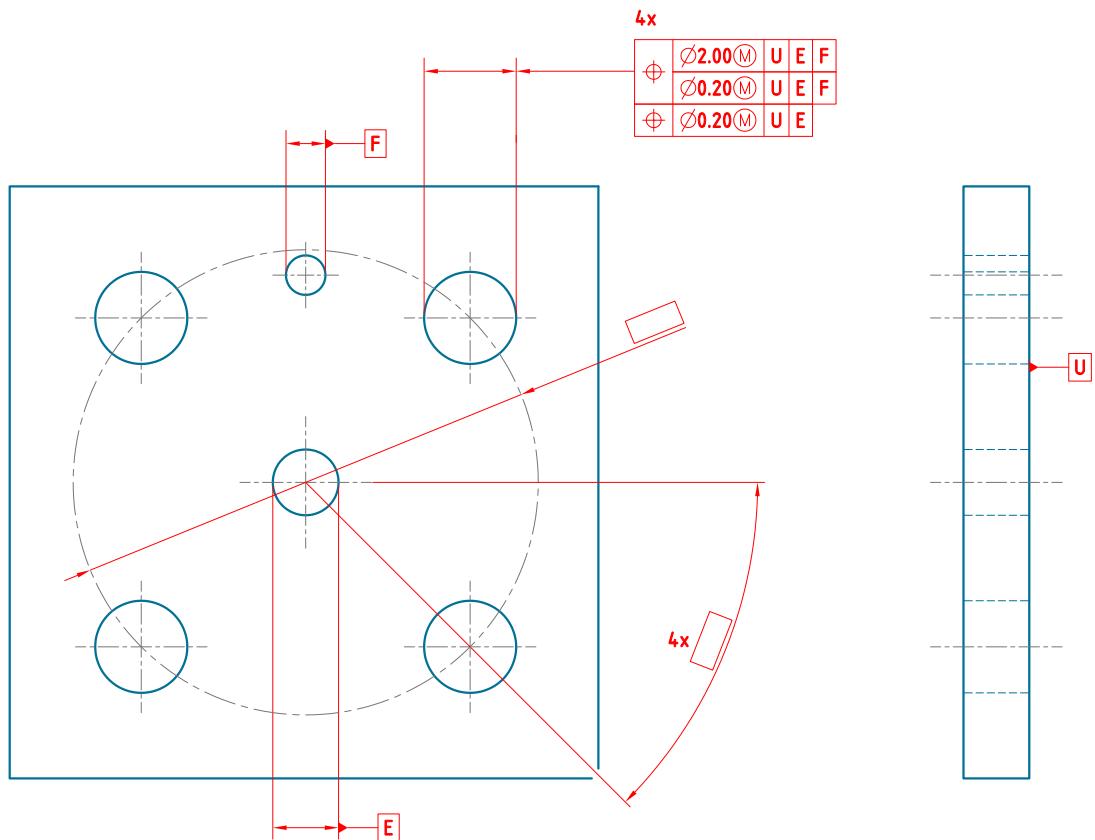
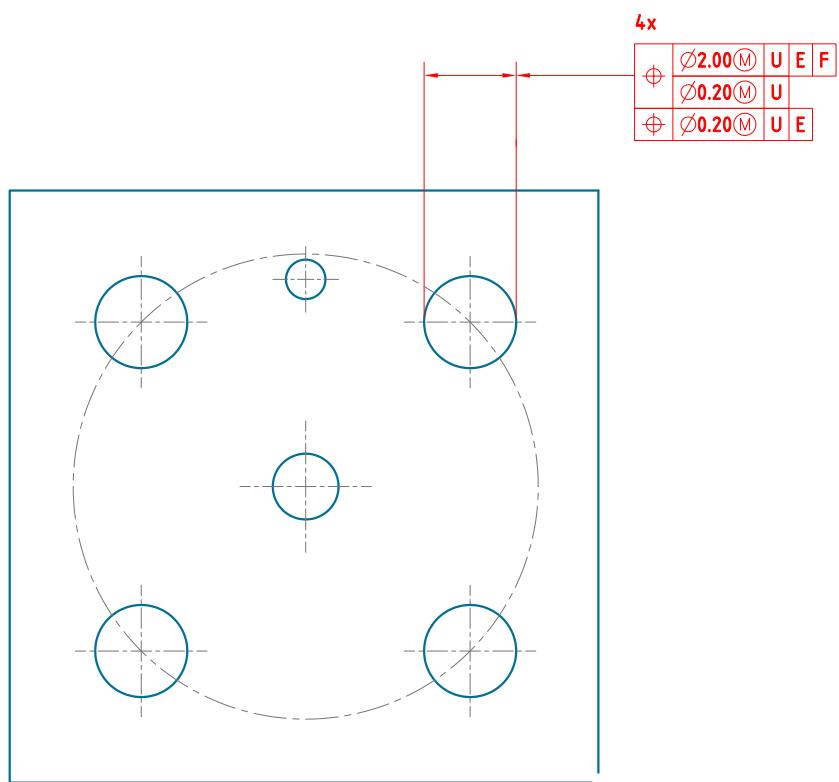


Dimensioning #1



Dimensioning #2



Dimensioning #1 and #2

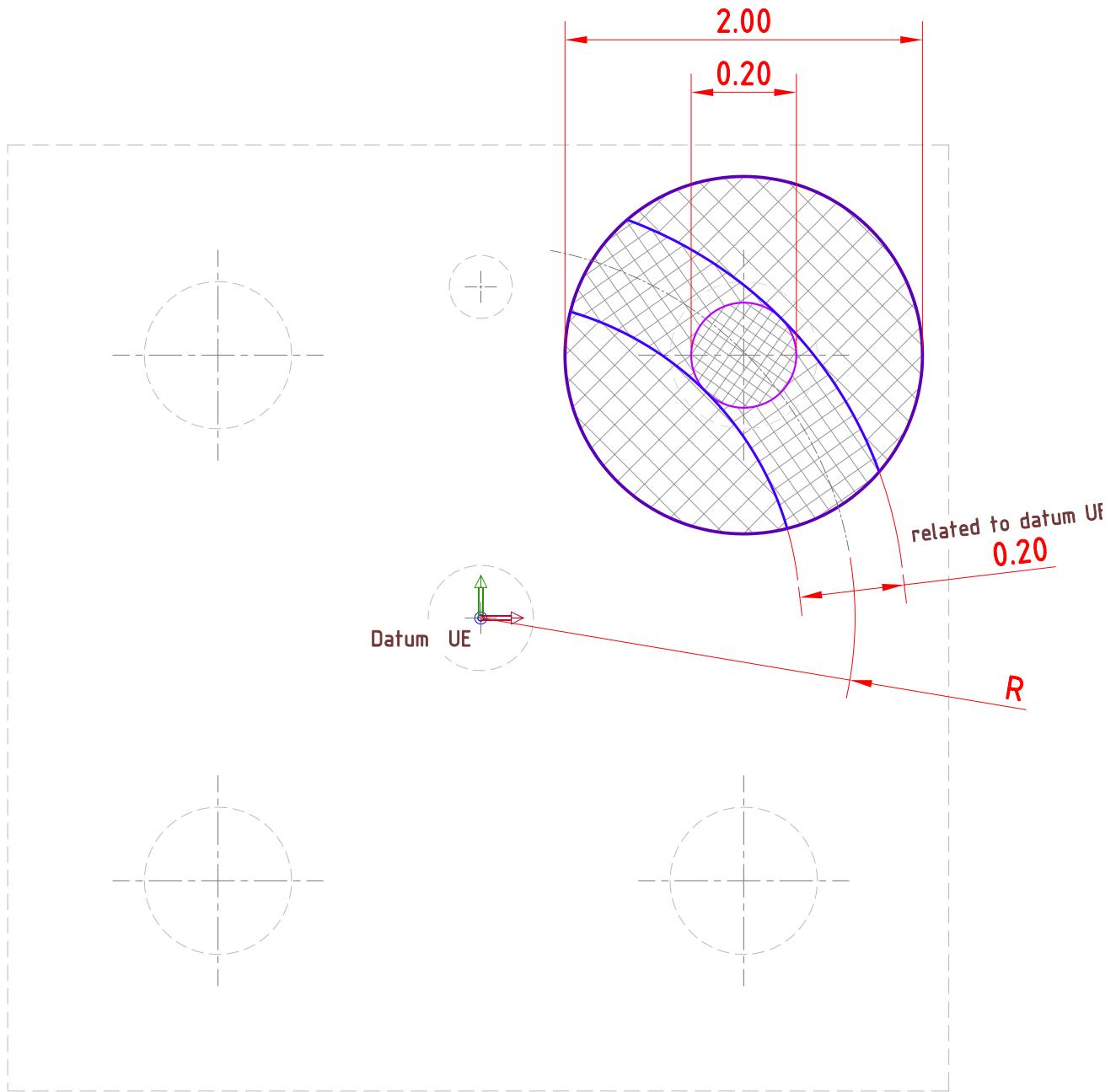
Tolerance zones

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U	E	F
\oplus	$\phi 0.20 \text{ M}$	U	E	

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U		
\oplus	$\phi 0.20 \text{ M}$	U	E	

