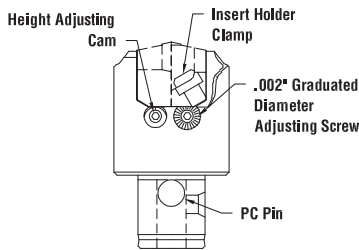
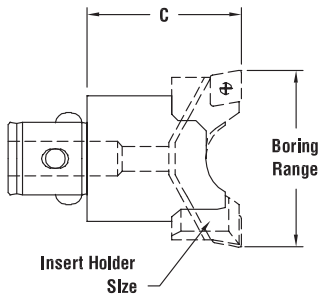


Twin Bore Roughing

.95" to 6.00" (25mm to 152.4mm)



PC4-4405
shown here.



- Independent height and diameter setting permits balanced cutting with production of almost perfectly round holes from the beginning, irrespective of core shifts.
- Two height balanceable cutting edges results in metal removal at rates almost 4 times that of a single cutter.
- Height adjustments are made with a cam that supports the insert holder where needed, at the furthest radial point.
- Each insert holder can be adjusted individually in diameter with a dial screw for fast, easy set-up operations.
- Balanced or stepped cutting can be done with the same set of insert holders permitting heavy stock removal and eliminating the need to purchase two sets of insert holders.
- Standard through-spindle coolant capability cools the insert and flushes chips.
- ISO standard inserts – requires no special expensive inserts.
- Square SCMT insert holders with 6° lead for through hole boring or extreme core shifts.
- Diamond CCMT insert holders for boring to a square holder, or deep bore lengths.
- Trigon WCMT insert holders for applications requiring heavy stock removal.

TWIN BORE ROUGHING

Part Number	Bore Range Min.	Bore Range Max.	Connection Size	Insert Holder Size	Body Dia.	C	Weight (lbs.)
PC2-4205	.95 (24.1)	1.31 (33.3)	PC2	21	.91 (23)	1.39 (33.5)	.2
PC2-4205	1.13 (28.7)*	1.48 (37.6)	PC2	22	.91 (23)	1.39 (33.5)	.2
PC3-4305	1.27 (32.3)	1.70 (43.2)	PC3	31	1.18 (30)	1.57 (40)	.4
PC3-4305	1.50 (38.1)*	1.95 (49.5)	PC3	32	1.18 (30)	1.57 (40)	.4
PC4-4405	1.58 (40)	2.17 (55.1)	PC4	41	1.50 (38)	1.85 (47)	.7
PC4-4405	2.09 (53)*	2.53 (64.3)	PC4	42	1.50 (38)	1.85 (47)	.7
PC5-4505	2.06 (52.4)	2.73 (69.3)	PC5	51	1.93 (49)	2.24 (57)	1.4
PC5-4505	2.58 (65.5)*	3.30 (83.8)	PC5	52	1.93 (49)	2.24 (57)	1.4
PC6-4605	2.61 (66.3)	3.48 (88.4)	PC6	61	2.48 (63)	2.79 (71)	2.8
PC6-4605	3.36 (85.3)	4.20 (106.7)	PC6	62	2.48 (63)	2.79 (71)	2.8
PC6-4605	4.10 (104.1)*	4.86 (123.4)	PC6	63	2.48 (63)	2.79 (71)	2.8
PC6-4606	3.92 (99.6)	4.84 (123)	PC6	61	3.54 (90)	2.79 (71)	3.9
PC6-4606	4.68 (119)	5.54 (140.7)	PC6	62	3.54 (90)	2.79 (71)	3.9
PC6-4606	5.44 (138)	6.20 (157.5)	PC6	63	3.54 (90)	2.79 (71)	3.9
PC7-4705	3.92 (99.6)	4.84 (122.9)	PC7	61	3.54 (90)	4.60 (117)	–
PC7-4705	4.68 (119)	5.54 (140.7)	PC7	62	3.54 (90)	4.60 (117)	–
PC7-4705	5.44 (138)	6.00 (152.4)	PC7	63	3.54 (90)	4.60 (117)	–

Part numbers in **bold face** are in-stock items.

