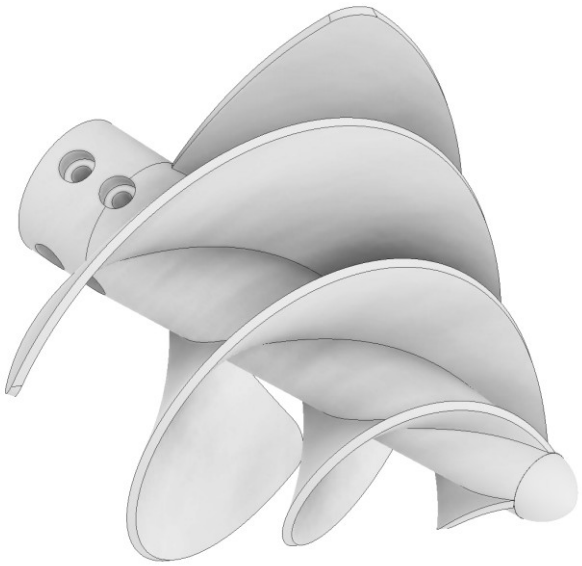
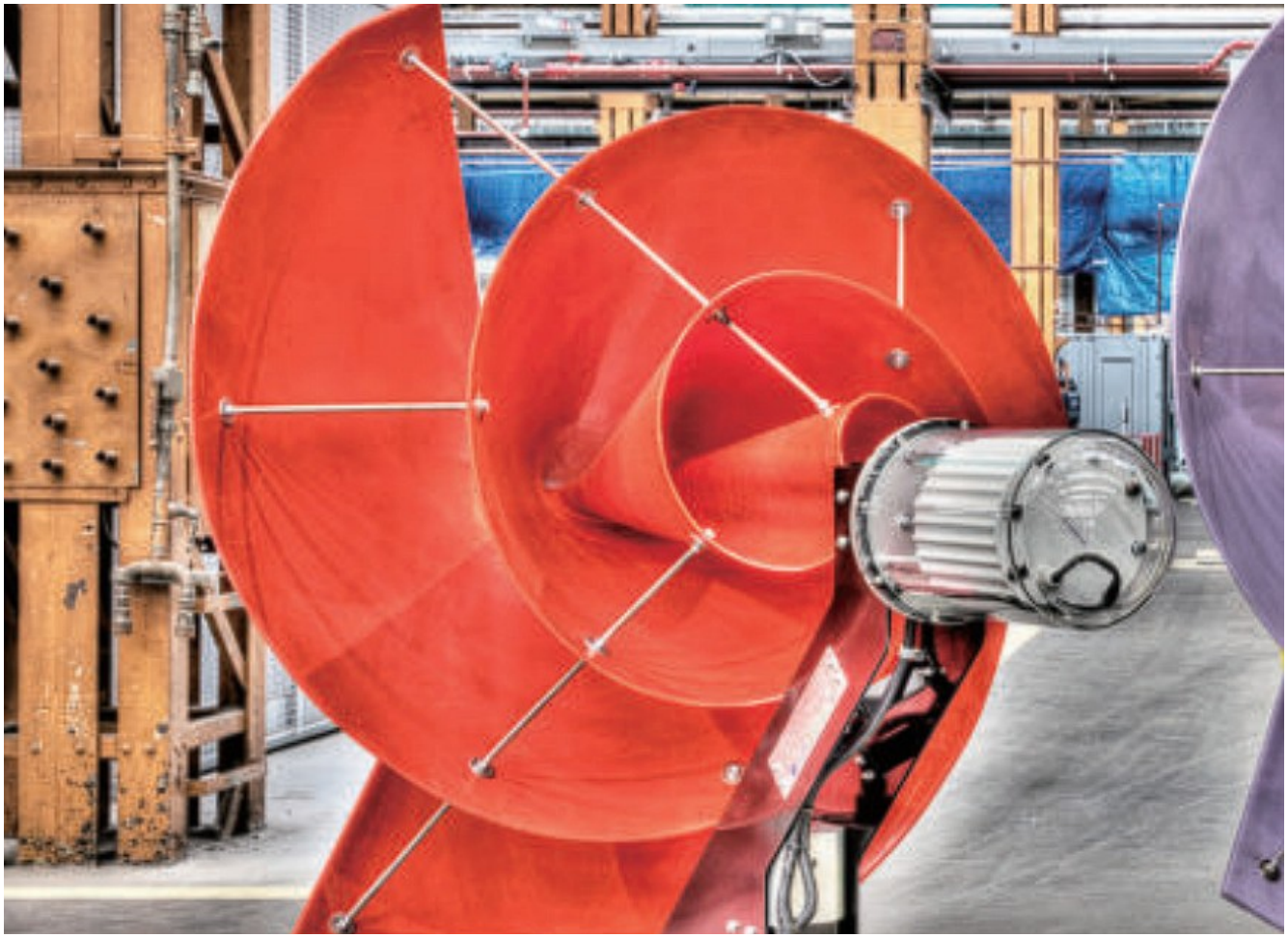
TURBINA EOLICA ARCHIMEDE



Video
https://www.youtube.com/watch?v=BF7yX-7Wy30&t=40s



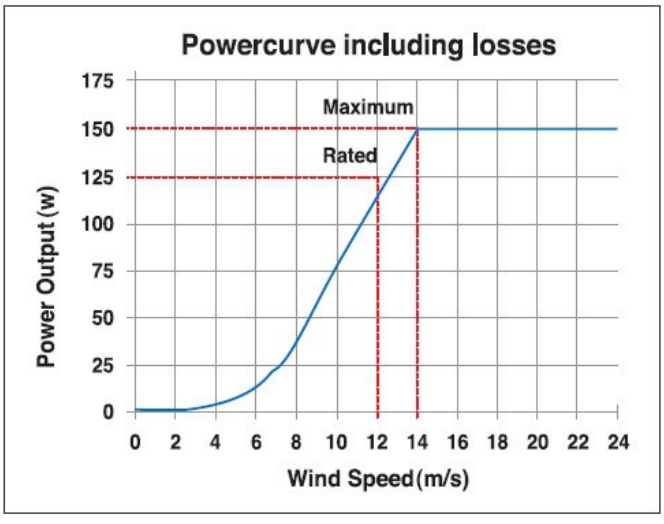
ARCHIMEDES WINDMILL (AWM)

https://thearchimedes.com/

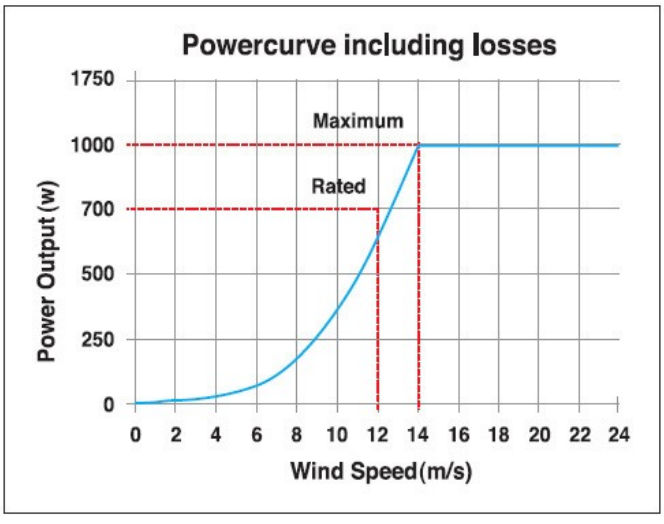
L'AWM si dimostra altamente efficiente (circa il 35% di tutta l'energia cinetica presente nell'aria), molto silenzioso (inferiore a 45 dBa), rispettoso degli uccelli e dei pipistrelli e con un design accattivante, adatto sia alle aree urbane che a quelle rurali.

L'AWM è disponibile in due dimensioni:
- Diametro di 1,5 metri con una potenza nominale di 550 w/h e un massimo di 700 w/h.
- Diametro di 0,75 metri con una potenza nominale di 100 w/h e un massimo di 150 w/h.

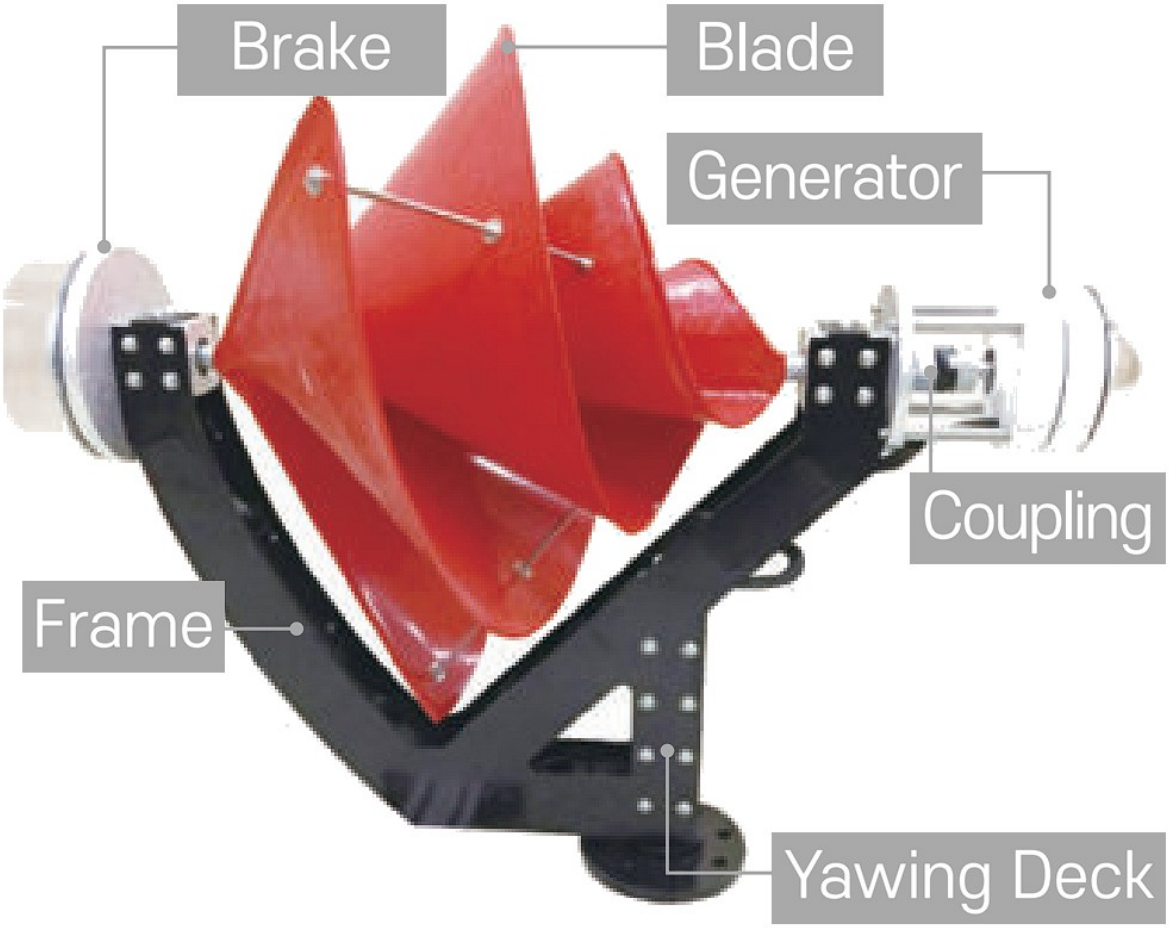
AWM wind turbines			
MODEL NAME		AWM - 750D - 150W	AWM - 1500D -1000W
POWER	RATED	125W	700W
	MAXIMUM	150W	1000W
WIND SPEED	OPERATING	0.9m/s (Cut in : 3m/s)	
	RATED	12m/s	
	CUT OUT	14m/s	
	SURVIVAL	50m/s	
BLADE RPM	RATED	600	330
	CUT OUT	600	400
SIZE		0.75m(W) x 1.1m(L) x 0.91m(H)	1.5m(W) x 1.9m(L) x 1.75m(H)
WEIGHT		32Kg	120Kg
CONTROL SYSTEM		MTTP control, Auto & Manual Braking System	



