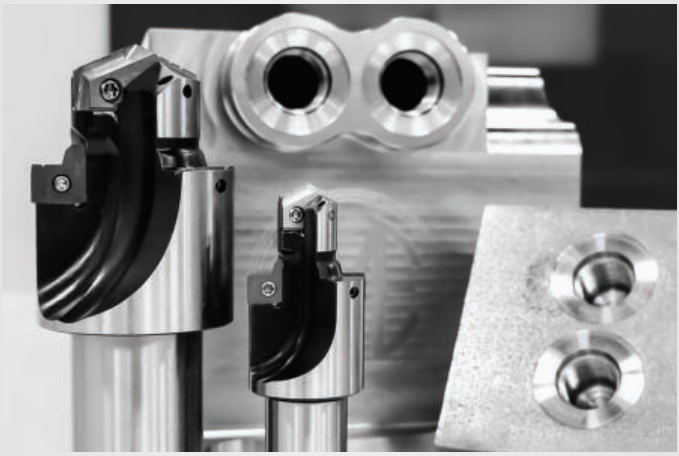
ACCUPORT 432®
PORTING
PRODUCT CATALOG







ALLIED MACHINE & ENGINEERING®

www.alliedmachine.com



It's so much easier when you make

BETTER CHIPS

Allied Machine specializes in developing innovative solutions designed to ***pulverize*** material. Our tools achieve the chip formation and chip evacuation you need to increase your production.

Allied Machine & Engineering is registered to ISO 9001:2015 by DQS

Wohlhaupter GmbH is registered to ISO 9001:2015 by QUACERT

FS 36985

Allied Machine & Engineering Co. Europe Ltd. is registered to ISO 9001:2015 by bsi.



Our Commitment to **YOU**

Manufacturing is the DNA of success everywhere in the world. When you're manufacturing, you're building, creating, and developing something that physically didn't exist before.

At Allied Machine, our core purpose is to provide practical and dependable solutions to improve your manufacturing processes. We know you face challenges and difficulties every day, so we're here to simplify your holemaking processes and improve your production.

However, many factors must be incorporated to truly improve production.

Some of those factors include increasing penetration rates while also improving chip formation and evacuation, reducing scrap rates by producing better parts, reducing setup times, and increasing tool life to get the most from your investment.

Not only does our tooling achieve these results, but our customer service is also an extension of our tooling advantages. Our Application Engineers and Field Sales Engineers are available to assist with any problems you encounter. Don't hesitate to put their skills and knowledge to the test. They won't disappoint.

This is our commitment to manufacturing, and it's our promise to you.

ALLIED MACHINE & ENGINEERING

SECTION

A92-ACP

AccuPort 432®

AccuPort 432®



High Performance Multistep Action

Durable and precise, the AccuPort 432 holders provide a strong and rigid platform for the drilling of hydraulic ports. The precision ground insert location on each holder ensures total repeatability and simple changing of the replaceable inserts.

With the AccuPort technology, you can drill and finish port forms in ***ONE*** operation. Save time and money with AccuPort.

- Single operation hydraulic port cutting system.
- No pre-drilling required.
- Replaceable inserts eliminate regrinding and resetting.

Applicable Industries

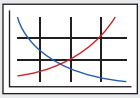
- Aerospace
- Agriculture
- Automotive
- Defense
- Heavy Equipment
- Hydraulics
- Oil and Gas
- Renewable Energy/ Energy
- Tool, Mold, and Die

Reference Icons

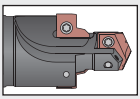
The following icons will appear throughout the catalog to help you navigate between products.



Setup / Assembly Information
Detailed instructions and information regarding the corresponding part(s).



Recommended Cutting Data
Speed and feed recommendations for optimum and safe drilling.



Accuport 432 Holders
Refers to the full details of the holder items included in each kit.



Port and Thread Finishing Kits
Lists the available kits complete with AccuPort tool and AccuThread® solid carbide thread mill.



Coolant-Through Option
Indicates that the product is coolant through.

Your safety and the safety of others is very important. This catalog contains important safety messages. Always read and follow all safety precautions.



This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury. When you see this symbol in the catalog, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalog. Safety messages follow these words:

⚠ WARNING means that failure to follow the precautions in this message could result in tool failure and serious injury.

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit www.alliedmachine.com for the most up-to-date information and procedures.

Table of Contents

Product Overview
- Port Specification . . . 3
- Replaceable Inserts Overview . . . 5
- Product Nomenclature . . . 6

AccuPort 432® Tools
- SAE J-1926 / ISO 11926-1 / MS-16142
  - Metric Shank
    - Metric Shank Holders . . . 7
    - Inserts . . . 8
  - Imperial Shank
    - Imperial Shank Holders . . . 9
    - Inserts . . . 10
  - Imperial Extended Minor Diameter Lengths
    - Holders . . . 11
    - Inserts . . . 12
- ISO 6149-1:2006 / SAE J-2244/1
  - Metric Shank Holders . . . 13
  - Inserts . . . 14
- SAE AS5202
  - Imperial Shank Holders . . . 15
  - Inserts . . . 16
- AND10050
  - Imperial Shank Holders . . . 17
  - Inserts . . . 18
- JDS-G173.1
  - Metric Shank Holders . . . 19
  - Inserts . . . 20

Port and Thread Finishing Kits
- J1926
  - Metric
    - Ferrous Materials . . . 21
    - Nonferrous Materials . . . 22
  - Imperial
    - Ferrous Materials . . . 23
    - Nonferrous Materials . . . 24
- I6149
  - No ID Ridge
    - Ferrous Materials . . . 25
    - Nonferrous Materials . . . 26
  - ID Ridge
    - Ferrous Materials . . . 27
    - Nonferrous Materials . . . 28
- AS5202
  - Ferrous Materials . . . 29
  - Nonferrous Materials . . . 30
- G1731
  - Ferrous Materials . . . 31

Technical Information
- Recommended Drilling Data
  - Metric (mm) . . . 34
  - Imperial (in) . . . 40
- Coolant Recommendations
  - Metric (mm) . . . 45
  - Imperial (in) . . . 47

Product Overview

Port Specification

ONE TOOL | **FOUR** OPERATIONS



4 IN 1

Advanced Solutions, Outstanding Results

As designers and manufacturing engineers push the limits of production technology to improve productivity and performance, Allied Machine has continued to innovate and develop new solutions like the unique AccuPort 432 hydraulic port contour cutter system. Every product in the AccuPort system is designed to deliver maximum performance in a diverse range of hydraulic port cutting applications and demanding manufacturing environments.

Using precision replaceable inserts for both the drilling and port forming operations, AccuPort eliminates the need for tool regrinding and enables absolute repeatability, excellent surface finish, and reduced cost per hole. The AccuPort drills, forms, and precision-finishes the hydraulic port in **one** pass. This replaces up to three separate cutting operations in a single tool to deliver outstanding improvements in productivity, accuracy, and repeatability.

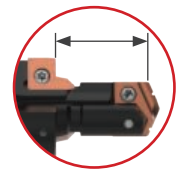
Hydraulic systems are present in an incredibly diverse range of industries. Anywhere a hydraulic port is required, AccuPort can provide a more cost-effective and higher performance solution in a fraction of the time taken for traditional methods using separate drills, special forming tools, and spot facers.



Solid Carbide AccuPort: -2 to -4



Replaceable Insert AccuPort: -4 to -32

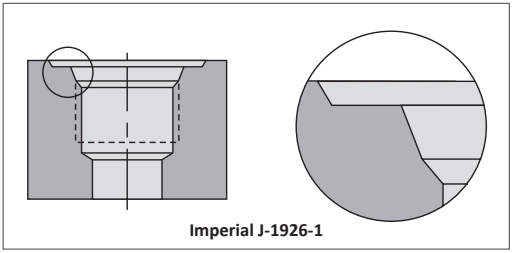
Port Specification	Notes
Imperial SAE J-1926 ISO 11926-1 MS-16142 	Extended minor diameter length option also available. 
Metric ISO 6149-1:2006 SAE J-2244/1 	Holders made with ID ridge. Utilizes inserts with or without ID ridge.  ID ridge  No ID ridge 
Military SAE AS5202 	Also conforms to AND10050 specification by using an alternate tap drill size for a UN thread.
John Deere® JDS-G173.1 	Adheres to John Deere port standards.

Product Overview

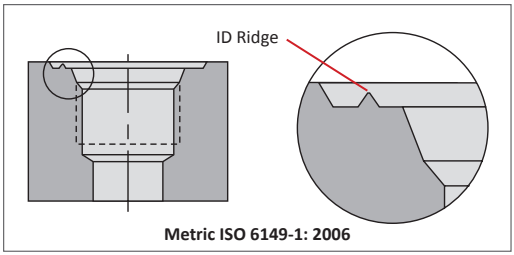
Port Specification & Solid Carbide Regrinds

Choosing the Right System

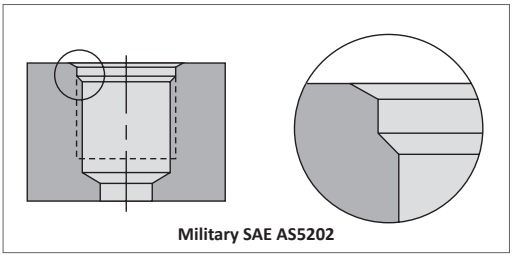
Every product in the AccuPort 432 product line is designed to deliver maximum performance in a diverse range of hydraulic port cutting applications and demanding manufacturing environments. The innovative design delivers the best possible range of benefits in terms of productivity, cost per hole, and tool life.



Imperial J-1926-1



Metric ISO 6149-1: 2006



Military SAE AS5202

Common Industry Sectors and Components

Aerospace
Pumps
Landing Gear
Brake Cylinders
Manifolds

Agriculture
Pumps
Manifolds
Cylinders and Rams
Gear Pumps

Automotive
Motor Valves
Relief Valves
Brake Cylinders
Power Steering
Pumps

Marine / Shipbuilding
Pumps
Cylinders and Rams
Motors
Manifolds

Solid Carbide Factory Regrind & Recoat

1. Send tools to Superion for regrind and recoat.



Parts for regrind
(packaged safely)

Paperwork included in shipment package must include:
- Distributor name
- Distributor contact
- Distributor email

Superion®
Attention: Regrind Department
1285 S Patton St.
Xenia, OH 45385
United States

2. Submit purchase order after tools have been inspected and quoted.

New item:
J1926-02S-10CM

Regrind item:
J1926-02G-10CM

3. Regrind and recoat in Xenia, OH (16 day lead time).

4. Tools returned at supplied address.

Product Overview

Replaceable Inserts Overview

T-A® Drill Insert Grades			
HSS Super Cobalt (T-A / GEN2 T-A) Suited for good-to-rigid machining applications, used for drilling exotic and high-alloy materials, or general use when surface speed needs to be increased. For use in material hardness up to 350 BHN.	**Carbide P40 (C5)** (T-A) Excellent for drilling free-machining steel, low/ medium-carbon steels, alloy steels, high-strength steels, tool steels, and hardened steels.	**Carbide K35 (C1)** (T-A / GEN2 T-A) Excellent for drilling free-machining steels, low/ medium-carbon steels, alloy steels, high-strength steels, tool steels, and hardened steels.	**Carbide K10 (C3)** (T-A) Designed for drilling grey/ white cast irons. The special geometry offers substantial increase in penetration rates and provides exceptional edge strength and tool life.

Port Form Inserts		GEN2 T-A Inserts		T-A Inserts
				
AM200®	TiAlN	AM300®	AM200®	TiN

GEN2 T-A®



Standard

- Offers substantial increases in penetration rates and tool life.
- Improves centering, drill stability, chip formation, and lowers drill forces.
- Provides smoother breakout on through-hole applications.

T-A®



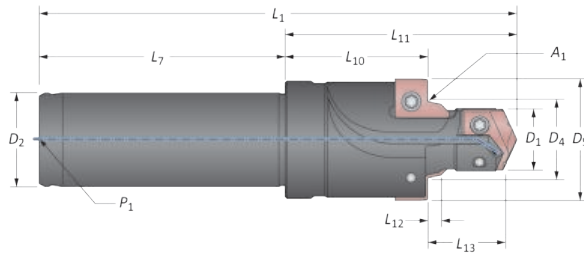
Standard

- Offers excellent penetration rates and tool life.
- Smooth breakout on through holes.
- Increases drill stability and chip formation.
- Ideally suited for low-to-high rigidity machining applications.

Made-to-Order Tool Specifications

Scan and email a copy of the table below to Allied's Application Engineering Department to receive pricing for a made-to-order AccuPort 432 Port Contour Cutter.

Send emails to appeng@alliedmachine.com.



Tube Dash No.	Specification	Port Thread Size	D_1	L_{13}	D_5	L_{10}	L_1	D_2	L_7
	☐ J1926								
	☐ ISO 6149								
	☐ ISO 6149 (no ridge)								
	☐ JDS-G173.1								
	☐ AS5202								

Company Name

Contact Name

Phone

Distributor Name

Fax

Product Overview

Product Nomenclature

AccuPort 432 Port Bodies

J1926	–	04		Y		–	20FM		
Port Specifications		Port Tube Dash No.		T-A® Insert Series			Shank Diameter		
							Solid Carbide	Replaceable Insert	
							Metric (mm)	Metric (mm)	Imperial (inch)
J1926 = Imperial		**04**	**14**	**Y**	**4**		**10CM** = 10	**16FM** = 16	**063F** = 0.750
X1926 = Imperial (extended minor length)		**05**	**16**	**Z**	**S***		**14CM** = 14	**20FM** = 20	**075F** = 0.750
		06	**18**	**0**	**G** = Regrind*		**16CM** = 16	**25FM** = 25	**100F** = 1.000
I6149 = Metric (ISO)		**08**	**20**	**1**				**32FM** = 32	**125F** = 1.250
G1731 = John Deere®		**10**	**24**	**2**					**150F** = 1.500
AS5202 = Military		**12**	**32**	**3**					

*Solid carbide porting bodies.

AccuPort 432 Port Form Inserts

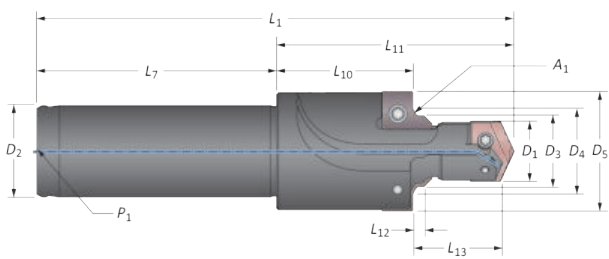
J1926	–	02				R	–	C5	A
Port Specifications		Insert Size				Port Specifications		Diameter	Coating
J1926 = Imperial		**02**	**06**	**10**	**16**	**Blank =** No ID ridge		**C5 =** P40 (C5)	**A =** TiAlN
I6149 = Metric (ISO)		**03**	**07**	**11**	**20**	**R =** ID ridge (I6149 only)		**C3 =** K10 (C3)	**H =** AM200®
G1731 = John Deere®		**04**	**07**	**12**	**24**				
AS5202 = Military		**05**	**09**	**14**	**32**				

T-A® / GEN2 T-A® Pilot Insert

4	5		Y		H	–	.386	-HE
Insert	Material		Series		Coating		Diameter	Geometry
1 = T-A®	**High-Speed Steel**	**Carbide**	**Y**	**4**	**P** = AM300®		**13** = Metric (mm)	**Blank** = Standard
4 = GEN2 T-A®	**3** = HSS	**C1** =K35 (C1)	**Z**		**H** = AM200®		**.515** = Decimal (in)	**-HE** = High Efficiency
	5 = Super cobalt	**C2** = K20 (C2)	**0**		**A** = TiAlN		**0017** = Fractional (in)	
	8 = Premium cobalt	**C3** = K10 (C3)	**1**		**N** = TiCN			
		C5 = P40 (C5)	**2**		**T** = TiN			
			3					

Reference Key

Symbol	Attribute
A_1	Seal angle
D_1	Minor diameter
D_2	Shank diameter
D_3	Pilot diameter
D_4	Seal angle diameter
D_5	Spot face diameter
L_1	Overall length
L_7	Shank length
L_{10}	Spot face to shoulder length
L_{11}	Total head length
L_{12}	Seal angle length
L_{13}	Minor diameter length
P_1	Rear pipe tap

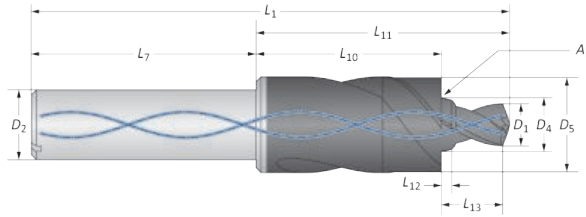


SAE J-1926 / ISO 11926-1 / MS-16142

Metric Shank Holders

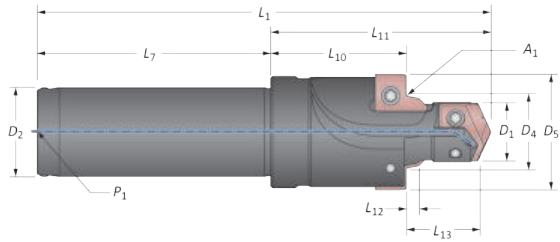
Solid Carbide





Replaceable Insert





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
Solid Carbide														
-2	6.90	12.2	17.25	12°	9.20	2.10	50.80	37.40	90.9	40.01	10	—	5/16-24 UNF-2B	**J1926-02S-10CM**
-3	8.40	12.2	19.25	12°	10.80	2.10	50.80	37.10	96.0	45.01	14	—	3/8-24 UNF-2B	**J1926-03S-14CM**
-4	9.90	16.3	21.26	12°	12.50	2.60	46.50	28.30	94.5	48.01	16	—	7/16-20 UNF-2B	**J1926-04S-16CM**
Replaceable Insert														
-4	9.80	14.0	21.34	12°	12.50	2.70	38.8	22.80	78.4	41.91	16	1/16 BSPT	7/16-20 UNF-2B	**J1926-04Y-16FM**
-5	11.50	14.0	23.51	12°	14.10	2.70	38.8	22.50	78.4	41.91	16	1/16 BSPT	1/2-20 UNF-2B	**J1926-05Z-16FM**
-6	13.00	15.5	25.13	12°	15.70	2.70	47.2	29.00	86.4	41.91	20	1/8 BSPT	9/16-18 UNF-2B	**J1926-060-20FM**
-8	17.50	17.5	30.62	15°	20.70	2.70	50.3	29.20	89.5	41.91	20	1/8 BSPT	3/4-16 UNF-2B	**J1926-080-20FM**
-10	20.50	20.0	34.13	15°	24.00	2.70	54.4	30.10	103.9	53.09	25	1/8 BSPT	7/8-14 UNF-2B	**J1926-101-25FM**
-12	25.00	23.0	42.03	15°	29.20	3.50	67.1	38.90	121.4	57.91	32	1/4 BSPT	1-1/16-12 UN-2B	**J1926-122-32FM**
-14	28.00	23.0	45.24	15°	32.40	3.50	67.1	38.20	121.4	57.91	32	1/4 BSPT	1-3/16-12 UN-2B	**J1926-142-32FM**
-16	31.20	23.0	49.13	15°	35.60	3.50	67.1	37.50	121.4	57.91	32	1/4 BSPT	1-5/16-12 UN-2B	**J1926-162-32FM**
-20	39.00	23.0	58.57	15°	43.60	3.50	77.8	46.60	130.9	57.91	32	1/4 BSPT	1-5/8-12 UN-2B	**J1926-203-32FM***
-24	45.50	23.0	65.13	15°	49.90	3.50	77.8	45.20	130.9	57.91	32	1/4 BSPT	1-7/8-12 UN-2B	**J1926-243-32FM***
-32	61.50	23.0	88.12	15°	65.80	3.50	103.2	60.80	150.0	57.91	32	1/4 BSPT	2-1/2-12 UN-2B	**J1926-324-32FM***

