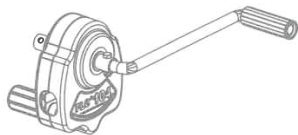


FLC[®]

User Instruction of Manual Film Reeler



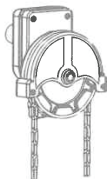
NA104



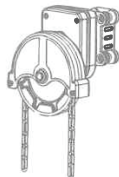
BS104



NS105/BS107



NA105/BA107



NSA105/BSA107

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The product are subject to design and performance updates,so it might be a little different from this manual book.But it will not affect your usage.This book is also subject to modification without further notice.Please read this book before use.

Please refer to the corresponding content in the User's Manual based on your purchased model

1. Product Installation Instructions

Thank you very much for purchasing our manual film reeler. Please read this manual carefully and refer to the installation instructions for correct installation. Before installing this product, please prepare other accessories for the greenhouse in advance.

1.1 Feature:

Manual film reeler is used to open sidewalls and roof of greenhouse covered by plastic film.

(1). Easy installing, steady operation;

(2). Big output torque, and not heavy;

(3). With safe self-lock function, the Unit will self-stop when it is left alone.

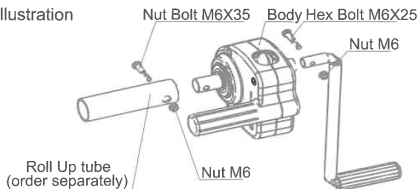
1.2 Parameters

Model	Torque	Speed Ratio	Recommended Loading	Usage
BS104	30N.m	4:1	≤90m	Sidewall
NA104	30N.m	4:1	≤100m	Top Sidewall
NS105	50N.m	5:1	≤100m	Sidewall
NA105	50N.m	5:1	≤100m	Roof
NSA105	40N.m	5:1	≤100m	Top Sidewall
BS107	60N.m	7:1	≤130m	Sidewall
BA107	60N.m	7:1	≤130m	Roof
BSA107	50N.m	7:1	≤100m	Top Sidewall

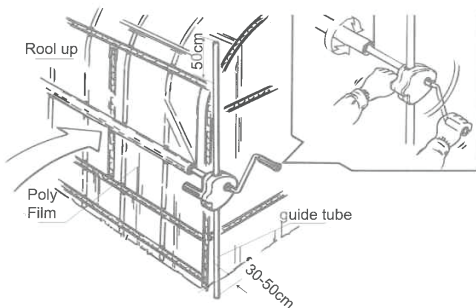
1.3 Installation instructions

1.3.1 BS104 installing picture

Assembly Illustration



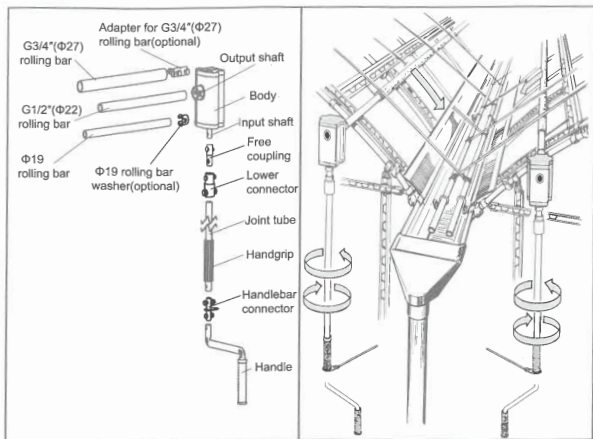
Installation illustration



Cautions:

- (1).When use 25mm roll up tube,drill $\Phi 25$ mm hlole on the tube,12mm form the end of tube,connect the roll up tube to out put shaft,tightening with screw.In case other size roll up tube,users need to prepare adapter themselves.
- (2).Guiding Tube $3/4"$ ($\Phi 26.7$) should be fixed vertically and steadily on the ground 30cm to 50cm away from greenhouse.
- (3).The guiding tube should be taller than the top film of rolling-up by 50cm.
- (4).The fixed film and the film rolled around rolling bar should be overlapped each other for 20-30cm.

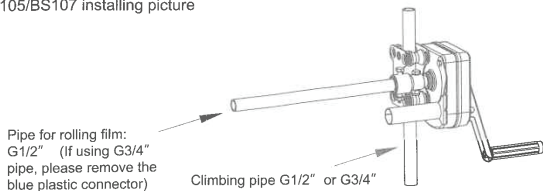
1.3.2 NA104 installing picture



Cautions:

- (1).Adapter for G3/4\"(Φ27) rolling bar washer is optional.
- (2).Φ19 rollingbar,G1/2\"(Φ22) rolling bar or G3/4\"(Φ27) rolling bar,and Φ19 joint tube or G1/2\" (Φ22) joint tube need prepared by customer.
- (3).There could be 2 cases for output end refer to right drawing
 - ①The output end uses Φ19 rolling bar:or G1/2\"(Φ22) rolling bar
Punch the hole Φ8.5,(the distanct from center to head face is 12 mm),then insert the rolling bar into output shaft, connected with bolt.
 - ② The output end uses G3/4\"(Φ27) rolling bar
Joint the adapter for G3/4\"(Φ27) rolling bar with the output shaft with the special screws and nuts.
- (4).Use the handlebar connector to join the input end.

