	1.01		11	•	1/2	•	8	11	101	11
230			27	11	1.01		•	•	1/2	UD			101	11

Standard straight shank ground flute drill for general purpose application on Steel and Cast steel, alloyed and non-alloyed, Grey cast iron, German silver steel, Graphite, etc

Un foret de type à queue rectiligne, à cannelure meulée, recommandé à l'usage général sur d'acier et d'acier coulé, allié et non-allié, du fonte grise, d'acier en maillechort, du graphit, etc

Taladro de flauta molida de varilla recta estándar para aplicaciones de propósito general en acero y acero fundido aleado y no aleado, hierro fundido gris, acero de plata alemana, grafito, etc.



Size-Diameter			Length mm		Size-Diameter			Length mm		Size-Diameter			Length mm	
mm	inch	dg/lg	flute	overall	mm	inch	dg/lg	flute	overall	mm	inch	dg/lg	flute	overall
6.15		C	63	101	8.73	11/32		81	125	11.60			94	142
6.2			63	101	8.80			81	125	11.70			94	142
6.25		D	63	101	8.84		S	81	125	11.80			94	142
6.3			63	101	8.90			81	125	11.90			101	151
6.35	1/4	E	63	101	9.00			81	125	11.91	15/32		101	151
6.4			63	101	9.09		T	81	125	12.00			101	151
6.5			63	101	9.10			81	125	12.10			101	151
6.53		F	63	101	9.13	23/64		81	125	12.20			101	151
6.6			63	101	9.20			81	125	12.30	31/64		101	151
6.63		G	63	101	9.30			81	125	12.40			101	151
6.7			63	101	9.34		U	81	125	12.50			101	151
6.75	17/64	H	69	109	9.40			81	125	12.60			101	151
6.8			69	109	9.50			81	125	12.70	1/2		101	151
6.9		I	69	109	9.52	3/8		87	133	12.80			101	151
7			69	109	9.58		V	87	133	12.90			101	151
7.03		J	69	109	9.60			87	133	13.00			101	151
7.1			69	109	9.70			87	133	13.10	33/64		101	151
7.14	9/32	K	69	109	9.80		W	87	133	13.20			101	151
7.2			69	109	9.90			87	133	13.30			108	160
7.3			69	109	9.92	25/64		87	133	13.40			108	160
7.37		L	69	109	10.00			87	133	13.49	17/32		108	160
7.4			69	109	10.08		X	87	133	13.50			108	160
7.49		M	69	109	10.10			87	133	13.60			108	160
7.5			69	109	10.20			87	133	13.70			108	160
7.54	19/64		75	117	10.26		Y	87	133	13.80			108	160
7.6			75	117	10.30			87	133	13.89	35/64		108	160
7.67		N	75	117	10.32	13/32		87	133	13.90			108	160
7.7			75	117	10.40			87	133	14.00			108	160
7.8			75	117	10.49		Z	87	133	14.25			114	169
7.9			75	117	10.50			87	133	14.29	9/16		114	169
7.94	5/16		75	117	10.60			87	133	14.50			114	169
8			75	117	10.70			94	142	14.68	37/64		114	169
8.03		O	75	117	10.72	27/64		94	142	14.75			114	169
8.1			75	117	10.80			94	142	15.00			114	169
8.2		P	75	117	10.90			94	142	15.08	19/32		120	178
8.3			75	117	11.00			94	142	15.25			120	178
	8.33	21/64		75	11.10			94	142	15.48	39/64		120	178
117					11.11	7/16		94	142	15.50			120	178
8.4			75	117	11.20			94	142	15.75			120	178
8.43		Q	75	117	11.30			94	142	15.87	5/8		120	178
8.5			75	117	11.40			94	142	16.00			120	178
8.6			81	125	11.50			94	142					
8.61		R	81	125	11.51	29/64		94	142					



HSS Straight Shank Drills

Stub Series Drills

Forets Série Extra-Courts
Taladros de Serie de Cabo

Des Forets à Queue
Rectiligne de HSS

Taladros de Varilla
Recta AAV



IS: 5100/DIN: 1897/
BS: 328/I.S.O.

Size-Diameter				Length mm				Size-Diameter				Length mm				Size-Diameter				Length mm			
mm		inch		flute	overall	mm		inch		flute	overall	mm		inch		flute	overall	mm		inch		flute	overall
1.00		6	26			5.95	15/64	28	66	10.80								47	95				
1.19	3/64	8	30			6.00		28	66	11.00								47	95				
1.20		8	30			6.20		31	70	11.11	7/16							47	95				
1.50		9	32			6.35	1/4	31	70	11.20								47	95				
1.59	1/16	10	34			6.50		31	70	11.50								47	95				
1.80		11	36			6.75	17/64	34	74	11.51	29/64							47	95				
1.98	5/64	12	38			6.80		34	74	11.80								47	95				
2.00		12	38			7.00		34	74	11.91	15/32							51	102				
2.20		13	40			7.14	9/32	34	74	12.00								51	102				
2.38	3/32	14	43			7.20		34	74	12.20								51	102				
2.50		14	43			7.50		34	74	12.30	31/64							51	102				
2.78	7/64	16	46			7.54	19/64	37	79	12.50								51	102				
2.80		16	46			7.80		37	79	12.70	1/2							51	102				
3.00		16	46			7.94	5/16	37	79	12.80								51	102				
3.17	1/8	18	49			8.00		37	79	13.00								51	102				
3.20		18	49			8.20		37	79	13.20								51	102				
3.50		20	52			8.33	21/64	37	79	13.49	17/32							54	107				
3.57	9/64	20	52			8.50		37	79	13.50								54	107				
3.80		22	55			8.73	11/32	40	84	13.80								54	107				
3.97	5/32	22	55			8.80		40	84	14.00								54	107				
4.00		22	55			9.00		40	84	14.25								56	111				
4.20		22	55			9.13	23/64	40	84	14.29	9/16							56	111				
4.37	11/64	24	58			9.20		40	84	14.50								56	111				
4.50		24	58			9.50		40	84	14.75								56	111				
4.76	3/16	26	62			9.52	3/8	43	89	15.00								56	111				
4.80		26	62			9.80		43	89	15.08	19/32							58	115				
5.00		26	62			9.92	25/64	43	89	15.25								58	115				
5.16	13/64	26	62			10.00		43	89	15.50								58	115				
5.20		26	62			10.20		43	89	15.75								58	115				
5.50		28	66			10.32	13/32	43	89	15.87	5/8							58	115				
5.56	7/32	28	66			10.50		43	89	16.00								58	115				
5.80		28	66			10.72	27/64	47	95	16.25								60	119				

Standard straight shank ground flute drill, recommended for use with hand drilling machine in drilling thin sections, sheet metal, car and bus bodies etc. Also, for use in automatic and capstan lathes.

Un foret de type à queue rectiligne, à cannelure meulée, recommandé à l'usage avec une foreuse mécanique à main pour percer des sections minces, des tôles, des caisses d'autobus et de voiture, etc. De plus, à l'usage pour des tours automatiques ou à revolvers.

Taladro de flauta molida de varilla recta, recomendado para uso con maquina de taladrar manual al taladrar secciones delgadas, hojas de metal, carrocerias de auto y autobús, etc. También para uso en tornos automáticos y de capstan.



