

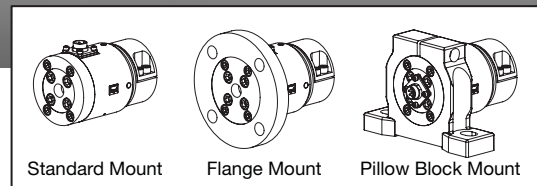
DR-C Series

Drop In Replacement Full Bridge Dead Shaft Load Cells

**available in half bridge upon request*



IP54



Montalvo DR-C Series - Drop In Replacement Full Bridge Dead Shaft Load Cells

As **alternatives to CMC Ultra and Legacy dead shaft style load cells**, Montalvo's DR-C Series are available in full bridge (or half bridge upon request) configurations, and meet CMC product dimension specifications. In addition to being direct, drop-in replacements, Montalvo's DR-C load cells feature mechanical variance compensation while a stainless steel construction gives you maximum performance with a long service life. DR-C load cells are available in multiple load ratings, three mounting configurations, two bridge options, and two different body sizes. If you require a full bridge load cells with different dimensions, Montalvo ES Series Cartridge Load Cells are also available in Full Bridge Configurations.

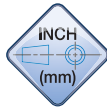
Features & Benefits

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

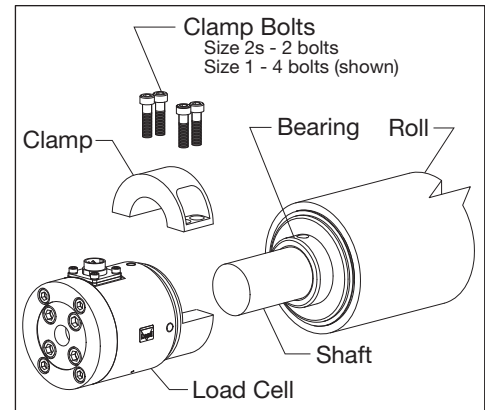
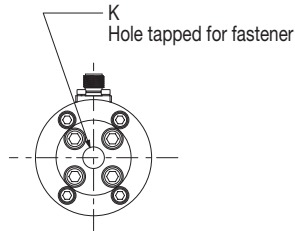
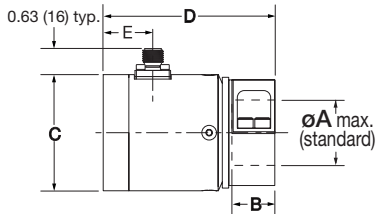
DR-C Series

Drop In Replacement Full Bridge Idler Roll Load Cells

Dimensions

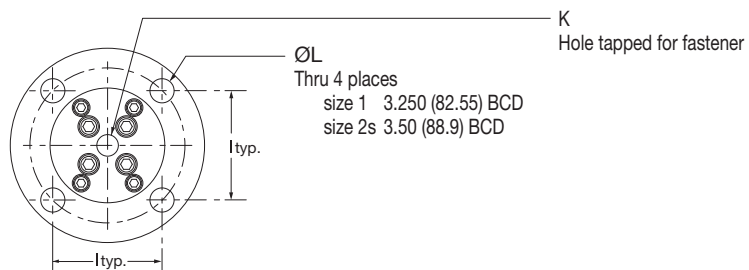
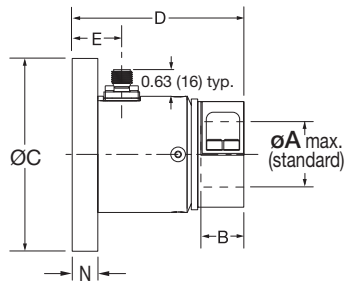


Standard Mount (S)



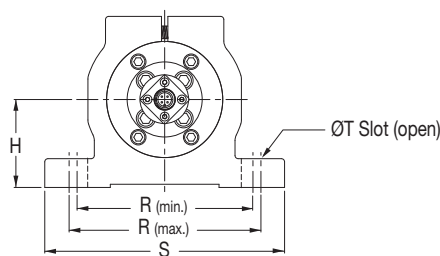
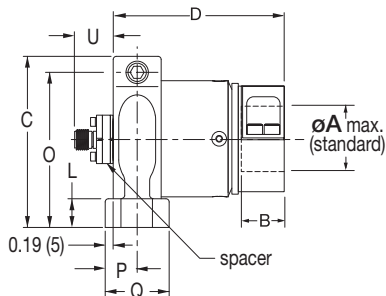
Model	A	A(metric option)	B	C	D	E	K	K(metric option)
DRC-I-S1	1.50	40mm	1.03 (26.2)	2.26 (57.5)	3.63 (92.2)	1.12 (28.5)	1/2"-13 x 13/32"	M12-1.75x10
DRC-I-S2s	1.50	40mm	0.86 (21.8)	2.85 (72.5)	3.86 (98.1)	1.05 (26.6)	5/8"-11x5/8"	M16-2.0x16

