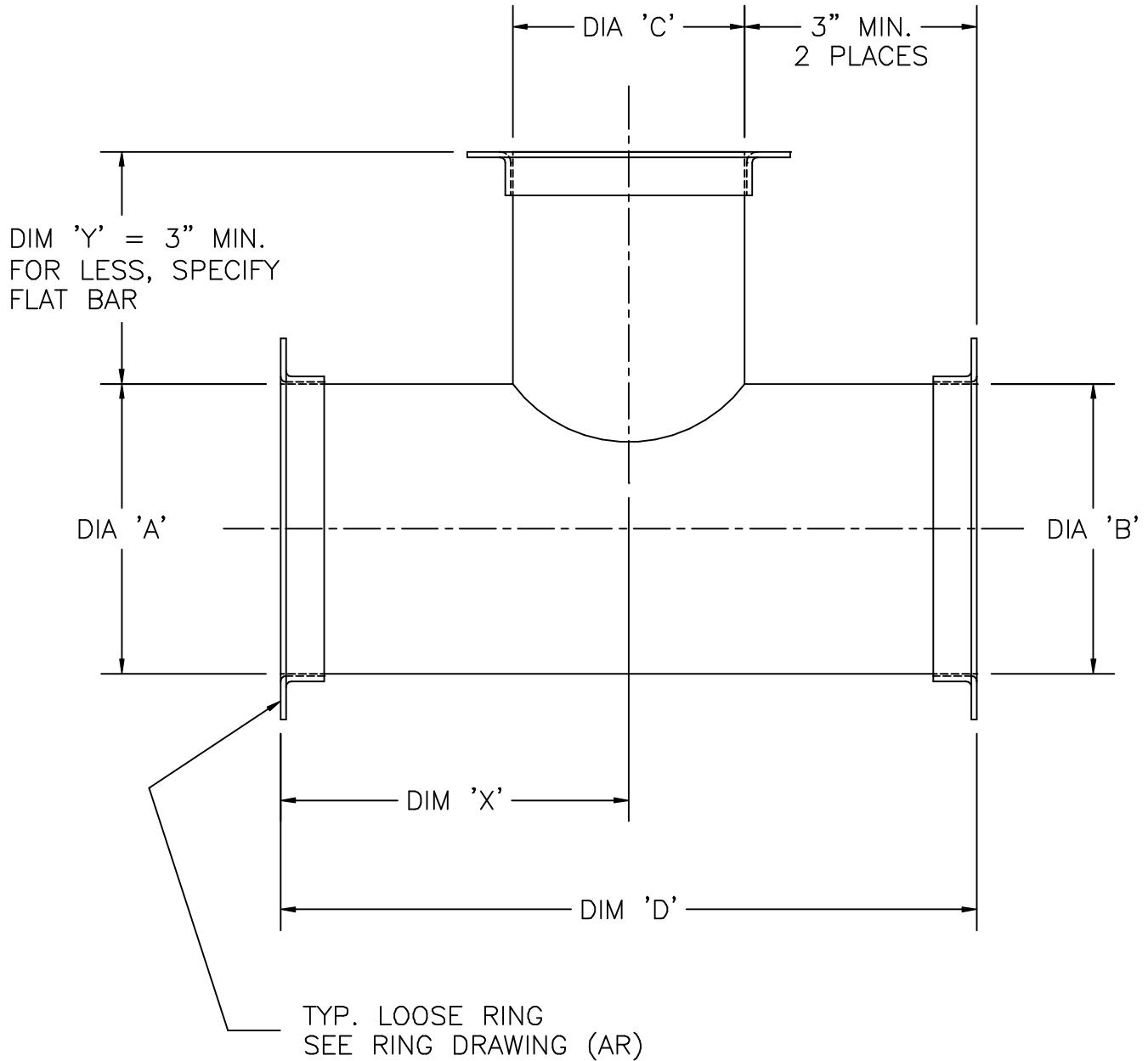


Tees

FITTING TYPE	DESIGNATION	STANDARD	ORDER SHEET
90 TAKEOFF	TEE	09/14/95	12/03/95
90 TAKEOFF CROSS	TEEC	10/15/95	12/03/95
90 DOUBLE TAKEOFF	DTEE	12/06/95	12/03/95
90 TRIPLE TAKEOFF	TTEE	12/25/95	05/12/98
90 QUADRUPLE TAKEOFF	QTEE	11/16/95	12/03/95
BTO 45 TAKEOFF	BTO	11/05/95	12/03/95
BTO 45 TAKEOFF CROSS	BTOC	12/27/95	12/27/95
DBTO 45 TAKEOFF DOUBLE	DBTO	12/27/95	12/27/95