— fixed tolerance gage

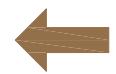
— transulatory tolerance gage



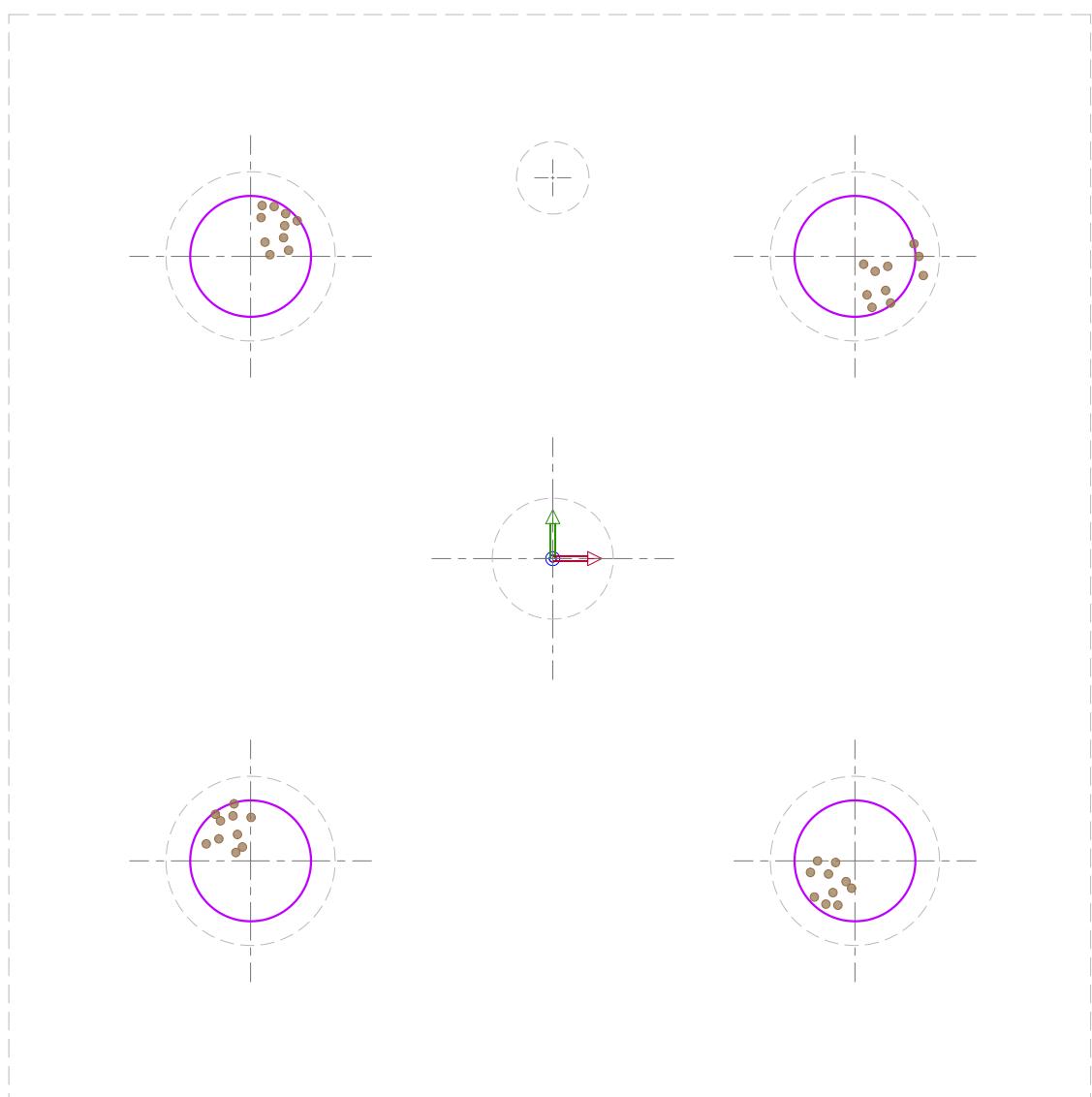
Actual values

After translatory fit

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U	E	F
\oplus	$\phi 0.20 \text{ M}$	U	E	



\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U		
\oplus	$\phi 0.20 \text{ M}$	U	E	



Actual values

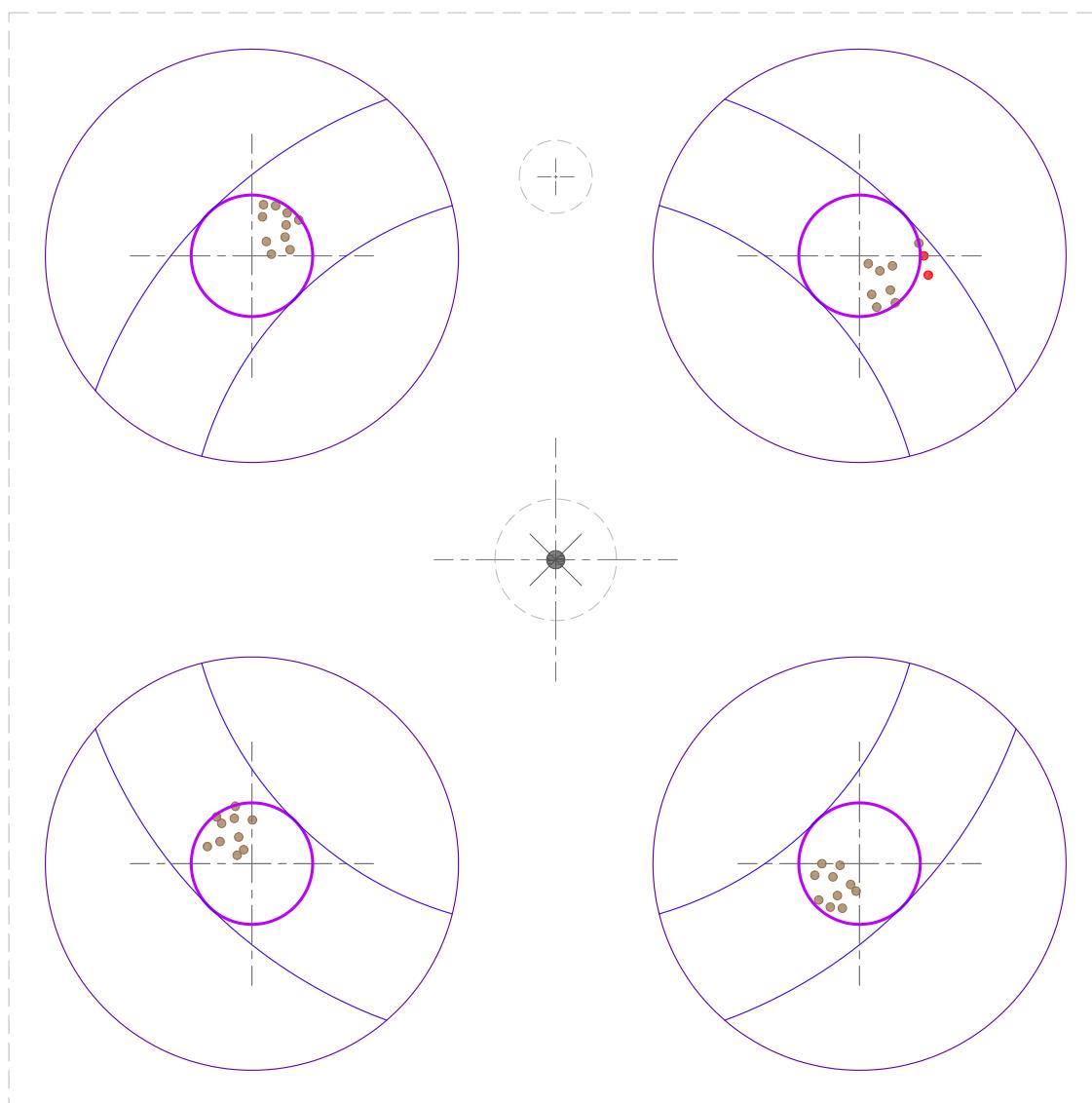
\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U	E	F
\oplus	$\phi 0.20 \text{ M}$	U	E	

Scenario #1

Translation X=0
Translation Y=0

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U		
\oplus	$\phi 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

