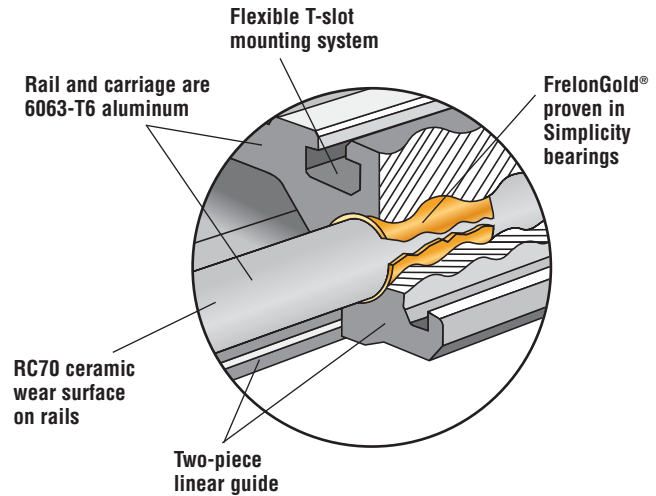- Based on proven Simplicity® linear bearing technology
- Two-piece assembly eliminates tolerance stack up
- No metal-to-metal contact
- Dampens vibration and shock loads
- FrelonGOLD® bearing material is self-lubricating
- RC70 ceramic coating withstands contamination
- Lightweight
- Easy to install
- Integrated packages can drop into existing applications
- Plug and Play controls

Flexible T-slot mounting system

Rail and carriage are 6063-T6 aluminum

FrelonGold® proven in Simplicity bearings

RC70 ceramic wear surface on rails

Two-piece linear guide

THREE SIMPLE OPTIONS MAKE SELECTION EASY...

1 Carriages with standard length rails or cut-to-length rails. Install your own choice of drive mechanisms.

2 Lead screw driven carriage with standard length rail is ready to drop into your existing application.

3 Lead screw driven package including motor and drive providing plug-n-play linear motion.

Introducing a New Class of Slide Dolphin Guides

2–Piece Design
Our DFA design delivers a unique two-piece slide vs. hundreds of components in competitive units.

Drive Options
Choose from ball or lead screws, belt drives, etc. Integrate your own or consult the factory for assistance.

Feather Shaft™
Our new ceramic-coated shaft is 66% lighter than steel.
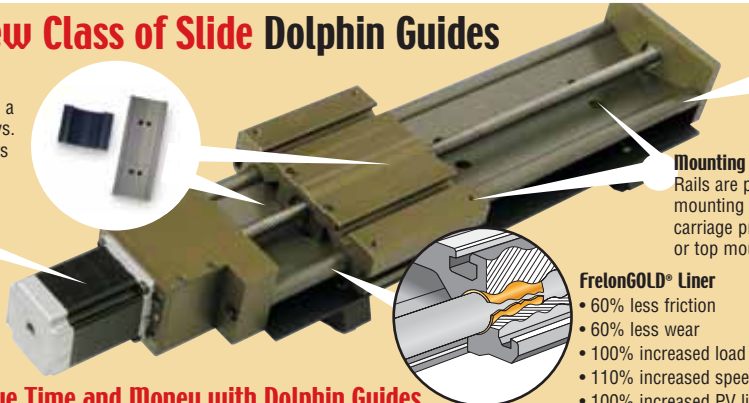
Mounting Flexibility
Rails are pre-drilled for mounting ease. The carriage provides side or top mounting.

Sample Program
We know that if you try this product you will love it. Call to discuss our Sample Program.

FrelonGOLD® Liner
- 60% less friction
- 60% less wear
- 100% increased load capacity
- 110% increased speed limits
- 100% increased PV limits