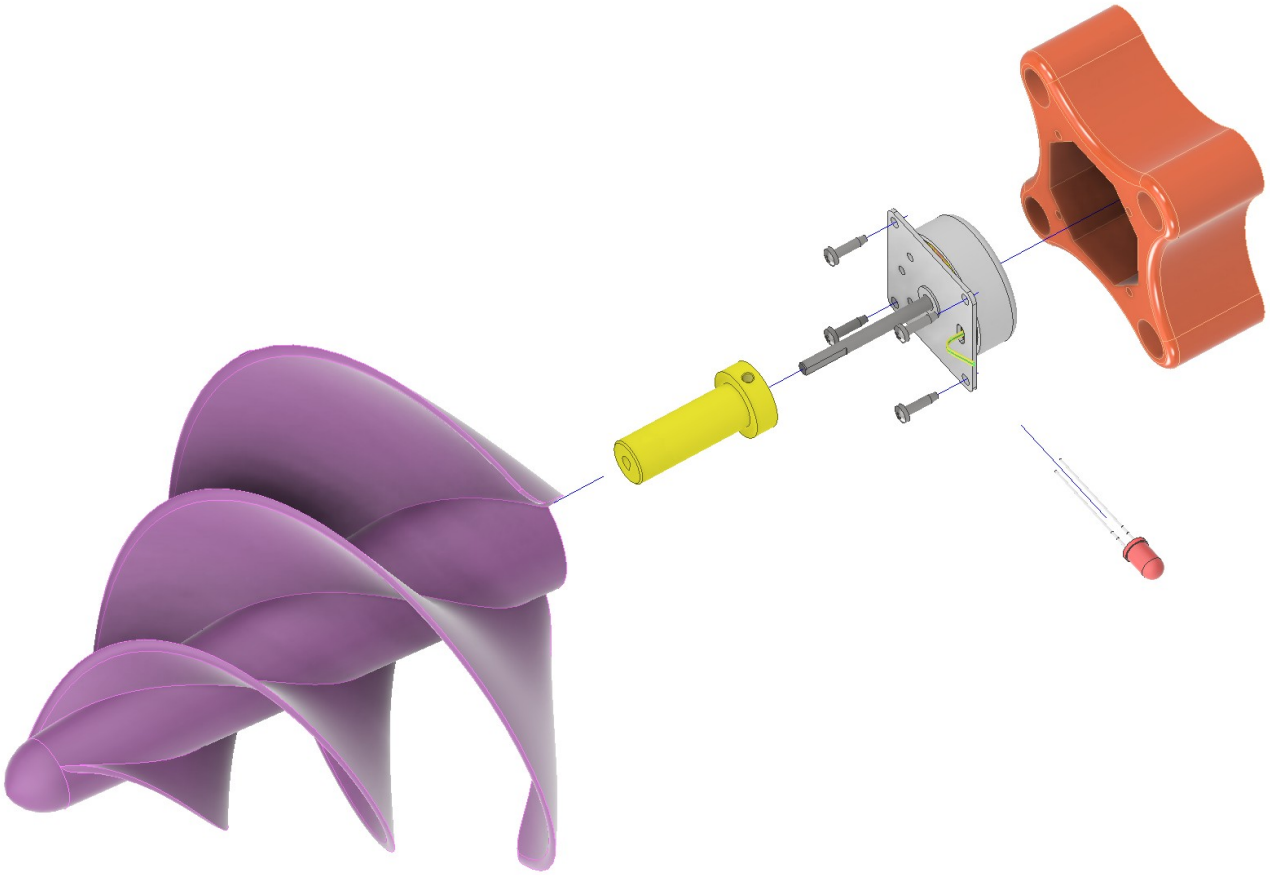
▶ AWM - 750D - 150W

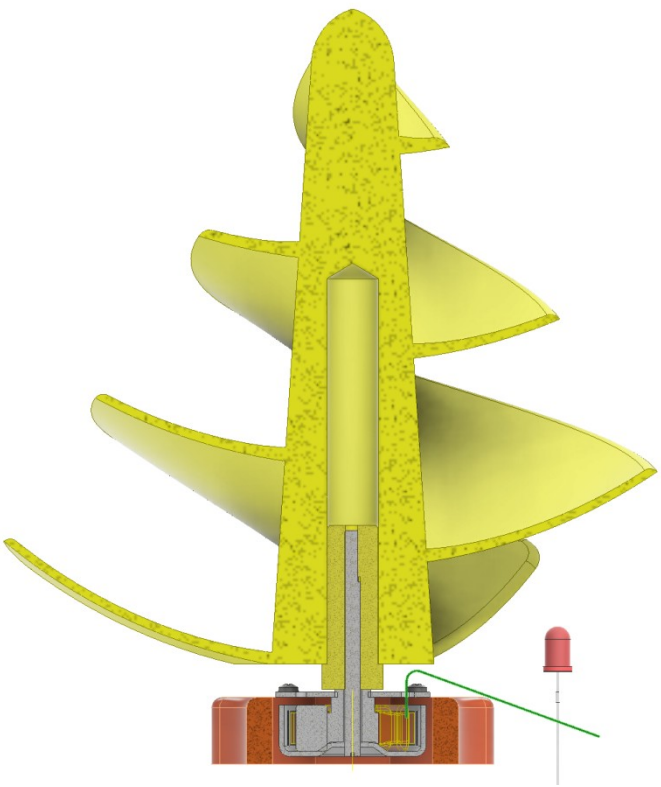


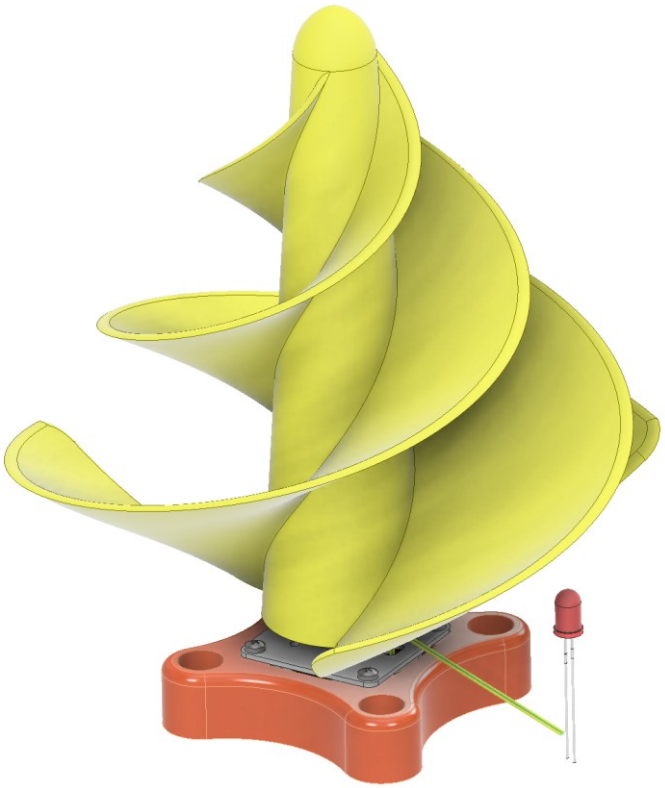
▶ AWM - 1500D - 1000W


Brake
Blade
Generator
Coupling
Frame
Yawing Deck

ASSIEME MODELLO

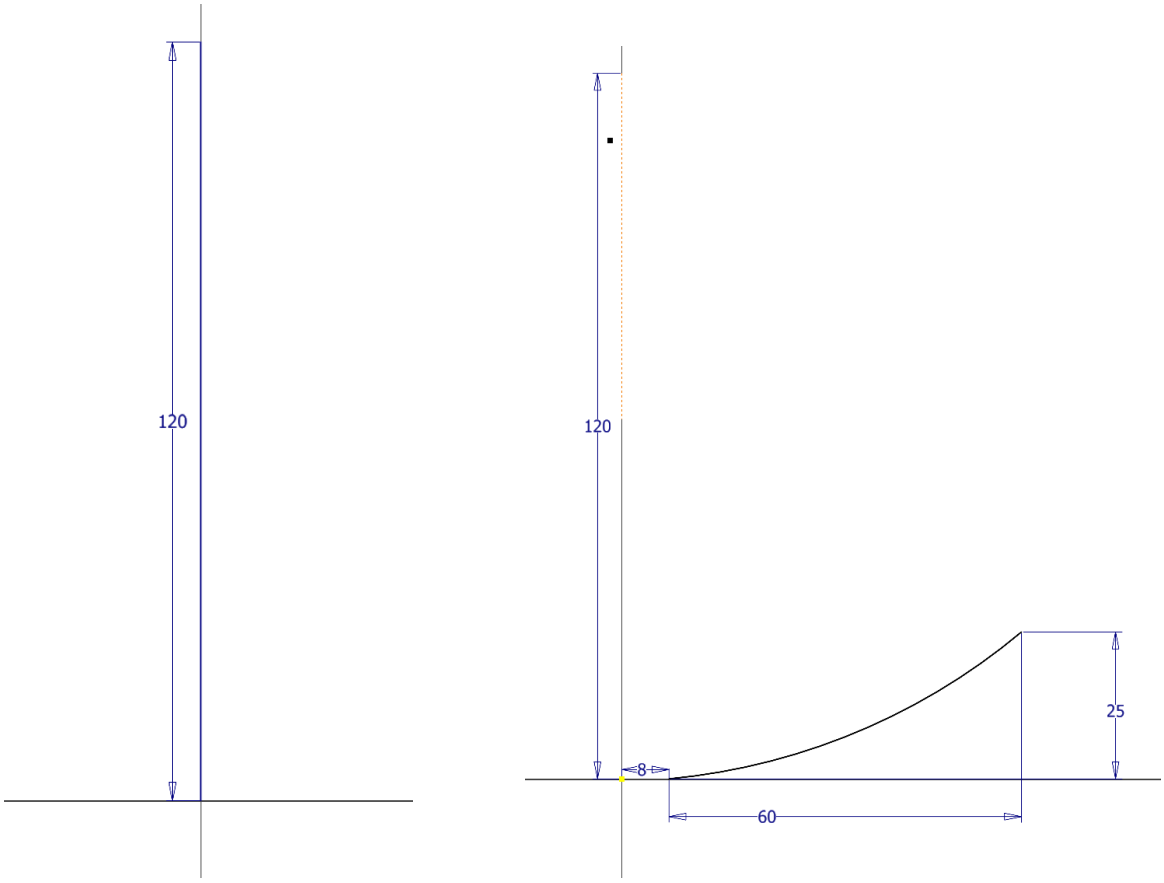




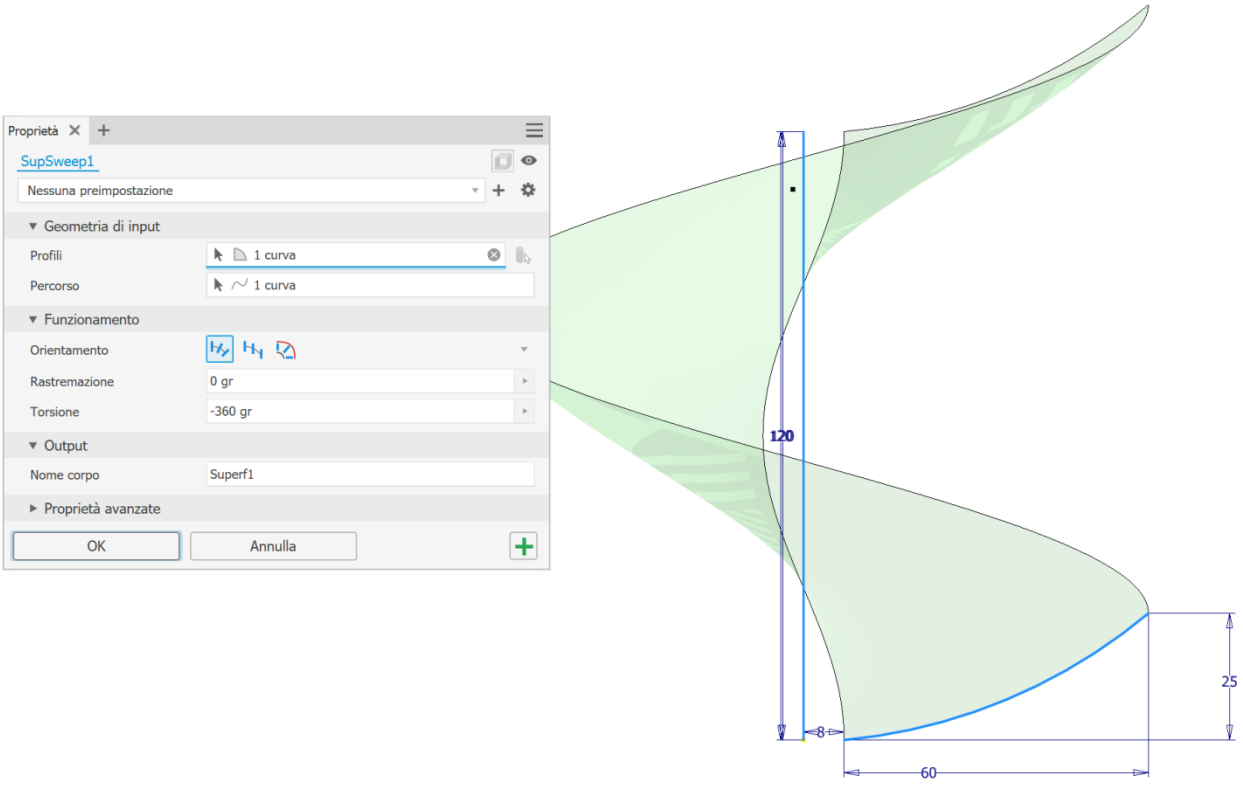


DISEGNO IN INVENTOR DEL ROTORE

