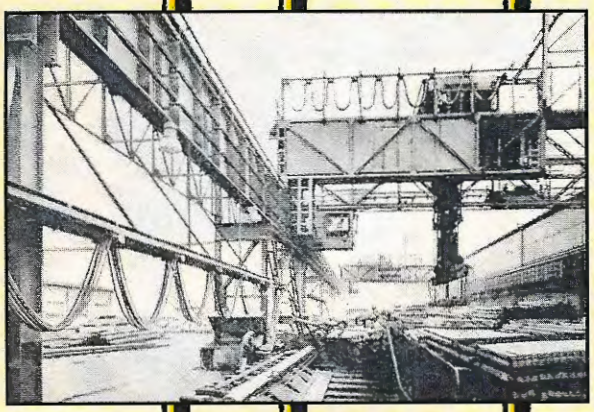
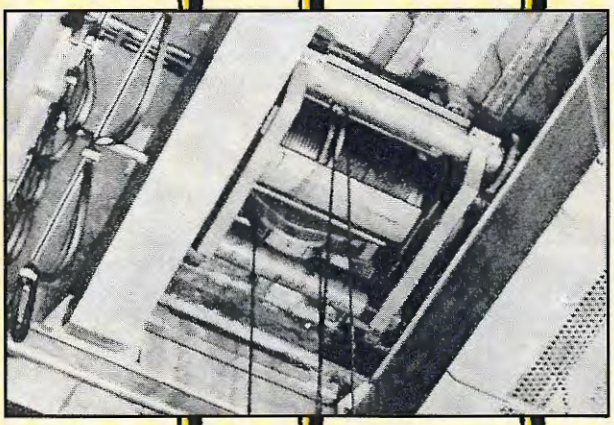




FOOD INDUSTRY

HEAVY STEEL IND.

GLASS AND CERAMIC IND.

