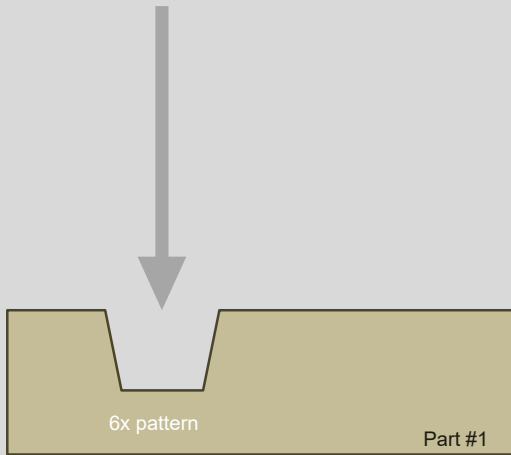


### Cast

Drawing: 2.14345.00

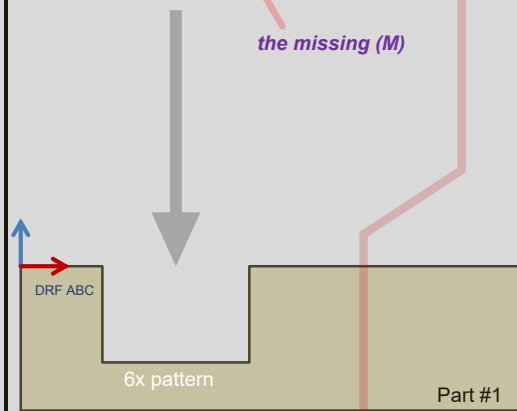
$\text{⊕}$	∅0,25	$\text{Ⓛ}$	A
------------	-------	------------	---



### Machining

Drawing: 3.14345.04

$\text{⊕}$	∅0,80	$\text{Ⓜ}$	A	B	C	Bore #3 ; #6
	∅0,25	$\text{Ⓜ}$	A			

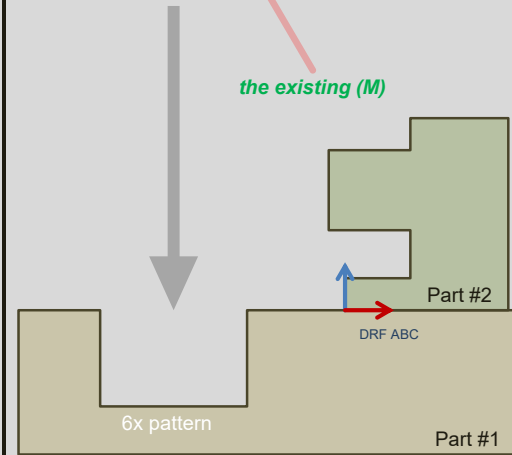


The upper tier of Composite Tolerance describes the **location and orientation** of the 6x pattern. **MMC not allowed.**  
The lower tier describes the mating ability of the 6x bore pattern. Therefore MMC is allowed.

### Assembling

Drawing: 5.24877.00

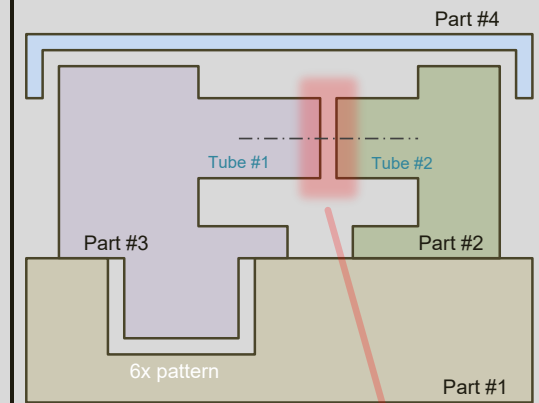
$\text{⊕}$	∅0,80	$\text{Ⓜ}$	A	B	C	6 Bores
------------	-------	------------	---	---	---	---------



The True Position has MMC on 6 bores and is related to a DRF that is defined by the assembled part #2. This means that there is a functional relationship between part #1 and part #2.