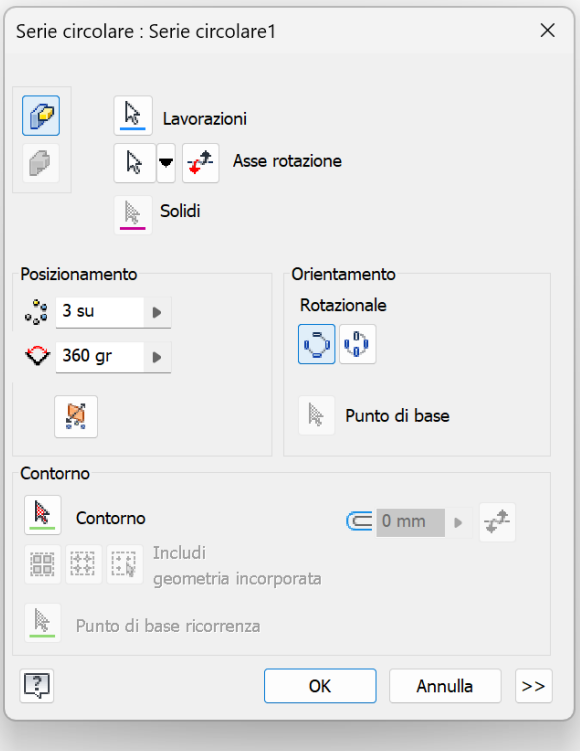
Creare due schizzi distinti come nelle figure sottostanti.

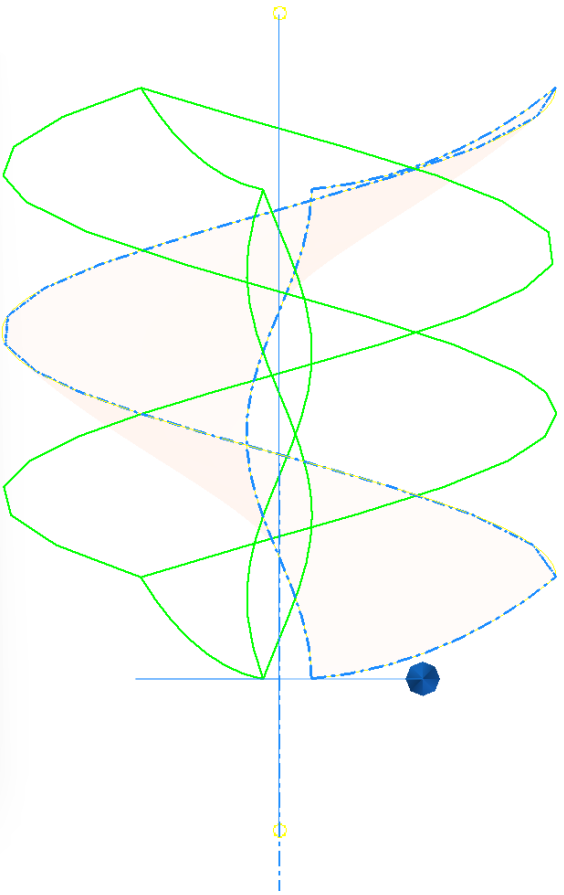


Creare la superficie a spirale col comando SWEEP

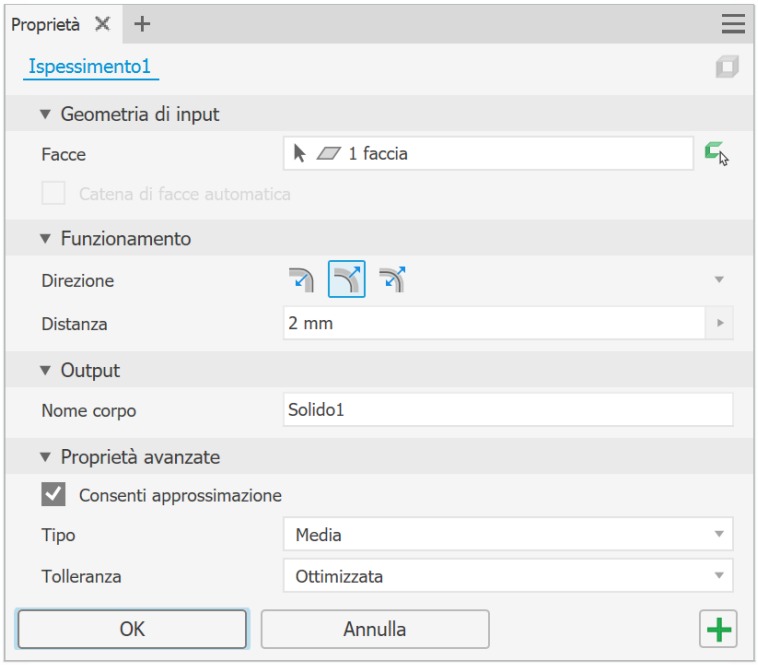


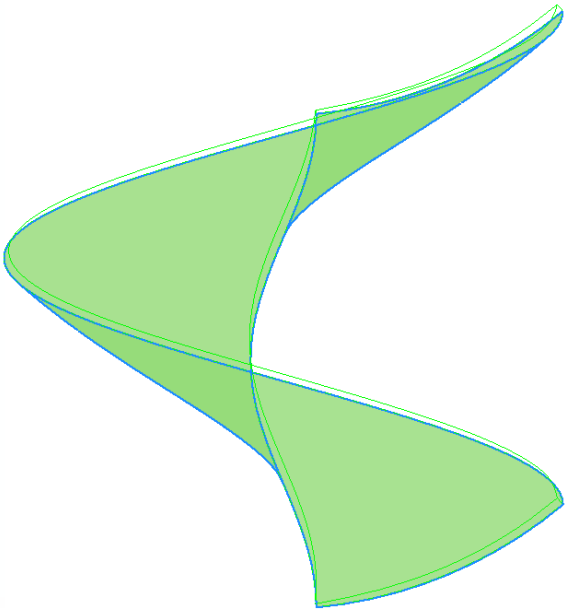
Utilizzare il comando SERIE CIRCOLARE per creare 3 pale



