

NEW

boring **VOLCUT INSERT HOLDERS**

rough machining

Ø 2.559" - 128.150" (65.00mm - 3255.00mm)



Increased material removal



Low machine power consumption



Excellent chip control



High-speed cutting

*High-volume machining in **ONE** cut.*



BORING



DRILLING



REAMING



BURNISHING



THREADING



SPECIALS

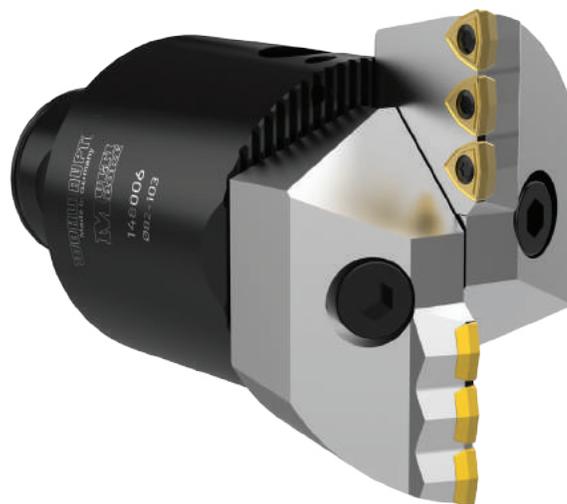


**ALLIED MACHINE
& ENGINEERING**

Allied Machine offers a wide range of drilling, boring, reaming, burnishing, and threading tools to lower your **cost per hole**.



- ✓ **Increased material removal**
up to 2.755" (70.00mm) on diameter
- ✓ **Low machine power consumption**
with our form 464/OP indexable inserts
- ✓ **Excellent chip control**
even with long-chipping materials
- ✓ **High cutting speeds**
for reduced cycle times
- ✓ **Wohlhaupter standard serrated tool bodies**
for unmatched length and diameter solutions
- ✓ **Outstanding surface quality**
due to optimal ratio of feed and cutting speed
- ✓ **Wohlhaupter MVS connection**
capable of adapting to any machine



Boring large holes? We've got you covered.

We took boring to the next level and created an innovative insert holder design. VolCut insert holders combine Allied Machine's holmaking experience with the benefits of modular tooling components from Wohlhaupter.

Pre-machine large diameter holes with short processing times and excellent chip control. The replaceable insert holders and inserts reduce setup time while still providing the maximum durability you expect.

Setup Instructions



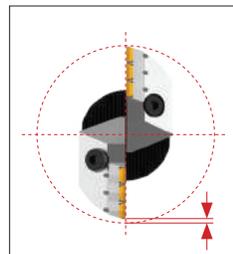
Step 1:
Loosen the mounting screws on both cartridges.



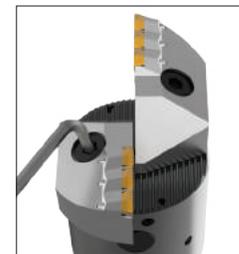
Step 2:
Set one cartridge to the finish diameter by tightening the adjustment screw against the adjustment pin.



Step 3:
Tighten the mounting screws on the cartridge to 15-19 Nm (11-14 ft-lbf).



Step 4:
Set the opposing cartridge with 0.157" - 0.196" (4mm - 5mm) radial offset inward by tightening the adjustment screw against the adjustment pin (optimum situation for each insert to remove equal material).



Step 5:
Tighten the mounting screws on the cartridge to 15-19 Nm (11-14 ft-lbf).