Kem-Tuff™

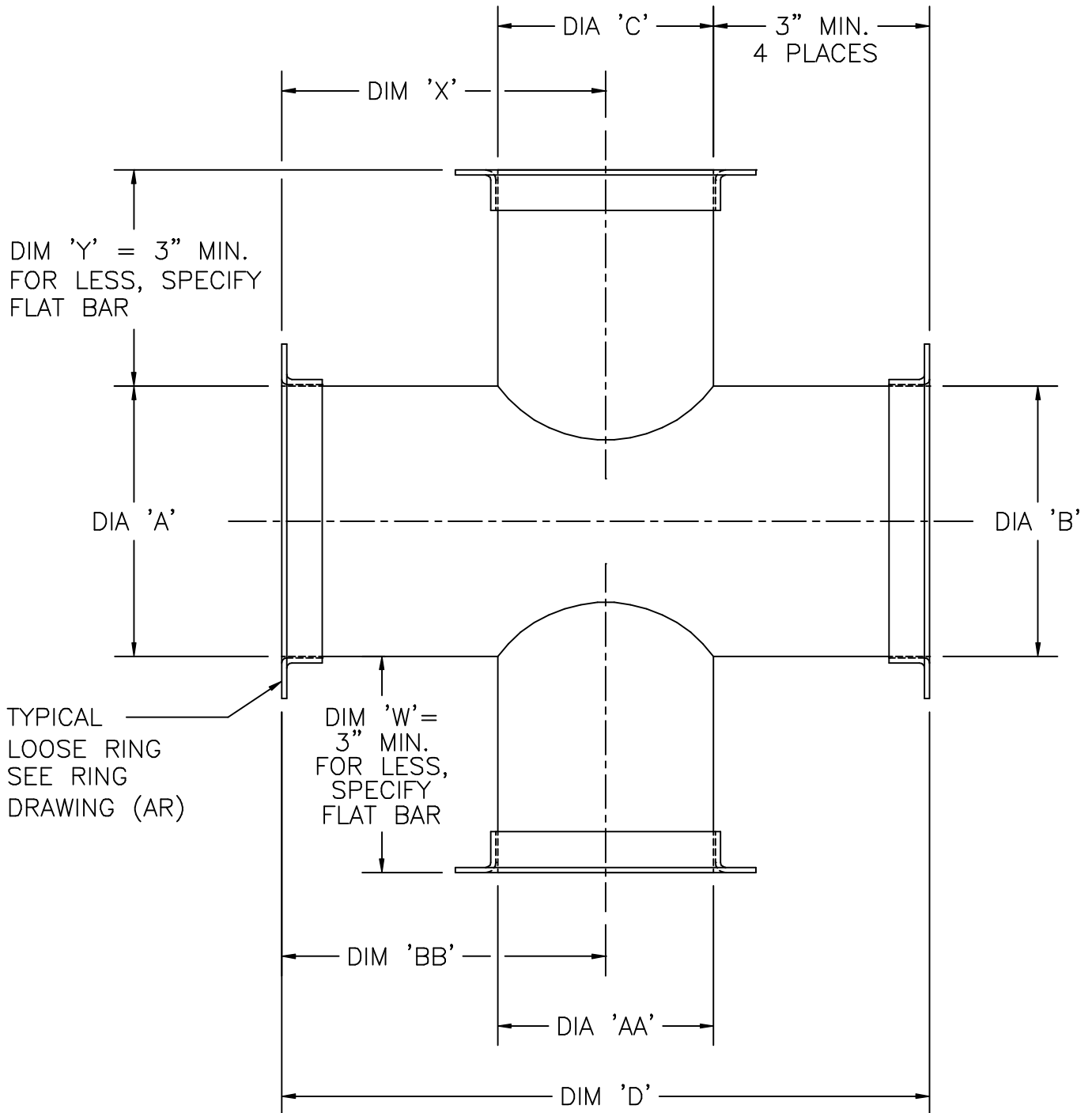
90° Takeoff - TEE



Kem-Tuff™

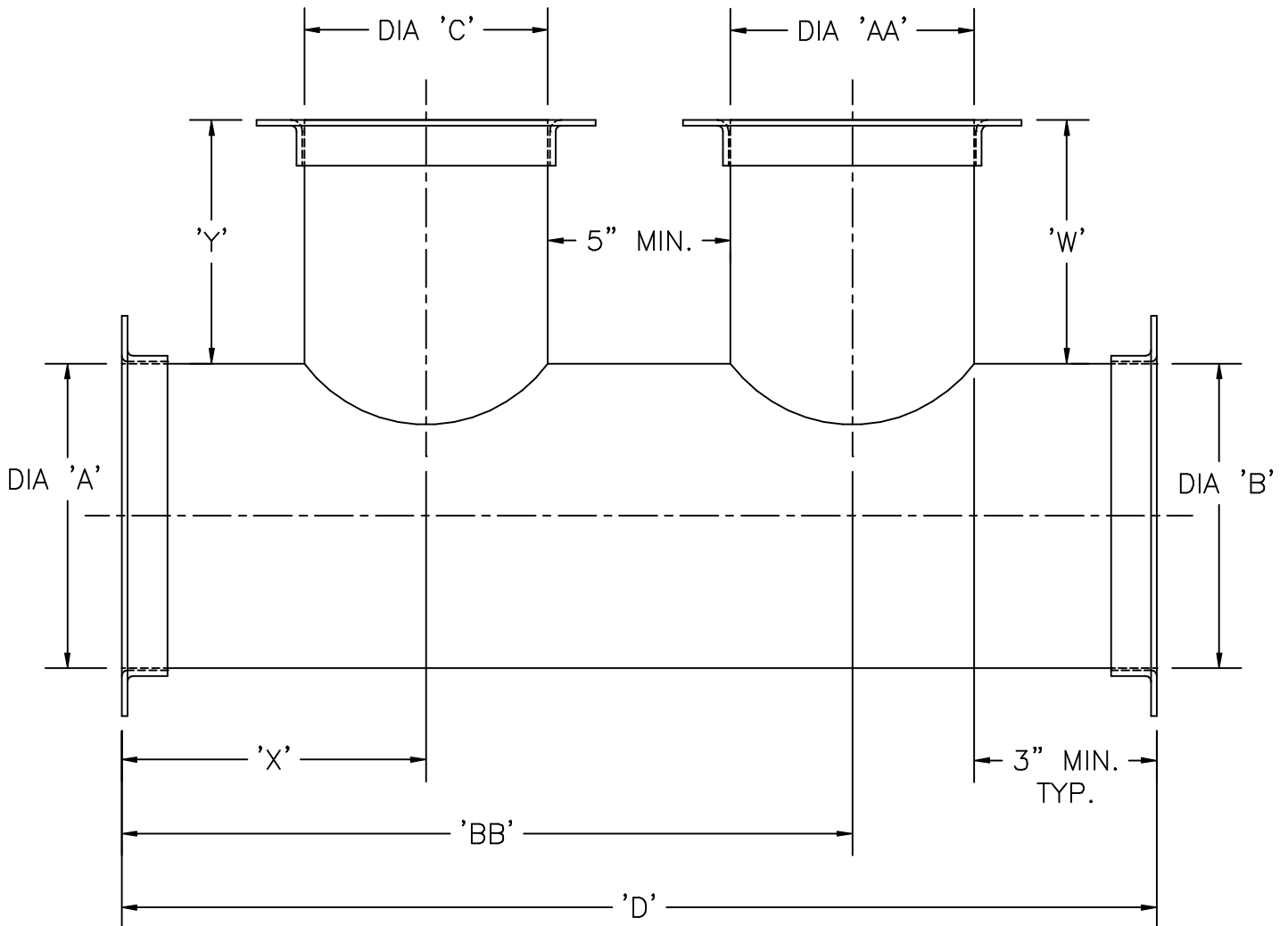
TEE CROSS

- TEEC



Kem-Tuff™

Double Tee - DTEE



MAX. 'D' = 47" 6"φ AND HIGHER

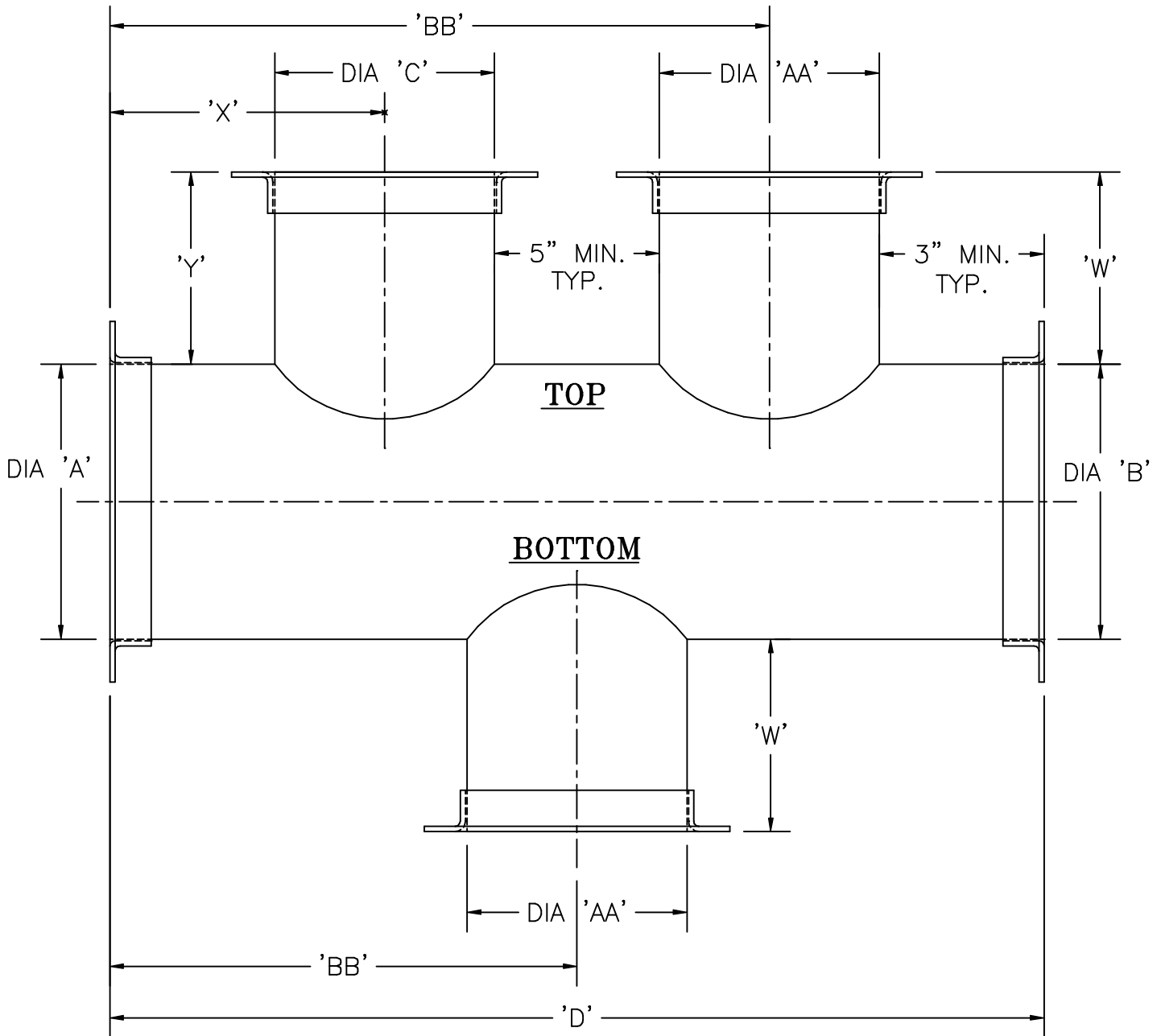
MAX. 'D' = 36" 4"φ

IF 'B' = 'A', MIN. FOR 'D' = 'C' + 'AA' + 11

Kem-Tuff™

Triple Tee

- TTEE

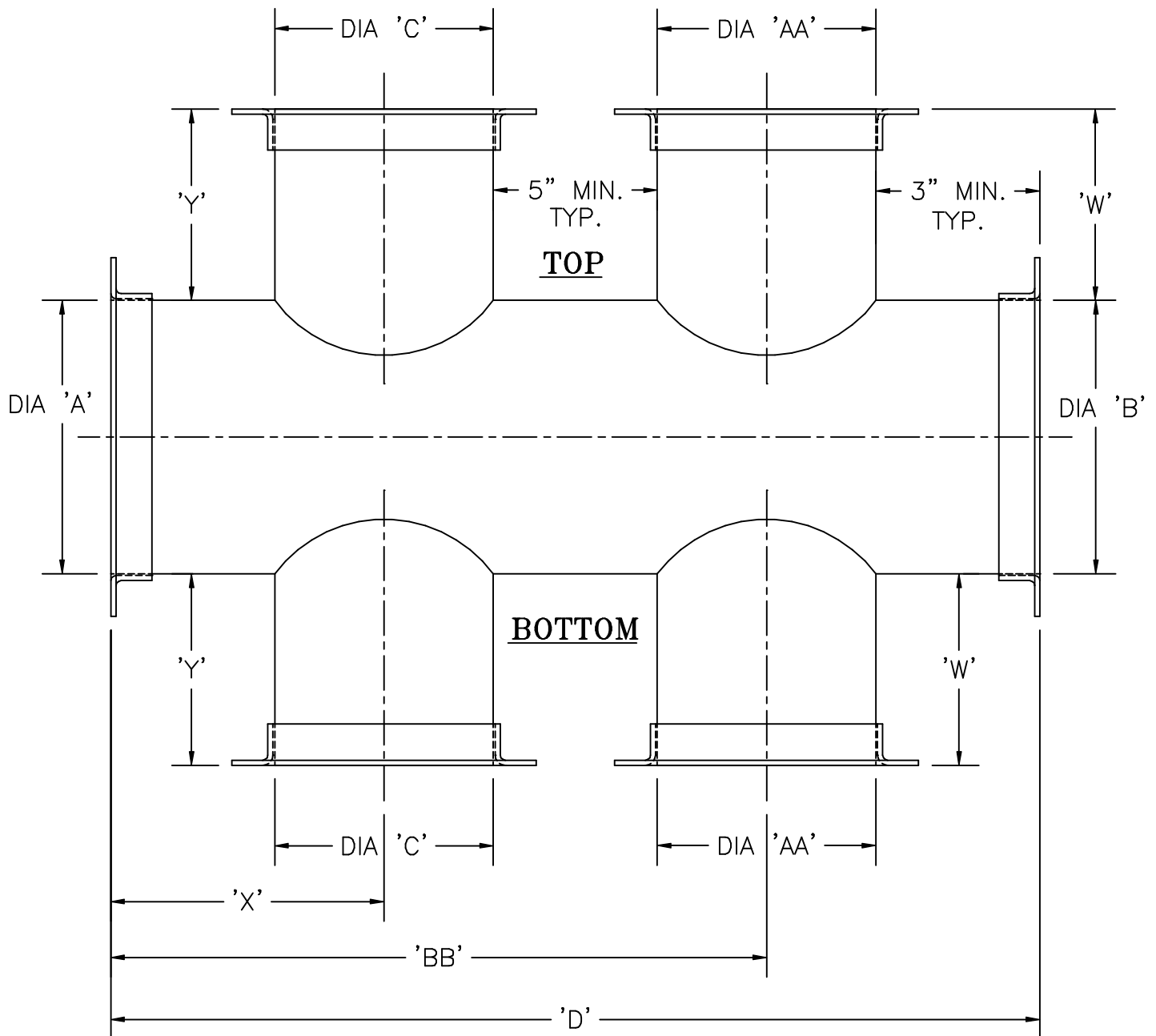


PLEASE NOTE *

- 1) WHEN USING ORDER SHEET, SPECIFY TOP DIMENSIONS IN FIRST ROW.
- 2) SPECIFY BOTTOM DIMENSIONS (WITH SAME DESIGNATION) IN SECOND ROW.
- 3) TOP & BOTTOM DIM'S WITH SAME LETTERS CAN BE DIFFERENT.
- 4) DIM 'BB' APPLIES SEPARATELY TO TOP & BOTTOM.
- 5) ALL 'TYPICAL' DIMENSIONS APPLY TO BOTH TOP AND BOTTOM.
