

TECHNOPLAST

FUTURE OF RECYCLING



LDPE Recycling Line

Capacity: 2000kg/hr

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General Description

The LDPE film recycling line is used to recycling the waste film.

For the film should be shredded firstly to higher the capacity.

Sink-float tank is used to separating out sinking materials from the film.

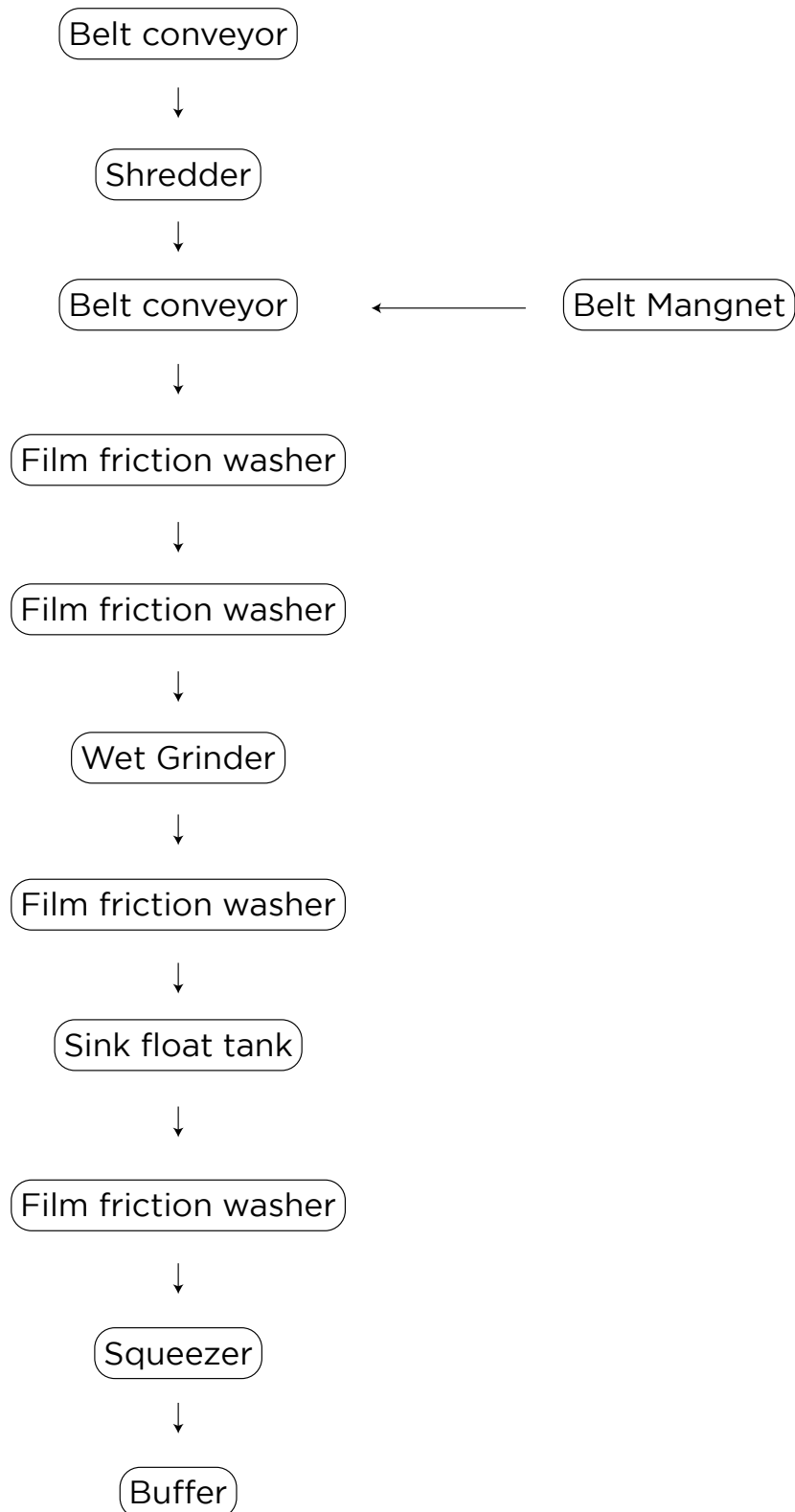
Friction washer is used for removing the sand and earth.

