



# ORSCO

## Sistemas de micropulverización de aceite con monitorización

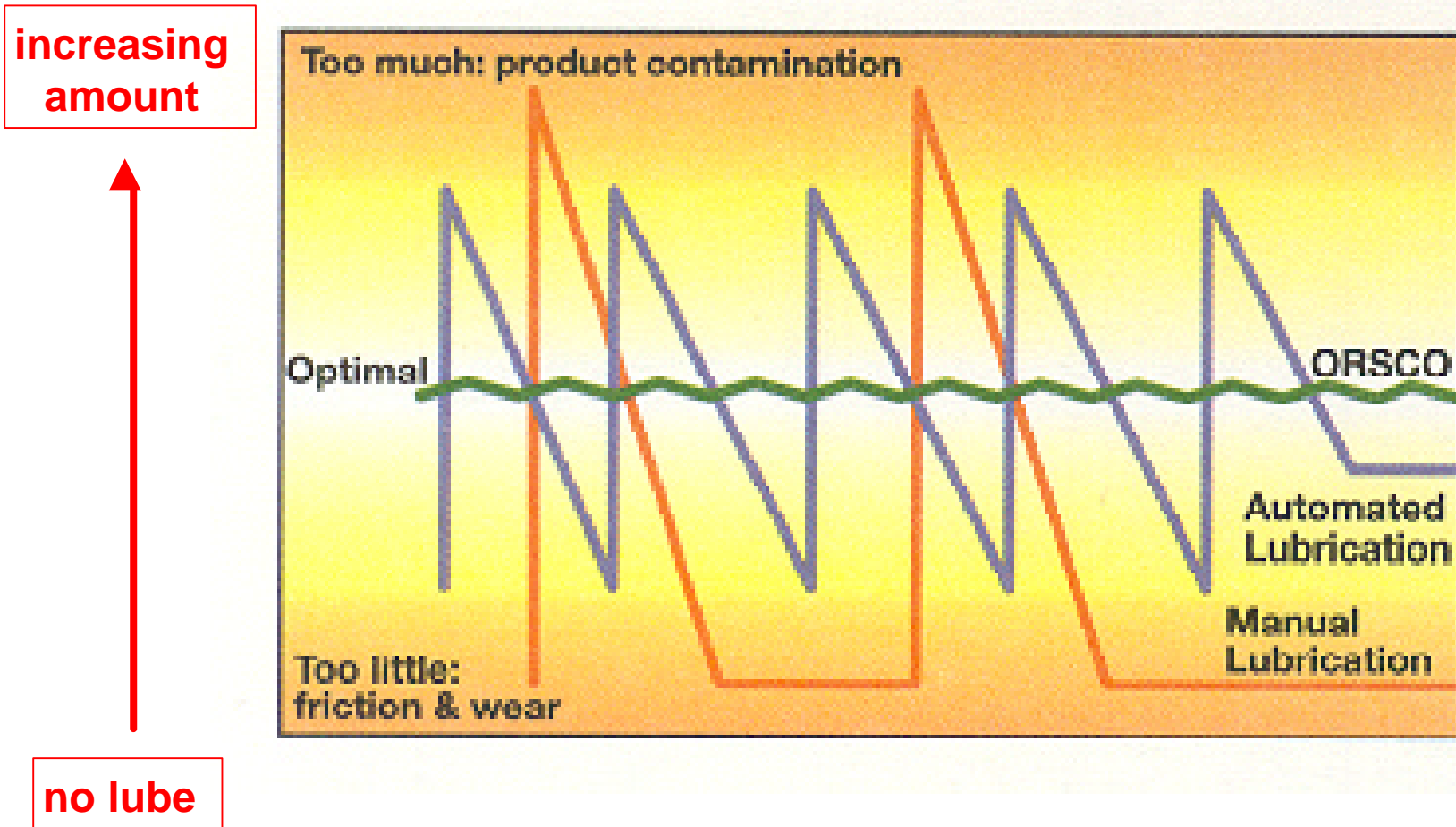


## Outline:

- 1. Basic Principles / Assumptions / Fixed-Displacement Injectors**
- 2. Standard Systems: Series 170** (incoming air & oil feedback)
- 3. Semi-Monitored System: Series 200** (plugged-nozzle detection)
- 4. Fully-Monitored System: Series 300**
- 5. Series 300 Controls Graphic**
- 6. Applications that require Monitored Systems (Series 300)**
- 7. Remote Tip Nozzles & Nozzle Placement**
- 8. Return On Investment (ROI) Figures**
- 9. Engineering Contacts – Technical Support**



