

**The WS series –  
economical,  
efficient  
and robust.**



WASHER EXTRACTOR | WS 100, 140, 220, 290, 350, 450, 600

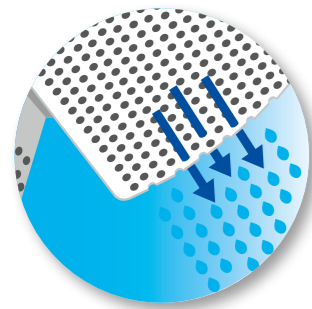
PROFESSIONALS DO THEIR LAUNDRY WITH STAHL

**STAHL**  
WÄSCHEREIMASCHINEN



**FREEpro Control Unit – Wash Technology  
Now and in the Future**

- Simple, easy and flexible programming
- 13 standard programs included
- 99 spaces for free programming
- Dialogue based, simple programming
- Easy individual program selection
- Free and infinitely variable wash parameters
- Machine and computer networks as well as online functions possible
- User navigation in plain language
- Large selection of languages
- Constant process monitoring
- Visual representation of the program process
- Possibility to retrieve extensive statistical information
- Timer with week and week-end settings



**STAHL Eco-Drum:**

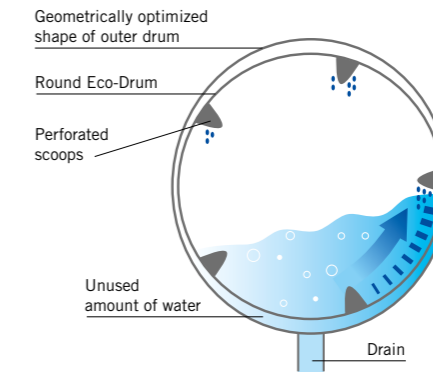
- Fast draining inclining lint
- Gentle conical perforations with soft radiuses

**Washing machine WS – for high-performance, economical and gentle laundry care**

- Extremely robust construction
- Long service life
- Extremely stable bearing
- Ergonomic design to promote efficiency
- Linen saving conical perforation of the Eco-Drum
- Perforations efficient in number and size
- Perforated scoops for fast flooding of the wash load
- **Made in Germany for over 100 year**

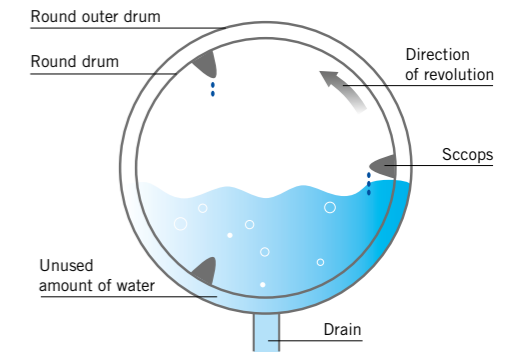


Washer extractor WS 220



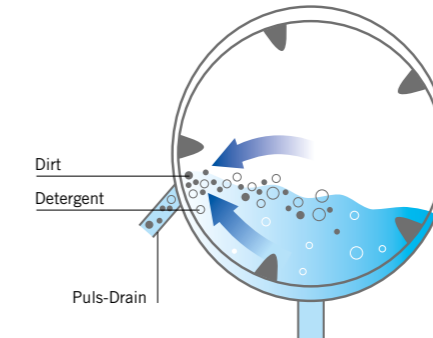
**SPEED-FLOW-System by STAHL**

- Water pressure increases at the narrowing on the right. The water flows quickly and with pressure onto and through the wash load (jet effect)
- More scoops = more agitation of water and wash load



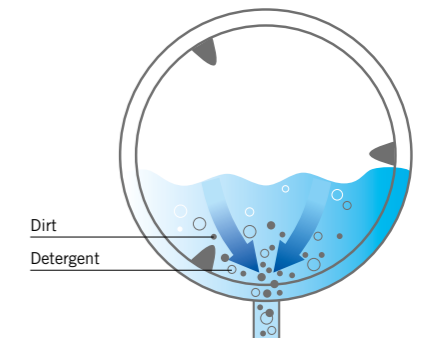
**Conventional System**

- The round drum in the round outer drum does not create any hydrodynamics
- Fewer scoops = Less agitation of wash load
- More unused water = higher water consumption



