



Dynaset

High pressure dust suppression
systems

HPW DUST

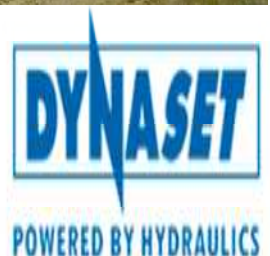


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Dust will be a big problem in future on demolition, quarrying, drilling, recycling, earth construction etc. business, without preventing actions.



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Why use high pressure water in dust suppression?



Dynaset HPW dust suppression system develops required water pressure, of over 120 bars, which minimizes the drop size under 160 μm producing thick water fog.

Some high pressure water benefits:

- Extremely low water usage
- No mud: cleaner work site
- Small drop size reaches every dust particle and its weight rises dramatically.
- Clear air: good visibility & better breathing air



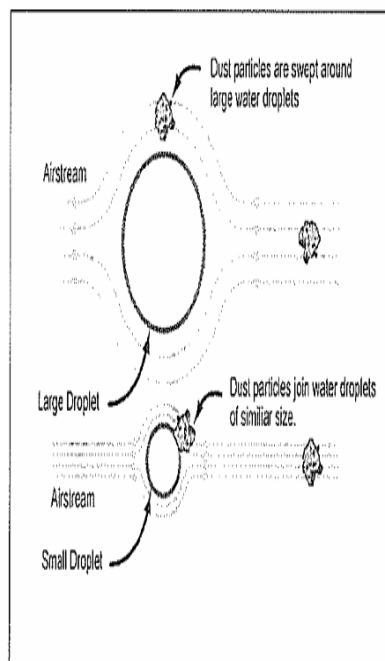


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HPW DUST makes dusty work site dust-free and ables better working conditions.

EU law prohipits dusty work sites. It is illegal to work without decent dust suppression.

If work site needs transported water, it may cost tens of thousands. Great saving are made, if water consumption can be reduced. And it CAN!

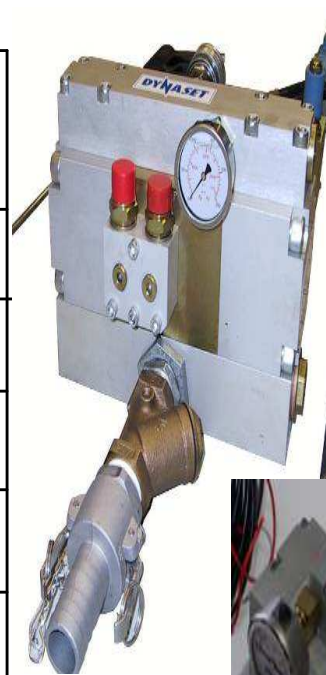




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HPW DUST is based on the HPW- high pressure water pump, which is powered by the hydraulics of a carrier machine. The HPW DUST is very versatile system and from our product range you can find suitable system for all kind of mobile machinery.

Application	HPW 200/30 DUST	HPW 220/50 DUST DOUBLE	HPW 180/90 DUST DOUBLE
Mobile crusher	•		
Mobile crushing plant		•	•
Mobile screen	•	•	
Wheel loader	•	•	
Rock drill	•		
Dumber	•	•	



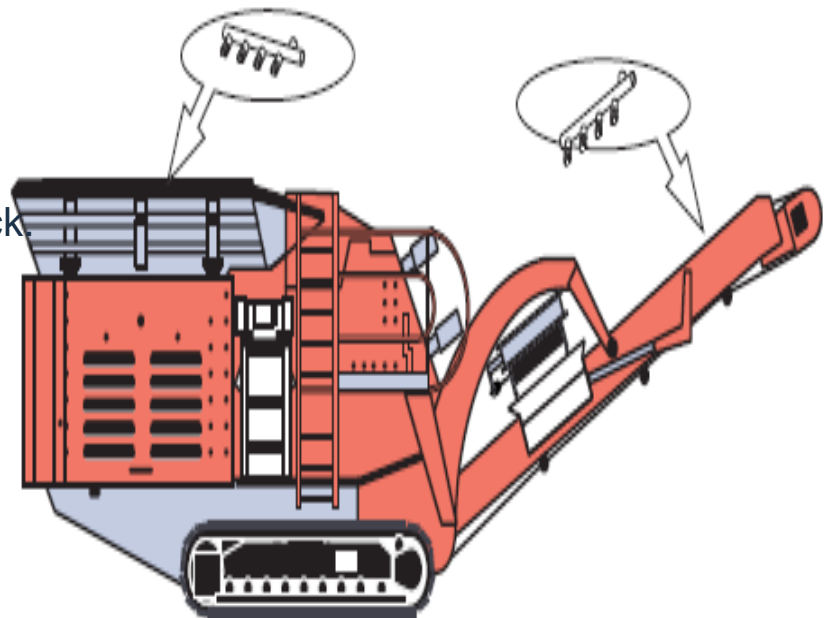
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Set of nozzles and nozzle blocks can be fixed to machine in places where the dust is produced. For each block is made own ball valve to use them separately or simultaneous.