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
Solid Carbide														
-2	0.272	0.480	0.6791	12°	0.362	0.083	2.000	1.472	3.579	1.575	10 mm	—	5/16-24 UNF-2B	**J1926-02S-10CM**
-3	0.331	0.480	0.7579	12°	0.425	0.083	2.000	1.461	3.780	1.772	14 mm	—	3/8-24 UNF-2B	**J1926-03S-14CM**
-4	0.390	0.642	0.8370	12°	0.492	0.102	1.831	1.114	3.720	1.890	16 mm	—	7/16-20 UNF-2B	**J1926-04S-16CM**
Replaceable Insert														
-4	0.386	0.551	0.8402	12°	0.492	0.106	1.528	0.898	3.087	1.650	0.630	1/16 BSPT	7/16-20 UNF-2B	**J1926-04Y-16FM**
-5	0.453	0.551	0.9255	12°	0.555	0.106	1.528	0.886	3.087	1.650	0.630	1/16 BSPT	1/2-20 UNF-2B	**J1926-05Z-16FM**
-6	0.512	0.610	0.9894	12°	0.618	0.106	1.858	1.142	3.402	1.650	0.787	1/8 BSPT	9/16-18 UNF-2B	**J1926-060-20FM**
-8	0.689	0.689	1.2056	15°	0.815	0.106	1.980	1.150	3.524	1.650	0.787	1/8 BSPT	3/4-16 UNF-2B	**J1926-080-20FM**
-10	0.807	0.787	1.3437	15°	0.945	0.106	2.142	1.185	4.091	2.090	0.984	1/8 BSPT	7/8-14 UNF-2B	**J1926-101-25FM**
-12	0.984	0.906	1.6549	15°	1.150	0.138	2.642	1.531	4.780	2.280	1.260	1/4 BSPT	1-1/16-12 UN-2B	**J1926-122-32FM**
-14	1.102	0.906	1.7812	15°	1.276	0.138	2.642	1.504	4.780	2.280	1.260	1/4 BSPT	1-3/16-12 UN-2B	**J1926-142-32FM**
-16	1.231	0.906	1.9341	15°	1.402	0.138	2.642	1.476	4.780	2.280	1.260	1/4 BSPT	1-5/16-12 UN-2B	**J1926-162-32FM**
-20	1.535	0.906	2.3058	15°	1.717	0.138	3.063	1.835	5.154	2.280	1.260	1/4 BSPT	1-5/8-12 UN-2B	**J1926-203-32FM***
-24	1.791	0.906	2.5641	15°	1.965	0.138	3.063	1.780	5.154	2.280	1.260	1/4 BSPT	1-7/8-12 UN-2B	**J1926-243-32FM***
-32	2.421	0.906	3.4694	15°	2.591	0.138	4.063	2.394	5.906	2.280	1.260	1/4 BSPT	2-1/2-12 UN-2B	**J1926-324-32FM***

***NOTICE:** Due to the cutting forces generated by this tool, a mechanical chuck is required. Please contact Application Engineering with any questions: **appeng@alliedmachine.com.**

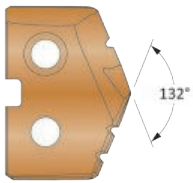
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 21 - 22

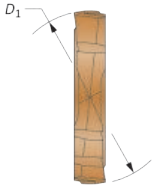
ⓜ = Metric (mm)
ⓘ = Imperial (in)

SAE J-1926 / ISO 11926-1 / MS-16142

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	J1926-04Y-16FM	Y	45YH-.386	4C1YP-.386	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	J1926-05Z-16FM	Z	45ZH-11.5	4C1ZP-11.5	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	J1926-060-20FM	0	450H-13	4C10P-13	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	J1926-080-20FM	0	450H-0022	4C10P-0022	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	J1926-101-25FM	1	451H-20.5	4C11P-20.5	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	J1926-122-32FM	2	452H-25	4C12P-25	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	J1926-142-32FM	2	452H-28	4C12P-28	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	J1926-162-32FM	2	452H-1.231	4C12P-1.231	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	J1926-203-32FM*	3	453H-39	1C53A-39	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	J1926-243-32FM*	3	453H-45.5	1C53A-45.5	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	J1926-324-32FM*	4	454H-61.5	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

Port Form Drill Inserts

Tube Dash No.	AccuPort Part No.	Part No. C3 Carbide AM200®	Part No. C5 Carbide TiAlN	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	J1926-04Y-16FM	J1926-02-C3H	J1926-02-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	J1926-05Z-16FM	J1926-03-C3H	J1926-03-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	J1926-060-20FM	J1926-03-C3H	J1926-03-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	J1926-080-20FM	J1926-07-C3H	J1926-07-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	J1926-101-25FM	J1926-04-C3H	J1926-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-12	J1926-122-32FM	J1926-08-C3H	J1926-08-C5A	7375-IP9-1	8IP-9	175 N-cm (15.5 in-lbs)
-14	J1926-142-32FM	J1926-08-C3H	J1926-08-C5A	7375-IP9-1	8IP-9	175 N-cm (15.5 in-lbs)
-16	J1926-162-32FM	J1926-09-C3H	J1926-09-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-20	J1926-203-32FM*	J1926-10-C3H	J1926-10-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-24	J1926-243-32FM*	J1926-11-C3H	J1926-11-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-32	J1926-324-32FM*	J1926-12-C3H	J1926-12-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)

***NOTICE:** Due to the cutting forces generated by this tool, a mechanical chuck is required. Please contact Application Engineering with any questions: **appeng@alliedmachine.com.**

**Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

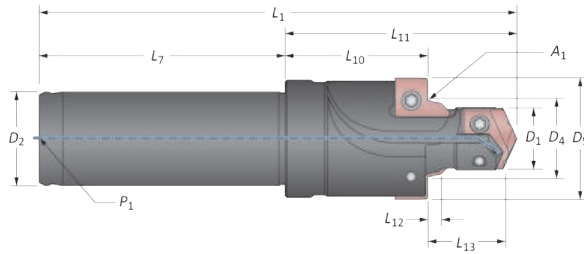
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 21 - 22

Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

SAE J-1926 / ISO 11926-1 / MS-16142

Imperial Shank Holders





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	9.80	14.00	21.34	12°	12.45	2.79	38.79	22.86	84.12	47.63	15.88	1/16 NPT	7/16-20 UNF-2B	**J1926-04Y-063F**
-5	11.50	14.00	23.51	12°	13.97	2.79	38.79	22.61	84.12	47.63	15.88	1/16 NPT	1/2-20 UNF-2B	**J1926-05Z-063F**
-6	13.00	15.49	25.13	12°	15.75	2.79	47.17	28.96	94.46	50.01	19.05	1/8 NPT	9/16-18 UNF-2B	**J1926-060-075F**
-8	17.50	17.50	30.62	15°	20.57	2.79	50.34	29.21	97.64	50.01	19.05	1/8 NPT	3/4-16 UNF-2B	**J1926-080-075F**
-10	20.50	19.99	34.13	15°	24.13	2.79	54.36	30.23	108.74	57.94	25.40	1/8 NPT	7/8-14 UNF-2B	**J1926-101-100F**
-12	25.00	23.01	42.03	15°	29.21	3.56	67.06	38.86	121.44	57.94	31.75	1/4 NPT	1-1/16-12 UN-2B	**J1926-122-125F**
-14	28.00	23.01	45.24	15°	32.51	3.56	67.06	38.10	121.44	57.94	31.75	1/4 NPT	1-3/16-12 UN-2B	**J1926-142-125F**
-16	31.20	23.01	49.13	15°	35.56	3.56	67.06	37.59	121.44	57.94	31.75	1/4 NPT	1-5/16-12 UN-2B	**J1926-162-125F**
-20	39.00	23.01	58.57	15°	43.69	3.56	77.77	46.74	141.30	68.28	38.10	1/4 NPT	1-5/8-12 UN-2B	**J1926-203-150F**
-24	45.50	23.01	65.13	15°	50.04	3.56	77.77	45.21	141.30	68.28	38.10	1/4 NPT	1-7/8-12 UN-2B	**J1926-243-150F**
-32	61.50	23.01	88.12	15°	65.79	3.56	96.82	60.71	160.35	68.28	38.10	1/4 NPT	2-1/2-12 UN-2B	**J1926-324-150F**

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	0.386	0.551	0.8402	12°	0.490	0.110	1.527	0.900	3.312	1.875	5/8	1/16 NPT	7/16-20 UNF-2B	**J1926-04Y-063F**
-5	0.453	0.551	0.9255	12°	0.550	0.110	1.527	0.890	3.312	1.875	5/8	1/16 NPT	1/2-20 UNF-2B	**J1926-05Z-063F**
-6	0.512	0.610	0.9894	12°	0.620	0.110	1.857	1.140	3.719	1.969	3/4	1/8 NPT	9/16-18 UNF-2B	**J1926-060-075F**
-8	0.689	0.689	1.2056	15°	0.810	0.110	1.982	1.150	3.844	1.969	3/4	1/8 NPT	3/4-16 UNF-2B	**J1926-080-075F**
-10	0.807	0.787	1.3437	15°	0.950	0.110	2.140	1.190	4.281	2.281	1	1/8 NPT	7/8-14 UNF-2B	**J1926-101-100F**
-12	0.984	0.906	1.6549	15°	1.150	0.140	2.640	1.530	4.781	2.281	1-1/4	1/4 NPT	1-1/16-12 UN-2B	**J1926-122-125F**
-14	1.102	0.906	1.7812	15°	1.280	0.140	2.640	1.500	4.781	2.281	1-1/4	1/4 NPT	1-3/16-12 UN-2B	**J1926-142-125F**
-16	1.231	0.906	1.9341	15°	1.400	0.140	2.640	1.480	4.781	2.281	1-1/4	1/4 NPT	1-5/16-12 UN-2B	**J1926-162-125F**
-20	1.535	0.906	2.3058	15°	1.720	0.140	3.062	1.840	5.563	2.688	1-1/2	1/4 NPT	1-5/8-12 UN-2B	**J1926-203-150F**
-24	1.791	0.906	2.5641	15°	1.970	0.140	3.062	1.780	5.563	2.688	1-1/2	1/4 NPT	1-7/8-12 UN-2B	**J1926-243-150F**
-32	2.421	0.906	3.4694	15°	2.590	0.140	3.812	2.390	6.313	2.688	1-1/2	1/4 NPT	2-1/2-12 UN-2B	**J1926-324-150F**

NOTE: Port contour cutters are available with extended pilot length (L_{13}). See page A92: 13 for items.

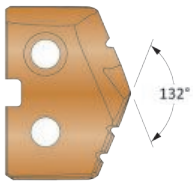
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 23 - 24

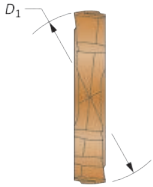
(m) = Metric (mm)
(i) = Imperial (in)

SAE J-1926 / ISO 11926-1 / MS-16142

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	J1926-04Y-063F	Y	45YH-.386	4C1YP-.386	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	J1926-05Z-063F	Z	45ZH-11.5	4C1ZP-11.5	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	J1926-060-075F	0	450H-13	4C10P-13	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	J1926-080-075F	0	450H-0022	4C10P-0022	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	J1926-101-100F	1	451H-20.5	4C11P-20.5	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	J1926-122-125F	2	452H-25	4C12P-25	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	J1926-142-125F	2	452H-28	4C12P-28	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	J1926-162-125F	2	452H-1.231	4C12P-1.231	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	J1926-203-150F	3	453H-39	1C53A-39	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	J1926-243-150F	3	453H-45.5	1C53A-45.5	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	J1926-324-150F	4	454H-61.5	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

Port Form Drill Inserts

Tube Dash No.	AccuPort Part No.	Part No. C3 Carbide AM200®	Part No. C5 Carbide TiAlN	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	J1926-04Y-063F	J1926-02-C3H	J1926-02-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	J1926-05Z-063F	J1926-03-C3H	J1926-03-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	J1926-060-075F	J1926-03-C3H	J1926-03-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	J1926-080-075F	J1926-07-C3H	J1926-07-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	J1926-101-100F	J1926-04-C3H	J1926-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-12	J1926-122-125F	J1926-08-C3H	J1926-08-C5A	7375-IP9-1	8IP-9	175 N-cm (15.5 in-lbs)
-14	J1926-142-125F	J1926-08-C3H	J1926-08-C5A	7375-IP9-1	8IP-9	175 N-cm (15.5 in-lbs)
-16	J1926-162-125F	J1926-09-C3H	J1926-09-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-20	J1926-203-150F	J1926-10-C3H	J1926-10-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-24	J1926-243-150F	J1926-11-C3H	J1926-11-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-32	J1926-324-150F	J1926-12-C3H	J1926-12-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)

**Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

Key on A92: 2

A92: 34 - 44

A92: 3 - 5

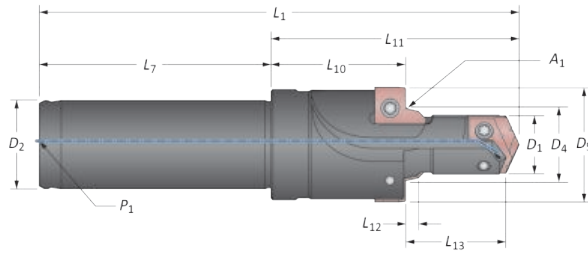
A92: 23 - 24

Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

SAE J-1926 / ISO 11926-1 / MS-16142

Imperial Extended Minor Diameter Length Holders





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	9.80	20.35	21.34	12°	12.45	2.69	45.14	22.76	90.47	47.63	15.88	1/16 NPT	7/16-20 UNF-2B	**X1926-04Y-063F**
-5	11.50	20.35	23.51	12°	14.05	2.69	45.14	22.48	90.47	47.63	15.88	1/16 NPT	1/2-20 UNF-2B	**X1926-05Z-063F**
-6	13.00	21.84	25.13	12°	15.70	2.69	53.52	29.06	100.81	50.01	19.05	1/8 NPT	9/16-18 UNF-2B	**X1926-060-075F**
-8	17.50	23.85	30.62	15°	20.65	2.69	56.69	29.21	103.99	50.01	19.05	1/8 NPT	3/4-16 UNF-2B	**X1926-080-075F**
-10	20.50	26.34	34.13	15°	24.00	2.69	60.71	30.10	115.09	57.94	25.40	1/8 NPT	7/8-14 UNF-2B	**X1926-101-100F**
-12	25.00	29.36	42.03	15°	29.21	3.51	73.41	38.86	127.79	57.94	31.75	1/4 NPT	1-1/16-12 UN-2B	**X1926-122-125F**
-14	28.00	29.36	45.24	15°	32.41	3.51	73.41	38.20	127.79	57.94	31.75	1/4 NPT	1-3/16-12 UN-2B	**X1926-142-125F**
-16	31.20	29.36	49.13	15°	35.56	3.51	73.41	37.52	127.79	57.94	31.75	1/4 NPT	1-5/16-12 UN-2B	**X1926-162-125F**
-20	39.00	29.36	58.57	15°	43.56	3.51	84.12	46.61	147.65	68.28	38.10	1/4 NPT	1-5/8-12 UN-2B	**X1926-203-150F**
-24	45.50	29.36	65.13	15°	49.91	3.51	84.12	45.16	147.65	68.28	38.10	1/4 NPT	1-7/8-12 UN-2B	**X1926-243-150F**
-32	61.50	29.36	88.12	15°	65.76	3.51	103.17	60.78	166.70	68.28	38.10	1/4 NPT	2-1/2-12 UN-2B	**X1926-324-150F**

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	0.386	0.801	0.8402	12°	0.490	0.106	1.777	0.896	3.562	1.875	5/8	1/16 NPT	7/16-20 UNF-2B	**X1926-04Y-063F**
-5	0.453	0.801	0.9255	12°	0.553	0.106	1.777	0.885	3.562	1.875	5/8	1/16 NPT	1/2-20 UNF-2B	**X1926-05Z-063F**
-6	0.512	0.860	0.9894	12°	0.618	0.106	2.107	1.144	3.969	1.969	3/4	1/8 NPT	9/16-18 UNF-2B	**X1926-060-075F**
-8	0.689	0.939	1.2056	15°	0.813	0.106	2.232	1.150	4.094	1.969	3/4	1/8 NPT	3/4-16 UNF-2B	**X1926-080-075F**
-10	0.807	1.037	1.3437	15°	0.945	0.106	2.390	1.185	4.531	2.281	1	1/8 NPT	7/8-14 UNF-2B	**X1926-101-100F**
-12	0.984	1.156	1.6549	15°	1.150	0.138	2.890	1.530	5.031	2.281	1-1/4	1/4 NPT	1-1/16-12 UN-2B	**X1926-122-125F**
-14	1.102	1.156	1.7812	15°	1.276	0.138	2.890	1.504	5.031	2.281	1-1/4	1/4 NPT	1-3/16-12 UN-2B	**X1926-142-125F**
-16	1.231	1.156	1.9341	15°	1.400	0.138	2.890	1.477	5.031	2.281	1-1/4	1/4 NPT	1-5/16-12 UN-2B	**X1926-162-125F**
-20	1.535	1.156	2.3058	15°	1.715	0.138	3.312	1.835	5.813	2.688	1-1/2	1/4 NPT	1-5/8-12 UN-2B	**X1926-203-150F**
-24	1.791	1.156	2.5641	15°	1.965	0.138	3.312	1.778	5.813	2.688	1-1/2	1/4 NPT	1-7/8-12 UN-2B	**X1926-243-150F**
-32	2.421	1.156	3.4694	15°	2.589	0.138	4.062	2.393	6.563	2.688	1-1/2	1/4 NPT	2-1/2-12 UN-2B	**X1926-324-150F**

NOTE: Port contour cutters are available with extended pilot length (L_{13}). See page A92: 13 for items.

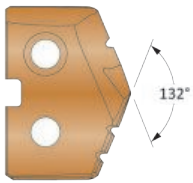
A92: 34 - 44
Key on A92: 2
A92: 3 - 5

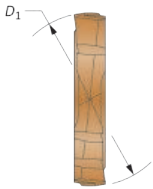
ⓜ = Metric (mm)
ⓘ = Imperial (in)

SAE J-1926 / ISO 11926-1 / MS-16142

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

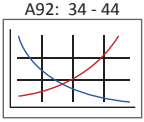
Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	X1926-04Y-063F	Y	45YH-.386	4C1YP-.386	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	X1926-05Z-063F	Z	45ZH-11.5	4C1ZP-11.5	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	X1926-060-075F	0	450H-13	4C10P-13	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	X1926-080-075F	0	450H-0022	4C10P-0022	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	X1926-101-100F	1	451H-20.5	4C11P-20.5	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	X1926-122-125F	2	452H-25	4C12P-25	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	X1926-142-125F	2	452H-28	4C12P-28	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	X1926-162-125F	2	452H-1.231	4C12P-1.231	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	X1926-203-150F	3	453H-39	1C53A-39	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	X1926-243-150F	3	453H-45.5	1C53A-45.5	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	X1926-324-150F	4	454H-61.5	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

Port Form Drill Inserts

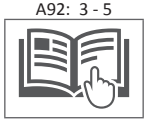
Tube Dash No.	AccuPort Part No.	Part No. C3 Carbide AM200®	Part No. C5 Carbide TiAlN	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	X1926-04Y-063F	J1926-02-C3H	J1926-02-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	X1926-05Z-063F	J1926-03-C3H	J1926-03-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	X1926-060-075F	J1926-03-C3H	J1926-03-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	X1926-080-075F	J1926-07-C3H	J1926-07-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	X1926-101-100F	J1926-04-C3H	J1926-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-12	X1926-122-125F	J1926-08-C3H	J1926-08-C5A	7375-IP9-1	8IP-9	175 N-cm (15.5 in-lbs)
-14	X1926-142-125F	J1926-08-C3H	J1926-08-C5A	7375-IP9-1	8IP-9	175 N-cm (15.5 in-lbs)
-16	X1926-162-125F	J1926-09-C3H	J1926-09-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-20	X1926-203-150F	J1926-10-C3H	J1926-10-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-24	X1926-243-150F	J1926-11-C3H	J1926-11-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-32	X1926-324-150F	J1926-12-C3H	J1926-12-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)

**Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

A92: 34 - 44
Key on A92: 2



A92: 3 - 5



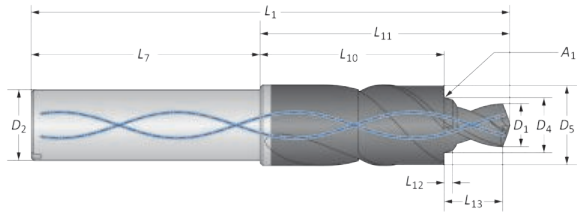
Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

