

BPM Overlay – IM Overlay

Uno strumento per l'analisi di motori brushless e ad induzione mediante il programma FEM *FLUX*

Obiettivi

- Creare il modello del motore brushless da analizzare con FLUX attraverso l'inserimento di un limitato numero d'informazioni
- Ottenere la mesh automatica del modello
- Assegnare correttamente le fasi dell'avvolgimento alle regioni del modello

Creazione di un nuovo modello



Preflu2D 9.2.2 - BPM Motor mode for Geometry

Project Display Motor Help

New MotorBPM

nom *
MotorBPM_1

Comment

General \ Rotor \ Stator \

Length Unit *
Millimeter

Rotor external radius (Rad1) *
25.0

Airgap (GAP) *
1.0

Use Excentricities
No

Use Periodicities *
Yes

Rotating Airgap *
2 layers airgap

Mesh Density (0 < value < 1) *
0.5

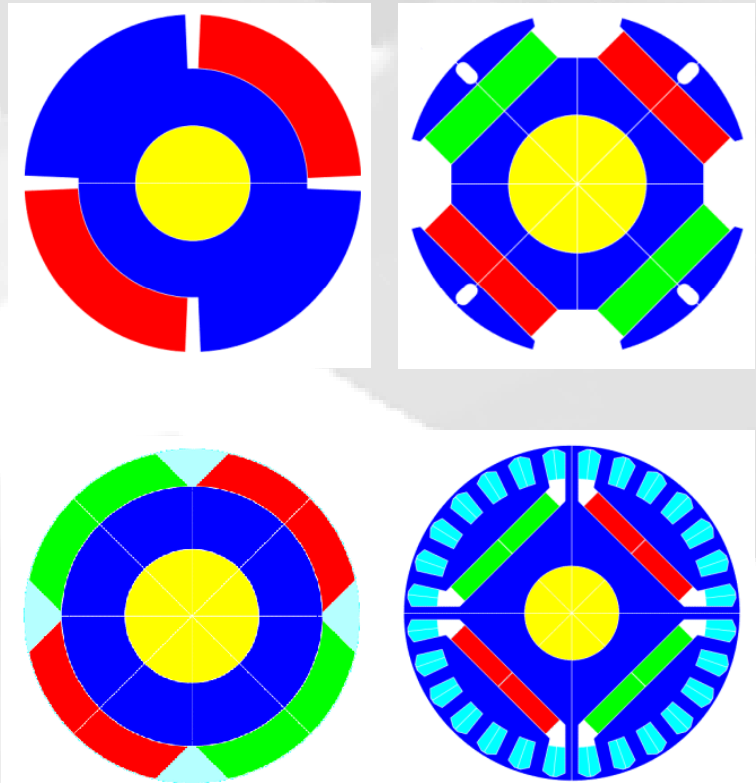
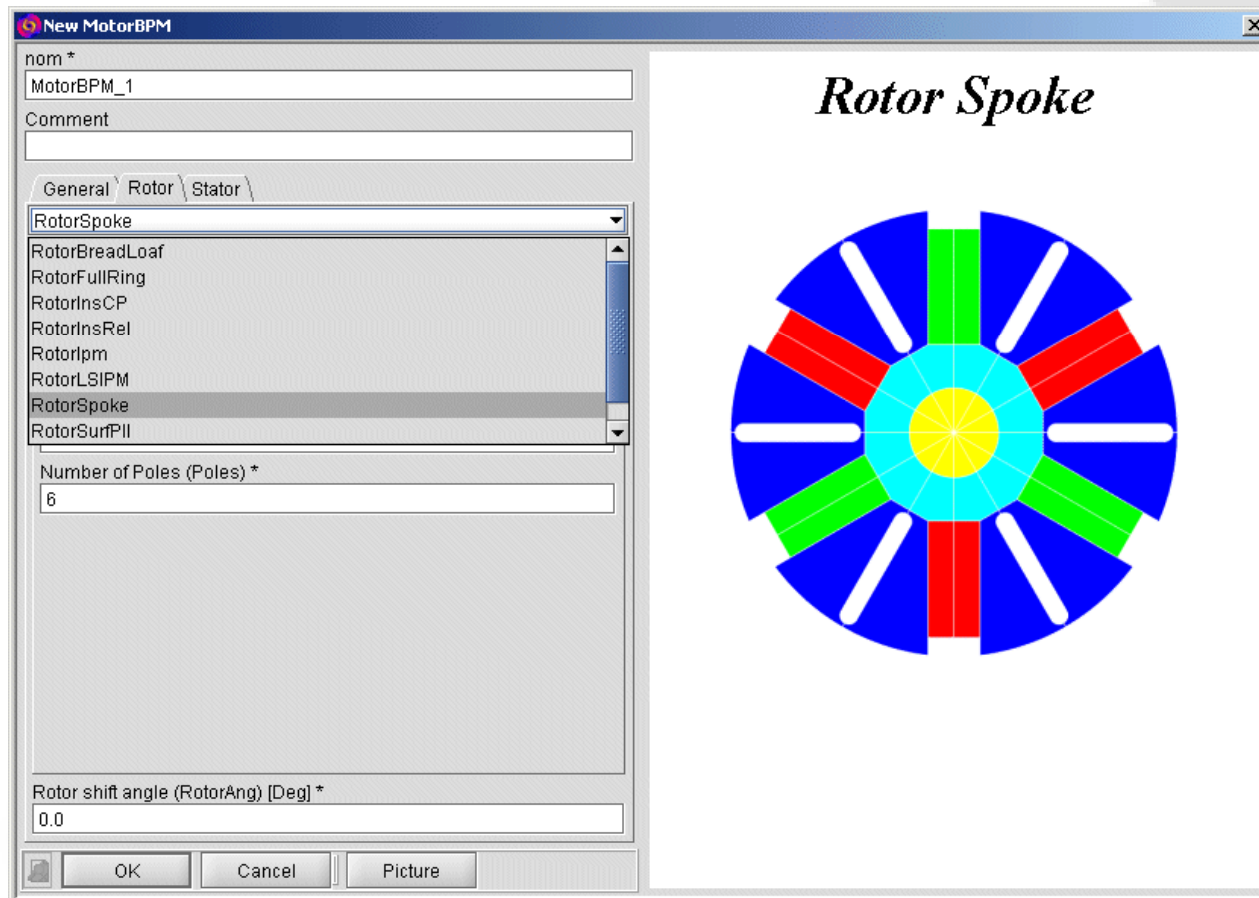
Brushless PM motor