Pacific® bearing

dolphin guides Save Time and Money with Dolphin Guides

DOLPHIN GUIDES®
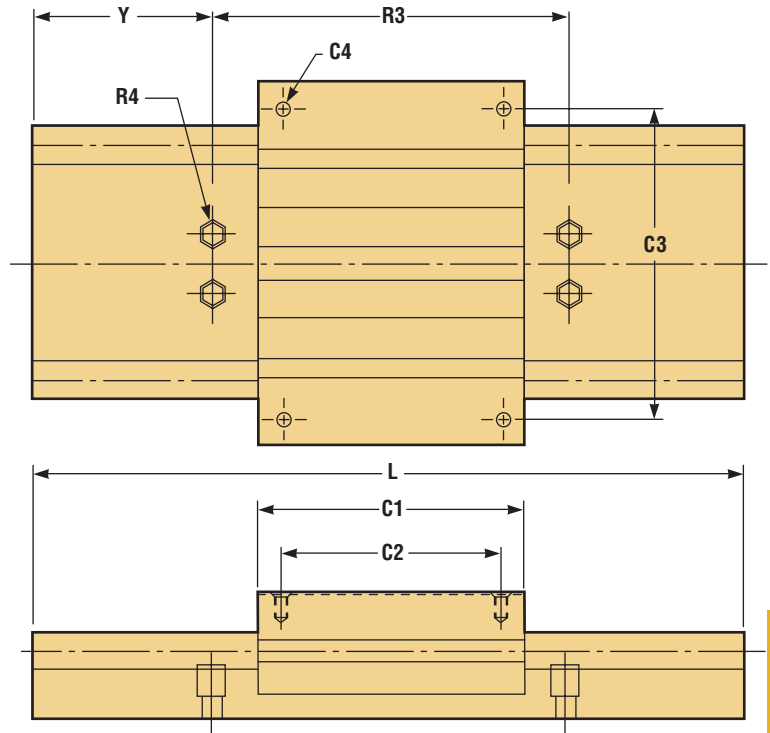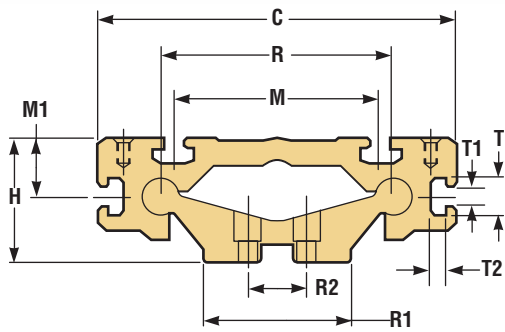
STANDARD INCH SERIES DOLPHIN GUIDE WITH NO DRIVE MECHANISM (Dimensions in Inches)

PART NO.	R	R1	R2	R3	R4 BOLT SIZE	Y	H	C	C1 STANDARD	C2 STANDARD	C1 EXTENDED	C2 EXTENDED	C3	C4 BOLT SIZE	M	M1	L MAX-FEET
D075-xxx	2.95	2	0.75	4	1/4	2	1.625	4.6	3.5	3	4.5	4	4	10-32	2.6	.819	12'
D100-xxx	3.94	2.6	1	6	5/16	3	2.125	6.1	4.5	3.75	6	5.25	5.25	1/4-20	3.5	1.02	12'
D125-xxx	4.92	3.3	1.25	6	3/8	3	2.625	7.6	6	5.25	7.5	6.75	6.75	5/16-18	4.33	1.30	12'

T-SLOT INFORMATION (Inches)

PART NO.	T	T1	T2
D075-xxx	.590	.256	.236
D100-xxx	.661	.319	.268
D125-xxx	.661	.319	.268

METRIC SERIES DOLPHIN GUIDE WITH NO DRIVE MECHANISM (Dimensions in mm)

PART NO.	R	R1	R2	R3	R4 BOLT SIZE	Y	H	C	C1 STANDARD	C2 STANDARD	C1 EXTENDED	C2 EXTENDED	C3	C4 BOLT SIZE	M	M1	L MAX-METER
DM075-xxx	75	51	20	120	M 6	60	41.3	117	85	73	110	98	105	M 5	66	16.5	3.66m
DM100-xxx	100	66	25	150	M 8	75	54	155	115	95	150	130	135	M 6	89	26	3.66m
DM125-xxx	125	84	30	200	M 10	100	66.7	193	150	130	190	170	175	M 8	110	33	3.66m

T-SLOT INFORMATION (mm)

PART NO.	T	T1	T2
DM075-xxx	15.0	6.5	6.0
DM100-xxx	16.8	8.1	6.8
DM125-xxx	16.8	8.1	6.8

STANDARD LENGTHS CHART (Dimensions in Inches)

PART NO.	8"	12"	16"	18"	20"	24"	28"	30"	32"	36"	40"	42"	48"
D075-xxx	X	X	X		X	X	X		X	X	X		X
D100-xxx		X		X		X		X		X		X	X
D125-xxx		X		X		X		X		X		X	X