Size-Diameter		Length mm		Size-Diameter		Length mm		Size-Diameter		Length mm	
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall
16.50		60	119	22.50		72	146	30.50		87	174
16.67	21/32	60	119	22.75		72	146	30.96	1.7/32	87	174
16.75		60	119	23.00		72	146	31.00		87	174
17.00		60	119	23.02	29/32	72	146	31.50		87	174
17.25		62	123	23.25		72	146	31.75	1.1/4	90	180
17.46	11/16	62	123	23.50		72	146	32.00		90	180
17.50		62	123	23.75		75	151	32.50		90	180
17.75		62	123	23.81	15/16	75	151	32.54	1.9/32	90	180
18.00		62	123	24.00		75	151	33.00		90	180
18.25		64	127	24.25		75	151	33.34	1.5/16	90	180
18.26	23/32	64	127	24.50		75	151	33.50		90	180
18.50		64	127	24.61	31/32	75	151	34.00		93	186
18.75		64	127	24.75		75	151	34.13	1.11/32	93	186
19.00		64	127	25.00		75	151	34.50		93	186
19.05	3/4	66	131	25.25		78	156	34.92	1.3/8	93	186
19.25		66	131	25.40	1	78	156	35.00		93	186
19.50		66	131	25.50		78	156	35.50		93	186
19.75		66	131	26.00		78	156	35.72	1.13/32	96	193
19.84	25/32	66	131	26.19	1.1/32	78	156	36.00		96	193
20.00		66	131	26.50		78	156	36.50		96	193
20.25		68	136	26.99	1.1/16	81	162	36.51	1.7/16	96	193
20.50		68	136	27.00		81	162	37.00		96	193
20.64	13/16	68	136	27.50		81	162	37.31	1.15/32	96	193
20.75		70	141	27.78	1.3/32	81	162	37.50		96	193
21.00		70	141	28.00		81	162	38.00		100	200
21.25		70	141	28.50		84	168	38.10	1.1/2	100	200
21.43	27/32	70	141	28.57	1.1/8	84	168	38.50		100	200
21.50		70	141	29.00		84	168	39.00		100	200
21.75		70	141	29.37	1.5/32	84	168	39.50		100	200
22.00		70	141	29.50		84	168	40.00		100	200
22.22	7/8	70	141	30.00		84	168				
22.25		70	141	30.16	1.3/16	87	174				



HSS Straight Shank Drills

Long Series Drills

Forets Longs
Taladros de Series Largas

Des Forets à Queue
Rectiligne de HSS

Taladros de Varilla
Recta AAV



IS: 5102/DIN: 340/
BS: 328/I.S.O.

Size-Diameter		Length mm		Size-Diameter		Length mm		Size-Diameter		Length mm	
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall
1.00		33	56	4.30		82	126	7.54	19/64	109	165
1.10		37	60	4.37	11/64	82	126	7.60		109	165
1.19	3/64	41	65	4.40		82	126	7.70		109	165
1.20		41	65	4.50		82	126	7.80		109	165
1.30		41	65	4.60		82	126	7.90		109	165
1.40		45	70	4.70		82	126	7.94		109	165
1.50		45	70	4.76	3/16	87	132	8.00		109	165
1.59	1/16	50	76	4.80		87	132	8.10		109	165
1.60		50	76	4.90		87	132	8.20		109	165
1.70		50	76	5.00		87	132	8.30		109	165
1.80		53	80	5.10		87	132	8.33	21/64	109	165
1.90		53	80	5.16	13/64	87	132	8.40		109	165
1.98	5/64	56	85	5.20		87	132	8.50		109	165
2.00		56	85	5.30		87	132	8.60		115	175
2.10		56	85	5.40		91	139	8.70		115	175
2.20		59	90	5.50		91	139	8.73	11/32	115	175
2.30		59	90	5.56	7/32	91	139	8.80		115	175
2.38	3/32	62	95	5.60		91	139	9.00		115	175
2.40		62	95	5.70		91	139	9.13	23/64	115	175
2.50		62	95	5.80		91	139	9.20		115	175
2.60		62	95	5.90		91	139	9.50		115	175
2.70		66	100	5.95	15/64	91	139	9.52	3/8	121	184
2.78	7/64	66	100	6.00		91	139	9.80		121	184
2.80		66	100	6.10		97	148	9.92	25/64	121	184
2.90		66	100	6.20		97	148	10.00		121	184
3.00		66	100	6.30		97	148	10.20		121	184
3.10		69	106	6.35	1/4	97	148	10.32	13/32	121	184
3.17	1/8	69	106	6.40		97	148	10.50		121	184
3.20		69	106	6.50		97	148	10.72	27/64	128	195
3.30		69	106	6.60		97	148	10.80		128	195
3.40		73	112	6.70		97	148	11.00		128	195
3.50		73	112	6.75	17/64	102	156	11.11	7/16	128	195
3.57	9/64	73	112	6.80		102	156	11.20		128	195
3.60		73	112	6.90		102	156	11.50		128	195
3.70		73	112	7.00		102	156	11.51	29/64	128	195
3.80		78	119	7.10		102	156	11.80		128	195
3.90		78	119	7.14	9/32	102	156	11.91	15/32	134	205
3.97	5/32	78	119	7.20		102	156	12.00		134	205
4.00		78	119	7.30		102	156	12.20		134	205
4.10		78	119	7.40		102	156	12.30	31/64	134	205
4.20		78	119	7.50		102	156	12.50		134	205

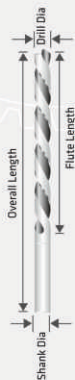
Straight shank drill with increased flute length for drilling deep and inaccessible holes or for use in conjunction with drill bushings.

Un foret à queue rectiligne, à longueur grande de la cannelure pour percer des trous profonds et inaccessibles ou à l'usage en conjonction avec des canons de perçage/forage.

Taladro de varilla recta con largo de flauta aumentado para taladrar agujeros profundos e inaccesibles o para usar junto con cojinetes de taladro.



Size-Diameter		Length mm		Size-Diameter		Length mm		Size-Diameter		Length mm	
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall
12.70	1/2	134	205	19.05	3/4	166	254	25.50		190	290
12.80		134	205	19.25		166	254	25.75		190	290
13.00		134	205	19.45	49/64	166	254	25.80	1.1/64	190	290
13.10	33/64	134	205	19.50		166	254	26.00		190	290
13.20		134	205	19.75	25/32	166	254	26.19	1.1/32	190	290
13.49	17/32	140	214	19.84		166	254	26.25		190	290
13.50		140	214	20.00		166	254	26.50		190	290
13.80		140	214	20.24	51/64	171	261	26.59	1.3/64	195	298
13.89	35/64	140	214	20.25		171	261	26.75		195	298
14.00		140	214	20.50		171	261	26.99	1.1/16	195	298
14.25		144	220	20.64	13/16	171	261	27.00		195	298
14.29	9/16	144	220	20.75		171	261	27.25		195	298
14.50		144	220	21.00		171	261	27.38	1.5/64	195	298
14.68	37/64	144	220	21.03	53/64	171	261	27.50		195	298
14.75		144	220	21.25		176	268	27.75		195	298
15.00		144	220	21.43	27/32	176	268	27.78	1.3/32	195	298
15.08	19/32	149	227	21.50		176	268	28.00		195	298
15.25		149	227	21.75		176	268	28.18	1.7/64	201	307
15.50		149	227	21.83	55/64	176	268	28.25		201	307
15.75		149	227	22.00		176	268	28.50		201	307
15.87	5/8	149	227	22.22	7/8	176	268	28.57	1.1/8	201	307
16.00		149	227	22.25		176	268	28.75		201	307
16.25		154	235	22.50		180	275	28.97	1.9/64	201	307
16.27	41/65	154	235	22.62	57/64	180	275	29.00		201	307
16.50		154	235	22.75		180	275	29.25		201	307
16.67	21/32	154	235	23.00		180	275	29.37	1.5/32	201	307
16.75		154	235	23.02	29/32	180	275	29.50		201	307
17.00		154	235	23.25		180	275	29.75		201	307
17.07	43/64	158	241	23.42	59/64	180	275	29.77	1.11/64	201	307
17.25		158	241	23.50		180	275	30.00		201	307
17.46	11/16	158	241	23.75		185	282	30.16	1.3/16	207	316
17.50		158	241	23.81	15/16	185	282	30.25		207	316
17.75		158	241	24.00		185	282	30.50		207	316
17.86	45/64	158	241	24.21	61/64	185	282	30.56	1.13/64	207	316
18.00		158	241	24.25		185	282	30.75		207	316
18.25		162	247	24.50		185	282	30.96	1.7/32	207	316
18.26	23/32	162	247	24.61	31/32	185	282	31.00		207	316
18.50		162	247	24.75		185	282	31.25		207	316
18.65	47/64	162	247	25.00	63/64	185	282	31.35	1.15/64	207	316
18.75		162	247	25.25		190	290	31.50		207	316
19.00		162	247	25.40	1	190	290				



HSS Straight Shank Drills

Extra Long Series Drills

Forets Extra-Longs
Taladros de Series Extra Largas

Des Forets à Queue
Rectiligne de HSS
Taladros de Varilla
Recta AAV



IS: 7823/DIN: 1869/
BS: 328/1.5.0.