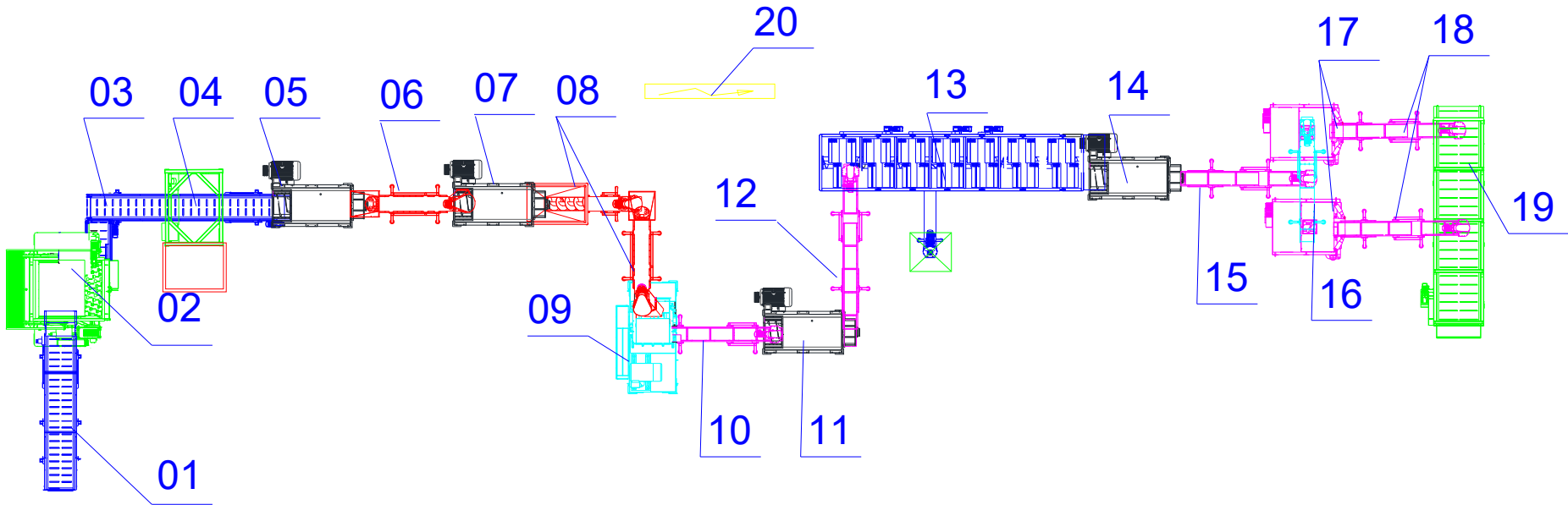
Squeezer is equipped for film dewatering, after squeezing, the moisture will be 6-8%.

- Raw materials:
- Capacity: 2000kg input
- End film moisture: about 6%
- Film size after wet grinder: 30-40mm



Main Operation Principle



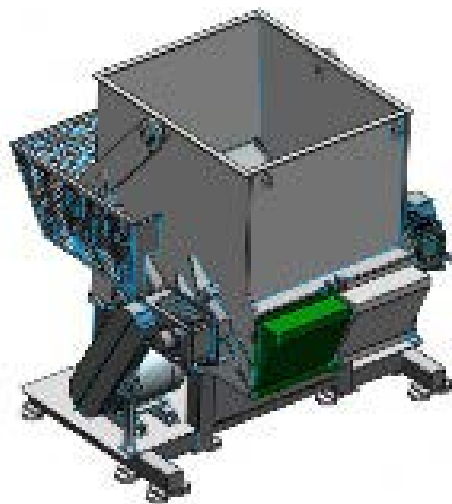


1. Belt Conveyor

Function: Conveying LDPE raw materials into shredder	
Model:	BC140
Width:	1400mm
Motor power:	3KW
Material:	carbon steel
Material of belt:	RUBBER
Thickness of RUBBER belt:	5mm
Wall thickness:	3mm
Gear Motor drive Controlled by inverter, belt speed is adjustable.	
With antirust painting	