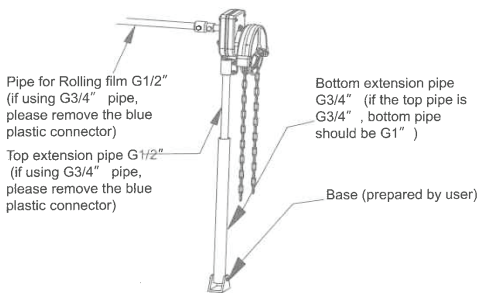
1.3.3 NS105/BS107 installing picture



Cautions:

- (1).Put the crank in the input shaft and tighten it by screw. Put the creeper on the climbing pipe and fix it.
- (2).Put the rolling film pipe into the connector on the output shaft, tighten it by screw.

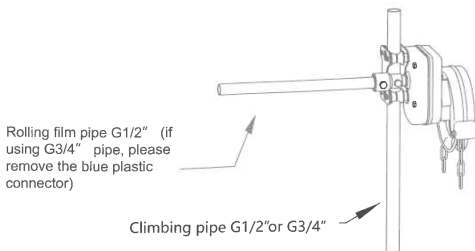
1.3.4 NA105/BA107 installing picture



Cautions:

- (1).Install the extension pipes (G3/4" G1/2" or G1 1/2-G3/4") according to above picture, and tighten them by screw.
- (2).Put the rolling film pipe into the connector on the output shaft, tighten it by screw.

1.3.5 NSA105/BSA107 installing picture



Cautions:

- (1). Put the creeper on the climbing pipe and fix the climbing pipe.
- (2). Put the rolling film pipe into the connector on the output shaft, tighten it by screw.

1.4 Please confirm the below things after finishing installation :

- (1). Turn the crank or chain to see if the rolling film pipe can circumrotate smoothly, and if it can roll up and down correctly.
- (2). To confirm if the rolling film pipe can self-lock and stop working safely when it is left alone, when the plastic film is completely opened.
Please re-install it or contact with supplier if above things cannot be confirmed.

2. Safety Rules must be obeyed :

- (1). Must obey the range of usage limitation. (Otherwise, breaking the unit or accident hurt will occur possibly.)
- (2). Don't unpack, repair or redo the unit. (Optionally unpacking may lead the unit broken)
- (3). To check the bolt and nut periodically to see if it is loose. (Loose bolt and nut will cause the unit cannot roll plastic film smoothly)
- (4). Chose an appropriate wire for pressing film according to your special use.
(Impertinent wire of pressing film will cause the ventilation film damage by wind)
- (5). Worm wheel Roll-up Unit is not waterproof, so don't put it into water or snow.
- (6). Don't use this Unit when the ventilation film is froze or pressed by snow.
- (7). Close the ventilation film during hurricane days.

3. Packing list

3.1 BS104

NO	PART NAME		QTY	MARK
1	Body		1	
2	Handle component	handle	1	Sealed in plastic bag
		self-locking nut M6	1	
		hexagon bolt M6×25	1	
3	Output connect part	self-locking nut M6	1	
		hexagon bolt M6×35	1	
4	Assemble instruction		1	
5	Certificate of quality		1	

3.2 NA104

NO	PART NAME	QTY	MARK
1	Body	1	
2	Handle	1	
3	Handlebar connector	1	
4	Handgrip	1	
5	Free coupling	1	
6	Connector	1	
7	Adapter	1	
8	Two Hole Plate	1	
9	Hexagon bolt M6×25	1	
10	Hexagon bolt M6×35	2	
11	self-locking nut M6	4	
12	Hexagon bolt M8×12	2	
13	Hexagon bolt M6×30	1	
14	Hexagon bolt M6×45	1	
15	Hexagon bolt M8×45	1	
16	Combined nut M6	1	
17	Combined nut M8	1	
18	Assemble instruction	1	
19	Certificate of quality	1	

3.3 105 Series

NO	PART NAME	QTY	MARK
1	Body	1	
2	Handle	1	for NS105 only
3	Assemble instruction	1	
4	Certificate of quality	1	

3.4 107 Series

NO	PART NAME	QTY	MARK
1	Body	1	
2	Handle	1	for BS105 only
3	Assemble instruction	1	
4	Certificate of quality	1	

The packing list only contain the standard accessories and documents, it doesn't include the other accessories you choose. If you have ordered other accessories, please check it when you receive the order. The production date is on this packing list.

To insure your interest and rights please keep this packing list for future service.

4.Certificate of product quality

Dear Customer:

Our company have obtained ISO 9001 certificate.The FLC[®] Manual roll-upand the Tanikankit Manual roll-up tested and each indicator complies with the standard of our company. We solemnly promise that in the case of correct installation and usage,the roll-up is guaranteed for 3 years (from the tine of sell out),problems during the guarantee period would be solved free of charge.

Exception clauses :

- 1.Operated against this manual.
- 2.Improper usage,maintenance, storage or damage on purpose.
- 3.Damage out of unauthorized un-installation,repairment.
- 4.Damage by force majeure .
- 5.Applie in other area than ventilation