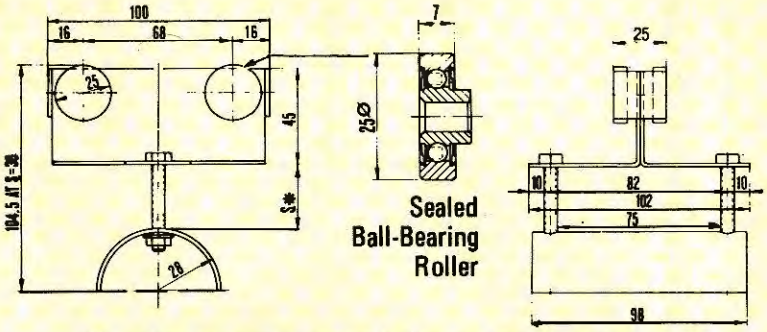
CEMENT INDUSTRY

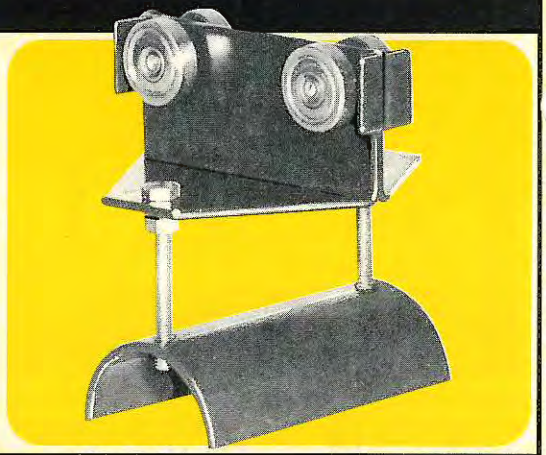
MINING INDUSTRY

CHEMICAL INDUSTRY

electrical feeding systems for mobile machinery

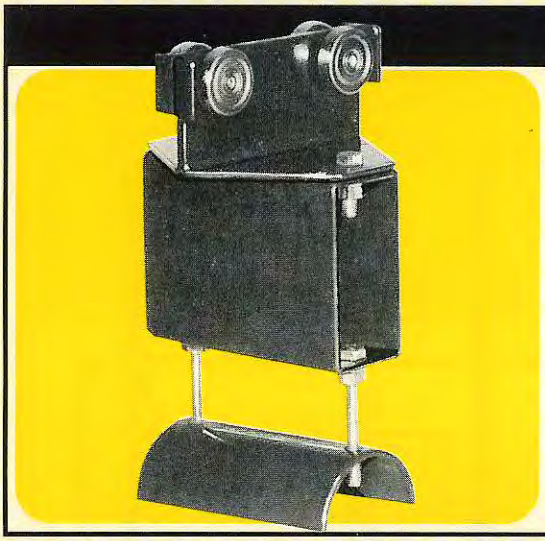
POWERMITE CARRIER NO. 90

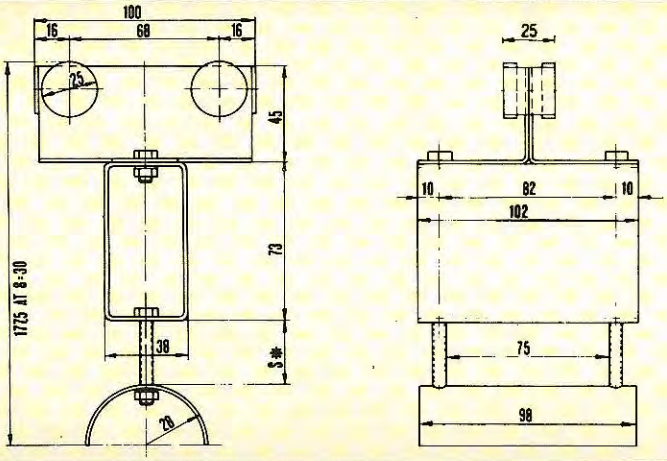




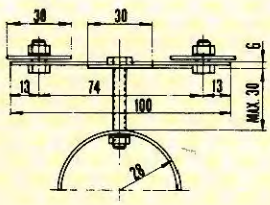
*If carriers approach bumper to bumper then S = 20 mm
however S = 30 mm is possible.

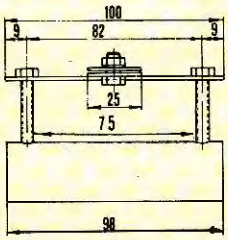
MASTER CARRIER NO. 91

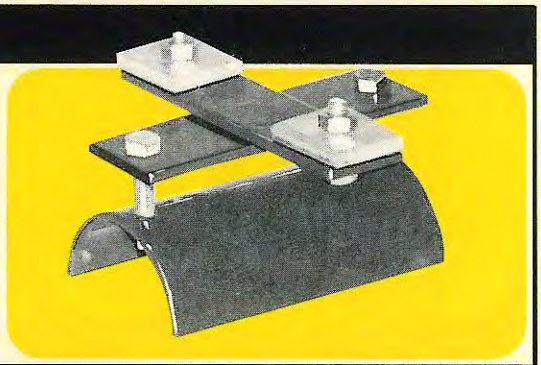




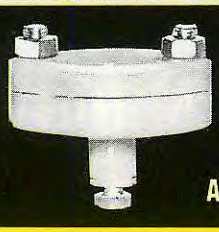
END CLAMP NO. 92





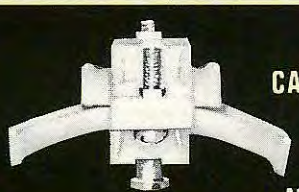


ADAPTOR PROFILE NO. 80



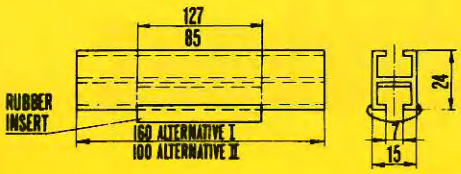
NO. 81

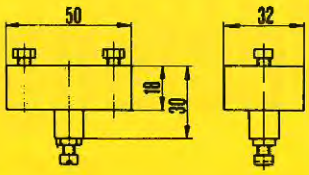
BALL
JOINT
ADAPTOR

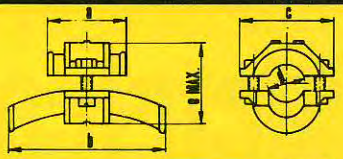


HOSE
CABLE CLIP

NO. 82-84



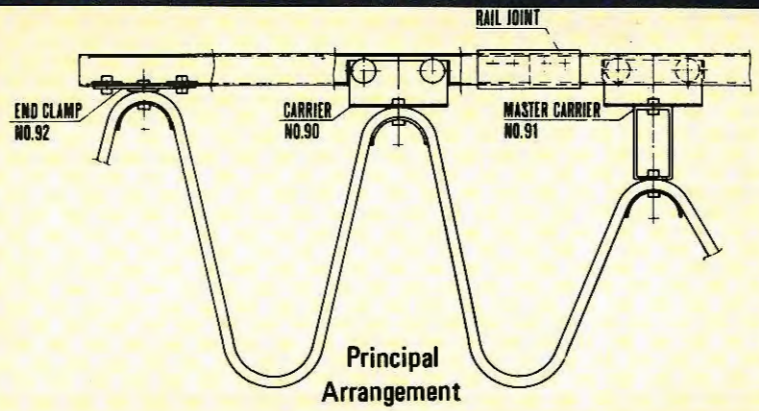




Ref. No.	d Cable-Dia	a	b	c	e Max.
82	10–16	35	70	42	38
83	17–25	70	100	50	47
84	26–36	70	140	64	58