2. Shredder



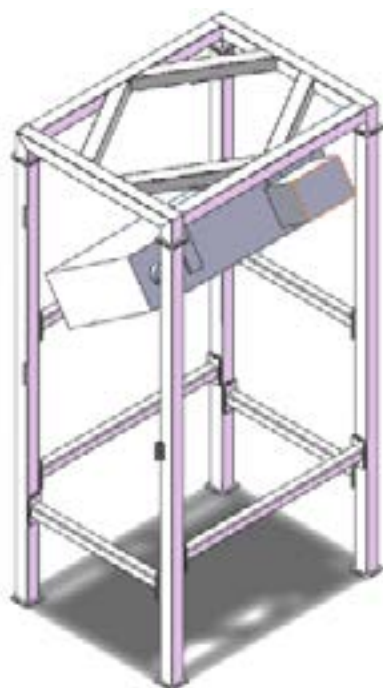
Function: Shredding LDPE raw materials into smaller pieces	
Model:	DGX2000
Motor power:	160kw
Screen:	Z shape
Screen size:	120mm
Material:	Carbon steel
» With hydraulic pusher » Motor drive » “V” belt transmission » Protection cover for “V” belt for safety	

3. L type belt conveyor

Function: Conveying the film into the film washer	
Width:	1000mm
Power:	3KW
Material:	Carbon steel
Material of belt:	RUBBER
Thickness of RUBBER belt:	5mm
Wall thickness	3mm
» Gear Motor drive » Controlled by inverter, belt speed is adjustable. » With antirust painting » With magnetic roller	



4. Belt magnet



Function: Removing ferrous metal by magnet	
Magnet filed strength:	700GS
Material:	Carbon steel
Octagon structure, can be easily dismantled for maintenance	

5. Film friction washer

Function:	The film friction washer is specialized for film washing. it can remove more than 90% contaminants from crushed film by high speed.
Motor power:	75kw
Model:	FW8075
Speed	1000rpm
Material:	Carbon steel
Screen hole:	Ø 10mm
Screen material:	Stainless steel 304
Screen diameter	Ø 800mm
Paddle material:	Wear resistant material
The roller with spire paddles, no twining of shredded film.	
Belt transmission	



3 High speed screw conveyor



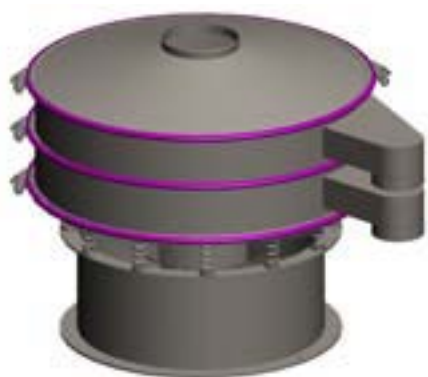
Function:	Conveying prewashed LDPE film pieces into film friction washer
Model:	HSC5040
Rotating speed:	300rpm
Diameter:	Ø 500mm
Motor power:	5.5KW
Material:	Stainless steel304
» Motor drive	
» Belt transmission	

7 Film friction washer

Function: Spraying hot chemical water from the top to remove the oil and glue.	
Motor power:	75kw
Model:	FW8075
Material:	Carbon steel
Screen hole:	Ø 10mm
Screen material:	Stainless steel 304
Screen diameter:	Ø 800mm
Paddle material:	wear resistant material
» The roller with spire paddles, no twining of shredded film.	
» Motor drive	
» Belt transmission	
» With hot washing	



7.1 Vibrating filter



Function:	filter the hot water and transfer to the LDPE line
Diameter:	1000mm
Material:	Stainless steel 304
Including the water tank	

8. Screw conveyer

Function:

Conveying LDPE film scraps from wet grinder into film friction washer

Model: SC5055

Motor power: 4Kw

“U” shape

Material: Stainless steel 304

Diameter: ø500mm

- » With water filter screen, easy for maintenance.
- » Gear motor drive
- » Chain transmission
- » Protection cover for chain for safety



9. Wet Grinder

Function:

Wet crushing LDPE material into scraps

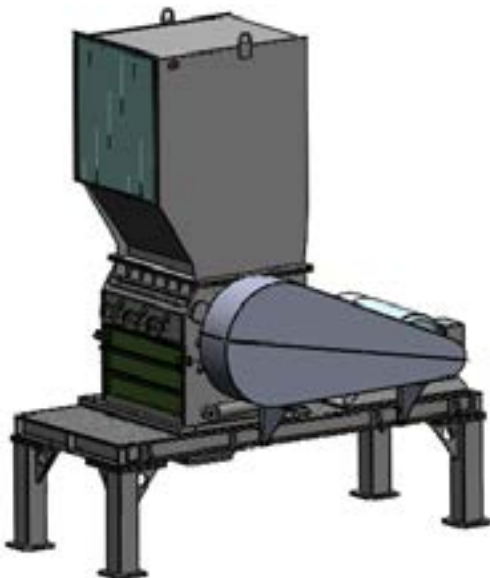
Wet crushing can removing sand and earth during crushing, and protecting knives.

