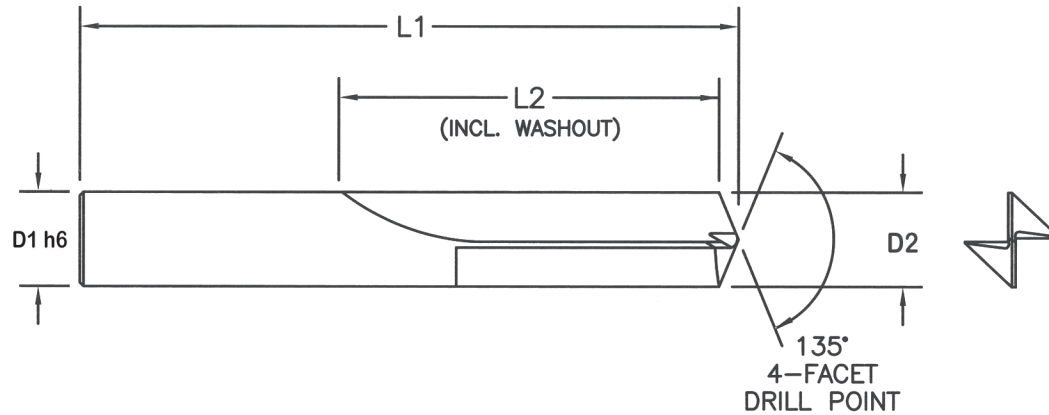


Specialty Application Tooling

Straight Flute Drills	2-13
High Performance Spiral Drills	14-20
Square End Mills	21-24
Ball Nose End Mills.....	25-26
Tapered End Mills.....	27-28
Reamers	29-30



D1: _____

D2: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

DRILLING DEPTH Lmax: _____

COOLANT FEED: YES NO

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

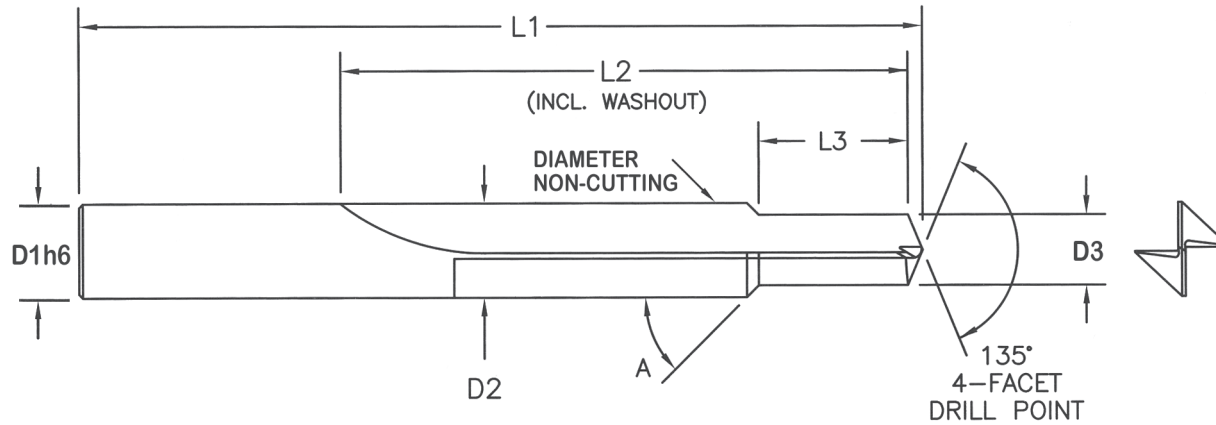
Date: _____

Notes:

**DOUBLE MARGIN
STRAIGHT FLUTE DRILL**

Customer: _____

Dwg. No.: _____



D1: _____

D2: _____ TOL: _____

D3: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

COATING: _____

A- STEP ANGLE (PER SIDE): _____

MAT'L BEING CUT: _____

COOLANT FEED: YES NO



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

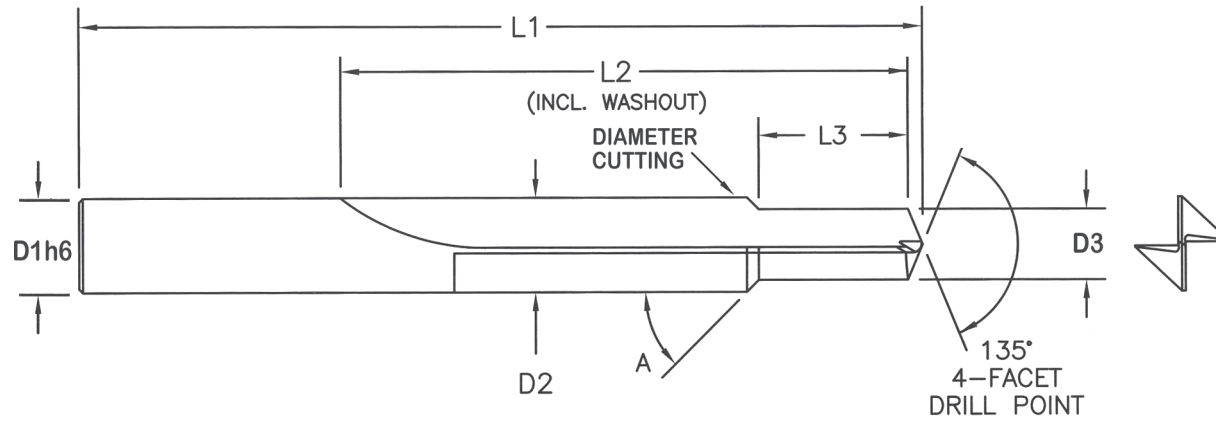
Title: _____

**DOUBLE MARGIN
STRAIGHT FLUTE CHAMFER DRILL**

Customer: _____

Dwg. No.: _____

Notes:



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____
 DRILLING DEPTH Lmax: _____
 A- STEP ANGLE (PER SIDE): _____
 COOLANT FEED: YES NO

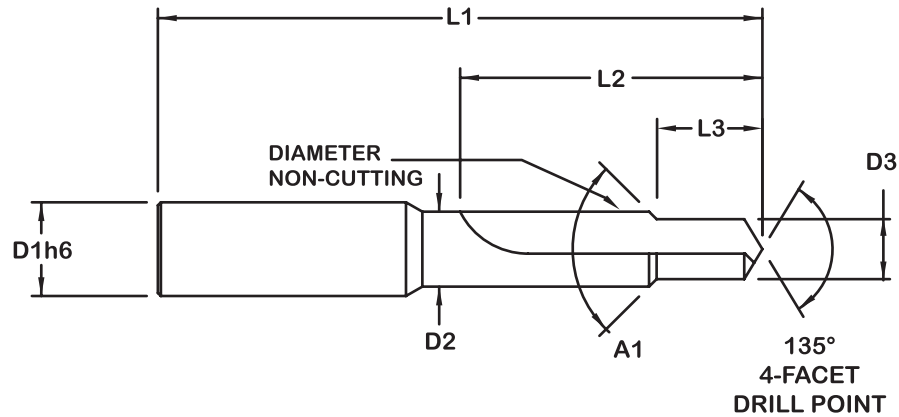
COATING: _____
 MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