Size		Overall Length in mm										
mm	Inch											
0.50	50											
0.60	50											
0.70	1/32	50										
0.80	50											
0.90	50											
1.00		100	150									
1.10		100	150									
1.20	3/64	100	150									
1.30		100	150									
1.40		100	150									
1.50		100	150									
1.60	1/16	100	125	150								
1.70		100	125	150								
1.80		100	125	150								
1.90		100	125	150								
2.00	5/64	100	125	150								
2.10		100	125	150								
2.20		100	125	150								
2.30		100	125	150								
2.40	3/32		125	150								
2.50			125	150								
2.60			125	150								
2.70			125	150								
2.80	7/64		125	150								
2.90		150	175	200	225	250						
3.00		150	175	200	225	250	275	300				
3.17	1/8	150	175	200	225	250	275	300				
3.50	9/64	150	175	200	225	250	275	300	325	350		
3.97	5/32	150	175	200	225	250	275	300	325	350	375	400

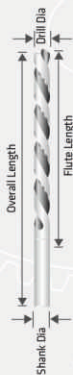
Straight shank drill with extra long flute for drilling extremely deep holes.

Un foret à queue rectiligne, à extra-long cannelure pour percer des trous extrêmement profonds.

Taladro de varilla recta con flauta extra larga para taladrar agujeros extremadamente profundos.



Size		Overall Length in mm											
mm	inch												
4.00		150	175	200	225	250	275	300	325	350	375	400	
4.50	11/64	150	175	200	225	250	275	300	325	350	375	400	
4.76	3/16	150	175	200	225	250	275	300	325	350	375	400	
5.00		150	175	200	225	250	275	300	325	350	375	400	
5.50	13/64	150	175	200	225	250	275	300	325	350	375	400	
5.56	7/32	150	175	200	225	250	275	300	325	350	375	400	
6.00	15/64			200	225	250	275	300	325	350	375	400	
6.35	1/4			200	225	250	275	300	325	350	375	400	
6.50				200	225	250	275	300	325	350	375	400	
7.00	17/64			200	225	250	275	300	325	350	375	400	
7.14	9/32			200	225	250	275	300	325	350	375	400	
7.50	19/64			200	225	250	275	300	325	350	375	400	
7.94	5/16			200	225	250	275	300	325	350	375	400	
8.00				200	225	250	275	300	325	350	375	400	
8.50	21/64			200	225	250	275	300	325	350	375	400	
8.73	11/32			200	225	250	275	300	325	350	375	400	
9.00				200	225	250	275	300	325	350	375	400	
9.50	23/64			200	225	250	275	300	325	350	375	400	
9.52	3/8			200	225	250	275	300	325	350	375	400	
10.00	25/64			200	225	250	275	300	325	350	375	400	
10.32	13/32			200	225	250	275	300	325	350	375	400	
10.50				200	225	250	275	300	325	350	375	400	
11.00	27/64					250	275	300	325	350	375	400	
11.11	7/16					250	275	300	325	350	375	400	
11.50	29/64					250	275	300	325	350	375	400	
11.91	15/32					250	275	300	325	350	375	400	
12.00						250	275	300	325	350	375	400	
12.50	31/64					250	275	300	325	350	375	400	
12.70	1/2					250	275	300	325	350	375	400	



HSS Taper Shank Drills

Standard Drills

Des Forets - Types
Taladros Estándar

Forets à Queue
Conique de HSS

Taladros de Varilla
Afilado AAV



IS: 5103 / DIN: 345 /
BS: 328 / L.S.O.

Size-Diameter		Length mm		Size-Diameter		Length mm		Size-Diameter		Length mm		
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall	
Mt1												
3.00		33	114	11.11	7/16	94	175	19.25		140	238	
3.17	1/8	36	117	11.20		94	175	19.45	49/64	140	238	
3.20		36	117	11.51	29/64	94	175	19.50		140	238	
3.50		39	120	11.80		94	175	19.75		140	238	
3.57	9/64	39	120	11.91	15/32	101	182	20.00	25/32	140	238	
3.80		43	124	12.00		101	182	20.24	51/64	145	243	
3.97	5/32	43	124	12.20		101	182	20.25		145	243	
4.00		43	124	12.30	31/64	101	182	20.50		145	243	
4.20		43	124	12.50		101	182	20.64	13/16	145	243	
4.37	11/64	47	128	12.70	1/2	101	182	20.75		145	243	
4.50		47	128	12.80		101	182	21.00		145	243	
4.76	3/16	52	133	13.00		101	182	21.03	53/64	145	243	
4.80		52	133	13.10	33/64	101	182	21.25		150	248	
5.00		52	133	13.20		101	182	21.43	27/32	150	248	
5.16	13/64	52	133	13.49	17/32	108	189	21.50		150	248	
5.20		52	133	13.50		108	189	21.75		150	248	
5.50		57	138	13.80		108	189	21.83	55/64	150	248	
5.56	7/32	57	138	13.89	35/64	108	189	22.00		150	248	
5.80		57	138	14.00		108	189	22.22	7/8	150	248	
5.95	15/64	57	138					22.25		150	248	
6.00		57	138	14.25		Mt2	114	212	22.50	155	253	
6.20		63	144	14.29	9/16	114	212	22.62	57/64	155	253	
6.35	1/4	63	144	14.50		114	212	22.75		155	253	
6.50		63	144	14.68	37/64	114	212	23.00		155	253	
6.75	17/64	69	150	14.75		114	212	23.02	29/32	155	253	
6.80		69	150	15.00		114	212					
7.00		69	150	15.08	19/32	120	218	23.25		Mt3	155	276
7.14	9/32	69	150	15.25		120	218	23.42	59/64	155	276	
7.20		69	150	15.48	39/64	120	218	23.50		155	276	
7.50		69	150	15.50		120	218	23.75		160	281	
7.54	19/64	75	156	15.75		120	218	23.81	15/16	160	281	
7.80		75	156	15.87	5/8	120	218	24.00		160	281	
7.94	5/16	75	156	16.00		120	218	24.21	61/64	160	281	
8.00		75	156	16.25		125	223	24.25		160	281	
8.20		75	156	16.27	41/64	125	223	24.50		160	281	
8.33	21/64	75	156	16.50		125	223	24.61	31/32	160	281	
8.50		75	156	16.67	21/32	125	223	24.75		160	281	
8.73	11/32	81	162	16.75		125	223	25.00	63/64	160	281	
8.80		81	162	17.00		125	223	25.25		165	286	
9.00		81	162	17.07	43/64	130	228	25.40	1	165	286	
9.13	23/64	81	162	17.25		130	228	25.50		165	286	
9.20		81	162	17.46	11/16	130	228	25.75		165	286	
9.50		81	162	17.50		130	228	25.80	1.1/64	165	286	
9.52	3/8	87	168	17.75		130	228	26.00		165	286	
9.80		87	168	17.86	45/64	130	228	26.19	1.1/32	165	286	
9.92	25/64	87	168	18.00		130	228	26.25		165	286	
10.00		87	168	18.25		135	233	26.50		165	286	
10.20		87	168	18.26	23/32	135	233	26.59	1.3/64	170	291	
10.32	13/32	87	168	18.50		135	233	26.75		170	291	
10.50		87	168	18.65	47/64	135	233	26.99	1.1/16	170	291	
10.72	27/64	94	175	18.75		135	233	27.00		170	291	
10.80		94	175	19.00		135	233	27.25		170	291	
11.00		94	175	19.05	3/4	140	238	27.38	1.5/64	170	291	

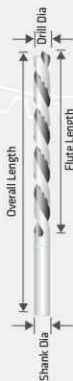
Standard taper shank drill for general purpose application on Steel and Cast steel, Grey cast iron, German silver steel, Graphite, etc.