Model DGF700-1200

Motor power: 90KW

Diameter Of Screen: 30mm

- » Motor driver
- » Belt transmission
- » Protection cover for “V” belts
- » for safety



10. Screw conveyer

Function:

Conveying LDPE film scraps from wet grinder into film friction washer

Model: SC5055

Motor power: 5.5 Kw

“U” shape

Material: Stainless steel 304

- » With water filter screen, easy for maintenance.
- » Gear motor drive
- » Chain transmission
- » Protection cover for chain for safety



11 Film friction washer

Function:

The film friction washer is specialized for film washing. it can remove more than 90% contaminants from crushed film by high speed.

Motor power: 75kw

Model: FW8075

Material: Carbon steel

Screen hole: Ø 10mm

Screen material: Stainless steel 304

Screen diameter: Ø 800mm

Paddle material: wear resistant material

- » The roller with spire paddles, no twining of shredded film.
- » Motor drive
- » Belt transmission
- » With hot washing



12. Screw conveyer

Function: Conveying LDPE film scraps from wet grinder into film friction washer	
Model:	SC5055
Motor power:	5.5 Kw
“U” shape	
Material:	Stainless steel 304
» With water filter screen, easy for maintenance.	
» Gear motor drive	
» Chain transmission	
» Protection cover for chain for safety	



13. Sink float tank

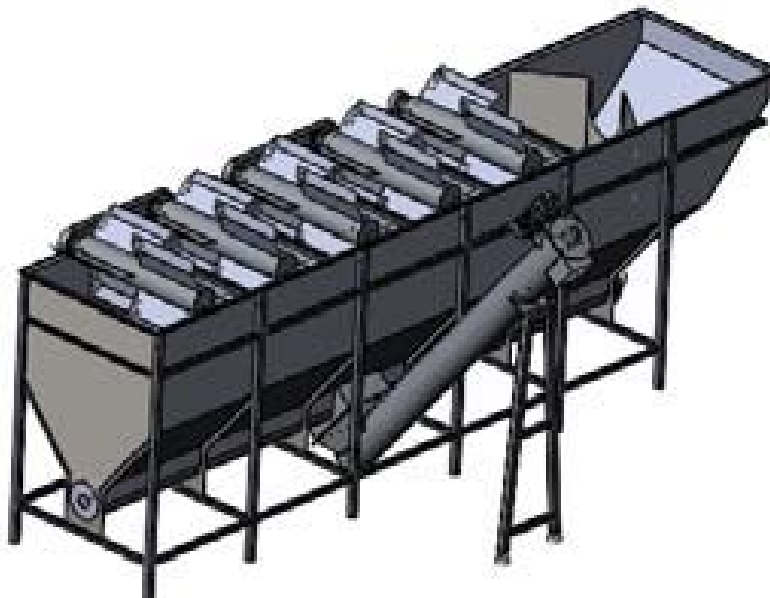
Function:

Washing the crushed LDPE film pieces, and separating sinking materials out from LDPE film

There are rollers for pressing materials down into water, heavy materials sink to the bottom, and transported out by sinking screw conveyer. Floating materials are transported into the floating screw by special roller.

Caustic soda can be added into this sink float tank to remove oil contaminants

Model:	PX2000-9
Length:	9000mm
Width:	2000mm
Motor power:	14.8Kw
Material:	Stainless steel 304
Dia. Of Sinking materials collecting screw:	400mm
Diameter of rollers:	600mm
<ul style="list-style-type: none"> » Gear motor drive » Chain transmission » With sinking material » Collecting screw on the bottom. » With sinking materials discharging screw conveyer » Protection cover for chains for safety 	



14. Film friction washer

Function:

The film friction washer is specialized for film washing. it can remove contaminants residual from film.