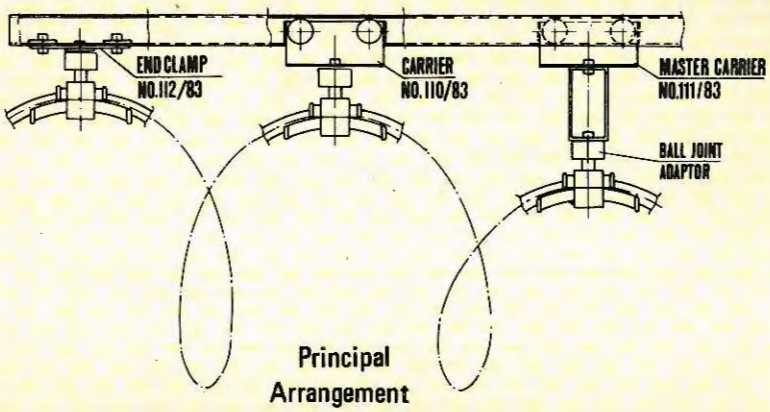
DESIGN AND DATA ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

POWERMITE FLAT-CABLE LOOP SYSTEM



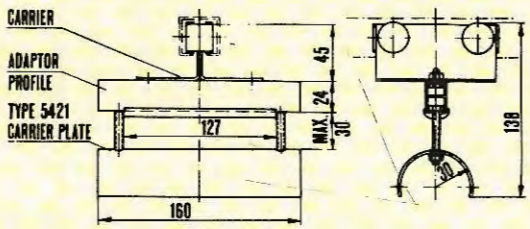
Principal Arrangement

POWERMITE ROUND-CABLE LOOP SYSTEM



Principal Arrangement

ALTERNATIVE 1 NO.100

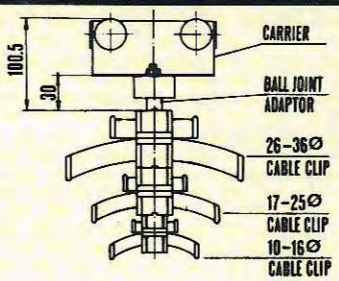


Use the adaptor profile to increase the size of cable carrier as well as master carrier No. 101 end Clamp No. 102

ALTERNATIVE 2 NO.110

Use the ball joint to suit hose and round cable applications.

See principal arrangement shown No. 110/82, 83, 84.

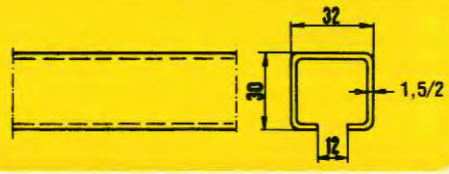


NOTE

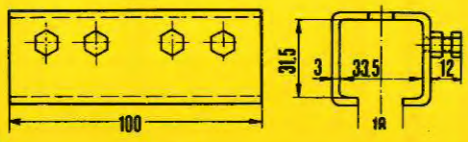
Parts No. 90-92 Nylon coated except bolts and rollers. Parts No. 70-73 galvanised. Part No. 80 aluminium. Parts No. 81-84 P.V.C.

ENDSTOP No. 73 to be fitted to end of system.

RAIL NO. 70

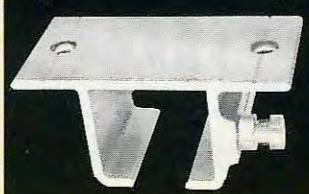


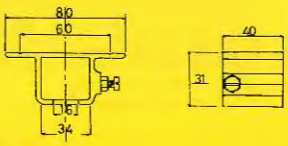
RAIL JOINT NO. 71



NO. 72 SUSPENSION BRACKET

SUSPENSION BRACKET NO. 74





DESIGN AND DATA ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

BASIC DATA

The No. 90/100/110 carriers will be able to carry 20 kg of load. This applies only to the roller bearings on the carriers. When you utilize the full load of the bearing capacity, kindly cross check with the loading capacity on diagram of the No. 70 POWERMITE rail track which is shown below.

The life of anti-friction bearings depends mainly on their operational factors as well as on environmental influences. Furthermore, important factors are the speed (travel speed of the machinery). In the table shown below you will find indications as to the speed of travel in relation to the weight and life of the carrier bearings.

The figures mentioned below are of an approximate nature, as further factors, such as dirt penetrating into the bearings, corrosion, fatigue of material etc., can change the tabulated figures considerably.