Foreuse du tibia de la bougie standard pour application du but générale sur Acier et Jetez Acier, Gris Jetez Acier, Allemand argenté Acier, Graphite, etc...

El taladro de la zanca afilado normal para la aplicación del propósito general en Acero y acero del Lanzamiento, acero de plata hierro colado, alemán Gris, Grafito, etc.



Size-Diameter				Size-Diameter				Size-Diameter			
mm		inch		mm		inch		mm		inch	
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall
27.50		170	291	37.70		195	344	49.61	1.61/64	220	369
27.75		170	291	37.70	1.31/64	200	349	50.00		220	369
27.78	1.3/32	170	291	38.00		200	349	50.01	1.31/32	225	374
28.00		170	291	38.10	1.1/2	200	349	50.40	1.63/64	225	374
28.18	1.7/64	175	296	38.50	1.33/64	200	349	50.50		225	374
28.25		175	296	38.89	1.17/32	200	349	50.80	2	225	374
28.50		175	296	39.00		200	349		Mt5		
28.57	1.1/8	175	296	39.29	1.35/64	200	349	51.00		225	412
28.75		175	296	39.50		200	349	51.50		225	412
28.97	1.9/64	175	296	39.69	1.9/16	200	349	51.59	2.1/32	225	412
29.00		175	296	40.00		200	349	52.00		225	412
29.25		175	296	40.08	1.37/64	205	354	52.39	2.1/16	225	412
29.37	1.5/32	175	296	40.48	1.19/32	205	354	52.50		225	412
29.50		175	296	40.50		205	354	53.00		225	412
29.75		175	296	40.88	1.39/64	205	354	53.18	2.3/32	230	417
29.77	1.11/64	175	296	41.00		205	354	53.50		230	417
30.00		180	301	41.27	1.5/8	205	354	53.97	2.1/8	230	417
30.16	1.3/16	180	301	41.50		205	354	54.00		230	417
30.25		180	301	41.67	1.41/64	205	354	54.50		230	417
30.50		180	301	42.00		205	354	54.77	2.5/32	230	417
30.56	1.13/64	180	301	42.07	1.21/32	205	354	55.00		230	417
30.75		180	301	42.47	1.43/64	205	354	55.50		230	417
30.96	1.7/32	180	301	42.50		205	354	55.56	2.3/16	230	417
31.00		180	301	42.86	1.11/16	210	359	56.00		230	417
31.25		180	301	43.00		210	359	56.36	2.7/32	230	417
31.35	1.15/64	180	301	43.26	1.45/64	210	359	56.50		230	417
31.50		180	301	43.50		210	359	57.00		235	422
31.75	1.1/4	185	306	43.66	1.23/32	210	359	57.15	2.1/4	235	422
	Mt4			44.00		210	359	57.50		235	422
32.00		185	334	44.05	1.47/64	210	359	57.94	2.9/32	235	422
32.15	1.17/64	185	334	44.45	1.3/4	210	359	58.00		235	422
32.50		185	334	44.50		210	359	58.50		235	422
32.54	1.9/32	185	334	44.85	1.49/64	210	359	58.74	2.5/16	235	422
32.94	1.19/64	185	334	45.00		210	359	59.00		235	422
33.00		185	334	45.24	1.25/32	215	364	59.50		235	422
33.34	1.5/16	185	334	45.50		215	364	59.53	2.11/32	235	422
33.50		185	334	45.64	1.51/64	215	364	60.00		235	422
33.73	1.21/64	190	339	46.00		215	364	60.32	2.3/8	240	427
34.00		190	339	46.04	1.13/16	215	364	60.50		240	427
34.13	1.11/32	190	339	46.43	1.53/64	215	364	61.00		240	427
34.50		190	339	46.50		215	364	61.12	2.13/32	240	427
34.53	1.23/64	190	339	46.83	1.27/32	215	364	61.50		240	427
34.92	1.3/8	190	339	47.00		215	364	61.91	2.7/16	240	427
35.00		190	339	47.23	1.55/64	215	364	62.00		240	427
35.32	1.25/64	190	339	47.50		215	364	62.50		240	427
35.50		190	339	47.62	1.7/8	220	369	61.71	2.15/32	240	427
35.72	1.13/32	195	344	48.00		220	369	63.00		240	427
36.00		195	344	48.02	1.57/64	220	369	63.50	2.1/2	245	432
36.12	1.27/64	195	344	48.42	1.29/32	220	369	64.00		245	432
36.50		195	344	48.50		220	369	64.29	2.17/32	245	432
36.51	1.7/16	195	344	48.82	1.59/64	220	369	65.00		245	432
36.91	1.29/64	195	344	49.00		220	369	65.09	2.9/16	245	432
37.00		195	344	49.21	1.15/16	220	369	65.88	2.19/32	245	432
37.31	1.15/32	195	344	49.50		220	369	66.00		245	432
								66.67	2.5/8	245	432



HSS Taper Shank Drills

Long Series Drills

Forets Longs
Taladros de Serie Largas

Forets à Queue
Conique de HSS
Taladros de Varilla
Afilado AAV



IS: 8305-1976/
DIN: 341

Size-Diameter		Length mm		Size-Diameter		Length mm		Size-Diameter		Length mm	
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall
		Mt1		10.72	27/64	125	206	16.27	41/64	159	257
5.00		74	155	10.80		125	206	16.50		159	257
5.16	13/64	74	155	11.00		125	206	16.67	21/32	159	257
5.20		74	155	11.11	7/16	125	206	16.75		159	257
5.50		80	161	11.20		125	206	17.00		159	257
5.56	7/32	80	161	11.50		125	206	17.07	43/64	165	263
5.80		80	161	11.51	29/64	125	206	17.25		165	263
5.95	15/64	80	161	11.80		125	206	17.46	11/16	165	263
6.00		80	161	11.91	15/32	134	215	17.50		165	263
6.20		86	167	12.00		134	215	17.75		165	263
6.35	1/4	86	167	12.20		134	215	17.86	45/64	165	263
6.50		86	167	12.30	31/64	134	215	18.00		165	263
6.75	17/64	93	174	12.50		134	215	18.25		171	269
6.80		93	174	12.70	1/2	134	215	18.26	23/32	171	269
7.00		93	174	12.80		134	215	18.50		171	269
7.14	9/32	93	174	13.00		134	215	18.65	47/64	171	269
7.20		93	174	13.10	33/64	134	215	18.75		171	269
7.50		93	174	13.20		134	215	19.00		171	269
7.54	19/64	100	181	13.49	17/32	142	223	19.05	3/4	177	275
7.80		100	181	13.50		142	223	19.25		177	275
7.94	5/16	100	181	13.80		142	223	19.45	49/64	177	275
8.00		100	181	13.89	35/64	142	223	19.50		177	275
8.20		100	181	14.00		142	223	19.75		177	275
8.33	21/64	100	181		Mt2			19.84	25/32	177	275
8.50		100	181	14.25		147	245	20.00		177	275
8.73	11/32	107	188	14.29	9/16	147	245	20.24	51/64	184	282
8.80		107	188	14.50		147	245	20.25		184	282
9.00		107	188	14.68	37/64	147	245	20.50		184	282
9.13	23/64	107	188	14.75		147	245	20.64	13/16	184	282
9.20		107	188	15.00		147	245	20.75		184	282
9.50		107	188	15.08	19/32	153	251	21.00		184	282
9.52	3/8	116	197	15.25		153	251	21.03	53/64	184	282
9.80		116	197	15.48	39/64	153	251	21.25		191	289
9.92	25/64	116	197	15.50		153	251	21.43	27/32	191	289
10.00		116	197	15.75		153	251	21.50		191	289
10.20		116	197	15.87	5/8	153	251	21.75		191	289
10.32	13/32	116	197	16.00		153	251	21.83	55/64	191	289
10.50		116	197	16.25		159	257	22.00		191	289

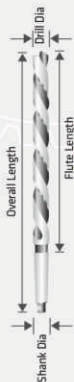
Standard taper shank drill with long flute for drilling extremely deep holes.