Motor power:	75kw
Model:	FW8075
Material:	Carbon steel
Screen hole:	Ø 3mm
Paddle material:	wear resistant material

- » The roller with spire paddles, no twining of shredded film.
- » Motor drive
- » Belt transmission



15. Screw conveyer



Function:

Conveying LDPE film scraps from wet grinder into film friction washer

Model:	SC5055
Motor power:	5.5 Kw

“U” shape

Material:	Stainless steel 304
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- » With water filter screen, easy for maintenance.
- » Gear motor drive
- » Chain transmission
- » Protection cover for chain for safety

16. Double direction screw conveyor

Function:

This double direction screw conveyor has one inlet and two outlets. both outlets for squeezers

Model: SC5055-W

Motor power: 3w

"U" shape

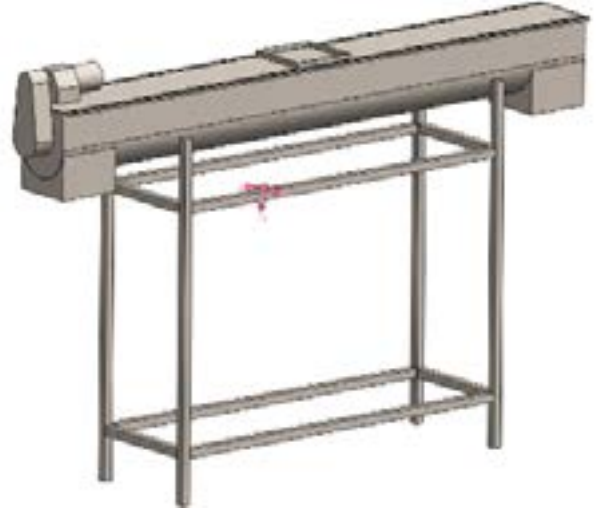
Material: Stainless steel

Diameter: ø500mm

Gear motor drive

Chain transmission

Protection cover for chain for safety



17. Squeezer

Function:

washed film is fed into the squeezer by the screw conveyor. There is a special screw which running continually. LDPE film will be compressed by running screw.

Model: SQ5075

Motor power: 75Kw

Material: Carbon steel

Diameter: Ø 500mm

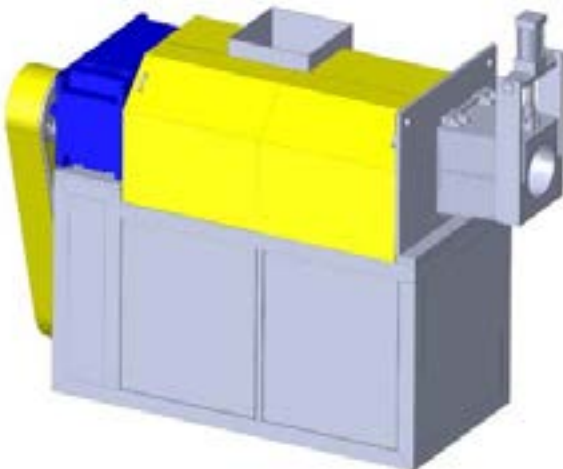
Rotating speed: 80rpm

"T" shape screen holes

Inner diameter of screen holes: 3.5mm

Outer diameter of screen holes: 8.5mm

With the screw for loosing the squeezed film.