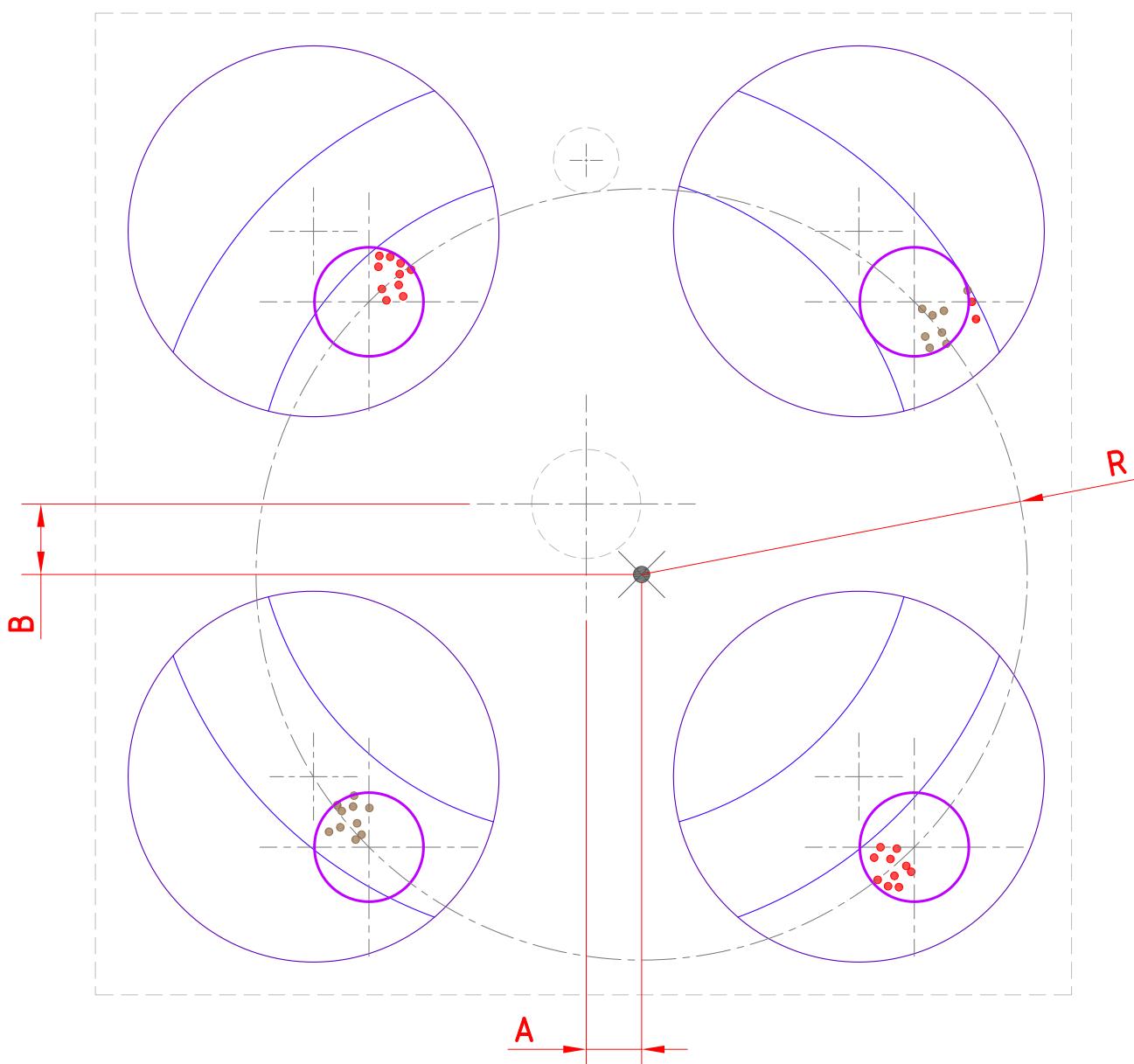
Scenario #2

Translation X=value A
Translation Y=value B

\oplus	$\odot 2.00 \text{ M}$	U	E	F
\ominus	$\odot 0.20 \text{ M}$	U	E	F
\oplus	$\odot 0.20 \text{ M}$	U	E	

\oplus	$\odot 2.00 \text{ M}$	U	E	F
\ominus	$\odot 0.20 \text{ M}$	U		
\oplus	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

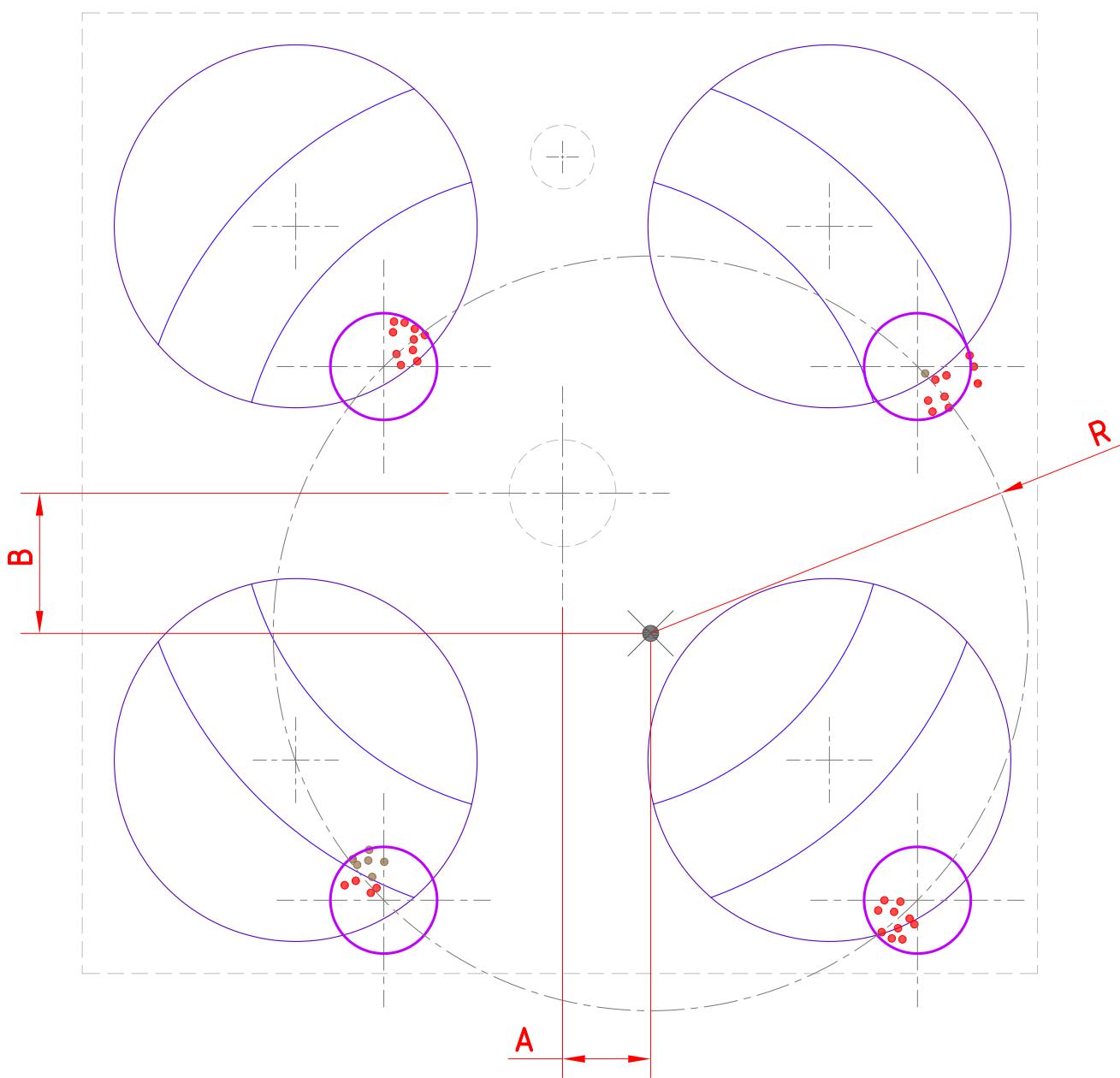
\oplus	$\odot 2.00 \text{ M}$	U	E	F
\ominus	$\odot 0.20 \text{ M}$	U	E	F
\oplus	$\odot 0.20 \text{ M}$	U	E	

Scenario #3

Translation X=value A
Translation Y=value B

\oplus	$\odot 2.00 \text{ M}$	U	E	F
\ominus	$\odot 0.20 \text{ M}$	U		
\oplus	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

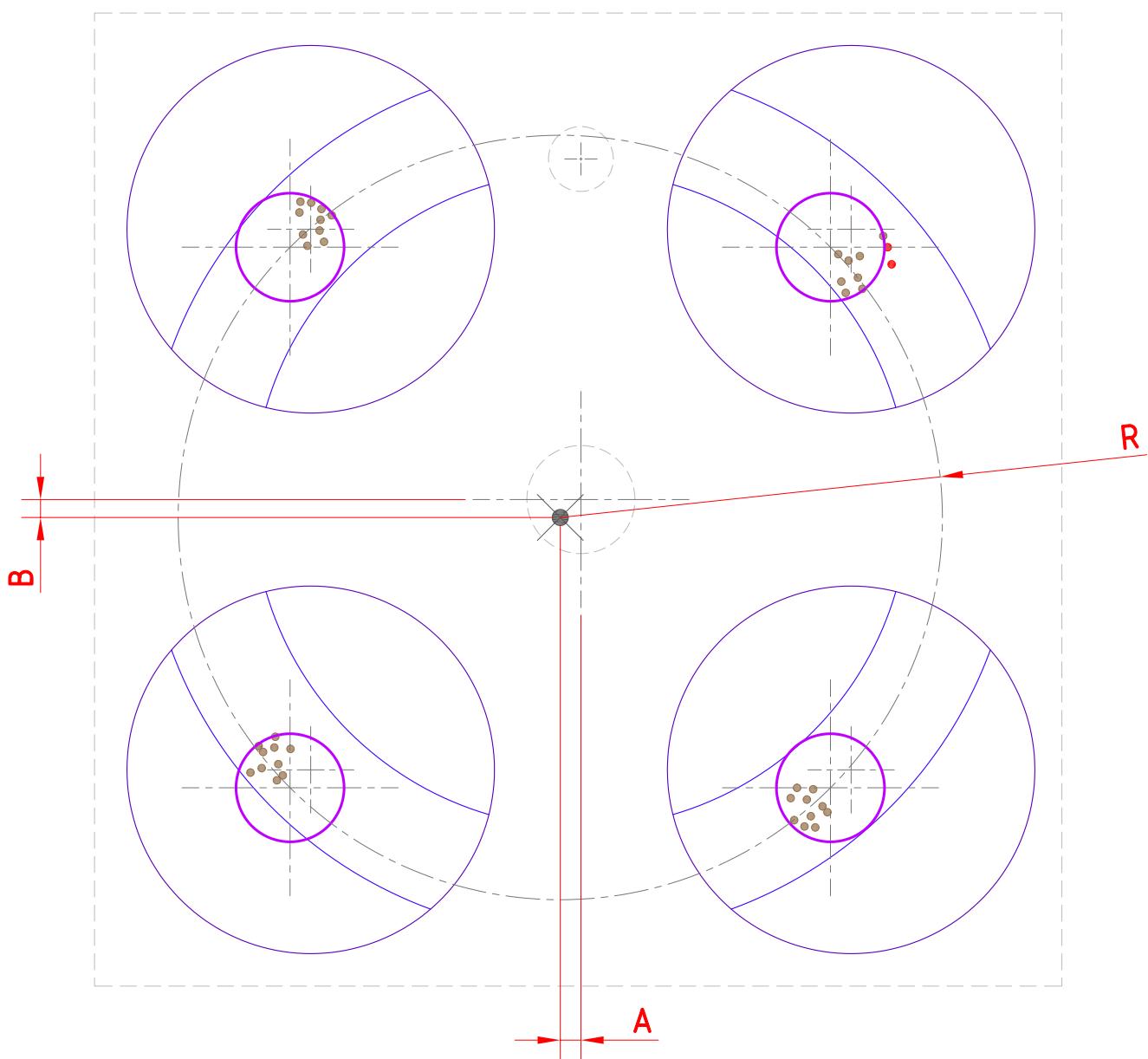
Scenario #4

Translation X=value A
Translation Y=value B

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U	E	F
\oplus	$\phi 0.20 \text{ M}$	U	E	