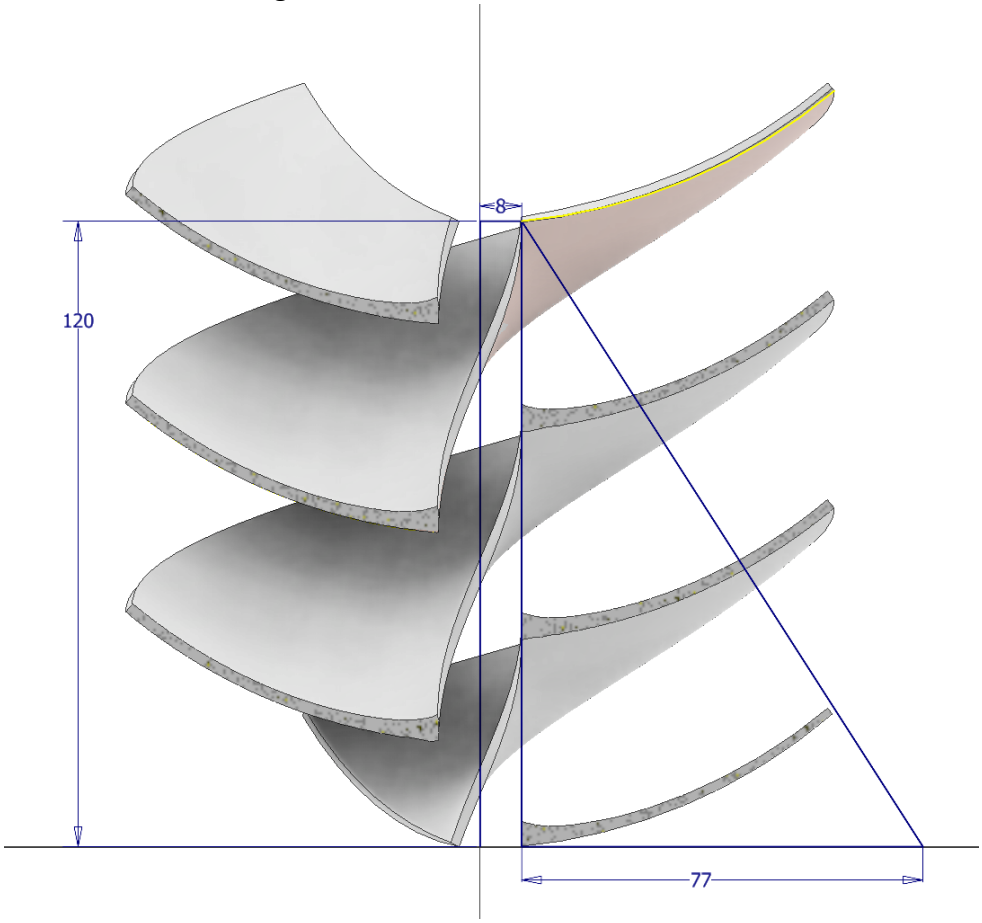


Utilizzare il comando “INSPESSISCI” per dare spessore ad ogni pala (UNA alla volta)

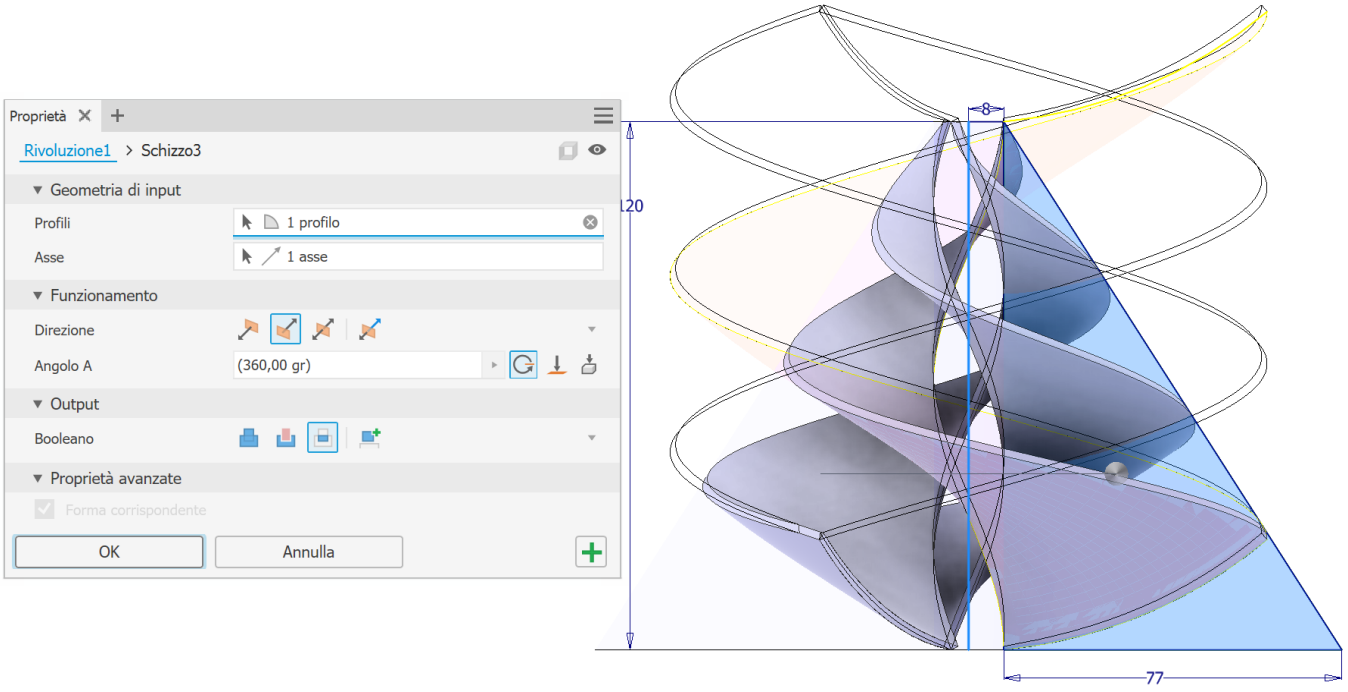




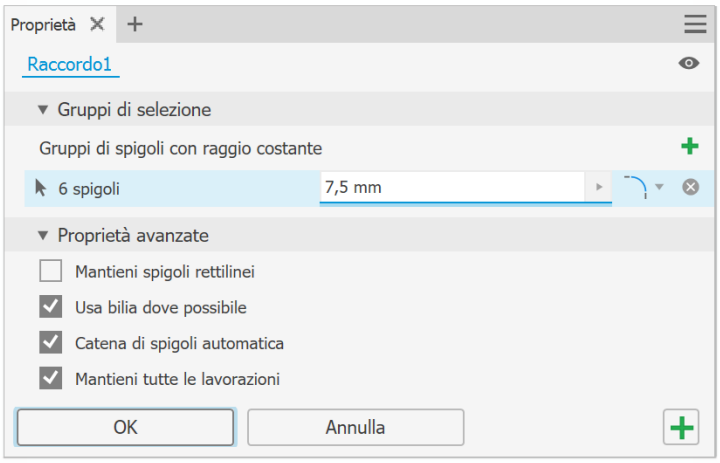
Creare lo schizzo in figura

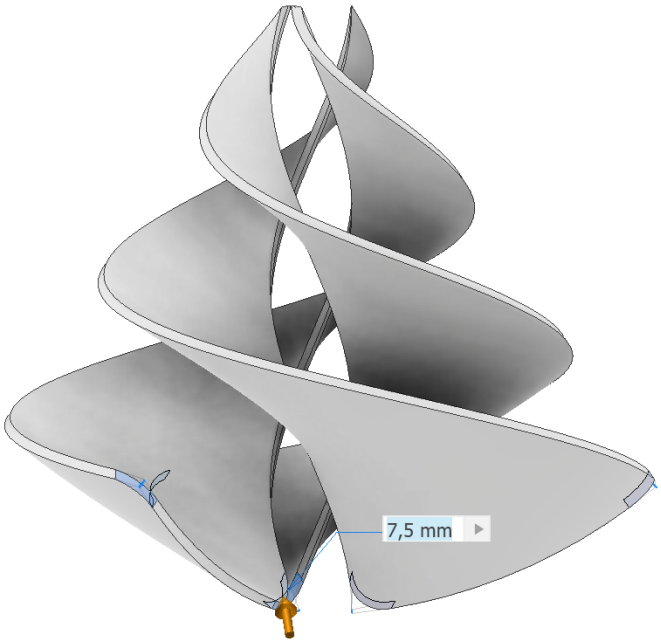


Utilizzare il comando RIVOLUZIONE in modalità INTERSEZIONE per profilare le pale.

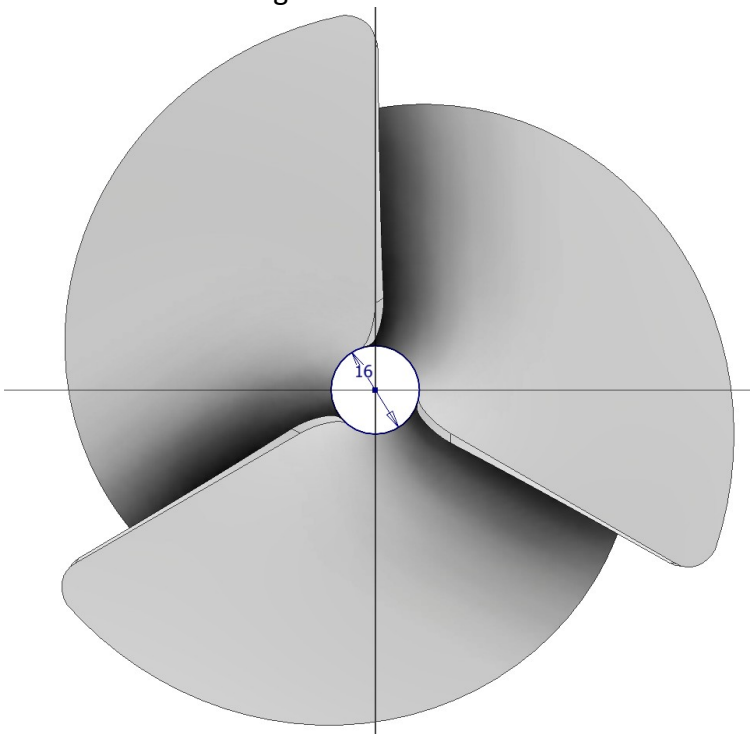


Raccordare le estremità.

