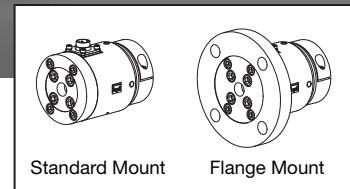


DR-D Series

Drop In Replacement 3-Pin Dead Shaft Load Cells



Montalvo DR-D Series - Drop In Replacement 3-Pin Dead Shaft Load Cells

As alternatives to DFE's Model C Tension Transducers, Montalvo's DR-D Series feature integrated 3-pin connectors while meeting DFE product dimension specifications. In addition to being direct, drop-in replacements, Montalvo's DR-D load cells feature mechanical variance compensation with a stainless steel construction to give you maximum performance and a long service life. DR-D load cells are available in multiple load ratings, two mounting configurations, and three different body sizes to meet the specific requirements of your application.

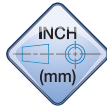
Features & Benefits

- ▶ **Industry Leading Resolution** - and sensitivity for superior accuracy and response
- ▶ **Drop In Replacement Design** - in three sizes to meet the dimensional requirements of your machine
- ▶ **Integrated 3-Pin Connector** - to match existing wiring configurations
- ▶ **Multiple Mounting Options** - standard or flange to fit most any machine frame
- ▶ **Stainless Steel Construction** - and dust proof (IP54) rating for durability and an extended, dependable service life
- ▶ **Mechanical Variance Compensation** - for shaft expansion and misalignment from installation variables
- ▶ **360° Overload Protection**

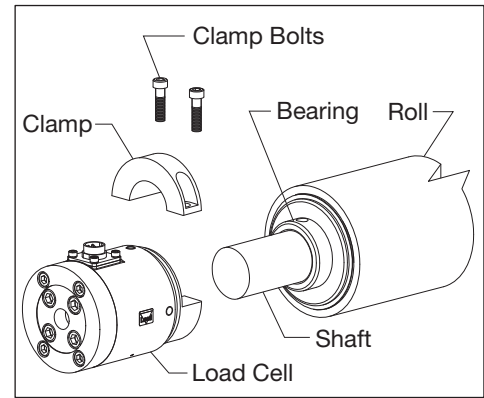
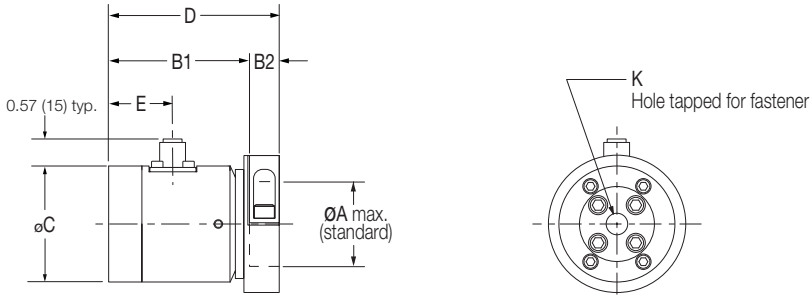
DR-D Series

Drop In Replacement 3-Pin Dead Shaft Load Cells

Dimensions

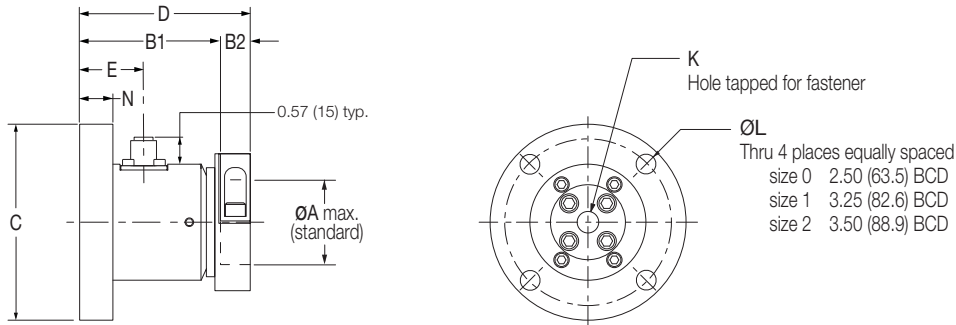


Standard Mount (S)