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U		
\oplus	$\phi 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

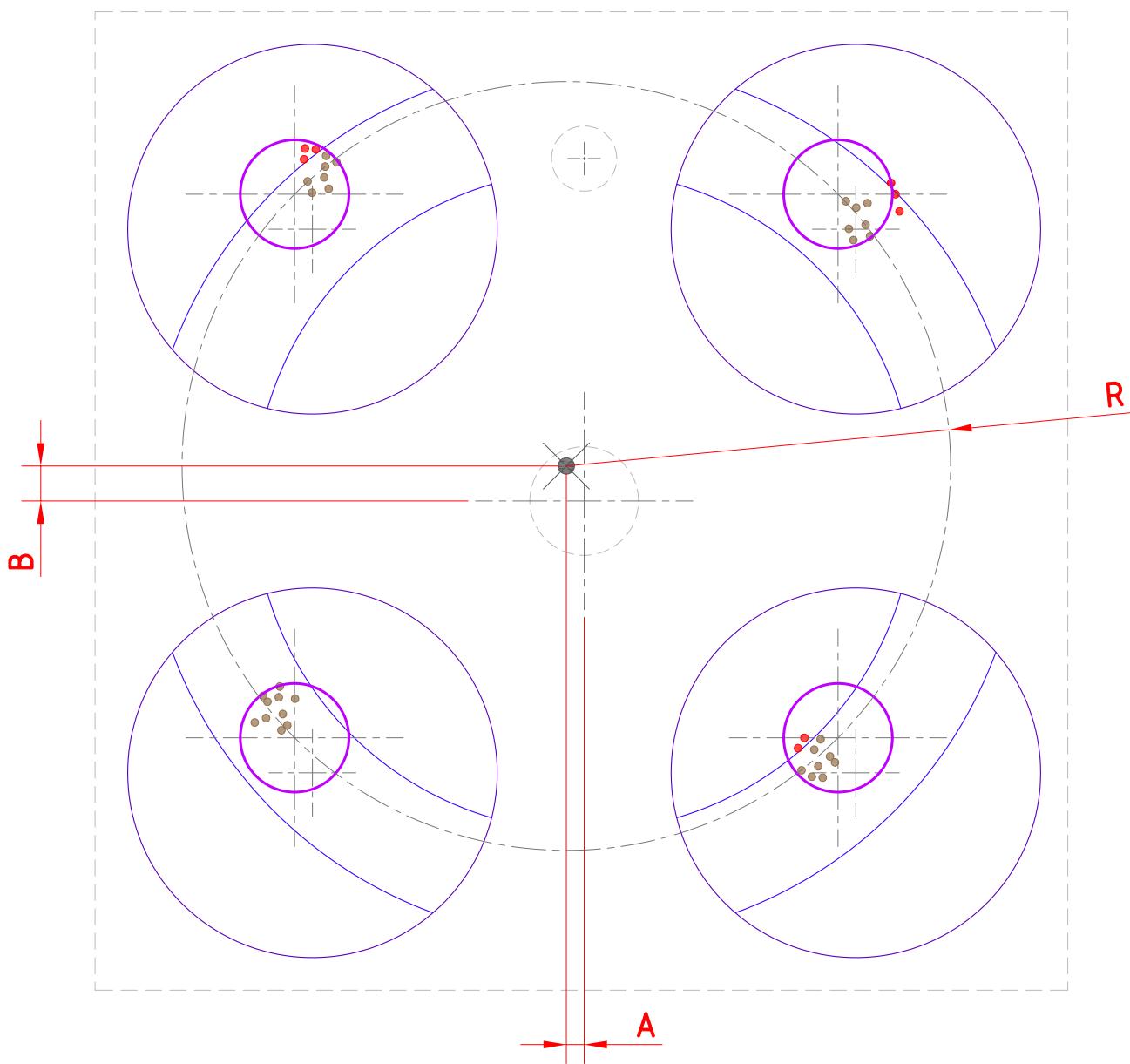
	$\phi 2.00 \text{ M}$	U	E	F
	$\phi 0.20 \text{ M}$	U	E	F
	$\phi 0.20 \text{ M}$	U	E	

Scenario #5

Translation X=value A
Translation Y=value B

	$\phi 2.00 \text{ M}$	U	E	F
	$\phi 0.20 \text{ M}$	U		
	$\phi 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
 - centerpoints out of tolerance



Actual values

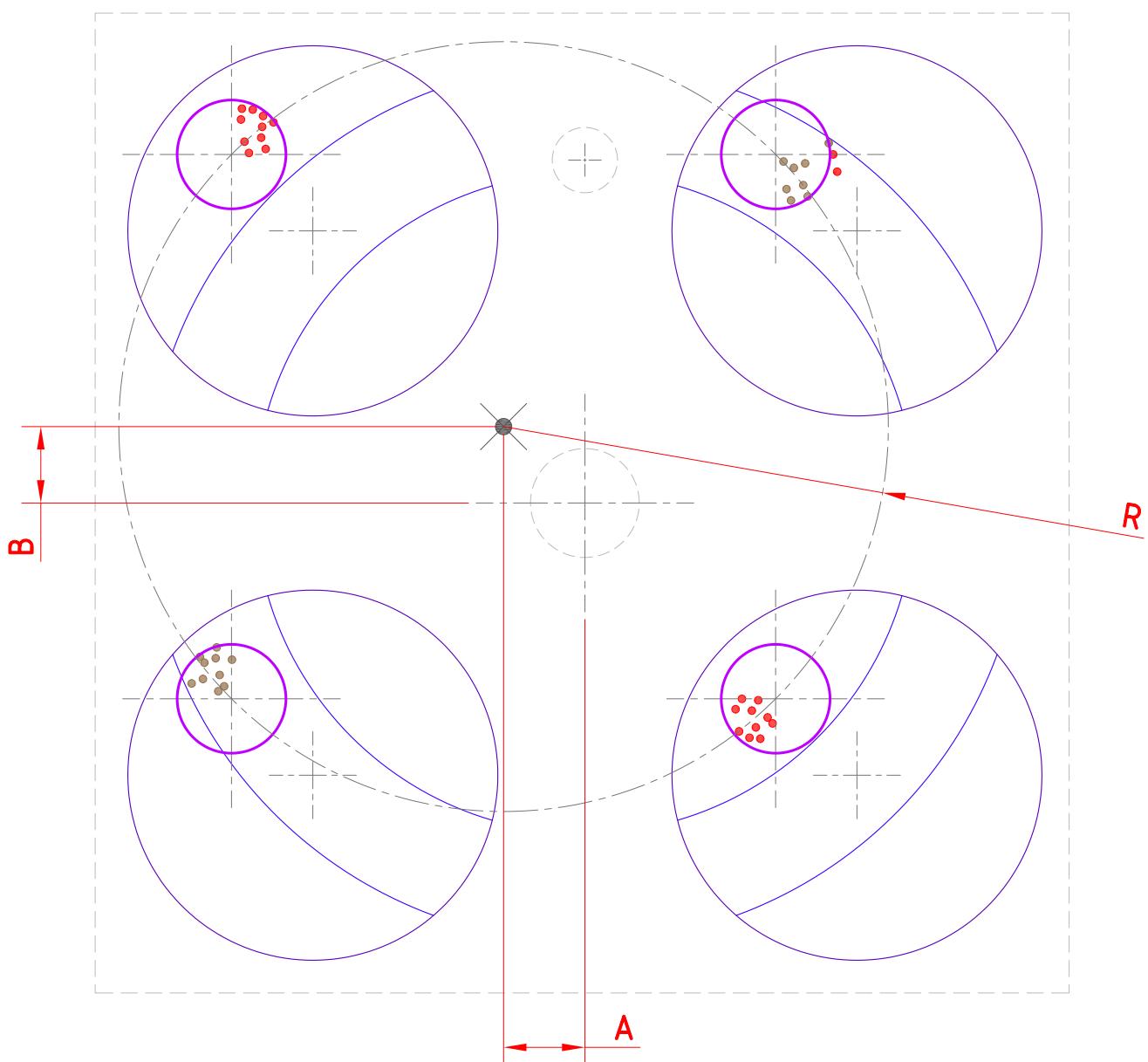
\oplus	$\odot 2.00 \text{ M}$	U	E	F
\ominus	$\odot 0.20 \text{ M}$	U	E	F
\oplus	$\odot 0.20 \text{ M}$	U	E	

Scenario #6

Translation X=value A
Translation Y=value B

\oplus	$\odot 2.00 \text{ M}$	U	E	F
\ominus	$\odot 0.20 \text{ M}$	U		
\oplus	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