You will design a Brushless PM Motor.
This box will help you to understand the parametrization.

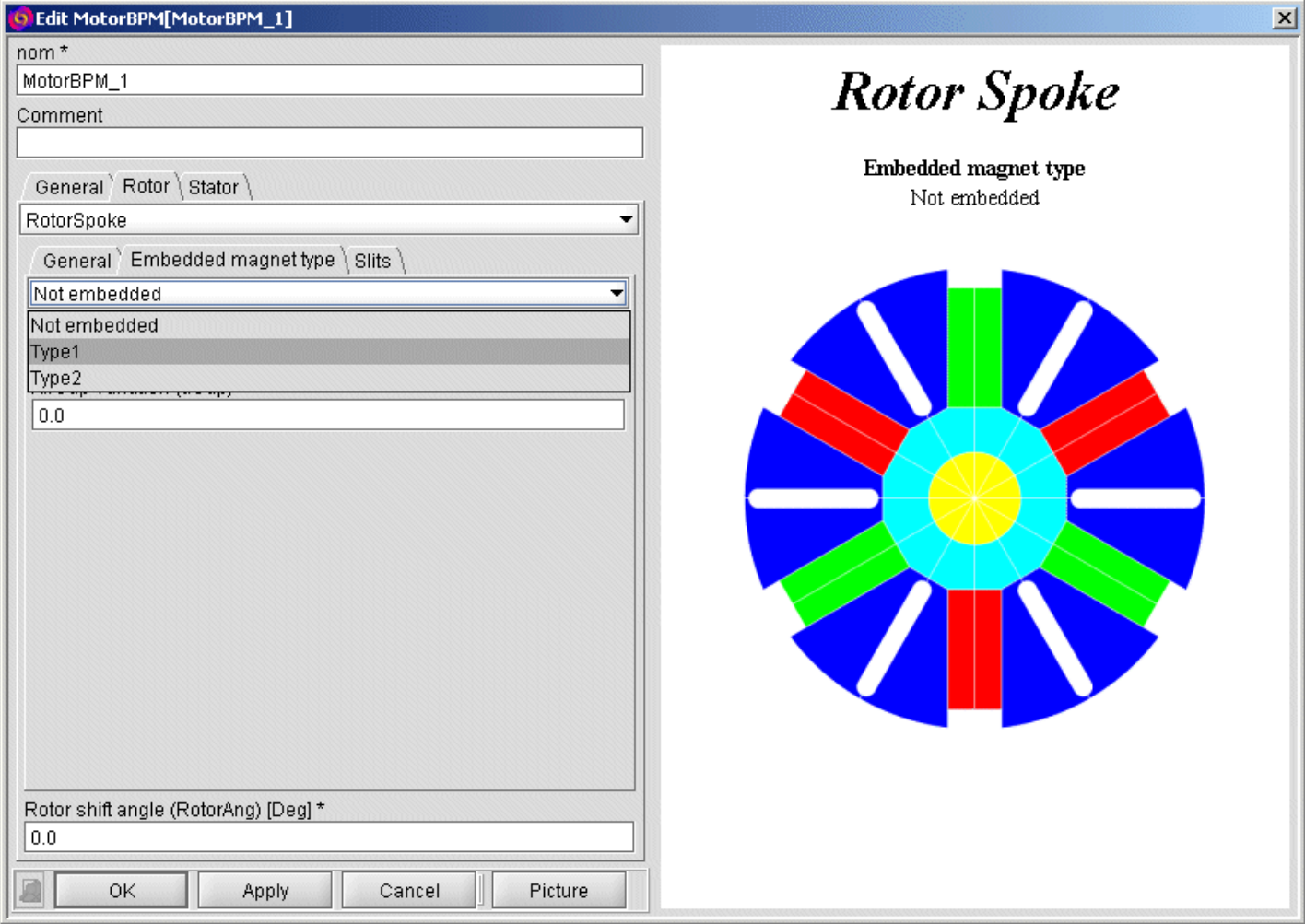
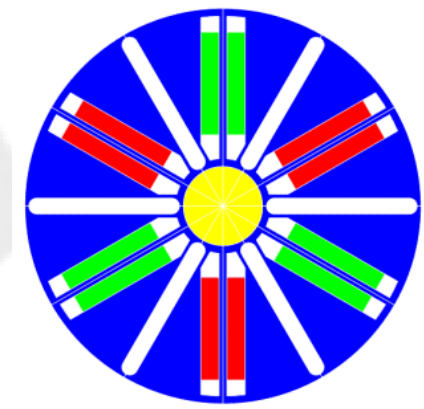
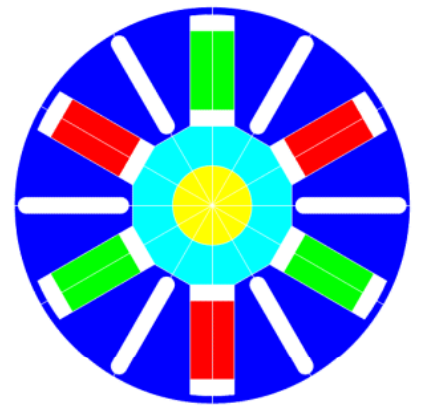
... Error opening BPM overlay

103 Mb / 198 Mb

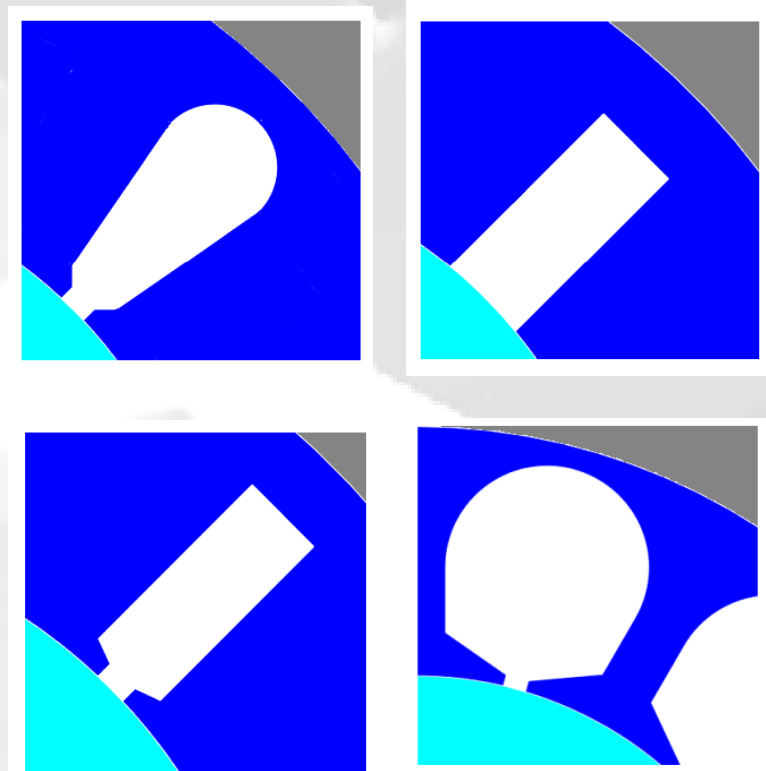
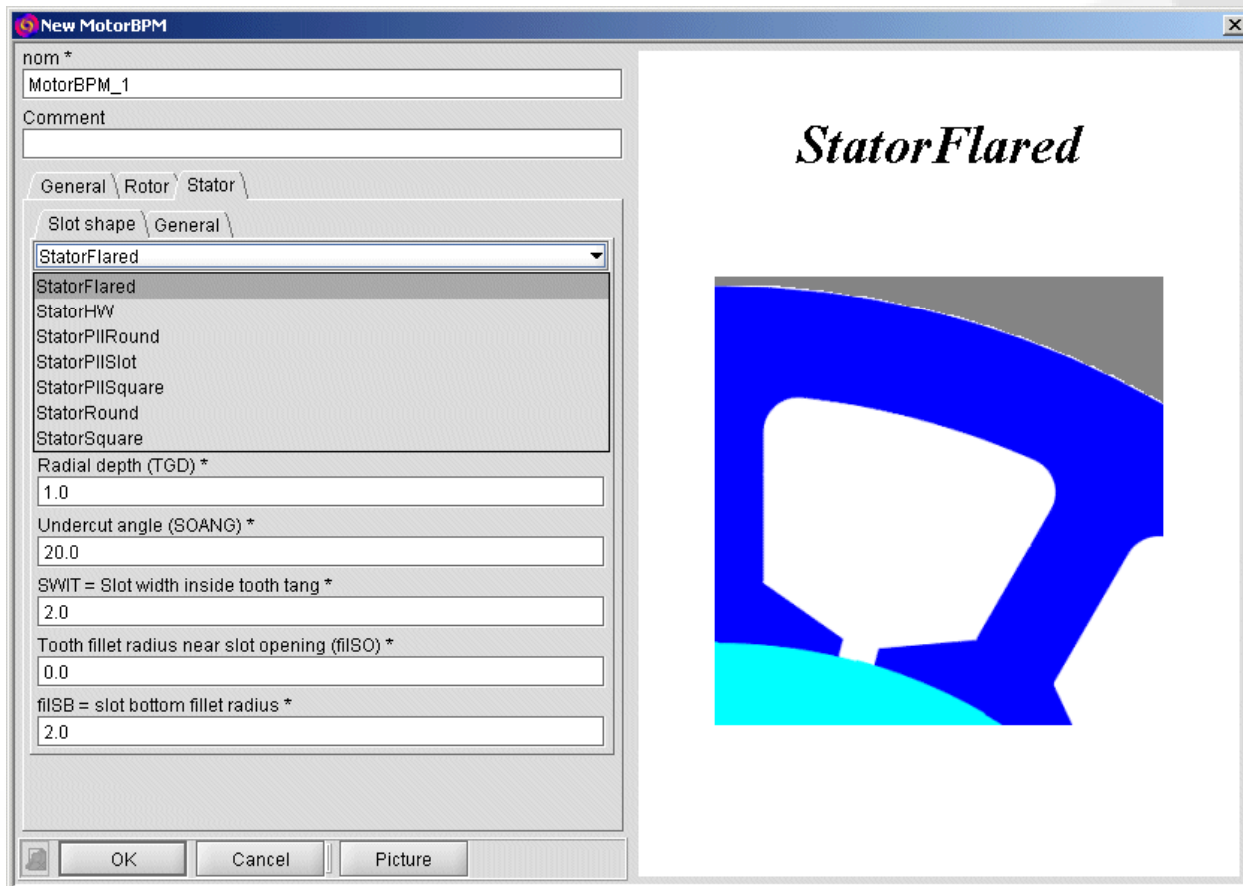
9 tipologie di rotore



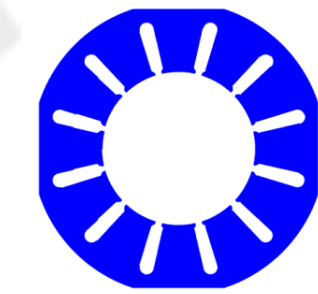
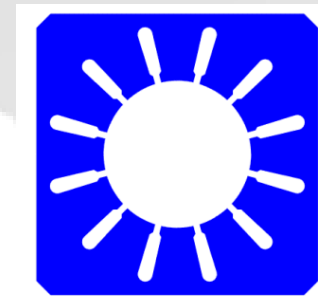
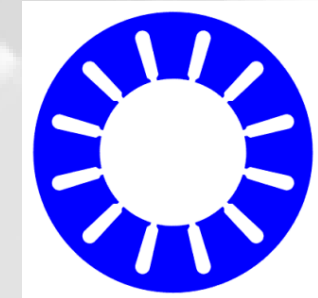
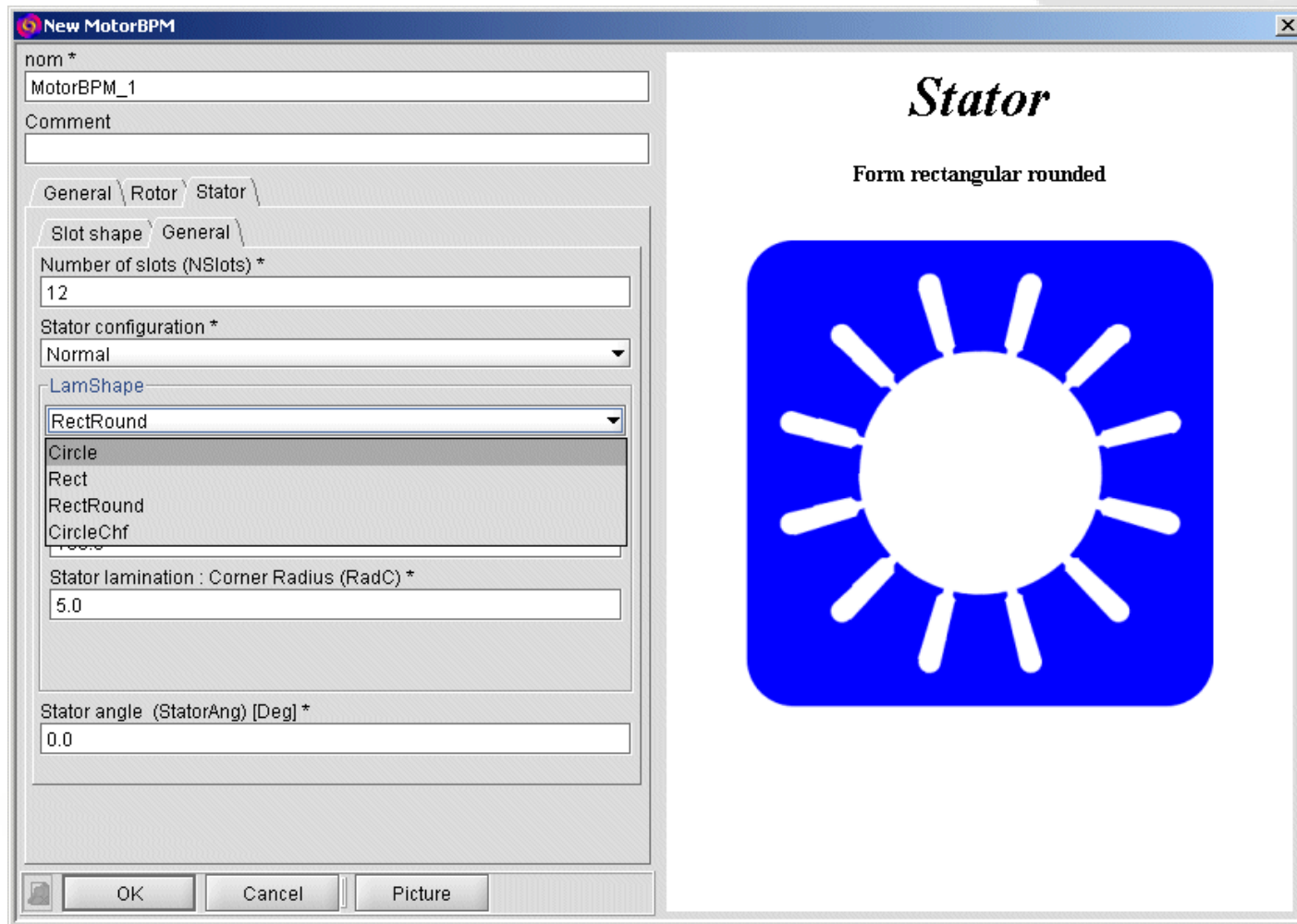
e diverse opzioni di magneti embedded per ogni tipologia

