

Ext. communication to Host System
 A Feeder
 B Weighing System
 C Control Module
 D Operator Interface

Each Coperion K-Tron Weigh feeder consists of the components A, B, C and D.

Component B is specified here.

Application

The D5 scale is designed for use with Coperion K-Tron modular feeders. It is equipped with a patented Smart Force Transducer (SFT) sensor, which provides accurate, stable and reliable digital weight measurement under a broad range of operating conditions.

The newly revamped design features a dust-tight housing and optimized cleanability making it suitable for all industries.

Main Features

- Direct digital weighing
- Onboard microcontroller
- Excellent repeatability and stability
- High resolution 1:8,000,000 in 20 ms
- High tolerance to vibration and electrical noise
- Electronic linearization
- Electronic temperature compensation
- Stiff, rugged construction
- Easy to clean
- Serial channel interface (RS 485)
- Addressable two-way communication

Option

- Pharmaceutical version featuring polished material contact surfaces Ra 0.8 and hygienic support frame

Vibrating Wire Principle of Operation

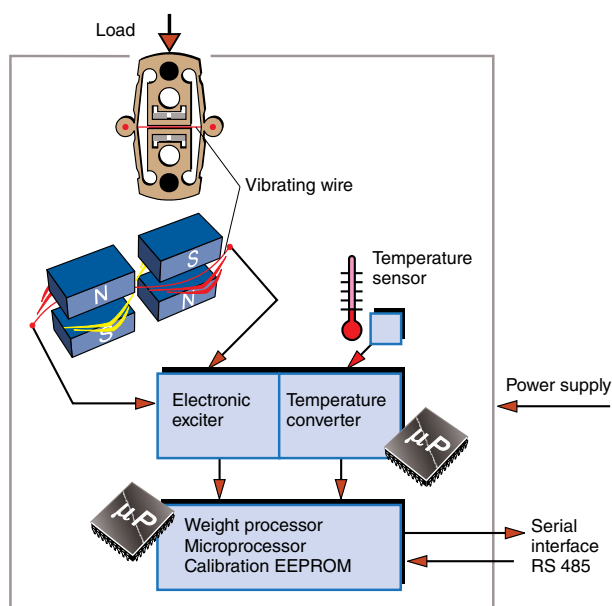
The SFT exploits the dependency of a vibrating wire's resonant frequency on its tension to measure applied loads. Through mechanical means the applied load is transmitted to the wire, causing a change in its resonant frequency from which the weight of the applied load is computed by the onboard microprocessor. A fully calibrated (linearized, spanned and temperature compensated) signal is transmitted via RS 485 serial communication to the controller.



D5 standard design



D5 pharmaceutical design (option)

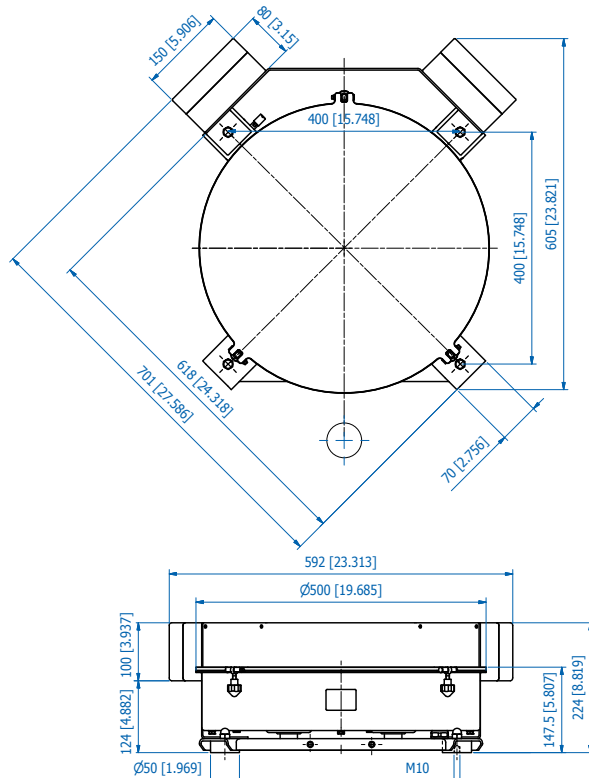


Technical Data

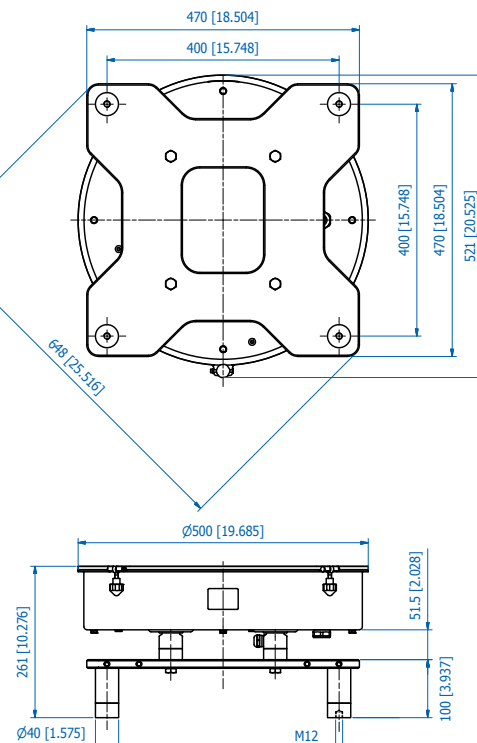
Load range:	450, 600, 1200, 2000 N [45, 60, 120, 200 kg]	
Combined error:	< ± 0,03% (Note: all percentage values are in relation to load capacity)	
Resolution:	1 : 8,000,000 in 20 ms	
Creep:	0.02% of max. value (30 mins)	
Hysteresis:	0.02% max.	
Repeatability:	<= 0.001% (standard deviation of 30 measurements; measuring time 2 s.)	
Temperature drift (per °Kelvin):	SPAN: 0.002% (-10 ... 60°C [14 ... 140°F]) ZERO: 0.003% (-10 ... 60°C [14 ... 140°F])	
Operating temperature range:	-20 ... 60°C [-4 ... 140°F]	
Storage temperature:	-25 ... 80°C [-13 ... 176°F]	
Power supply:	7.2 ... 12.5 VDC	
Power consumption:	max. 0.36 W at 12 VDC	
Communication distance:	max. 500 m [1640 ft]	
Output:	RS 485	
Materials of construction enclosure:	Stainless steel DIN 1.4301 [AISI 304]	
Enclosure rating:	IP65, NEMA 4	
EMI-Protection:	Fully protected against EMI	
Weight:	32 kg [70 lb] standard version, 49 kg [108 lb] Pharma version	
Warranty:	Full five-year warranty from date of shipment	
Hazardous location options:		
ATEX	D5 XPC3	Ex II 3D Ex tc IIIC T65°C Dc
	D5 XPC2	Ex II 2G Ex h ia IIC T4 Gb
		Ex II 2D Ex h ia IIIC T65°C Db
		(with load cell K-SFT-WMOD-I XPC1 EU-Type Examination Certificate SEV 17 ATEX 0160 X, IECEx SEV 170020X) Requires Ex Interface XPC1
Korea	K-SFT-WMOD-I XPC1	KCs cert. KGS 23-GA4BO-0023X, KGS 23-GA4BO-0024X

Dimensions mm [in]

Standard Version



Pharma Version



Caution: these measurements are for general reference only. Please consult dimensional drawing for exact measurements