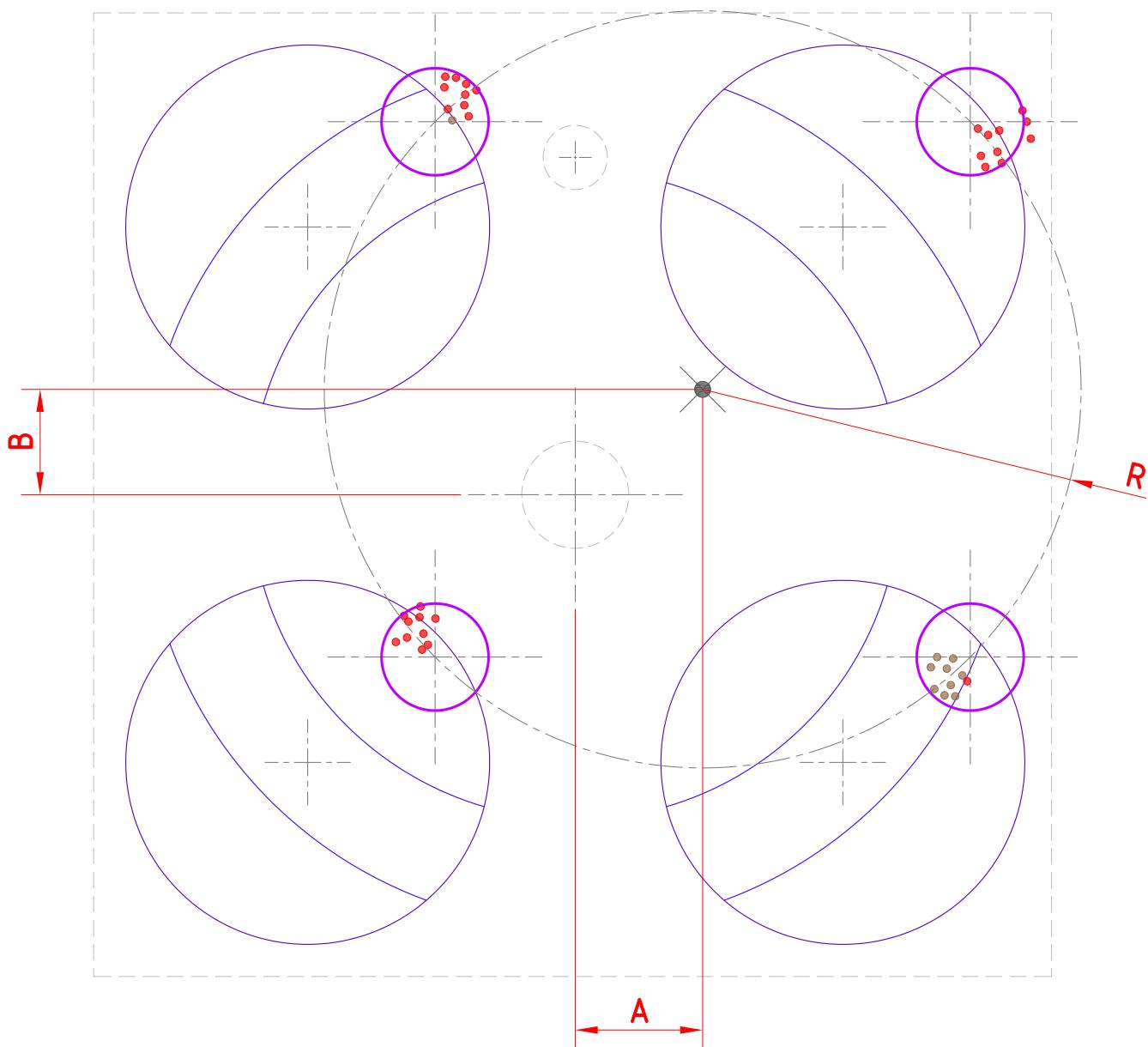
	$\phi 2.00$	M	U	E	F
	$\phi 0.20$	M	U	E	F
	$\phi 0.20$	M	U	E	

Scenario #7

Translation X=value A
Translation Y=value B

	$\phi 2.00$	M	U	E	F
	$\phi 0.20$	M	U		
	$\phi 0.20$	M	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

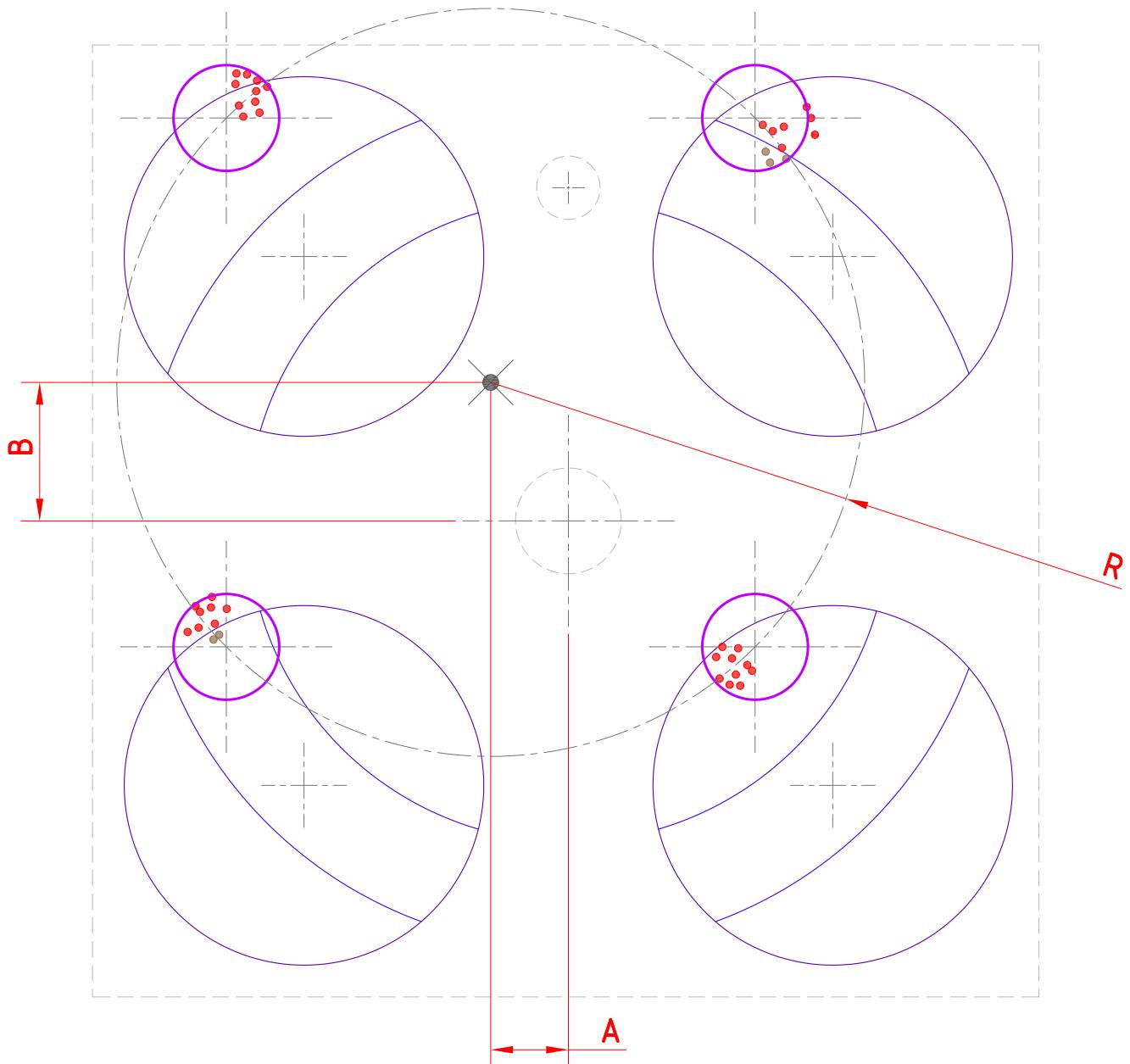
\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U	E	F
\oplus	$\phi 0.20 \text{ M}$	U	E	

Scenario #8

Translation X=value A
Translation Y=value B

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U		
\oplus	$\phi 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance

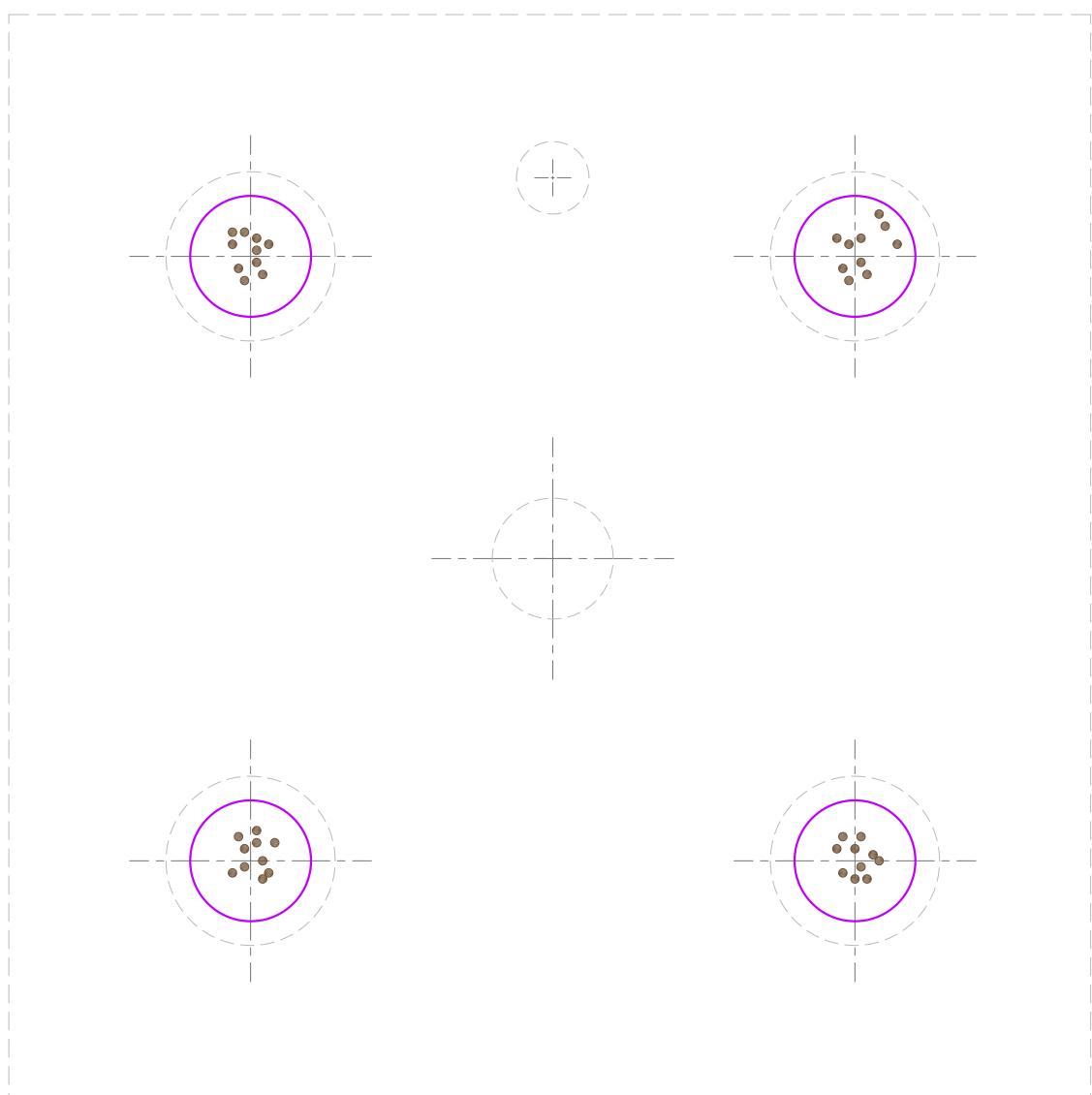
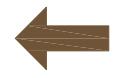