- 6) IF 'B' = 'A', MIN. FOR 'D' = THE LONGER OF:
TOP: 'C' + 'AA' + 11 OR BOTTOM: 'AA' + 6.
- 7) MAX. 'D' = 36" 4"Ø MAX. 'D' = 47" 6"Ø AND HIGHER
- 8) DIM'S 'W' & 'Y' = 3" MIN. FOR LESS, SPECIFY FLAT BAR.

Kem-Tuff™

Quadruple - QTEE Tee



PLEASE NOTE *

- 1) WHEN USING ORDER SHEET, SPECIFY TOP DIMENSIONS IN FIRST ROW.
- 2) SPECIFY BOTTOM DIMENSIONS (WITH SAME DESIGNATION) IN SECOND ROW.
- 3) TOP & BOTTOM DIM'S WITH SAME LETTERS CAN BE DIFFERENT.
- 4) DIM'S 'X' AND 'BB' APPLY SEPARATELY TO TOP & BOTTOM.
- 5) ALL 'TYPICAL' DIMENSIONS APPLY TO BOTH TOP AND BOTTOM.

MAX. 'D' = 36" 4"φ

MAX. 'D' = 47" 6"φ AND HIGHER

IF 'B' = 'A', MIN. FOR 'D' = 'C' + 'AA' + 11

DIM'S 'W' & 'Y' = 3" MIN. FOR LESS, SPECIFY FLAT BAR.

Kem-Tuff™

45° Takeoff - BTO

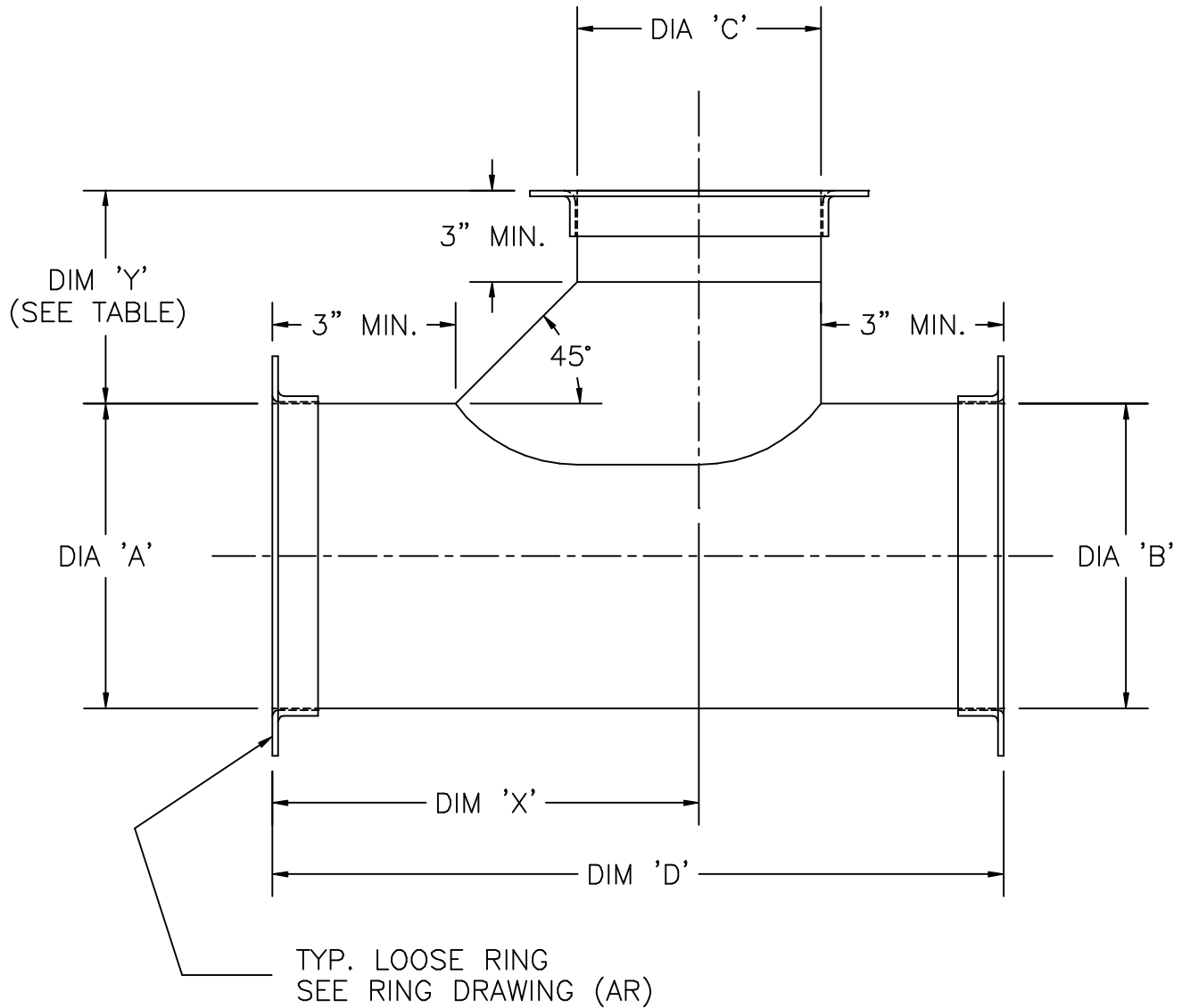


TABLE	
DIA "A "	DIM "Y "
5 - 16" ϕ	7" MIN
17 - 24" ϕ	9" MIN