<p>Appr. By: _____ Date: _____</p>	
<p>Title: DOUBLE MARGIN STRAIGHT FLUTE STEP DRILL</p>	
<p>Customer: _____</p>	<p>Dwg. No.: _____</p>

Notes:



D1: _____

D2: _____ TOL: _____

D3: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

A1: _____

NO. OF FLUTES: _____

COOLANT FEED: YES NO

COATING: _____

MAT'L BEING CUT: _____

DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

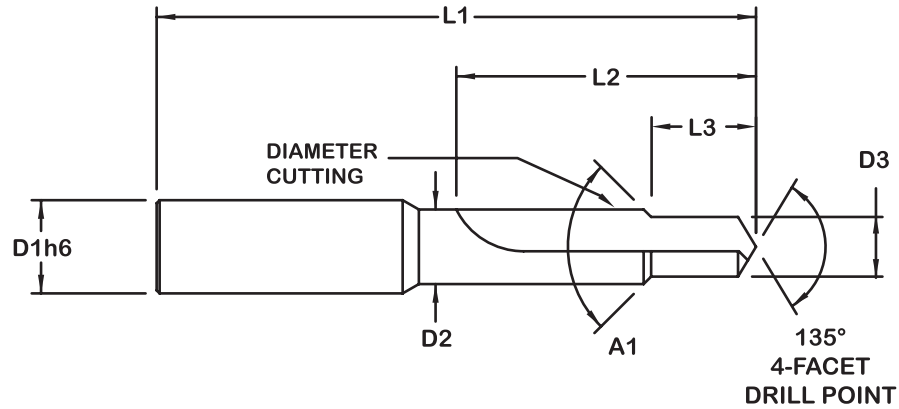
Notes:



Appr. By: _____	Date: _____
-----------------	-------------

Title:	DOUBLE MARGIN STRAIGHT FLUTE CHAMFER DRILL
--------	---

Customer: _____	Dwg. No.: _____
-----------------	-----------------



D1: _____

D2: _____ TOL: _____

D3: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

A1: _____

NO. OF FLUTES: _____

COOLANT FEED: YES NO

COATING: _____

MAT'L BEING CUT: _____

DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Notes:



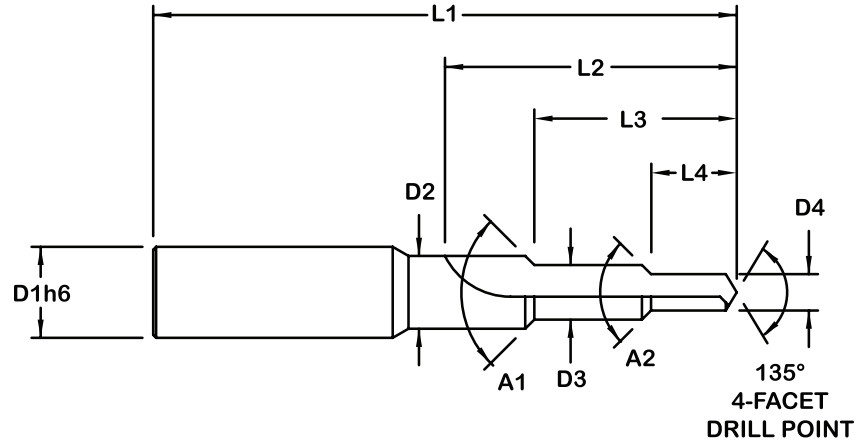
Appr. By: _____

Date: _____

Title: **DOUBLE MARGIN STRAIGHT FLUTE STEP DRILL**

Customer: _____

Dwg. No.: _____



D1: _____

A1: _____

D2: _____ TOL: _____

A2: _____

D2 DIA. CUTTING: YES NO

NO. OF FLUTES: _____

D3: _____ TOL: _____

COOLANT FEED: YES NO

D4: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

COATING: _____

L3: _____ TOL: _____

MAT'L BEING CUT: _____

L4: _____ TOL: _____

DRILLING DEPTH Lmax: _____



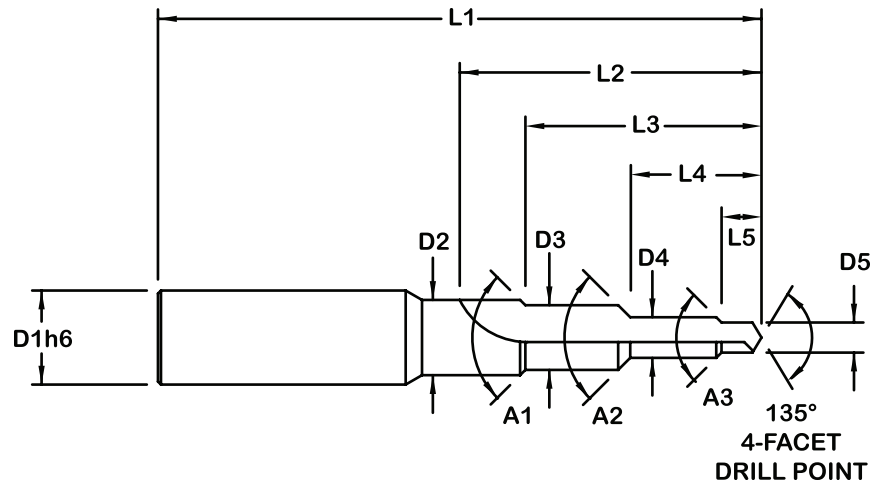
DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____ Date: _____

Title: **DOUBLE MARGIN STRAIGHT FLUTE TWO STEP DRILL**

Customer: _____ Dwg. No.: _____

Notes:



D1: _____

L5: _____ TOL: _____

D2: _____ TOL: _____

DRILLING DEPTH Lmax: _____

D2 DIA. CUTTING: YES NO

A1: _____

D3: _____ TOL: _____

A2: _____

D4: _____ TOL: _____

A3: _____

D5: _____ TOL: _____

NO. OF FLUTES: _____

L1: _____

COOLANT FEED: YES NO

COATING: _____

L2: _____ TOL: _____

MAT'L BEING CUT: _____

L3: _____ TOL: _____

L4: _____ TOL: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

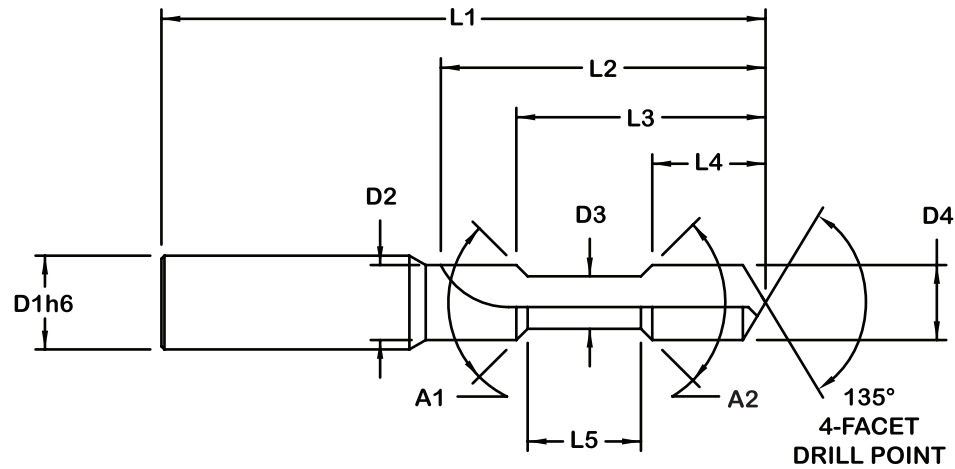
Date: _____

Title: _____

**DOUBLE MARGIN STRAIGHT
FLUTE THREE STEP DRILL**

Customer: _____

Dwg. No.: _____



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 D4: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____
 L4: _____ TOL: _____
 L5: _____ TOL: _____
 DRILLING DEPTH Lmax: _____

A1: _____
 A2: _____
 NO. OF FLUTES: _____
 COOLANT FEED: YES NO

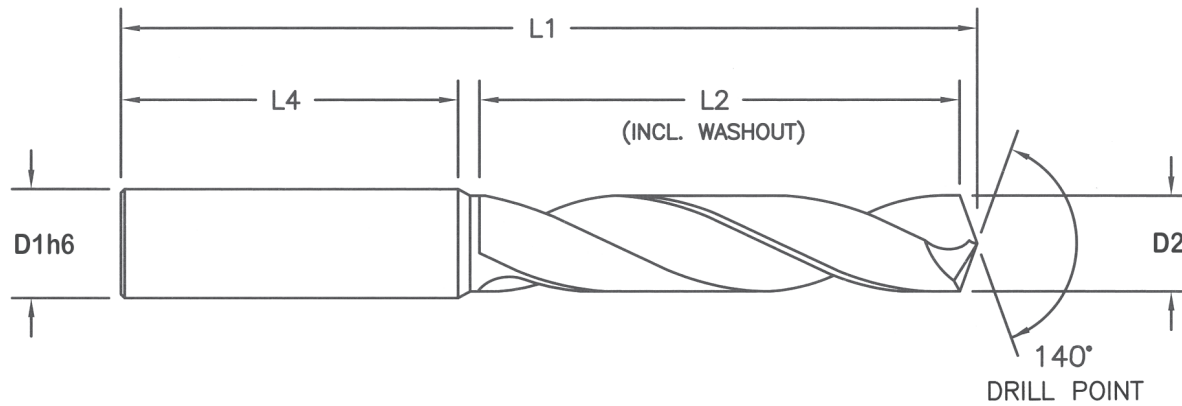
COATING: _____
 MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____		Date: _____
Title:		DOUBLE MARGIN STRAIGHT FLUTE BACK CHAMFER TOOL
Customer: _____		Dwg. No.: _____

Notes:



D1: _____

D2: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L4: _____ TOL: _____

DRILLING DEPTH Lmax: _____

HELIX ANGLE: 30°

NO. OF FLUTES: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

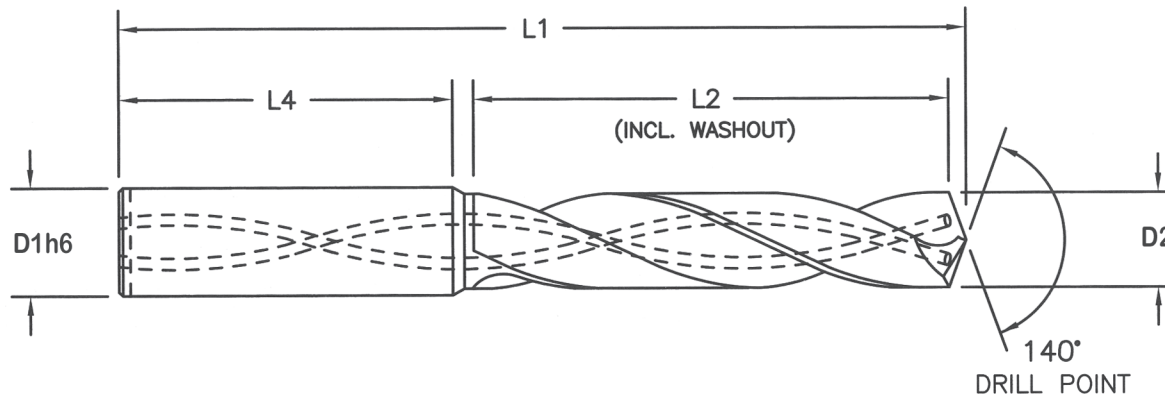
Notes:

Title:

**HIGH PERFORMANCE DRILL
NON-COOLANT**

Customer: _____

Dwg. No.: _____



D1: _____

D2: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L4: _____ TOL: _____

DRILLING DEPTH Lmax: _____

HELIX ANGLE: 30°

NO. OF FLUTES: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

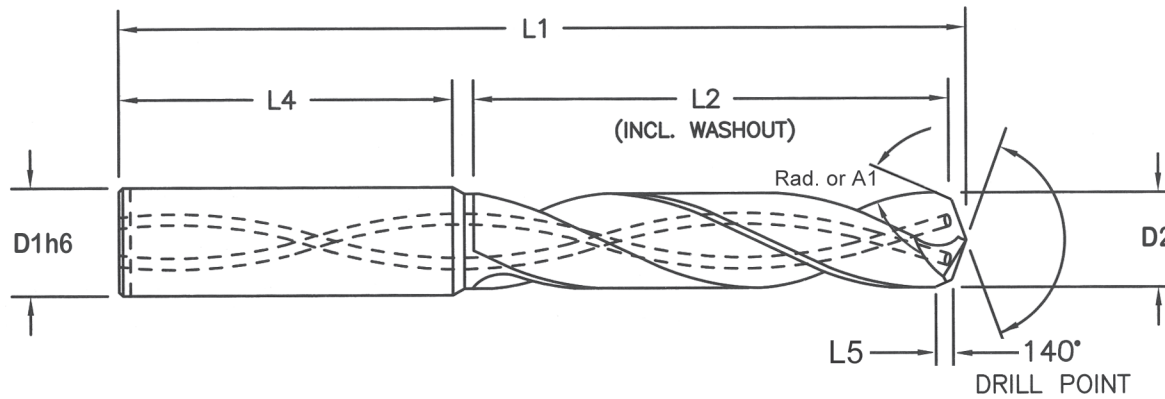
Title: _____

**COOLANT FEED
HIGH PERFORMANCE DRILL**

Customer: _____

Dwg. No.: _____

Notes:



D1: _____ L5: _____
D2: _____ TOL: _____ A1: _____
L1: _____ Radius: _____
L2: _____ TOL: _____ HELIX ANGLE: 30°
L4: _____ TOL: _____ NO. OF FLUTES: _____
DRILLING DEPTH Lmax: _____

COATING: _____

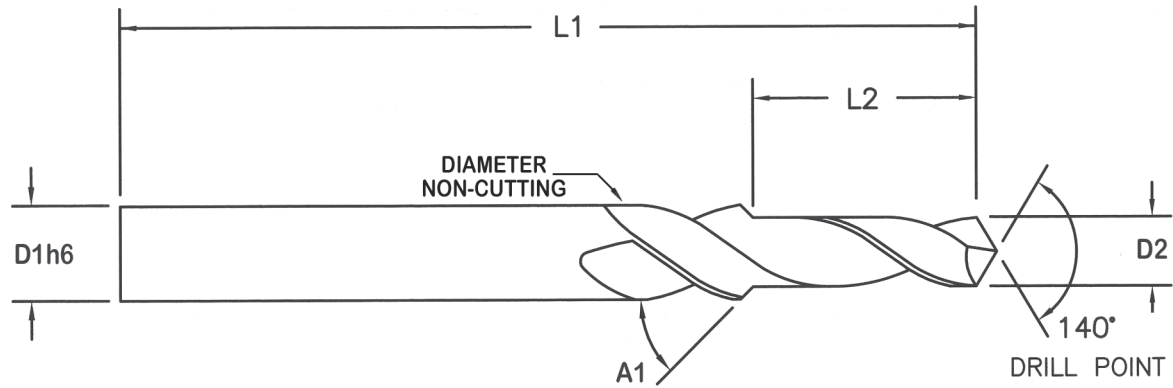
MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
COOLANT FEED HIGH PERFORMANCE DRILL WITH END FORM	
Customer:	Dwg. No.:

Notes:



D1: _____

D2: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

DRILLING DEPTH Lmax: _____

A1- CHAMFER ANGLE (PER SIDE): _____

HELIX ANGLE: 30°

COATING: _____

NO. OF FLUTES: _____

MAT'L BEING CUT: _____

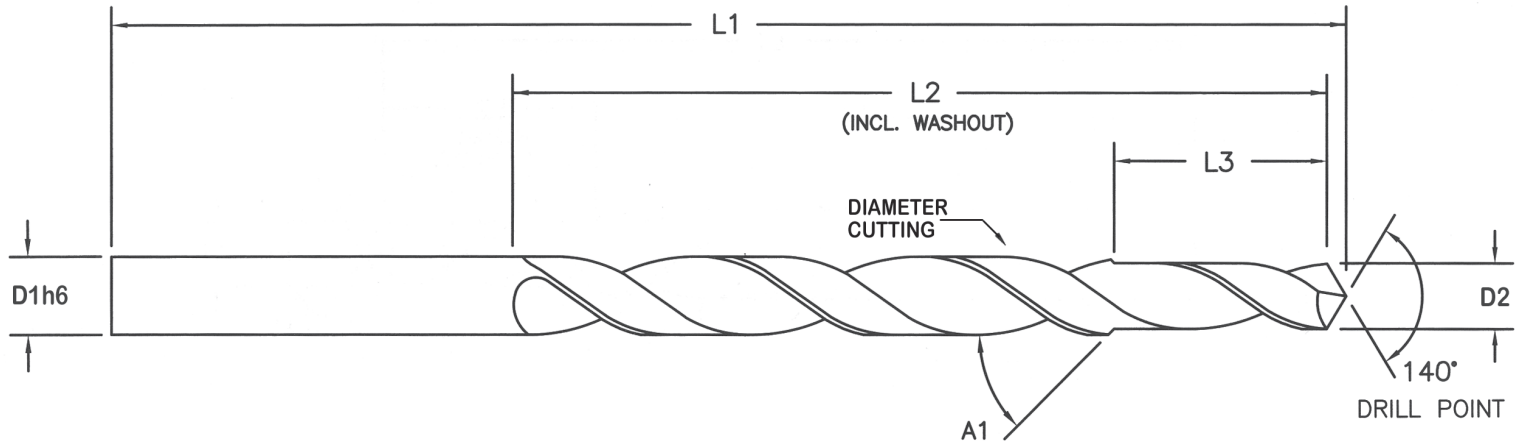
COOLANT FEED: YES NO



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
HIGH PERFORMANCE DRILL CHAMFER TOOL	
Customer:	Dwg. No.:

Notes:



D1: _____

D2: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

A1- STEP ANGLE (PER SIDE): _____

HELIX ANGLE: 30°

NO. OF FLUTES: _____

COOLANT FEED: YES NO

COATING: _____

MAT'L BEING CUT: _____

DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Notes:



Appr. By:

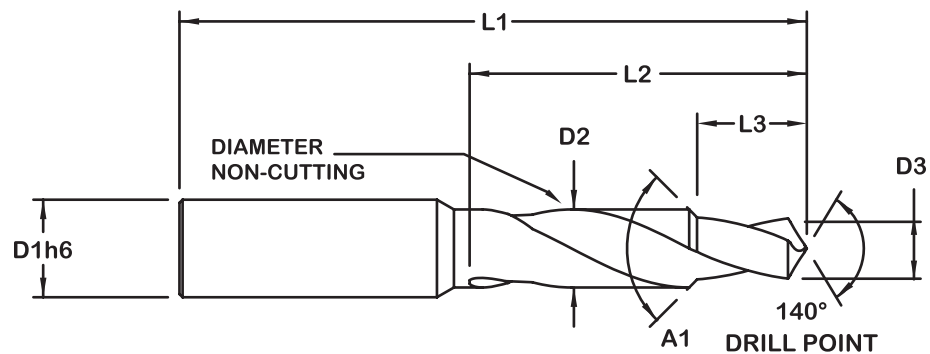
Date:

Title:

HIGH PERFORMANCE STEP DRILL

Customer:

Dwg. No.:



D1: _____

D2: _____ TOL: _____

D3: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

A1: _____

HELIX ANGLE: 30°

NO. OF FLUTES: _____

COOLANT FEED: YES NO

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

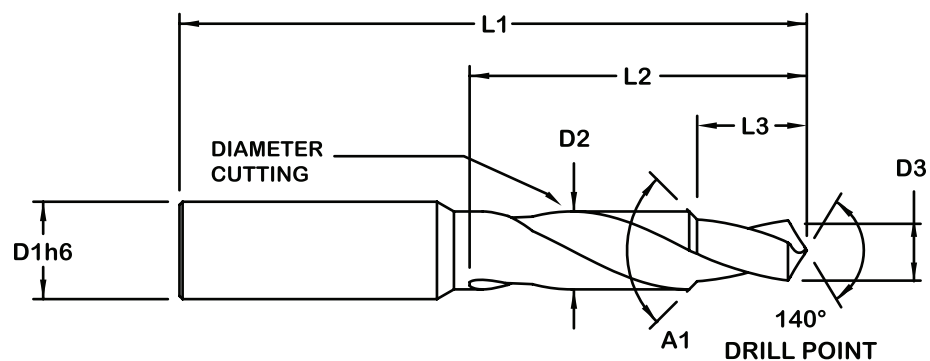
Title: _____

**DOUBLE MARGIN SPIRAL
FLUTE CHAMFER DRILL**

Customer: _____

Dwg. No.: _____

Notes:



D1: _____

D2: _____ TOL: _____

D3: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

A1: _____

HELIX ANGLE: 30°

NO. OF FLUTES: _____

COOLANT FEED: YES NO

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

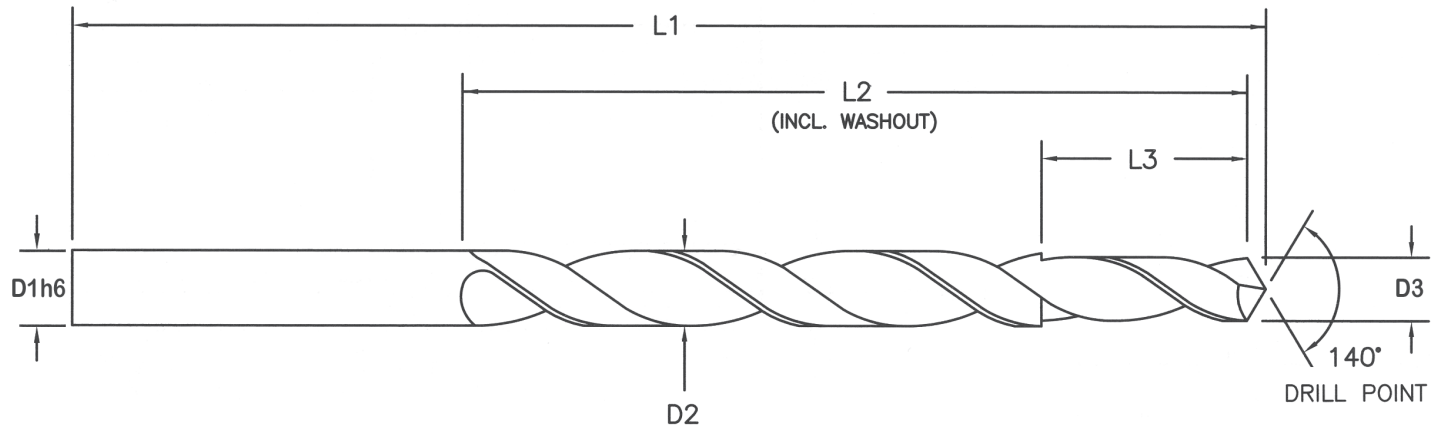
Title: _____

**DOUBLE MARGIN SPIRAL
FLUTE STEP DRILL**

Customer: _____

Dwg. No.: _____

Notes:



D1: _____

HELIX ANGLE: 30°

D2: _____ TOL: _____

NO. OF FLUTES: _____

D3: _____ TOL: _____

COOLANT FEED: YES NO

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

DRILLING DEPTH Lmax: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

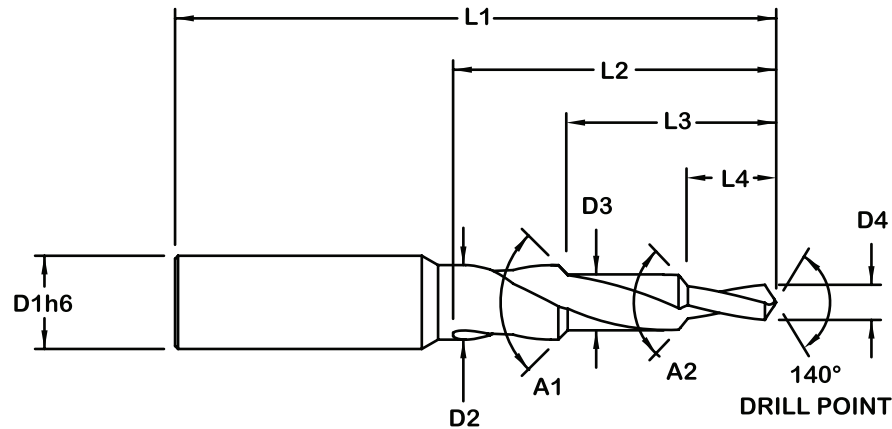
Notes:

Title:

**HIGH PERFORMANCE
DRILL COUNTERBORE**

Customer: _____

Dwg. No.: _____



D1: _____

A1: _____

D2: _____ TOL: _____

A2: _____

D2 DIA. CUTTING: YES NO

HELIX ANGLE: 30°

D3: _____ TOL: _____

NO. OF FLUTES: _____

D4: _____ TOL: _____

COOLANT FEED: YES NO

L1: _____

L2: _____ TOL: _____

COATING: _____

L3: _____ TOL: _____

MAT'L BEING CUT: _____

L4: _____ TOL: _____

DRILLING DEPTH Lmax: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

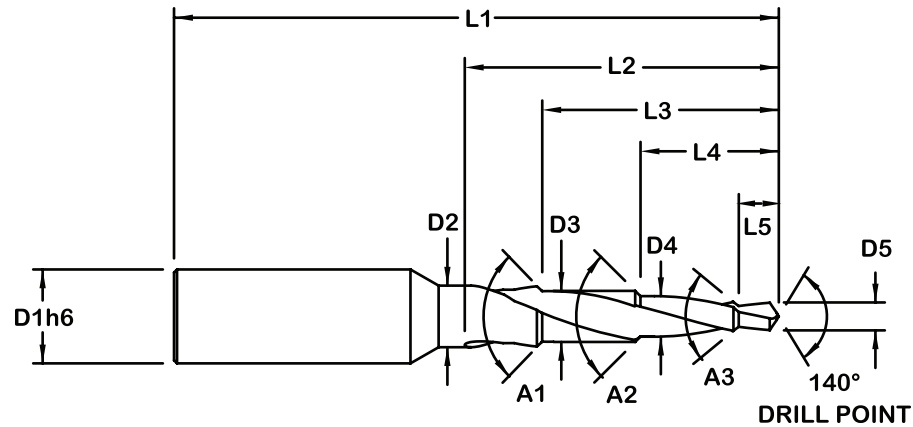
Title: _____

**DOUBLE MARGIN SPIRAL
FLUTE TWO STEP DRILL**

Customer: _____

Dwg. No.: _____

Notes:



D1: _____

L5: _____ TOL: _____

D2: _____ TOL: _____

DRILLING DEPTH Lmax: _____

D2 DIA. CUTTING: YES NO

A1: _____

D3: _____ TOL: _____

A2: _____

D4: _____ TOL: _____

A3: _____

D5: _____ TOL: _____

HELIX ANGLE: 30°

L1: _____

NO. OF FLUTES: _____

COATING: _____

L2: _____ TOL: _____

COOLANT FEED: YES NO

MAT'L BEING CUT: _____

L3: _____ TOL: _____

L4: _____ TOL: _____

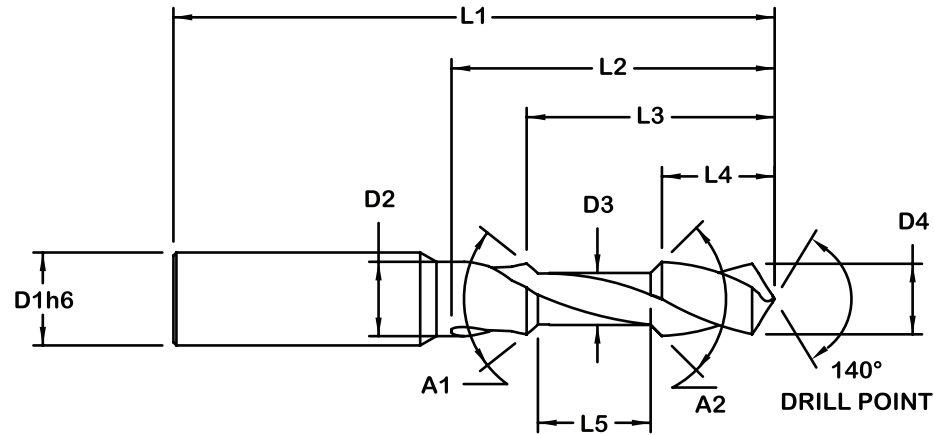


DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____	Date: _____
-----------------	-------------

Notes:	DOUBLE MARGIN SPIRAL FLUTE THREE STEP DRILL
--------	--

Customer: _____	Dwg. No.: _____
-----------------	-----------------



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 D4: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____
 L4: _____ TOL: _____
 L5: _____ TOL: _____
 DRILLING DEPTH Lmax: _____

A1: _____
 A2: _____
 HELIX ANGLE: 30°
 NO. OF FLUTES: _____
 COOLANT FEED: YES NO

COATING: _____

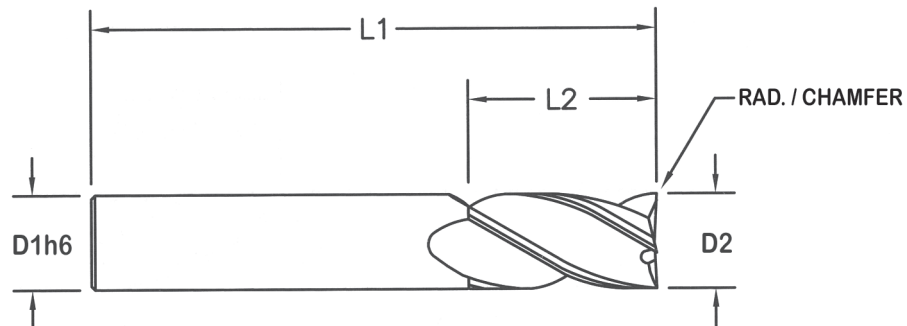
MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
DOUBLE MARGIN SPIRAL FLUTE BACK CHAMFER TOOL	
Customer:	Dwg. No.:

Notes:



D1: _____

D2: _____ TOL: _____

L1: _____ TOL: _____

L2: _____ TOL: _____

RAD: _____ TOL: _____

CHAMFER ANGLE: _____ LENGTH: _____ TOL: _____

SPIRAL: R/H L/H STR

CUT: R/H L/H

HELIX ANGLE: _____

NO. OF FLUTES: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

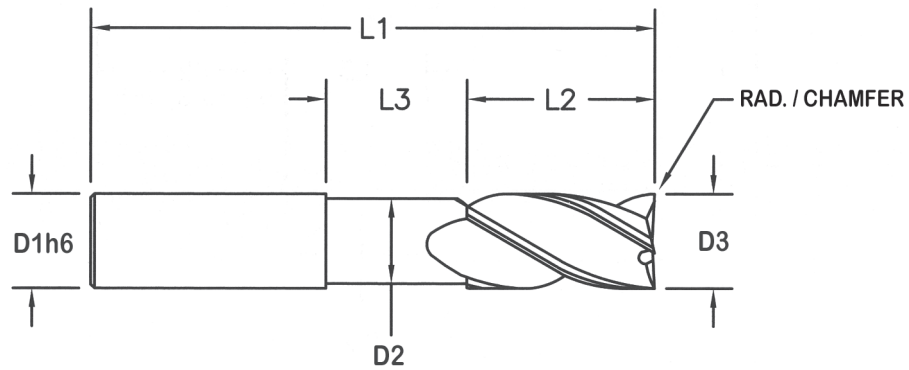
Title: _____

HIGH PERFORMANCE END MILL

Customer: _____

Dwg. No.: _____

Notes:



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____
 RAD: _____ TOL: _____

CHAMFER ANGLE: _____ LENGTH: _____ TOL: _____
 SPIRAL: R/H L/H STR
 CUT: R/H L/H
 HELIX ANGLE: _____
 NO. OF FLUTES: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

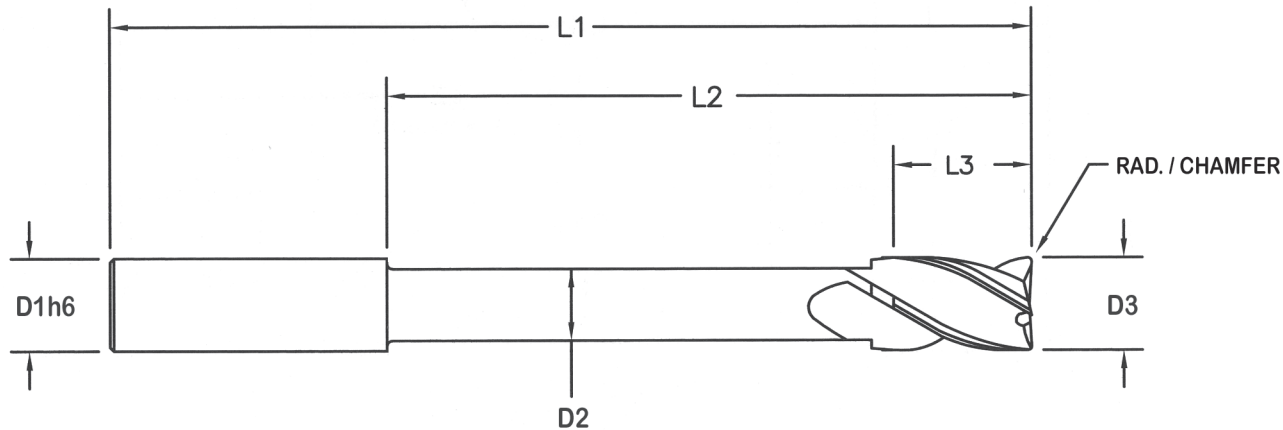
Notes:

Title:

**HIGH PERFORMANCE
 END MILL WITH NECK**

Customer: _____

Dwg. No.: _____



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____
 RAD: _____ TOL: _____

CHAMFER ANGLE: _____ LENGTH: _____ TOL: _____
 SPIRAL: R/H L/H STR
 CUT: R/H L/H
 HELIX ANGLE: _____
 NO. OF FLUTES: _____

COATING: _____

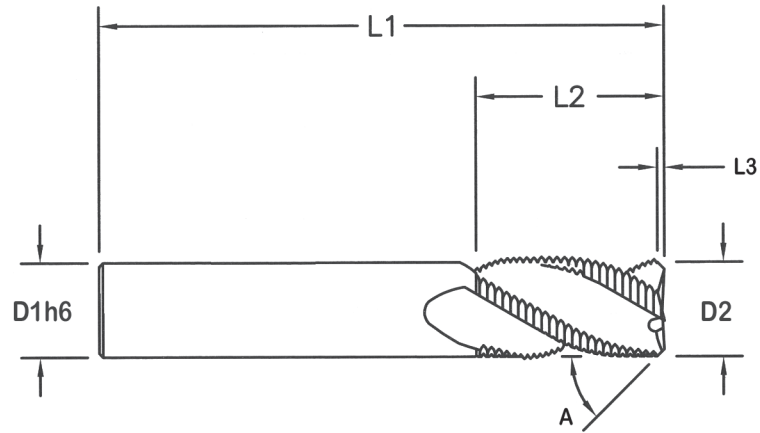
MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
HIGH PERFORMANCE EXTENDED NECK END MILL	
Customer:	Dwg. No.:

Notes:



D1: _____

D2: _____ TOL: _____

L1: _____

L2: _____ TOL: _____

L3: _____ TOL: _____

ANGLE A: _____

SPIRAL: R/H L/H STR

CUT: R/H L/H

HELIX ANGLE: _____

NO. OF FLUTES: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

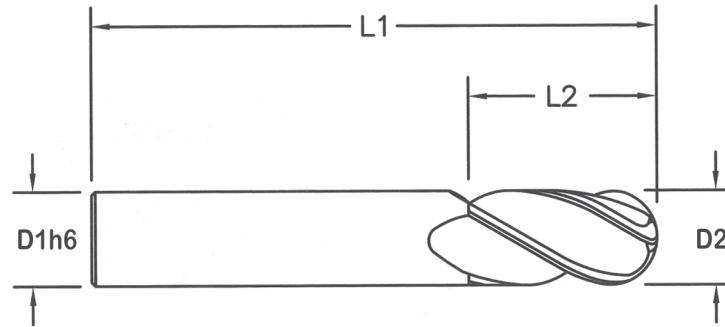
Title: _____

END MILL ROUGHER

Customer: _____

Dwg. No.: _____

Notes:



D1: _____
 D2: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____

NO. OF FLUTES: _____
 SPIRAL: R/H L/H STR
 CUT: R/H L/H
 HELIX ANGLE: _____

COATING: _____

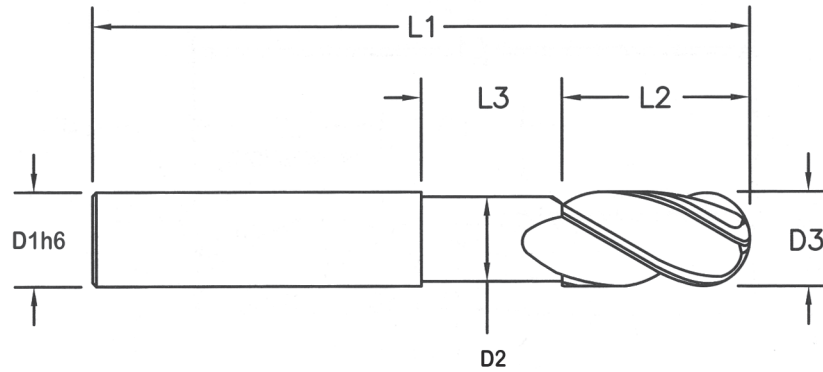
MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
Title:	BALL NOSE END MILL
Customer:	Dwg. No.:

Notes:



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____

NO. FLUTES: _____
 SPIRAL: R/H L/H STR
 CUT: R/H L/H
 HELIX ANGLE: _____

COATING: _____

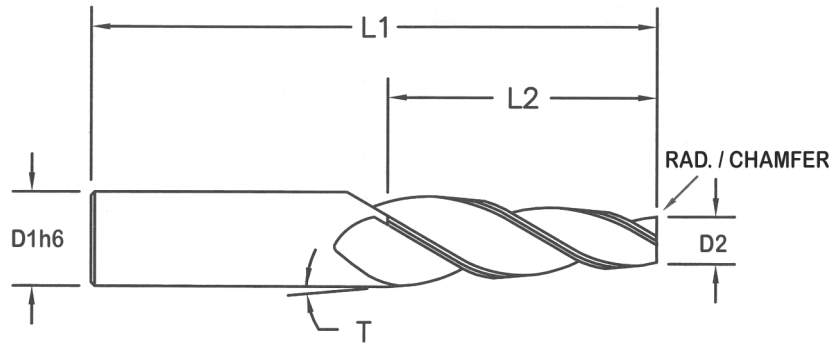
MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
Title:	BALL NOSE END MILL WITH NECK
Customer:	Dwg. No.:

Notes:



D1: _____
 D2: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 RAD: _____ TOL: _____

NO. FLUTES: _____
 HELIX ANGLE: _____
 T (TAPER / SIDE): _____
 CHAMFER ANGLE: _____ LENGTH: _____ TOL: _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

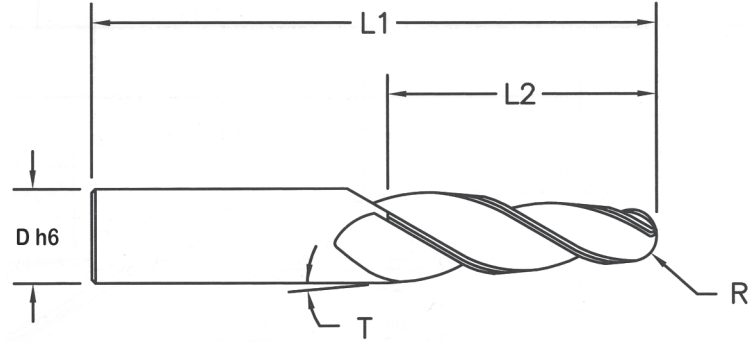
Title: _____

TAPERED END MILL

Customer: _____

Dwg. No.: _____

Notes:



R: _____ TOL: _____

D: _____

L1: _____

L2: _____ TOL: _____

NO. FLUTES: _____

SPIRAL: R/H L/H STR

CUT: R/H L/H

HELIX ANGLE: _____

T (TAPER / SIDE): _____

COATING: _____

MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____

Date: _____

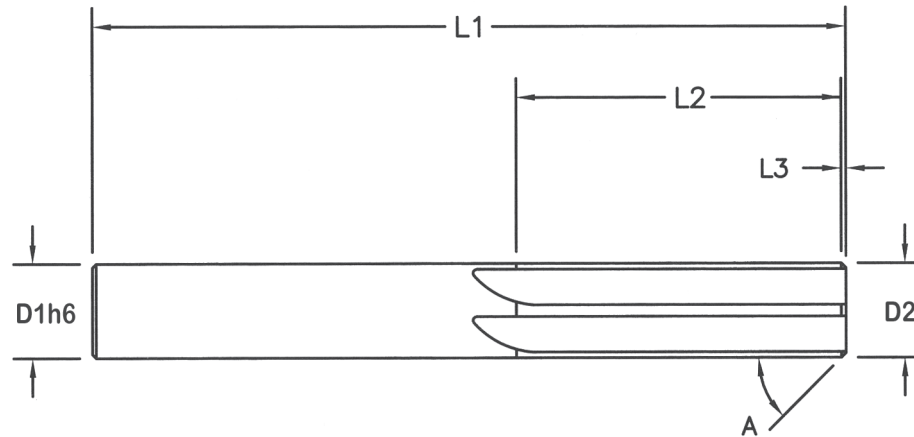
Title: _____

TAPERED BALL END MILL

Customer: _____

Dwg. No.: _____

Notes:



D1: _____
 D2: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3- CHAMFER LENGTH: _____
 A- CHMAFER ANGLE: _____

NO. OF FLUTES: _____
 COOLANT FEED: YES NO
 SPIRAL: R/H L/H STR
 CUT: R/H L/H
 HELIX ANGLE: _____
 END CUT STYLE: _____

COATING: _____

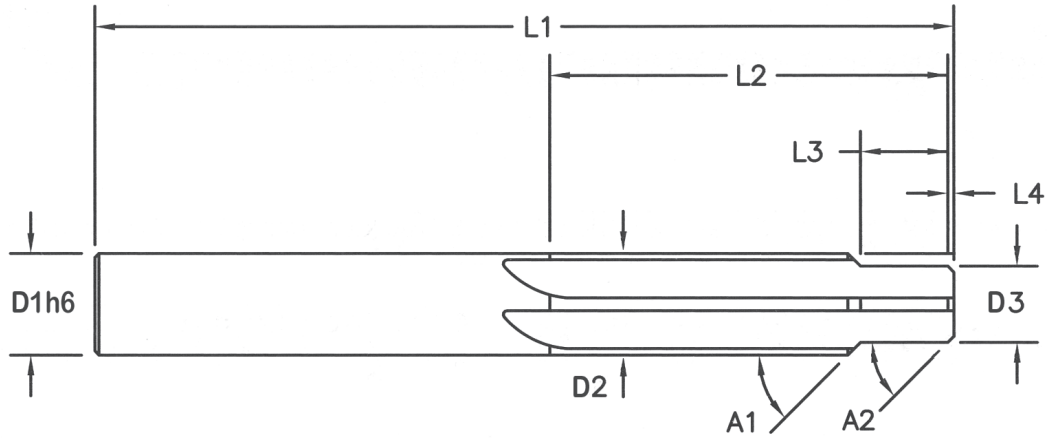
MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By:	Date:
Title:	REAMER
Customer:	Dwg. No.:

Notes:



D1: _____
 D2: _____ TOL: _____
 D3: _____ TOL: _____
 L1: _____
 L2: _____ TOL: _____
 L3: _____ TOL: _____
 L4 (CHAMFER LENGTH): _____
 A1 (CHAMFER ANGLE): _____
 A2 (STEP ANGLE): _____

NO. OF FLUTES: _____
 SPIRAL: R/H L/H STR
 CUT: R/H L/H
 HELIX ANGLE: _____
 END CUT STYLE: _____

COATING: _____
 MAT'L BEING CUT: _____



DIMENSIONS NOT SHOWN TO BE RANI TOOL STANDARDS.
 TOLERANCES ARE BEFORE ANY COATING IS APPLIED.

Appr. By: _____		Date: _____
Title: _____		STEP REAMER
Customer: _____		Dwg. No.: _____

Notes: