



In the standard equipment of every DI2020 solution are integrated the **Safe Torque Off (STO)** and **Safe Brake Control** safety functions

In line with the evolution of motion control towards solutions with distributed electronics, Moog's DI2020 drive integrates the servo control directly on board of the FAS H series of high efficiency brushless motors.

This allows the implementation of a decentralized architecture of the machine controls, with a consequent greater design freedom compared to traditional centralized cabinet solutions.

This flexibility ensures substantial savings in installation times and necessary materials, with a remarkable reduction in both the complexity of the wiring and the overall dimensions of the system.

Technical Specifications

Fieldbus control	EtherCAT, CANopen
Control functions	Torque, speed, position
Protection rating	IP 65
Command protocols	EtherCAT, CANopen (in accordance to CIA 402)
PWM Frequency	4-8-16 kHz
Power supply range	282 - 810 Vdc
Environmental operating temperature	From 0°C to 40°C
Auxiliary power supply tension	24 Vdc
Machine safety	STO (Safe Torque Off) SILCL 3 SBC (Safe Brake Control) SILCL 3 PL e (*)
Set-up communication interface	EtherCAT, CANopen, USB
Certification	CE, UL (*)

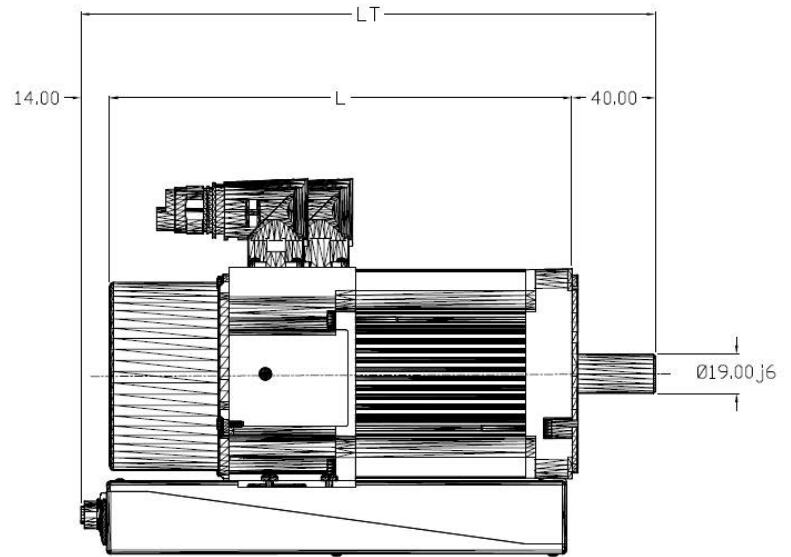
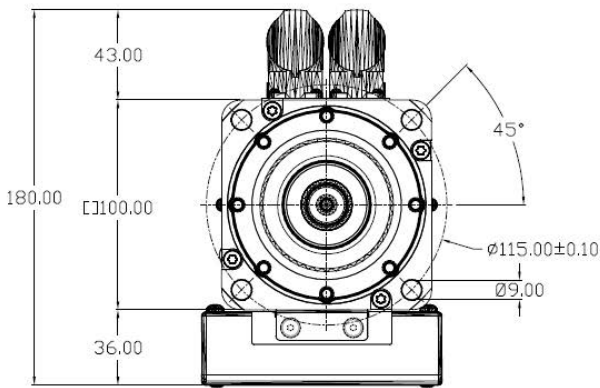
*Pending approval

DI2020

On Board Servodrive *Integrated Solution*

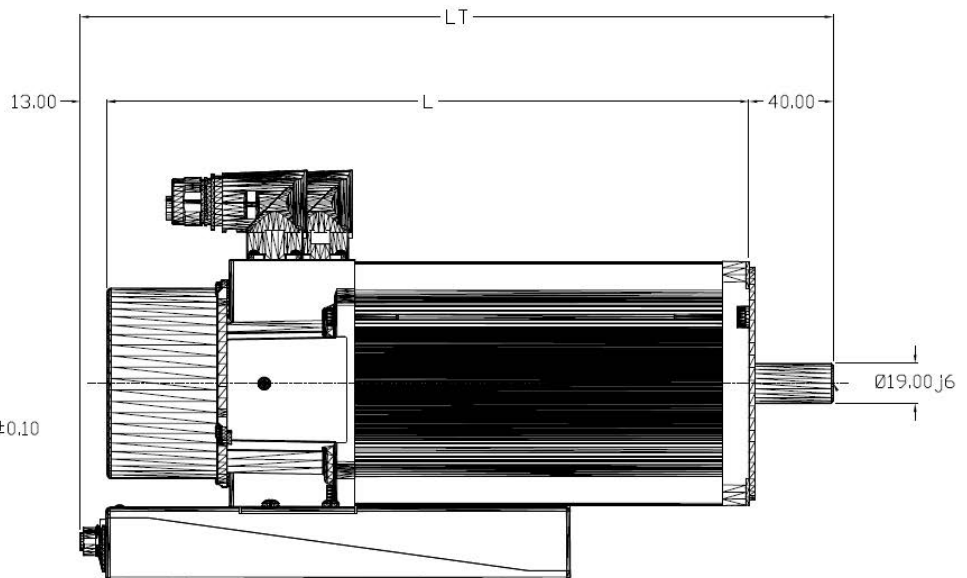
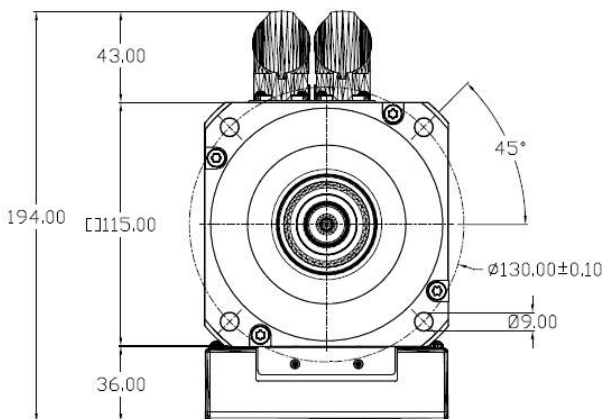
Motor Size 100

Nr of modules	L (no brake)	L (with brake)	LT (no brake)	LT (with brake)
2	220MM/8.66IN	263MM/10.35IN	274MM/10.79IN	317MM/12.48IN
4	263MM/10.35IN	306MM/12.05IN	317MM/12.48IN	360MM/14.17IN



Motor Size 115

Nr of Modules	L (no brake)	L (with brake)	LT (no brake)	LT (with brake)
2	218MM/8.58IN	261MM/10.28IN	271MM/10.67IN	314MM/12.36IN
4	261MM/10.28IN	304MM/11.97IN	314MM/12.36IN	357MM/14.06IN



MOOG

Product Coding



Version	
6	Standard
E	Special

System Data			
Valore	Locked rotor Torque	Rated Torque	Rated Speed
122	2.0 Nm (1.47 ft/lb)	1.7 Nm (1.25 ft/lb)	3000 rpm
142	3.5 Nm (2.58 ft/lb)	2.1 Nm (1.55 ft/lb)	3000 rpm
222	2.7 Nm (1.99 ft/lb)	1.9 Nm (1.40 ft/lb)	3000 rpm
242	5.1 Nm (3.76 ft/lb)	2.0 Nm (1.47 ft/lb)	3000 rpm

Motor Configuration	
Value	Description
00	Flange 100 mm (3.94 in), standard shaft
02	Flange 100 mm (3.94 in), shaft with key
10	Flange 115 mm (4.53 in), standard shaft
12	Flange 115 mm (4.53 in), shaft with key

Transducer type	
Value	Type
2	RESOLVER 2poles
C	ENCODER Sincos Hyperface Single turn Capacitive ⁽³⁾
D	ENCODER Sincos Hyperface Multiturn Capacitive
E	ENCODER Endat 22 Single turn Optical ⁽³⁾
F	ENCODER Endat 01 Multiturn Optical ⁽³⁾
G	ENCODER Endat 22 Multiturn Optical ⁽³⁾
L	ENCODER Endat 01 Single turn Optical ⁽³⁾
I	ENCODER Endat 22 Single turn Inductive ⁽³⁾
N	ENCODER Endat 22 Multiturn Inductive ⁽³⁾

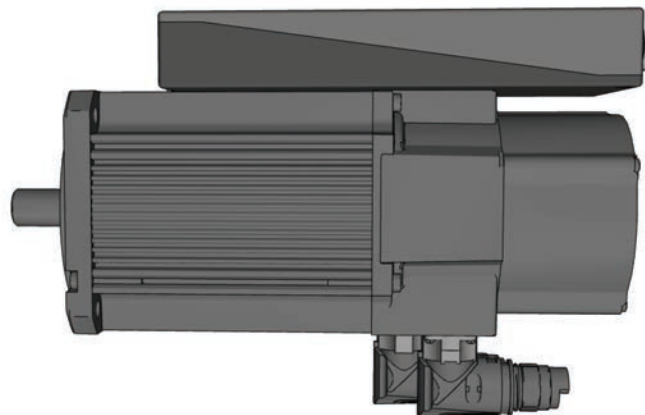
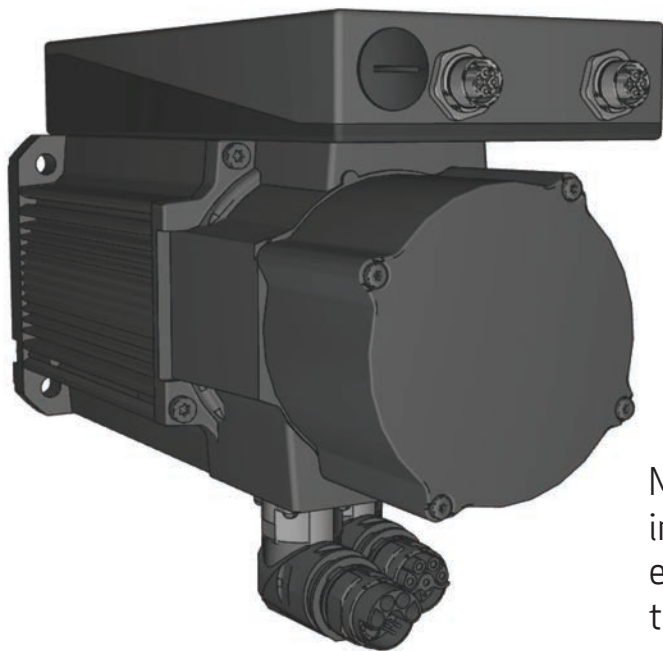
Special versions	
Value - Internal coding ⁽²⁾	

Special configurations	
Value - Internal coding ⁽²⁾	
01	Standard (no brake)
02	With brake
31	No brake with SBC low level ⁽³⁾
32	Brake with SBC low level ⁽³⁾
61	No brake with SBC high level ⁽³⁾
62	Brake with SBC high level ⁽³⁾

Hardware Revision	
Value - Internal coding ⁽²⁾	

Fieldbus configuration	
Value	Type
0	Analogue references (option)
1	CanBus configuration (option)
2	EtherCAT configuration ⁽¹⁾

- (1) Standard Version
- (2) Values assigned by Moog
- (3) In development



Moog's decentralized solution can be perfectly integrated into a multi-axis DM2020 system and each DI2020 drive features independent dynamic thermal protections, both software and hardware.

Available sizes	H100-V2	H100-V4	H115-V2	H115-V4
Continuous stall torque	2Nm(1.47ft/lb)	3,6Nm(2.65ft/lb)	2,8Nm(2.06ft/lb)	5Nm(3.69ft/lb)
Rated torque at rated speed	1,5Nm(1.1ft/lb)	2,2Nm(1.62ft/lb)	1,9Nm(1.4ft/lb)	3,3Nm(2.43ft/lb)
Peak torque	13Nm(9.59ft/lb)	20Nm(14.7ft/lb)	16Nm(11.8ft/lb)	22Nm(16.22ft/lb)
Rated speed	3000 rpm	3000 rpm	3000 rpm	3000 rpm
Peak speed	5500 rpm	5500 rpm	4500 rpm	4500 rpm

Advantages

- Reduction of the number of connections and potential failures
- Reduction in size and number of components
- Adjustable 90° connectors
- Simplification of design
- Significant reduction of costs and installation times

Applications

- Machines with open modular architecture
- High precision and maximum dynamic machines
- Installations in environments with limited space for control cabinets
- Machines that require quick and accurate execution of movements