

# Comparison Sheet

## SOBO® iQ Control & Proportional / Digital Brake Control System

Below highlights some of the main differences between the SOBO® iQ and a Proportional / Digital Brake Control System.

	SOBO® IQ CONTROL	PROPORTIONAL (ANALOGUE) AND DIGITAL CONTROL
REACTION TIME RELEASED BRAKES TO BALANCE PRESSURE	<100ms	<100ms
OPERATIONAL STATUS W/ MAIN ACCU FAILURE	SOBO® IQ Ramp still available with additional "noise" in stopping ramp	Limited Control
ACCUMULATOR SIZE	Small accumulators can be utilized due to valve design	Large accumulators required due to valve design
PAD WEAR	Even across all brakes since all brakes operate simultaneously	Uneven across brakes due to dedicated digital vs proportional control brakes (digital brakes incur much greater pad wear)
AIR GAP ADJUSTMENT	Predictable/consistent air gap adjustment due to even pad wear since all brakes operate simultaneously	More frequent air gap adjustment due to excessive wear on digital brakes (more frequent shutdowns required)
INDIVIDUAL CALIPER STRESS/FATIGUE	Brake Caliper stress is split evenly between all calipers since all brakes operate simultaneously	Brake Caliper stress is much higher on digital calipers since they are applied with full force every time they are activated
LOAD ACROSS INDIVIDUAL BRAKE DISCS	Easily balanced by arrangement of calipers (eg one caliper at 3 and 9 o'clock)	Individual Discs cannot be balanced practically
LOAD ACROSS ALL BRAKE DISCS	Easily balanced by arrangement of calipers (eg one caliper at 3 and 9 o'clock on all discs)	Multiple Discs cannot be balanced practically due to uneven application of digital calipers
MECHANICAL SHOCKWAVE	Shockwave introduction during braking is kept to a minimal level due to SOBO® IQ Programming and all brakes operate simultaneously	Shockwave introduction from proportional calipers is minimal but shockwave introduction from digital calipers cannot be controlled/minimized
BRAKE SYSTEM PROGRAMMING INTEGRATION WITH MAIN PLC	Very simple integration with few communication signals exchanged. All brake system programming is included in the Svendborg Brakes SOBO® IQ controller.	Heavy integration between brake system and main PLC is necessary. Brake system programming is typically supplied by parties other than the brake manufacturer.