

SYSTEMS



DESCRIPTION

The flagship of **FAMA s.r.l.** metal swarf treatment systems is the pneumatic suction system. Versatile, non-invasive, extensible, modifiable over time, it has very interesting benefits and advantages.

The application of the system eliminates all problems related to swarf handling: the constant commitment of a forklift and an operator, the risk of impacts during transportation, the commitment of personnel to clean up the scattered swarf and oil, the encumbrance of the containers (full and empty) in the workplace,...

OBJECTIVE

The aim is simple: a system that allows to remove swarf and coolant from lathes, milling machines, NC machines,... continuously, automatically and without the constant presence of an operator to control it.

COVERED DISTANCE*	up to 200 m			
QUANTITY PER LINE*	up to 1200 kg/hour			
POWER	11 ÷ 55 kW			
VOLTAGE	230/400 V			
LOADING	continuous			
CIVIL WORKS	none			
VERSATILITY	maximum			
TYPE OF SWARF	any			
COOLANT	any			
C B A				

THE DESCRIBED DATA ARE TO BE CONSIDERED AS LIMIT VALUES. EVERY CASE MUST BE STUDIED, ANALYSED, SIZED AND DESIGNED. THE NUMBER OF MACHINES THAT CAN BE CONNECTED DEPENDS ON THE DISTANCE AND QUANTITY OF SWARF. *THE DATA REFER TO A SINGLE LINE, IT IS ALWAYS POSSIBLE TO PROVIDE RELAUNCH MECHANISMS.

SUPPLY

- Displacement pump;
- Safety filter;
- Cyclonic separator;
- Suction intake manifold in AISI304 stainless steel, complete with bends and couplings;
- Branching to reach the machine (GSM, floor, valve, electrical panel...);
- Main electrical panel, electrical wiring and compressed air line.

OPTIONAL

- Double or triple suction line in case of multi material;
- Revolver;
- Curves with anti-wear extrados;
- Double guillotine for systems that have to work 24 hours a day;
- Shredder for long swarf [E];
- Squeezer for very wet swarf [G];
- Synoptic remote control;
- Remote assistance.

HOURLY PRODUCTION							
Q = 0.8 m3/h	BRASS	STEEL	ALUMINIUM	STAINLESS STEEL	COPPER	CAST IRON	
Δ density [kg/dm3]	1.5	1.3	0.8	1.1	1.0	1.4	
Kg/h \rightarrow	1200	1050	640	900	800	1150	

THE DATA IN kg/h ARE APPROXIMATE AND IN ANY CASE DEPEND ON THE DENSITY OF THE SWARF, THE SHAPE, THE OIL CONTENT AND THE TYPE OF COOLANT. THE DENSITY DATA CONSIDERED ARE HYPOTHETICAL, BASED ON AN EXPERIMENTAL AVERAGE OF THE DATA IN OUR POSSESSION.

FAMA RESERVES THE RIGHT TO MAKE CHANGES TO THE PRODUCT WITHOUT NOTICE

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OPERATION

The system is operated by a vacuum pump [A], protected by a safety filter [B], which provides enough energy to suck the oil-soaked swarf. This is then transferred from the machine to the storage area. Each machine will be equipped with a submachine unit [F], abbreviated 'GSM'. It is a special storage unit, placed at the base of the evacuator, which accumulates the wet swarf for a certain amount of time. A level sensor reserves the GSM for cleaning after the suction process. In its turn, the GSM dosing screw activates and conveys the swarf to the suction point. The material courses along the line [D] to the separator [C], where the swarf precipitates and is stored inside a container or is centrifuged.

The system works with a short swarf, so where necessary, the GSM is integrated with a shredder [*E*].



EXAMPLE: It is a branching with double suction line, with manual exchange.

Depending on the type of material being processed, the operator can connect to line 1 or line 2. Operation can be automatic, managed from the panel.



Safety filter with interchangeable filter cells.



EXAMPLE: If the swarf is long and skeintype, a shredder model TAL is combined with GSM to grind the swarf and to make it pneumatically transportable.

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