



Olive paste preparation

Crushers and depitters for olive oil extraction plants



Alfa Laval disc crusher (left) and hammer crusher (right)

Paste preparation is one of the critical steps in determining both the quantity and quality of oil obtained from an olive oil extraction line. The paste can be prepared in different ways in accordance with the producer's particular wishes, before proceeding to the subsequent malaxing stage.

Alfa Laval supplies the following equipment for paste preparation:

- Hammer crusher (30 hp, 50 hp, 60 hp, 75 hp)
- Disc crusher (30 hp)
- Depitter for paste (25 hp)

Application

The traditional method of crushing olives with stone crushers has now been largely replaced by two main types of crushers

– hammer crushers and disc crushers. The main goal of the crusher is to break the fruit into small pieces to allow for easy release of the oil in the malaxer and eventual recovery in a horizontal decanter.

The way the crushing is done affects the quantity of oil released, the taste of the oil and the oxidative stability of the oil.

Design

Alfa Laval crushing and depitting machines play a key role in the olive oil production process, and are designed for maximum strength and reliability.

Easy maintenance and cleaning have also been taken into account.



75 hp hammer crusher

Working principles, features and benefits

Hammer crusher

Olives are fed to the crusher through a short screw-conveyor assembly that leads the olives into the zone where rotating hammers equipped with wear-resistant metal plates crush the olives against a stationary grid. The diameter of the holes in the interchangeable grid determines the thickness of the paste.

After passing through the grid, the paste drops into a hopper or directly into a pump, from where it is transported to the malaxing section.

Alfa Laval hammer crushers are fitted with the following equipment as standard:

- Interchangeable grid (5, 6 and 7 mm available as standard)
- Safety microswitch on the cover to prevent opening while in operation.

They are noted for:

- Robustness and reliability
- High throughput
- Easy adjustment by changing grid size
- Low spare part costs.

Disc crusher

Olives are fed to the crusher through a short screw-conveyor assembly that leaves the olives between two toothed discs, one stationary, one rotating. The discs tear the olives apart and the resulting paste drops into a hopper or directly to a pump from where it is transferred to the malaxing section.

Alfa Laval disc crushers are fitted with the following equipment as standard:

- Discs with adjustable gap
- Safety microswitch on the cover to prevent opening while in operation.

They are noted for:

- Minimal risk of paste overheating
- Production of green, spicy olive oil
- Easy adjustment of disc spacing
- Continuous throughput.

Depitter

Olives are fed to the depitter through a short screw-conveyor assembly that leads the olives into a special chamber fitted with bores. A rotating mixer moves the olives towards the periphery where the pulp is separated from the pit, which is ejected – unbroken and clean – at the end opposite to the feed.

The pulp passes through the basket holes in the chamber and drops into a hopper beneath, from where it is sent to the malaxing stage.

Alfa Laval depitters are fitted with the following equipment as standard:

- Safety microswitch on the cover to prevent opening while in operation.

They are noted for:

- Production of harmonic oil with high resistance to oxidation
- Minimal risk of paste overheating
- Opportunity to use unbroken stones for other purposes
- Good throughput.

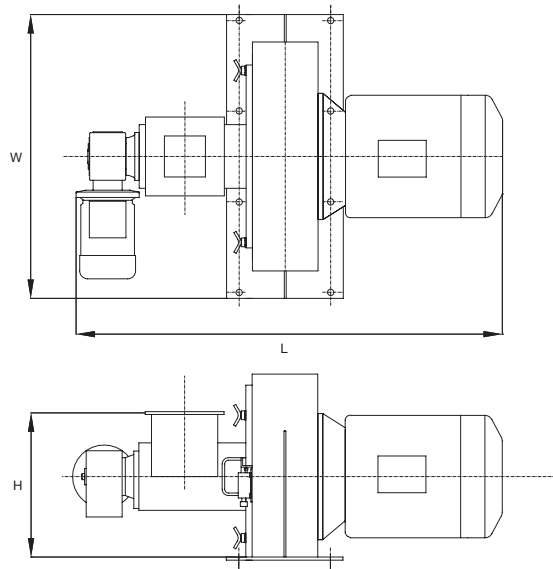
Alfa Laval disc crusher

Shipping data	kg	lbs
Tare weight	380	837.8

Technical specifications

Sound pressure level	85.1 dB
Main drive size	22.4 kW
Speed	1,400 rpm

Dimensions	mm	inches
Length (L)	1,414	55.7
Width (W)	705	27.8
Height (H)	717	28.2