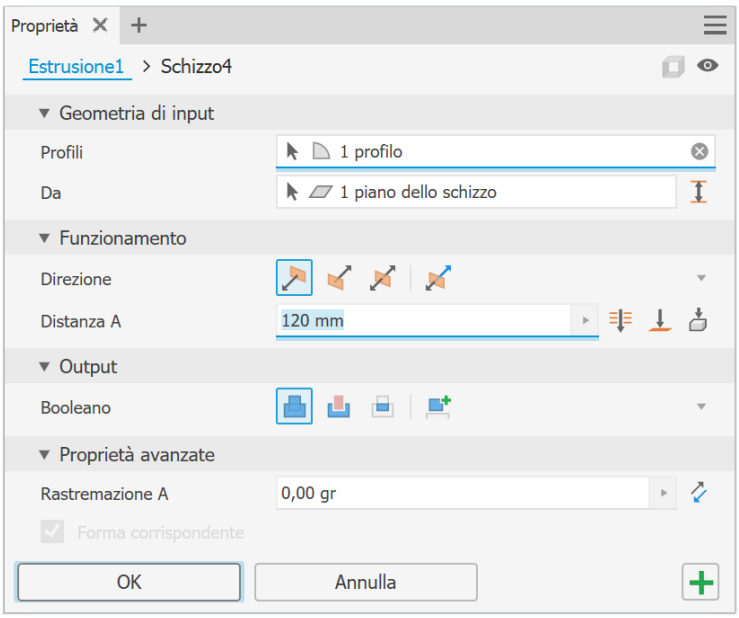


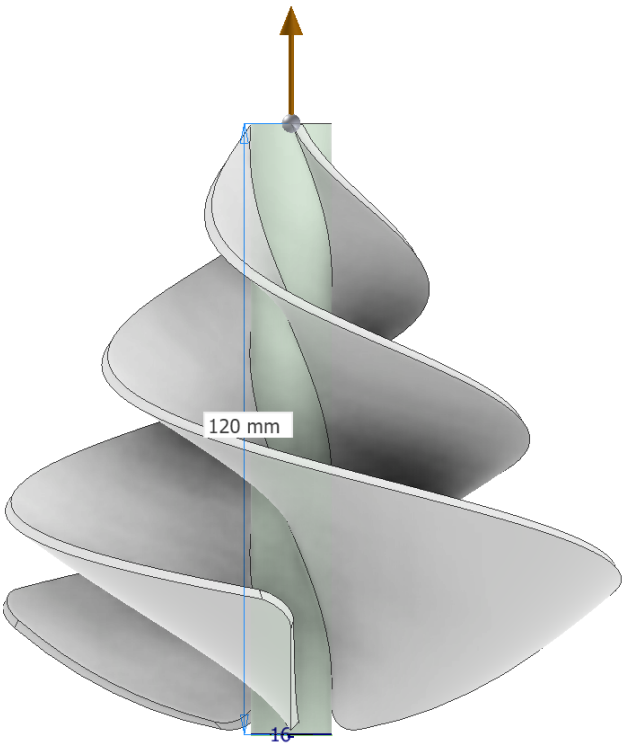


Creare lo schizzo in figura

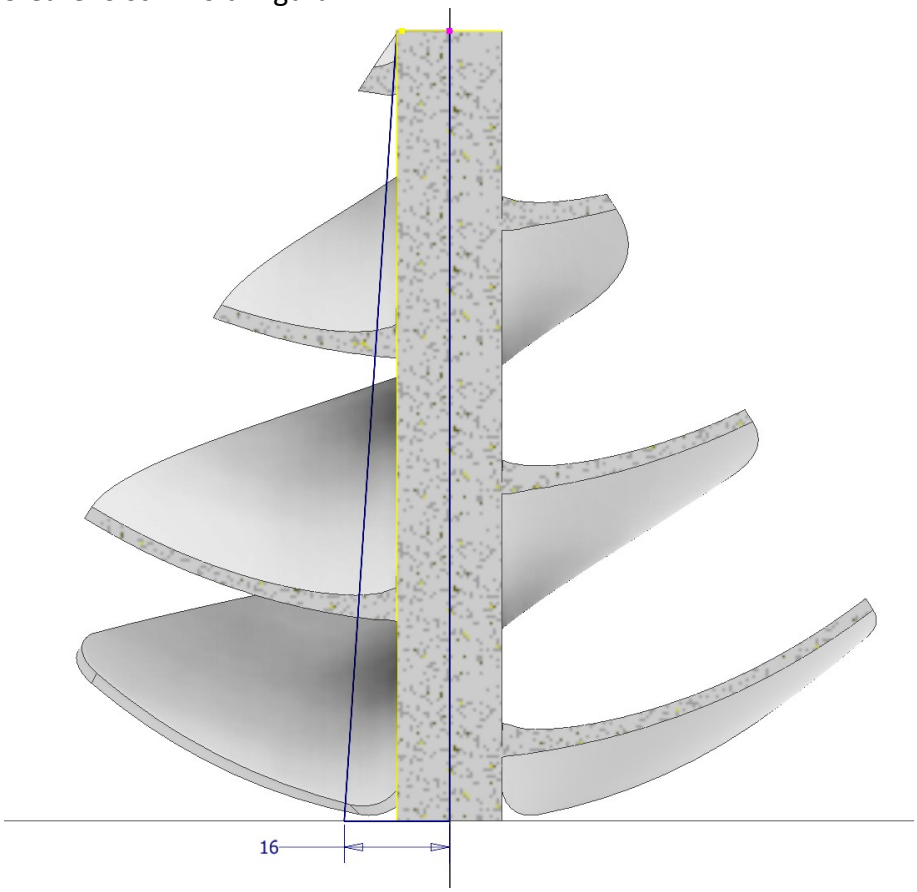


Estrudere lo schizzo

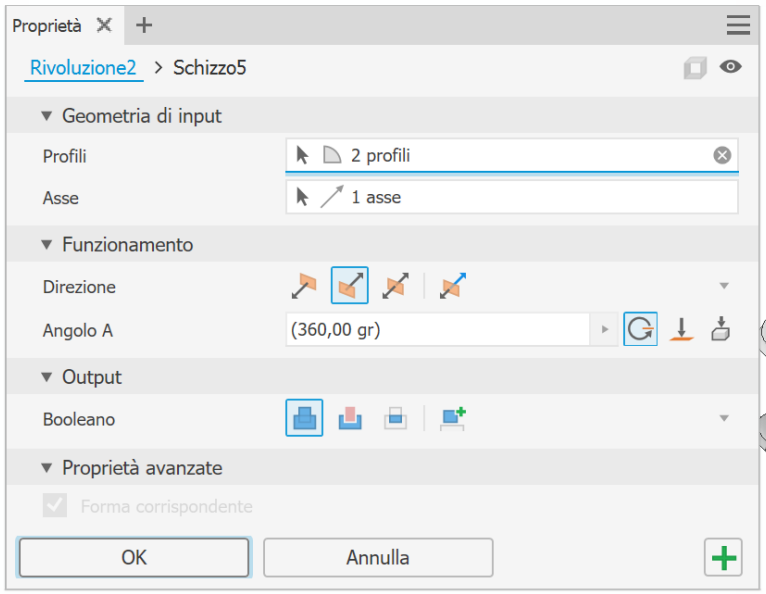


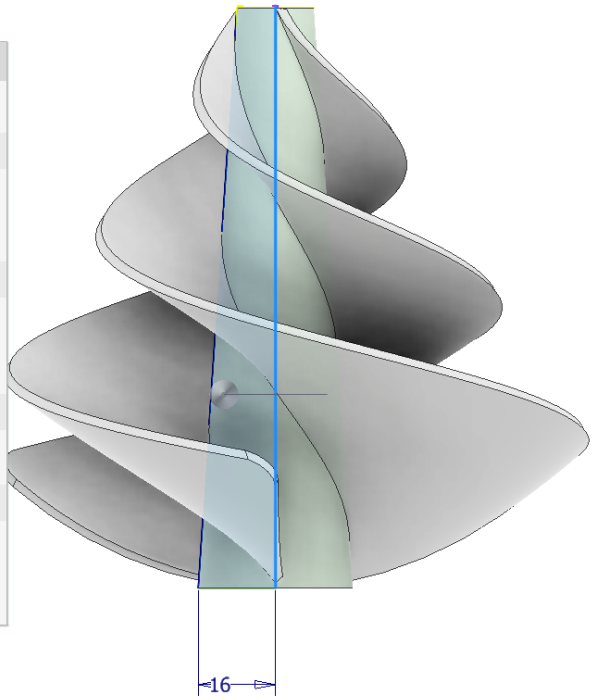


Creare lo schizzo di figura

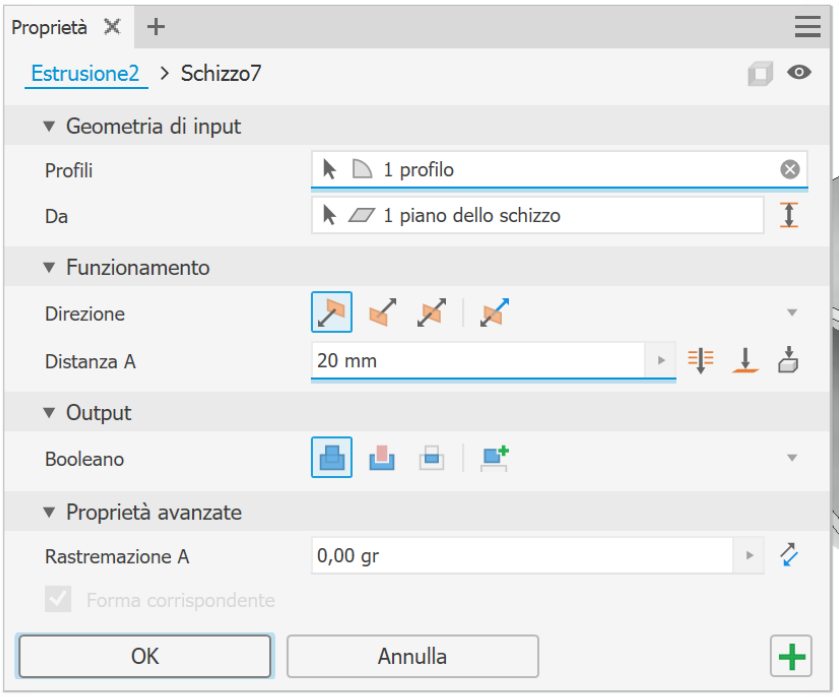


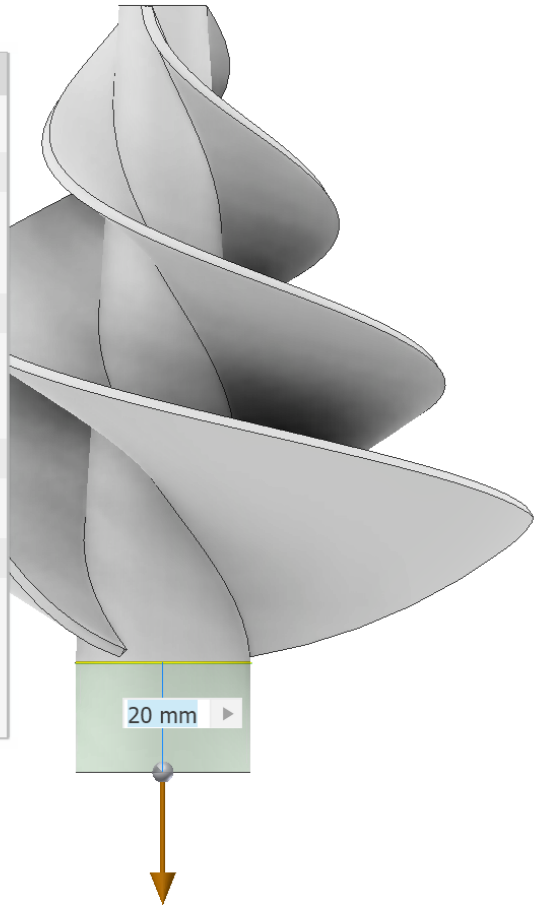
Effettuare RIVOLUZIONE



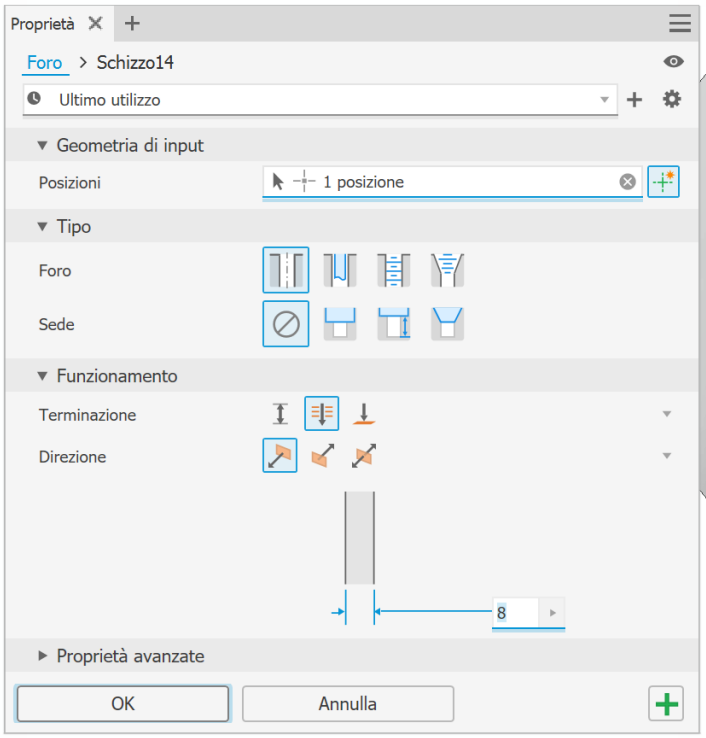