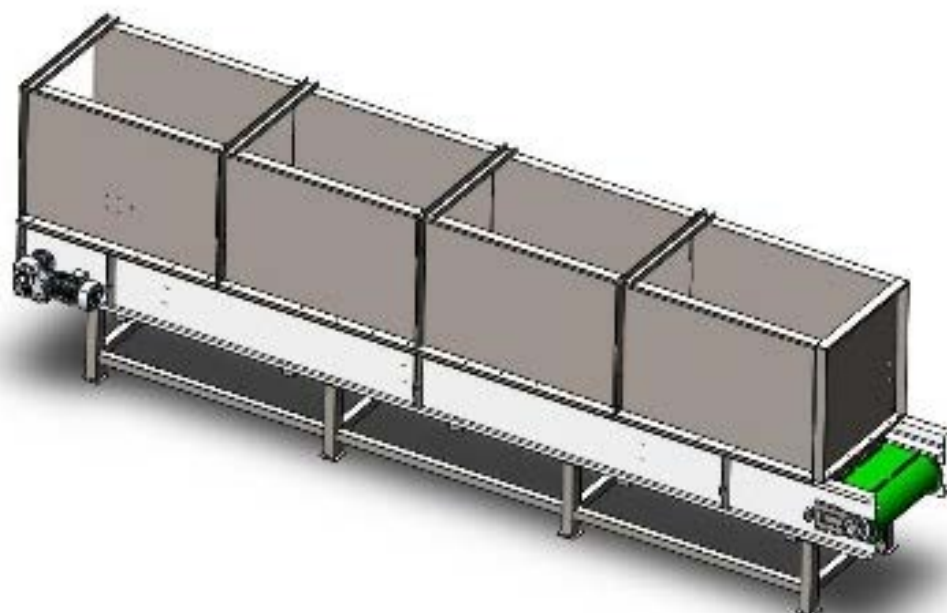


18. Screw conveyor



Function: Conveying LDPE film into squeezer	
Model:	SC5011
Motor power:	11 Kw
Shape	" U" shape
Material:	stainless steel 304, Carbon steel frame
<ul style="list-style-type: none"> » With water filter screen, easy for maintenance. » Gear motor drive » Chain transmission » Protection cover for chain for safety 	

19. Belt silo



Function: storage end materials	
Material:	belt : rubber
Support:	carbon steel
Motor power:	1.1kw

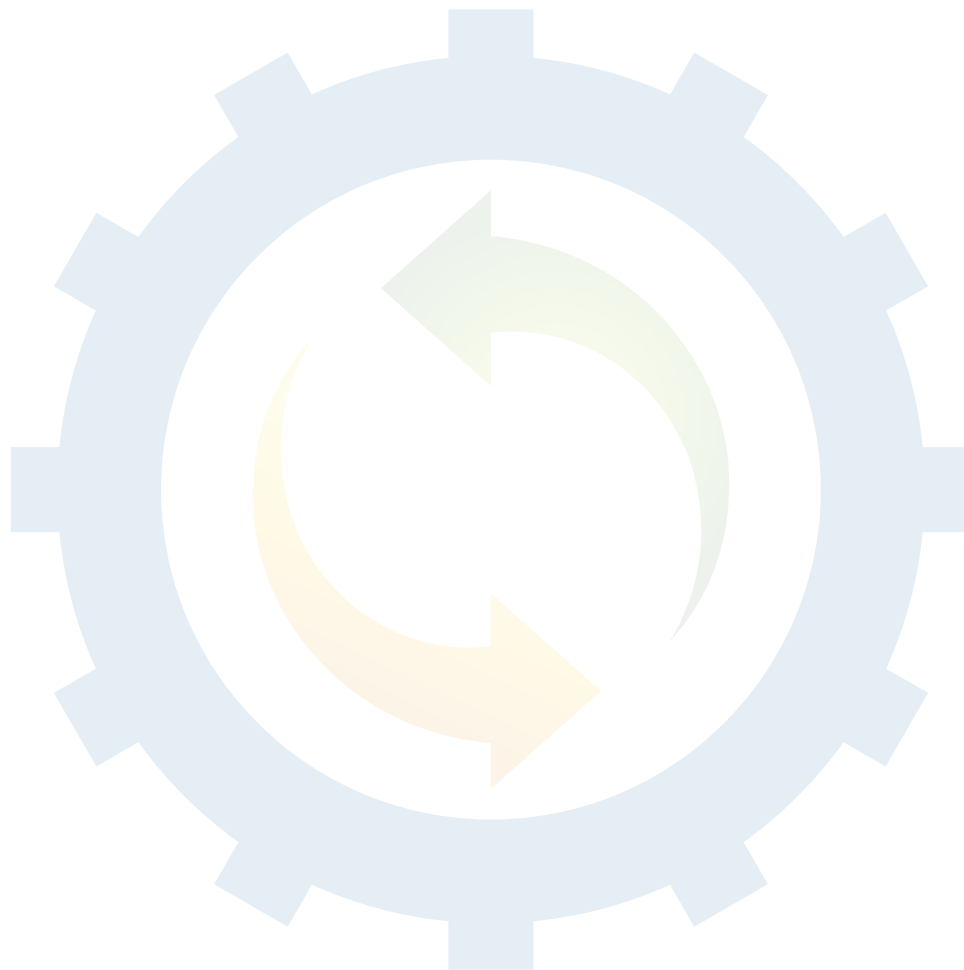


20.1 Electric control system

Function:	Controlling the operation of the whole line Including the cables and cable bridges
» PLC program	
» Touch screen for operation	

20.2 Cables & cable bridge

Cables from the Electric control cabinet to machines in the LDPE recycling line.



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