25" ϕ +	12" MIN

Kem-Tuff™ 45° Takeoff Cross - BTOC

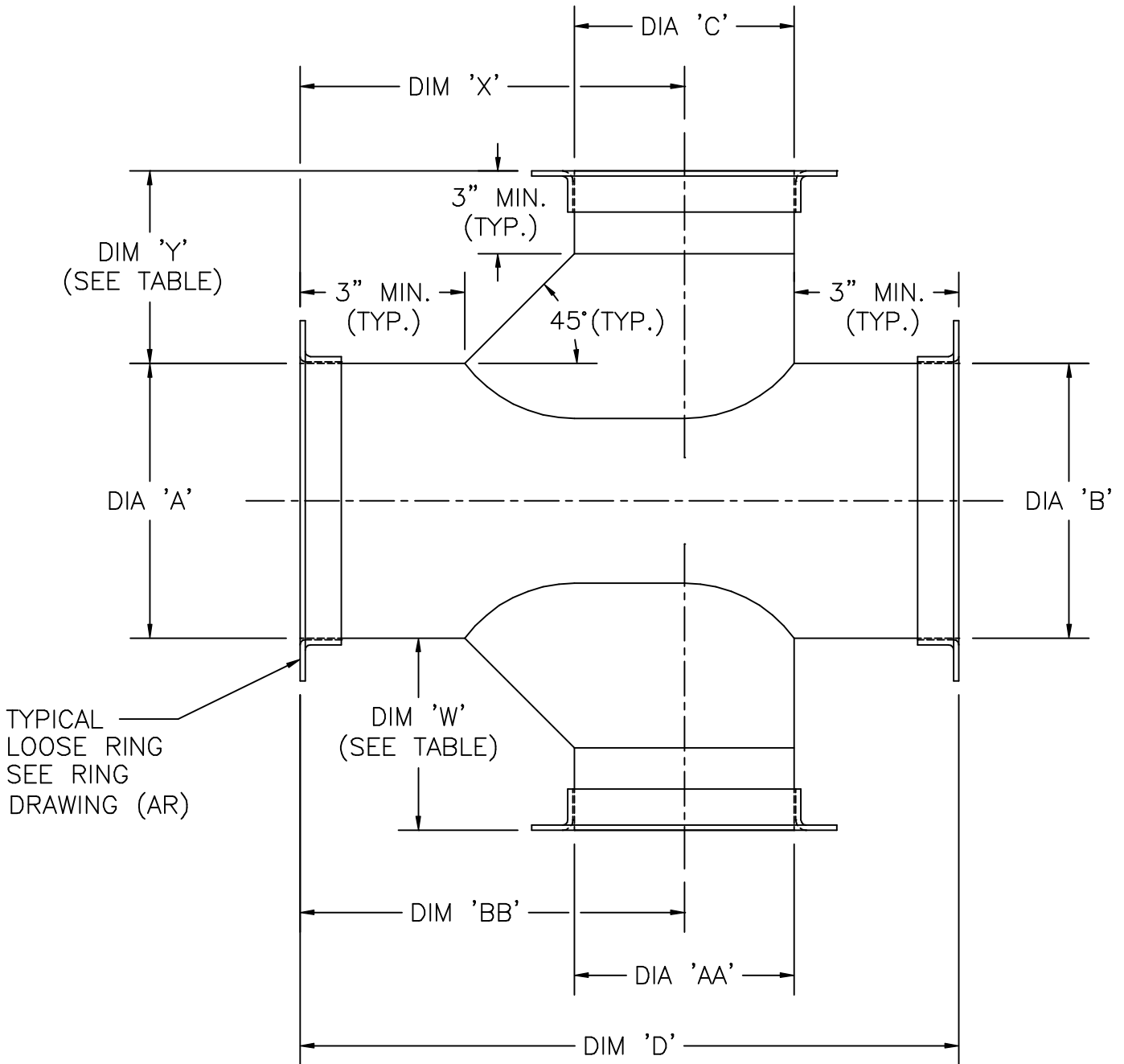
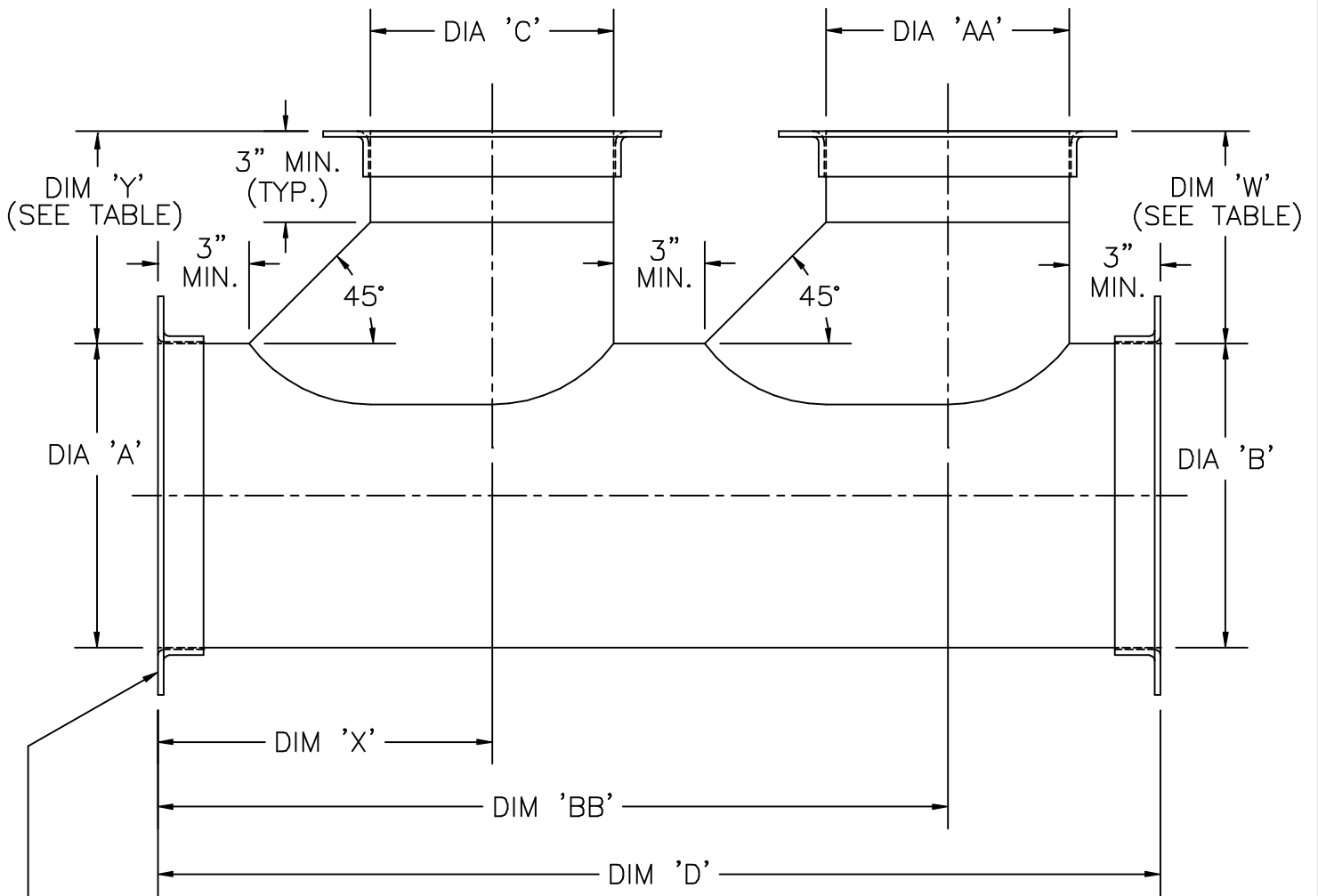