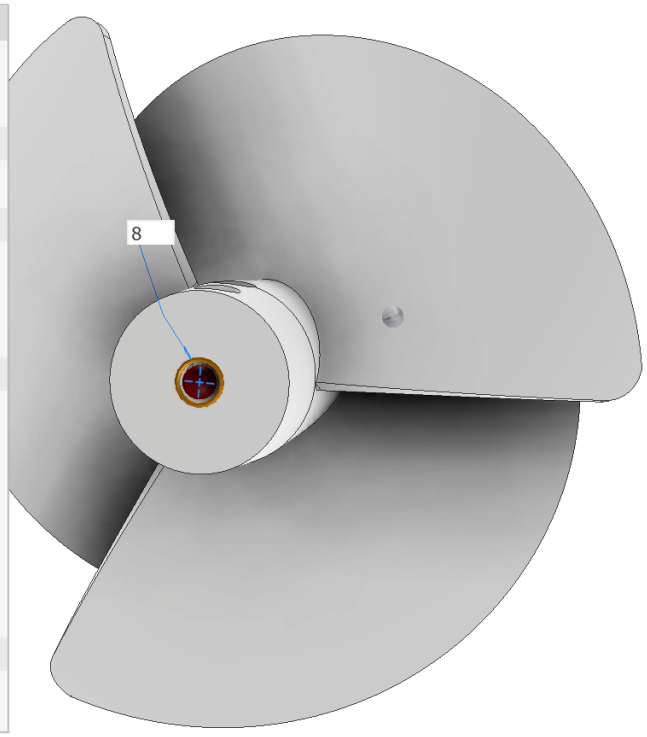
Creare la parte terminale dell'albero



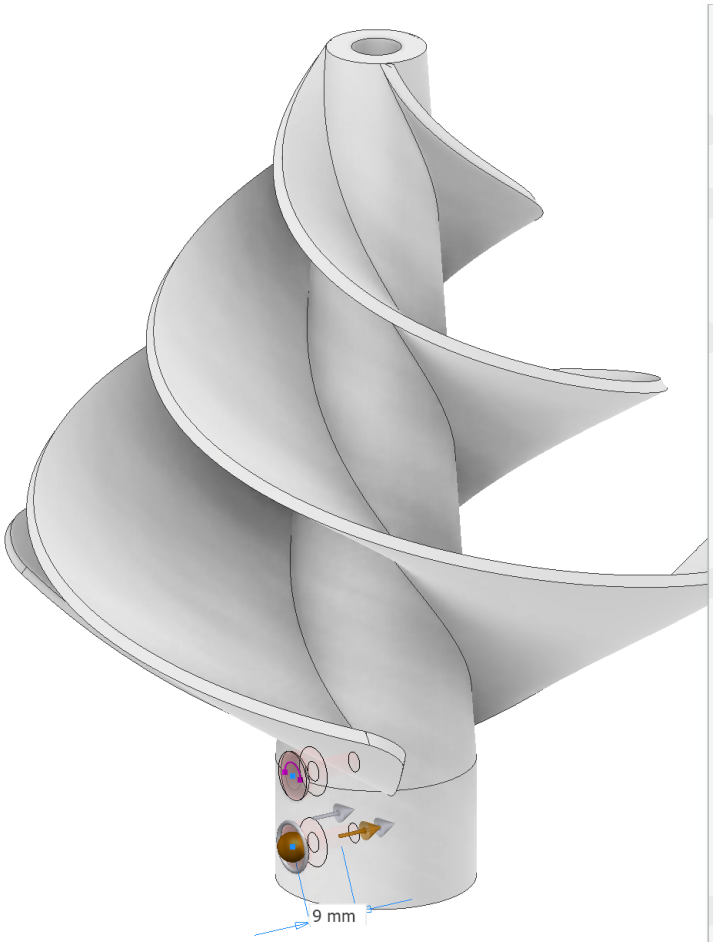


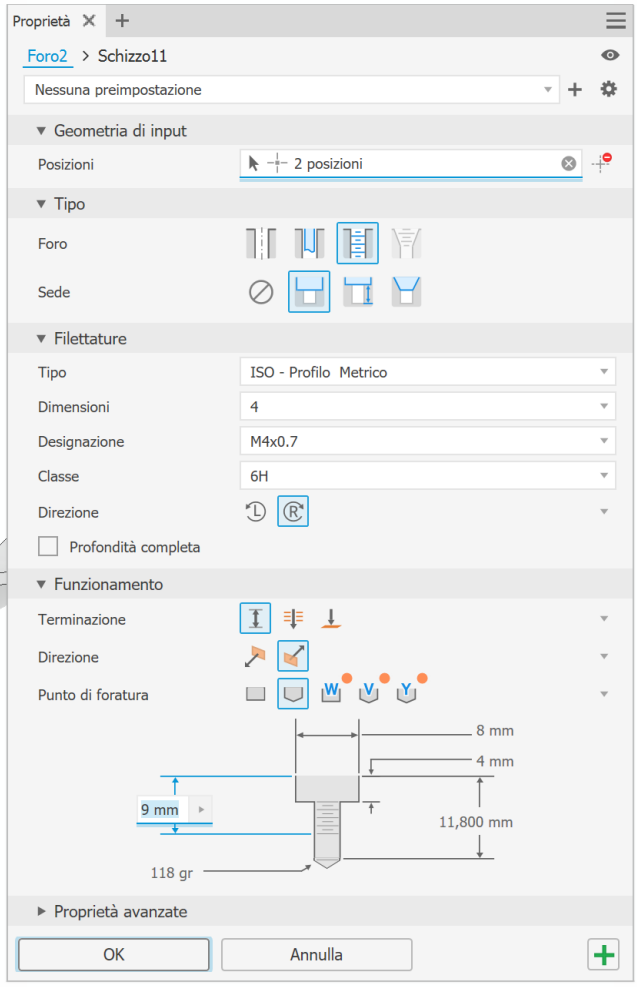
Realizzare foro semplice da 8mm



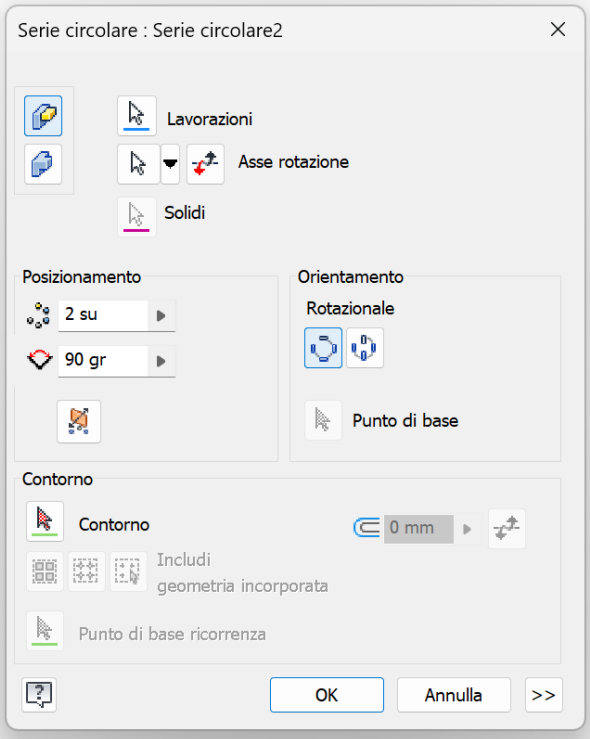


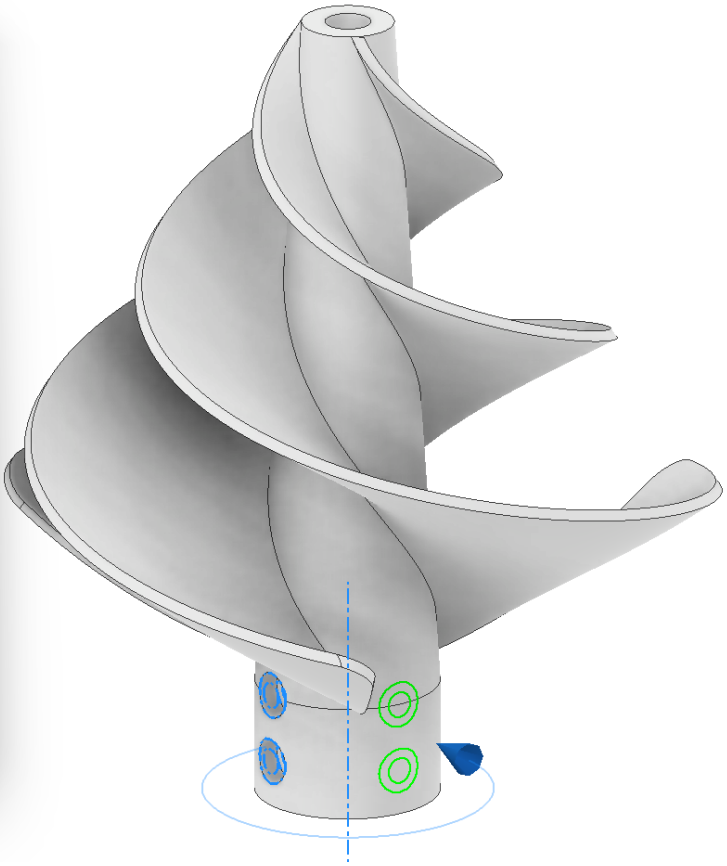
Creare una coppia di fori sull'albero



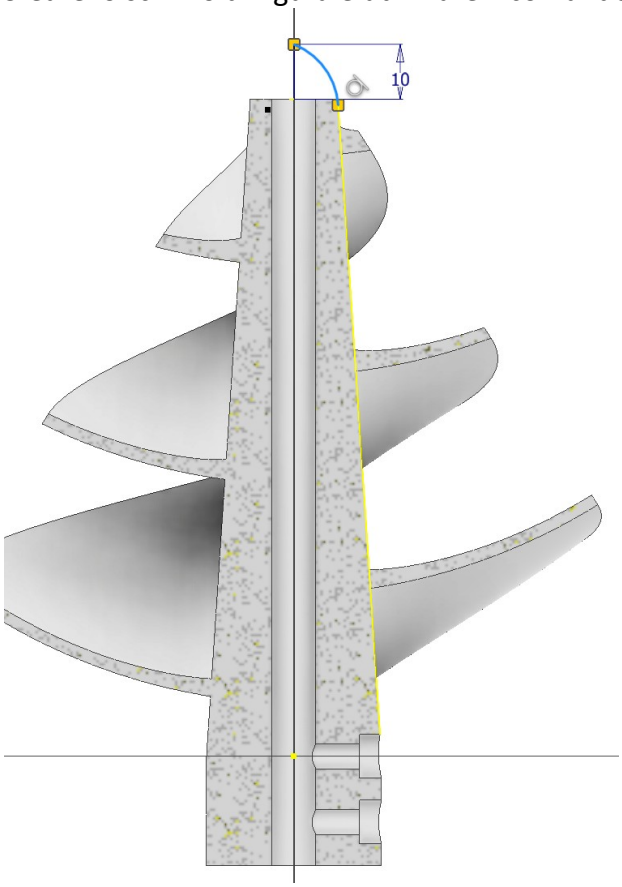


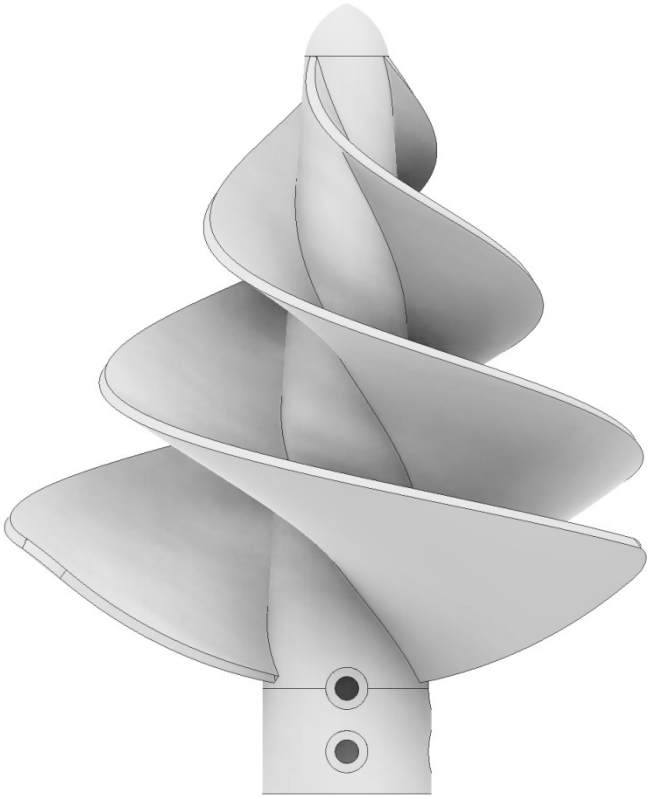
Creare un’altra coppia di fori col comando SERIE