8 tipologie di cave



4 sagome del lamierino di statore



È possibile considerare l'eccentricità del motore

New MotorBPM
✕

nom *
MotorBPM_1

Comment

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Millimeter

Rotor external radius (Rad1) *
25.0

Airgap (GAP) *
1.0

Use Excentricities
Yes

dy stator *
0.0

dx rotor *
0.0

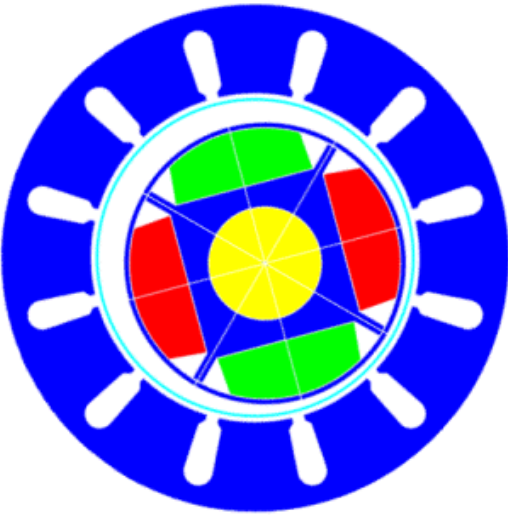
dy rotor *
0.0

Mesh Density (0 < value < 1) *
0.5

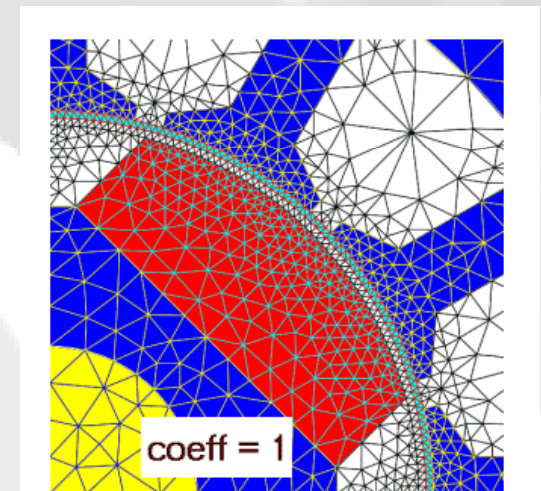
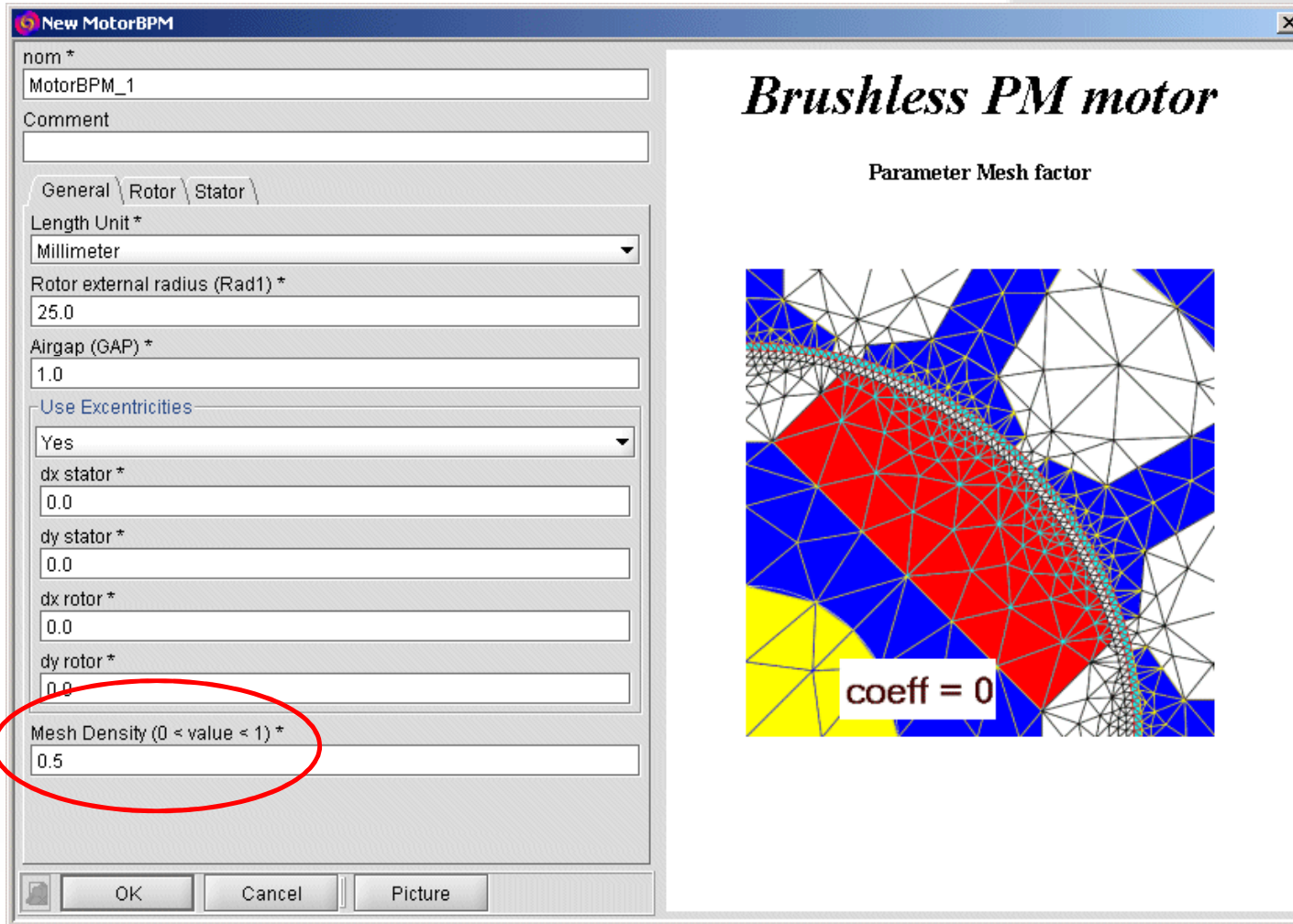
OK Cancel Picture