### Complete System

Drawing: 7.18227.00

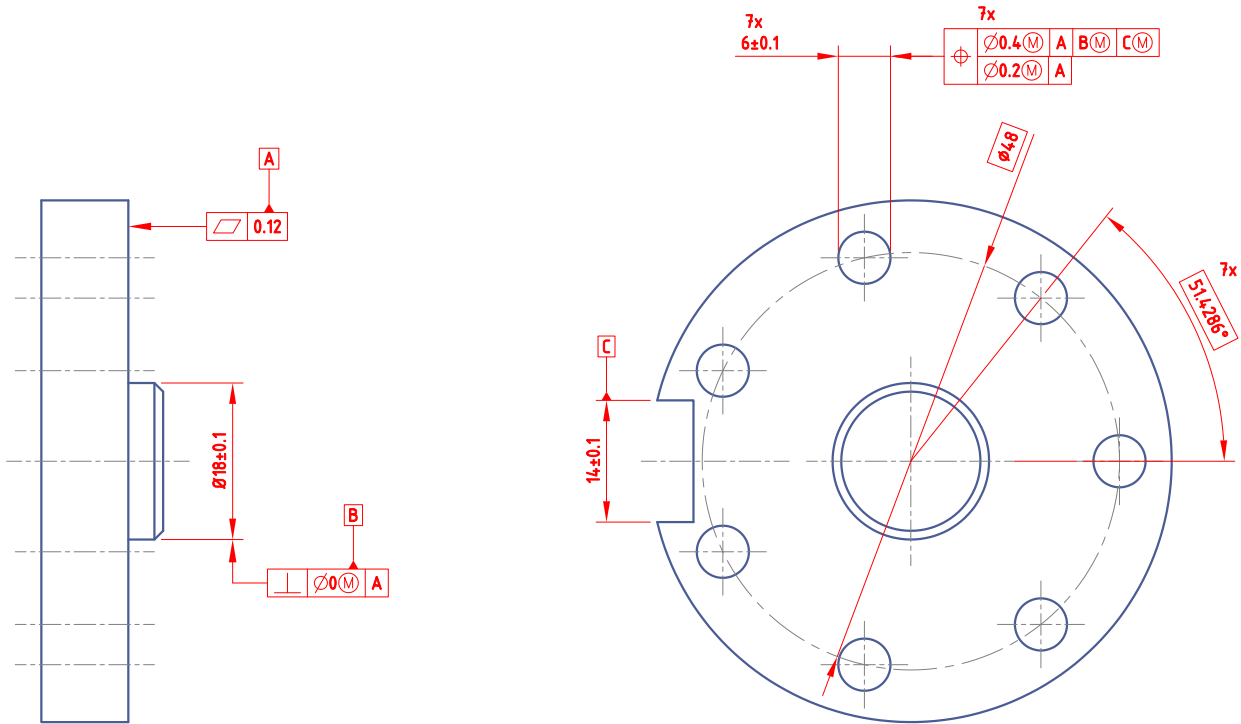


The functional target:  
Both tubes have to be coaxial.

# Dimensioning #1

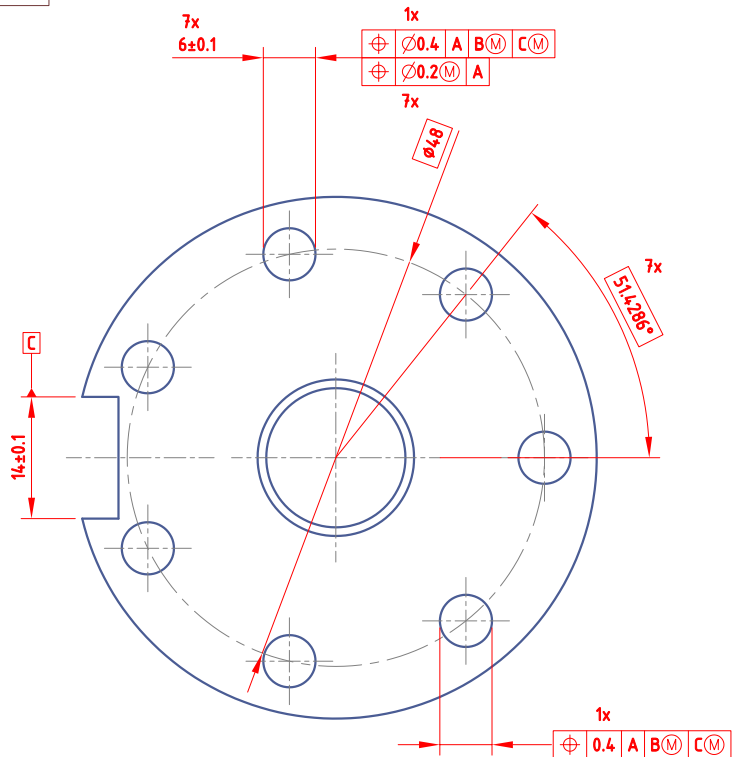
Pic. #1

Composite tolerance



# Dimensioning #2

Single segment tolerance



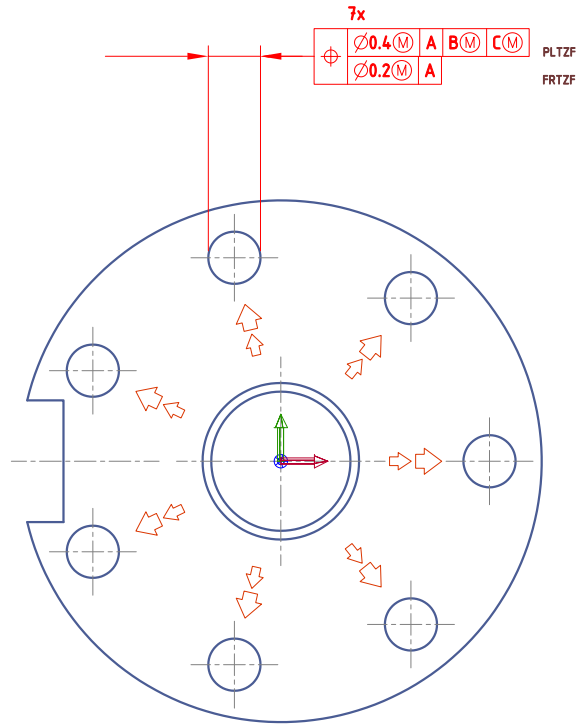
# Dimensioning #1 (not ok.)