ISO 6149-1:2006 / SAE J-2244/1

Metric Shank Holders

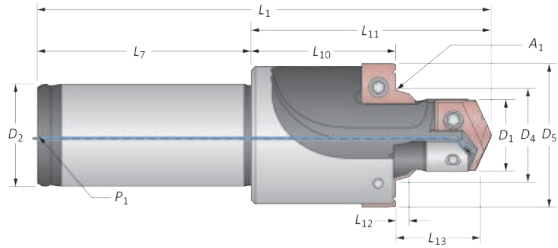
Solid Carbide





Replaceable Insert





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
Solid Carbide														
-2	7.00	11.5	14.00	12°	9.10	1.60	50.8	38.10	90.9	40.01	10	—	M8 X 1	**I6149-02S-10CM**
-3	8.50	11.5	16.00	12°	11.10	1.60	49.3	36.20	94.2	45.01	14	—	M10 X 1	**I6149-03S-14CM**
-4	10.50	15.0	19.00	12°	13.80	2.40	46.5	29.50	94.5	48.01	16	—	M12 X 1.5	**I6149-04S-16CM**
Replaceable Insert														
-4	10.50	14.4	23.98	15°	13.81	2.60	38.8	22.20	78.4	41.91	16	1/16 BSPT	M12 X 1.5	**I6149-04RY-16FM**
-5	12.50	14.4	25.99	15°	15.80	2.60	38.8	21.80	78.4	41.91	16	1/16 BSPT	M14 X 1.5	**I6149-05RZ-16FM**
-6	14.50	15.9	27.99	15°	17.80	2.60	47.2	28.30	86.4	41.91	20	1/8 BSPT	M16 X 1.5	**I6149-06R0-20FM**
-8	16.50	17.4	30.00	15°	19.80	2.60	50.3	29.60	89.5	41.91	20	1/8 BSPT	M18 X 1.5	**I6149-08R0-20FM**
-10	20.50	18.4	33.97	15°	23.80	2.60	54.4	31.60	103.9	53.09	25	1/8 BSPT	M22 X 1.5	**I6149-10R1-25FM**
-12	25.00	22.4	39.95	15°	29.40	3.30	67.1	39.40	121.4	57.91	32	1/4 BSPT	M27 X 2	**I6149-12R2-32FM**
-14	28.00	22.4	44.00	15°	32.40	3.30	67.1	38.80	121.4	57.91	32	1/4 BSPT	M30 X 2	**I6149-14R2-32FM**
-16	31.00	22.4	48.97	15°	35.40	3.30	67.1	38.10	121.4	57.91	32	1/4 BSPT	M33 X 2	**I6149-16R2-32FM**
-20	40.00	23.0	59.92	15°	44.40	3.30	77.8	46.40	130.9	57.91	32	1/4 BSPT	M42 X 2	**I6149-20R3-32FM***
-24	46.00	25.5	66.10	15°	50.40	3.30	77.8	42.60	130.9	57.91	32	1/4 BSPT	M48 X 2	**I6149-24R3-32FM***
-32	58.00	28.0	75.95	15°	62.40	3.30	103.2	56.60	150.0	57.91	32	1/4 BSPT	M60 X 2	**I6149-32R4-32FM***

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
Solid Carbide														
-2	0.276	0.453	0.5512	12°	0.358	0.063	2.000	1.500	3.579	1.575	10 mm	—	M8 X 1	**I6149-02S-10CM**
-3	0.335	0.453	0.6299	12°	0.437	0.063	1.941	1.425	3.709	1.772	14 mm	—	M10 X 1	**I6149-03S-14CM**
-4	0.413	0.591	0.7480	12°	0.543	0.094	1.831	1.161	3.720	1.890	16 mm	—	M12 X 1.5	**I6149-04S-16CM**
Replaceable Insert														
-4	0.413	0.567	0.9441	15°	0.544	0.102	1.528	0.874	3.087	1.650	0.630	1/16 BSPT	M12 X 1.5	**I6149-04RY-16FM**
-5	0.492	0.567	1.0232	15°	0.622	0.102	1.528	0.858	3.087	1.650	0.630	1/16 BSPT	M14 X 1.5	**I6149-05RZ-16FM**
-6	0.571	0.626	1.1020	15°	0.701	0.102	1.858	1.114	3.402	1.650	0.787	1/8 BSPT	M16 X 1.5	**I6149-06R0-20FM**
-8	0.650	0.685	1.1811	15°	0.780	0.102	1.980	1.165	3.524	1.650	0.787	1/8 BSPT	M18 X 1.5	**I6149-08R0-20FM**
-10	0.807	0.724	1.3374	15°	0.937	0.102	2.142	1.244	4.091	2.090	0.984	1/8 BSPT	M22 X 1.5	**I6149-10R1-25FM**
-12	0.984	0.882	1.5728	15°	1.157	0.130	2.642	1.551	4.780	2.280	1.260	1/4 BSPT	M27 X 2	**I6149-12R2-32FM**
-14	1.102	0.882	1.7323	15°	1.276	0.130	2.642	1.528	4.780	2.280	1.260	1/4 BSPT	M30 X 2	**I6149-14R2-32FM**
-16	1.220	0.882	1.9280	15°	1.394	0.130	2.642	1.500	4.780	2.280	1.260	1/4 BSPT	M33 X 2	**I6149-16R2-32FM**
-20	1.575	0.906	2.3591	15°	1.748	0.130	3.063	1.827	5.154	2.280	1.260	1/4 BSPT	M42 X 2	**I6149-20R3-32FM***
-24	1.811	1.004	2.6024	15°	1.984	0.130	3.063	1.677	5.154	2.280	1.260	1/4 BSPT	M48 X 2	**I6149-24R3-32FM***
-32	2.283	1.102	2.9902	15°	2.457	0.130	4.063	2.228	5.906	2.280	1.260	1/4 BSPT	M60 X 2	**I6149-32R4-32FM***

***NOTICE:** Due to the cutting forces generated by this tool, a mechanical chuck is required. Please contact Application Engineering with any questions: **appeng@alliedmachine.com.**

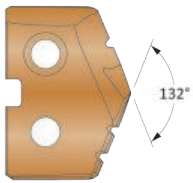
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 25 - 28

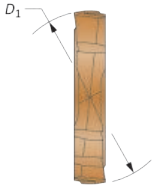
ⓜ = Metric (mm)
ⓘ = Imperial (in)

ISO 6149-1:2006 / SAE J-2244/1

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	I6149-04RY-16FM	Y	45YH-10.5	4C1YP-10.5	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	I6149-05RZ-16FM	Z	45ZH-12.5	4C1ZP-12.5	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	I6149-06R0-20FM	0	450H-14.5	4C10P-14.5	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	I6149-08R0-20FM	0	450H-16.5	4C10P-16.5	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	I6149-10R1-25FM	1	451H-20.5	4C11P-20.5	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	I6149-12R2-32FM	2	452H-25	4C12P-25	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	I6149-14R2-32FM	2	452H-28	4C12P-28	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	I6149-16R2-32FM	2	452H-31	4C12P-31	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	I6149-20R3-32FM*	3	453H-40	1C53A-40	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	I6149-24R3-32FM*	3	453H-46	1C53A-46	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	I6149-32R4-32FM*	4	454H-58	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

Port Form Drill Inserts

Tube Dash No.	AccuPort Part No.	Part No. C3 Carbide (AM200®) ID Ridge	Part No. C3 Carbide (AM200®) No ID Ridge	Part No. C5 Carbide (TiAlN) ID Ridge	Part No. C5 Carbide (TiAlN) No ID Ridge	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	I6149-04RY-16FM	I6149-04R-C3H	I6149-04-C3H	I6149-04R-C5A	I6149-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	I6149-05RZ-16FM	I6149-04R-C3H	I6149-04-C3H	I6149-04R-C5A	I6149-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	I6149-06R0-20FM	I6149-06R-C3H	I6149-06-C3H	I6149-06R-C5A	I6149-06-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	I6149-08R0-20FM	I6149-06R-C3H	I6149-06-C3H	I6149-06R-C5A	I6149-06-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	I6149-10R1-25FM	I6149-04R-C3H	I6149-04-C3H	I6149-04R-C5A	I6149-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-12	I6149-12R2-32FM	I6149-12R-C3H	I6149-12-C3H	I6149-12R-C5A	I6149-12-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-14	I6149-14R2-32FM	I6149-14R-C3H	I6149-14-C3H	I6149-14R-C5A	I6149-14-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-16	I6149-16R2-32FM	I6149-16R-C3H	I6149-16-C3H	I6149-16R-C5A	I6149-16-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-20	I6149-20R3-32FM*	I6149-20R-C3H	I6149-20-C3H	I6149-20R-C5A	I6149-20-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-24	I6149-24R3-32FM*	I6149-24R-C3H	I6149-24-C3H	I6149-24R-C5A	I6149-24-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-32	I6149-32R4-32FM*	I6149-32R-C3H	I6149-32-C3H	I6149-32R-C5A	I6149-32-C5A	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)

***NOTICE:** Due to the cutting forces generated by this tool, a mechanical chuck is required. Please contact Application Engineering with any questions: **appeng@alliedmachine.com.**

**Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 25 - 28

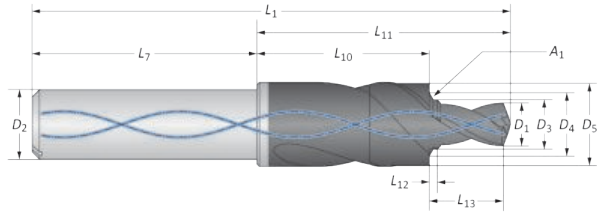
Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

SAE AS5202

Imperial Shank Holders

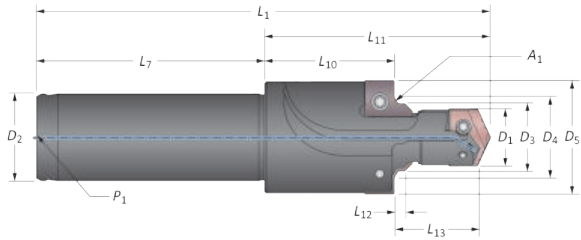
Solid Carbide





Replaceable Insert





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder D_3	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
Solid Carbide															
-2	7.00	15.20	15.29	60°	11.10	1.60	8.30	50.00	33.40	89.90	40.01	10	—	5/16-20 UNJF-3B	**AS5202-02S-10CM**
-3	8.60	14.70	16.89	60°	12.70	1.60	9.90	50.80	34.50	96.00	45.01	14	—	3/8-24 UNJF-3B	**AS5202-03S-14CM**
-4	10.00	16.80	18.49	60°	14.30	1.60	11.50	46.50	27.90	94.50	48.01	16	—	7/16-20 UNJF-3B	**AS5202-04S-16CM**
Replaceable Insert															
-4	9.91	17.02	22.23	60°	14.35	2.11	11.58	41.83	22.76	87.17	47.63	15.88	1/16 NPT	7/16-20 UNJF-3B	**AS5202-04Y-063F**
-5	11.50	17.02	23.27	60°	15.95	2.11	13.18	41.83	22.40	87.17	47.63	15.88	1/16 NPT	1/2-20 UNJF-3B	**AS5202-05Z-063F**
-6	12.95	18.36	24.87	60°	17.55	2.31	14.78	49.53	28.42	97.26	50.01	19.05	1/8 NPT	9/16-18 UNJF-3B	**AS5202-06Z-075F**
-8	17.50	21.56	30.43	60°	22.30	2.59	19.58	53.77	28.58	101.07	50.01	19.05	1/8 NPT	3/4-16 UNJF-3B	**AS5202-080-075F**
-10	20.50	24.05	34.39	60°	25.48	2.92	22.81	58.50	30.20	112.88	57.94	25.40	1/8 NPT	7/8-14 UNJF-3B	**AS5202-101-100F**
-12	25.00	27.46	41.53	60°	31.52	3.38	27.64	70.59	37.95	124.97	57.94	31.75	1/4 NPT	1-1/16-12 UNJ-3B	**AS5202-122-125F**
-14	28.17	27.46	45.09	60°	34.67	3.38	30.78	70.56	37.21	124.94	57.94	31.75	1/4 NPT	1-3/16-12 UNJ-3B	**AS5202-142-125F**
-16	31.34	27.46	48.77	60°	37.85	3.38	33.96	70.56	36.50	124.94	57.94	31.75	1/4 NPT	1-5/16-12 UNJ-3B	**AS5202-162-125F**
-20	39.29	28.78	57.91	60°	45.80	3.38	41.91	81.33	44.32	144.86	68.28	38.10	1/4 NPT	1-5/8-12 UNJ-3B	**AS5202-203-150F**
-24	45.64	29.06	65.28	60°	52.15	3.38	48.26	81.28	42.57	144.81	68.28	38.10	1/4 NPT	1-7/8-12 UNJ-3B	**AS5202-243-150F**
-32	61.49	35.20	88.65	60°	68.05	3.38	64.16	94.01	45.77	157.53	68.28	38.10	1/4 NPT	2-1/2-12 UNJ-3B	**AS5202-324-150F**

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder D_3	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
Solid Carbide															
-2	0.276	0.598	0.6020	60°	0.437	0.063	0.327	1.969	1.315	3.539	1.575	10 mm	—	5/16-20 UNJF-3B	**AS5202-02S-10CM**
-3	0.339	0.579	0.6650	60°	0.500	0.063	0.390	2.000	1.358	3.780	1.772	14 mm	—	3/8-24 UNJF-3B	**AS5202-03S-14CM**
-4	0.394	0.661	0.7280	60°	0.563	0.063	0.453	1.831	1.098	3.720	1.890	16 mm	—	7/16-20 UNJF-3B	**AS5202-04S-16CM**
Replaceable Insert															
-4	0.390	0.670	0.8750	60°	0.565	0.083	0.456	1.647	0.896	3.432	1.875	5/8	1/16 NPT	7/16-20 UNJF-3B	**AS5202-04Y-063F**
-5	0.453	0.670	0.9160	60°	0.628	0.083	0.519	1.647	0.882	3.432	1.875	5/8	1/16 NPT	1/2-20 UNJF-3B	**AS5202-05Z-063F**
-6	0.510	0.723	0.9790	60°	0.691	0.091	0.582	1.950	1.119	3.829	1.969	3/4	1/8 NPT	9/16-18 UNJF-3B	**AS5202-06Z-075F**
-8	0.689	0.849	1.1981	60°	0.878	0.102	0.771	2.117	1.125	3.979	1.969	3/4	1/8 NPT	3/4-16 UNJF-3B	**AS5202-080-075F**
-10	0.807	0.947	1.3540	60°	1.003	0.115	0.898	2.303	1.189	4.444	2.281	1	1/8 NPT	7/8-14 UNJF-3B	**AS5202-101-100F**
-12	0.984	1.081	1.6350	60°	1.241	0.133	1.088	2.779	1.494	4.920	2.281	1-1/4	1/4 NPT	1-1/16-12 UNJ-3B	**AS5202-122-125F**
-14	1.109	1.081	1.7750	60°	1.365	0.133	1.212	2.778	1.465	4.919	2.281	1-1/4	1/4 NPT	1-3/16-12 UNJ-3B	**AS5202-142-125F**
-16	1.234	1.081	1.9200	60°	1.490	0.133	1.337	2.778	1.437	4.919	2.281	1-1/4	1/4 NPT	1-5/16-12 UNJ-3B	**AS5202-162-125F**
-20	1.547	1.133	2.2800	60°	1.803	0.133	1.650	3.202	1.745	5.703	2.688	1-1/2	1/4 NPT	1-5/8-12 UNJ-3B	**AS5202-203-150F**
-24	1.797	1.144	2.5700	60°	2.053	0.133	1.900	3.200	1.676	5.701	2.688	1-1/2	1/4 NPT	1-7/8-12 UNJ-3B	**AS5202-243-150F**
-32	2.421	1.386	3.4901	60°	2.679	0.133	2.526	3.701	1.802	6.202	2.688	1-1/2	1/4 NPT	2-1/2-12 UNJ-3B	**AS5202-324-150F**

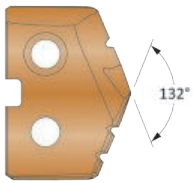
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 29 - 30

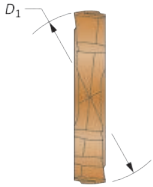
ⓜ = Metric (mm)
ⓘ = Imperial (in)

SAE AS5202

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	AS5202-04Y-063F	Y	45YH-.390	4C1YP-.390	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	AS5202-05Z-063F	Z	45ZH-11.5	4C1ZP-11.5	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	AS5202-06Z-075F	Z	45ZH-.510	4C1ZP-.510	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-8	AS5202-080-075F	0	450H-17.5	4C10P-17.5	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	AS5202-101-100F	1	451H-20.5	4C11P-20.5	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	AS5202-122-125F	2	452H-25	4C12P-25	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	AS5202-142-125F	2	452H-1.109	4C12P-1.109	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	AS5202-162-125F	2	452H-1.234	4C12P-1.234	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	AS5202-203-150F	3	453H-1.547	1C53A-1.547	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	AS5202-243-150F	3	453H-1.797	1C53A-1.797	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	AS5202-324-150F	4	454H-2.421	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

Port Form Drill Inserts

Tube Dash No.	AccuPort Part No.	Part No. C5 Carbide TiAlN	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	AS5202-04Y-063F	AS5202-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	AS5202-05Z-063F	AS5202-05-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	AS5202-06Z-075F	AS5202-06-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	AS5202-080-075F	AS5202-08-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	AS5202-101-100F	AS5202-10-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-12	AS5202-122-125F	AS5202-12-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	AS5202-142-125F	AS5202-14-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	AS5202-162-125F	AS5202-16-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	AS5202-203-150F	AS5202-20-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-24	AS5202-243-150F	AS5202-24-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-32	AS5202-324-150F	AS5202-32-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)

**Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

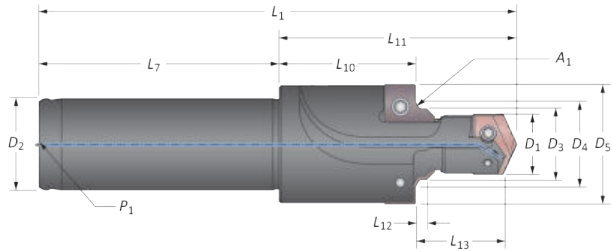
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 29 - 30

Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

AND10050

Imperial Shank Holders





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder D_3	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	9.80	17.02	22.23	60°	14.35	2.11	11.58	41.83	22.76	87.17	47.63	15.88	1/16 NPT	7/16-20 UNF-3B	**AS5202-04Y-063F**
-5	11.46	17.02	23.27	60°	15.95	2.11	13.18	41.83	22.40	87.17	47.63	15.88	1/16 NPT	1/2-20 UNF-3B	**AS5202-05Z-063F**
-6	12.85	18.36	24.87	60°	17.55	2.31	14.78	49.53	28.42	97.26	50.01	19.05	1/8 NPT	9/16-18 UNF-3B	**AS5202-06Z-075F**
-8	17.48	21.56	30.43	60°	22.30	2.59	19.58	53.77	28.58	101.07	50.01	19.05	1/8 NPT	3/4-16 UNF-3B	**AS5202-080-075F**
-10	20.35	24.05	34.39	60°	25.48	2.92	22.81	58.50	30.20	112.88	57.94	25.40	1/8 NPT	7/8-14 UNF-3B	**AS5202-101-100F**
-12	24.79	27.46	41.53	60°	31.52	3.38	27.64	70.59	37.95	124.97	57.94	31.75	1/4 NPT	1-1/16-12 UN-3B	**AS5202-122-125F**
-14	27.99	27.46	45.09	60°	34.67	3.38	30.78	70.56	37.21	124.94	57.94	31.75	1/4 NPT	1-3/16-12 UN-3B	**AS5202-142-125F**
-16	31.14	27.46	48.77	60°	37.85	3.38	33.96	70.56	36.50	124.94	57.94	31.75	1/4 NPT	1-5/16-12 UN-3B	**AS5202-162-125F**
-20	38.99	28.78	57.91	60°	45.80	3.38	41.91	81.33	44.32	144.86	68.28	38.10	1/4 NPT	1-5/8-12 UN-3B	**AS5202-203-150F**
-24	45.49	29.06	65.28	60°	52.15	3.38	48.26	81.28	42.57	144.81	68.28	38.10	1/4 NPT	1-7/8-12 UN-3B	**AS5202-243-150F**
-32	61.29	35.20	88.65	60°	68.05	3.38	64.16	94.01	45.77	157.53	68.28	38.10	1/4 NPT	2-1/2-12 UN-3B	**AS5202-324-150F**

