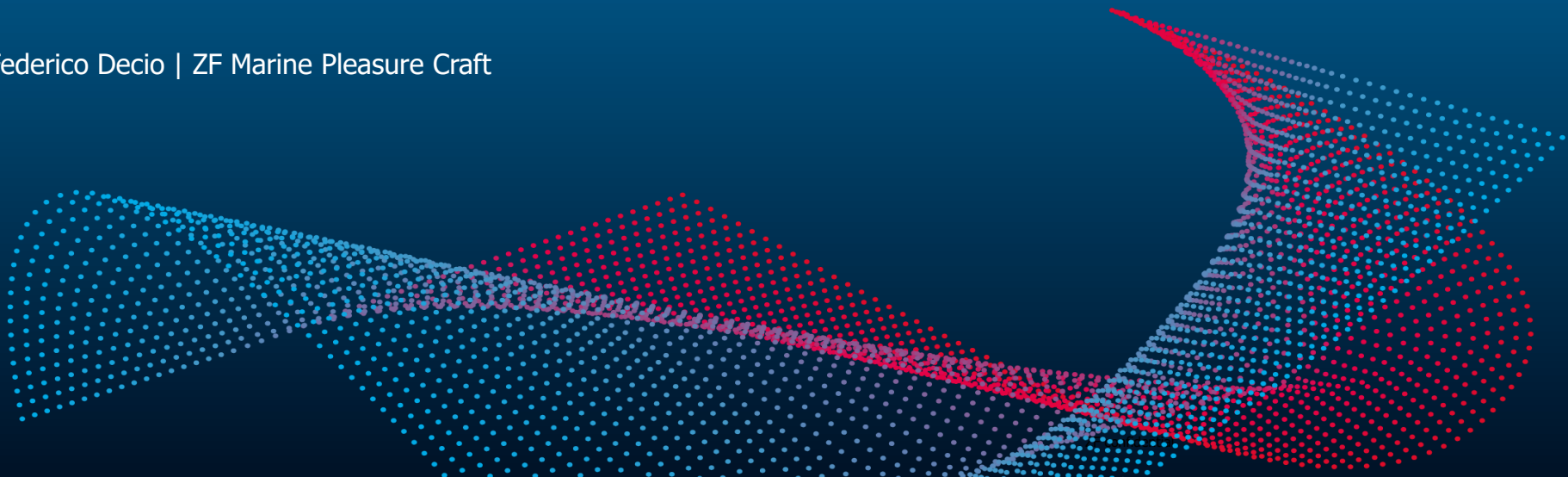




# Sailboat propulsion

## SPP – Steerable POD Propulsion

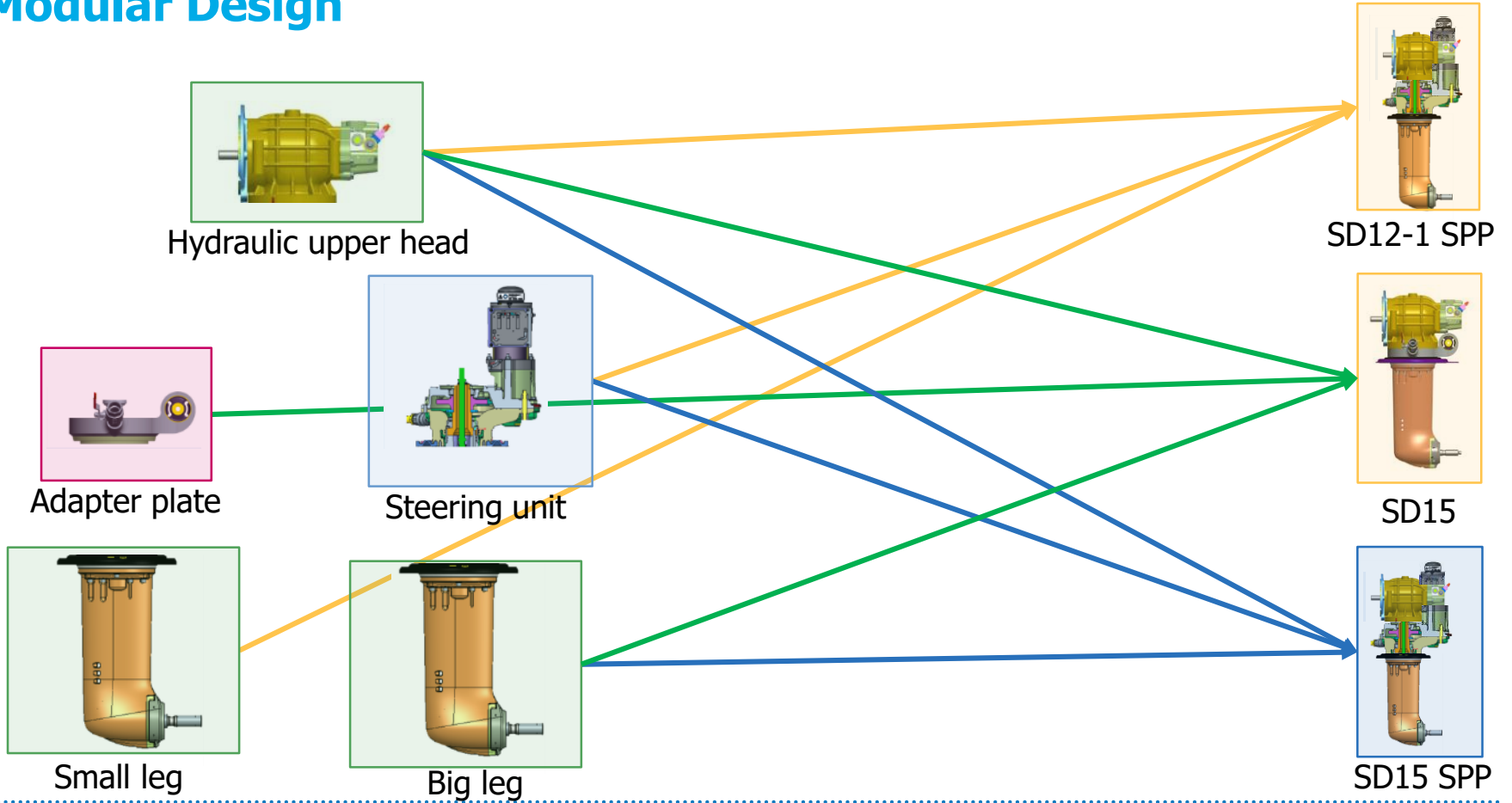
Federico Decio | ZF Marine Pleasure Craft



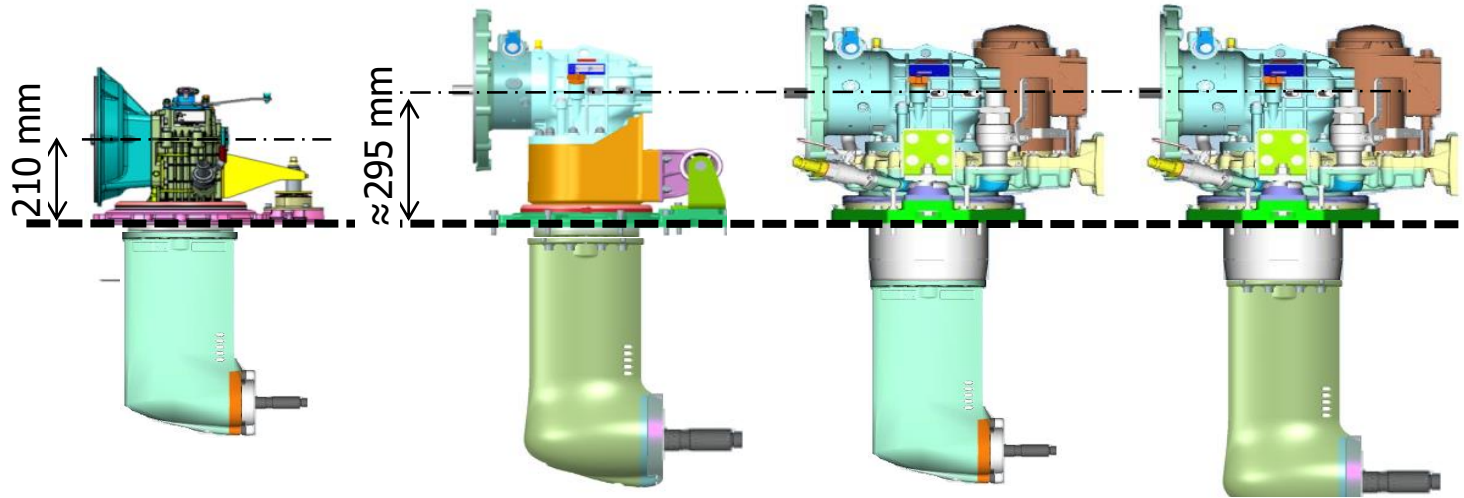
# Steerable POD Propulsion (SPP) - Overview

- ❑ Integrated system (mechanic, controls) allows unmatched maneuvering performances
- ❑ Typical applications: sail boats 7.5m (25') to 17m (55') length & 3t to 15t displacement
- ❑ Modular concept (see next slide)
- ❑ Two gears (ahead and reverse) multidisk wet clutch hydraulically actuated
- ❑ New Electronic Control Unit harmonized with all the other ZF control systems (SmartCommand)
- ❑ New HMIs (Human Machine Interface): lever, joystick, optional display available
- ❑ More engine interfaces supported (analog current 0-20ma, analog voltage 0-5 V, PWM, CAN)

# Modular Design



# SPP Range



	ZF SD12 (reference)	ZF SD15 (new)	ZF SD12-1 SPP (new)	ZF SD15 SPP (new)
Max Input power	80hp / 3200 rpm	150hp / 3000rpm	80hp / 3200 rpm	150hp / 3000rpm
Compatible bell housing	SAE4/SAE5/Borg warner	SAE4/SAE5/Borg warner	SAE4/SAE5/Borg warner	SAE4/SAE5/Borg warner
Clutch type	Mech. Actuated Multi-disc (4) wet	Hydr. Actuated Multi-disc wet	Hydr. Actuated Multi-disc wet	Hydr. Actuated Multi-disc wet
System power supply	n.a.	n.a.	12VDC	12/24VDC
Max prop dia.	21"	23"	21"	23"
Gear ratio	2,49 / 2,23	2,49	2,49 / 2,23	2,49

# Thank you for your attention.