Brushless PM motor

Parameter Excentricity
Excentricity Yes

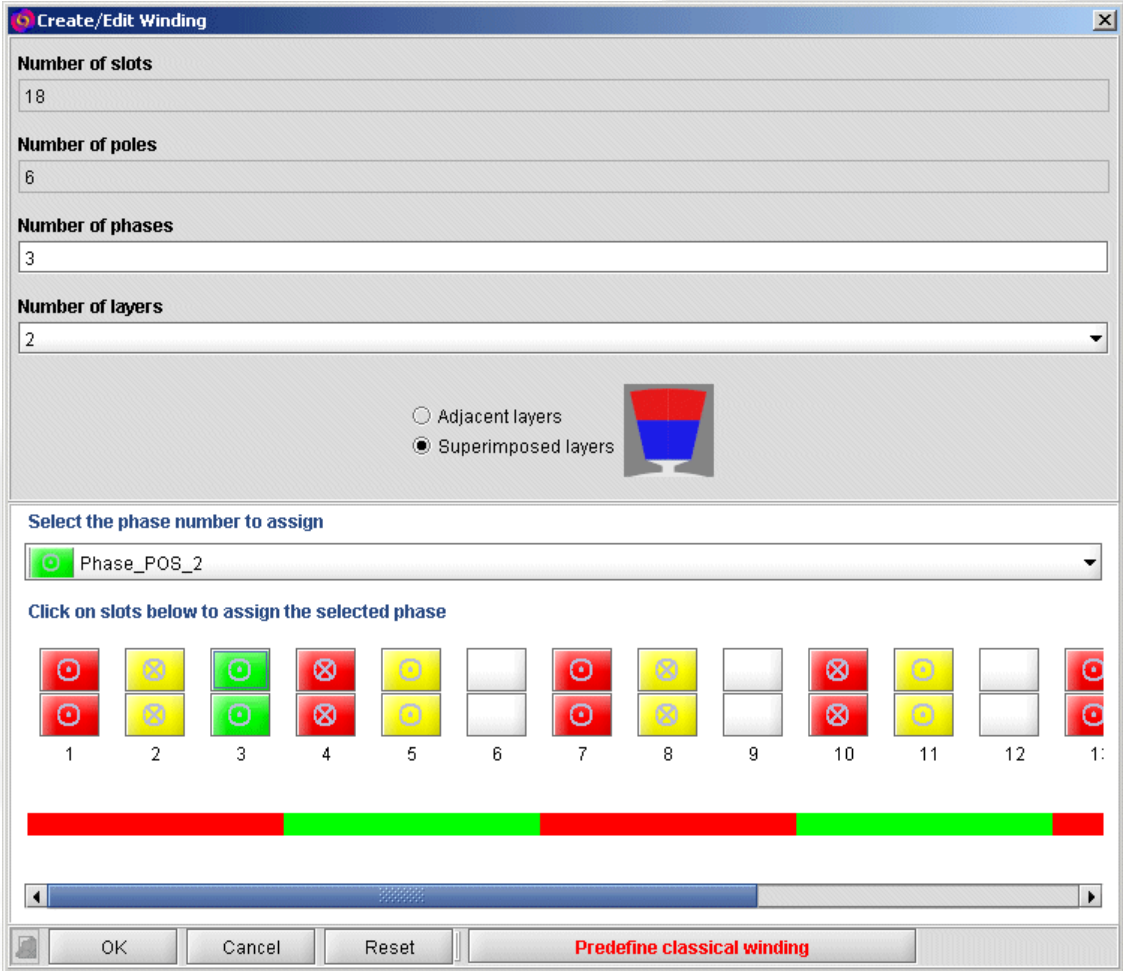


Un solo parametro definisce la densità della mesh



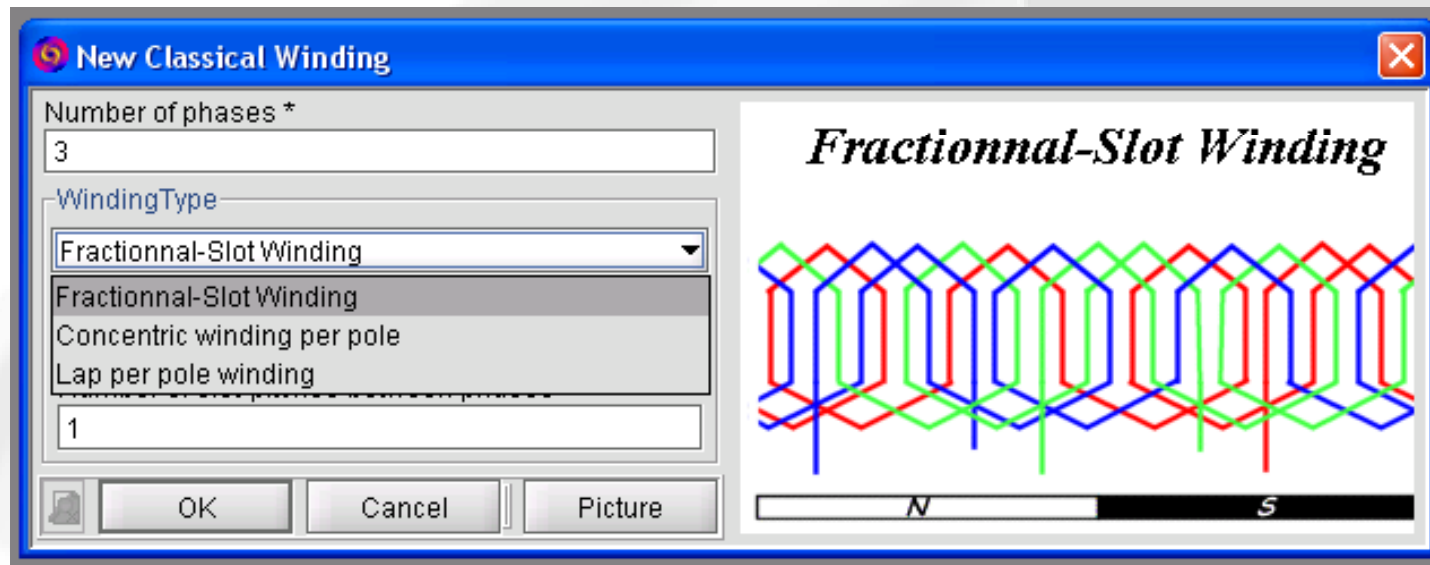
Rappresentazione dell'avvolgimento