WEIGHTS

PART NO.	RAIL PER INCH (LBS.)	STANDARD CARRIAGE (LBS.)	EXTENEDED CARRIAGE (LBS.)
D075-xxx	0.19	0.98	1.26
D100-xxx	0.32	2.12	2.82
D125-xxx	0.48	4.56	5.7

Standard Lead Screw Specifications:

• Right Hand Rolled Thread

• 303 Stainless Steel with TFE Coating

• Self-lubricating Polyacetal, Anti-Backlash Nut

• Standard Accuracy = .0072 in./ft.

• Repeatability = .0002"
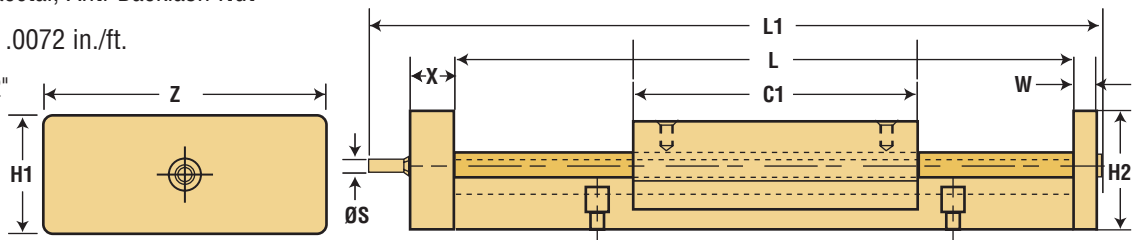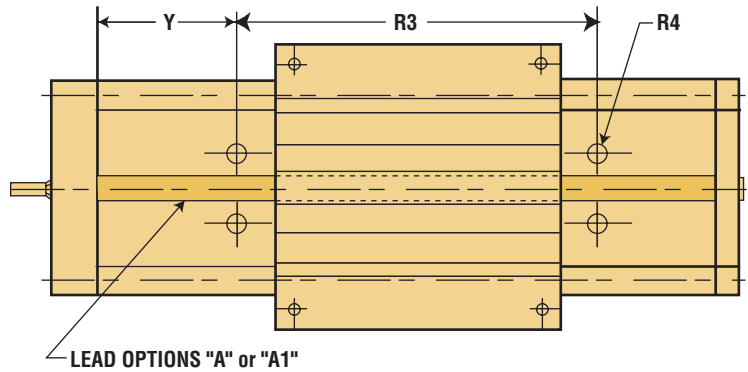
LEAD OPTIONS "A" or "A1"

REFER TO PAGE 13 FOR DIMENSIONS NOT SHOWN. CALL THE FACTORY FOR NON-STANDARD LENGTHS.

PART NO.	Stroke (L-C1)	L	L1	C1	Nominal Screw Dia.	A Standard Lead	A1 Optional Lead	S	Y	R3	R4	W	X	Z	H1	H2
D075xx-12	8.5	12	13.93	3.5	3/8"	0.250	0.500	0.187	2	4	1/4	0.375	0.625	3.42	1.75	1.625
D075xx-16	12.5	16	17.93	3.5	3/8"	0.250	0.500	0.187	2	4	1/4	0.375	0.625	3.42	1.75	1.625
D075xx-20	16.5	20	21.93	3.5	3/8"	0.250	0.500	0.187	2	4	1/4	0.375	0.625	3.42	1.75	1.625
D075xx-24	20.5	24	25.93	3.5	3/8"	0.250	0.500	0.187	2	4	1/4	0.375	0.625	3.42	1.75	1.625
D100xx-12	7.5	12	14.61	4.5	1/2"	0.250	0.500	0.314	3	6	5/16	0.5	1	4.56	2.5	2.500
D100xx-18	13.5	18	20.61	4.5	1/2"	0.250	0.500	0.314	3	6	5/16	0.5	1	4.56	2.5	2.500
D100xx-24	19.5	24	26.61	4.5	1/2"	0.250	0.500	0.314	3	6	5/16	0.5	1	4.56	2.5	2.500
D100xx-30	25.5	30	32.61	4.5	1/2"	0.250	0.500	0.314	3	6	5/16	0.5	1	4.56	2.5	2.500
D125xx-12	6	12	14.85	6	5/8"	0.250	0.500	0.314	3	6	3/8	0.5	1	5.78	3.5	2.500
D125xx-18	12	18	20.85	6	5/8"	0.250	0.500	0.314	3	6	3/8	0.5	1	5.78	3.5	2.500
D125xx-24	18	24	26.85	6	5/8"	0.250	0.500	0.314	3	6	3/8	0.5	1	5.78	3.5	2.500
D125xx-30	24	30	32.85	6	5/8"	0.250	0.500	0.314	3	6	3/8	0.5	1	5.78	3.5	2.500
D125xx-36	30	36	38.85	6	5/8"	0.250	0.500	0.314	3	6	3/8	0.5	1	5.78	3.5	2.500

