ACCESSORIES FOR MITOOL MAKE CABLE DRAG CHAINS

TROUGH
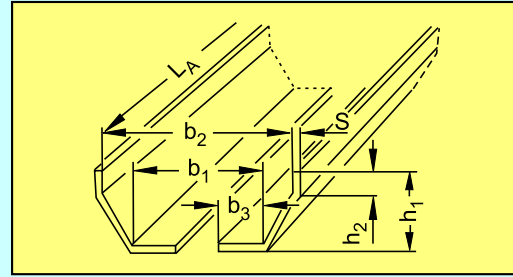
Type of Chain	b_1	b_2	b_3	h_1	h_2	s
CDC 65	B_k +15	B_k +35	40	30	10	3
CDC 95	B_k +20	B_k +60	70	45	15	3
CDC 125	B_k +25	B_k +65	70	60	20	3
CDC 180	B_k +30	B_k +90	95	90	30	3

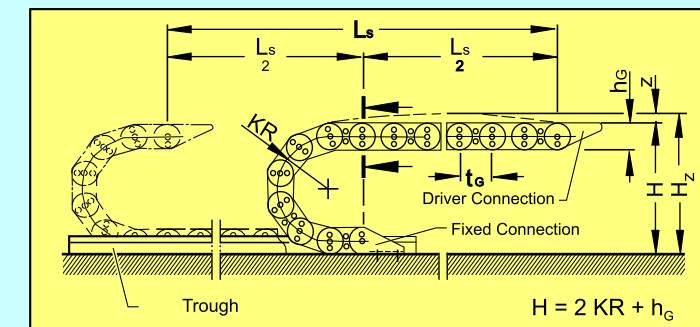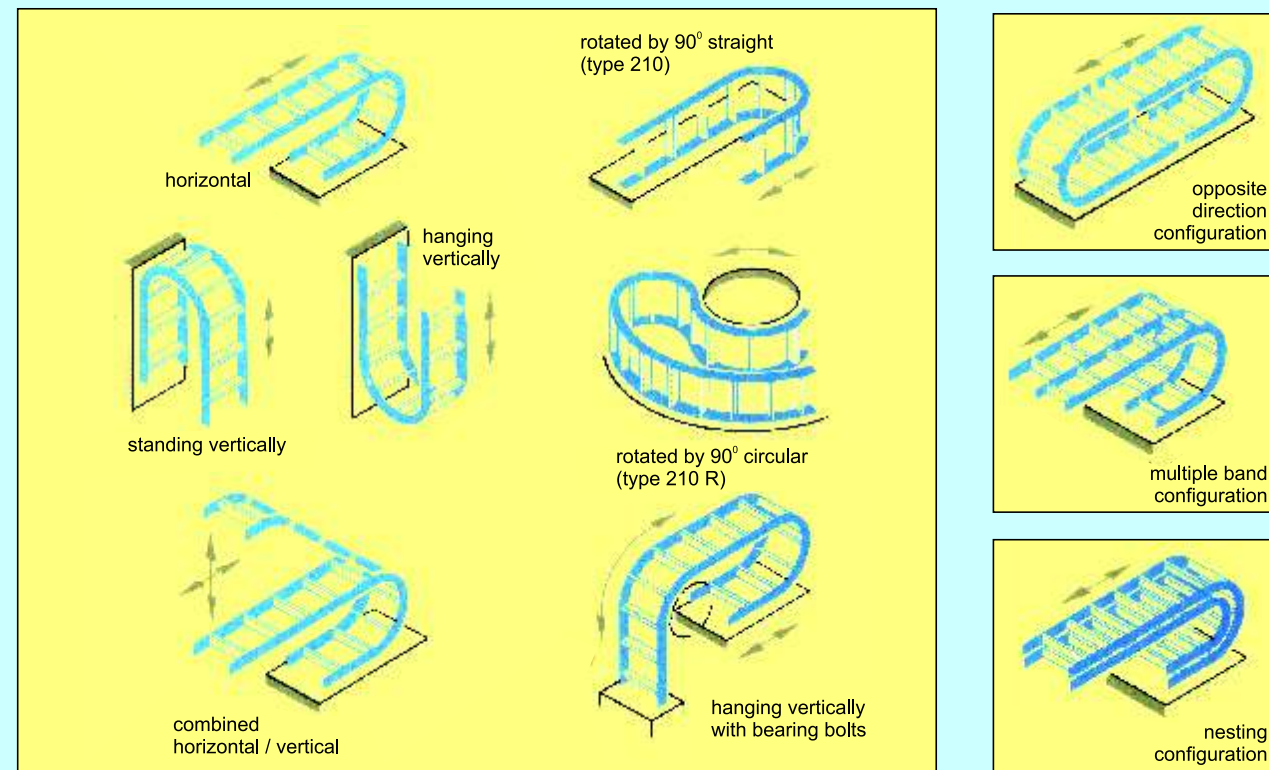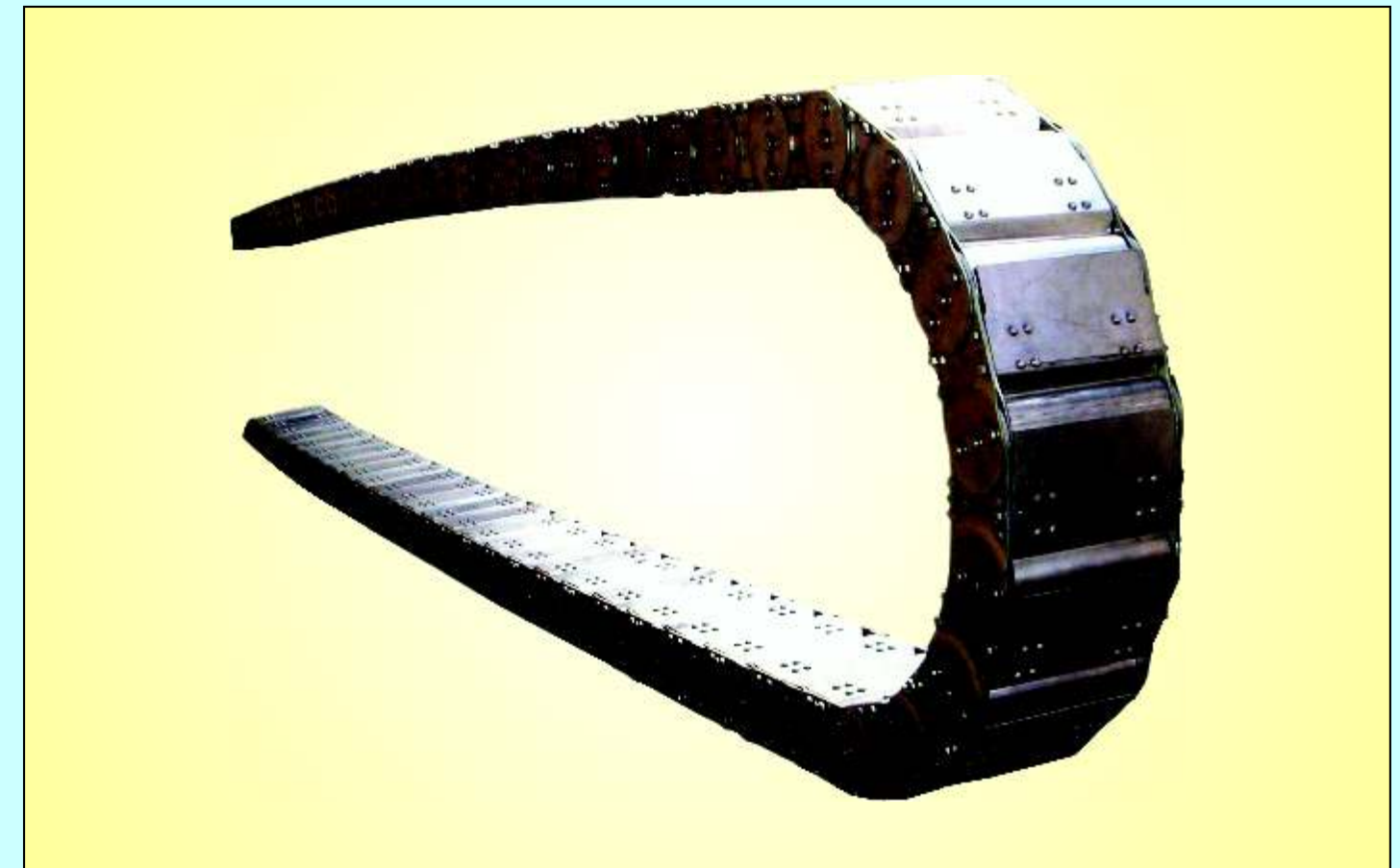Length of trough $$L_A = \frac{L_s}{2} + 300 \text{ mm}$$