Alfa Laval hammer crusher

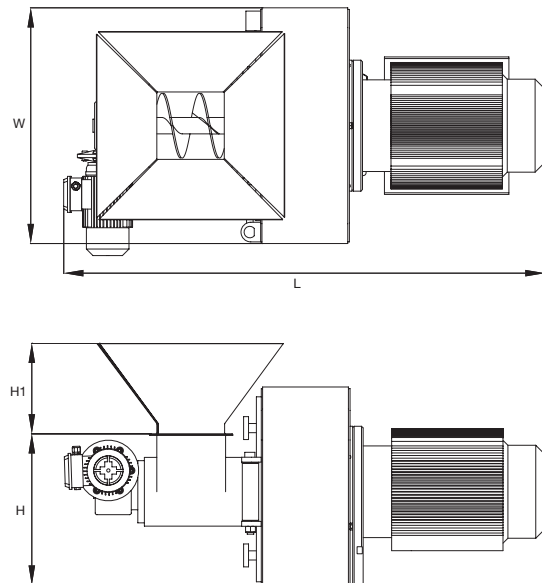
Types 30, 50, 60 and 75

Shipping data	Tare weight	kg	lbs
Type 30		415	914.9
Type 50		470	1,036.2
Type 60		647	1,426.4
Type 75		854	1,882.7

Technical specifications

Sound pressure level	Type 30	88.0 dB
	Type 50	61.1 dB
	Type 60	92.3 dB
	Type 75	90.9 dB
Main drive size	Type 30	22.4 kW
	Type 50	30.0 kW
	Type 60	44.7 kW
	Type 75	60.0 kW
Speed	Type 30	2,800 rpm
	Type 50	2,800 rpm
	Type 60	3,000 rpm
	Type 75	1,500 rpm

Dimensions		mm	inches
Type 30	Length (L)	1,351	53.2
	Width (W)	900	35.4
	Height (H)	457	18.0
Type 50	Length (L)	1,400	55.1
	Width (W)	900	35.4
	Height (H)	490	19.3
	Height (H1)	280	11.0
Type 60	Length (L)	1,469	57.8
	Width (W)	720	28.4
	Height (H)	462	18.2
	Height (H1)	276	10.9
Type 75	Length (L)	1,681	66.2
	Width (W)	870	43.3
	Height (H)	538	21.2
	Height (H1)	333	13.1

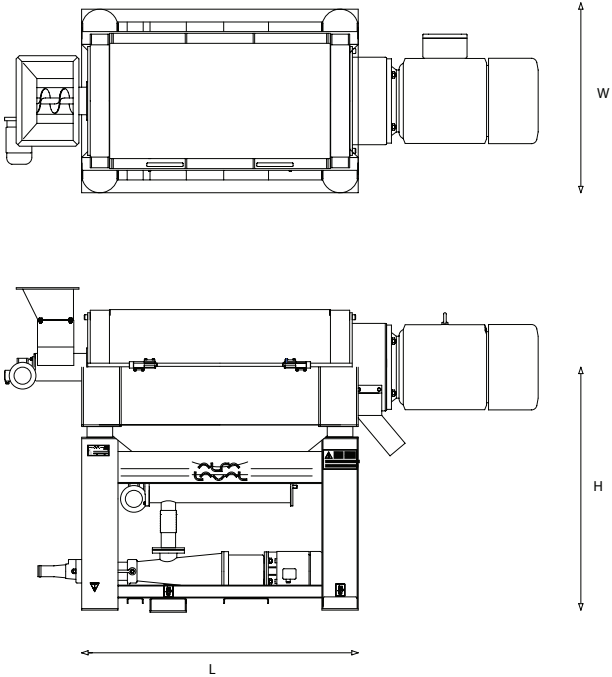


Alfa Laval depitter

Shipping data	kg	lbs
Tare weight	370	815.7

Technical specifications		
Sound pressure level	61.0 dB	
Main drive size	18.7 kW	
Speed	920 rpm	

Dimensions	mm	inch.
Length (L)	2,395	94.3
Width (W)	840	33.1
Height (H)	1,460	57.5



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Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com.