Model	A	A(metric option)	B1	B2	C	D	E	K	K(metric option)
DRD-I-S0	1.50	40mm	2.48 (62.9)	0.54 (13.7)	2.26 (57.5)	3.02 (76.7)	1.16 (29.5)	3/8"-16 x 0.40"	M10-1.5x10
DRD-I-S1	1.50	40mm	2.52 (63.9)	0.54 (13.7)	2.26 (57.5)	3.06 (77.7)	1.20 (30.5)	1/2"-13 x 0.40"	M12-1.75x10
DRD-I-S2	1.75	40mm	3.00 (76.2)	0.58 (21.3)	2.85 (72.5)	3.84 (97.6)	1.12 (28.6)	5/8"-11 x 0.47"	M16-2.0x12

Flange Mount (F)



Model	A	A(metric option)	B1	B2	C	D	E	K	K(metric option)	L	N
DRD-I-F0	1.50	40mm	2.48 (62.9)	0.54 (13.7)	3.125 (79.4)	3.02 (76.7)	1.16 (29.5)	3/8"-16 x 0.40"	M10-1.5x10	0.354 (9)	0.551 (14)
DRD-I-F1	1.50	40mm	2.52 (63.9)	0.54 (13.7)	4.00 (101.6)	3.06 (77.7)	1.20 (30.5)	1/2"-13 x 0.40"	M12-1.75x10	0.354 (9)	0.59 (15)
DRD-I-F2	1.75	40mm	3.00 (76.2)	0.58 (21.3)	4.49 (114)	3.84 (97.6)	1.12 (28.6)	5/8"-11 x 0.47"	M16-2.0x12	0.531 (13.5)	0.45 (11.6)

Note: Pillow Block Mounted Load Cells

DR-D bodies are designed to fit within existing pillow block mounts. If you require a new pillow block mount, please let us know.

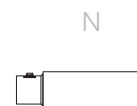
DR-D Series

Drop In Replacement 3-Pin Dead Shaft Load Cells

How To Specify

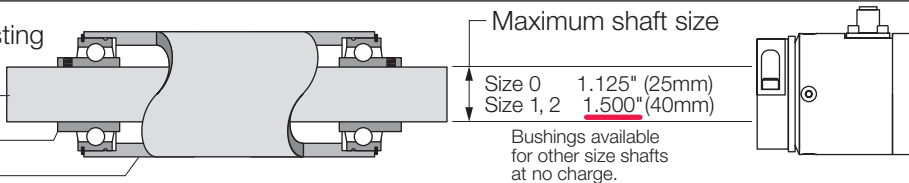
Series

DR-D, ES, N, or U



Shaft / Shaft Size in (mm)

I- Dead Shaft Idler Roller consisting of the following components:
 Shaft _____
 Bearing _____
 Roller _____



Mount

S or F

S (standard)

F (flange)



Size

0, 1 or 2

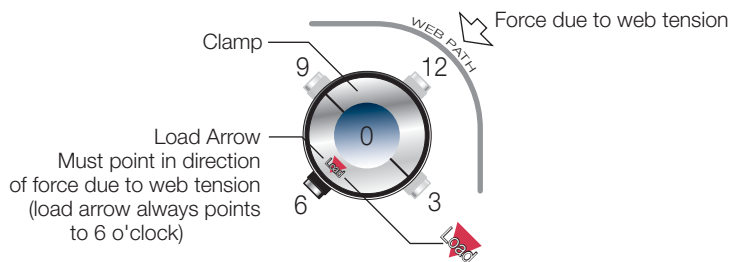
Consider the following:
 Load rating, shaft size, dimensions and replacement mounting