"xx" – Insert lead screw selection in Part Number. Example: D100A-18

OPTIONAL HAND CRANK
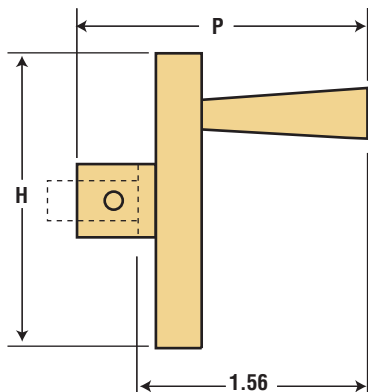
PART NO.	P	H
75H	2.31	1.75
100H	2.31	2.25
125H	2.31	3.25

To integrate with option #2 on page 10, see order codes on page 14.

OPTIONAL MOTOR MOUNT ATTACHMENT
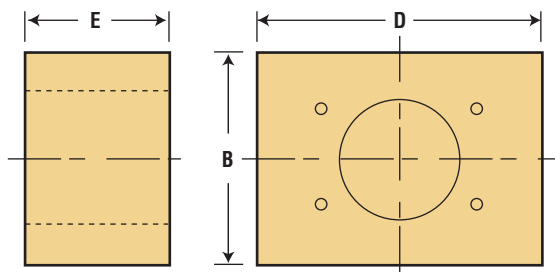
PART NO.	MOTOR MOUNT	B	E	D
75N	NEMA 17	2	1.81	3.25
100N	NEMA 23	2.5	1.81	3.25
125N	NEMA 34	3.5	2.30	4.25

To integrate with option #2 or #3 on page 10, see order codes on page 14.

STATIC LOADS WITH NO DRIVE MECHANISM

The numbers below are for guides only in a static condition. The drive mechanism selected (lead screw, ball screw, cylinder, etc.) becomes the limiting factor when calculating maximum load and speed capacities. The user is responsible for determining the maximum capacity for the complete system based on the manufacturer's data for their drive configuration.
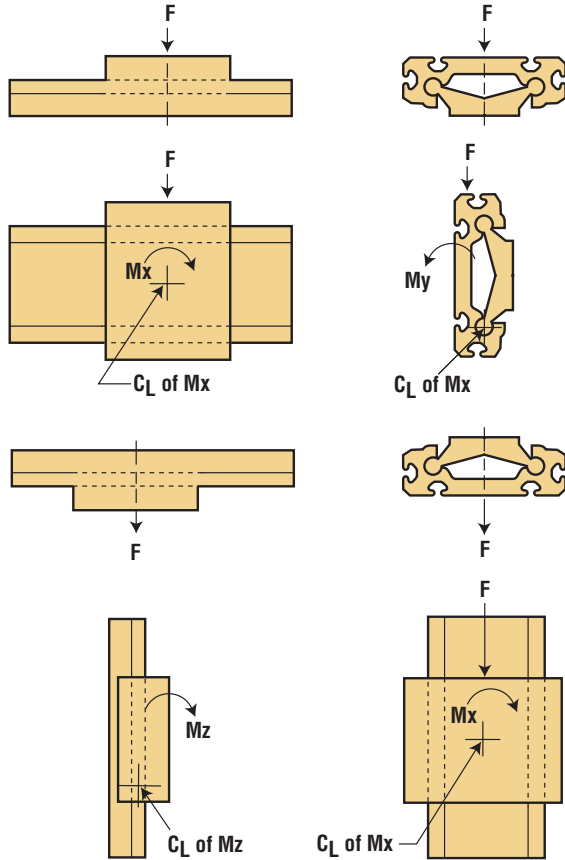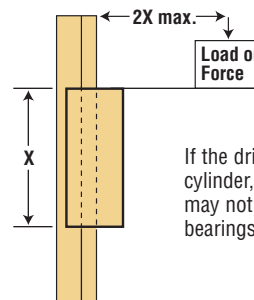
SIZE	F MAX LOAD (LBS.)
D075	500
D100	750
D125	1,000