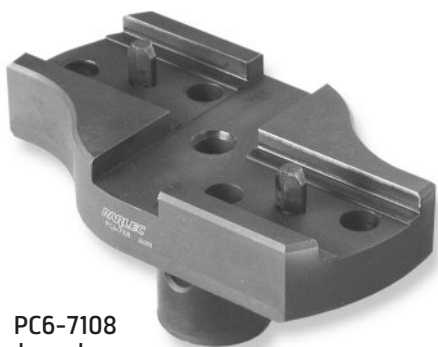
*For use when reduced boring shaft diameter is required for clearance.

PC Connection OD should not be larger than the starting diameter of the hole. Refer to page 106.

Twin Bore Roughing

6.00" to 8.27" (152.4mm to 210mm)

BORING

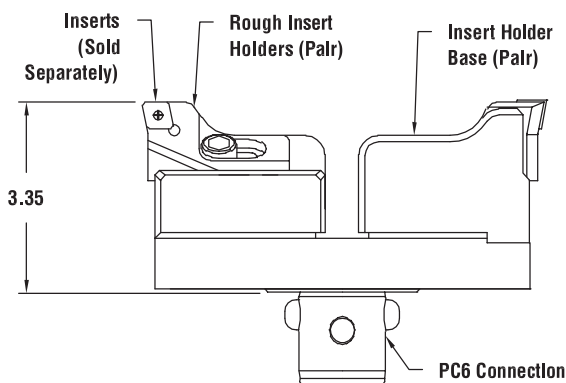


PC6-7108
shown here.

- For use on 40 tapers with 15 lb. tool change limit.
- Reduces inventory.
- Interchangeable with other sizes.



Rough Assembly
with Insert Holders
shown here.



TWIN BORE ROUGHING

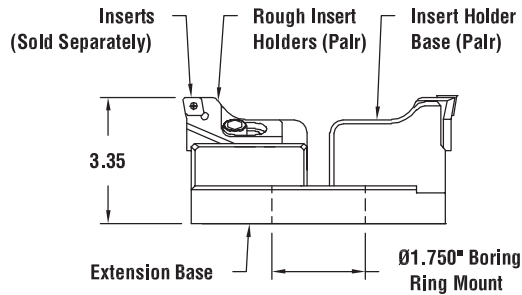
Extension Base	Insert Holder Base	Boring Range Min.	Insert Max.	Insert Holder C	Insert Holder S	Holder W
PC6-7108	7100-B460	5.95 (151)	6.80 (172)	4605-61C12	4605-61S12	4605-61W08
PC6-7108	7100-B460	6.68 (170)	7.52 (191)	4605-62C12	4605-62S12	4605-62W08
PC6-7108	7100-B460	7.42 (189)	8.27 (210)	4606-63C12	4606-63S12	4606-63W08

Select Insert style (see bottom of next page).

Part numbers in **bold face** are in-stock items.

Twin Bore Roughing

5.95" to 21.89" (151 mm - 556 mm)



Note: For ordering example see page 110.

Extension Base 17BR-7112 shown here with and without Insert Holders.