TABLE		
DIA "A "	DIM "W "	DIM "Y "
5 - 16" ϕ	7" MIN	7" MIN
17 - 24" ϕ	9" MIN	9" MIN
25" ϕ +	12" MIN	12" MIN

Kem-Tuff™ Double 45° Takeoff - DBTO



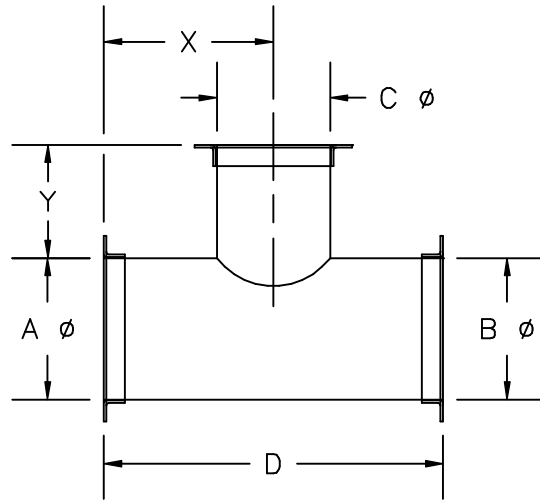
TYPICAL
LOOSE RING
SEE RING
DRAWING (AR)

TABLE

DIA "A "	DIM "W "	DIM "Y "
5 - 16" ϕ	7" MIN	7" MIN
17 - 24" ϕ	9" MIN	9" MIN
25" ϕ +	12" MIN	12" MIN

Kem-Tuff™

NOTE* When ordering, refer to TEE STANDARDS sheet



90° Takeoff - TEE

CONNECTIONS* REFER TO LEGEND

STANDARD*

USE FOR NON-STANDARD FLANGES ONLY

FITTING #	A ø	B ø	C ø	D	X	Y	CONNECTIONS*			SPEC	I.D.	O.D.	B.C.	HOLE SIZE	# OF HOLES	REMARKS
							"A"	"B"	"C"							
										"A"						
										"B"						
										"C"						
										"A"						
										"B"						
										"C"						
										"A"						
										"B"						
										"C"						

Pressure Class in w.g. + - 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

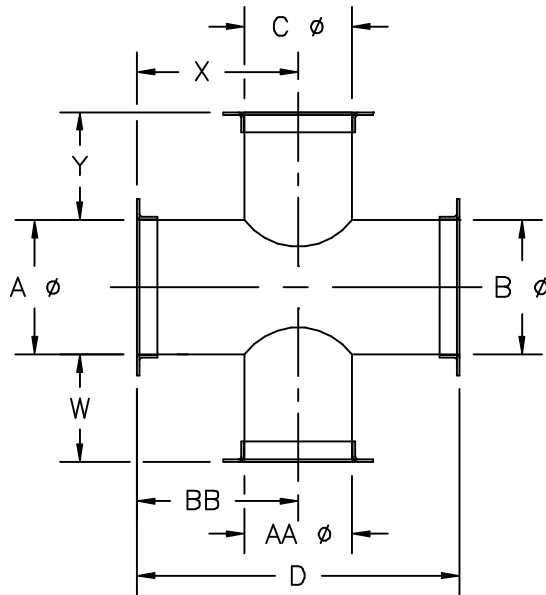
CONNECTION LEGEND

TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4ø TO 18ø ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