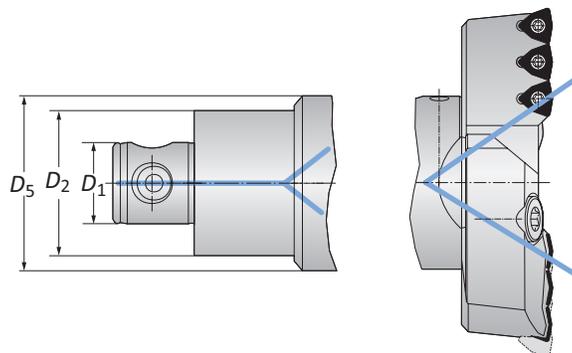
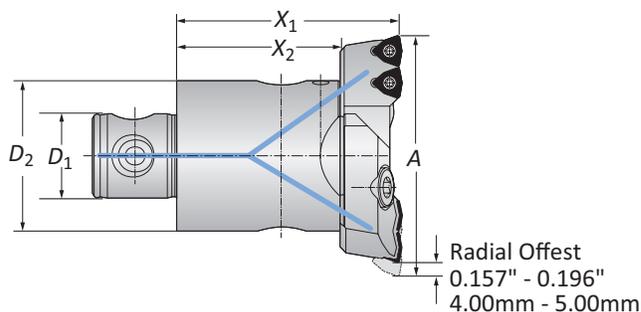
Note: Drilling systems with OP inserts are used as single cutters. The replaceable inserts are mounted offset in diameter. Please review the assembly instructions.

Minimum Pilot Calculation

Calculation: Finish Diameter - Opening Range = Minimum Pilot Hole Diameter

Insert Holder	Diameter Range	Opening Range
151019	2.559" - 2.756" (65.00mm - 70.00mm)	0.600" (15.24mm)
	2.756" - 3.267" (70.00mm - 83.00mm)	1.880" (47.75mm)
151039	3.228" - 3.425" (82.00mm - 87.00mm)	0.600" (15.24mm)
	3.425" - 4.055" (87.00mm - 103.00mm)	2.680" (68.07mm)
151059	3.937" - 4.134" (100.00mm - 105.00mm)	0.600" (15.24mm)
	4.134" - 5.118" (105.00mm - 130.00mm)	2.680" (68.07mm)
151069	4.921" - 5.118" (125.00mm - 130.00mm)	0.600" (15.24mm)
	5.118" - 8.070" (130.00mm - 205.00mm)	2.680" (68.07mm)
149030	7.874" - 128.149" (200.00mm - 3255.00mm)	2.680" (68.07mm)

Example: To open an existing hole to 4.500" diameter, a 151059 insert holder would be used with a 148007 serrated tool body, and the minimum pilot diameter would be 4.500" - 2.680" = 1.820".



Serrated Bodies with VolCut Insert Holders

Connection	Boring Range		Serrated Body			Weight	Number of Inserts	Insert Form	Part No.		
	D ₂ D ₁	A	A _{min} **	X ₁	X ₂				D ₅	VolCut Insert Holder	Serrated Body
i	50 - 28	2.559 - 3.267	2.559 - 2.756	2.913	2.165	-	2.425 (lbs)	2	464	151019	148005
	63 - 36	3.228 - 4.055	3.228 - 3.425	3.503	2.362	-	4.850 (lbs)	3	464	151039	148006
	80 - 36	3.937 - 5.118	3.937 - 4.134	3.503	2.362	-	6.613 (lbs)	3	464	151059	148007
	80 - 36	4.921 - 6.102	4.921 - 5.118	3.503	2.362	-	7.054 (lbs)	3	464	151069	148007
	80 - 36	5.905 - 8.070	5.905 - 6.102	3.503	2.362	4.921	11.243 (lbs)	3	464	151069	148009
▲ D60	7.874 - 128.150	-	-	-	-	-	-	3	464	149030	*
m	50 - 28	65.00 - 83.00	65.00 - 70.00	74.00	55.00	-	1.10 (kg)	2	464	151019	148005
	63 - 36	82.00 - 103.00	82.00 - 87.00	89.00	60.00	-	2.20 (kg)	3	464	151039	148006
	80 - 36	100.00 - 130.00	100.00 - 105.00	89.00	60.00	-	3.00 (kg)	3	464	151059	148007
	80 - 36	125.00 - 155.00	125.00 - 130.00	89.00	60.00	-	3.20 (kg)	3	464	151069	148007
	80 - 36	150.00 - 205.00	150.00 - 155.00	89.00	60.00	125.00	5.10 (kg)	3	464	151069	148009
▲ D60	200.00 - 3255.00	-	-	-	-	-	-	3	464	149030	*

NOTE: Inserts, insert holders, and serrated body are sold separately.

