

# White Paper

For

SPCL-6/3200, SPCL-8/4400, SPCL-8/5000  
SPCL-10/6000, SPCL-12/8000

Oct, 2002

## SHUTTLE

The shuttle of our SPCL series circular loom is based upon our patent “Swallow-tail guide rail pair for plastic circular loom” (patent no.96217570.6, or Application Number: CN19960217570U at [esp@cenet](mailto:esp@cenet)), there's only one wheel on shuttle which pushed by shuttle driver, as such dramatically decreases warp breakage due to being grinded, and avoids warp's affection to shuttle's motion precision, the general benefits are:

- 1.completely avoid shuttle drop;
- 2.completely avoid warp break within weaving area;
- 3.decrease the strength loss of fabric due to weaving, so that increase the strength of final cloth;
- 4.broaden the application scope of circular loom, the shuttle can fit in with warp of thickness from 0.03-0.5mm, even beyond the scope;
- 5.get rid of main abrasion parts i.e. shuttle-wheel.

## CAM

Our SPCL series circular loom improves on 3-dimensional spacial cam utilized by Austria Starlinger circular loom, there's no sliding and rubbing parts within hatch system composed by cam, rocker and palm belt, benefits the loom with

- 1.powder produced by weaving has less affection to loom, and prolong the bearings' life;
- 2.no lubricating needed and less easy-wear parts;
- 3.stable running and lower power consumption.

## ADJUSTING SPEED OF MAIN MOTOR

Our SPCL series circular loom by adopting inverter which yielding steady performance to control rotating speed of main motor, can easily adjust weaving speed according spot condition and technics, while decrease power consumption by more than 20%

## **ADJUSTING WEFT DENSITY**

Our SPCL series circular loom adopts another inverter on exalting system and the exalting speed kept pace with main motor speed ,the speed ratio can be adjusted stepless at any moment, and only several seconds spent for one adjustment, so gains the following characteristics :

- 1.able to tiny-adjust gram weight of fabric accurately so as to remedy slit film errors due to producing, as such not only satisfy customer's requirement, but also avoid waste of slit film;
- 2.reduced gear wheels for weft adjusting and other easy-wear parts;
- 3.no need to halt machine while adjusting weft density, weaving while adjusting, raised production rate can be anticipated.

## **ROLLING**

Our SPCL series circular loom uses lambdoid haulm cutting breadth, whole breadth unfolding and rolling system, functioning:

1. roll on columnar shape without cutting breadth ;
2. roll on columnar shape with cutting breadth;
3. roll on single breadth after cutting and unfolding;
4. parallel roll on multi breadth after cutting to 2-8 parts.

## **OPERATION AND MAINTENANCE**

Our SPCL series circular loom embodies operator's supremacy on the aspects of easy operation and simple maintenance etc through the whole designing process, including:

1. low and spacious operating platform , stand pillar disposed at outside of scatter operating platform, so that operating is safe and film pulling on is convenient;
2. short distance from operator to shuttle makes replacing of weft thread convenient;
3. adjusting weaving speed and weft density are also simple and quick;
4. a great leap for shuttle towards maintenance free so that maintenance period extends to continuous running for half year or so;
- 5.least wear and tear parts brings about least maintenance cost.

## **POWER CONSUMPTION**

Our SPCL series circular loom benefits from advanced mechanism transmission, plus two advanced power-saving transducers , lead to very low power consumption, greatly reduced running cost.

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