

How to Select Reels

Gleason Electric Cable Reels are assembled from several components with a great variety of combinations possible. In order to select the CORRECT reel from the following pages, follow STEPS 1–3 on this page.

STEP 1 Identify Your Cable

Cable is the **WHAT** in reel selection. **WHAT** is the size (AWG) and number of conductors. Reel calculations are based on the cable weight per foot, active travel and cable O.D. Fill in “Selection Input Required” on the facing page for each reel you order.

STEP 2 Identify Your Application

Application is the **HOW** in reel selection. From the [applications](#) on the facing page, choose the one that resembles the way you are applying the cable in STEP 1 above. There are specific selection charts on the following pages for each application type. Reel calculations are based on **HOW** you want to handle the cable. Note: Identify any added weight such as extra cable (overhang) or pushbutton stations – Selection charts do NOT consider any added weight.

STEP 3 Select a Reel Model

Applying your input from STEP 1 and STEP 2, the correct reel model number may be found in the Selection Charts on the following pages. Note that either an MMD Reel or SM Reel can be used in many applications.

EXAMPLE: A reel must LIFT [TURN TO LIFT CHART] #12 AWG, 10 conductor cable [FIND “14-AWG, 10 CONDUCTOR” ROW] for a Total Travel 40.0 feet, ONE WAY PAYOUT – see Fig. 1 below. Active Travel is, therefore, 40 feet [FIND “40 FEET” COLUMN, THEN FOLLOW “40 FEET” COLUMN DOWN TO “12-AWG, 10 CONDUCTOR” ROW. THE INTERSECTION IS THE CORRECT REEL MODEL – MMD21-1001-103-13-1 or SM211001 - 103 - 13- M - 1].

For requirements not fully covered in the Selection Charts such as cable sizes, greater Active Travel or greater weight, contact your factory representative. We will be happy to make specific calculations for you.

Definition of terms

- **Active Travel** = The **DISTANCE** in **ONE DIRECTION** from reel centerline to full extension of cable; the **TRAVEL** allowed by one full cable extension. See Figures 1 & 2 below.
- **Total Travel** = The **TOTAL DISTANCE** reel is to service. See Figures 1 & 2 below.
- **Payout** = The **ACTION** of cable winding off of the reel, in one or two directions. See Figures 1 & 2 below.
- **Cable Length** = The total **AMOUNT** of cable **REQUIRED** for connections, unwind/wind, SAG (if any) and “extra” lengths you require. See “Cable Length–Don’t Cut Yourself Short” at the back of this catalog.

REMEMBER: Cable Length is NEVER equal to Active Travel or Total Travel!

Fig. 1 **ONE-WAY PAYOUT**

TOTAL TRAVEL = ACTIVE TRAVEL

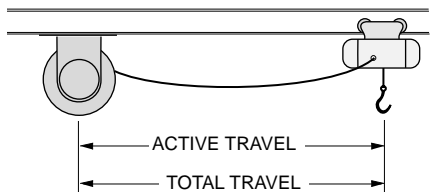
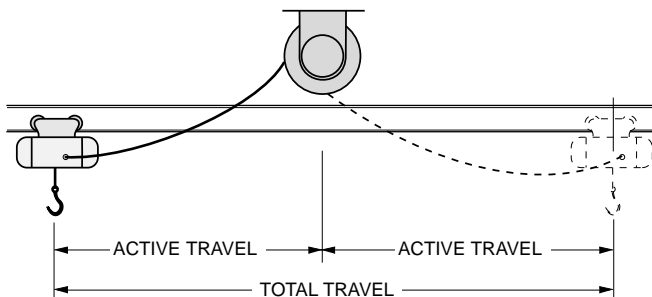


Fig. 2 **TWO-WAY PAYOUT**

TOTAL TRAVEL = ACTIVE TRAVEL x 2



Selection INPUT Required

TYPE OF APPLICATION

LIFT STRETCH RETRIEVE DRAG

If none of the above apply to how the reel will be used, or if extra weight is added at the end of the cable (overhang, push-button station, etc.) please consult your factory representative.

