```python
from aqa.math import *

from varmain.arcsub.cpb_util import *

from varmain.primitiv import *

from varmain.var_basic import *

from varmain.custom import *


@activate (Group="Fitting", TooltipShort="", TooltipLong="", LengthUnit="mm", Ports=2)

@param(D=LENGTH)

@param(D2=LENGTH)

@param(R=LENGTH)

@param(A=ANGLE)

@param(OF=LENGTH)

@param(L1=LENGTH)

@param(L2=LENGTH)

@param(L21=LENGTH)

@param(I=LENGTH)

@param(L22=LENGTH)




def MBCPBP_OFOM(s, D = 114.3, D2 = 114.3, R = 175.0, A = 90.0, OF = -1.0, L1 = 200.0,
L2 = 300.0, L21 = 30.0, I = 20.0, L22 = 35.0, ID = 'MBCPBP_OFOM', **kw):

    noLeft = 0

    noRight = 0

    noLeftCon = 0

    noRightCon = 0

    if D2 <= 0.0:

        D2 = D

    if L1 == -2:

        noLeft = 1

        noLeftCon = 1

        L1 = None

        I = 0.0

    if L2 == 0.0:

        L2 = L1

    if L2 and L2 == -2:

        noRight = 1

        noRightCon = 1

        L2 = None

    if noLeft == 0 and L21 == -2:
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            noLeftCon = 1

            L21 = None

            I = 0.0

    if noRight == 0:

        if L22 == 0.0:

            L22 = L21

        if L22 and L22 == -2:

            noRightCon = 1

            L22 = None

    if R <= D / 2.0:

        R = D / 2.0 + 0.0001

    o0 = ARC3D2(s, D=D / 2.0, D2=D2 / 2.0, R=R, A=A)

    Pts = CPB_CalcPts(oA=o0, A=A, L1=L1, L2=L2, I1=I, I2=0.0, L21=L21, L22=0L22)

    arc3d2TMP = CYLINDER(s, R=D * 0.01 / 2.0, H=R * 0.01).rotateY(-90).translate(Pts[8])

    arc3d2TMP.uniteWith(o0)

    o0.erase()

    o0 = arc3d2TMP

    OF = getThickness(D=D, OF=OF, Ever=1)

    O1 = 0.0

    O2 = 0.0

    if not OF == 0.0:

        O1 = getInsideDiameter(D=D, OF=OF, Ever=1) / 2.0

        O2 = getInsideDiameter(D=D2, OF=OF, Ever=1) / 2.0

        o1 = ARC3D2(s, D=O1, D2=O2, R=R, A=A)

        o0.subtractFrom(o1)

        o1.erase()

    if noLeft == 0:

        if Pts[0] > 0.0:

            oL1 = CYLINDER(s, R=D / 2.0, H=Pts[0],
O=O1).rotateY(90.0).rotateZ(asDegrees(Pts[2])).translate(Pts[8])

            o0.uniteWith(oL1)

            oL1.erase()

        if noLeftCon == 0:

            oL3 = CON_OF(s, D1=D, D2=0.0, L=L21,
OF=OF).rotateZ(asDegrees(Pts[2])).translate(Pts[10])

            o0.uniteWith(oL3)

            oL3.erase()

    if noRight == 0:

        if Pts[1] > 0.0:

            oL2 = CYLINDER(s, R=D2 / 2.0, H=Pts[1],
O=O2).rotateY(90.0).rotateZ(asDegrees(Pts[3])).translate(Pts[9])
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            o0.uniteWith(oL2)

            oL2.erase()

        if noRightCon == 0:

            oL4 = CON_OM(s, D1=D2, D2=0.0, L=L22,
OF=OF).rotateZ(asDegrees(Pts[3])).translate(Pts[11])

            o0.uniteWith(oL4)

            oL4.erase()

    s.setPoint(Pts[4], Pts[6], 0.0)

    s.setPoint(Pts[5], Pts[7], 0.0)




    return




activate(CPBP_OFOM, '\n[Type AQA-
VCPBP_OFOM]\nVID=STRING,32\nDN=STRING\nD=LENGTH\nD2=LENGTH\nR=LENGTH\nA=ANGLE\nOF=LENGTH\nL1=L
ENGTH\nL2=LENGTH\nL21=LENGTH\nI=LENGTH\nL22=LENGTH\nUnits=STRING,8\n;\nuniqId=CALC =$self.VID$
$self.DN$ $self.D2$ $self.A$\n;\nboltCalcVal=CALC CPB_GetNeededBoltParam(B1=0.0, B2=0.0, L1=-
2, L2=-2)\n;\n@key=VID,DN\n', '@VarDataDefault0')
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