Pic. #2

## Composite tolerance

Tolerances as much as possible.

- 1.) X/Y location of 7 bores constr. to A
- 2.) X/Y location of 7 bores constr. to ABC

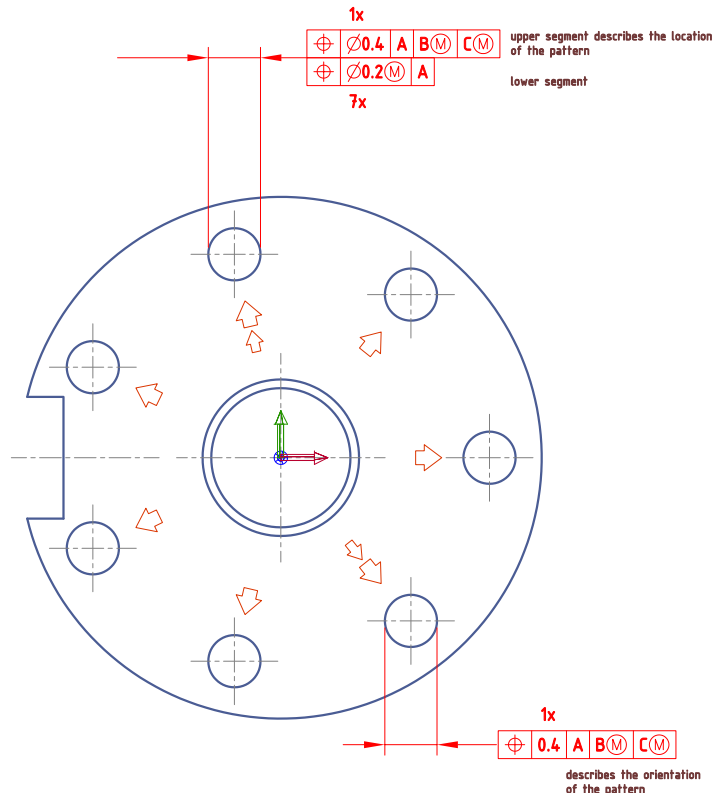


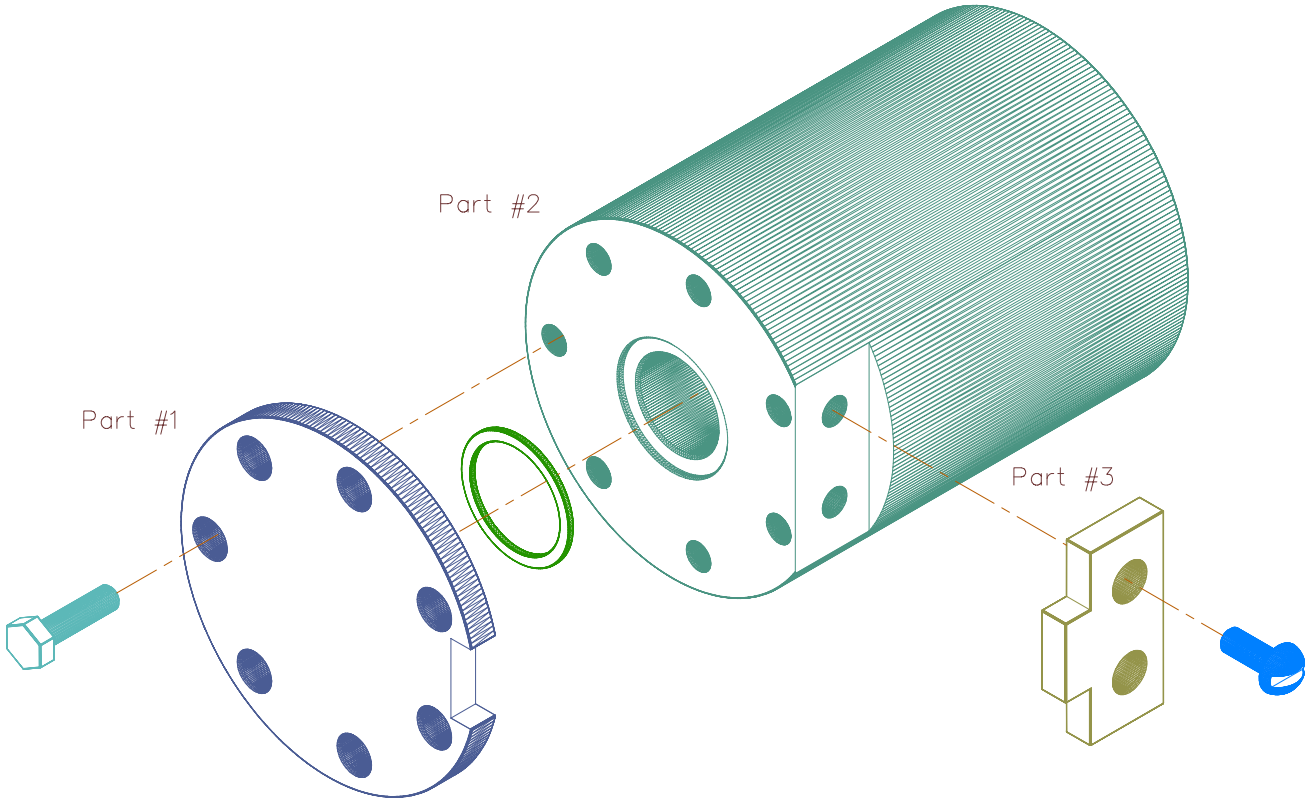
# Dimensioning #2 (ok.)