Mobile crusher with nozzle block



Wheel loader bucket with nozzle block.





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Without dust suppression





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Without dust suppression





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Dust suppression nozzles are one of the key components to dust suppression. With special nozzles the water spray cover in a right area. With fan type nozzles can easily built wide dust suppression blanket.

Various nozzle sets





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Example of dust suppression nozzles water consumption calculations

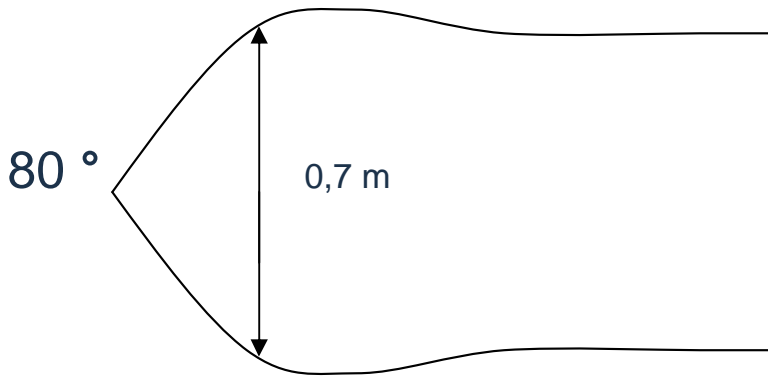
(Working pressure 120bar)

Nozzle type	Angle	Nominal size	Water consumption lpm (120bar)
632.187	120	0,030	0,65
1100033	110	0,033	0,77
632.217	120	0,036	0,85
1100050	110	0,050	1,13
1100067	110	0,067	2,50





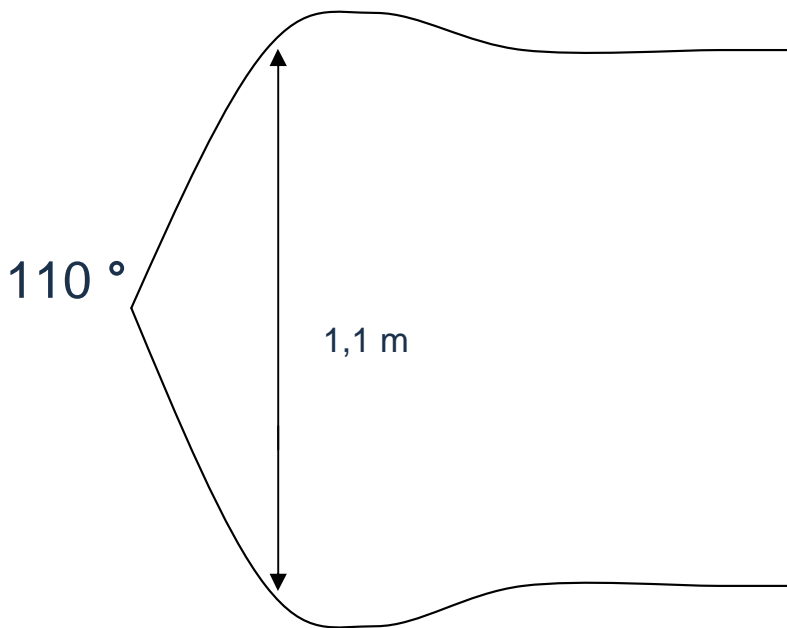
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Fog blanket coverage

Area covered $0,7\text{m} \times 3\text{m} = 2,1\text{m}^2$

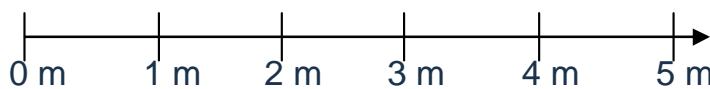
If 10 nozzles: $10 \times 2,1\text{m}^2 = 21\text{m}^2$



Fog blanket coverage

Area covered $1,1\text{m} \times 3\text{m} = 3,3\text{m}^2$

If 10 nozzles: $10 \times 3,3\text{m}^2 = 33\text{m}^2$



Example set (10) of 1100033 nozzles consumption during 8 hours
 $10 \times 0,77 \text{ l/min} \times 60 \text{ min} \times 8 \text{ h} = 3600 \text{ l/8h}$

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Dynaset HPW DUST is a complete kit, which includes:

- HPW pump
- hydraulic installation valve with constant water pressure control
- high pressure dust suppression nozzles
- meshes for each nozzle
- wiring kit
- washing pistol and 10m hose



Optional accessories: nozzle blocks, 20m hose and reel, water tank





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Hydraulic requirements:

HPW 200/30 DUST:

- Oil flow max. 45 lpm
- Oil pressure max. 210bar

HPW 220/50 DUST DOUBLE:

- Oil flow max. 70 lpm
- Oil pressure max. 210bar

HPW 180/90 DUST DOUBLE:

- Oil flow max. 115 lpm
- Oil pressure max. 210bar





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Hydraulic priority valve with load sensing ensures right oil flow. Hydraulic power can also be taken from tool hydraulics with t-connections – then HPW DUST will work at the same time with e.g. breaker



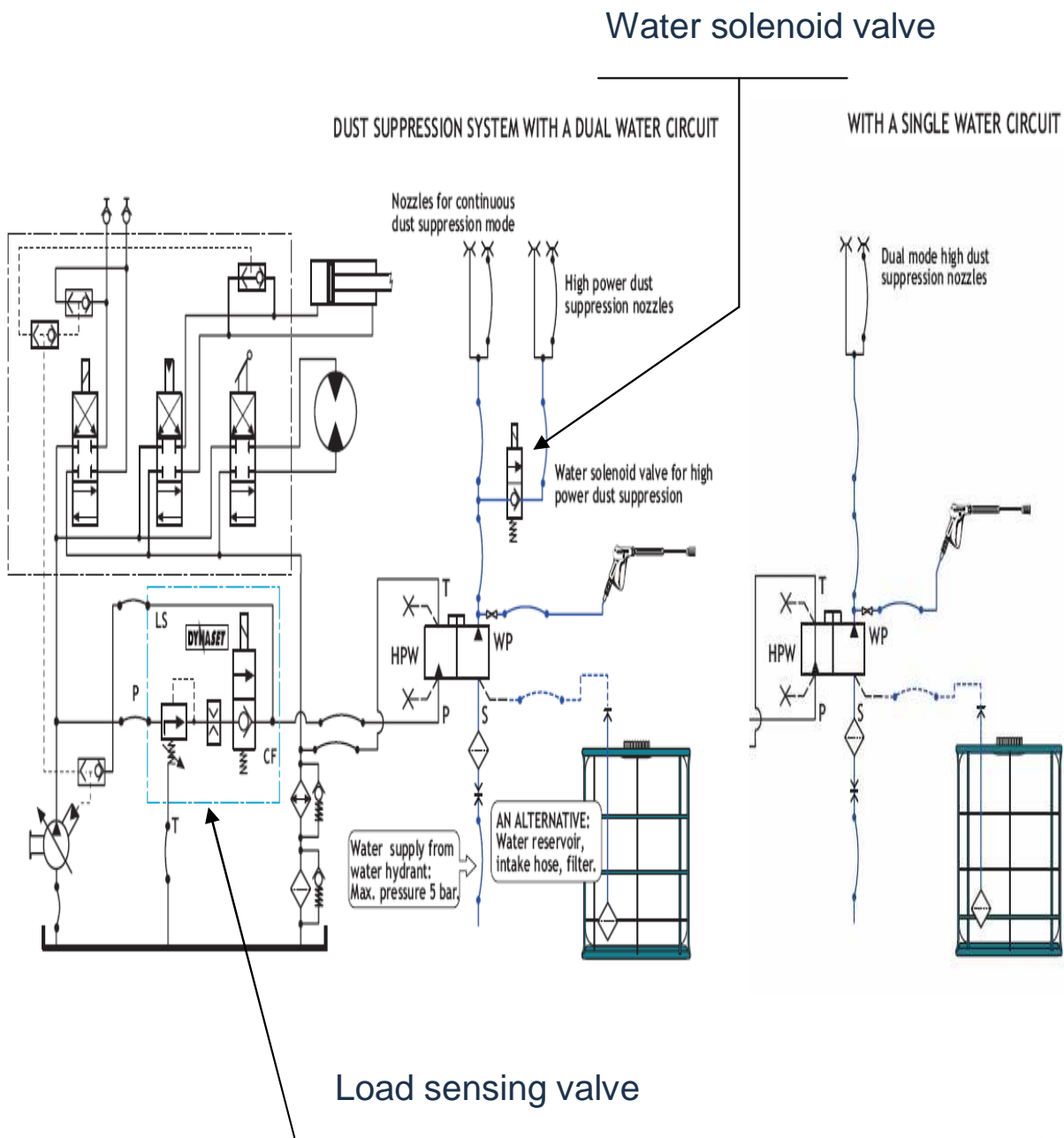
PRESSURE COMPENSATOR INSTALLED TO A PRESSURE PORT OF A MAIN HYDRAULIC PUMP





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CLOSED CENTRE HYDRAULIC SYSTEM WITH VARIABLE DISPLACEMENT PUMP





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With HPW DUST and its pistol it is easy to wash the work machines on site and do additional cleaning and washing to the machines and environment.





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