To guarantee optimum operation of the MITOOL make Cable Drag Chain, a clean flat surface should be provided. If this is not possible then a trough is required.

SEGMENT TYPE COVERING

MITOOL make Cable Drag Chains with Segment type covering are used where it is necessary to protect the cables / hoses from hot chips and dust etc.

DRIVER

The driver connection between the cable drag chain and movable unit may be a simple steel construction.

horizontal

hanging vertically

rotated by 90° straight (type 210)

opposite direction configuration

standing vertically

rotated by 90° circular (type 210 R)

multiple band configuration

combined horizontal / vertical

hanging vertically with bearing bolts

nesting configuration

$$H = 2 KR + h_G$$

Trough

Instructions for selection of appropriate MITOOL make Cable Drag Chain

When planning a MITOOL make Cable Drag Chain application, it is advisable to proceed as follows :

Required technical data

a) Intended function

b) **Length of travel**

c) Max. acceleration or deceleration

d) Speed of travel

e) Frequency of travel

f) **Number and external diameter of the cables / hoses to be installed.** Types of hoses and cables (with/without fittings)

g) **Required bending radius**

h) **Weight in kp/m of the cables and hoses (including hose content)**

i) **Width available for the chain**

k) When used on cranes : side play of drive arm in mm

l) Working environment

If these data are available , check on

a) Which chain type depending on the load is applicable for this travel length. (Diagram)

$$\frac{\text{Unsupported length of chain}}{} = \frac{L_s}{2}$$ (Fixed point in centre of length of travel)

b) The required hole diameter D should be 10 percent greater than the cable / hose diameter. The minimum clearance must be 2 mm.

Select type of stay

Unsplit hole stay-Split hole stay-or Frame stay

c) Select a suitable bending radius which is in excess of the largest minimum bending radius specified by the manufacturer for the cables / hoses.
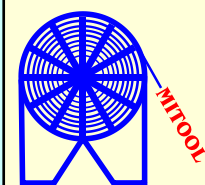
You are requested to submit the following data : acceleration, travel speed and frequency of travel, to enable us to confirm the suitability of the selected chain.

MITOOL
Equipments Pvt. Ltd.