Speed of travel m/min	Weight of cable and carrier in kg. (kp)			
	20 kg.	16 kg.	12,5 kg.	10 kg.
160	20 000	40 000	80 000	160 000
125	25 000	50 000	100 000	200 000
100	32 000	63 000	125 000	
80	40 000	80 000	160 000	
63	50 000	100 000	200 000	
50	63 000	125 000		
40	80 000	160 000		
32	100 000	200 000		
25	125 000			
20	160 000			
16	200 000			
	Bearing life in hrs.			

CAPACITY OF RAIL PROFILE NO. 70.

The maximum permissible loading of the POWERMITE No. 70 Profile can be determined when calculated on the following assumptions:

1. The section is suspended on 2 supports, and the load is spread over its length symmetrically from the middle.
2. The load of a carrier P(kp/carrier) is distributed evenly along the carrier length/width
3. The total loaded length is obtained from the length L(m) of all carriers placed at one end
4. Bending strength 1000 kp/cm2, no account being taken of flange stress.
5. The maximum permissible deflection of the profile section due to loading plus its own weight = D÷250.
6. The loading is distributed symmetrically over the suspension clamps along the loaded section of the profile.

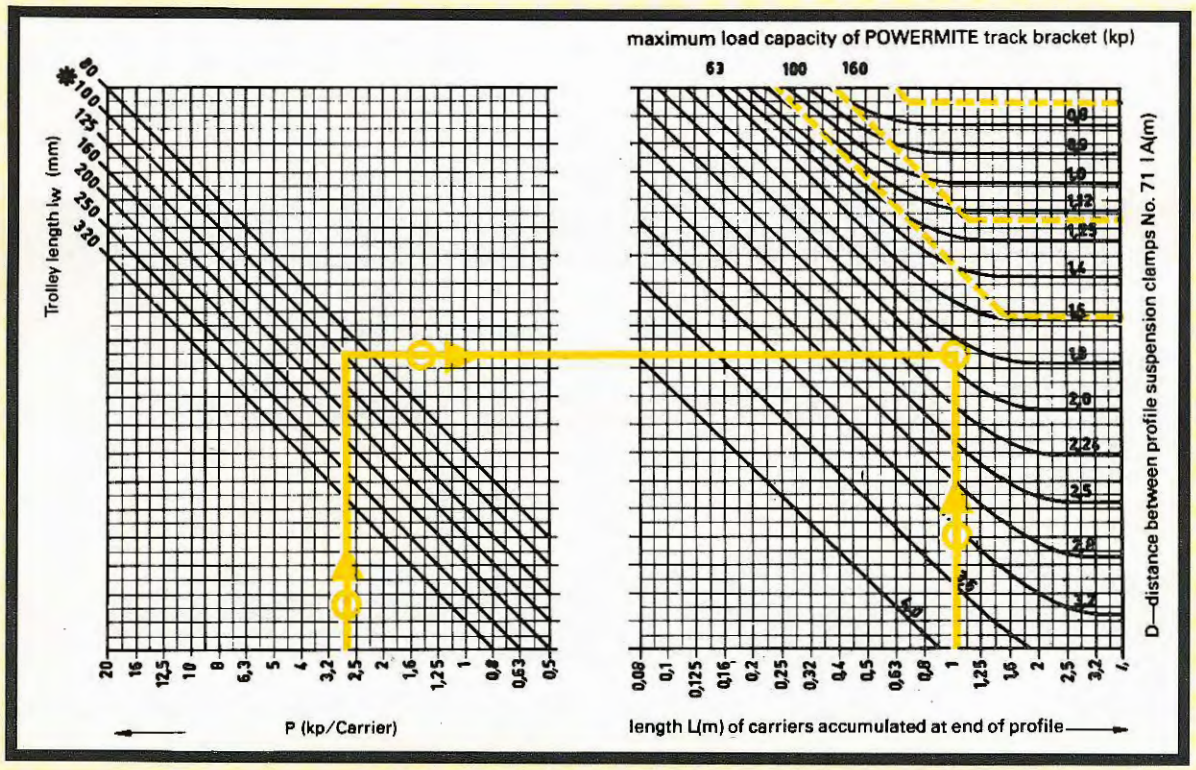
Example of calculation (yellow lines):

1. Given:

P = load/carrier including own weight and weight of cable = 2.8 kp
Iw = length of cable carrier = 100 mm
Z = No. of cable carriers = 10
L = loaded length=Z Iw/1000 = 1.0 m

2. From diagram:

required distance between suspension clamp No.71 = 1.9 m
maximum load capacity of suspension clamp No.71 = 63 kp



POWERMITE™

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