1) manuale

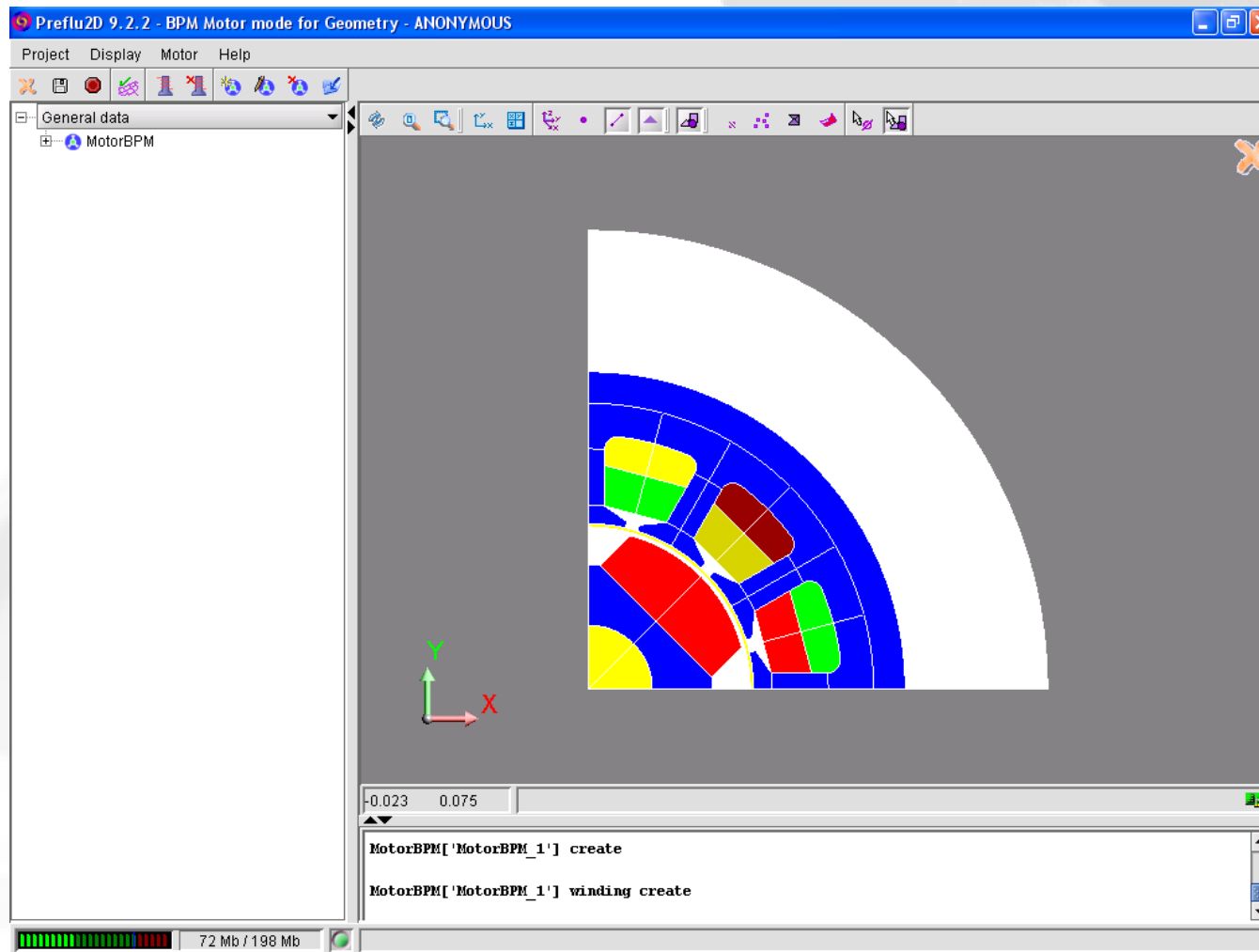


Rappresentazione dell'avvolgimento

2) attraverso 3 maschere predefinite per avvolgimenti standard



Il modello viene aggiornato con le Face Region dell'avvolgimento