Manufacturer of : Cable Reeling Drum, Cable Drag Chain, Collector Coloumn

DIAGRAM TO ESTABLISH THE MAXIMUM UNSUPPORTED LENGTH OF MITOOL MAKE CABLE DRAG CHAINS DEPENDENT ON THE ADDITION LOAD

The diagram opposite shows the permissible load capacities of unsupported chain lengths of MITOOL make Cable Drag Chain types. If the unsupported length is exceeded, there is the possibility of supporting the Drag Chain.
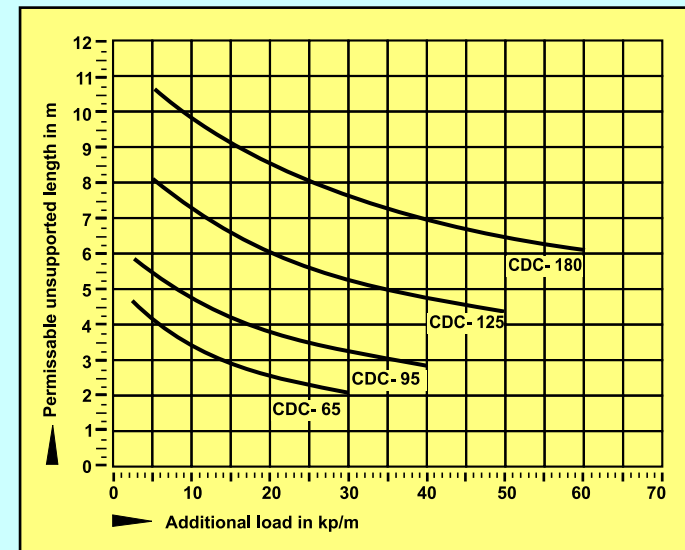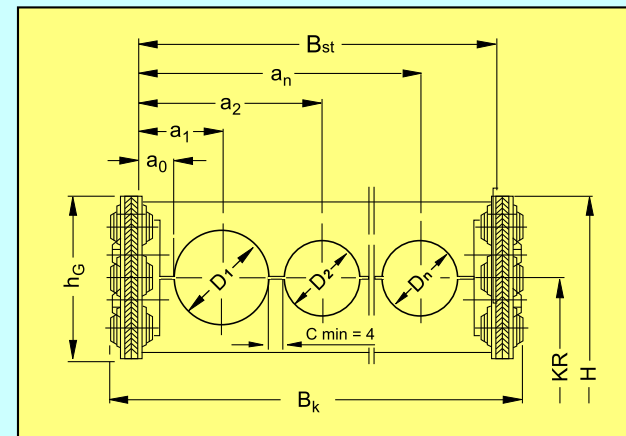

VARIATION OF STAYS

Unsplit hole stay - Split hole stay

The hole stay design offers the best way of carrying flexible cables / hoses in a cable drag chain, because each cable/hose is guided in a separate hole in the neutral axis.
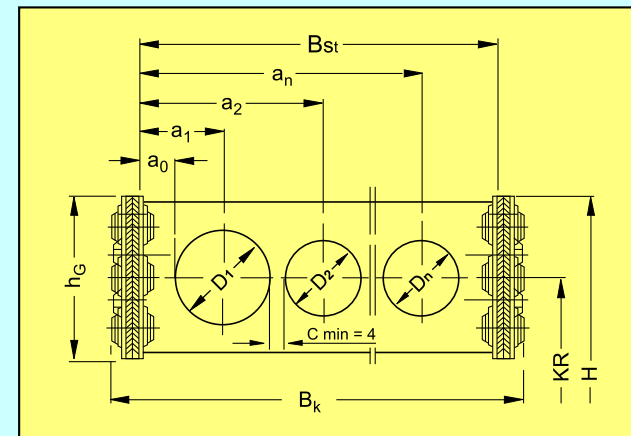
Cross section of chain with unsplit hole stay

Cross section of chain with split hole stay

TABLE OF DIMENSIONS

Type of Chain		CDC 65					CDC 95				CDC 125					CDC 180				
Chain pitch t_G		65					95				125					180				
Link height h_G		51					68				92					140				
Standard bending radius $KR^{1)}$	75	90	115	125	145	145	200	250	300	145	200	250	300	350	250	300	350	450	600	
Ideal bending radius $V \geqq 30$ m/min	75	95	115	135	156	139	200	258	318	145	222	261	300	340	263	320	376	433	600	
Min. width of chain $B_{k\ min}$		65					120				120					200				
Max. width of chain $B_{k\ max}^{2)}$		The maximum width of chain $B_{k\ max}$ will be determined by us according to the corresponding load																		
Max. hole diameter $D_{max}^{3)}$ — hole stay		30					50				75					110				
— frame stay		25					46				72					—				
Width of chain $B_k^{4)}$ — hole stay		$\Sigma D + \Sigma c + 35$					$\Sigma D + \Sigma c + 43$				$\Sigma D + \Sigma c + 48$					$\Sigma D + \Sigma c + 59$				
— frame stay		$\Sigma D + \Sigma s_T + 35$					$\Sigma D + \Sigma s_T + 43$				$\Sigma D + \Sigma s_T + 48$					—				
Thickness of dividers S_T		3					4				5					—				

1) We can also supply non standard radii at a slight price increase.