Actual values

After translatory and rotatory fit

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U	E	F
\oplus	$\phi 0.20 \text{ M}$	U	E	

\oplus	$\phi 2.00 \text{ M}$	U	E	F
\ominus	$\phi 0.20 \text{ M}$	U		
\oplus	$\phi 0.20 \text{ M}$	U	E	



Actual values

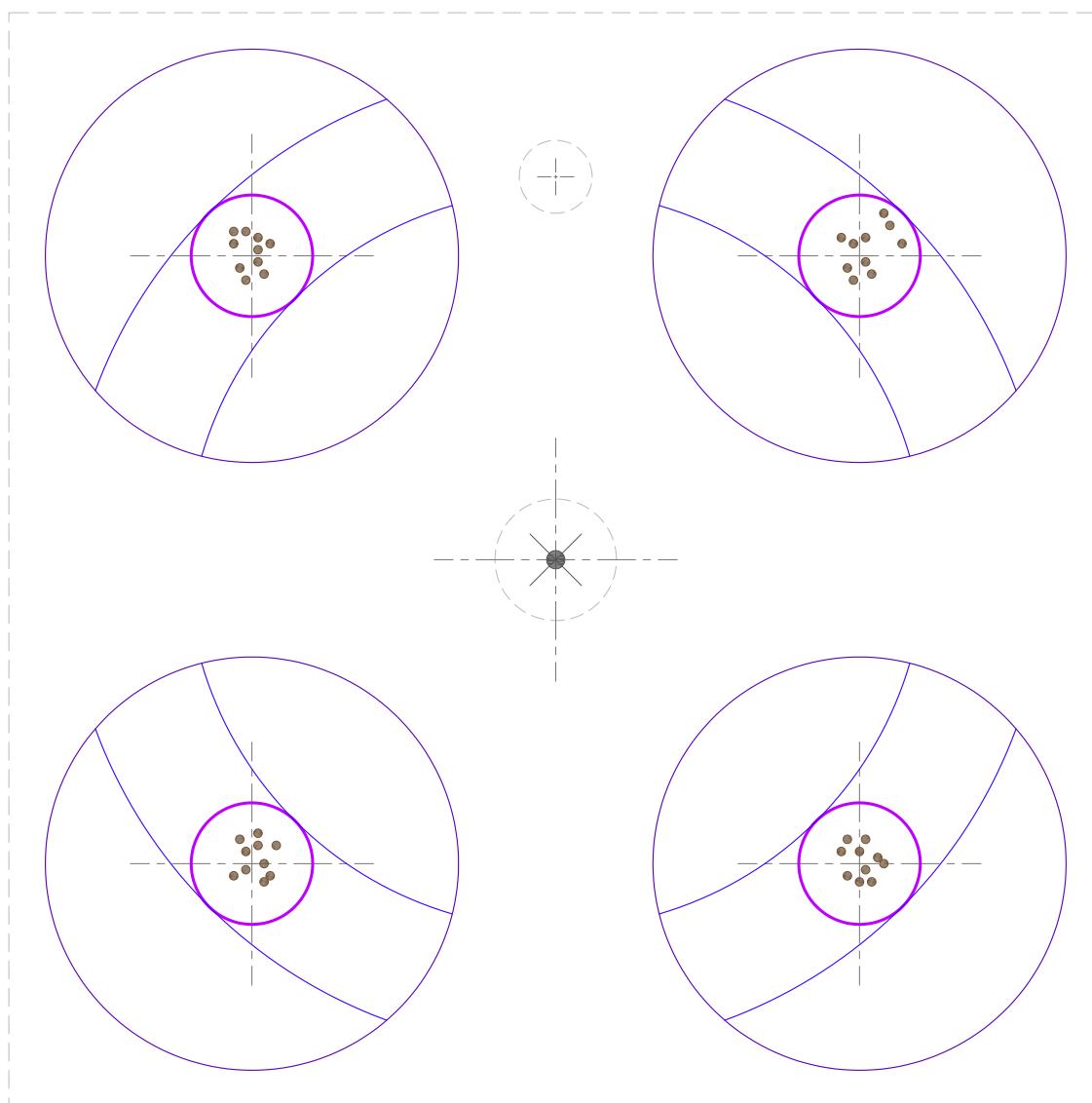
Scenario #1

Translation X=0
Translation Y=0

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U		
\odot	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
 - centerpoints out of tolerance



Actual values

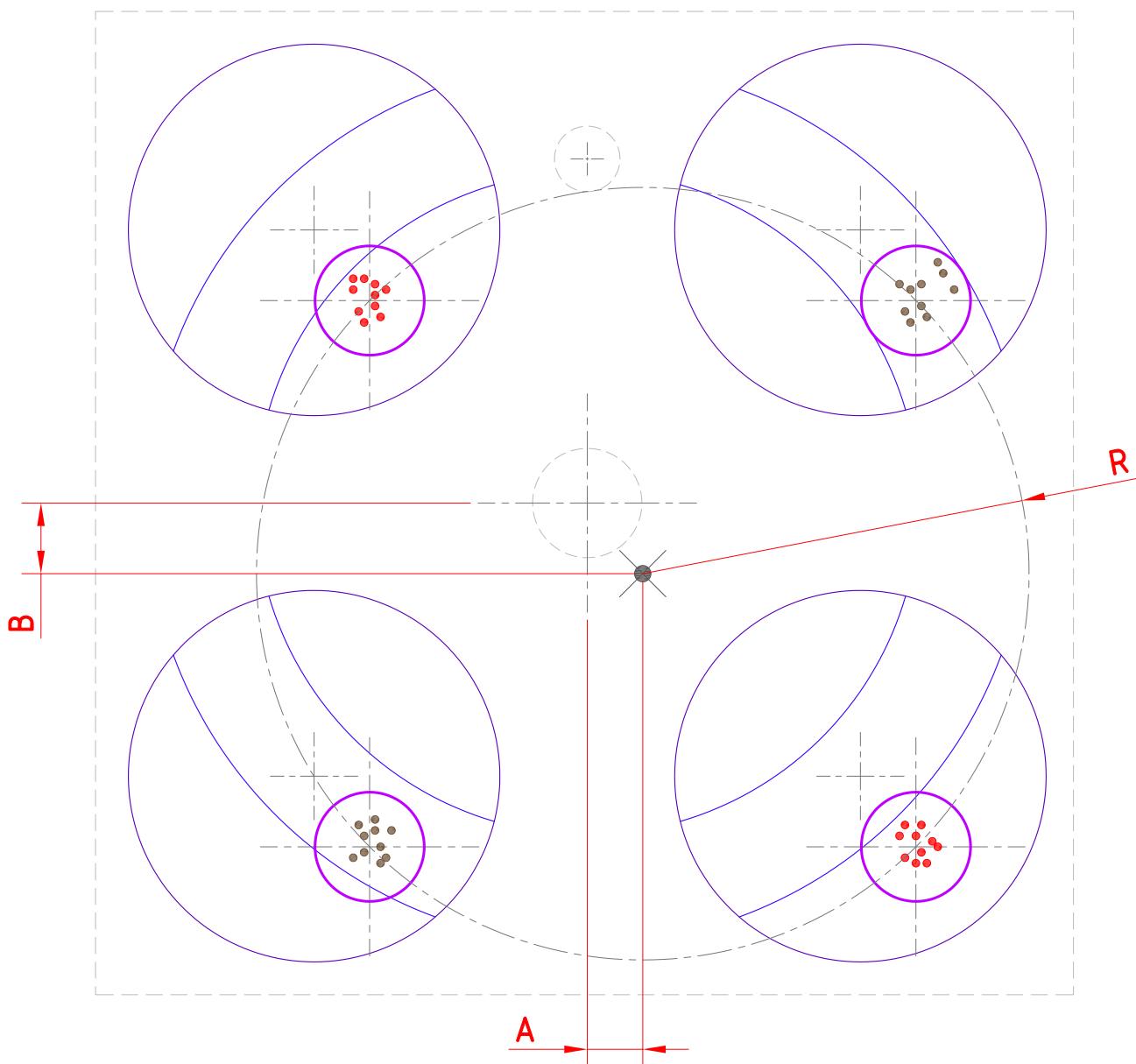
Scenario #2

Translation X=value A
Translation Y=value B

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U		
\odot	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