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder D_3	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	0.386	0.670	0.8750	60°	0.565	0.083	0.456	1.647	0.896	3.432	1.875	5/8	1/16 NPT	7/16-20 UNF-3B	**AS5202-04Y-063F**
-5	0.451	0.670	0.9160	60°	0.628	0.083	0.519	1.647	0.882	3.432	1.875	5/8	1/16 NPT	1/2-20 UNF-3B	**AS5202-05Z-063F**
-6	0.506	0.723	0.9790	60°	0.691	0.091	0.582	1.950	1.119	3.829	1.969	3/4	1/8 NPT	9/16-18 UNF-3B	**AS5202-06Z-075F**
-8	0.688	0.849	1.1981	60°	0.878	0.102	0.771	2.117	1.125	3.979	1.969	3/4	1/8 NPT	3/4-16 UNF-3B	**AS5202-080-075F**
-10	0.801	0.947	1.3540	60°	1.003	0.115	0.898	2.303	1.189	4.444	2.281	1	1/8 NPT	7/8-14 UNF-3B	**AS5202-101-100F**
-12	0.976	1.081	1.6350	60°	1.241	0.133	1.088	2.779	1.494	4.920	2.281	1-1/4	1/4 NPT	1-1/16-12 UN-3B	**AS5202-122-125F**
-14	1.102	1.081	1.7750	60°	1.365	0.133	1.212	2.778	1.465	4.919	2.281	1-1/4	1/4 NPT	1-3/16-12 UN-3B	**AS5202-142-125F**
-16	1.226	1.081	1.9200	60°	1.490	0.133	1.337	2.778	1.437	4.919	2.281	1-1/4	1/4 NPT	1-5/16-12 UN-3B	**AS5202-162-125F**
-20	1.535	1.133	2.2800	60°	1.803	0.133	1.650	3.202	1.745	5.703	2.688	1-1/2	1/4 NPT	1-5/8-12 UN-3B	**AS5202-203-150F**
-24	1.791	1.144	2.5700	60°	2.053	0.133	1.900	3.200	1.676	5.701	2.688	1-1/2	1/4 NPT	1-7/8-12 UN-3B	**AS5202-243-150F**
-32	2.413	1.386	3.4901	60°	2.679	0.133	2.526	3.701	1.802	6.202	2.688	1-1/2	1/4 NPT	2-1/2-12 UN-3B	**AS5202-324-150F**

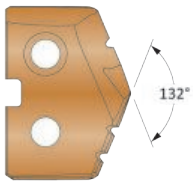
A92: 34 - 44
Key on A92: 2
A92: 3 - 5

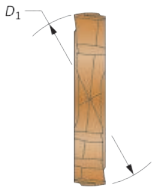
ⓜ = Metric (mm)
ⓘ = Imperial (in)

AND10050

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

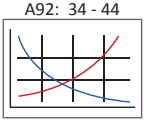
Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	AS5202-04Y-063F	Y	45YH-.386	4C1YP-.386	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	AS5202-05Z-063F	Z	45ZH-.451	4C1ZP-.451	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	AS5202-06Z-075F	Z	45ZH-.506	4C1ZP-.506	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-8	AS5202-080-075F	0	450H-0022	4C10P-0022	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	AS5202-101-100F	1	451H-.801	4C11P-.801	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	AS5202-122-125F	2	452H-.976	4C12P-.976	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	AS5202-142-125F	2	452H-28	4C12P-28	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	AS5202-162-125F	2	452H-1.226	4C12P-1.226	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	AS5202-203-150F	3	453H-39	1C53A-39	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	AS5202-243-150F	3	453H-45.5	1C53A-45.5	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	AS5202-324-150F	4	454H-2.413	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

Port Form Drill Inserts

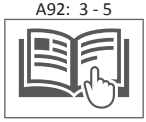
Tube Dash No.	AccuPort Part No.	Part No. C5 Carbide TiAlN	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	AS5202-04Y-063F	AS5202-04-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	AS5202-05Z-063F	AS5202-05-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	AS5202-06Z-075F	AS5202-06-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	AS5202-080-075F	AS5202-08-C5A	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	AS5202-101-100F	AS5202-10-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-12	AS5202-122-125F	AS5202-12-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	AS5202-142-125F	AS5202-14-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	AS5202-162-125F	AS5202-16-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-20	AS5202-203-150F	AS5202-20-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-24	AS5202-243-150F	AS5202-24-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-32	AS5202-324-150F	AS5202-32-C5A	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)

**Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

A92: 34 - 44
Key on A92: 2



A92: 3 - 5

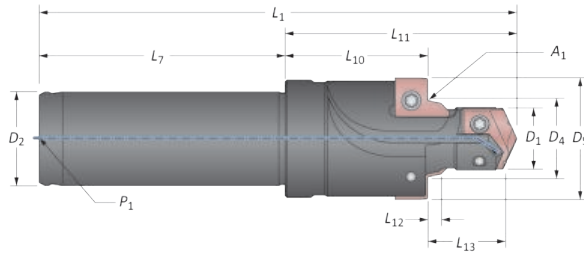


Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

JDS-G173.1

Metric Shank Holders





Metric (mm)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	10.50	18.0	24.00	15°	13.90	2.65	42.4	22.20	82.0	41.91	16	1/16 BSPT	M12 X 1.5	**G1731-04Y-16FM**
-5	12.50	18.0	26.01	15°	15.90	2.65	42.4	21.80	82.0	41.91	16	1/16 BSPT	M14 X 1.5	**G1731-05Z-16FM**
-6	14.50	19.0	29.00	15°	17.90	2.65	50.3	28.40	89.5	41.91	20	1/8 BSPT	M16 X 1.5	**G1731-060-20FM**
-8	16.50	21.0	30.98	15°	19.90	2.65	53.9	29.50	93.1	41.91	20	1/8 BSPT	M18 X 1.5	**G1731-080-20FM**
-10	20.50	22.0	34.96	15°	23.90	2.65	57.9	31.60	107.4	53.09	25	1/8 BSPT	M22 X 1.5	**G1731-101-25FM**
-12	25.00	27.0	41.00	15°	29.50	3.35	71.6	39.40	126.0	57.91	32	1/4 BSPT	M27 X 2	**G1731-122-32FM**
-14	28.00	27.0	44.01	15°	32.50	3.35	71.6	39.70	126.0	57.91	32	1/4 BSPT	M30 X 2	**G1731-142-32FM**
-16	31.00	27.0	50.00	15°	35.50	3.35	71.6	38.10	126.0	57.91	32	1/4 BSPT	M33 X 2	**G1731-162-32FM**
-18	36.00	27.0	54.96	15°	40.50	3.35	73.7	46.80	134.5	57.91	32	1/4 BSPT	M38 X 2	**G1731-183-32FM***
-20	40.00	27.0	61.00	15°	44.50	3.35	73.7	45.90	134.5	57.91	32	1/4 BSPT	M42 X 2	**G1731-203-32FM***
-24	46.00	29.0	67.02	15°	50.50	3.35	73.7	42.80	134.5	57.91	32	1/4 BSPT	M48 X 2	**G1731-243-32FM***
-32	58.00	32.0	77.00	15°	62.50	3.35	103.2	58.40	154.1	57.91	32	1/4 BSPT	M60 X 2	**G1731-324-32FM***
CV	18.50	20.0	32.95	15°	21.90	2.65	54.4	32.50	103.9	53.09	25	1/8 BSPT	M20 X 1.5	**G1731-CV1-25FM**

Imperial (in)

Tube Dash No.	Cutting D_1	Cutting L_{13}	Cutting D_5	Seal Angle A_1	Seal Angle D_4	Seal Angle L_{12}	Holder L_{11}	Holder L_{10}	Holder L_1	Shank L_7	Shank D_2	Shank P_1	Port Thread Size	Part No.
-4	0.413	0.709	0.9449	15°	0.547	0.104	1.669	0.874	3.228	1.650	0.630	1/16 BSPT	M12 X 1.5	**G1731-04Y-16FM**
-5	0.492	0.709	1.0240	15°	0.626	0.104	1.669	0.858	3.228	1.650	0.630	1/16 BSPT	M14 X 1.5	**G1731-05Z-16FM**
-6	0.571	0.748	1.1417	15°	0.705	0.104	1.980	1.118	3.524	1.650	0.787	1/8 BSPT	M16 X 1.5	**G1731-060-20FM**
-8	0.650	0.827	1.2197	15°	0.783	0.104	2.122	1.161	3.665	1.650	0.787	1/8 BSPT	M18 X 1.5	**G1731-080-20FM**
-10	0.807	0.866	1.3764	15°	0.941	0.104	2.280	1.244	4.228	2.090	0.984	1/8 BSPT	M22 X 1.5	**G1731-101-25FM**
-12	0.984	1.063	1.6142	15°	1.161	0.132	2.819	1.551	4.961	2.280	1.260	1/4 BSPT	M27 X 2	**G1731-122-32FM**
-14	1.102	1.063	1.7327	15°	1.280	0.132	2.819	1.563	4.961	2.280	1.260	1/4 BSPT	M30 X 2	**G1731-142-32FM**
-16	1.221	1.063	1.9685	15°	1.398	0.132	2.819	1.500	4.961	2.280	1.260	1/4 BSPT	M33 X 2	**G1731-162-32FM**
-18	1.417	1.063	2.1638	15°	1.594	0.132	2.902	1.843	5.295	2.280	1.260	1/4 BSPT	M38 X 2	**G1731-183-32FM***
-20	1.575	1.063	2.4016	15°	1.752	0.132	2.902	1.807	5.295	2.280	1.260	1/4 BSPT	M42 X 2	**G1731-203-32FM***
-24	1.811	1.142	2.6386	15°	1.988	0.132	2.902	1.685	5.295	2.280	1.260	1/4 BSPT	M48 X 2	**G1731-243-32FM***
-32	2.284	1.260	3.0315	15°	2.461	0.132	4.063	2.299	6.067	2.280	1.260	1/4 BSPT	M60 X 2	**G1731-324-32FM***
C**	0.728	0.787	1.2972	15°	0.862	0.104	2.142	1.280	4.091	2.090	0.984	1/8 BSPT	M20 X 1.5	**G1731-CV1-25FM**

***NOTICE:** Due to the cutting forces generated by this tool, a mechanical chuck is required. Please contact Application Engineering with any questions: **appeng@alliedmachine.com.**

**Cartridge cavity.

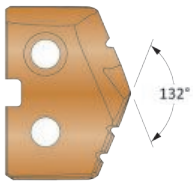
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 31

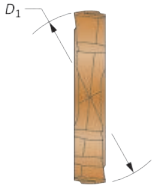
m = Metric (mm)
i = Imperial (in)

JDS-G173.1

Inserts







See section A30 in A00-DRL for complete T-A insert details.

T-A® / GEN2 T-A® Drill Inserts

Tube Dash No.	AccuPort Part No.	T-A® Insert Series	Part No. Super Cobalt AM200®	Part No. Carbide AM300®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	G1731-04Y-16FM	Y	45YH-10.5	4C2YP-10.5	724-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-5	G1731-05Z-16FM	Z	45ZH-12.5	4C2ZP-12.5	7247-IP7-1	8IP-7	84 N-cm (7.4 in-lbs)
-6	G1731-060-20FM	0	450H-14.5	4C20P-14.5	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	G1731-080-20FM	0	450H-16.5	4C20P-16.5	72567-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	G1731-101-25FM	1	451H-20.5	4C21P-20.5	739-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-12	G1731-122-32FM	2	452H-25	4C22P-25	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-14	G1731-142-32FM	2	452H-28	4C22P-28	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-16	G1731-162-32FM	2	452H-31	4C22P-31	7495-IP15-1	8IP-15	690 N-cm (61.0 in-lbs)
-18	G1731-183-32FM*	3	453H-36	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-20	G1731-203-32FM*	3	453H-40	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-24	G1731-243-32FM*	3	453H-46	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
-32	G1731-324-32FM*	4	454H-58	—	7514-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)
C***	G1731-CV1-25FM	1	451H-18.5	4C21P-18.5	739-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)

Port Form Drill Inserts

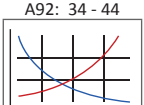
Tube Dash No.	AccuPort Part No.	Part No. C3 Carbide AM200®	Insert Screw	Insert Driver	Admissible Tightening Torque**
-4	G1731-04Y-16FM	G1731-01-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-5	G1731-05Z-16FM	G1731-01-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-6	G1731-060-20FM	G1731-02-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-8	G1731-080-20FM	G1731-02-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-10	G1731-101-25FM	G1731-02-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-12	G1731-122-32FM	G1731-03-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-14	G1731-142-32FM	G1731-03-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)
-16	G1731-162-32FM	G1731-04-C3H	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-18	G1731-183-32FM*	G1731-04-C3H	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-20	G1731-203-32FM*	G1731-05-C3H	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-24	G1731-243-32FM*	G1731-05-C3H	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
-32	G1731-324-32FM*	G1731-06-C3H	7375-IP9-1	8IP-9	305 N-cm (27.0 in-lbs)
C***	G1731-CV1-25FM	G1731-02-C3H	72556-IP8-1	8IP-8	175 N-cm (15.5 in-lbs)

***NOTICE:** Due to the cutting forces generated by this tool, a mechanical chuck is required. Please contact Application Engineering with any questions: **appeng@alliedmachine.com.**

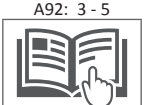
**Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

***Cartridge cavity.

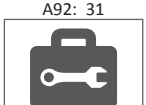
A92: 34 - 44
Key on A92: 2



A92: 3 - 5



A92: 31

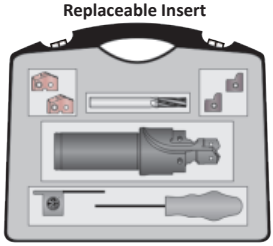


Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

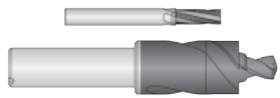
Port and Thread Finishing Kits

J1926 | Metric | Ferrous Materials

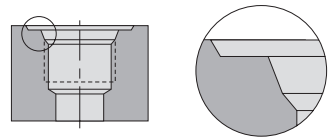
Replaceable Insert



Solid Carbide



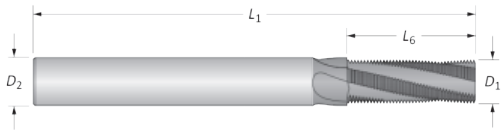
SAE J-1926-1 / ISO 11926-1



Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	GEN2 T-A® Insert Super Cobalt AM200®	GEN2 T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill AM210®	AccuThread® Thread Mill Qty	Kit Part No.
Solid Carbide										
-2	**J1926-02S-10CM**	5/16-24 UNF-2B	1	—	—	—	—	**TMUK0313-24M**	1	**ATKK02S-1926M**
-3	**J1926-03S-14CM**	3/8-24 UNF-2B	1	—	—	—	—	**TMUK0313-24M**	1	**ATKK03S-1926M**
-4	**J1926-04S-16CM**	7/16-20 UNF-2B	1	—	—	—	—	**TMAK0438-20M**	1	**ATKK04S-1926M**
Replaceable Insert										
-4	**J1926-04Y-16FM**	7/16-20 UNF-2B	1	**45YH-.386**	2	**J1926-02-C5A**	2	**TMAK0438-20M**	1	**ATKK04-1926M**
-5	**J1926-05Z-16FM**	1/2-20 UNF-2B	1	**45ZH-11.5**	2	**J1926-03-C5A**	2	**TMAK0438-20M**	1	**ATKK05-1926M**
-6	**J1926-060-20FM**	9/16-18 UNF-2B	1	**450H-13**	2	**J1926-03-C5A**	2	**TMAK0563-18M**	1	**ATKK06-1926M**
-8	**J1926-080-20FM**	3/4-16 UNF-2B	1	**450H-0022**	2	**J1926-07-C5A**	2	**TMAK0750-16M**	1	**ATKK08-1926M**
-10	**J1926-101-25FM**	7/8-14 UNF-2B	1	**451H-20.5**	2	**J1926-04-C5A**	2	**TMAK0875-14M**	1	**ATKK10-1926M**
-12	**J1926-122-32FM**	1-1/16-12 UN-2B	1	**452H-25**	2	**J1926-08-C5A**	2	**TMAK1063-12M**	1	**ATKK12-1926M**
-14	**J1926-142-32FM**	1-3/16-12 UN-2B	1	**452H-28**	2	**J1926-08-C5A**	2	**TMAK1063-12M**	1	**ATKK14-1926M**
-16	**J1926-162-32FM**	1-5/16-12 UN-2B	1	**452H-1.231**	2	**J1926-09-C5A**	2	**TMAK1063-12M**	1	**ATKK16-1926M**
-20	**J1926-203-32FM**	1-5/8-12 UN-2B	1	**453H-39**	1	**J1926-10-C5A**	2	**TMAK1063-12M**	1	**ATKK20-1926M**
-24	**J1926-243-32FM**	1-7/8-12 UN-2B	1	**453H-45.5**	1	**J1926-11-C5A**	2	**TMAK1063-12M**	1	**ATKK24-1926M**
-32	**J1926-324-32FM**	2-1/2-12 UN-2B	1	**454H-61.5**	1	**J1926-12-C5A**	2	**TMAK1063-12M**	1	**ATKK32-1926M**





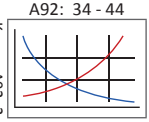
AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-2 to -3	24	5.95	16.00	6.00	58.00	3	**TMUK0313-24M**
-4 to -5	20	8.51	15.24	10.00	73.00	4	**TMAK0438-20M**
-6	18	9.40	16.92	10.00	73.00	4	**TMAK0563-18M**
-8	16	11.94	19.05	12.00	84.00	4	**TMAK0750-16M**
-10	14	11.94	21.77	12.00	84.00	4	**TMAK0875-14M**
-12 to -32	12	11.94	23.29	12.00	84.00	4	**TMAK1063-12M**

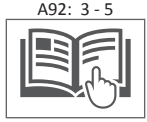
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.

The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

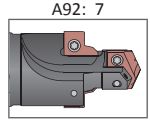
A92: 34 - 44
Key on A92: 2



A92: 3 - 5



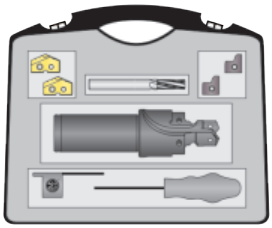
A92: 7

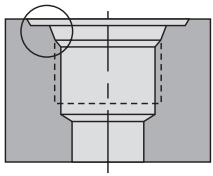


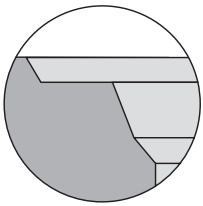
ⓜ = Metric (mm)
ⓘ = Imperial (in)

Port and Thread Finishing Kits

J1926 | Metric | Nonferrous Materials





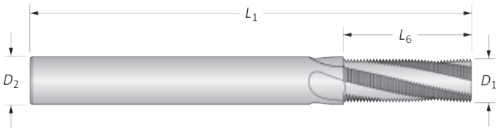


SAE J-1926-1 / ISO 11926-1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	GEN2 T-A® Insert Super Cobalt TiN	GEN2 T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill Uncoated	AccuThread® Thread Mill Qty	Kit Part No.
-4	J1926-04Y-16FM	7/16-20 UNF-2B	1	15YT-.386	2	J1926-02-C5A	2	TMAU0438-20M	1	ATKU04-1926M
-5	J1926-05Z-16FM	1/2-20 UNF-2B	1	15ZT-11.5	2	J1926-03-C5A	2	TMAU0438-20M	1	ATKU05-1926M
-6	J1926-060-20FM	9/16-18 UNF-2B	1	150T-13	2	J1926-03-C5A	2	TMAU0563-18M	1	ATKU06-1926M
-8	J1926-080-20FM	3/4-16 UNF-2B	1	150T-0022	2	J1926-07-C5A	2	TMAU0750-16M	1	ATKU08-1926M
-10	J1926-101-25FM	7/8-14 UNF-2B	1	151T-20.5	2	J1926-04-C5A	2	TMAU0875-14M	1	ATKU10-1926M
-12	J1926-122-32FM	1-1/16-12 UN-2B	1	152T-25	2	J1926-08-C5A	2	TMAU1063-12M	1	ATKU12-1926M
-14	J1926-142-32FM	1-3/16-12 UN-2B	1	152T-28	2	J1926-08-C5A	2	TMAU1063-12M	1	ATKU14-1926M
-16	J1926-162-32FM	1-5/16-12 UN-2B	1	152T-1.231	2	J1926-09-C5A	2	TMAU1063-12M	1	ATKU16-1926M
-20	J1926-203-32FM	1-5/8-12 UN-2B	1	453T-39	1	J1926-10-C5A	2	TMAU1063-12M	1	ATKU20-1926M
-24	J1926-243-32FM	1-7/8-12 UN-2B	1	453T-45.5	1	J1926-11-C5A	2	TMAU1063-12M	1	ATKU24-1926M
-32	J1926-324-32FM	2-1/2-12 UN-2B	1	454T-61.5	1	J1926-12-C5A	2	TMAU1063-12M	1	ATKU32-1926M





AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-4 to -5	20	8.51	15.24	10.00	73.00	4	TMAU0438-20M
-6	18	9.40	16.92	10.00	73.00	4	TMAU0563-18M
-8	16	11.94	19.05	12.00	84.00	4	TMAU0750-16M
-10	14	11.94	21.77	12.00	84.00	4	TMAU0875-14M
-12 to -32	12	11.94	23.29	12.00	84.00	4	TMAU1063-12M

AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.