TWIN BORE ROUGHING

Extension Base	Insert Holder Base	Boring Range		Select Insert style (see below).		
		Min.	Max.	Insert Holder C	Insert Holder S	Insert Holder W
17BR-7108	7100-B460	5.95 (151)	6.80 (172)	4605-61C12	4605-61S12	4605-61W08
17BR-7108	7100-B460	6.68 (170)	7.52 (191)	4605-62C12	4605-62S12	4605-62W08
17BR-7108	7100-B460	7.42 (189)	8.27 (210)	4606-63C12	4606-63S12	4606-63W08
17BR-7110	7100-B460	8.22 (209)	9.07 (230)	4605-61C12	4605-61S12	4605-61W08
17BR-7110	7100-B460	8.95 (228)	9.79 (249)	4605-62C12	4605-62S12	4605-62W08
17BR-7110	7100-B460	9.69 (246)	10.54 (267)	4606-63C12	4606-63S12	4606-63W08
17BR-7112	7100-B460	10.49 (267)	11.34 (288)	4605-61C12	4605-61S12	4605-61W08
17BR-7112	7100-B460	11.22 (285)	12.07 (306)	4605-62C12	4605-62S12	4605-62W08
17BR-7112	7100-B460	11.96 (304)	12.81 (325)	4606-63C12	4606-63S12	4606-63W08
17BR-7115	7100-B460	12.76 (324)	13.61 (345)	4605-61C12	4605-61S12	4605-61W08
17BR-7115	7100-B460	13.49 (343)	14.34 (364)	4605-62C12	4605-62S12	4605-62W08
17BR-7115	7100-B460	14.23 (362)	15.08 (383)	4606-63C12	4606-63S12	4606-63W08
17BR-7117	7100-B460	15.03 (382)	15.88 (403)	4605-61C12	4605-61S12	4605-61W08
17BR-7117	7100-B460	15.75 (400)	16.61 (422)	4605-62C12	4605-62S12	4605-62W08
17BR-7117	7100-B460	16.50 (419)	17.35 (441)	4606-63C12	4606-63S12	4606-63W08
17BR-7119	7100-B460	17.30 (439)	18.15 (461)	4605-61C12	4605-61S12	4605-61W08
17BR-7119	7100-B460	18.03 (458)	18.88 (479)	4605-62C12	4605-62S12	4605-62W08
17BR-7119	7100-B460	18.77 (477)	19.62 (498)	4606-63C12	4606-63S12	4606-63W08
17BR-7121	7100-B460	19.57 (497)	20.42 (519)	4605-61C12	4605-61S12	4605-61W08
17BR-7121	7100-B460	20.29 (515)	21.15 (537)	4605-62C12	4605-62S12	4605-62W08
17BR-7121	7100-B460	21.04 (534)	21.89 (556)	4606-63C12	4606-63S12	4606-63W08

INSERT HOLDER STYLES

Style	Insert Type & Size	Insert Screw	Insert Screw Wrench
C	CCMT 12	028-907	018-009
S	SCMT 12	028-907	018-009
W	WCMX 08	028-906	018-008

WEIGHTS

Part Number	Weight (lbs.)
7100-B460	2.8
Size 61	.6
Size 62	.8
Size 63	1.0

Part numbers in **bold face** are in-stock items.

Twin Bore Roughing Insert Holders

BORING

STYLE 1: FOR USE WITH SCMT INSERTS



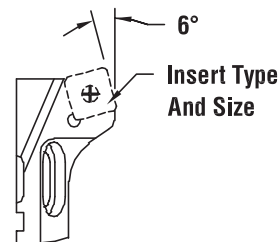
Insert Holders 4405-41C09
Style 2 shown here.

- Designed for boring through holes, particularly in castings where core shift is a problem.

Order Inserts separately (see pages 142-144).

STYLE 1

Part Number	Insert Holder Size	Insert Type and Size	Insert Screw	Insert Screw Wrench	Weight (lbs.)
4305-31S09	31	SCMT 09	028-906	018-008	.1
4405-41S09	41	SCMT 09	028-906	018-008	.2
4505-51S12	51	SCMT 12	028-907	018-009	.3
4605-61S12	61	SCMT 12	028-907	018-009	.6
4605-62S12	62	SCMT 12	028-907	018-009	.8
4606-63S12	63	SCMT 12	028-907	018-009	1.0



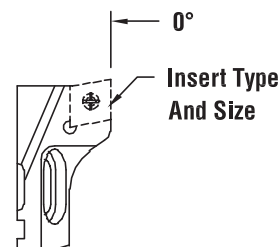
STYLE 2: FOR USE WITH CCMT INSERTS

Order Inserts separately (see pages 142-144).