Flange Mount (F)



Model	A	A(metric option)	B	C	D	E	I typ.	K	K(metric option)	L	N
DRC-I-F1	1.50	40mm	1.03 (26.2)	4.00 (101.6)	3.63 (92.2)	1.12 (28.5)	2.298 (58.4)	1/2"-13 x 13/32"	M12-1.75x10	0.433 (11)	0.59 (15)
DRC-I-F2s	1.50	40mm	0.86 (21.8)	4.48 (114)	3.86 (98.1)	1.22 (31)	2.47 (62.9)	5/8"-11x5/8"	M16-2.0x16	0.531 (13.5)	0.63 (16)

Pillow Block Mount (P)



Model	A	A(metric)	B	C	D	H	L	O	P	Q	R (min.)	R (max.)	S	T	U
DRC-I-P1	1.50	40mm	1.03 (26.2)	3.24 (82.3)	3.63 (92.2)	1.626 (41.3)	0.445 (11.3)	2.96 (75.2)	0.59 (15)	1.18 (30)	3.39 (86.1)	4.00 (101.6)	4.57 (116)	0.53 (13.5)	1.62 (41.1)

DR-C Series

Drop In Replacement Full Bridge Idler Roll Load Cells

How To Specify

Series

DR-C, ES, N, or U

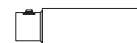
DR-C



ES



N

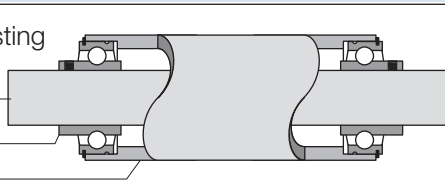


U



Shaft / Shaft Size in (mm)

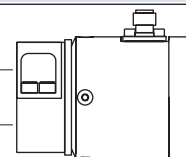
- I - Dead Shaft Idler Roller consisting of the following components:
 - Shaft _____
 - Bearing _____
 - Roller _____



Maximum shaft size

1.500" (40mm)

Bushings available for other size shafts at no charge.



Mount

S, F, or P

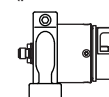
S (standard)



F (flange)



P (pillow block)

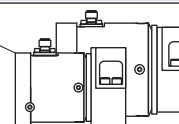


Size

1 or 2s

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

1
Lower loads
Smaller shafts
Smaller Dimensions

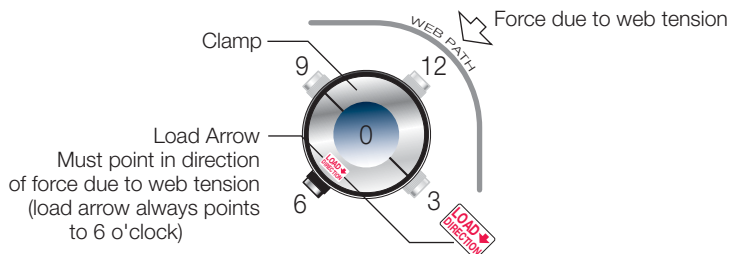


2s
Higher Loads
Larger Rollers
Larger Dimensions

Connector Position

- 6 (standard on S and F mounts)
- 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.

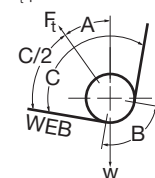


Load Rating lb (N)

- Size 1 50(250), 75(375), 100(500), 150(750), 250(1250)
- Size 2s 75(375), 100(500), 150(750), 250(1250), 500(2500), 1000(5000)

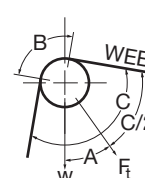
- LR load rating
- P maximum tension (pull) on web
- B wrap angle
- W weight of roller in pounds
- A angle between F_t and vertical axis
- C angle between entering and exiting web
- F resultant force

F_t points ABOVE horizon



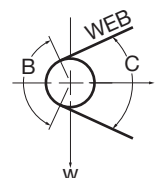
$$LR = \frac{4P \sin(B/2) - W \cos(A)}{2}$$