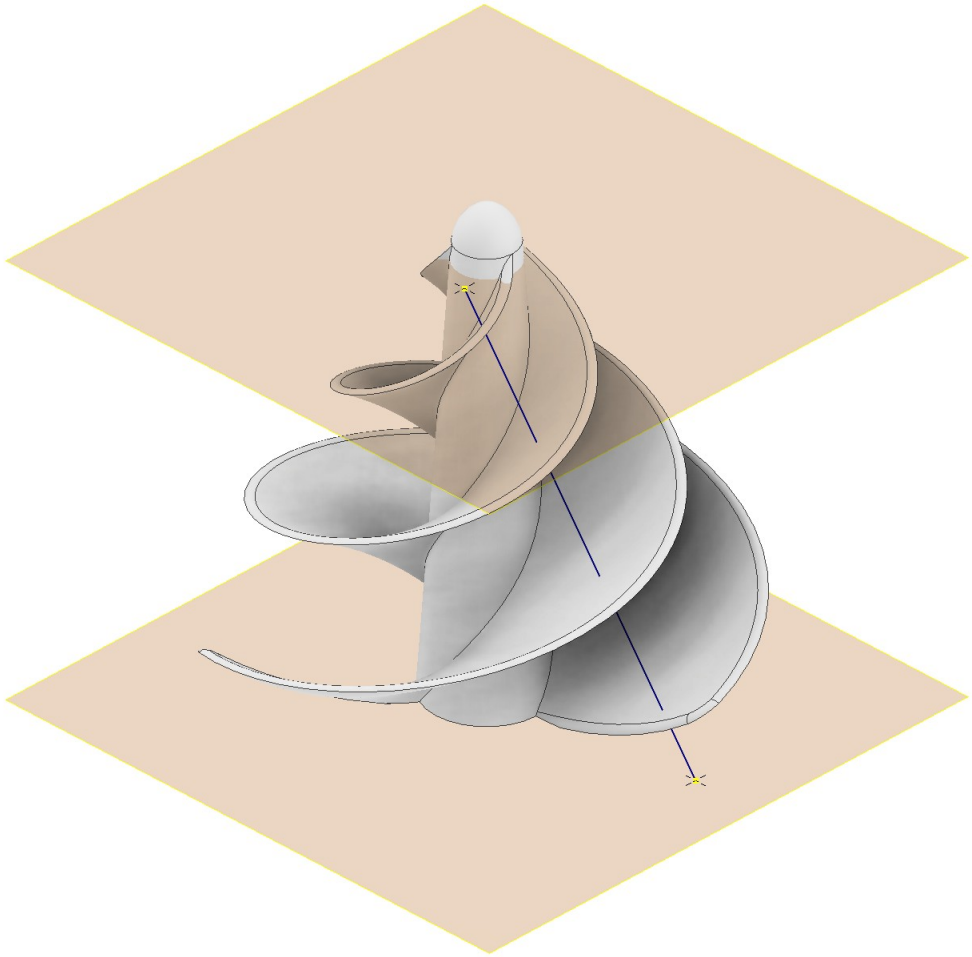


Creare lo schizzo di figura e utilizzare il comando RIVOLUZIONE per terminare

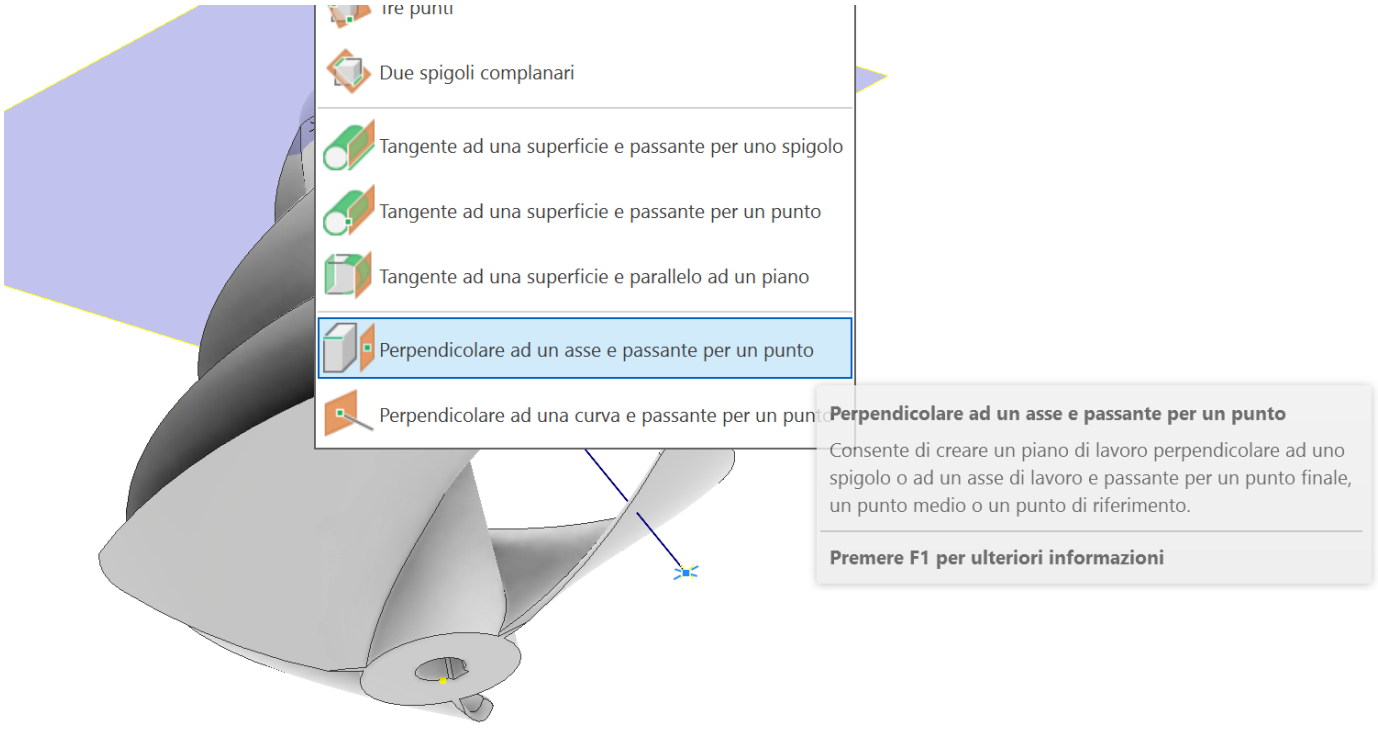




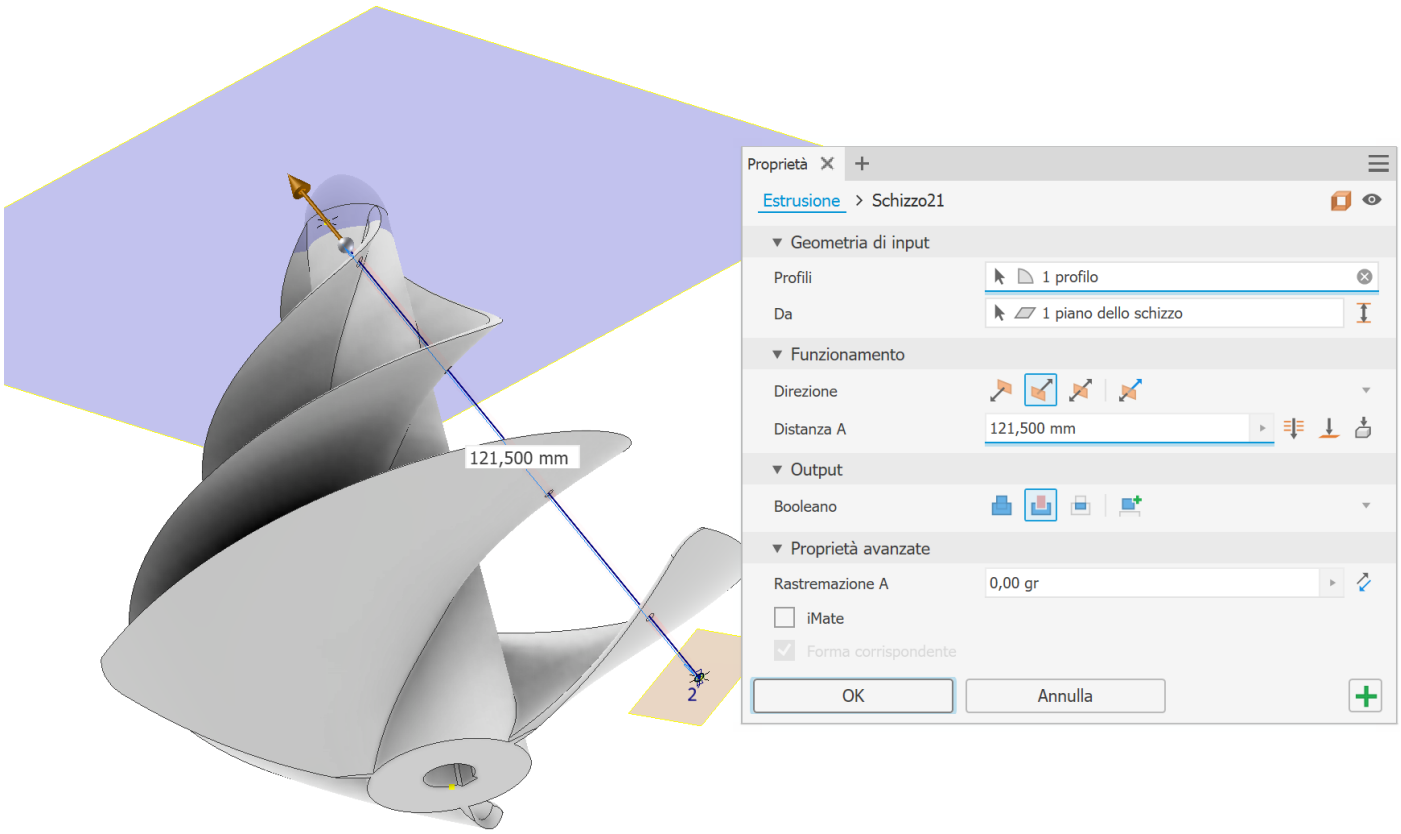
Creare un piano parallello a quello origine in modo da inserire due punti (su due schizzi 2D) che verranno uniti tamite una liena 3D (schizzo 3D) come in figura.

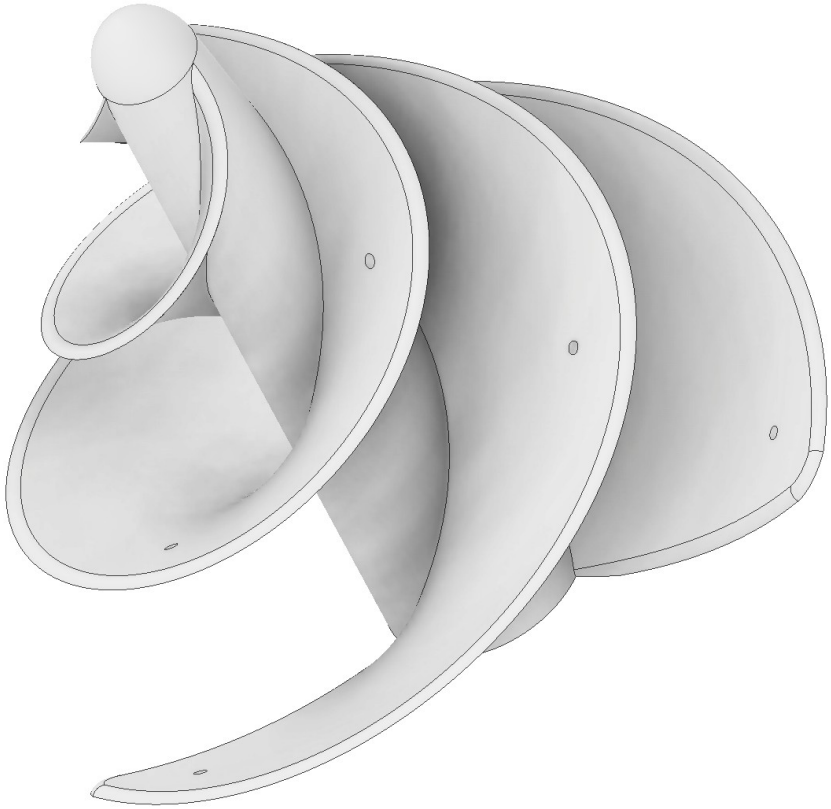