Forets standard à queue conique avec hélice longue pour trous très Profonds.

Broca estándar con Mango cónico con longitud de corte larga para taladrar agujeros extremadamente profundos.



Size-Diameter		Length mm		Size-Diameter		Length mm		Size-Diameter		Length mm	
mm	inch	flute	overall	mm	inch	flute	overall	mm	inch	flute	overall
22.22	7/8	191	289	28.57	1.1/8	230	351	38.10	1.1/2	277	426
22.25		191	289	28.75		230	351	38.50		277	426
22.50		198	296	29.00		230	351	38.89	1.17/32	277	426
22.62	57/64	198	296	29.25		230	351	39.00		277	426
22.75		198	296	29.37	1.5/32	230	351	39.50		277	426
23.00		198	296	29.50		230	351	39.69	1.9/16	277	426
23.02	29/32	198	296	29.75		230	351	40.00		277	426
	Mt3			30.00		230	351	40.48	1.19/32	287	436
23.25		198	319	30.16	1.3/16	239	360	40.50		287	436
23.42	59/64	198	319	30.25		239	360	41.00		287	436
23.50		198	319	30.50		239	360	41.27	1.5/8	287	436
23.75		206	327	30.75		239	360	41.50		287	436
23.81	15/16	206	327	30.96	1.7/32	239	360	42.00		287	436
24.00		206	327	31.00		239	360	42.07	1.21/32	287	436
24.21	61/64	206	327	31.25		239	360	42.50		287	436
24.25		206	327	31.50		239	360	42.86	1.11/16	298	447
24.50		206	327	31.75	1.1/4	248	369	43.00		298	447
24.61	31/32	206	327		Mt4			43.50		298	447
24.75		206	327	32.00		248	397	43.66	1.23/32	298	447
25.00	63/64	206	327	32.50		248	397	44.00		298	447
25.25		214	335	32.54	1.9/32	248	397	44.45	1.3/4	298	447
25.40		214	335	33.00		248	397	44.50		298	459
25.50		214	335	33.34	1.5/16	248	397	45.00		298	459
25.75		214	335	33.50		248	397	45.24	1.25/32	310	459
26.00		214	335	34.00		257	406	45.50		310	459
26.19	1.1/32	214	335	34.13	1.11/32	257	406	46.00		310	459
26.25		214	335	34.50		257	406	46.04	1.13/16	310	459
26.50		214	335	34.92	1.3/8	257	406	46.50		310	459
26.75		222	343	35.00		257	406	46.83	1.27/32	310	459
26.99	1.1/16	222	343	35.50		257	406	47.00		310	459
27.00		222	343	35.72	1.13/32	267	416	47.50		310	459
27.25		222	343	36.00		267	416	47.62	1.7/8	321	470
27.50		222	343	36.50		267	416	48.00		321	470
27.75		222	343	36.51	1.7/16	267	416	48.42	1.29/32	321	470
27.78	1.3/32	222	343	37.00		267	416	48.50		321	470
28.00		222	343	37.31	1.15/32	267	416	49.00		321	470
28.25		230	351	37.50		267	416	49.21	1.15/16	321	470
28.50		230	351	38.00		277	426	49.50		321	470
								50.00		321	470



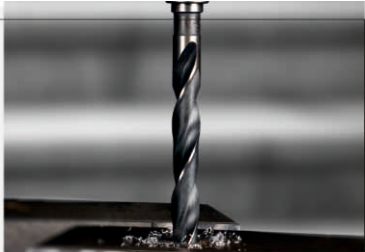
HSS Taper Shank Drills

Long Series Drills

Forets Longs
Taladros de Serie Larga

Forets à Queue
Conique de HSS

Taladros de Varilla
Afilada AAV



IS: 8305-1976/
DIN: 341

Size		Overall Length in mm																		
mm	Inch																			
3.00	1/8	200	225	250	275	300														
3.50		200	225	250	275	300														
4.00	5/32	200	225	250	275	300	315													
4.50		200	225	250	275	300	315	325												
5.00	3/16	200	225	250	275	300	315	325												
5.50		200	225	250	275	300	315	325												
6.00		200	225	250	275	300	315	325												
6.35	1/4	200	225	250	275	300	315	325												
6.50		200	225	250	275	300	315	325												
7.00		200	225	250	275	300	315	325												
7.50		200	225	250	275	300	315	325												
7.94	5/16	200	225	250	275	300	315	325												
8.00		200	225	250	275	300	315	325												
8.50		200	225	250	275	300	315	325												
9.00		200	225	250	275	300	315	325												
9.50		200	225	250	275	300	315	325												
9.52	3/8	200	225	250	275	300	315	325												
10.00		200	225	250	275	300	315	325	350	375	400									
10.50		200	225	250	275	300	315	325	350	375	400									
11.00		200	225	250	275	300	315	325	350	375	400									
11.11	7/16	200	225	250	275	300	315	325	350	375	400									
11.50		200	225	250	275	300	315	325	350	375	400									
12.00			225	250	275	300	315	325	350	375	400									
12.50			225	250	275	300	315	325	350	375	400									
12.70	1/2		225	250	275	300	315	325	350	375	400									
13.00				250	275	300	315	325	350	375	400									
13.50				250	275	300	315	325	350	375	400									
14.00				250	275	300	315	325	350	375	400									
14.29	9/16			250	275	300	315	325	350	375	400	425	450	475	500					
14.50				250	275	300	315	325	350	375	400	425	450	475	500					
15.00				250	275	300	315	325	350	375	400	425	450	475	500					
15.50				250	275	300	315	325	350	375	400	425	450	475	500					
15.87	5/8			250	275	300	315	325	350	375	400	425	450	475	500					
16.00				250	275	300	315	325	350	375	400	425	450	475	500					
16.50				250	275	300	315	325	350	375	400	425	450	475	500					
17.00					250	275	300	315	325	350	375	400	425	450	475	500				
17.45	11/16				250	275	300	315	325	350	375	400	425	450	475	500				
17.50					300	315	325	350	375	400	425	450	475	500						
18.00					300	315	325	350	375	400	425	450	475	500						
18.50					300	315	325	350	375	400	425	450	475	500						
19.00					300	315	325	350	375	400	425	450	475	500						
19.05	3/4				300	315	325	350	375	400	425	450	475	500						
19.50					300	315	325	350	375	400	425	450	475	500						
20.00					300	315	325	350	375	400	425	450	475	500						
20.50					300	315	325	350	375	400	425	450	475	500						
20.64	13/16				300	315	325	350	375	400	425	450	475	500						
21.00					300	315	325	350	375	400	425	450	475	500						
21.50					300	315	325	350	375	400	425	450	475	500						
22.00					300	315	325	350	375	400	425	450	475	500						
22.22	7/8				300	315	325	350	375	400	425	450	475	500						