SIZE	F MAX LOAD (LBS.)	Mx (IN-LBS.)	My (IN-LBS.)
D075	250	340	350
D100	375	650	730
D125	500	1,200	1,225

SIZE	F MAX LOAD (LBS.)
D075	125
D100	190
D125	250

SIZE	Mx (IN-LBS.)	Mz (IN-LBS.)
D075	340	350
D100	650	730
D125	1,200	1,225

Designs must also operate within the following dynamic parameters:
• Maximum Loads (P) = from charts above
• Maximum Speed Dry (V) = 300 ft./min.
• Maximum PV (pressure x velocity) = 20,000
• PV Example: Load = 85 psi
              Speed = 180 ft./min.
              PV = 85 x 180 = 15,300 PV

NOTE: FrelonGold® bearing material coefficient of friction is 0.125.

2X max.

Load or Force

X

If the drive mechanism (lead screw, ball screw, cylinder, etc.) is centered on the carriage, the load may not exceed a 2:1 ratio to the length of the bearings or binding will occur.
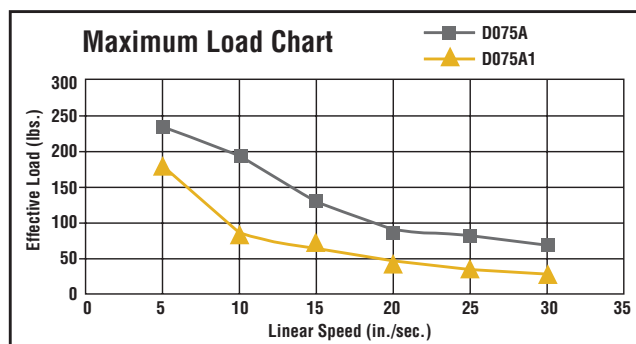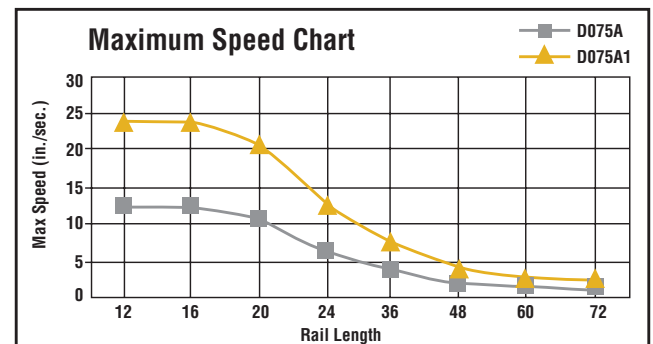
LOAD & SPEED DATA FOR STANDARD LEAD SCREW DRIVEN DOLPHIN GUIDES
(Horizontal Orientation)

D075A-xxx

Maximum Load Chart — D075A, D075A1
Effective Load (lbs.) vs. Linear Speed (in./sec.)

D075A-xxx

Maximum Speed Chart — D075A, D075A1
Max Speed (in./sec.) vs. Rail Length

DOLPHIN GUIDES®

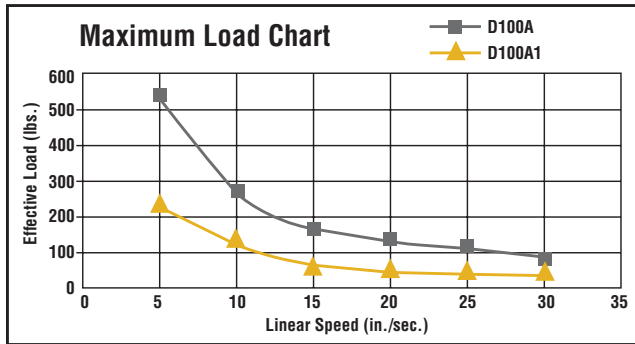# LOAD & SPEED DATA FOR STANDARD LEAD SCREW DRIVEN DOLPHIN GUIDES

(Horizontal Orientation)

D100A-xxx

Maximum Load Chart

Legend: D100A, D100A1

Effective Load (lbs.) vs Linear Speed (in./sec.)