F_t points BELOW horizon



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

F_t is HORIZONTAL

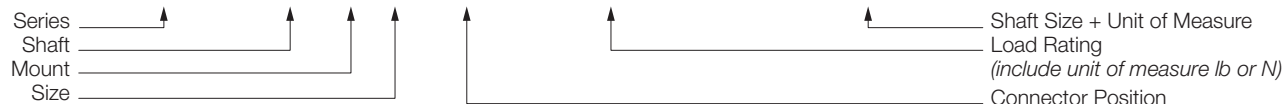


$$LR = \frac{4P \sin(B/2)}{2}$$

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

Example

DR-C - I - F 1 - 6 - 500lb - 1.500in



EST. 1947

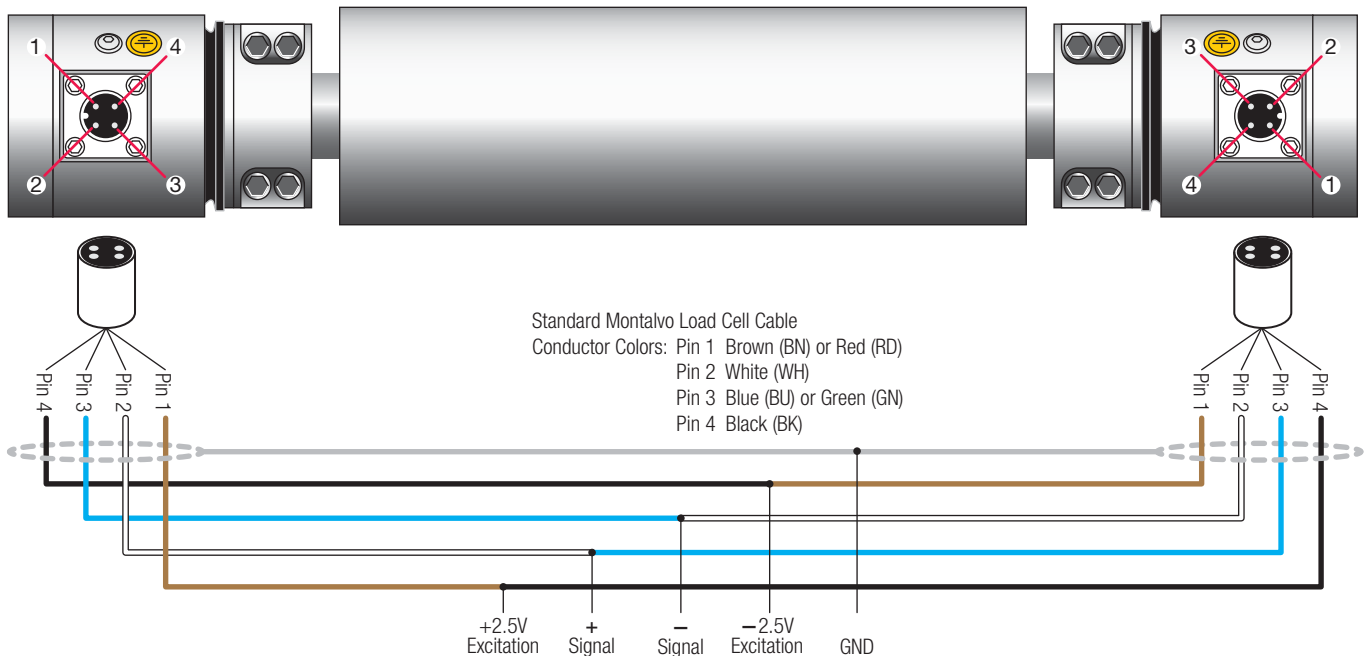
montalvo

Better Web Control®

DR-C Series

Drop In Replacement Full Bridge Idler Roll Load Cells

Wiring



Specifications

Electrical

Excitation.....5 VDC
 Output..... 500 mV, nominal @ full load
 Gauge Resistance..... 80 - 130 Ω
 Type full bridge semi-conductor
 Non-Repeatability..... ±1/4% full span
 Non-Linearity and Hysteresis (combined)..... ±1/2% full span

Connector

Type Male 4 pin M12
 Pin 1 Excitation
 Pin 2..... Signal
 Pin 3..... Signal
 Pin 4..... Excitation

Load Ratings - lb (N)

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

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 1 1-1/2" or (40 mm) std.
 Size 2s 1-1/2" or (40 mm) std.

*Bushings available for smaller shaft sizes.

Finish stainless steel

Common Replacement Units

DRC-I-S-1 replacesCMC 1T
 DRC-I-S-2s replacesCMC 2T

Related Montalvo Products

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

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	+49 (0)511 760 691 41



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Better Web Control®

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Technical details subject to change without notice. DRCI-US-8 © Montalvo