0	1	2
Lower Loads Smaller Shafts Smaller Dimensions	Lower Loads Smaller Shafts Smaller Dimensions	Higher Loads Larger Rollers Larger Dimensions

Connector Position

6 (standard)
 3, 9 or 12 (available upon request)

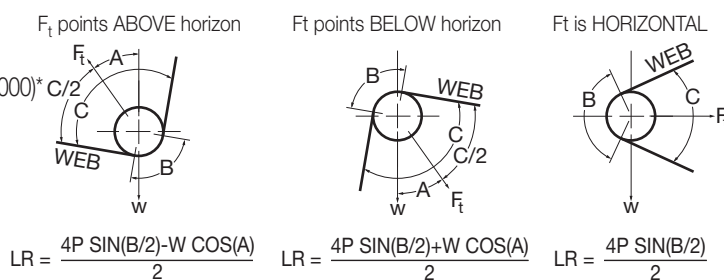
Position is relative to LOAD ARROW (except P mount), which is always 6, as observed from clamp end of load cell.



Load Rating lb (N)

Size 0 10(50), 25(125), 50(250), 75(375), 100(500), 150(750)
 Size 1 100(500), 150(750), 250(1250)
 Size 2 75(375), 100(500), 150(750), 250(1250), 500(2500), 1000*(5000)*

- LR load rating
- P maximum tension (pull) on web
- B wrap angle
- W weight of roller in pounds
- A angle between F_t and vertical axis
- C angle between entering and exiting web
- F resultant force



$$LR = \frac{4P \sin(B/2) - W \cos(A)}{2}$$

$$LR = \frac{4P \sin(B/2) + W \cos(A)}{2}$$

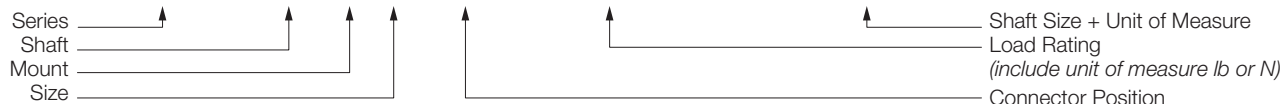
$$LR = \frac{4P \sin(B/2)}{2}$$

* For F mount only.

Note: It is recommended that Montalvo be contacted to ensure proper sizing.