# 1. ORSCO Spray Nozzles





# 1. ORSCO Lube Consumption Chart

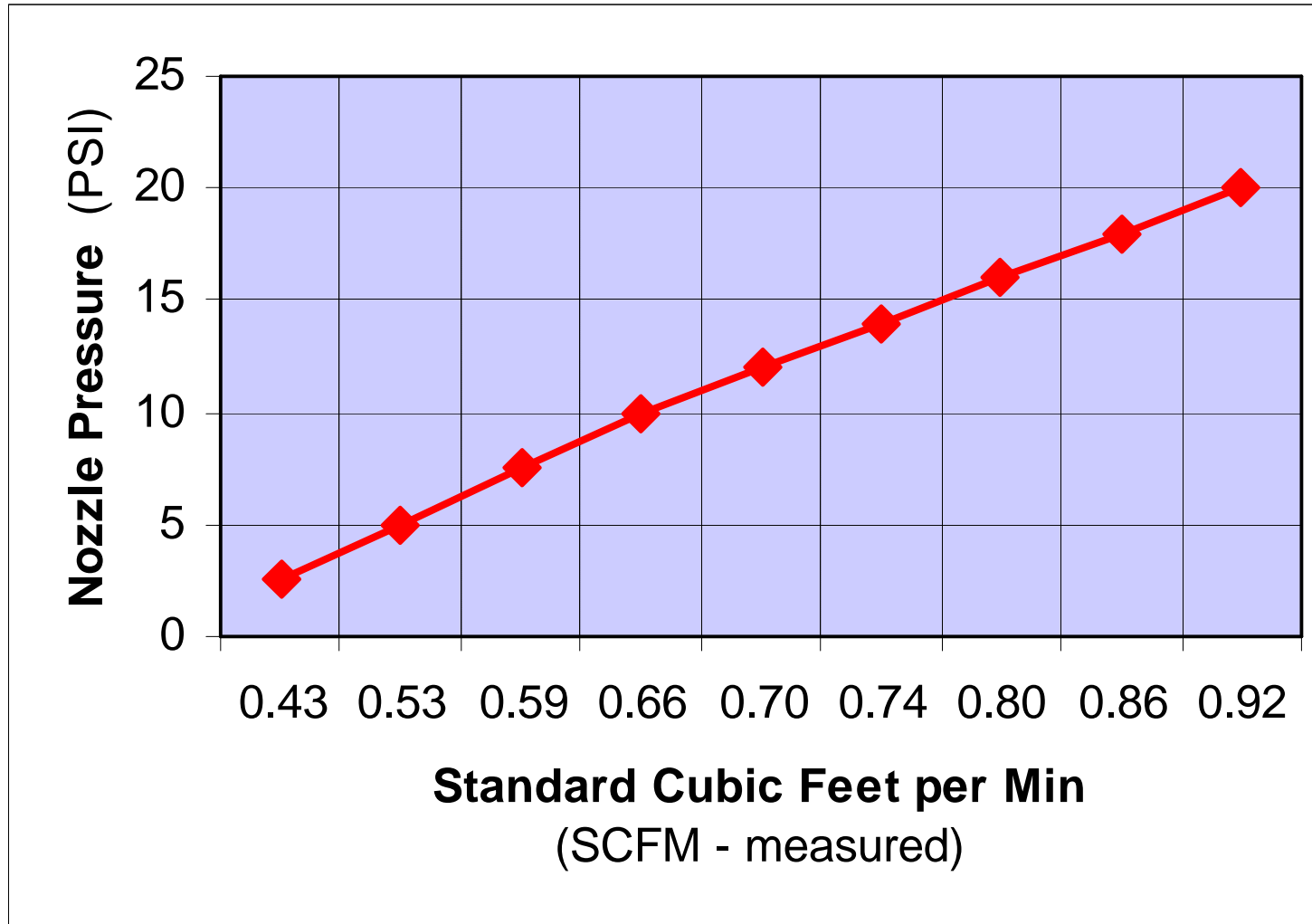
Lube Consumption/Usage Reference Chart:								1/2 Drop Injector
Injector Cycling Every	ml per Min	ml per Hour	ml per 8 Hrs	ml Per Day (24 Hr Day)	ml Per Week (24 Hr Day)	ml Per Month (24 Hr Day)	ml Per Year (24 Hr Day)	Gallons Per Year (24 Hr Day)
1	0.900	54.000	432	1,296	9,072	38,880	473,040	98.86
2	0.450	27.000	216	648	4,536	19,440	236,520	49.43
3	0.300	18.000	144	432	3,024	12,960	157,680	32.95
4	0.225	13.500	108	324	2,268	9,720	118,260	24.71
5	0.180	10.800	86	259	1,814	7,776	94,608	19.77
6	0.150	9.000	72	216	1,512	6,480	78,840	16.48
7	0.129	7.714	62	185	1,296	5,554	67,577	14.12
8	0.113	6.750	54	160	1,134	4,860	59,130	12.36
9	0.100	6.000	48	144	1,008	4,320	52,560	10.98
10	0.090	5.400	43	130	907	3,888	47,304	9.89
15	0.060	3.600	29	86	605	2,592	31,536	6.59
20	0.045	2.700	22	65	454	1,944	23,652	4.94
25	0.036	2.160	17	52	363	1,555	18,921	3.95
30	0.030	1.800	14	43	302	1,296	15,768	3.30