STYLE 2

Part Number	Insert Holder Size	Insert Type and Size	Insert Screw	Insert Screw Wrench	Weight (lbs.)
4205-21C06	21	CCMT 06	028-925	018-007	.1
4205-22C06	22	CCMT 06	028-905	018-007	.1
4305-31C06	31	CCMT 06	028-905	018-007	.1
4305-32C06	32	CCMT 06	028-905	018-007	.1
4405-41C09	41	CCMT 09	028-906	018-008	.2
4405-42C09	42	CCMT 09	028-906	018-008	.2
4505-51C12	51	CCMT 12	028-907	018-009	.3
4505-52C12	52	CCMT 12	028-907	018-009	.4
4605-61C12	61	CCMT 12	028-907	018-009	.6
4605-62C12	62	CCMT 12	028-907	018-009	.8
4606-63C12	63	CCMT 12	028-907	018-009	1.0

- Designed for boring to square shoulders and deep bores. Also used when step cutting.



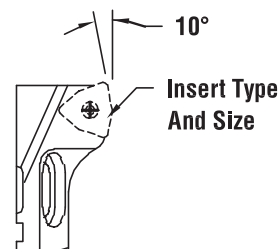
STYLE 3: FOR USE WITH WCMX INSERTS

Order Inserts separately (see pages 142-144).

STYLE 3

Part Number	Insert Holder Size	Insert Type and Size	Insert Screw	Insert Screw Wrench	Weight (lbs.)
4205-21W03	21	WCMX 03	028-905	018-007	.1
4305-31W03	31	WCMX 03	028-905	018-007	.1
4405-41W04	41	WCMX 04	028-905	018-007	.2
4505-51W05	51	WCMX 05	028-908	018-003	.3
4605-61W08	61	WCMX 08	028-906	018-008	.6
4605-62W08	62	WCMX 08	028-906	018-008	.8
4606-63W08	63	WCMX 08	028-906	018-008	1.0

- Designed for heavy stock removal at moderate horsepower.



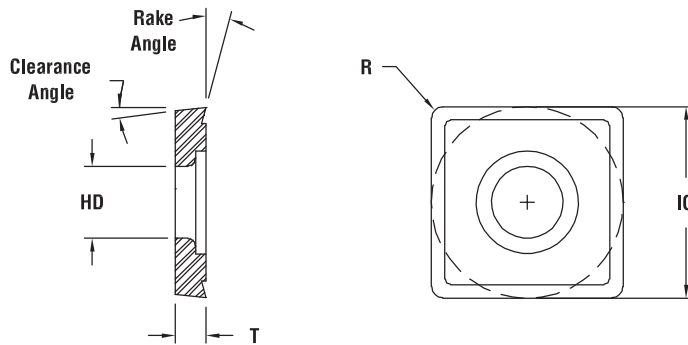
Part numbers in **bold face** are in-stock items. Rough insert holders sold in pairs.

Twin Bore Roughing

Square Insert



Square Insert
S091615C2P
shown here.



SIZE SCMT 09

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
S091615C2P	.375	7°	.016	.156	15°	.173	C2	Uncoated	Pressed
S093115C2P	.375	7°	.031	.156	15°	.173	C2	Uncoated	Pressed
S091615TTP	.375	7°	.016	.156	15°	.173	TT	Coated	Pressed
S093115TTP	.375	7°	.031	.156	15°	.173	TT	Coated	Pressed
S091615CTP	.375	7°	.016	.156	15°	.173	CT	Cermet	Pressed
S093115CTP	.375	7°	.031	.156	15°	.173	CT	Cermet	Pressed
S093100ASP	.375	7°	.031	.156	0°	.173	AS	Coated	Pressed
S091600C2G	.375	7°	.016	.156	0°	.173	C2	Uncoated	Pressed