Example

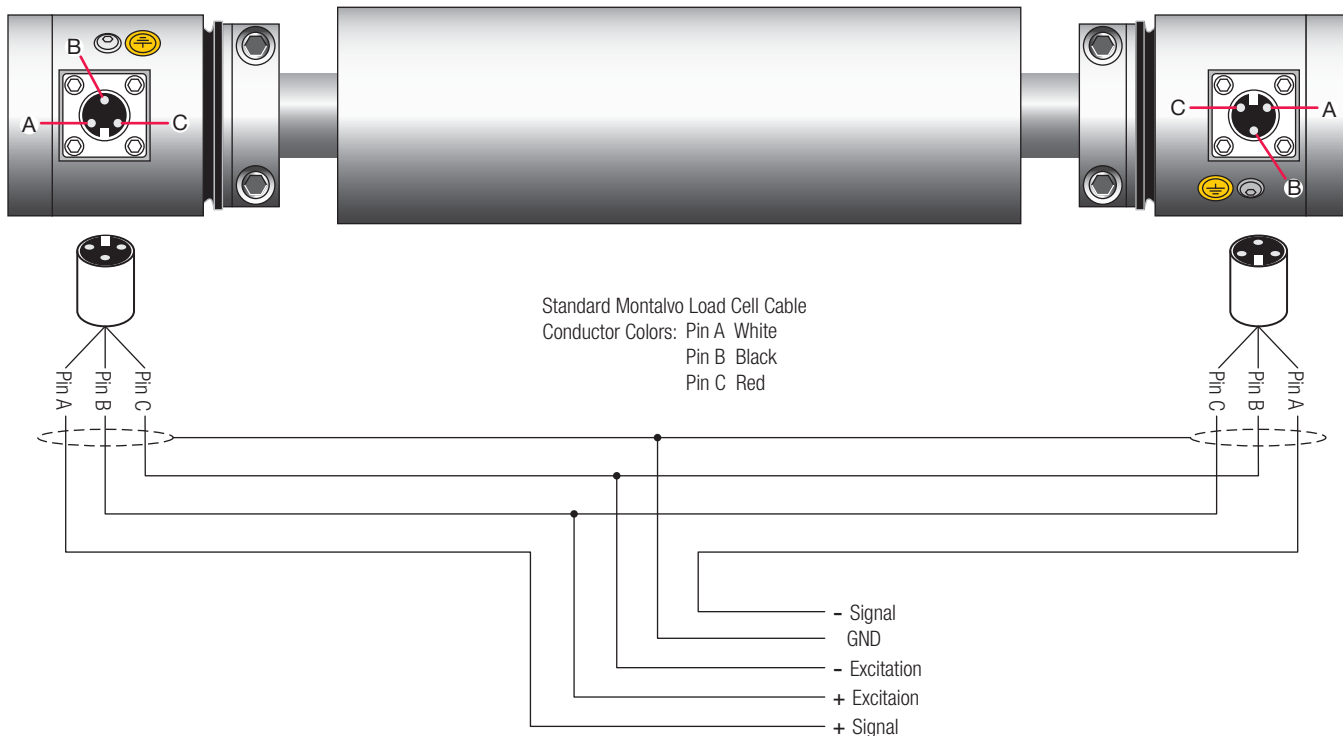
DR-D - I - F 2 - 6 - 500 lb - 1.500 in



DR-D Series

Drop In Replacement 3-Pin Dead Shaft Load Cells

Wiring



Specifications

Electrical

Excitation.....5 VDC
 Output..... 250 mV, nominal @ full load
 Gauge Resistance..... 80 - 130 Ω
 Type half bridge semi-conductor
 Non-Repeatability..... ±1/4% full span
 Non-Linearity and Hysteresis (combined)..... ±1/2% full span

Connector

Type Amphenol MS3106A-10SL-3S
 Pin A..... Signal
 Pin B Excitation
 Pin C Excitation

Load Ratings - lb (N)

Size 0 10(50), 25(125), 50(250), 75(375), 100(500), 150(750)
 Size 1 100(500), 150(750), 250(1250)
 Size 2 75(375), 100(500), 150(750), 250(1250), 500(2500), 1000*(5000)*
 Overload Stops 110% of Load Rating
 Overload Rating..... 300% of Load Rating

* For F and P mounts only.

Note: It is recommended that Montalvo be contacted to ensure proper sizing.

Environmental

ClassificationIP54
 Temperature °F (°C)
 Operating range -4 to +150 (-20 to +70)
 Coefficient (% per degree)..... 0.02 (0.01) typ.

Mechanical

Deflection in (mm)..... 0.008 to 0.015 (0.203 to 0.381)
 Alignment 1° max.
 Bore** Size 0 1-1/2" or (40 mm) std.
 Size 1 1-1/2" or (40 mm) std.
 Size 2 1-3/4" or (40 mm) std.

*Bushings available for smaller shaft sizes.

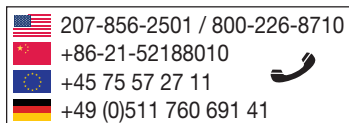
Finish stainless steel

Common Replacement Units

DRD-I-S-0 replaces DFE C-0-D-S
 DRD-I-S-1 replaces DFE C-1-D-S
 DRD-I-S-2 replaces DFE C-2-D-S

Related Montalvo Products

Tension Controllers
 Load Cell Amplifiers
 Tension Indicators
 and... Cables



The Montalvo Corporation

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 Fax: 1-800-644-5097 / 207-856-2509

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