Creare un piano perpendicolare al’asse come in figura.



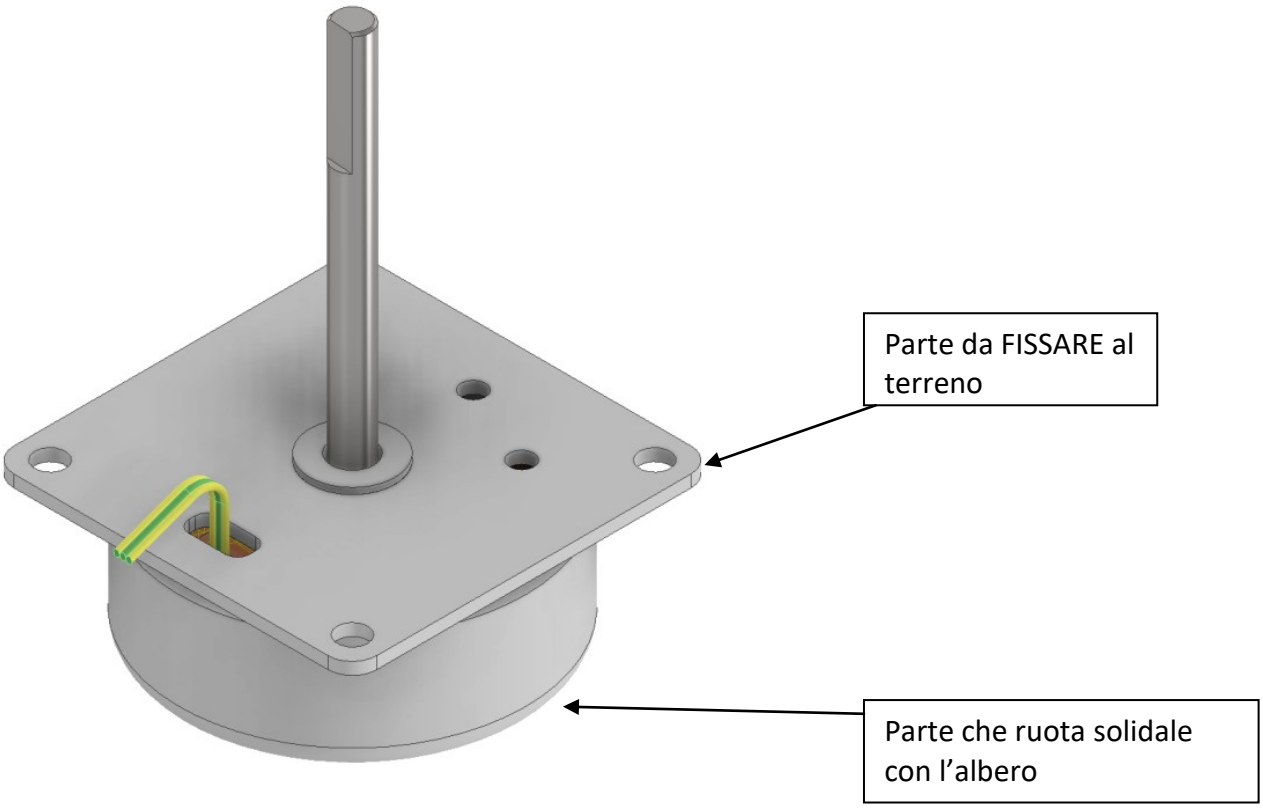
Creare uno schizzo con un cerchio da 2mm ed estrudere in taglio fino a bucare tutte le pale.





Terminare un una serie circolare della lavorazione per bucare le altre due pale.
Raccordare Infine I bordi delle pale.

Mini Generatore trifase 3-24V per turbine eoliche



Completare l’assieme con le parti mancanti.