## Single segment tolerance

Tolerances as much as necessary.

- 1.) X/Y location of 7 bores constr. to A
- 2.) X/Y location of *one* bore constr. to ABC
- 3.) X location of *another* bore constr. to ABC

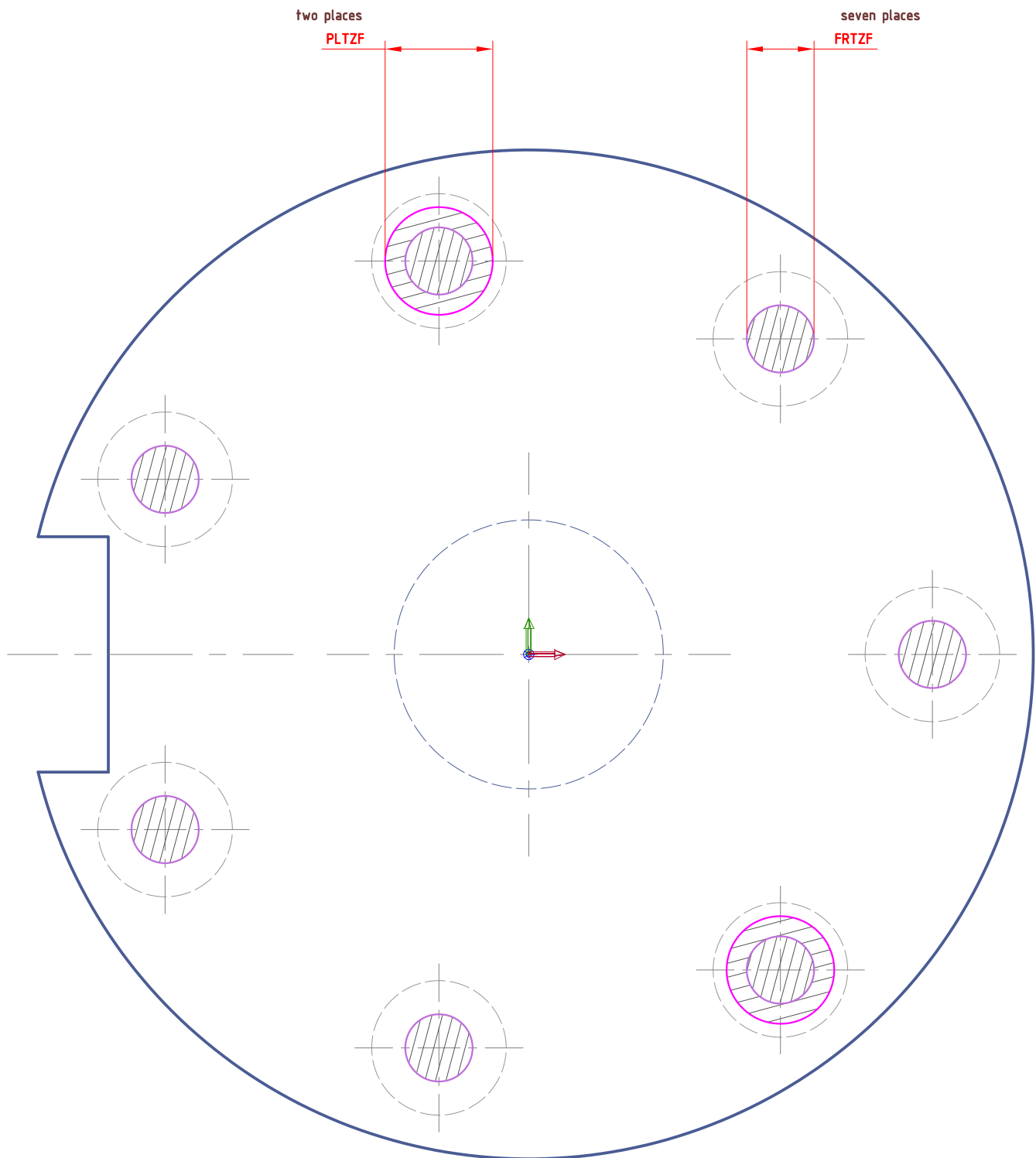