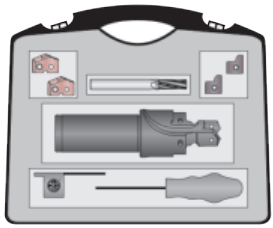
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

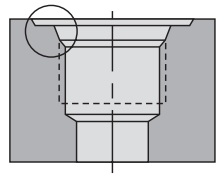
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 7

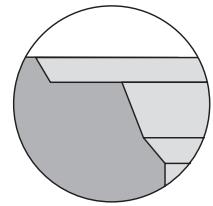
Y - 2 series T-A inserts sold in multiples of 2.
3 - 4 series T-A inserts sold in multiples of 1.
Port form inserts sold in multiples of 2.
Insert screws sold in multiples of 10.

Port and Thread Finishing Kits

J1926 | Imperial | Ferrous Materials





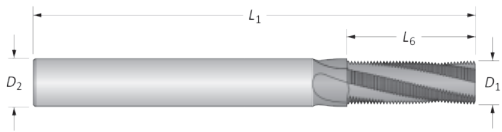


SAE J-1926-1 / ISO 11926-1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	GEN2 T-A® Insert Super Cobalt AM200®	GEN2 T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill AM210®	AccuThread® Thread Mill Qty	Kit Part No.
-4	**J1926-04Y-063F**	7/16-20 UNF-2B	1	**45YH-.386**	2	**J1926-02-C5A**	2	**TMAK0438-20**	1	**ATKK04-1926**
-5	**J1926-05Z-063F**	1/2-20 UNF-2B	1	**45ZH-11.5**	2	**J1926-03-C5A**	2	**TMAK0438-20**	1	**ATKK05-1926**
-6	**J1926-060-075F**	9/16-18 UNF-2B	1	**450H-13**	2	**J1926-03-C5A**	2	**TMAK0563-18**	1	**ATKK06-1926**
-8	**J1926-080-075F**	3/4-16 UNF-2B	1	**450H-0022**	2	**J1926-07-C5A**	2	**TMAK0750-16**	1	**ATKK08-1926**
-10	**J1926-101-100F**	7/8-14 UNF-2B	1	**451H-20.5**	2	**J1926-04-C5A**	2	**TMAK0875-14**	1	**ATKK10-1926**
-12	**J1926-122-125F**	1-1/16-12 UN-2B	1	**452H-25**	2	**J1926-08-C5A**	2	**TMAK1063-12**	1	**ATKK12-1926**
-14	**J1926-142-125F**	1-3/16-12 UN-2B	1	**452H-28**	2	**J1926-08-C5A**	2	**TMAK1063-12**	1	**ATKK14-1926**
-16	**J1926-162-125F**	1-5/16-12 UN-2B	1	**452H-1.231**	2	**J1926-09-C5A**	2	**TMAK1063-12**	1	**ATKK16-1926**
-20	**J1926-203-150F**	1-5/8-12 UN-2B	1	**453H-39**	1	**J1926-10-C5A**	2	**TMAK1063-12**	1	**ATKK20-1926**
-24	**J1926-243-150F**	1-7/8-12 UN-2B	1	**453H-45.5**	1	**J1926-11-C5A**	2	**TMAK1063-12**	1	**ATKK24-1926**
-32	**J1926-324-150F**	2-1/2-12 UN-2B	1	**454H-61.5**	1	**J1926-12-C5A**	2	**TMAK1063-12**	1	**ATKK32-1926**





AccuThread® Port Specific Solid Carbide Thread Mills

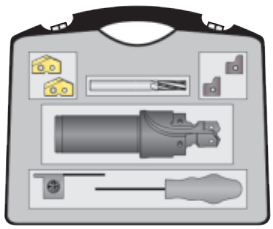
Port Size	Pitch	Thread Mill (in) D_1	L_6	D_2	L_1	Flutes	Part No.
-4 to -5	20	0.335	0.600	0.375	3.5	4	**TMAK0438-20**
-6	18	0.370	0.666	0.375	3.5	4	**TMAK0563-18**
-8	16	0.495	0.750	0.500	3.5	4	**TMAK0750-16**
-10	14	0.495	0.857	0.500	3.5	4	**TMAK0875-14**
-12 to -32	12	0.495	0.917	0.500	3.5	4	**TMAK1063-12**

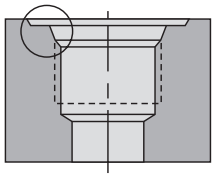
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

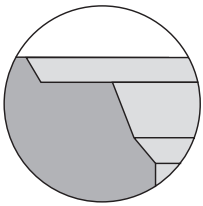
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 9

Port and Thread Finishing Kits

J1926 | Imperial | Nonferrous Materials





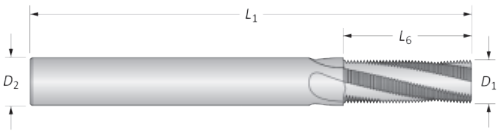


SAE J-1926-1 / ISO 11926-1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	T-A® Insert Super Cobalt TiN	T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill Uncoated	AccuThread® Thread Mill Qty	Kit Part No.
-4	J1926-04Y-063F	7/16-20 UNF-2B	1	15YT-.386	2	J1926-02-C5A	2	TMAU0438-20	1	ATKU04-1926
-5	J1926-05Z-063F	1/2-20 UNF-2B	1	15ZT-11.5	2	J1926-03-C5A	2	TMAU0438-20	1	ATKU05-1926
-6	J1926-060-075F	9/16-18 UNF-2B	1	150T-13	2	J1926-03-C5A	2	TMAU0563-18	1	ATKU06-1926
-8	J1926-080-075F	3/4-16 UNF-2B	1	150T-0022	2	J1926-07-C5A	2	TMAU0750-16	1	ATKU08-1926
-10	J1926-101-100F	7/8-14 UNF-2B	1	151T-20.5	2	J1926-04-C5A	2	TMAU0875-14	1	ATKU10-1926
-12	J1926-122-125F	1-1/16-12 UN-2B	1	152T-25	2	J1926-08-C5A	2	TMAU1063-12	1	ATKU12-1926
-14	J1926-142-125F	1-3/16-12 UN-2B	1	152T-28	2	J1926-08-C5A	2	TMAU1063-12	1	ATKU14-1926
-16	J1926-162-125F	1-5/16-12 UN-2B	1	152T-1.231	2	J1926-09-C5A	2	TMAU1063-12	1	ATKU16-1926
-20	J1926-203-150F	1-5/8-12 UN-2B	1	453T-39	1	J1926-10-C5A	2	TMAU1063-12	1	ATKU20-1926
-24	J1926-243-150F	1-7/8-12 UN-2B	1	453T-45.5	1	J1926-11-C5A	2	TMAU1063-12	1	ATKU24-1926
-32	J1926-324-150F	2-1/2-12 UN-2B	1	454T-61.5	1	J1926-12-C5A	2	TMAU1063-12	1	ATKU32-1926





AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (in) D_1	L_6	D_2	L_1	Flutes	Part No.
-4 to -5	20	0.335	0.600	0.375	3.5	4	TMAU0438-20
-6	18	0.370	0.666	0.375	3.5	4	TMAU0563-18
-8	16	0.495	0.750	0.500	3.5	4	TMAU0750-16
-10	14	0.495	0.857	0.500	3.5	4	TMAU0875-14
-12 to -32	12	0.495	0.917	0.500	3.5	4	TMAU1063-12

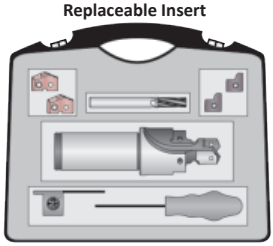
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 9

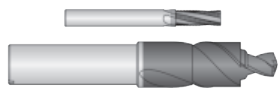
Port and Thread Finishing Kits

I6149 | No ID Ridge | Ferrous Materials

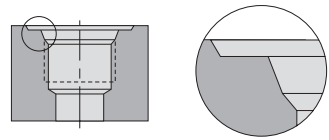
Replaceable Insert



Solid Carbide



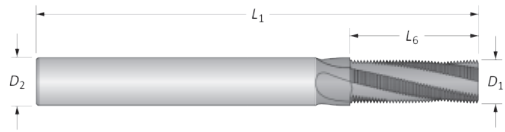
ISO 6149-1:2006 / SAE J-2244/1



Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	GEN2 T-A® Insert Super Cobalt AM200®	GEN2 T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill AM210®	AccuThread® Thread Mill Qty	Kit Part No.
Solid Carbide										
-2	**I6149-02S-10CM**	M8 X 1	1	—	—	—	—	**TMMK0600-100M**	1	**ATKK02S-6149M**
-3	**I6149-03S-14CM**	M10 X 1	1	—	—	—	—	**TMMK0600-100M**	1	**ATKK03S-6149M**
-4	**I6149-04S-16CM**	M12 X 1.5	1	—	—	—	—	**TMMK1000-150M**	1	**ATKK04S-6149M**
Replaceable Insert										
-4	**I6149-04RY-16FM**	M12 X 1.5	1	**45YH-10.5**	2	**I6149-04-C5A**	2	**TMMK1000-150M**	1	**ATKK04-6149**
-5	**I6149-05RZ-16FM**	M14 X 1.5	1	**45ZH-12.5**	2	**I6149-04-C5A**	2	**TMMK1400-150M**	1	**ATKK05-6149**
-6	**I6149-06R0-20FM**	M16 X 1.5	1	**450H-14.5**	2	**I6149-06-C5A**	2	**TMMK1400-150M**	1	**ATKK06-6149**
-8	**I6149-08R0-20FM**	M18 X 1.5	1	**450H-16.5**	2	**I6149-06-C5A**	2	**TMMK1800-150M**	1	**ATKK08-6149**
-10	**I6149-10R1-25FM**	M22 X 1.5	1	**451H-20.5**	2	**I6149-04-C5A**	2	**TMMK1800-150M**	1	**ATKK10-6149**
-12	**I6149-12R2-32FM**	M27 X 2	1	**452H-25**	2	**I6149-12-C5A**	2	**TMMK2000-200M**	1	**ATKK12-6149**
-14	**I6149-14R2-32FM**	M30 X 2	1	**452H-28**	2	**I6149-14-C5A**	2	**TMMK2000-200M**	1	**ATKK14-6149**
-16	**I6149-16R2-32FM**	M33 X 2	1	**452H-31**	2	**I6149-16-C5A**	2	**TMMK2000-200M**	1	**ATKK16-6149**
-20	**I6149-20R3-32FM**	M42 X 2	1	**453H-40**	1	**I6149-20-C5A**	2	**TMMK2000-200M**	1	**ATKK20-6149**
-24	**I6149-24R3-32FM**	M48 X 2	1	**453H-46**	1	**I6149-24-C5A**	2	**TMMK2000-200M**	1	**ATKK24-6149**
-32	**I6149-32R4-32FM**	M60 X 2	1	**454H-58**	1	**I6149-32-C5A**	2	**TMMK2000-200M**	1	**ATKK32-6149**





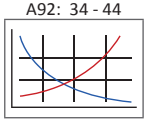
AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-2 to -3	1.00	4.60	12.00	6.00	58.00	3	**TMMK0600-100M**
-4	1.50	7.40	19.50	8.00	64.00	4	**TMMK1000-150M**
-5 to -6	1.50	10.90	27.00	12.00	84.00	4	**TMMK1400-150M**
-8 to -10	1.50	11.90	31.50	12.00	84.00	4	**TMMK1800-150M**
-12 to -32	2.00	11.95	30.00	12.00	84.00	4	**TMMK2000-200M**

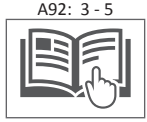
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.

The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

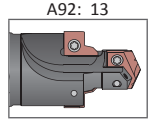
A92: 34 - 44
Key on A92: 2



A92: 3 - 5

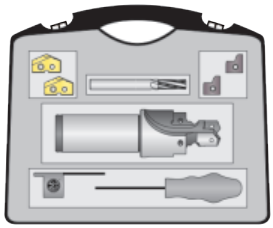


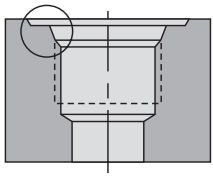
A92: 13

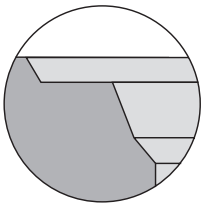


Port and Thread Finishing Kits

I6149 | No ID Ridge | Nonferrous Materials





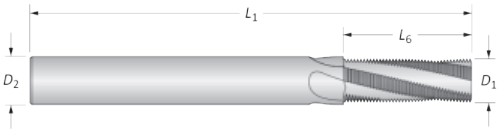


ISO 6149-1:2006 / SAE J-2244/1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	T-A® Insert Super Cobalt TiN	T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill Uncoated	AccuThread® Thread Mill Qty	Kit Part No.
-4	I6149-04RY-16FM	M12 X 1.5	1	15YT-10.5	2	I6149-04-C5A	2	TMMU1000-150M	1	ATKU04-6149
-5	I6149-05RZ-16FM	M14 X 1.5	1	15ZT-12.5	2	I6149-04-C5A	2	TMMU1400-150M	1	ATKU05-6149
-6	I6149-06R0-20FM	M16 X 1.5	1	150T-14.5	2	I6149-06-C5A	2	TMMU1400-150M	1	ATKU06-6149
-8	I6149-08R0-20FM	M18 X 1.5	1	150T-16.5	2	I6149-06-C5A	2	TMMU1800-150M	1	ATKU08-6149
-10	I6149-10R1-25FM	M22 X 1.5	1	151T-20.5	2	I6149-04-C5A	2	TMMU1800-150M	1	ATKU10-6149
-12	I6149-12R2-32FM	M27 X 2	1	152T-25	2	I6149-12-C5A	2	TMMU2000-200M	1	ATKU12-6149
-14	I6149-14R2-32FM	M30 X 2	1	152T-28	2	I6149-14-C5A	2	TMMU2000-200M	1	ATKU14-6149
-16	I6149-16R2-32FM	M33 X 2	1	152T-31	2	I6149-16-C5A	2	TMMU2000-200M	1	ATKU16-6149
-20	I6149-20R3-32FM	M42 X 2	1	453T-40	1	I6149-20-C5A	2	TMMU2000-200M	1	ATKU20-6149
-24	I6149-24R3-32FM	M48 X 2	1	453T-46	1	I6149-24-C5A	2	TMMU2000-200M	1	ATKU24-6149
-32	I6149-32R4-32FM	M60 X 2	1	454T-58	1	I6149-32-C5A	2	TMMU2000-200M	1	ATKU32-6149





AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-4	1.50	7.40	19.50	8.00	64.00	4	TMMU1000-150M
-5 to -6	1.50	10.90	27.00	12.00	84.00	4	TMMU1400-150M
-8 to -10	1.50	11.90	31.50	12.00	84.00	4	TMMU1800-150M
-12 to -32	2.00	11.95	30.00	12.00	84.00	4	TMMU2000-200M

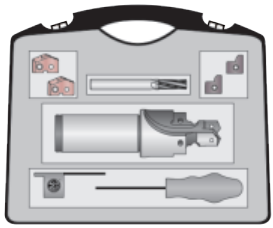
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.

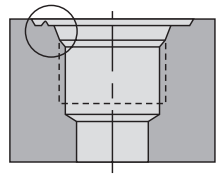
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

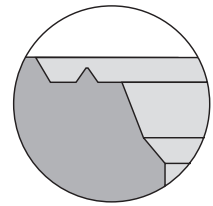
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 13

Port and Thread Finishing Kits

I6149 | ID Ridge | Ferrous Materials





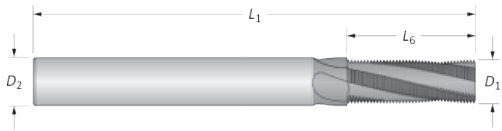


ISO 6149-1:2006 / SAE J-2244/1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	GEN2 T-A® Insert Super Cobalt AM200®	GEN2 T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill AM210®	AccuThread® Thread Mill Qty	Kit Part No.
-4	I6149-04RY-16FM	M12 X 1.5	1	45YH-10.5	2	I6149-04R-C5A	2	TMMK1000-150M	1	ATKK04R-6149
-5	I6149-05RZ-16FM	M14 X 1.5	1	45ZH-12.5	2	I6149-04R-C5A	2	TMMK1400-150M	1	ATKK05R-6149
-6	I6149-06R0-20FM	M16 X 1.5	1	450H-14.5	2	I6149-06R-C5A	2	TMMK1400-150M	1	ATKK06R-6149
-8	I6149-08R0-20FM	M18 X 1.5	1	450H-16.5	2	I6149-06R-C5A	2	TMMK1800-150M	1	ATKK08R-6149
-10	I6149-10R1-25FM	M22 X 1.5	1	451H-20.5	2	I6149-04R-C5A	2	TMMK1800-150M	1	ATKK10R-6149
-12	I6149-12R2-32FM	M27 X 2	1	452H-25	2	I6149-12R-C5A	2	TMMK2000-200M	1	ATKK12R-6149
-14	I6149-14R2-32FM	M30 X 2	1	452H-28	2	I6149-14R-C5A	2	TMMK2000-200M	1	ATKK14R-6149
-16	I6149-16R2-32FM	M33 X 2	1	452H-31	2	I6149-16R-C5A	2	TMMK2000-200M	1	ATKK16R-6149
-20	I6149-20R3-32FM	M42 X 2	1	453H-40	1	I6149-20R-C5A	2	TMMK2000-200M	1	ATKK20R-6149
-24	I6149-24R3-32FM	M48 X 2	1	453H-46	1	I6149-24R-C5A	2	TMMK2000-200M	1	ATKK24R-6149
-32	I6149-32R4-32FM	M60 X 2	1	454H-58	1	I6149-32R-C5A	2	TMMK2000-200M	1	ATKK32R-6149





AccuThread® Port Specific Solid Carbide Thread Mills

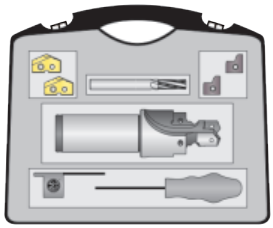
Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-4	1.50	7.40	19.50	8.00	64.00	4	TMMK1000-150M
-5 to -6	1.50	10.90	27.00	12.00	84.00	4	TMMK1400-150M
-8 to -10	1.50	11.90	31.50	12.00	84.00	4	TMMK1800-150M
-12 to -32	2.00	11.95	30.00	12.00	84.00	4	TMMK2000-200M

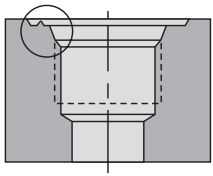
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

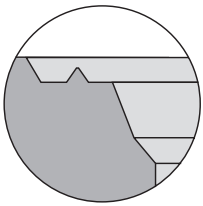
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 13