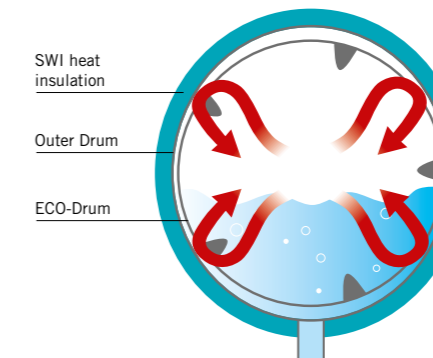
**PULS – process by STAHL**

- Dirt bound in detergent is drained via overflow (Arrow)
- Rinse bath remains cleaner = Save on rinse



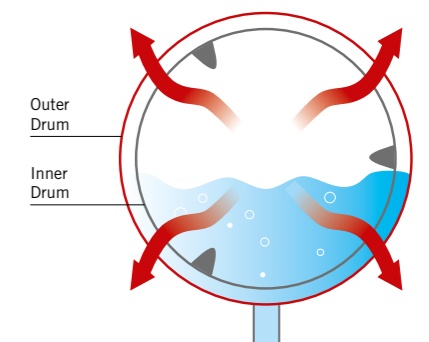
**Conventional rinse without PULS**

- Dirt and detergent come into contact with wash load during rinse
- More rinses are necessary



**SWI heat insulation by STAHL**

- SWI stops heat from radiating out (red arrow) as unused energy and keeps it inside the Eco-Drum instead. This results in marked energy savings
- No heat loss = Energy savings



**Conventional machines**

- Without insulation a high proportion of the heat is radiated out (red arrow) as unused energy
- High heat loss = Energy loss

**FREEpro – the next generation technology**

- Control technology to satisfy any requirement
- Combination of powder and liquid detergents within one program
- Intelligent cold and warm water supply
- Connection to integrated or external water recuperation system
- Quantity control with level sensor
- Easily adaptable to future wash processes and new textiles
- Controlled cool down to prevent creasing
- Combined PULS/Cool-Down/SPEED-Flow/SWI technologies to save time, water and energy
- Trigger of external dosing pumps
- Control of external energy management and trigger of peak-load switch
- Modern sensor technology to comply with temperature curves
- Dual heating system

**WS reduces costs and is kind to the environment:**

- **SWI** – specially designed heat insulation keeps the heat inside the outer drum. This “thermo effect” saves approximately 30% of heating energy.
- **PULS** – pendulum overflow rinse process reduces amount of rinse baths, detergents, wash times, wear and tear on linen and energy consumption.
- **SPEED-FLOW** – hydrodynamic water flooding reduces water and energy consumption.
- Marked additional savings in water consumption can be achieved by installing a water recuperation system.
- WS is 100% recyclable.
- Liquid dosing system for cost reducing and ecological operation can be fitted any time.

Type WS		100	140	220	290	350	450	600
<b>Drum volume</b>	l	100	140	220	290	350	450	580
Load capacity (dry load)*	ca. kg	10	14	22	29	35	45	60
Spin speed variable up to	rpm	500	500	500	500	500	500	500
Number of scoop ribs		4	4	5	5	6	6	6
<b>Connections</b>								
Electric-heating	kW	9	12	18	18 (24)	36	36	36 (54)
Steam HP (4-6 bar)	ca. kg/h	9	9	18	18	36	45	60
<b>Installation connections</b>								
Water cold	DN	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Water hot (optional)	DN	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Steam HP 1/2" thread	DN	20	20	20	20	20	20	20
Water drain	mm	70	70	70	70	70	70	70
<b>Dimensions</b>								
Width	mm	775	775	885	885	1110	1110	1110
Depth	mm	718	868	996	1151	1100	1280	1680
Height	mm	1220	1220	1370	1370	1600	1600	1620
Net weight	kg	240	260	340	433	820	870	1100

\*Depending on load type



**ATOLL** washing machine  
5,5–110 kg



**D-Y 1600**  
pass-through washing machine  
14–200 kg



**T 256**  
tumble dryer  
8–100 kg



**MASTER 1610**  
high-power flatwork ironer  
210–2010 mm roller diameter



**KOMBIFOLD**  
folding machine  
for towelling and dry linen

Made in Germany

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PROFESSIONALS WORK WITH STAHL