# Tolerancing of 7 bores

Pic. #4

Two tolerancing systems



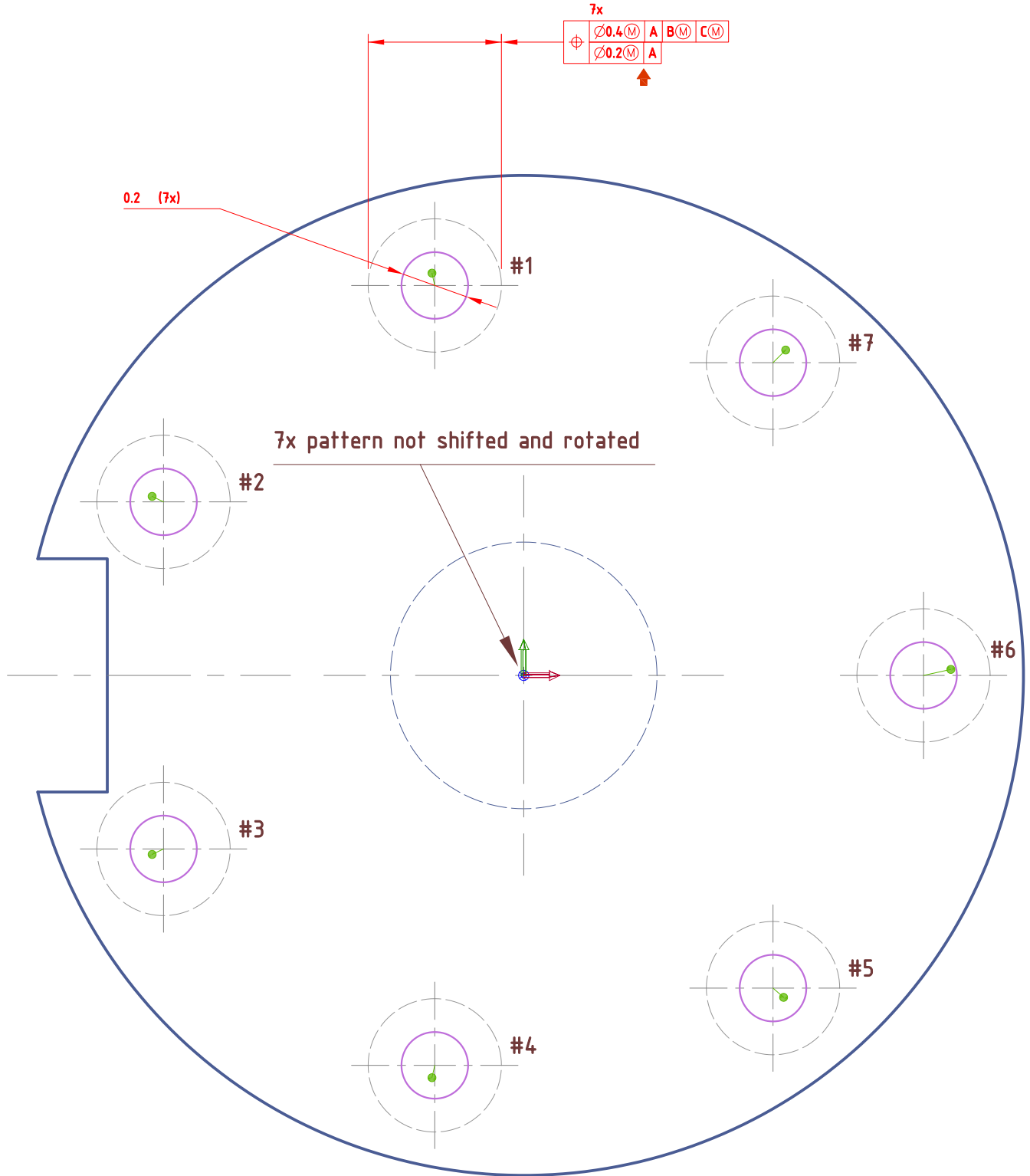
# Tolerancing of 7 bores

Pic. #5

FRTZF 1 ; 2 ; 3 ; 4 ; 5 ; 6 ; 7



green dot actual deviation after Best-Fit



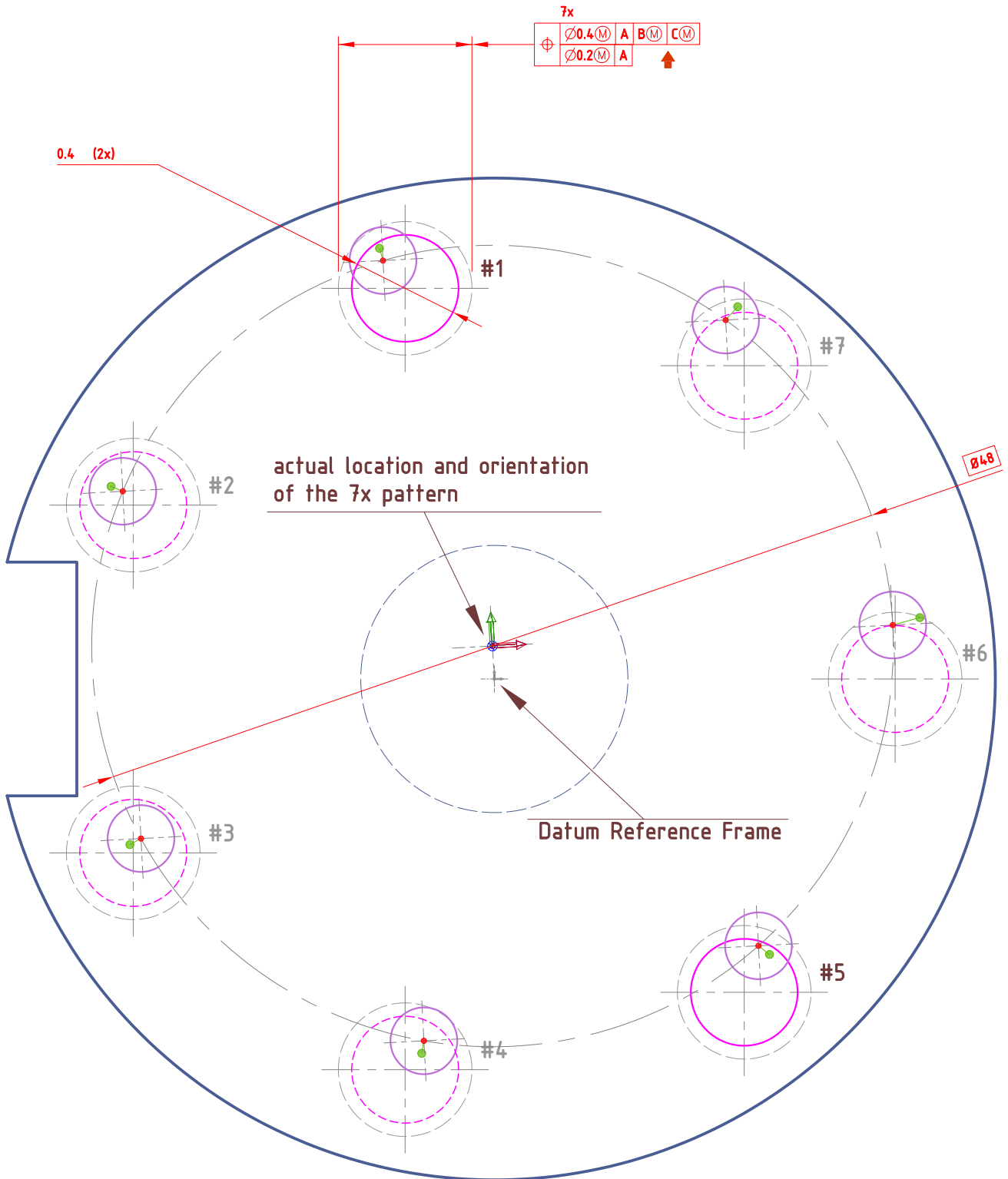