Kem-Tuff™

NOTE* When ordering, refer to TEEC STANDARDS sheet



Tee Cross - TEEC

FITTING #	A ϕ	B ϕ	AA ϕ	BB	C ϕ	D	W	X	Y	CONNECTIONS* REFER TO LEGEND				USE FOR NON-STANDARD FLANGES ONLY					REMARKS			
										STANDARD*	"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.	B.C.		HOLE SIZE	# OF HOLES	
														"A"								
														"B"								
														"AA"								
														"C"								
														"A"								
														"B"								
														"AA"								
														"C"								

Pressure Class in w.g.	+	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

CONNECTION LEGEND

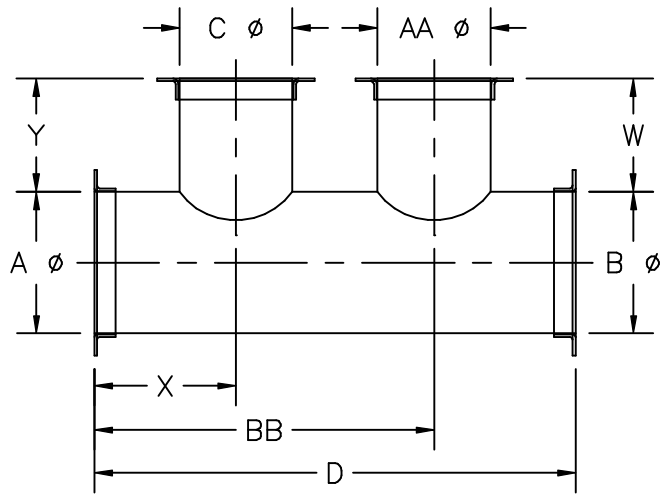
TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4 ϕ TO 18 ϕ ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

ORDER SHEET

Kem-Tuff™

NOTE* When ordering, refer to DTEE STANDARDS sheet



Double Tee - DTEE

FITTING #	A ϕ	B ϕ	AA ϕ	BB	C ϕ	D	W	X	Y	CONNECTIONS* REFER TO LEGEND				USE FOR NON-STANDARD FLANGES ONLY				REMARKS			
										STANDARD*	"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.		B.C.	HOLE SIZE	# OF HOLES
														"A"							
														"B"							
														"AA"							
														"C"							
														"A"							
														"B"							
														"AA"							
														"C"							

Pressure Class in w.g.	+	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

CONNECTION LEGEND

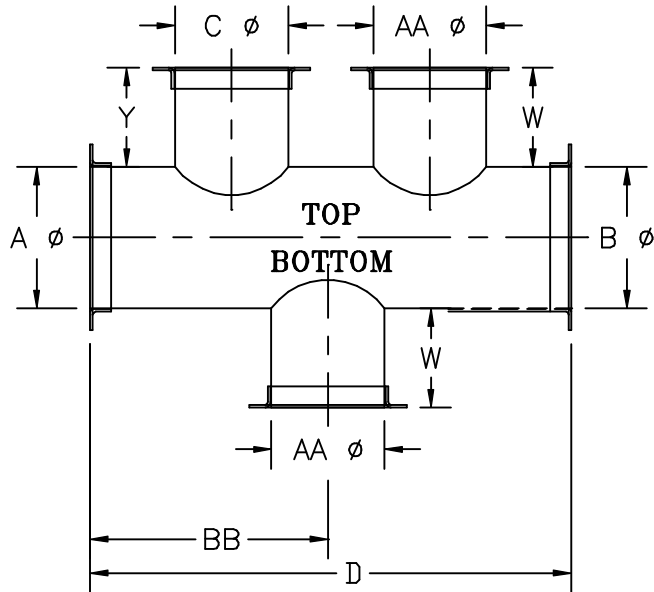
TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4 ϕ TO 18 ϕ ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

Kem-Tuff™

NOTE* When ordering, refer to TTEE STANDARDS sheet

Triple Tee - TTEE



FITTING #	A ϕ	B ϕ	AA ϕ	BB	C ϕ	D	W	X	Y	CONNECTIONS* REFER TO LEGEND				USE FOR NON-STANDARD FLANGES ONLY					REMARKS			
										STANDARD*	"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.	B.C.		HOLE SIZE	# OF HOLES	
														"A"								
														"B"								
														"AA"								
														"C"								
TOP														"A"								
BOTTOM														"AA"								
														"C"								

Pressure Class in w.g.	+	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

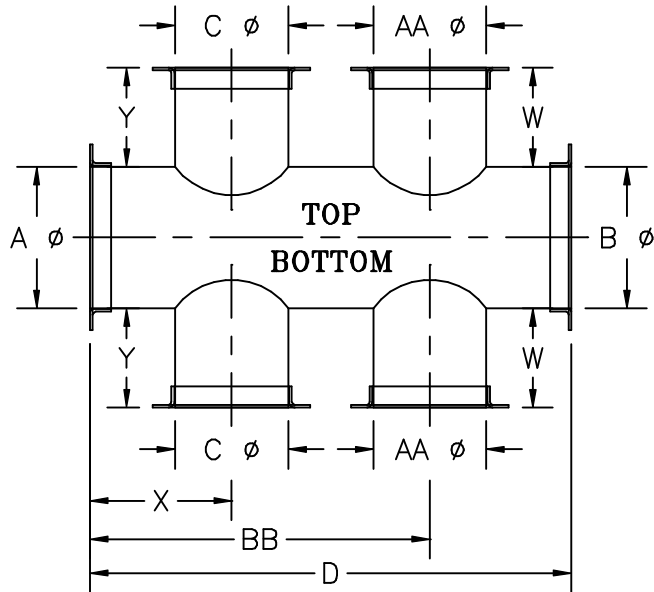
CONNECTION LEGEND	
TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4 ϕ TO 18 ϕ ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

Kem-Tuff™

NOTE* When ordering, refer to QTEE STANDARDS sheet

Quadruple Tee - QTEE



CONNECTIONS*				REFER TO LEGEND			
STANDARD*				USE FOR NON-STANDARD FLANGES ONLY			
"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.	B.C.