Extra Long Series Drills

Forets Extra-Longs
Taladros de Serie Extra Largas

HSS Taper Shank Drills

Forets à Queue
Conique de HSS
Taladros de Varilla
Afilada AAV

Size		Overall Length in mm									
mm	inch										
22.50		300	315	325	350	375	400	425	450	475	500
23.00		300	315	325	350	375	400	425	450	475	500
23.50		300		325	350	375	400	425	450	475	500
23.81	15/16	300		325	350	375	400	425	450	475	500
24.00		300		325	350	375	400	425	450	475	500
24.50		300		325	350	375	400	425	450	475	500
25.00				325	350	375	400	425	450	475	500
25.40	1				350	375	400	425	450	475	500
25.50					350	375	400	425	450	475	500
26.00					350	375	400	425	450	475	500
26.50					350	375	400	425	450	475	500
26.99	1.1/16				350	375	400	425	450	475	500
27.00					350	375	400	425	450	475	500
27.50					350	375	400	425	450	475	500
28.00					350	375	400	425	450	475	500
28.50					350	375	400	425	450	475	500
28.57	1.1/8				350	375	400	425	450	475	500
29.00					350	375	400	425	450	475	500
29.50					350	375	400	425	450	475	500
30.00					350	375	400	425	450	475	500
30.16	1.3/16				350	375	400	425	450	475	500
31.00					350	375	400	425	450	475	500
31.75	1.1/4				350	375	400	425	450	475	500
32.00					350	375	400	425	450	475	500
33.00							400	425	450	475	500 525
33.34	1.5/16						400	425	450	475	500 525
34.00							400	425	450	475	500 525
34.92	1.3/8						400	425	450	475	500 525
35.00							400	425	450	475	500 525
36.00							400	425	450	475	500 525
36.51	1.1/16						400	425	450	475	500 525
37.00							400	425	450	475	500 525
38.00							400	425	450	475	500 525
38.10	1.1/2						400	425	450	475	500 525
39.00							400	425	450	475	500 525
40.00							400	425	450	475	500 525
41.00											500
41.27	1.5/8										500
42.00											500
43.00											500
44.00											500
44.45	1.3/4										500
45.00											500
45.50	1.13/16										500
46.00											500
47.00											500
47.62	1.7/8										500
48.00											500
49.00	1.15/16										500
50.00											500

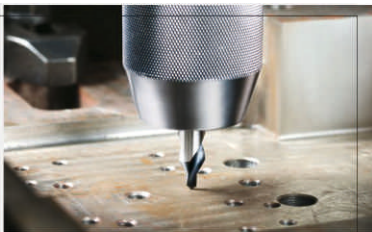


DIN: 7822/
BS: 328

HSS Centre Drills

Forets à
Centrer de HSS

Taladros de
Centro AAV



HSS Centre drills are manufactured in two types. Type A - for centre holes without protecting chamfers. Type B - for centre holes with protecting chamfers.

On fabrique des forets à centrer de HSS de 2 types. Type A - pour des trous de centrage sans des chamfreins protecteur. Type B - pour des trous de centrage avec des chamfreins protecteur.

Los taladros de Centro AAV se fabrican en dos tipos. Tipo A - para agujeros de centro sin protectores. Tipo B - para agujeros de centro con biseles protectores.



DIN: 333/
BS: 328

TYPE 'A' AS PER IS-6708/1977

Pilot Dia mm k12	Body Dia mm h9	Overall Length mm		Pilot Length mm	
		Max.	Min.	Max.	Min.
1.00	3.15	33.5	29.5	1.9	1.3
1.25	3.15	33.5	29.5	2.2	1.6
1.60	4.00	37.5	33.5	2.8	2.0
2.00	5.00	42	38	3.3	2.5
2.50	6.30	47	43	4.1	3.1
3.15	8.00	52	48	4.9	3.9
4.00	10.00	59	53	6.2	5.0
5.00	12.50	66	60	7.5	6.3

TYPE 'B' AS PER IS-6709/1977

1.60	6.30	47	43	2.8	2.0
2.00	8.00	52	48	3.3	2.5
2.50	10.00	59	53	4.1	3.1
3.15	11.20	63	57	4.9	3.9
4.00	14.00	70	64	6.2	5.0

AS PER B.S. 328 (PART 2)

Size Pilot	Dia Inch	Body Dia Inch	Pilot Length mmOAL		Tolerance on	
			Max.	Min.	Inch.	Overall Length
BS 1	3/64	1/8	5/64	1/16	1.1/2	± 1/32
BS 2	1/16	3/16	3/32	5/64	1.3/4	± 1/33
BS 3	3/32	1/4	5/32	1/8	2	± 1/16
BS 4	1/8	5/16	3/16	5/32	2.1/4	± 1/16
BS 5	3/16	7/16	9/32	1/4	2.1/2	± 3/32



Silver & Deming Drills

Des Forets en argent et de deming

Taladros de Plata y Deming

These drills have reduced shank and are used for drilling holes larger than the capacity of a 1/4" or 3/8" or 1/2" drill chuck. These drills are used light to medium duty drilling applications.

Ces forets ont une queue reduite et on les utilise pour percer les trous qui sont plus grands que la capacité d'un mandrin de foret de 1/4" ou 3/8" ou 1/2". On utilise ces forets pour des applications à faible ou moyen rendement.

Estos taladros tienen varilla reducida y son usados para taladrar agujeros mayores que la capacidad de un portabrocas de taladro de 1/4" o 3/8" o 1/2". Estos taladros se utilizan para aplicaciones de taladrar livianas a medianas.



Size-Diameter	Lenght in Inch	
	Inch	Overall
1/2	3	6



Double Ended Drills

Des Forets à Deux Bouts

Taladros de Doble Punta

These drills have flutes and split points on both ends and have a solid centre shank for chucking. They will drill double number of holes than a single end drill for only a fraction more in cost. They reduce change over time, inventory and overall cost.

Ces forets ont des cannelures et des points fendus dans tous les deux côtes et ont une queue solide au centre pour mandriner. Seulement pour une fraction additionnelle au prix, les nombres de trous qu'ils perceront sont deux fois d'un foret à un bout. Ils reduisent le temps de passage, inventaire et le prix total.

Estos taladros tienen flautas y puntas partidas en ambos extremos y tienen una varilla central sólida para portar brocas. Taladrarán un número doble de agujeros que un taladro de una punta por sólo una fracción más en el costo. Reducen el cambio - en tiempo, inventario y costo total.



Size-Diameter	Lenght in Inch	
	Inch	Overall
3.3	15	50
4.1	17	56
5	17	63

KT Series HSS Tool Bits Blanks

Peux D'Outil
de HSS

Trozos de
Herramienta AAV

Square Tool Bit Blanks



KT-0= (M2)
0% COBALT

KT-5(M35)
5% COBALT

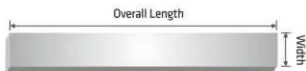
KT-8(M42)
8% COBALT

KT-10-(T42)
10% COBALT

They are manufactured from high quality High Speed Steel Bars. They undergo Cryogenic heat treatment process to allow full conversion into marten site and attain stress free structure. This ensures consistently high wear resistance for superior performance. They are available in KT-0, KT-5, KT-8 and KT-10 grades in square sections

Ces forets sont fabriques a partir de barres en acier rapide de haute qualite. Ils subissent un traitement thermique cryogenique afin d'obtenir une conversion martensitique complete tune structure totalement exempte de contraintes. On obtient ainsi une resistance a l'usure aussi elevee que constant pour des performance superieures. Ils sont livrables en nuances KT-0, KT-5, KT-8 et KT-10 en sections carrées.

Se fabrican con barras de Acero Rapido en Alta calidad. Se les aplica un proceso de Criogenizacion por calor para permitir que la estructura este libre de tensiones. Este proceso asegura una alta resistencia al desgaste para un rendimiento superior. Estan disponibles en calidades KT-0, KT-5, KT-8, KT-10 en secciones cuadradas.