SIZE SCMT 12

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
S121615C2P	.500	7°	.016	.188	15°	.216	C2	Uncoated	Pressed
S123115C2P	.500	7°	.031	.188	15°	.216	C2	Uncoated	Pressed
S121615TTP	.500	7°	.016	.188	15°	.216	TT	Coated	Pressed
S123115TTP	.500	7°	.031	.188	15°	.216	TT	Coated	Pressed
S124715TTP	.500	7°	.047	.188	15°	.216	TT	Coated	Pressed
S121615CTP	.500	7°	.016	.188	15°	.216	CT	Cermet	Pressed
S123115CTP	.500	7°	.031	.188	15°	.216	CT	Cermet	Pressed
S124715CTP	.500	7°	.047	.188	15°	.216	CT	Cermet	Pressed

Part numbers in **bold face** are in-stock items.

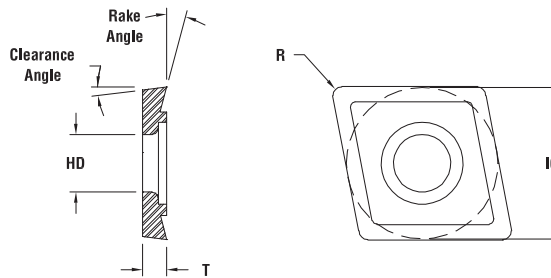
Twin Bore Roughing

80° Diamond Inserts

BORING



80° Diamond Insert
C061620C2G
shown here.



SIZE CCMT 06

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
C061615C2P	.250	7°	.016	.094	15°	.110	C2	Uncoated	Pressed
C063115C2P	.250	7°	.031	.094	15°	.110	C2	Uncoated	Pressed
C061620C2G	.250	7°	.016	.094	20°	.110	C2	Uncoated	Ground
C061615TTP	.250	7°	.016	.094	15°	.110	TT	Coated	Pressed
C063115TTP	.250	7°	.031	.094	15°	.110	TT	Coated	Pressed
C061615CTP	.250	7°	.016	.094	15°	.110	CT	Cermet	Pressed
C063115CTP	.250	7°	.031	.094	15°	.110	CT	Cermet	Pressed
C063115SNG	.250	7°	.031	.094	15°	.110	SN	Coated	Ground
C061615SNG	.250	7°	.016	.094	15°	.110	SN	Coated	Ground
C061615VNG	.250	7°	.016	.094	15°	.110	VN	Coated	Ground
C063115VNG	.250	7°	.031	.094	15°	.110	VN	Coated	Ground
C093115VNG	.375	7°	.031	.156	15°	.173	VN	Coated	Ground

SIZE CCMT 09

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
C091615C2P	.375	7°	.016	.156	15°	.173	C2	Uncoated	Pressed
C093115C2P	.375	7°	.031	.156	15°	.173	C2	Uncoated	Pressed
C091620C2G	.375	7°	.016	.156	20°	.173	C2	Uncoated	Ground
C091615TTP	.375	7°	.016	.156	15°	.173	TT	Coated	Pressed
C093115TTP	.375	7°	.031	.156	15°	.173	TT	Coated	Pressed
C091615CTP	.375	7°	.016	.156	15°	.173	CT	Cermet	Pressed
C093115CTP	.375	7°	.031	.156	15°	.173	CT	Cermet	Pressed
C091615SNG	.375	7°	.016	.156	15°	.173	SN	Coated	Ground
C093115SNG	.375	7°	.031	.156	15°	.173	SN	Coated	Ground
C091615VNG	.375	7°	.016	.156	15°	.173	VN	Coated	Ground