FITTING #	A ϕ	B ϕ	AA ϕ	BB	C ϕ	D	W	X	Y	"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.	B.C.	HOLE SIZE	# OF HOLES	REMARKS
														"A"						
														"B"						
														"AA"						
														"C"						
TOP														"C"						
BOTTOM														"AA"						
														"C"						

Pressure Class in w.g.	+	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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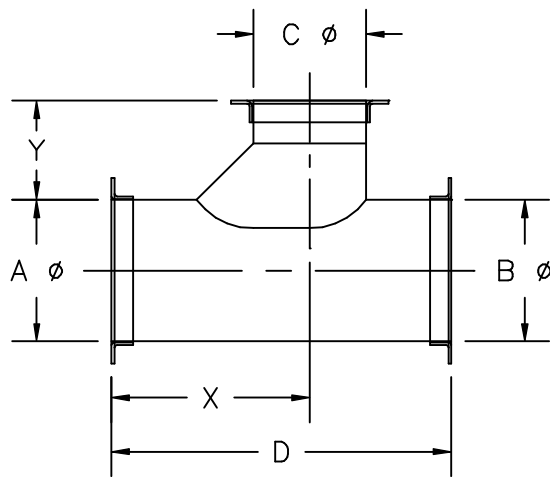
Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

CONNECTION LEGEND	
TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4 ϕ TO 18 ϕ ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

Kem-Tuff™

NOTE* When ordering, refer to BTO STANDARDS sheet



45° Takeoff - BTO

CONNECTIONS* REFER TO LEGEND

FITTING #	A ϕ	B ϕ	C ϕ	D	X	Y	STANDARD*			USE FOR NON-STANDARD FLANGES ONLY						REMARKS	
							"A"	"B"	"C"	SPEC	I.D.	O.D.	B.C.	HOLE SIZE	# OF HOLES		
										"A"							
										"B"							
										"C"							
										"A"							
										"B"							
										"C"							
										"A"							
										"B"							
										"C"							

Pressure Class in w.g. + - 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

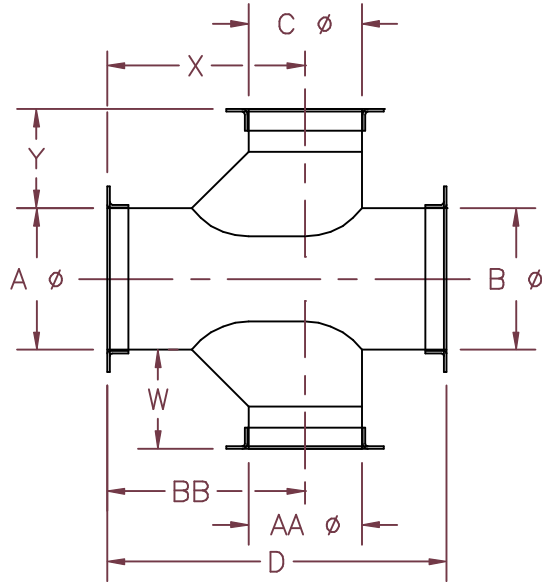
CONNECTION LEGEND

TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4 ϕ TO 18 ϕ ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

Kem-Tuff™

NOTE* When ordering, refer to BTOC STANDARDS sheet



45° Takeoff - BTOC Cross

CONNECTIONS* REFER TO LEGEND																					
STANDARD*				USE FOR NON-STANDARD FLANGES ONLY																	
FITTING #	A ϕ	B ϕ	AA ϕ	BB	C ϕ	D	W	X	Y	"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.	B.C.	HOLE SIZE	# OF HOLES	REMARKS	
														"A"							
														"B"							
														"AA"							
														"C"							
														"A"							
														"B"							
														"AA"							
														"C"							

Pressure Class in w.g.	+	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

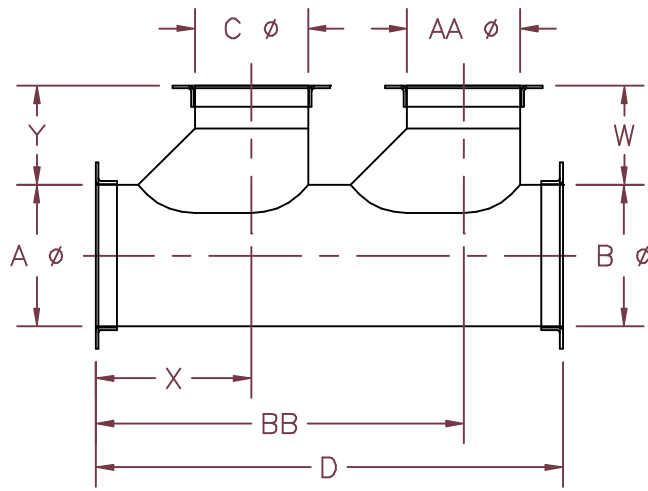
CONNECTION LEGEND	
TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4 ϕ TO 18 ϕ ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.

Kem-Tuff™

NOTE* When ordering, refer to DBTO STANDARDS sheet

Double 45° Takeoff - **DBTO**



										CONNECTIONS*				REFER TO LEGEND								
										STANDARD*				USE FOR NON-STANDARD FLANGES ONLY								
FITTING #	A ø	B ø	AA ø	BB	C ø	D	W	X	Y	"A"	"B"	"AA"	"C"	SPEC	I.D.	O.D.	B.C.	HOLE SIZE	# OF HOLES	REMARKS		
														"A"								
														"B"								
														"AA"								
														"C"								
														"A"								
														"B"								
														"AA"								
														"C"								

Pressure Class in w.g.	+	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Company Name: _____
 Contact Name: _____ Phone# _____
 Project Name: _____ Date: _____
 Project #: _____ GDS Project #: _____

CONNECTION LEGEND	
TYPE	MATERIAL
KF = NW-ISO-KF	316 = STAINLESS
CF = SERIES 88 CF	304 = STAINLESS
FB = FLAT BAR	GAL. = HRS GALVANIZED
AR = ANGLE RING	SPEC = FB 304 S.S. ONLY
RAW = NO FLANGE	BC = HRS BLACK CHROME*
	*BLACK CHROME AVAILABLE IN 4ø TO 18ø ONLY

Specify under "Connections" STD column: flange type and material if other than std 304 S.S.