Active Travel _____ ft.
 Size _____
 No. Cond. _____

INCLUDE THE FOLLOWING INFORMATION IF IT IS DIFFERENT than the cable data at the back of this catalog for the cable size listed above:

O.D. _____ Weight (lbs/ft) _____

Model Number Explanation

MMD DIRECT DRIVE	MMD	21	100	1	-	12	3	-	14	-	1		
MMD GEAR DRIVE	MMD	28	100	4	-	14	3	-	11	-	K	-	2
SM GEAR DRIVE	SM	32	100	8	-	8	3	-	9	-	Y	-	2
	REEL TYPE	FRAME SERIES	SPRING MOTOR	No. of SPRINGS		No. of POLES	AMPACITY CODE*		CORE DIA.		GEAR RATIO**		PRETENSION TURNS

*SLIP RING AMPACITY CODE	
GLEASON CODE	MAX AMPS
3	35
7	75
12	125
20	200

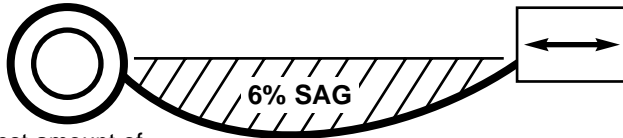
**GEAR RATIOS

RATIO	8-PITCH						6-PITCH									
	1.22	1.50	1.72	1.86	2.00	2.07	2.33	2.75	3.00	4.00	1.22	1.50	2.00	2.33	2.75	4.00
CODE-Series MMD	A	B	-	C	-	D	E	-	F	G	H	I	J	K	-	-
CODE-Series SM	-	M	N	-	P	-	Q	R	-	S	-	T	V	-	W	Y

Common Applications

HORIZONTAL STRETCH

STRETCHING cable horizontally requires the greatest amount of tension on any application to maintain a minimum sag. In this catalog, all reel capacities for horizontal stretch applications are based on a sag of 6%.



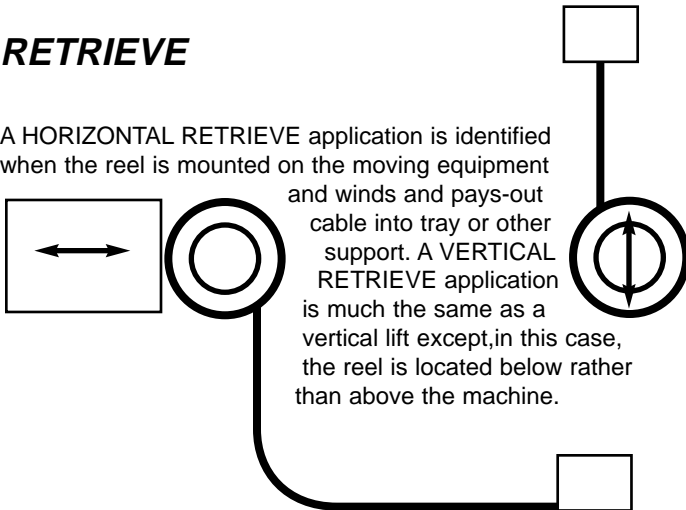
VERTICAL LIFT

VERTICAL LIFT refers to any application where the cable is simply hoisted vertically with only the weight of the cable involved. Special consideration must be given to any weight added to the end of the cable such as a push-button station or overhang (i.e. extra cable).



RETRIEVE

A HORIZONTAL RETRIEVE application is identified when the reel is mounted on the moving equipment and winds and pays-out cable into tray or other support. A VERTICAL RETRIEVE application is much the same as a vertical lift except, in this case, the reel is located below rather than above the machine.



DRAG

In DRAG applications, the reel is stationary. As the machine moves, cable is pulled off of the reel and "dragged" over the surface. Dragging produces wear on the cable and is NOT a recommended application.