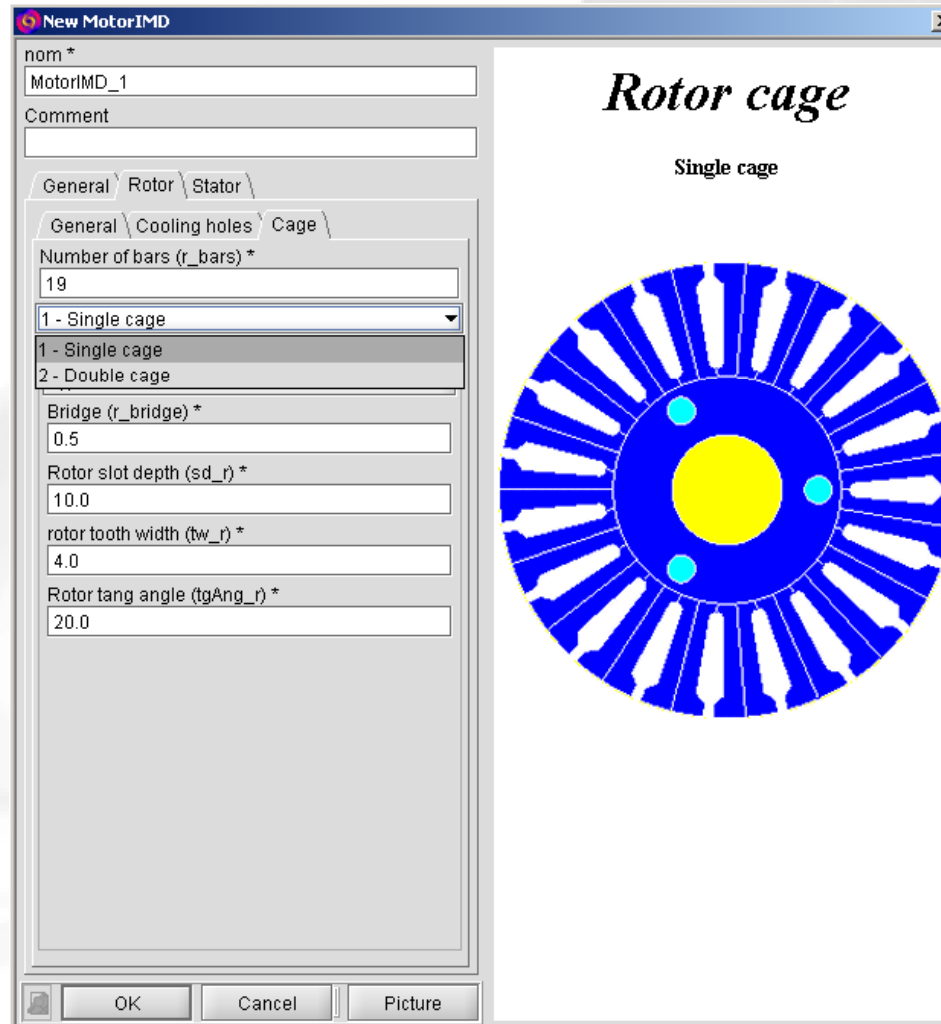


Novità della release 9.3

IM Overlay

per l'analisi di motori ad induzione con FLUX

Gabbie singole o doppie – condotti di raffreddamento



13 tipologie di barre (singole, doppie, aperte, chiuse)