# Tolerancing of 7 bores

Pic. #6

PLTZF 1 ; 5



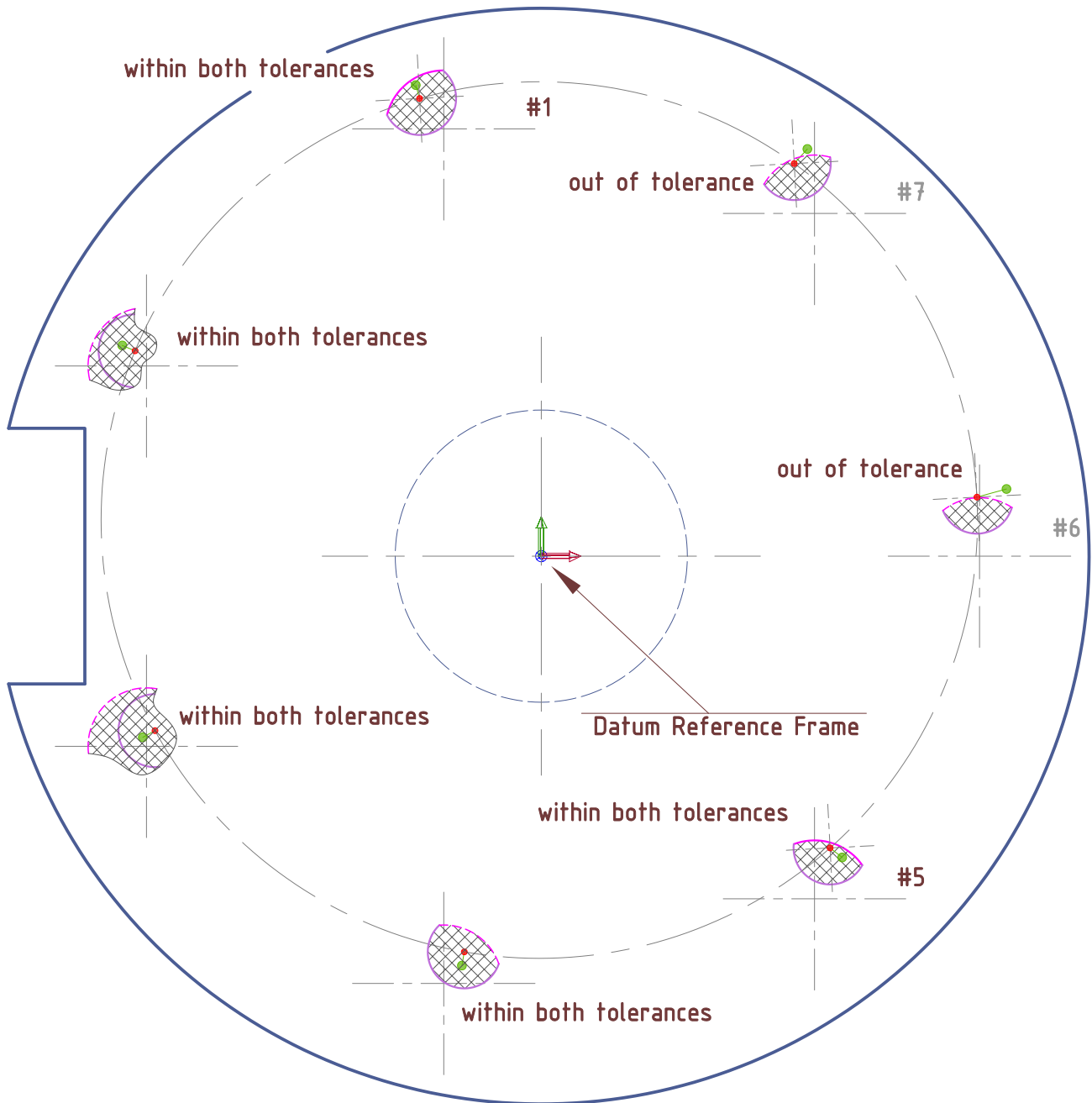
actual deviation after Best-Fit



# Tolerancing of 7 bores

Pic. #7

PLTZF 1 ; 5



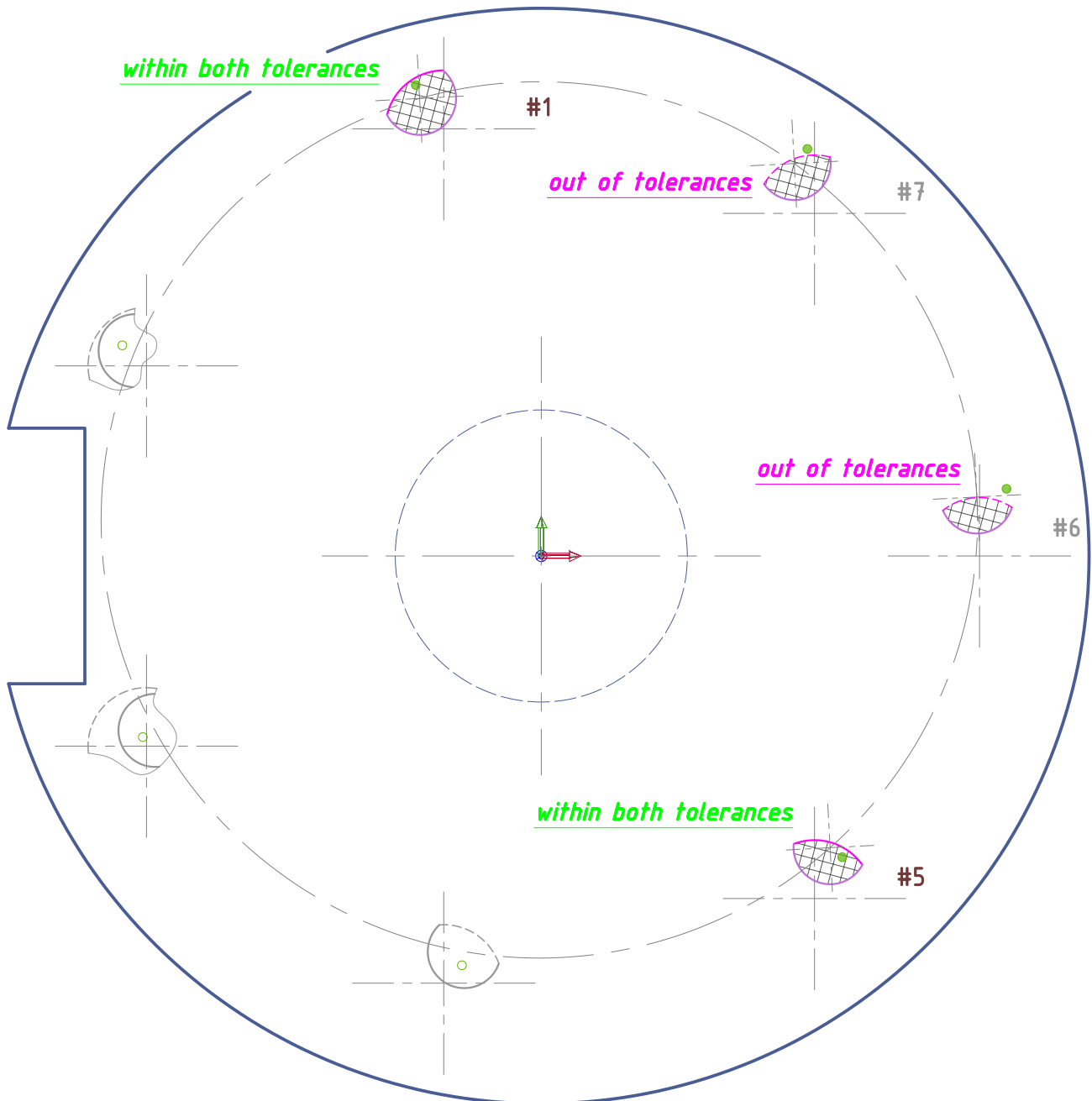


# Tolerancing of 7 bores

Pic. #8

PLTZF 1 ; 5