*For large diameter serrated slides, please contact Application Eng. (330.343.4283 ext: 7611) and see section B10-E in the Wohlhaupter Master Product Catalog.

**For smaller diameters, both cartridges must be set to the same diameter. Only the outside insert on each cartridge can be engaged in the material.

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

⚠ WARNING For large diameter boring with VolCut insert holders, please:
 - Contact our Application Engineering department before purchasing (330.343.4283 ext: 7611 | email: appeng@alliedmachine.com)
 - Refer to section B10-E in the Wohlhaupter Master Product Catalog

IC Inserts

Carbide Grade	Geometry	Part No. AM300®	WSP-Screw
P35 (C5)	Standard	OP-05T308-P	IS-10-1
K35 (C1)	Standard	OP-05T308-1P	IS-10-1
K20 (C2)	Standard	OP-05T308-2P	IS-10-1
P35 (C5)	High Rake	OP-05T308-PHR	IS-10-1

NOTE: See section A70 in the Allied Master Product Catalog (AMPC) for recommended cutting data, cutting materials, and geometries.



APPLICATION SOLUTIONS

Saving 2 tools!

YOUR APPLICATION

Drilling of ST Materials

- **Material:** ST52-3
- **Starting diameter:** 3.149" (80.00mm)
- **Finish diameter:** 4.901" (124.50mm)
- **Machine:** Hüller Hille
- **Spindle:** SK50 DIN69871
- **Power consumption:** 54%

OUR SOLUTION

VolCut insert holders can replace the need to push your machine to its limits during circular milling. The radial measurement of 0.875" (22.25mm) allows for a single cutting operation. Our replaceable indexable inserts allow for quick setup times and can be easily eliminated without having to replace the insert holder.

Measure:

- **Feed rate:** 0.004 IPR (0.10mm/rev)
- **Speed:** 650 SFM (200m/min)

VolCut assembly:

- (1) Shank: 327010
- (1) Serrated body: 148007
- (2) VolCut insert holders: 151059
- (3) Inserts: OP-05T308-PHR



YOUR ADVANTAGE

"When your current process isn't saving you time, you can't save money. By using VolCut insert holders, the machining time can be reduced by two minutes," said Oliver Birkle, sales representative of Wohlhaupter Allied.

"With a lower power consumption, the process is more machine friendly than the previous circular interpolation method," said Birkle.

80% time savings compared to circular milling

YOUR APPLICATION

Boring of GG and GGG Materials

- **Material:** GGG40
- **Starting diameter:** 1.574" (40.00mm)
- **Finish diameter:** 4.901" (105mm) with interrupted cut
- **Machine:** Matec HV30
- **Spindle:** HSK-A100
- **Power consumption:** 52%

OUR SOLUTION

Machine GGG40 material with ease using VolCut insert holders. VolCut insert holders allow radial stock removal of 1.279" (32.50mm) with an interrupted cut.

Measure:

- **Feed rate:** 0.003" IPR (0.08mm/rev)
- **Speed:** 980 SFM (300m/min)

VolCut assembly:

- (1) Shank: 245015
- (1) Serrated body: 148006
- (2) VolCut insert holders: 151039
- (3) Inserts: OP-05T308-PHR



YOUR ADVANTAGE

"The VolCut insert holders increased stock removal and eliminated two tools from the process!" says Axel Wagner, product manager at Wohlhaupter Allied.

Allied Machine offers expert engineering support. Whether you need a quote, a test, or an application solution, a highly skilled and trained engineer is standing by, ready to help.
www.alliedmachine.com/contactus

Literature Order Number: VOLCUT-FL-1

Copyright © 2023 Allied Machine and Engineering Corp. – All rights reserved.

All trademarks designated with the ® symbol are registered in the United States and other countries.



ALLIED MACHINE & ENGINEERING

WOHLHAUPTER®

Holemaking Solutions for Today's Manufacturing