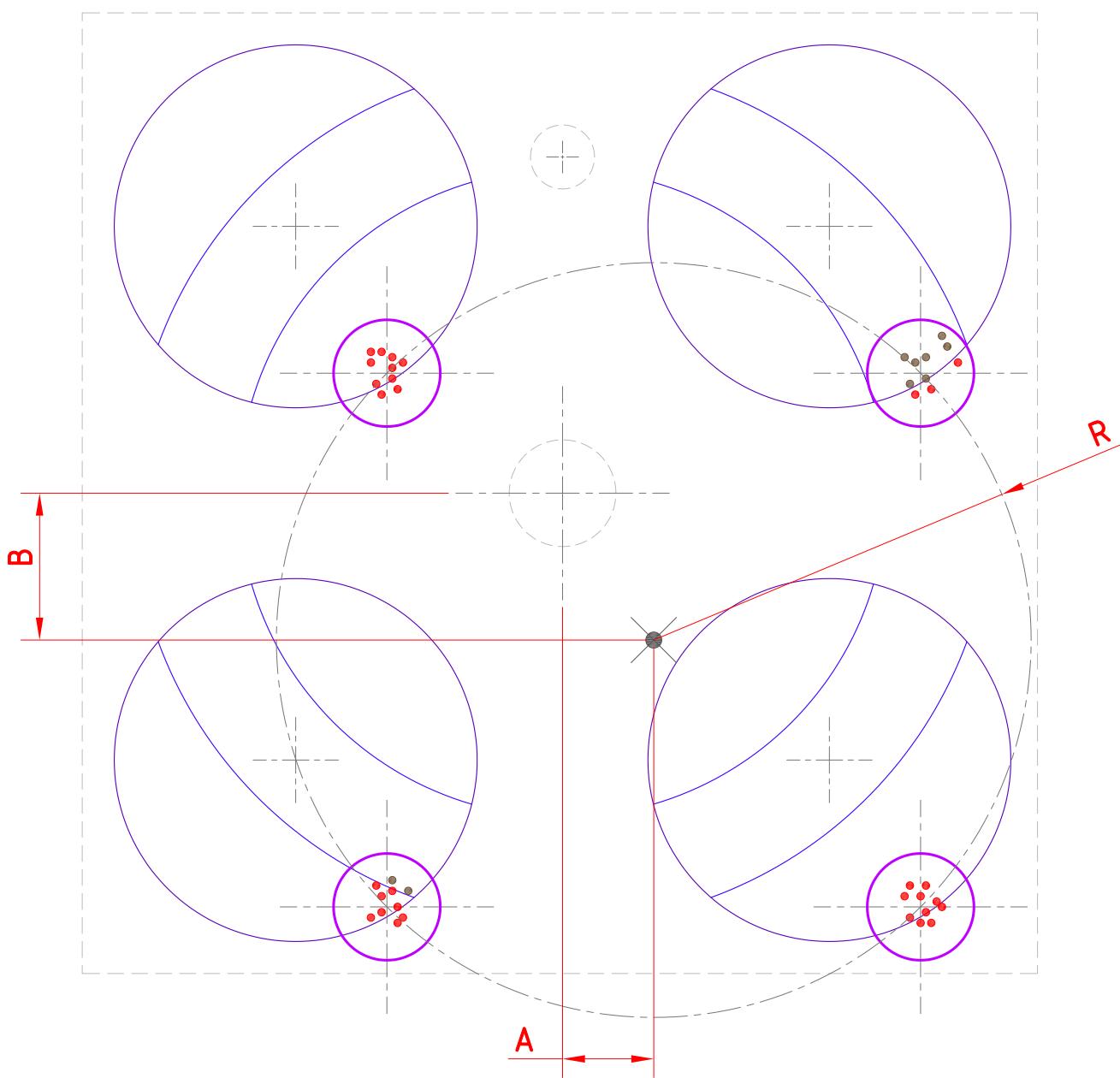
Scenario #3

Translation X=value A
Translation Y=value B

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U		
\odot	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

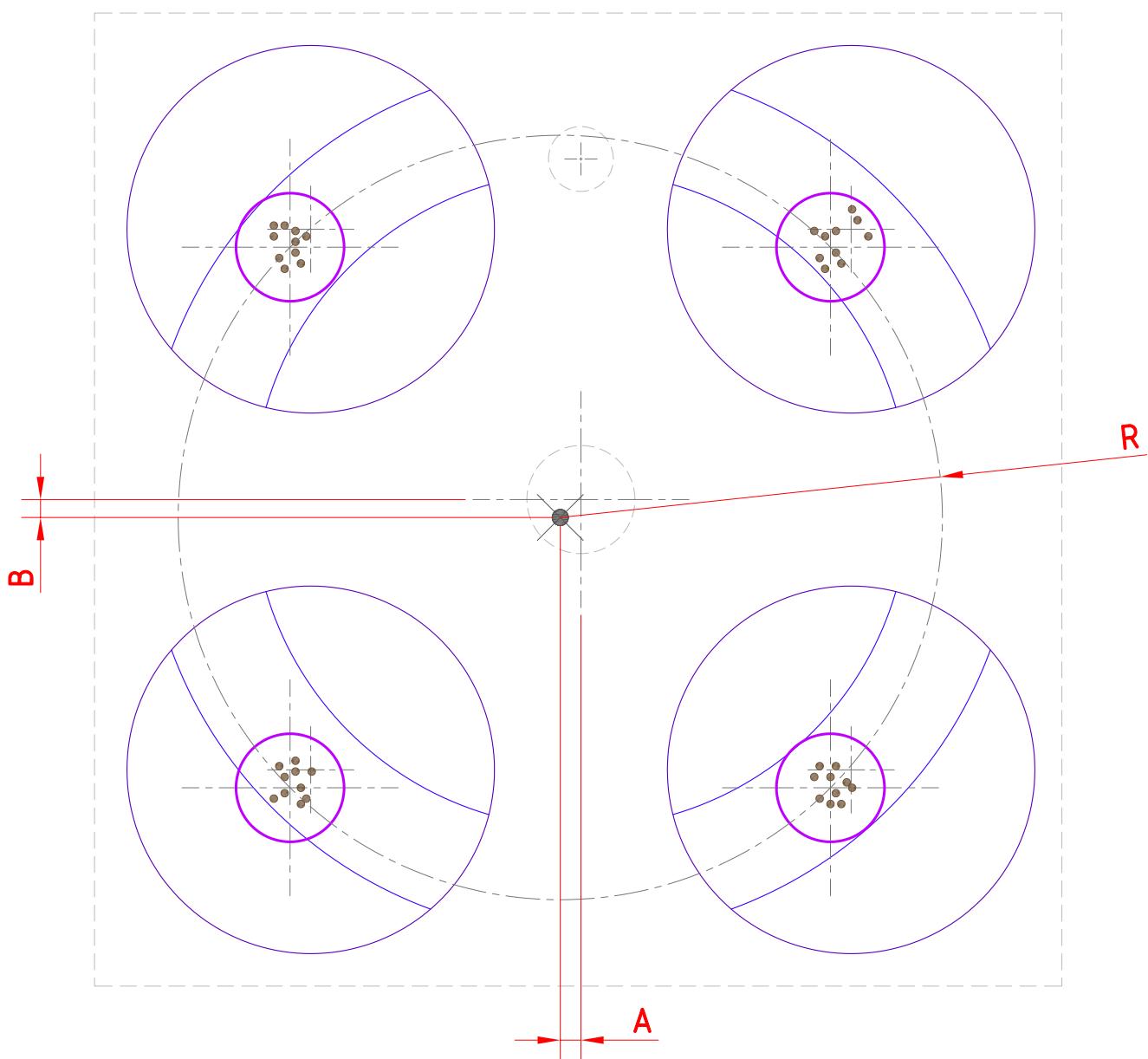
Scenario #4

Translation X=value A
Translation Y=value B

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U	E	F
	$\odot 0.20$	M	U	E	

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U		
	$\odot 0.20$	M	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

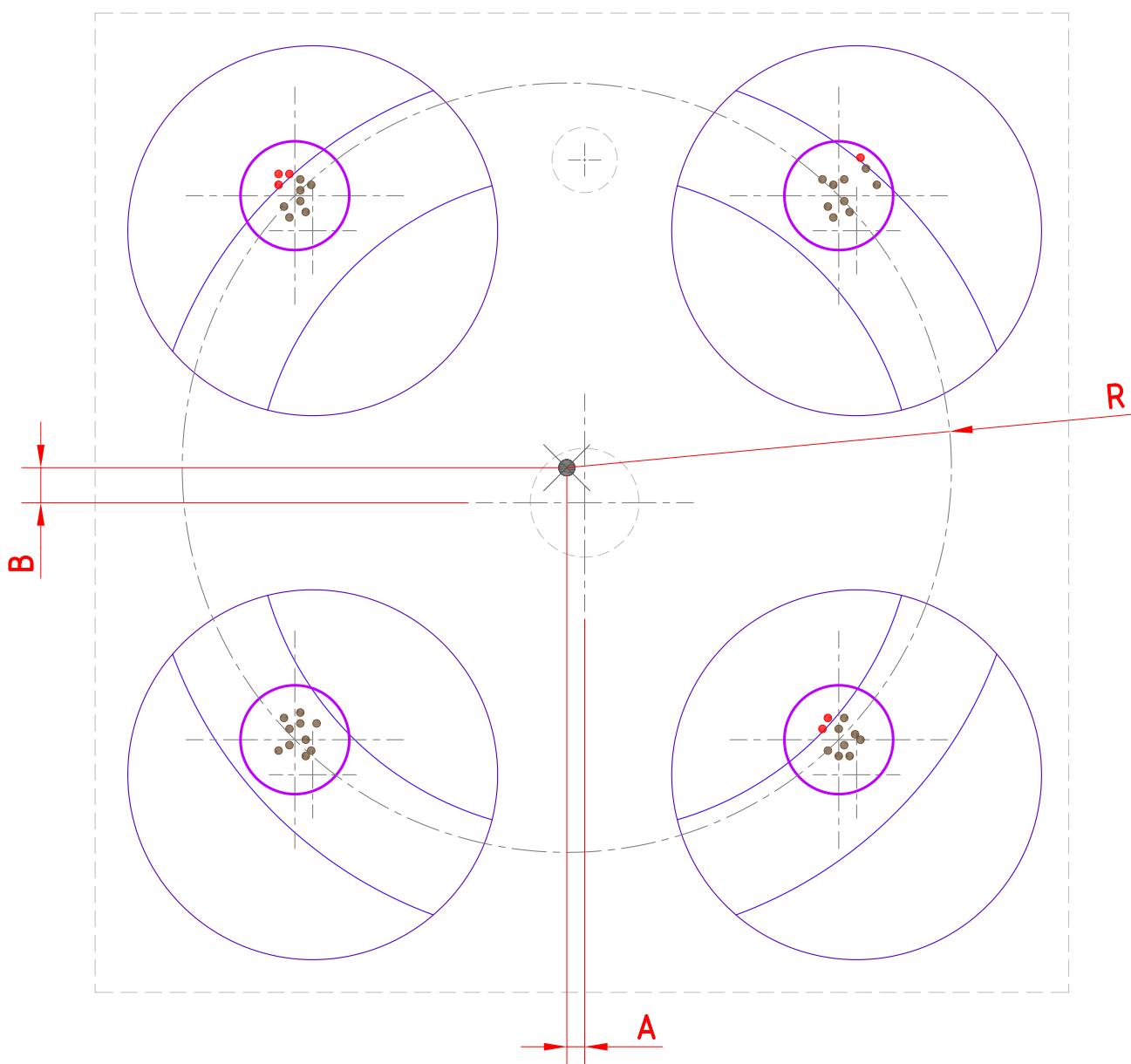
Scenario #5

Translation X=value A
Translation Y=value B

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U	E	F
	$\odot 0.20$	M	U	E	

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U		
	$\odot 0.20$	M	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