The "out of tolerance deviations" of #6 and #7 are irrelevant. The deviations of #1 and #5 decide about the mating ability of part 1 and 3.





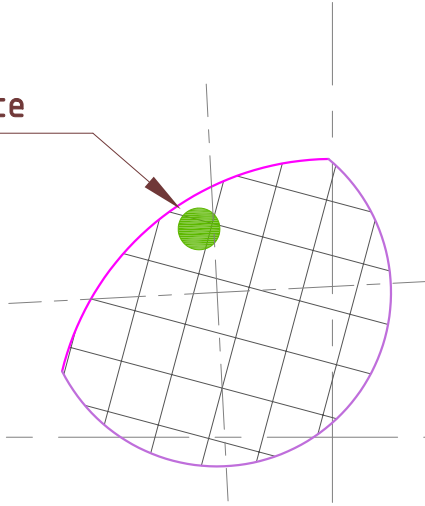
# Tolerancing of 7 bores

Pic. #10

PLTZF 1 ; 5

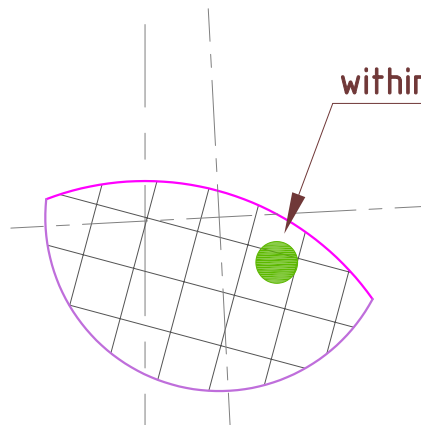
The deviations of #1 and #5 decide about the mating ability of part 1 and 3.

within tolerance

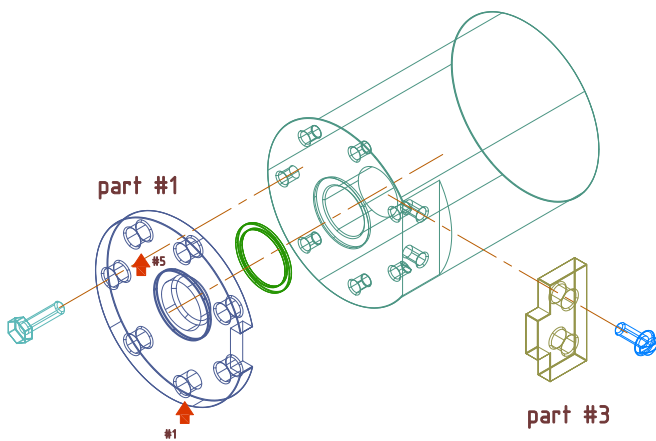


#1

within tolerance



#5



# Tolerancing of 7 bores

Pic. #11

Tolerances as much as necessary