2) When exceeding the maximum permissible width of Chain B_k (dependent on the load) : an additional opposite chain or a multiple chain should be used.

3) The hole diameter D = cable / hose diameter d + 0.10 d (when d<20 mm, the allowance must be 2 mm minimum)

4) The width of chain B_k :

 Hole Stay : Sum of holes D + Sum of distance between holes c + fixed addition

 Frame Stay : Sum of Cable / hose diameters d + 0.10 d + sum of dividers S_T + fixed addition.

 For more details like Length of Chain, Width of Chain, Speed etc. Please consult us

CHAIN CONNECTION

The MITOOL make Cable Drag Chain is supplied with four connecting angles.

When necessary, the connecting angles can be positioned with the fastening holes to the outside of the chain width.

Type of Chain	A_1	A_2
CDC 65	B_k-43	B_k-37
CDC 95	B_k-71	B_k-63
CDC 125	B_k-74	B_k-64
CDC 180	B_k-88	B_k-77
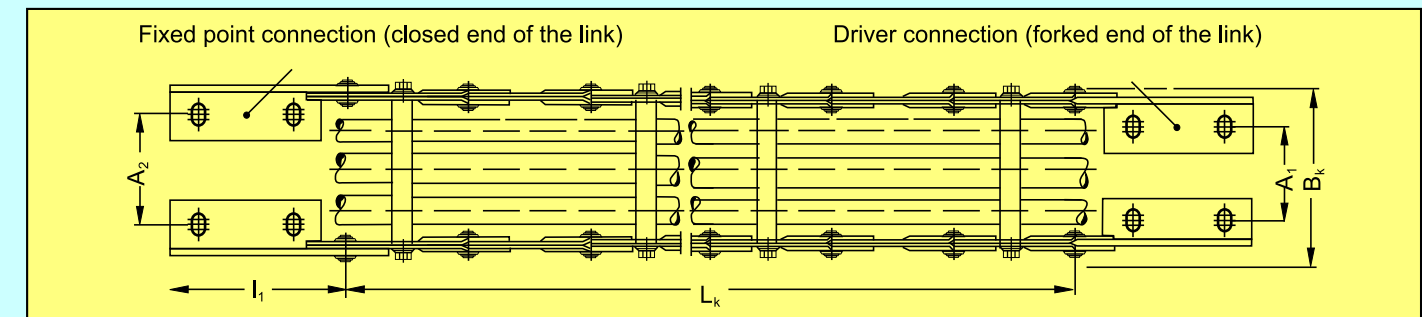
The connecting angles at the closed end of the chain always determined the fixed point.

CONNECTING ANGLES
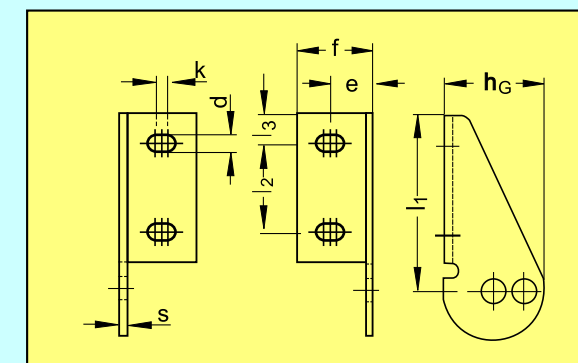
Type of Chain	h_G	d	e	f	k	s	l_1	l_2	l_3
CDC 65	51	6,4/M 6	19	30	5	3	95	45	15
CDC 95	68	8,4/M 8	30	55	10	4	125	65	20
CDC 125	92	10,5/M 10	30	55	10	5	155	80	25
CDC 180	140	13,5/M 12	35	60	10	5	210	115	30

Connecting Height

The height of the driver connection H_A should be about 20 mm higher than the height of H of the chain.

$$H_A = 2\ KR + h_G + 20$$

Clearance Height

For the Cable drag chain a clearance height of at least H_z is required.

$$H_z = 2\ KR + h_G + z$$

z = approx. 8 mm per m of chain length.