



Model Name		Benshaw H2		Benshaw H2 Pump		Benshaw S		Benshaw SW		Benshaw GM2		
Category		Multi-Purpose Industrial Drive		Pump Series Drive		Industrial Purpose Micro Drive		Washdown Drive - Built in Disconnect		General Purpose Micro Drive		
HP Range		Normal Duty	Heavy Duty	Normal Duty	Heavy Duty	Normal Duty	Heavy Duty	Normal Duty	Heavy Duty	Normal Duty	Heavy Duty	
		At 240 Vac	7.5 ~ 25	5 ~ 20	7.5 ~ 25	5 ~ 20	1.0 ~ 15	0.5 ~ 10	N/A	0.5 - 20	1.0 ~ 15	0.5 ~ 10
		At 460 Vac	7.5 ~ 800	5 ~ 600	7.5 ~ 800	5 ~ 600	1.0 ~ 15	0.5 ~ 10	N/A	0.5 - 30	1.0 ~ 15	0.5 ~ 10
		At 575 Vac	Future		Future		N/A		N/A		N/A	
1 / 3 Phase Input		1, 3		1, 3		1, 3		1, 3		1, 3		
Display / Keypad		Standard LCD (removable)		Standard LCD (removable)		Built in LED (option LCD remote)		Built in LED (option LCD remote)		Built in LED (option LCD remote)		
Control Method	V / F Control	Standard Built In		Standard Built In		Standard Built In		Standard Built In		Yes		
	Sensorless Vector	Yes (IM & PM motors)		No		Yes (IM & PM motors)		Yes (IM & PM motors)		Yes (IM Motor)		
	Tuning Method	Static & Rotating		N/A		Static & Rotating		Static & Rotating		Static & Rotating		
	Slip Compensation	Yes		Yes		Yes		Yes		Yes		
	Torque Control	No		No		Yes		Yes		No		
Input Terminal	Digital Inputs	7		7		5		5		5		
	Analog Current	1 (0-20mA), switchable to 0-10V		1 (0-20mA), switchable to 0-10V		1 (0-20mA), switchable to 0-10V		1 (0-20mA), switchable to 0-10V		1 (0-20mA)		
	Analog Voltage	1 (0-10V)		1 (0-10V)		1 (0-10V)		1 (0-10V)		1 (0-10V)		
	Pulse Train	Yes		Yes		Yes		Yes		No		
Built in Speed Potentiometer		N/A		N/A		N/A		N/A		Yes		
Output Terminal	Relay Output (Form A)	4 (programmable)		4 (programmable)		No		No		1 (programmable)		
	Fault Relay (Form C)	1 (programmable)		1 (programmable)		1 (programmable)		1 (programmable)		1 (programmable)		
	Open Collector	1 (programmable)		1 (programmable)		1 (programmable)		1 (programmable)		No		
	Analog Current	1 (0-20mA), switchable to 0-10V		1 (0-20mA), switchable to 0-10V		1(0-20mA), switchable to 0-10V		1(0-20mA), switchable to 0-10V		1 (0-10V)		
	Analog Voltage	1 (0-10V)		1 (0-10V)						No		
	Pulse Train	Yes		Yes		Yes		Yes		No		
Dynamic Braking		Internal IGBT: 240V all, 460V up to 40HP		Internal IGBT: 240V all, 460V up to 40HP		Internal IGBT: 240V all, 460V all		Internal IGBT: 240V all, 460V all		Internal IGBT: 240V all, 460V all		
Braking Functions		Dynamic Braking, DC Injection, Stall Prevention, Flux Braking, Power Braking		Dynamic Braking, DC Injection, Stall Prevention, Flux Braking, Power Braking		Dynamic Braking, DC Injection, Stall Prevention, Flux Braking, Power Braking		Dynamic Braking, DC Injection, Stall Prevention, Flux Braking, Power Braking		Dynamic Braking Injection, Stall Prevention, Flux Braking, Power Braking		
DC Reactor		240V - No / 460V -50HP - 800HP		240V - No / 460V -50HP - 800HP		N/A		N/A		N/A		
EMC Filter		Built In (460V only)		Built In (460V only)		Built In (460V only)		Built In (460V only)		Built In (460V only)		



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<b>Functions &amp; Features</b>					
Quick Start	Yes	Yes	In Remote LCD Only	In Remote LCD Only	N/A
Macro Settings	Yes	Yes	N/A	N/A	N/A
Multi Motor Control	N/A	Yes up to 5 aux motors	N/A	N/A	N/A
Multiplex	N/A	Duplex, Triplex, - up to 8 motors	N/A	N/A	N/A
Lead Lag	N/A	Lead / Lag / Alternating	Yes	Yes	N/A
PID Control	Yes	Yes	Yes	Yes	Yes
Regen Avoidance	Yes	Yes	Yes	Yes	Yes
Safe Torque Off	N/A	N/A	Yes	Yes	N/A
Fire Mode	Yes	Yes	Yes	Yes	Yes
Pump Load Tuning	Yes	Yes	N/A	N/A	N/A
<b>Communications</b>					
Modbus-RTU (RS-485) Standard	√	√	√	√	√
Profibus (Option)	X	X	√	X	X
LonWorks (Option)	√	√	X	X	X
Ethernet IP (Option)	√	√	√	√	√
Modbus TCP (Option)	√	√	√	√	√
Metasys - N2 Standard	√	√	X	X	X
BACnet Standard	√	√	X	X	X
CANopen (Option)	X	X	√	√	X
Profinet (Option)	X	X	√	√	X
<b>Environment</b>					
Ambient Temperature	14°F~104°F (-10°C~40°C) up to 122°F (50°C) max. 2.5% per °C current derating	14°F~104°F (-10°C~40°C) up to 122°F (50°C) max. 2.5% per °C current derating	14°F~104°F (-10°C~40°C) up to 122°F (50°C) max. 2% per °C current derating	14°F~104°F (-10°C~40°C), no derating	14°F~104°F (-10°C~40°C) up to 122°F (50°C) max. 2% per °C current derating
Altitude	3280 Ft. (100 Meters) above sea level - Apply 1% derating of output voltage & current for every 328 Ft (100 Meters) elevation up to 4000 meters				
Vibration	9.8m /sec <sup>2</sup> (1.0G) or below				
Protective Function	Over/Under Load, Over Current 1 & 2, Over Voltage, Low Voltage, Phase Open, Ground Fault, Over Heat, Lost Keypad, Lost Reference and more				
Cooling	Forced air cooling fan				
Storage Temperature	-4°F - 149°F (-20°C - 65°C)				
Plenum Rated	Yes (with Conduit Option)	Yes (with Conduit Option)	Yes (with Conduit Option)	N/A	N/A
IP Rating	UL Open (IP00/IP20), UL Type 1 with Conduit Option through 800HP		UL Open (IP00/IP20), UL Type 1 with Conduit Option	UL Type 4X (IP66), Indoor Only	UL Open (IP00/IP20), UL Type 1 with Conduit Option