Sq. Size inch	Sq. Size mm	Sq. Size inch	Sq. Size mm
3/16 X 3	5 X 75	1/2 X 4	12 X 100
3/16 X 4	5 X 100	1/2 X 6	12 X 150
3/16 X 6	5 X 150	1/2 X 8	12 X 200
1/4 X 3	6 X 75	5/8 X 4	16 X 100
1/4 X 4	6 X 100	5/8 X 6	16 X 150
1/4 X 6	6 X 150	5/8 X 8	16 X 200
5/16 X 3	8 X 75	3/4 X 4	-
5/16 X 4	8 X 100	3/4 X 6	-
5/16 X 6	8 X 150	3/4 X 8	-
3/8 X 3	10 X 75	-	20 X 100
3/8 X 4	10 X 100	-	20 X 150
3/8 X 6	10 X 150	-	20 X 200
3/8 X 8	10 X 200	1 X 6	25 X 150
1/2 X 3	12 X 75	1 X 8	25 X 200

Normal/Premium/Super Granit

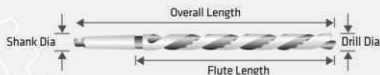
Masonry Drills

Forets de
Maçonnerie
Taladros
de Albañilería

JK Masonry Drills are available in three categories- Normal, Premium & Super Granit. **Normal** is meant for use on bricks, concrete walls & other general applications. **Premium** is meant for use on harder materials like Marbles and similar applications. **Super Granit** is specifically meant for hardest Granites.

Les JK forets de maçonnerie sont disponibles en 3 catégories- Normal, Premium, Granit Super. Le **Normal** est destiné à l'usage sur des briques, des murs et des autres applications générales. La **Premium** est destinée à des matières plus dures comme des Marbres et des usages pareils. Le **Granit Super** est spécifiquement destiné à des Granits les plus durs.

Los Taladros de Albañilería JK están disponibles en tres categorías, específicamente, Normal, Premium & Super Granit. Normal está pensado para usarse en ladrillos, paredes y otras aplicaciones generales. Premium está pensado para usarse en materiales más duros como mármoles y aplicaciones similares. Super Granit está específicamente pensado para los granitos más duros.



Size ** Inch	Size ** mm	Flute Length	Overall Length
1/8	3.00	33	67
5/32	4.00	40	78
3/16	5.00	45	88
7/32	5.50	50	88
15/64	6.00	54	102
1/4	6.50	54	102
9/32	7.00	55	108
5/16	8.00	64	118
11/32	9.00	78	135
3/8	10.00	78	135
7/16	11.00	82	148
15/32	12.00	85	152
1/2	13.00	85	152

Useful Tips for Drilling

*Des Renseignements Utiles Pour Le Perçage.
Algunos Consejos Útiles Para Taladrar*

Données Techniques

Datos Técnicos

- Use the shortest drill possible for the specific application Longer drills are :
 1. More costly
 2. Break easier and
 3. Drill bellmouthed holes.
- Avoid the tendency to over speed and under feed. Excessive speed causes
 1. Premature outer corner drill wear
 2. Material work hardening
 3. Long, stringy chips
 4. Reduced drill life and
 5. Increased cost per hole.
- Optimising feed rate:
 1. Helps break up chips
 2. Reduces premature outer corner drill wear
 3. Reduces material work hardening
 4. Extends drill life and
 5. Reduces cost per hole.
- Use split point drills for drilling alloy materials; benefits include:
 1. Start at the point of contact (self-centering)
 2. Drill with less torque and thrust and
 3. Break up chips.
- A hole of three drill diameters or deeper should be considered a deep hole. Therefore, you should peck drill just enough to prevent chips from packing in the flutes, because chip clogging is the major cause of drill breakage.
- When drilling harder materials (i.e. above HRC 35) :
 1. Reduce speeds and feeds to prevent points from burning and drilling breakage.
 2. Use cobalt drills as their higher hardness and heavy-duty construction are designed for drilling harder-materials.

- Use steam tempered. The black oxide surface laser holds the coolants and lubricates to the surface of the drill retarding material build-up. This treatment also improves toughness.
- You should decrease speeds and feeds as follows:

Speed and feed Reduction
(Based upon hole depth)

Holes Depth To Diameter Ratio (times drill diameter)	Speed Reduction	Feed Reduction
3	10%	10%
4	20%	10%
5	30%	20%
6	35-40%	20%

- Use coolant whenever possible , this will keep the drill cooler. Chip welding and breakage are also reduced. Coolant helps the drill to last and will give the drill a better chance of operating without failing.
- Chips should be short and broken up.
- Keep drills sharp! Sharp drills perform better and last longer. Sharp drills also increase productivity and have a reduced tendency to break.
- Chuck drill on shank area only, not in the flute area

- Employez un foret le plus court pour l'emploi spécifique. De plus longs forets
 1. Sont plus chers.
 2. Se cassent plus facilement.
 3. Percent des trous évasés.
- Évitez la tendance de la vitesse excessive et la pression insuffisante/ l'aménage insuffisant. La vitesse excessive mène à
 1. L'usure prématurée de l'angle extérieur du foret.
 2. Le durcissement de la matière à travailler/fabriquer.
 3. Les longs éclats/ copeaux filants/ filandreux.
 4. L'usage réduit du foret et.
 5. Un coût accru par trou.
- Le taux optimum de l'aménage
 1. Aide à casser les copeaux.
 2. Réduit l'usure de l'angle extérieur du foret.
 3. Réduit le durcissement de la matière à fabriquer.
 4. Prolonge la vie du foret et
 5. Réduit le coût par trou
- Employez les forets à pointe en deux pour percer des matières alliées. Les avantages sont :-
 1. Commencement au point de contact (le serrage concentrique).
 2. Un perçage à moins de couple et poussée et
 3. Fragmentation des copeaux.
- Un trou d'un diamètre de 3 forets ou plus profond devrait être pris comme un trou profond. Donc vous devriez donner un bon coup de foret pour éviter les copeaux de s'accumuler dans les cannelures, parce que l'encrassement des copeaux est une cause majeure pour le cassage du foret.
- Pendant le perçage de la matière dure (c-à-d. supérieur de HRC 35) :
 1. Réduisez la vitesse et l'aménage pour éviter les pointes de se brûler et aussi le cassage du foret.
 2. Employez des forets de cobalt car leur plus haute dureté et leur construction de fatigue sont affectés pour le perçage de la matière plus dure.
- Employez les forets tempérés à vapeur. Le laser de surface d'oxyde noir tient des liquides de refroidissement et graisse/ lubrifie la surface pour que des montées de la matière qui retarde le foret, puissent y sortir. Ce traitement améliore aussi la solidité.
- Vous devriez ralentir la vitesse et l'aménage/ la pression comme suivant :

**Le ralentissement de la vitesse et de l'aménage -
(Basé sur la profondeur du trou)**

Le rapport de profondeur de trou - diamètre	Le ralentissement de vitesse	Le ralentissement d'aménage
3	10%	10%
4	20%	10%
5	30%	20%
6	35-40%	20%

- Se servez de la liquide de refroidissement si possible, comme cela gardera le foret au froid. La soudure et le cassage copeaux sont réduits. La liquide aide à prolonger la vie de foret et donnera au foret, une meilleure possibilité de s'opérer sans panne.
- Les copeaux doivent être courts et fragmentés.
- Gardez les forets pointus ! Les forets pointus fonctionnent mieux et ont une longue vie. Ils augmentent aussi la productivité et ont une tendance réduite à casser.
- Mandriner le foret uniquement à la partie à la surface de queue, pas à la surface de cannelure.