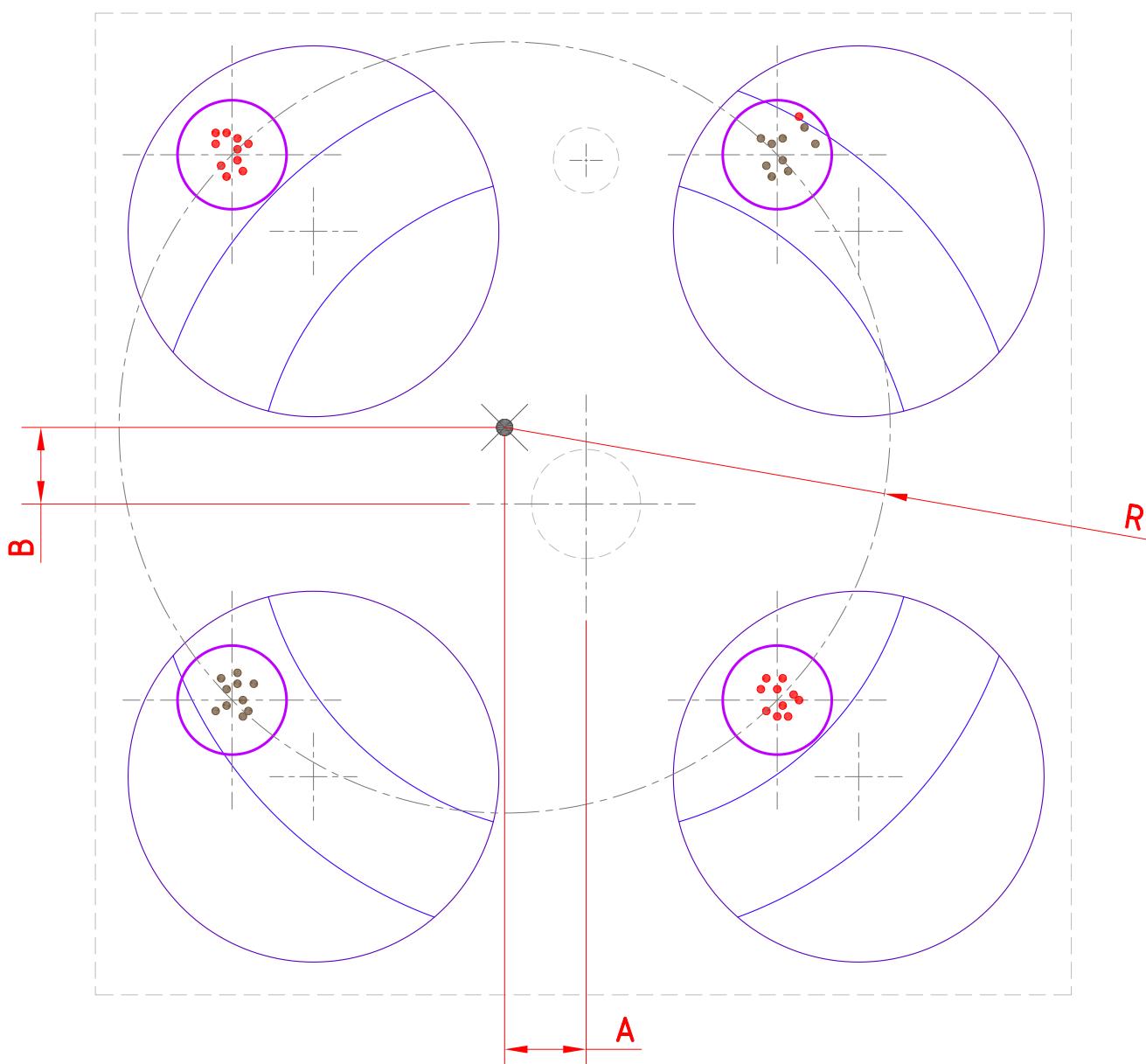
Scenario #6

Translation X=value A
Translation Y=value B

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U	E	F
	$\odot 0.20$	M	U	E	

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U		
	$\odot 0.20$	M	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

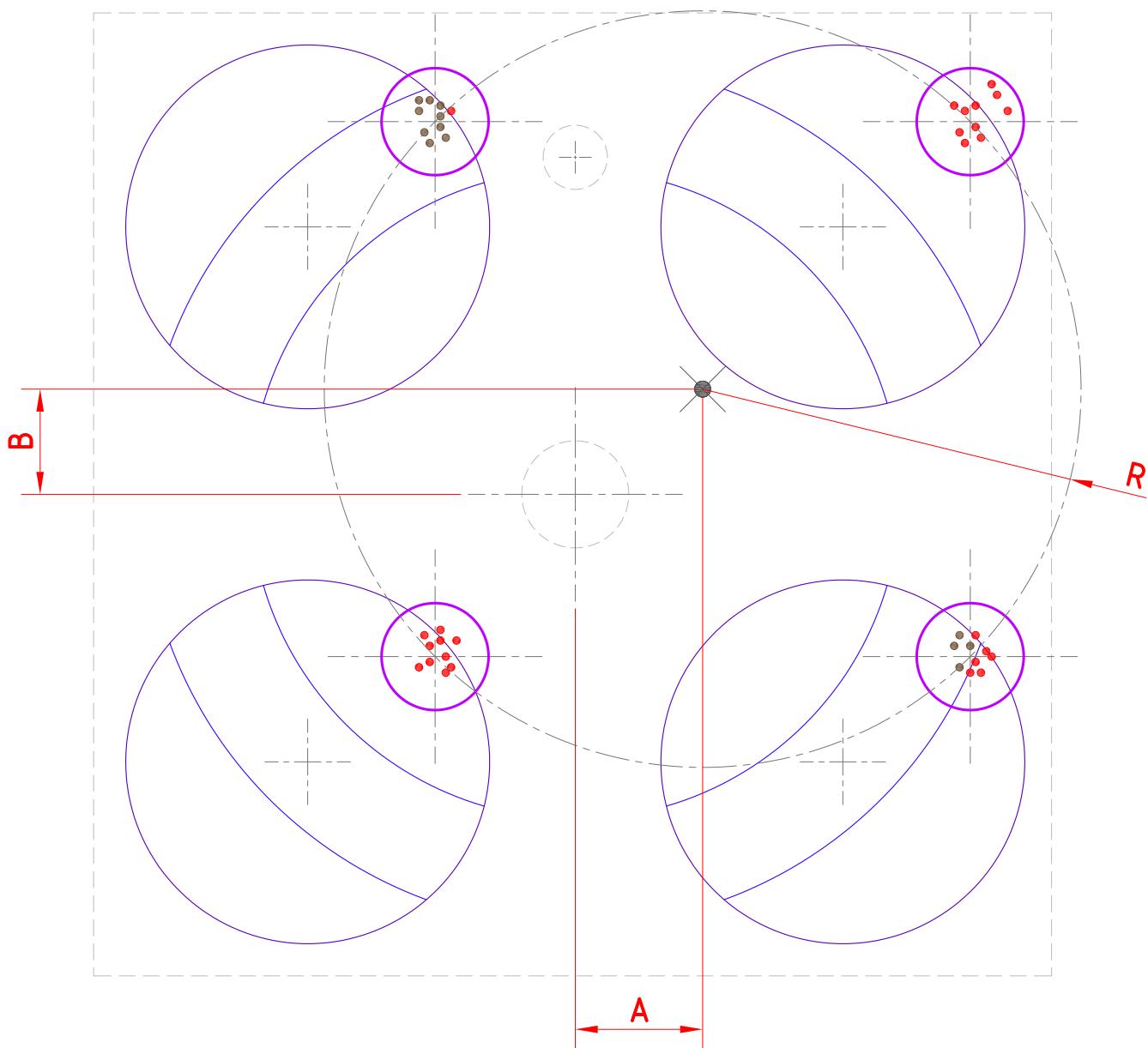
Scenario #7

Translation X=value A
Translation Y=value B

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U	E	

\odot	$\odot 2.00 \text{ M}$	U	E	F
\odot	$\odot 0.20 \text{ M}$	U		
\odot	$\odot 0.20 \text{ M}$	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance



Actual values

Scenario #8

Translation X=value A
Translation Y=value B

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U	E	F
	$\odot 0.20$	M	U	E	

	$\odot 2.00$	M	U	E	F
	$\odot 0.20$	M	U		
	$\odot 0.20$	M	U	E	

- fixed tolerance gage
- translatory tolerance gage
- centerpoints out of tolerance