Port and Thread Finishing Kits

I6149 | ID Ridge | Nonferrous Materials





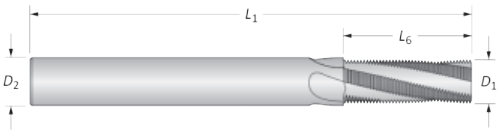


ISO 6149-1:2006 / SAE J-2244/1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	T-A® Insert Super Cobalt TiN	T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill Uncoated	AccuThread® Thread Mill Qty	Kit Part No.
-4	I6149-04RY-16FM	M12 X 1.5	1	15YT-10.5	2	I6149-04R-C5A	2	TMMU1000-150M	1	ATKU04R-6149
-5	I6149-05RZ-16FM	M14 X 1.5	1	15ZT-12.5	2	I6149-04R-C5A	2	TMMU1400-150M	1	ATKU05R-6149
-6	I6149-06R0-20FM	M16 X 1.5	1	150T-14.5	2	I6149-06R-C5A	2	TMMU1400-150M	1	ATKU06R-6149
-8	I6149-08R0-20FM	M18 X 1.5	1	150T-16.5	2	I6149-06R-C5A	2	TMMU1800-150M	1	ATKU08R-6149
-10	I6149-10R1-25FM	M22 X 1.5	1	151T-20.5	2	I6149-04R-C5A	2	TMMU1800-150M	1	ATKU10R-6149
-12	I6149-12R2-32FM	M27 X 2	1	152T-25	2	I6149-12R-C5A	2	TMMU2000-200M	1	ATKU12R-6149
-14	I6149-14R2-32FM	M30 X 2	1	152T-28	2	I6149-14R-C5A	2	TMMU2000-200M	1	ATKU14R-6149
-16	I6149-16R2-32FM	M33 X 2	1	152T-31	2	I6149-16R-C5A	2	TMMU2000-200M	1	ATKU16R-6149
-20	I6149-20R3-32FM	M42 X 2	1	453T-40	1	I6149-20R-C5A	2	TMMU2000-200M	1	ATKU20R-6149
-24	I6149-24R3-32FM	M48 X 2	1	453T-46	1	I6149-24R-C5A	2	TMMU2000-200M	1	ATKU24R-6149
-32	I6149-32R4-32FM	M60 X 2	1	454T-58	1	I6149-32R-C5A	2	TMMU2000-200M	1	ATKU32R-6149





AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-4	1.50	7.40	19.50	8.00	64.00	4	TMMU1000-150M
-5 to -6	1.50	10.90	27.00	12.00	84.00	4	TMMU1400-150M
-8 to -10	1.50	11.90	31.50	12.00	84.00	4	TMMU1800-150M
-12 to -32	2.00	11.95	30.00	12.00	84.00	4	TMMU2000-200M

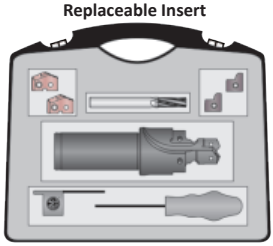
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 13

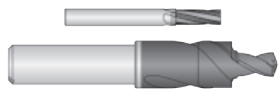
Port and Thread Finishing Kits

AS5202 | Ferrous Materials

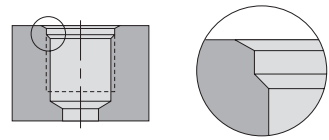
Replaceable Insert



Solid Carbide



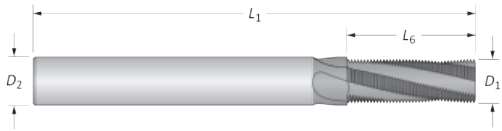
SAE AS5202



Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	GEN2 T-A® Insert Super Cobalt AM200®	GEN2 T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill AM210®	AccuThread® Thread Mill Qty	Kit Part No.
Solid Carbide										
-2	**AS5202-02S-10CM**	5/16-20 UNJF-3B	1	—	—	—	—	**TMUK0313-24M**	1	**ATKK02S-5202M**
-3	**AS5202-03S-14CM**	3/8-24 UNJF-3B	1	—	—	—	—	**TMUK0313-24M**	1	**ATKK03S-5202M**
-4	**AS5202-04S-16CM**	7/16-20 UNJF-3B	1	—	—	—	—	**TMAK0438-20M**	1	**ATKK04S-5202M**
Replaceable Insert										
-4	**AS5202-04Y-063F**	7/16-20 UNJF-3B	1	**45YH-.390**	2	**AS5202-04-C5A**	2	**TMAK0438-20**	1	**ATKK04-5202**
-5	**AS5202-05Z-063F**	1/2-20 UNJF-3B	1	**45ZH-11.5**	2	**AS5202-05-C5A**	2	**TMAK0438-20**	1	**ATKK05-5202**
-6	**AS5202-06Z-075F**	9/16-18 UNJF-3B	1	**45ZH-.510**	2	**AS5202-06-C5A**	2	**TMAK0563-18**	1	**ATKK06-5202**
-8	**AS5202-080-075F**	3/4-16 UNJF-3B	1	**450H-17.5**	2	**AS5202-08-C5A**	2	**TMAK0750-16**	1	**ATKK08-5202**
-10	**AS5202-101-100F**	7/8-14 UNJF-3B	1	**451H-20.5**	2	**AS5202-10-C5A**	2	**TMAK0875-14**	1	**ATKK10-5202**
-12	**AS5202-122-125F**	1-1/16-12 UNJ-3B	1	**452H-25**	2	**AS5202-12-C5A**	2	**TMAK1063-12**	1	**ATKK12-5202**
-14	**AS5202-142-125F**	1-3/16-12 UNJ-3B	1	**452H-1.109**	2	**AS5202-14-C5A**	2	**TMAK1063-12**	1	**ATKK14-5202**
-16	**AS5202-162-125F**	1-5/16-12 UNJ-3B	1	**452H-1.234**	2	**AS5202-16-C5A**	2	**TMAK1063-12**	1	**ATKK16-5202**
-20	**AS5202-203-150F**	1-5/8-12 UNJ-3B	1	**453H-1.547**	1	**AS5202-20-C5A**	2	**TMAK1063-12**	1	**ATKK20-5202**
-24	**AS5202-243-150F**	1-7/8-12 UNJ-3B	1	**453H-1.797**	1	**AS5202-24-C5A**	2	**TMAK1063-12**	1	**ATKK24-5202**
-32	**AS5202-324-150F**	2-1/2-12 UNJ-3B	1	**454H-61.5**	1	**AS5202-32-C5A**	2	**TMAK1063-12**	1	**ATKK32-5202**





AccuThread® Port Specific Solid Carbide Thread Mills

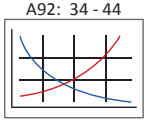
Port Size	Pitch	Thread Mill (in) D_1	L_6	D_2	L_1	Flutes	Part No.
-2 to -3	24	0.234	0.630	6.00 mm	2.283	3	**TMUK0313-24M**
-4*	20	0.335	0.600	10.00 mm	2.874	4	**TMAK0438-20M**
-4 to -5	20	0.335	0.600	0.375	3.5	4	**TMAK0438-20**
-6	18	0.370	0.666	0.375	3.5	4	**TMAK0563-18**
-8	16	0.495	0.750	0.500	3.5	4	**TMAK0750-16**
-10	14	0.495	0.857	0.500	3.5	4	**TMAK0875-14**
-12 to -32	12	0.495	0.917	0.500	3.5	4	**TMAK1063-12**

*-4 solid carbide AccuPort.

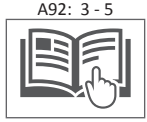
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.

The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

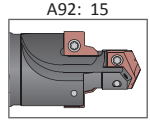
A92: 34 - 44
Key on A92: 2



A92: 3 - 5

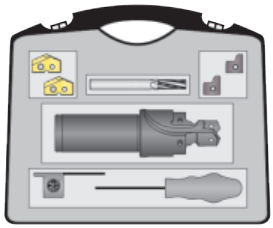


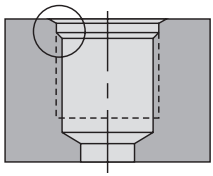
A92: 15

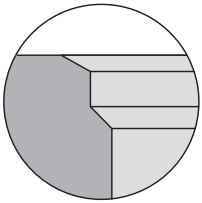


Port and Thread Finishing Kits

AS5202 | Nonferrous Materials





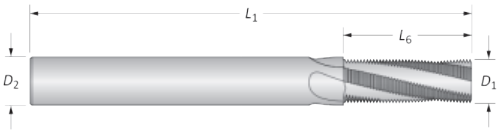


SAE AS5202

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	AccuPort 432 Port Thread Size	AccuPort 432 Qty	T-A® Insert Super Cobalt TiN	T-A® Insert Qty	Port Form Insert C5 Carbide TiAlN	Port Form Insert Qty	AccuThread® Thread Mill Uncoated	AccuThread® Thread Mill Qty	Kit Part No.
-4	**AS5202-04Y-063F**	7/16-20 UNJF-3B	1	**15YT-.390**	2	**AS5202-04-C5A**	2	**TMAU0438-20**	1	**ATKU04-5202**
-5	**AS5202-05Z-063F**	1/2-20 UNJF-3B	1	**15ZT-11.5**	2	**AS5202-05-C5A**	2	**TMAU0438-20**	1	**ATKU05-5202**
-6	**AS5202-06Z-075F**	9/16-18 UNJF-3B	1	**15ZT-.510**	2	**AS5202-06-C5A**	2	**TMAU0563-18**	1	**ATKU06-5202**
-8	**AS5202-080-075F**	3/4-16 UNJF-3B	1	**150T-17.5**	2	**AS5202-08-C5A**	2	**TMAU0750-16**	1	**ATKU08-5202**
-10	**AS5202-101-100F**	7/8-14 UNJF-3B	1	**151T-20.5**	2	**AS5202-10-C5A**	2	**TMAU0875-14**	1	**ATKU10-5202**
-12	**AS5202-122-125F**	1-1/16-12 UNJ-3B	1	**152T-25**	2	**AS5202-12-C5A**	2	**TMAU1063-12**	1	**ATKU12-5202**
-14	**AS5202-142-125F**	1-3/16-12 UNJ-3B	1	**152T-1.109**	2	**AS5202-14-C5A**	2	**TMAU1063-12**	1	**ATKU14-5202**
-16	**AS5202-162-125F**	1-5/16-12 UNJ-3B	1	**152T-1.234**	2	**AS5202-16-C5A**	2	**TMAU1063-12**	1	**ATKU16-5202**
-20	**AS5202-203-150F**	1-5/8-12 UNJ-3B	1	**453T-1.547**	1	**AS5202-20-C5A**	2	**TMAU1063-12**	1	**ATKU20-5202**
-24	**AS5202-243-150F**	1-7/8-12 UNJ-3B	1	**453T-1.797**	1	**AS5202-24-C5A**	2	**TMAU1063-12**	1	**ATKU24-5202**
-32	**AS5202-324-150F**	2-1/2-12 UNJ-3B	1	**454T-61.5**	1	**AS5202-32-C5A**	2	**TMAU1063-12**	1	**ATKU32-5202**





AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (in) D_1	L_6	D_2	L_1	Flutes	Part No.
-4 to -5	20	0.335	0.600	0.375	3.5	4	**TMAU0438-20**
-6	18	0.370	0.666	0.375	3.5	4	**TMAU0563-18**
-8	16	0.495	0.750	0.500	3.5	4	**TMAU0750-16**
-10	14	0.495	0.857	0.500	3.5	4	**TMAU0875-14**
-12 to -32	12	0.495	0.917	0.500	3.5	4	**TMAU1063-12**

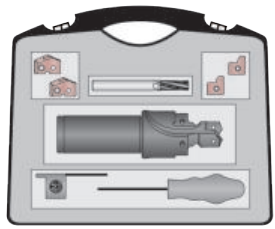
AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.

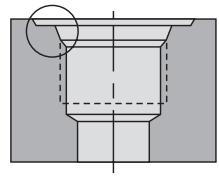
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

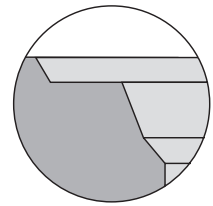
A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 15

Port and Thread Finishing Kits

G1731 | Ferrous Materials





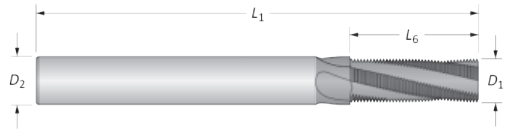


JDS-G173.1

Port and Thread Finishing Kits

Tube Dash No.	AccuPort 432 Part No.	Port Thread Size	Qty	GEN2 T-A® Insert Super Cobalt AM200®	Qty	Port Form Insert C5 Carbide AM200	Qty	AccuThread® Thread Mill AM210®	Qty	Kit Part No.
-4	G1731-04Y-16FM	M12 X 1.5	1	45YH-10.5	2	G1731-01-C3H	2	TMMK1000-150M	1	ATKK04-G1731
-5	G1731-05Z-16FM	M14 X 1.5	1	45ZH-12.5	2	G1731-01-C3H	2	TMMK1400-150M	1	ATKK05-G1731
-6	G1731-060-20FM	M16 X 1.5	1	450H-14.5	2	G1731-02-C3H	2	TMMK1400-150M	1	ATKK06-G1731
-8	G1731-080-20FM	M18 X 1.5	1	450H-16.5	2	G1731-02-C3H	2	TMMK1800-150M	1	ATKK08-G1731
-10	G1731-101-25FM	M22 X 1.5	1	451H-20.5	2	G1731-02-C3H	2	TMMK1800-150M	1	ATKK10-G1731
-12	G1731-122-32FM	M27 X 2	1	452H-25	2	G1731-03-C3H	2	TMMK2000-200M	1	ATKK12-G1731
-14	G1731-142-32FM	M30 X 2	1	452H-28	2	G1731-03-C3H	2	TMMK2000-200M	1	ATKK14-G1731
-16	G1731-162-32FM	M33 X 2	1	452H-31	2	G1731-04-C3H	2	TMMK2000-200M	1	ATKK16-G1731
-18	G1731-183-32FM	M38 X 2	1	453H-36	1	G1731-04-C3H	2	TMMK2000-200M	1	ATKK18-G1731
-20	G1731-203-32FM	M42 X 2	1	453H-40	1	G1731-05-C3H	2	TMMK2000-200M	1	ATKK20-G1731
-24	G1731-243-32FM	M48 X 2	1	453H-46	1	G1731-05-C3H	2	TMMK2000-200M	1	ATKK24-G1731
-32	G1731-324-32FM	M60 X 2	1	454H-58	1	G1731-06-C3H	2	TMMK2000-200M	1	ATKK32-G1731





AccuThread® Port Specific Solid Carbide Thread Mills

Port Size	Pitch	Thread Mill (mm) D_1	L_6	D_2	L_1	Flutes	Part No.
-4	1.50	7.40	19.50	8.00	64.00	4	TMMK1000-150M
-5 to -6	1.50	10.90	27.00	12.00	84.00	4	TMMK1400-150M
-8 to -10	1.50	11.90	31.50	12.00	84.00	4	TMMK1800-150M
-12 to -32	2.00	11.95	30.00	12.00	84.00	4	TMMK2000-200M

AccuPort 432 specific thread mills - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms.
The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form specifications.

A92: 34 - 44
Key on A92: 2
A92: 3 - 5
A92: 19

Notes

Notes

Recommended Drilling Data | Metric (mm)

SOLID CARBIDE

ISO	Material	Hardness (BHN)	Geometry	Speed (m/min)	Feed Rate (mm/rev) by Tube Size		
					Tube No.: 2	Tube No.: 3	Tube No.: 4
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100-150	HPS	150	0.23	0.30	0.33
		150-200	HPS	145	0.22	0.28	0.30
		200-250	HPS	135	0.20	0.25	0.28
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HPS	140	0.23	0.30	0.34
		125-175	HPS	135	0.22	0.29	0.33
		175-225	HPS	130	0.20	0.28	0.32
		225-275	HPS	125	0.20	0.25	0.30
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	HPS	135	0.19	0.28	0.30
		175-225	HPS	130	0.18	0.27	0.29
		225-275	HPS	120	0.18	0.27	0.28
		275-325	HPS	115	0.17	0.25	0.28
	Alloy Steel 4140, 5140, 8640, etc.	125-175	HPS	125	0.19	0.27	0.29
		175-225	HPS	115	0.18	0.25	0.28
		225-275	HPS	110	0.17	0.24	0.27
		275-325	HPS	105	0.15	0.23	0.25
		325-375	HPS	100	0.14	0.23	0.25
	High-Strength Alloy 4340, 4330V, 300M, etc.	225-300	HPS	105	0.17	0.24	0.27
		300-350	HPS	100	0.15	0.23	0.25
		350-400	HPS	75	0.14	0.20	0.22
	Structural Steel A36, A285, A516, etc.	100-150	HPS	135	0.20	0.30	0.33
		150-250	HPS	130	0.18	0.28	0.30
		250-350	HPS	120	0.17	0.24	0.27
	Tool Steel H-13, H-21, A-4, S-3, etc.	150-200	HPS	80	0.15	0.24	0.25
		200-250	HPS	75	0.14	0.22	0.23
M	**Stainless Steel 400 Series** 416, 420, etc.	185-275	HPS	75	0.17	0.23	0.24
		275-350	HPS	60	0.14	0.20	0.22
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135-185	HPS	60	0.13	0.18	0.19
		185-275	HPS	55	0.10	0.15	0.17
	Super Duplex Stainless Steel	135-185	HPS	45	0.13	0.18	0.18
		185-275	HPS	40	0.10	0.14	0.14
K	**SG / Nodular Cast Iron**	120-150	HPS	150	0.28	0.36	0.39
		150-200	HPS	150	0.25	0.33	0.36
		200-220	HPS	145	0.23	0.30	0.33
		220-260	HPS	140	0.23	0.30	0.33
		260-320	HPS	125	0.22	0.29	0.32
	Gray/White Cast Iron	120-150	HPS	165	0.30	0.39	0.42
		150-200	HPS	160	0.28	0.37	0.39
		200-220	HPS	155	0.25	0.33	0.36
		220-260	HPS	145	0.25	0.33	0.36
		260-320	HPS	135	0.24	0.32	0.34
N	**Cast Aluminum**	30	HPS	290	0.25	0.37	0.41
		180	HPS	230	0.23	0.34	0.39
	Wrought Aluminum	30	HPS	335	0.28	0.37	0.43
		180	HPS	290	0.25	0.34	0.39
	Aluminum Bronze	100-200	HPS	115	0.18	0.23	0.25
		200-250	HPS	95	0.15	0.18	0.20
	Brass	100	HPS	230	0.23	0.29	0.32
	Copper	60	HPS	155	0.08	0.10	0.10
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	140-220	HPS	35	0.10	0.14	0.15
		220-310	HPS	30	0.09	0.11	0.13
	Titanium Alloy	140-220	HPS	45	0.10	0.15	0.15
		220-310	HPS	35	0.09	0.13	0.14
	Aerospace Alloy S82	185-275	HPS	50	0.10	0.11	0.14
		275-350	HPS	40	0.09	0.10	0.11
H	**Wear Plate** Hardox®, AR400, T-1, etc.	400	HPS	50	0.08	0.10	0.13
		500	HPS	45	0.08	0.10	0.10
		600	HPS	30	0.08	0.10	0.10
	Hardened Steel	300-400	HPS	50	0.08	0.10	0.13
		400-500	HPS	45	0.08	0.10	0.10

Flood Coolant Applications

Recommend if diameter to depth is less than or equal to three times the diameter. Reduce speed by 20%, and if needed, drop feed by 10% to maintain optimal chip formation.

Parameter Recommendations for Solid Carbide Port Tool

- Speed and feed rates are based off the pilot diameter.

IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department.

Recommended Drilling Data | Metric (mm)

REPLACEABLE INSERT | HIGH-SPEED STEEL

ISO	Material	Hardness (BHN)	Grade	Speed (m/min) TiN	TiAlN	TiCN	AM200®
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	HSS	61	85	79	92
		150 - 200	HSS	55	79	72	87
		200 - 250	HSS	49	73	64	81
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	HSS	52	76	67	84
		125 - 175	HSS	49	73	64	81
		175 - 225	HSS	46	69	59	76
		225 - 275	HSS	43	64	55	70
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	HSS	49	73	64	79
		175 - 225	HSS	46	69	59	75
		225 - 275	HSS	43	64	55	70
		275 - 325	SC	40	59	52	66
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	HSS	46	64	59	69
		175 - 225	HSS	43	59	55	66
		225 - 275	HSS	40	55	52	60
		275 - 325	SC	37	52	47	56
		325 - 375	SC	34	47	44	55
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	SC	24	34	30	37
		300 - 350	SC	18	26	24	27
		350 - 400	SC	15	21	20	23
	Structural Steel A36, A285, A516, etc.	100 - 150	HSS	43	61	55	67
		150 - 250	HSS	37	52	47	56
		250 - 350	SC	30	43	40	47
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	SC	24	34	32	37
		200 - 250	SC	18	27	26	31
M	**Stainless Steel 400 Series** 416, 420, etc.	185 - 275	SC	23	32	29	33
		275 - 350	SC	18	27	24	29
K	**Nodular, Grey, Ductile Cast Iron**	120 - 150	HSS	52	76	67	82
		150 - 200	HSS	46	69	59	75
		200 - 220	HSS	40	59	52	66
		220 - 260	SC	34	50	44	55
		260 - 320	SC	27	41	37	44
N	**Cast Aluminum**	30	HSS	183	259	229	—
		180	HSS	91	137	122	—
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	140 - 220	SC	30	40	35	45
		220 - 310	SC	25	35	30	40

Formulas

1. **RPM = (318.47 • m/min) / DIA**

where:

RPM = revolutions per minute (rev/min)
m/min = speed (m/min)
DIA = diameter of drill (mm)

2. **mm/min = RPM • mm/rev**

where:

mm/min = mm per minute (mm/min)
RPM = revolutions per minute (rev/min)
mm/rev = feed rate (mm/rev)

3. **m/min = RPM • 0.003 • DIA**

where:

m/min = speed (m/min)
RPM = revolutions per minute (rev/min)
DIA = diameter of drill (mm)

The table and equations on this page are found in the "Machinery's Handbook." Permission to simplify and print the equations is granted by the Editor of the "Machinery's Handbook."

IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department.

Recommended Drilling Data | Metric (mm)

REPLACEABLE INSERT | HIGH-SPEED STEEL

Feed Rate (mm/rev) by Tube Size & T-A® Insert Series					
Tube No.: 4 - 5 T-A Series: Y - Z	**Tube No.: 6 - 8** T-A Series: 0	**Tube No.: 10** T-A Series: 1	**Tube No.: 12 - 16** T-A Series: 2	**Tube No.: 20 - 24** T-A Series: 3	**Tube No.: 32** T-A Series: 4
0.18	0.25	0.33	0.41	0.51	0.58
0.18	0.25	0.33	0.41	0.51	0.58
0.15	0.25	0.33	0.41	0.51	0.58
0.15 ❖	0.23	0.30	0.38	0.48	0.58
0.15 ❖	0.23	0.30	0.38	0.48	0.58
0.13 ❖	0.20	0.25	0.36	0.46	0.53
0.13 ❖	0.20	0.25	0.36	0.46	0.53
0.15	0.23	0.30	0.38	0.48	0.58
0.13	0.20	0.25	0.36	0.46	0.53
0.13	0.20	0.25	0.36	0.46	0.53
0.10	0.18	0.23	0.30	0.41	0.48
0.15	0.20	0.25	0.36	0.43	0.48
0.13	0.20	0.25	0.36	0.43	0.48
0.13	0.18	0.25	0.36	0.43	0.48
0.10	0.15	0.23	0.30	0.38	0.43
0.08	0.15	0.23	0.30	0.38	0.43
0.13 ❖	0.18	0.23	0.25	0.36	0.43
0.10 ❖	0.18	0.23	0.25	0.36	0.43
0.08 ❖	0.15	0.20	0.23	0.30	0.38
0.15 ❖	0.25	0.30	0.36	0.46	0.53
0.13 ❖	0.23	0.25	0.30	0.41	0.48
0.10 ❖	0.20	0.23	0.25	0.36	0.43
0.10	0.15	0.20	0.25	0.30	0.38
0.10	0.15	0.20	0.25	0.30	0.38
0.15 ❖	0.20	0.23	0.28	0.36	0.41
0.13 ❖	0.18	0.20	0.25	0.30	0.36
0.18	0.30	0.41	0.51	0.61	0.69
0.15	0.28	0.36	0.46	0.56	0.64
0.15	0.23	0.30	0.41	0.46	0.53
0.13	0.18	0.23	0.30	0.36	0.43
0.10	0.15	0.18	0.23	0.30	0.36
0.20	0.33	0.41	0.51	0.56	0.64
0.20	0.33	0.41	0.46	0.56	0.64
0.08 ❖	0.18	0.20	0.25	0.30	0.38
0.08 ❖	0.15	0.18	0.20	0.25	0.30

❖ Contact our Application Engineering department for assistance when machining these materials.

Recommended Drilling Data | Metric (mm)

REPLACEABLE INSERT | CARBIDE

ISO	Material	Hardness (BHN)	Grade	Speed (m/min) TiN	TiAlN	AM200®
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	C1, C5	98	128	146
		150 - 200	C1, C5	85	110	126
		200 - 250	C1, C5	79	104	119
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	C1, C5	91	119	137
		125 - 175	C1, C5	79	104	119
		175 - 225	C1, C5	73	94	108
		225 - 275	C1, C5	64	82	94
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	C1, C5	79	104	119
		175 - 225	C1, C5	73	94	108
		225 - 275	C1, C5	64	82	94
		275 - 325	C1, C5	55	70	81
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	C1, C5	76	99	114
		175 - 225	C1, C5	70	91	105
		225 - 275	C1, C5	64	82	94
		275 - 325	C1, C5	61	76	87
		325 - 375	C1, C5	52	67	78
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	C1, C5	49	61	73
		300 - 350	C1, C5	43	55	62
		350 - 400	C1, C5	37	49	56
	Structural Steel A36, A285, A516, etc.	100 - 150	C1, C5	73	94	108
		150 - 250	C1, C5	61	76	87
		250 - 350	C1, C5	55	70	81
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	C1, C5	49	67	78
		200 - 250	C1, C5	37	52	59
M	**Stainless Steel 400 Series** 416, 420, etc.	185 - 275	C2	49	64	73
		275 - 350	C2	37	49	46
K	**Nodular, Grey, Ductile Cast Iron**	120 - 150	C2, C3	98	140	152
		150 - 200	C2, C3	82	122	146
		200 - 220	C2, C3	73	110	131
		220 - 260	C2, C3	64	94	113
		260 - 320	C2, C3	55	82	102
N	**Cast Aluminum**	30	C2	366	457	—
		180	C2	244	305	—
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	140 - 220	C2	24	32	36
		220 - 310	C2	18	26	29

Formulas

1. **RPM = (318.47 • m/min) / DIA**

where:

RPM	= revolutions per minute (rev/min)
m/min	= speed (m/min)
DIA	= diameter of drill (mm)

2. **mm/min = RPM • mm/rev**

where:

mm/min	= mm per minute (mm/min)
RPM	= revolutions per minute (rev/min)
mm/rev	= feed rate (mm/rev)

3. **m/min = RPM • 0.003 • DIA**

where:

m/min	= speed (m/min)
RPM	= revolutions per minute (rev/min)
DIA	= diameter of drill (mm)

The table and equations on this page are found in the "Machinery's Handbook." Permission to simplify and print the equations is granted by the Editor of the "Machinery's Handbook."

IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department.

Recommended Drilling Data | Metric (mm)

REPLACEABLE INSERT | CARBIDE

Feed Rate (mm/rev) by Tube Size & T-A® Insert Series				
Tube No.: 4 - 5 T-A Series: Y - Z	**Tube No.: 6 - 8** T-A Series: 0	**Tube No.: 10** T-A Series: 1	**Tube No.: 12 - 16** T-A Series: 2	**Tube No.: 20 - 24** T-A Series: 3
0.20	0.30	0.38	0.46	0.53
0.18	0.28	0.36	0.41	0.48
0.15	0.25	0.33	0.38	0.43
0.20 ❖	0.25	0.33	0.43	0.48
0.18 ❖	0.25	0.33	0.41	0.46
0.15 ❖	0.23	0.3	0.38	0.43
0.13 ❖	0.23	0.30	0.38	0.43
0.18	0.25	0.33	0.41	0.46
0.15	0.23	0.30	0.38	0.43
0.15	0.23	0.30	0.38	0.43
0.13	0.20	0.28	0.36	0.41
0.18	0.25	0.33	0.41	0.46
0.15	0.23	0.30	0.38	0.43
0.15	0.23	0.30	0.38	0.43
0.13	0.20	0.28	0.36	0.41
0.10	0.18	0.25	0.33	0.38
0.15 ❖	0.23	0.25	0.30	0.38
0.13 ❖	0.20	0.23	0.28	0.36
0.10 ❖	0.18	0.20	0.25	0.30
0.20 ❖	0.28	0.36	0.41	0.46
0.15 ❖	0.25	0.30	0.36	0.41
0.13 ❖	0.23	0.28	0.30	0.36
0.10	0.18	0.23	0.28	0.33
0.10	0.18	0.23	0.28	0.33
0.18 ❖	0.23	0.30	0.36	0.41
0.15 ❖	0.20	0.28	0.30	0.36
0.20	0.30	0.38	0.48	0.58
0.18	0.28	0.33	0.43	0.53
0.15	0.23	0.30	0.38	0.46
0.13	0.20	0.28	0.33	0.38
0.13	0.18	0.25	0.28	0.33
0.25	0.38	0.46	0.51	0.56
0.23	0.33	0.41	0.46	0.51
0.10 ❖	0.18	0.23	0.28	0.33
0.10 ❖	0.15	0.20	0.25	0.30

❖ Contact our Application Engineering department for assistance when machining these materials.

Notes

Recommended Drilling Data | Imperial (in)

SOLID CARBIDE

ISO	Material	Hardness (BHN)	Geometry	Speed (SFM)	Feed Rate (IPR) by Tube Size		
					Tube No.: 2	Tube No.: 3	Tube No.: 4
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100-150	HPS	500	0.0090	0.0120	0.0130
		150-200	HPS	475	0.0085	0.0110	0.0120
		200-250	HPS	450	0.0080	0.0100	0.0110
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HPS	455	0.0090	0.0120	0.0135
		125-175	HPS	440	0.0085	0.0115	0.0130
		175-225	HPS	425	0.0080	0.0110	0.0125
		225-275	HPS	410	0.0080	0.0100	0.0120
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	HPS	440	0.0075	0.0110	0.0120
		175-225	HPS	430	0.0070	0.0105	0.0115
		225-275	HPS	400	0.0070	0.0105	0.0110
		275-325	HPS	375	0.0065	0.0100	0.0110
	Alloy Steel 4140, 5140, 8640, etc.	125-175	HPS	405	0.0075	0.0105	0.0115
		175-225	HPS	380	0.0070	0.0100	0.0110
		225-275	HPS	365	0.0065	0.0095	0.0105
		275-325	HPS	340	0.0060	0.0090	0.0100
		325-375	HPS	325	0.0055	0.0090	0.0100
	High-Strength Alloy 4340, 4330V, 300M, etc.	225-300	HPS	340	0.0065	0.0095	0.0105
		300-350	HPS	320	0.0060	0.0090	0.0100
		350-400	HPS	250	0.0055	0.0080	0.0085
	Structural Steel A36, A285, A516, etc.	100-150	HPS	450	0.0080	0.0120	0.0130
		150-250	HPS	425	0.0070	0.0110	0.0120
		250-350	HPS	390	0.0065	0.0095	0.0105
	Tool Steel H-13, H-21, A-4, S-3, etc.	150-200	HPS	270	0.0060	0.0095	0.0100
		200-250	HPS	250	0.0055	0.0085	0.0090
M	**Stainless Steel 400 Series** 416, 420, etc.	185-275	HPS	250	0.0065	0.0090	0.0095
		275-350	HPS	195	0.0055	0.0080	0.0085
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135-185	HPS	200	0.0050	0.0070	0.0075
		185-275	HPS	175	0.0040	0.0060	0.0065
	Super Duplex Stainless Steel	135-185	HPS	150	0.0050	0.0070	0.0070
		185-275	HPS	135	0.0040	0.0055	0.0055
K	**SG / Nodular Cast Iron**	120-150	HPS	500	0.0110	0.0140	0.0155
		150-200	HPS	485	0.0100	0.0130	0.0140
		200-220	HPS	470	0.0090	0.0120	0.0130
		220-260	HPS	455	0.0090	0.0120	0.0130
		260-320	HPS	415	0.0085	0.0115	0.0125
	Gray/White Cast Iron	120-150	HPS	545	0.0120	0.0155	0.0165
		150-200	HPS	530	0.0110	0.0145	0.0155
		200-220	HPS	515	0.0100	0.0130	0.0140
		220-260	HPS	475	0.0100	0.0130	0.0140
		260-320	HPS	450	0.0095	0.0125	0.0135
N	**Cast Aluminum**	30	HPS	950	0.0100	0.0145	0.0160
		180	HPS	755	0.0090	0.0135	0.0155
	Wrought Aluminum	30	HPS	1100	0.0110	0.0145	0.0170
		180	HPS	950	0.0100	0.0135	0.0155
	Aluminum Bronze	100-200	HPS	370	0.0070	0.0090	0.0100
		200-250	HPS	310	0.0060	0.0070	0.0080
	Brass	100	HPS	750	0.0090	0.0115	0.0125
	Copper	60	HPS	510	0.0030	0.0040	0.0040
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	140-220	HPS	110	0.0040	0.0055	0.0060
		220-310	HPS	100	0.0035	0.0045	0.0050
	Titanium Alloy	140-220	HPS	150	0.0040	0.0060	0.0060
		220-310	HPS	120	0.0035	0.0050	0.0055
	Aerospace Alloy S82	185-275	HPS	160	0.0040	0.0045	0.0055
		275-350	HPS	130	0.0035	0.0040	0.0045
H	**Wear Plate** Hardox®, AR400, T-1, etc.	400	HPS	170	0.0030	0.0040	0.0050
		500	HPS	140	0.0030	0.0040	0.0040
		600	HPS	100	0.0030	0.0040	0.0040
	Hardened Steel	300-400	HPS	170	0.0030	0.0040	0.0050
		400-500	HPS	140	0.0030	0.0040	0.0040

Flood Coolant Applications

Recommend if diameter to depth is less than or equal to three times the diameter. Reduce speed by 20%, and if needed, drop feed by 10% to maintain optimal chip formation.

Parameter Recommendations for Solid Carbide Port Tool

- Speed and feed rates are based off the pilot diameter.

IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department.

Recommended Drilling Data | Imperial (in)

REPLACEABLE INSERT | HIGH-SPEED STEEL

ISO	Material	Hardness (BHN)	Grade	Speed (SFM) TiN	TiAlN	TiCN	AM200®
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	HSS	200	280	260	325
		150 - 200	HSS	180	260	235	300
		200 - 250	HSS	160	240	210	280
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	HSS	170	250	220	290
		125 - 175	HSS	160	240	210	275
		175 - 225	HSS	150	225	195	260
		225 - 275	HSS	140	210	180	240
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	HSS	160	240	210	275
		175 - 225	HSS	150	225	195	260
		225 - 275	HSS	140	210	180	240
		275 - 325	SC	130	195	170	225
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	HSS	150	210	195	240
		175 - 225	HSS	140	195	180	225
		225 - 275	HSS	130	180	170	210
		275 - 325	SC	120	170	155	195
		325 - 375	SC	110	155	145	180
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	SC	80	110	100	125
		300 - 350	SC	60	85	80	100
		350 - 400	SC	50	70	65	80
	Structural Steel A36, A285, A516, etc.	100 - 150	HSS	140	200	180	235
		150 - 250	HSS	120	170	155	190
		250 - 350	SC	100	140	130	160
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	SC	80	110	105	125
		200 - 250	SC	60	90	85	105
M	**Stainless Steel 400 Series** 416, 420, etc.	185 - 275	SC	75	105	95	110
		275 - 350	SC	60	90	80	100
K	**Nodular, Grey, Ductile Cast Iron**	120 - 150	HSS	170	250	220	290
		150 - 200	HSS	150	225	195	260
		200 - 220	HSS	130	195	170	225
		220 - 260	SC	110	165	145	190
		260 - 320	SC	90	135	120	155
N	**Cast Aluminum**	30	HSS	600	850	750	—
		180	HSS	300	450	400	—
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	140 - 220	SC	9	12	10	14
		220 - 310	SC	7	10	9	12

Formulas

1. **RPM = (3.82 • SFM) / DIA**

where:

RPM = revolutions per minute (rev/min)
SFM = speed (ft/min)
DIA = diameter of drill (inch)

2. **IPM = RPM • IPR**

where:

IPM = inches per minute (in/min)
RPM = revolutions per minute (rev/min)
IPR = feed rate (in/rev)

3. **SFM = RPM • 0.262 • DIA**

where:

SFM = speed (ft/min)
RPM = revolutions per minute (rev/min)
DIA = diameter of drill (inch)

The table and equations on this page are found in the "Machinery's Handbook." Permission to simplify and print the equations is granted by the Editor of the "Machinery's Handbook."

IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department.

Recommended Drilling Data | Imperial (in)

REPLACEABLE INSERT | HIGH-SPEED STEEL

Feed Rate (IPR) by Tube Size & T-A® Insert Series					
Tube No.: 4 - 5 T-A Series: Y - Z	**Tube No.: 6 - 8** T-A Series: 0	**Tube No.: 10** T-A Series: 1	**Tube No.: 12 - 16** T-A Series: 2	**Tube No.: 20 - 24** T-A Series: 3	**Tube No.: 32** T-A Series: 4
0.007	0.010	0.013	0.016	0.020	0.023
0.007	0.010	0.013	0.016	0.020	0.023
0.006	0.010	0.013	0.016	0.020	0.023
0.006 ❖	0.009	0.012	0.015	0.019	0.023
0.006 ❖	0.009	0.012	0.015	0.019	0.023
0.005 ❖	0.008	0.010	0.014	0.018	0.021
0.005 ❖	0.008	0.010	0.014	0.018	0.021
0.006	0.009	0.012	0.015	0.019	0.023
0.005	0.008	0.010	0.014	0.018	0.021
0.005	0.008	0.010	0.014	0.018	0.021
0.004	0.007	0.009	0.012	0.016	0.019
0.006	0.008	0.010	0.014	0.017	0.019
0.005	0.008	0.010	0.014	0.017	0.019
0.005	0.007	0.010	0.014	0.017	0.019
0.004	0.006	0.009	0.012	0.015	0.017
0.003	0.006	0.009	0.012	0.015	0.017
0.005 ❖	0.007	0.009	0.010	0.014	0.017
0.004 ❖	0.007	0.009	0.010	0.014	0.017
0.003 ❖	0.006	0.008	0.009	0.012	0.015
0.006 ❖	0.010	0.012	0.014	0.018	0.021
0.005 ❖	0.009	0.010	0.012	0.016	0.019
0.004 ❖	0.009	0.009	0.010	0.014	0.017
0.004	0.006	0.008	0.010	0.014	0.015
0.004	0.006	0.008	0.010	0.012	0.015
0.006 ❖	0.008	0.009	0.011	0.012	0.016
0.005 ❖	0.007	0.008	0.010	0.012	0.014
0.007	0.012	0.016	0.020	0.024	0.027
0.006	0.011	0.014	0.018	0.022	0.025
0.006	0.009	0.012	0.016	0.018	0.021
0.005	0.007	0.009	0.012	0.014	0.017
0.004	0.006	0.007	0.009	0.012	0.014
0.008	0.013	0.016	0.020	0.022	0.025
0.008	0.013	0.016	0.018	0.022	0.025
0.003 ❖	0.007	0.008	0.010	0.012	0.015
0.003 ❖	0.006	0.007	0.008	0.010	0.012

❖ Contact our Application Engineering department for assistance when machining these materials.

Recommended Drilling Data | Imperial (in)

REPLACEABLE INSERT | CARBIDE

ISO	Material	Hardness (BHN)	Grade	Speed (SFM) TiN	TiAlN	AM200®
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	C1, C5	320	420	480
		150 - 200	C1, C5	280	360	415
		200 - 250	C1, C5	260	340	390
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	C1, C5	300	390	450
		125 - 175	C1, C5	260	340	390
		175 - 225	C1, C5	240	310	355
		225 - 275	C1, C5	210	270	310
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	C1, C5	260	340	390
		175 - 225	C1, C5	240	310	355
		225 - 275	C1, C5	210	270	310
		275 - 325	C1, C5	180	230	265
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	C1, C5	250	325	375
		175 - 225	C1, C5	230	300	345
		225 - 275	C1, C5	210	270	310
		275 - 325	C1, C5	200	250	285
		325 - 375	C1, C5	170	220	255
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	C1, C5	160	200	230
		300 - 350	C1, C5	140	180	205
		350 - 400	C1, C5	120	160	185
	Structural Steel A36, A285, A516, etc.	100 - 150	C1, C5	240	310	355
		150 - 250	C1, C5	200	250	285
		250 - 350	C1, C5	180	230	265
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	C1, C5	160	220	255
		200 - 250	C1, C5	120	170	195
M	**Stainless Steel 400 Series** 416, 420, etc.	185 - 275	C2	160	210	240
		275 - 350	C2	120	160	185
K	**Nodular, Grey, Ductile Cast Iron**	120 - 150	C2, C3	320	460	500
		150 - 200	C2, C3	270	400	480
		200 - 220	C2, C3	240	360	430
		220 - 260	C2, C3	210	310	370
		260 - 320	C2, C3	180	270	335
N	**Cast Aluminum**	30	C2	1200	1500	—
		180	C2	800	1000	—
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	140 - 220	C2	80	105	120
		220 - 310	C2	60	85	95

Formulas

1. **RPM = (3.82 • SFM) / DIA**

where:

RPM = revolutions per minute (rev/min)
SFM = speed (ft/min)
DIA = diameter of drill (inch)

2. **IPM = RPM • IPR**

where:

IPM = inches per minute (in/min)
RPM = revolutions per minute (rev/min)
IPR = feed rate (in/rev)

3. **SFM = RPM • 0.262 • DIA**

where:

SFM = speed (ft/min)
RPM = revolutions per minute (rev/min)
DIA = diameter of drill (inch)

The table and equations on this page are found in the "Machinery's Handbook." Permission to simplify and print the equations is granted by the Editor of the "Machinery's Handbook."

IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department.

Recommended Drilling Data | Imperial (in)

REPLACEABLE INSERT | CARBIDE

Feed Rate (IPR) by Tube Size & T-A® Insert Series				
Tube No.: 4 - 5 T-A Series: Y - Z	**Tube No.: 6 - 8** T-A Series: 0	**Tube No.: 10** T-A Series: 1	**Tube No.: 12 - 16** T-A Series: 2	**Tube No.: 20 - 24** T-A Series: 3
0.008	0.012	0.015	0.018	0.021
0.007	0.011	0.014	0.016	0.019
0.006	0.010	0.013	0.015	0.017
0.008 ❖	0.010	0.013	0.017	0.019
0.007 ❖	0.010	0.013	0.016	0.018
0.006 ❖	0.009	0.012	0.015	0.017
0.005 ❖	0.009	0.012	0.015	0.017
0.007	0.010	0.013	0.016	0.018
0.006	0.009	0.012	0.015	0.017
0.006	0.009	0.012	0.015	0.017
0.005	0.008	0.011	0.014	0.016
0.007	0.010	0.013	0.016	0.018
0.006	0.009	0.012	0.015	0.017
0.006	0.009	0.012	0.015	0.017
0.005	0.008	0.011	0.014	0.016
0.004	0.007	0.010	0.013	0.015
0.006 ❖	0.009	0.010	0.012	0.015
0.005 ❖	0.008	0.009	0.011	0.014
0.004 ❖	0.007	0.008	0.010	0.012
0.008 ❖	0.011	0.014	0.016	0.018
0.006 ❖	0.010	0.012	0.014	0.016
0.005 ❖	0.009	0.011	0.012	0.014
0.004	0.007	0.009	0.011	0.013
0.004	0.007	0.009	0.011	0.013
0.007 ❖	0.009	0.012	0.014	0.016
0.006 ❖	0.008	0.011	0.012	0.014
0.008	0.012	0.015	0.019	0.023
0.007	0.011	0.013	0.017	0.021
0.006	0.009	0.012	0.015	0.018
0.005	0.008	0.011	0.013	0.015
0.005	0.007	0.010	0.011	0.013
0.010	0.015	0.018	0.020	0.022
0.009	0.013	0.016	0.018	0.020
0.004 ❖	0.007	0.009	0.011	0.013
0.004 ❖	0.006	0.008	0.010	0.012

❖ Contact our Application Engineering department for assistance when machining these materials.

Coolant Recommendations | Metric (mm)

REPLACEABLE INSERT | HIGH-SPEED STEEL

ISO	Material	Pressure or Flow Rate	Tube No.: 4 - 5 T-A Series: Y - Z	Tube No.: 6 - 8 T-A Series: 0	Tube No.: 10 T-A Series: 1	Tube No.: 12 - 16 T-A Series: 2	Tube No.: 20 - 24 T-A Series: 3	Tube No.: 32 T-A Series: 4
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	BAR	12 - 13	7 - 8	7 - 10	6 - 8	6 - 7	3 - 4
		LPM	9.5 - 9.8	10.6 - 11.4	16.7 - 19.7	26.5 - 30.3	45.4 - 53.0	114 - 125
	Low-Carbon Steel 1010, 1020, 1025, 1522, etc.	BAR	11 - 12	5 - 6	5 - 7	4 - 6	4 - 5	2 - 3
		LPM	9.1 - 9.5	9.1 - 9.8	14.0 - 15.9	22.7 - 26.5	41.6 - 45.4	98 - 114
	Medium-Carbon Steel 1030, 1040, 1050, 1527, etc.	BAR	11	5 - 6	5 - 6	4 - 5	3 - 5	2 - 3
		LPM	8.7 - 9.1	8.7 - 9.8	13.6 - 15.5	18.9 - 22.7	37.9 - 45.4	98 - 114
	Alloy Steel 4140, 5140, 8640, etc.	BAR	11	5 - 6	5	3 - 5	3 - 4	2
		LPM	8.7 - 9.1	13.2 - 14.8	8.3 - 9.1	18.9 - 22.7	34.1 - 37.9	87 - 98
	High-Strength Alloy 4340, 4330V, 300M, etc.	BAR	10 - 11	4 - 5	3 - 4	2	2	2
		LPM	8.7 - 9.1	7.9 - 8.3	11.0 - 11.7	15.1 - 18.9	26.5 - 30.3	79 - 87
	Structural Steel A36, A285, A516, etc.	BAR	11	5 - 6	5 - 6	3 - 4	3	2
		LPM	8.7 - 9.1	9.1 - 9.8	13.2 - 14.8	18.9 - 22.7	34.1 - 37.9	87 - 98
	Tool Steel H-13, H-21, A-4, S-3, etc.	BAR	4	10 - 11	3	2	2	1 - 2
		LPM	7.9 - 8.3	8.7 - 9.1	11.0 - 11.7	15.1 - 18.9	26.5 - 30.3	79 - 87
M	**Stainless Steel 400 Series** 416, 420, etc.	BAR	11.4 - 11.7	4.8 - 5.8	4.5 - 5.2	2.7 - 3.8	2.7 - 3.4	1.7 - 2
		LPM	9.1 - 9.5	8.7 - 9.8	13.2 - 14	18.9 - 22.7	34.1 - 37.9	87 - 98
K	**Nodular, Grey, Ductile Cast Iron**	BAR	10.7 - 11.0	4.1 - 4.5	3.4 - 4.1	2 - 2.7	2 - 2.4	1.7 - 2
		LPM	8.7 - 9.1	8.3 - 8.7	11.7 - 12.5	15.1 - 18.9	30.3 - 34.1	87 - 98
N	**Aluminum**	BAR	13.1 - 14.5	9.6 - 12.4	10.3 - 15.8	7.9 - 11	6.2 - 8.6	2.7 - 3.4
		LPM	9.8 - 10.2	12.5 - 14	20.1 - 23.1	30.3 - 34.1	53 - 60.6	114 - 125
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	BAR	10 - 11	4 - 5	3 - 4	2	2	2
		LPM	8.7 - 9.1	8.3 - 8.7	11.7 - 12.1	15.1 - 18.9	26.5 - 30.3	87 - 98

SOLID CARBIDE

Pressure or Flow Rate	Tube No.: 2	Tube No.: 3	Tube No.: 4
BAR	50	47	46
LPM	12	16	20

IMPORTANT: The coolant pressure and flow rate recommendations above represent a good approximation to obtain optimum tool life and chip evacuation at Allied Machine recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the AccuPort 432 Port Contour Cutter will still function at reduced penetration rates. Contact our Application Engineering department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Coolant Recommendations | Metric (mm)

REPLACEABLE INSERT | CARBIDE

ISO	Material	Pressure or Flow Rate	Tube No.: 4 - 5 T-A Series: Y - Z	Tube No.: 6 - 8 T-A Series: 0	Tube No.: 10 T-A Series: 1	Tube No.: 12 - 16 T-A Series: 2	Tube No.: 20 - 24 T-A Series: 3
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	BAR	20	16	17	15	12
		LPM	12.2	16.3	25.3	41.5	71.9
	Low-Carbon Steel 1010, 1020, 1025, 1522, etc.	BAR	11.4	13.3	20.6	36.5	62
		LPM	17	10	10	10	8
	Medium-Carbon Steel 1030, 1040, 1050, 1527, etc.	BAR	17	9	10	8	7
		LPM	11.1	12.3	19.3	30	55.8
	Alloy Steel 4140, 5140, 8640, etc.	BAR	10.4	9.1	12.6	18.8	33.6
		LPM	16	9	8	7	5
	High-Strength Alloy 4340, 4330V, 300M, etc.	BAR	15	5	5	3	3
		LPM	10.4	9.1	13.6	19.7	36.5
	Structural Steel A36, A285, A516, etc.	BAR	16	9	8	7	5
		LPM	10.8	12	17.5	27.8	47.1
	Tool Steel H-13, H-21, A-4, S-3, etc.	BAR	15	5	5	3	3
		LPM	10.4	9.1	13.6	19.7	36.5
M	**Stainless Steel 400 Series** 416, 420, etc.	BAR	22.7	16.5	17.9	17.2	13.1
		LPM	13	16.3	26.3	44.2	75
K	**Nodular, Grey, Ductile Cast Iron**	BAR	15.5	7.2	6.2	6.2	5.5
		LPM	10.7	10.8	15.4	26.5	48.7
N	**Aluminum**	BAR	24.1	22	21.7	19.6	13.8
		LPM	13.4	18.8	29	47.2	77
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	BAR	17	11.4	12.4	11	9
		LPM	11.1	13.5	21.9	35.4	62

IMPORTANT: The coolant pressure and flow rate recommendations above represent a good approximation to obtain optimum tool life and chip evacuation at Allied Machine recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the AccuPort 432 Port Contour Cutter will still function at reduced penetration rates. Contact our Application Engineering department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Coolant Recommendations | Imperial (in)

REPLACEABLE INSERT | HIGH-SPEED STEEL

ISO	Material	Pressure or Flow Rate	Tube No.: 4 - 5 T-A Series: Y - Z	Tube No.: 6 - 8 T-A Series: 0	Tube No.: 10 T-A Series: 1	Tube No.: 12 - 16 T-A Series: 2	Tube No.: 20 - 24 T-A Series: 3	Tube No.: 32 T-A Series: 4
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	PSI	175 - 185	100 - 120	105 - 140	80 - 115	75 - 100	40 - 50
		GPM	2.5 - 2.6	2.8 - 3.0	4.4 - 5.2	7 - 8	12 - 14	30 - 33
	Low-Carbon Steel 1010, 1020, 1025, 1522, etc.	PSI	165 - 170	75 - 90	75 - 95	60 - 80	55 - 75	30 - 40
		GPM	2.4 - 2.5	2.4 - 2.6	3.7 - 4.2	6 - 7	11 - 12	26 - 30
	Medium-Carbon Steel 1030, 1040, 1050, 1527, etc.	PSI	160 - 165	70 - 85	70 - 90	55 - 75	50 - 70	30 - 40
		GPM	2.3 - 2.4	2.3 - 2.6	3.7 - 4.2	5 - 6	10 - 12	26 - 30
	Alloy Steel 4140, 5140, 8640, etc.	PSI	160 - 165	65 - 75	65 - 80	50 - 70	45 - 60	30 - 35
		GPM	2.3 - 2.4	2.2 - 2.4	3.5 - 3.9	5 - 6	10 - 11	26 - 28
	High-Strength Alloy 4340, 4330V, 300M, etc.	PSI	150 - 155	55 - 60	45 - 50	25 - 30	25 - 30	20 - 25
		GPM	2.3 - 2.4	2.1 - 2.2	2.9 - 3.1	4 - 5	7 - 8	21 - 23
	Structural Steel A36, A285, A516, etc.	PSI	160 - 165	75 - 85	65 - 80	40 - 55	40 - 50	25 - 30
		GPM	2.3 - 2.4	2.4 - 2.6	3.5 - 3.9	5 - 6	9 - 10	23 - 26
	Tool Steel H-13, H-21, A-4, S-3, etc.	PSI	150 - 155	55 - 60	45 - 50	25 - 30	25 - 30	20 - 25
		GPM	2.3 - 2.4	2.1 - 2.2	2.9 - 3.1	4 - 5	7 - 8	21 - 23
M	**Stainless Steel 400 Series** 416, 420, etc.	PSI	171	86	75	55	51	29
		GPM	3	3	4	6	10	26
K	**Nodular, Grey, Ductile Cast Iron**	PSI	160	65	61	41	35	29
		GPM	2	2	3	5	9	26
N	**Aluminum**	PSI	210	180	230	159	125	51
		GPM	3	4	6	9	16	33
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	PSI	150 - 155	60 - 65	50 - 55	30 - 35	25 - 30	25 - 30
		GPM	2.3 - 2.4	2.2 - 2.3	3.1 - 3.2	4 - 5	7 - 8	23 - 26

SOLID CARBIDE

Pressure or Flow Rate	Tube No.: 2	Tube No.: 3	Tube No.: 4
PSI	700	680	650
GPM	3	5	6

IMPORTANT: The coolant pressure and flow rate recommendations above represent a good approximation to obtain optimum tool life and chip evacuation at Allied Machine recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the AccuPort 432 Port Contour Cutter will still function at reduced penetration rates. Contact our Application Engineering department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Coolant Recommendations | Imperial (in)

REPLACEABLE INSERT | CARBIDE

ISO	Material	Pressure or Flow Rate	Tube No.: 4 - 5 T-A Series: Y - Z	Tube No.: 6 - 8 T-A Series: 0	Tube No.: 10 T-A Series: 1	Tube No.: 12 - 16 T-A Series: 2	Tube No.: 20 - 24 T-A Series: 3
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	PSI	195	140	160	140	155
		GPM	2.6	3.3	5.5	9	18
	Low-Carbon Steel 1010, 1020, 1025, 1522, etc.	PSI	180	105	105	110	115
		GPM	2.5	2.9	4.4	8	15
	Medium-Carbon Steel 1030, 1040, 1050, 1527, etc.	PSI	175	100	90	100	75
		GPM	2.5	2.8	4.1	7	13
	Alloy Steel 4140, 5140, 8640, etc.	PSI	165	85	100	75	70
		GPM	2.4	2.6	4.3	6	12
	High-Strength Alloy 4340, 4330V, 300M, etc.	PSI	160	65	55	40	35
		GPM	2.4	2.3	3.2	5	8
	Structural Steel A36, A285, A516, etc.	PSI	175	115	105	75	70
		GPM	2.5	3	4.4	6	12
	Tool Steel H-13, H-21, A-4, S-3, etc.	PSI	155	60	55	40	35
		GPM	2.4	2.2	3.2	5	8
M	**Stainless Steel 400 Series** 416, 420, etc.	PSI	150 - 155	60 - 65	50 - 55	30 - 35	25 - 30
		GPM	2.3 - 2.4	2.2 - 2.3	3.1 - 3.2	4 - 5	7 - 8
K	**Nodular, Grey, Ductile Cast Iron**	PSI	329	239	260	250	190
		GPM	3	4	7	12	20
N	**Aluminum**	PSI	225	104	90	90	80
		GPM	3	3	4	7	13
S	**High-Temp Alloy** Hastelloy® B, Inconel® 600, etc.	PSI	350	319	315	284	200
		GPM	4	5	8	12	20

IMPORTANT: The coolant pressure and flow rate recommendations above represent a good approximation to obtain optimum tool life and chip evacuation at Allied Machine recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the AccuPort 432 Port Contour Cutter will still function at reduced penetration rates. Contact our Application Engineering department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Guaranteed Test / Demo Application Form

Distributor PO #	

The following must be filled out completely before your test will be considered.

IMPORTANT: For processing, send purchase order to your Allied Field Sales Engineer (FSE).
Please clearly mark the paperwork as "Test Order."

Distributor Information

Company Name: _____
Contact: _____
Account Number: _____
Phone: _____
Email: _____

End User Information

Company Name: _____
Contact: _____
Industry: _____
Phone: _____
Email: _____

Current Process List all tooling, coatings, substrates, speeds and feeds, tool life, and any problems you are experiencing.

_____

_____

Test Objective List what would make this a successful test (i.e. penetration rate, finish, tool life, hole size, etc.).

_____

_____

Application Information

Hole Diameter: _____ in/mm Tolerance: _____ Material: _____ (4150, A36, cast iron, etc.)

Preexisting Diameter: _____ in/mm Depth of Cut: _____ in/mm Hardness: _____ (BHN, Rc)

Required Finish: _____ RMS State: _____ (Casting, hot rolled, forging)

Machine Information

Machine Type: _____ (Lathe, screw machine, machine center, etc.) Builder: _____ (Haas, Mori Seiki, etc.) Model #: _____

Shank Required: _____ (CAT50, Morse taper, etc.) Power: _____ HP/KW

Thrust: _____ lbs/N

Rigidity:	Orientation:	Tool Rotating:
☐ Excellent	☐ Vertical	☐ Yes
☐ Good	☐ Horizontal	☐ No
☐ Poor		

Coolant Information

Coolant Delivery: _____ (Through tool, flood) Coolant Pressure: _____ PSI / bar

Coolant Type: _____ (Air mist, oil, synthetic, water soluble, etc.) Coolant Volume: _____ GPM / LPM

Requested Tooling

QTY	Item Number

QTY	Item Number

Allied Machine & Engineering
120 Deeds Drive
Dover, OH 44622

Telephone: (330) 343-4283
Toll Free USA & Canada: (800) 321-5537
Email: info@alliedmachine.com



ALLIED MACHINE & ENGINEERING

Warranty Information

Allied Machine & Engineering ("Allied Machine") warrants to original equipment manufacturers, distributors, industrial and commercial users of its products for one year from the original date of sale that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied Machine's sole and exclusive obligation under this warranty is limited to, at its option, without additional charge, replacing or repairing this product or issuing a credit. For this warranty to be applied, the product must be returned freight prepaid to the plant designated by an Allied Machine representative and which, upon inspection, is determined by Allied Machine to be defective in material and workmanship.

Complete information as to operating conditions, machine, setup, and the application of cutting fluid should accompany any product returned for inspection. This warranty shall not apply to any Allied Machine products which have been subjected to misuse, abuse, improper operating conditions, improper machine setup or improper application of cutting fluid or which have been repaired or altered if such repair or alteration, in the judgement of Allied Machine, would adversely affect the performance of the product.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Allied Machine shall have no liability or responsibility for any claim, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein.

Allied Machine shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for economic losses of any kind or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform this agreement.

ALL PRICES, DELIVERIES, DESIGNS, AND MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Allied Machine & Engineering is registered to ISO 9001:2015 by DQS.

Wohlhaupter GmbH is registered to ISO 9001:2015 by QUACERT.

FS 36985

Allied Machine & Engineering Co. Europe Ltd. is registered to ISO 9001:2015 by bsi.

United States

Allied Machine & Engineering
120 Deeds Drive
Dover OH 44622
United States

Allied Machine & Engineering
485 W Third Street
Dover OH 44622
United States

Phone:
+1.330.343.4283

Toll Free (US & CA):
800.321.5537

Toll Free (US & CA):
800.223.5140

Europe

Allied Machine & Engineering Co. (Europe) Ltd
93 Vantage Point, Pensnett Estate
Kingswinford, West Midlands
DY6 7FR England

Phone:
+44 (0) 1384 400 900

Wohlhaupter® GmbH
Maybachstrasse 4
72636 Frickenhausen
Germany

Phone:
+49 (0) 7022 408-0

Asia

Wohlhaupter® India Pvt. Ltd.
B-23, 3rd Floor
B Block Community Centre
Janakpuri, New Delhi - 110058
India

Phone:
+91 (0) 11.41827044

寶怡機械

台北: 02-27030193
台中: 04-24636890

www.gcarbidetool.com

Allied Machine & Engineering is registered to **ISO 9001:2015** by DQS.
Wohlhaupter GmbH is registered to **ISO 9001:2015** by QUACERT.
Allied Machine & Engineering Co. (Europe) Ltd is registered to **ISO 9001:2015** by bsi.
Copyright © 2026 Allied Machine and Engineering Corp. – All rights reserved. All trademarks designated with the ® symbol are registered in the United States and other countries.

A92-ACP | Publish Date: Sep. 11, 2026

ALLIED MACHINE & ENGINEERING
WOHLHAUPTER®
Holemaking Solutions for Today's Manufacturing
www.alliedmachine.com