- Use el taladro más corto posible para la aplicación específica. Los taladros más largos son:
 1. Más costosos
 2. Se rompen más fácilmente y
 3. Taladrarán agujeros con boca de campana.
- Evite la tendencia a velocidad excesiva y alimentación baja. La velocidad excesiva causa:
 1. Desgaste prematuro de la esquina exterior del taladro.
 2. Endurecimiento del material de trabajo.
 3. Astillas largas, correas, y
 4. Vida del taladro reducida,
 5. Costo por agujero aumentado.
- Optimizando la proporción de alimentación:
 1. Ayuda a separar las astillas
 2. Reduce el desgaste prematuro de la esquina exterior del taladro
 3. Reduce el endurecimiento del material de trabajo
 4. Extiende la vida del taladro y
 5. Reduce el costo por agujero.
- Use taladros de punto hendido para taladrar materiales de aleación; los beneficios incluyen:
 1. Inicio en el punto de contacto (auto-centrado),
 2. Taladre con menos torsión y empuje, y
 3. Separación de las astillas.
- Un agujero de tres diámetros del taladro o más profundo debe ser considerado un agujero profundo. Por consiguiente, usted debe picar justo lo suficiente para impedir a las astillas llenar las flautas, porque atascamiento de astilla la causa principal de rotura del taladro.
- Al taladrar materiales más duros (es decir por encima de HRC 35):
 1. Reduzca las velocidades y alimentaciones para impedir que los puntos se quemen y rotura del taladro.
 2. Use taladros de cobalto ya que su dureza superior y la construcción pesada están diseñadas para taladrar los materiales duros.
- Use vapor templado. El láser de superficie de óxido negro guarda los refrigerantes y lubrica la superficie del taladro retardando la acumulación de material. Este tratamiento también mejora la dureza.
- Usted debe disminuir las velocidades y alimentación como sigue:

**Reducción de Velocidad y Alimentación
(Con base en profundidad de agujero)**

Tasa de profundidad de agujero a diámetro (por el diámetro del taladro)	Reducción de Velocidad	Reducción de alimentación
3	10%	10%
4	20%	10%
5	30%	20%
6	35-40%	20%

- Use refrigerante siempre que sea posible, esto mantendrá el taladro más frío. La fundición y rompimiento de astillas también se reduce. El enfriador ayuda al taladro a durar y le dará al taladro una mejor posibilidad de operar sin fallar.
- Las astillas deben ser cortos y quebrados.
- ¡Mantenga los taladros afilados! Los taladros afilados se desempeñan mejor y duran más tiempo. Los taladros afilados también aumentan la productividad y tienen una menor tendencia a romperse.
- Presione el taladro en el área del mango únicamente no en el área de la flauta.

Trouble Shooting And Remedies

Le Dépannage Et Des Solutionsle Dépannage
Solución De Problemas Y Remedios

Données Techniques

Datos Técnicos

Problems	Reasons	Remedies
1. Oversize Hole	<ol style="list-style-type: none"> 1. Unequal Lip Angles 2. Unequal Lip Lengths 	Regrind the Drill point to correct lip angle with proper relief, maintaining lip lengths equal
2. Buckling of the Drill	Drill deflects Axially	Use correct guide bush
3. Drill Chattering	<ol style="list-style-type: none"> 1. Hard, Tough work piece 2. Torsional deflection of the Drill 	Increase Torsional stiffness by replacing thicker web drill. Reduce drill length and shorten flute length
4. Drill breaking	<ol style="list-style-type: none"> 1. Fixture not rigid 2. Web thickness more 3. Speed & Feed not proper 	<ol style="list-style-type: none"> 1. Use rigid fixture. 2. Web thinning to be implemented. 3. Use proper speeds & Feeds according to work material.
5. Drill breaking in deep hole drilling.	<ol style="list-style-type: none"> 1. Chips blocking in flutes 2. Back taper no uniform 3. Drill finished on CD 	<ol style="list-style-type: none"> 1. Use wood pecking system 2. Before using check uniform back taper and concentricity.
6. Drill Rubbing at relief	<ol style="list-style-type: none"> 1. No proper relief on point 2. No uniform back taper 	<ol style="list-style-type: none"> 1. Regrind point with proper point geometry 2. Check uniform back taper, at no point negative back taper should occur on drill dia
7. Excessive Heat generation while drilling	<ol style="list-style-type: none"> 1. Coolant insufficient 2. Proper coolant not used 3. Work piece is hard 	<ol style="list-style-type: none"> 1. Use proer coolant flow 2. Use proper coolant 3. Select drill with correct geometry for the material

Les Problèmes	Les Raisons	Les Solutions
1. Un trou trop grand	1. Angles de la Lèvre inégaux. 2. Longueurs de la Lèvre inégales.	Raffûtez la pointe du foret au bon angle de la lèvre à l'angle d'incidence correct
2. La flambage du foret.	Le foret se défléchit axialement	Employez la bonne buselure/ le bon manchon de guide
3. Le brouillage du foret.	1. La matière dure et solid de travail. 2. Le défléchissement à la torsion du foret.	Intensifiez la rigidité de torsion en remplaçant un foret de corps plus épais. Réduisez la longueur du foret et raccourcissez la longueur de la cannelure.
4. Le cassage de foret.	1. La pièce fixe n'est pas rigide. 2. Plus d'épaisseur du corps. 3. La vitesse et l'aménagement. ne sont pas comme il faut.	1. Employez de la pièce fixe rigide. 2. L'amincissement du corps à exécuter. 3. Employez la vitesse et l'aménagement correct selon la matière à travailler
5. Le cassage du foret pendant le perçage d'un trou profond	1. Les copeaux qui s'obstruent 2. Pas de conicité uniforme en arrière 3. L'expiration/ L'épuisement sur OD	1. Employez la méthode à oup de bois. 2. Avant d'employer, vérifiez la conicité uniforme en arrière et la concentricité.
6. Le frottage de foret correct à/ sur la pointe	1. Pas d'angle d'incidence point 2. Pas de conicité constante / uniforme en arrière	1. Raffûtez la pointe à un angle d'incidence correct 2. Vérifiez la conicité Une conicité négative en arrière ne doit jamais se produire au cadran de foret.
7. La production de la chaleur en perçant	1. La liquide de refroidissement est insuffisant. 2. La bonne liquide n'est pas employée. 3. La matière à travailler est dure.	1. Employez l'écoulement/correct de la liquide. 2. Employez une bonne liquide. 3. Choisissez un foret d'une bonne géométrie pour la matière.

Problemas	Razones	Remedios
1. Agujero muy grande	1. Angulos de corte desiguales 2. Logitudes de corte desiguales	Vuelva a pulir el punto de taladrado para corregir el ángulo del labio con relevo apropiado, manteniendo los largos del labio iguales
2. Resistencia del taladro	1. El taladro se desvía axialmente	Use cojinete guía correcto
3. Traqueteado del taladro	1. Pieza de trabajo dura, difícil 2. Desviación de torso del taladro	Aumente la rigidez del torso reemplazando por red más gruesa. Reduzca el largo del taladro y acorte el largo de la flauta.
4. Rompimiento del taladro	1. Parte no rígida 2. Mayor grosor de red 3. Velocidad y alimentación no apropiados	1. Use parte rígida 2. Implemente adelgazamiento de red 3. Use velocidades y alimentaciones apropiadas de acuerdo al material de trabajo
5. Rompimiento del taladro en agujero profundo	1. Bloque de astillas en flautas 2. Afilamiento trasero no uniforme 3. Termino de taladro en OD	1. Utilice sistema de picado de madera 2. Antes de usar revise afilamiento trasero uniforme y concentrado
6. Fricción del taladro	1. Punto de relieve no apropiado 2. Afilamiento trasero no uniforme	1. Vuelva a pulir el punto con relieve de punto apropiado 2. Revise afilamiento trasero, en ningún momento debe ocurrir afilamiento trasero negativo en el dial del taladro.
7. Generación de calor al taladrar	1. Refrigerante insuficiente 2. No se usa el refrigerante apropiado 3. La pieza de trabajo es dura	1. Use el flujo de refrigerante apropiado 2. Use el refrigerante apropiado 3. Seleccione taladro con geometría apropiada para el material



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HSS Taps

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