D100A-xxx

Maximum Speed Chart

Legend: D100A, D100A1

Max Speed (in./sec.) vs Rail Length

D125A-xxx

Maximum Load Chart

Legend: D125A1, D125A

Effective Load (lbs.) vs Linear Speed (in./sec.)

D125A-xxx

Maximum Speed Chart

Legend: D125A, D125A1

Max Speed (in./sec.) vs Rail Length
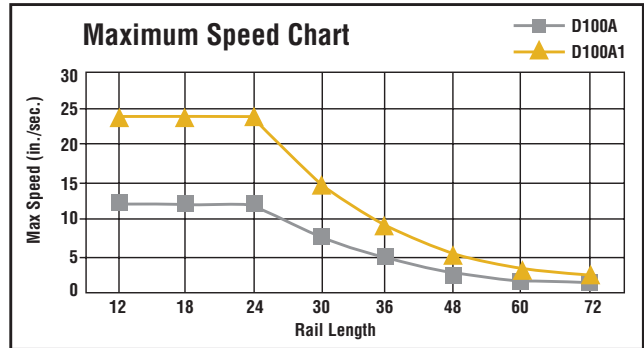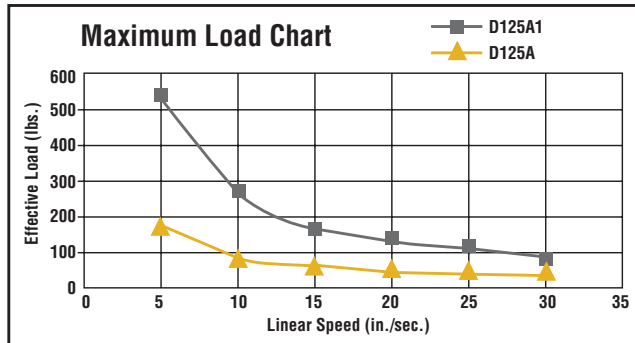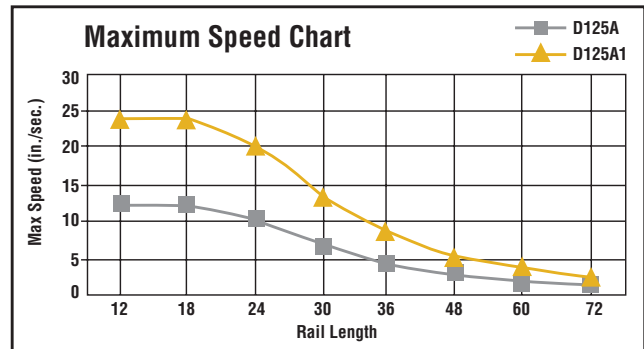
DOLPHIN GUIDES ORDERING CODE

D L M 100 A CHB – xxx P M

Series
D - Standard Dolphin Guides

Carriage Options
No Entry - Standard Dolphin Carriage
L - Extended Length Carriage

Mounting Hole Options
No Entry - Standard Inch Sizes
M - Metric Size Mounting Holes

Nominal Size
75mm
100mm
125mm
Based on mm from shaft center-to-center

Drive Options
No Entry - No Drive Mechanism
A - Right Hand Lead Screw with Standard Pitch
A1 - Right Hand Lead Screw with Optional Pitch
See page 12 for lead screw specifications.
Call the factory for other optional drive mechanisms.
Note: Screw options require attaching collar.

Drive Mounting Options
No Entry - No Drive Mounting Options
H - Hand Crank
N - NEMA Standard Motor Mount
See page 12 for specifications.
HB - Handbrake (requires handcrank and screw)
CHB - Carriage Handbrake (not offered with screw driven options)

Data Entry Option
No Entry - No Options
M - Optional MMI Keypad
(Man-to-Machine Interface)

Power and Control Options
No Entry - No Power Options
P - Standard Motor with Motor Mount,
Programmable Drive, Cables
and Software (must have "N" in
Drive Mounting Option)
Note: Kits available for NEMA motor

Overall Rail Length
"D" Series - Enter Length of Rail in Inches
"DM" Series - Enter Length of Rail in mm

Side tab: **DOLPHIN GUIDES**®