SIZE CCMT 12

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
C121615C2P	.500	7°	.016	.188	15°	.216	C2	Uncoated	Pressed
C123115C2P	.500	7°	.031	.188	15°	.216	C2	Uncoated	Pressed
C124715C2P	.500	7°	.047	.188	15°	.216	C2	Uncoated	Pressed
C121620C2G	.500	7°	.016	.188	20°	.216	C2	Uncoated	Ground
C123120C2G	.500	7°	.031	.188	20°	.216	C2	Uncoated	Ground
C121615TTP	.500	7°	.016	.188	15°	.216	TT	Coated	Pressed
C123115TTP	.500	7°	.031	.188	15°	.216	TT	Coated	Pressed
C124715TTP	.500	7°	.047	.188	15°	.216	TT	Coated	Pressed
C121615CTP	.500	7°	.016	.188	15°	.216	CT	Cermet	Pressed
C123115CTP	.500	7°	.031	.188	15°	.216	CT	Cermet	Pressed
C124715CTP	.500	7°	.047	.188	15°	.216	CT	Cermet	Pressed
C121615SNG	.500	7°	.016	.188	15°	.216	SN	Coated	Ground
C123115SNG	.500	7°	.031	.188	15°	.216	SN	Coated	Ground
C121615VNG	.500	7°	.016	.188	15°	.216	VN	Coated	Ground
C123115VNG	.500	7°	.031	.188	15°	.216	VN	Coated	Ground

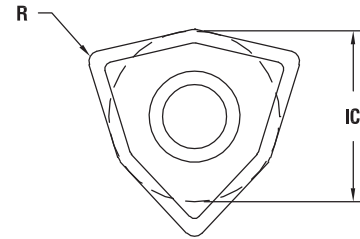
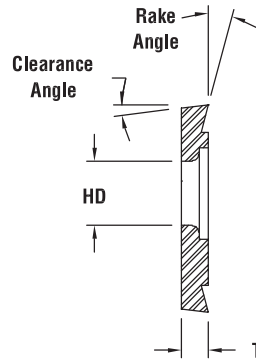
Part numbers in **bold face** are in-stock items.

Twin Bore Roughing

Trigon Inserts



Trigon Insert
W033115TTP
shown here.



SIZE WCMX 03

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
W033115TTP	.218	7°	.031	.093	15°	.110	TT	Coated	Pressed

SIZE WCMX 04

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
W043115TTP	.250	7°	.031	.093	15°	.122	TT	Coated	Pressed

SIZE WCMX 05

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
W053115TTP	.312	7°	.031	.125	15°	.126	TT	Cermet	Pressed

SIZE WCMX 08

Part Number	IC	Clearance Angle	R	T	Rake Angle	HD	Grade	Type	Periphery
W084715TTP	.500	7°	.047	.187	15°	.169	TT	Coated	Pressed

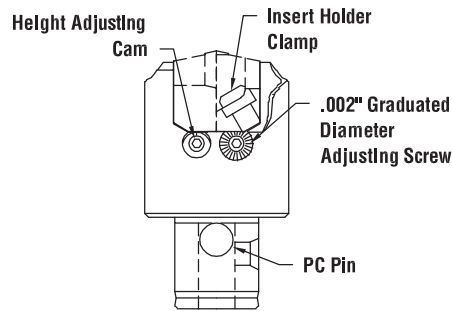
Part numbers in **bold face** are in-stock items.

Twin Bore Roughing Components

BORING



PC4-4405 shown here.



ROUGH BORING COMPONENTS

Part Number	Diameter Adjust. Screw	Insert Holder Clamp (Pair)	Height Adjust. Cam (Pair)	Wrench Kit	Spare Kit	PC Pin
PC2-4205	4205-11	4205-12	4205-13	4205-14	4205-10	PCP-002
PC3-4305	4305-11	4305-12	4305-13	4305-14	4305-10	PCP-003
PC4-4405	4405-11	4405-12	4405-13	4405-14	4405-10	PCP-004
PC5-4505	4505-11	4505-12	4505-13	4505-14	4505-10	PCP-005
PC6-4605	4605-11	4605-12	4605-13	4605-14	4605-10	PCP-006
PC6-4606	4605-11	4605-12	4605-13	4605-14	4605-10	PCP-006
PC7-4705	4605-11	4605-12	4605-13	4605-14	4605-10	PCP-007
7100-B460	4605-11	4605-12	4605-13	4605-14	4605-10	-

Part numbers in **bold face** are in-stock items.

*Included in spare kit.