*numbers  
in seconds*

*chart assumes non-stop usage*



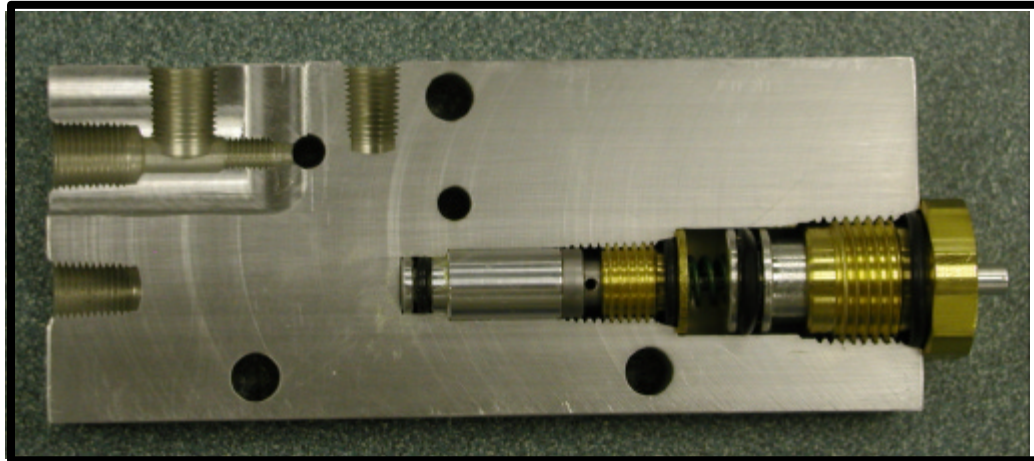
# 1. ORSCO Air Consumption



*(based on standard nozzle orifice = 0.046")*

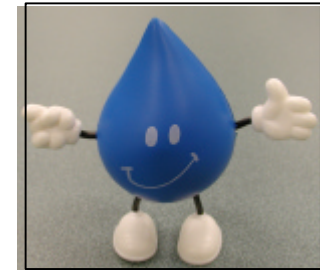


# 1. ORSCO Injectors



**Fixed Half-Drop Injector: 0.015 cc/cycle** (standard)

**Fixed Two-Drop Injector: 0.060 cc/cycle** (optional)



one drop = 0.030 ml  
*industry standard*

.6 ml/min. (.037 in <sup>3</sup> )	40 cycles per minute* (0.66 Hz)
1.2 ml/min. (.074 in <sup>3</sup> )	80 cycles per minute* (1.3 Hz)
1.8 ml/min. (.101 in <sup>3</sup> )	120 cycles per minute* (2.0 Hz)

Typical ORSCO Spray patterns

*\*-based on using a half drop injector*



## 2. Standard Systems:

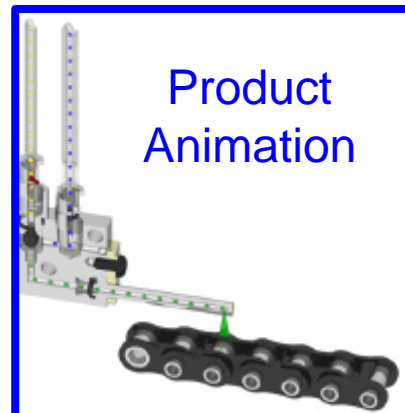
### Series 170 Oil-Spray System



**Standard System**

*Injectors require a minimum air pressure of 60 PSI to operate.*

*Both systems only include feed back for **low oil level** and **low incoming air pressure** – both outputs can signal a PLC for an appropriate response.*



**Product Animation**

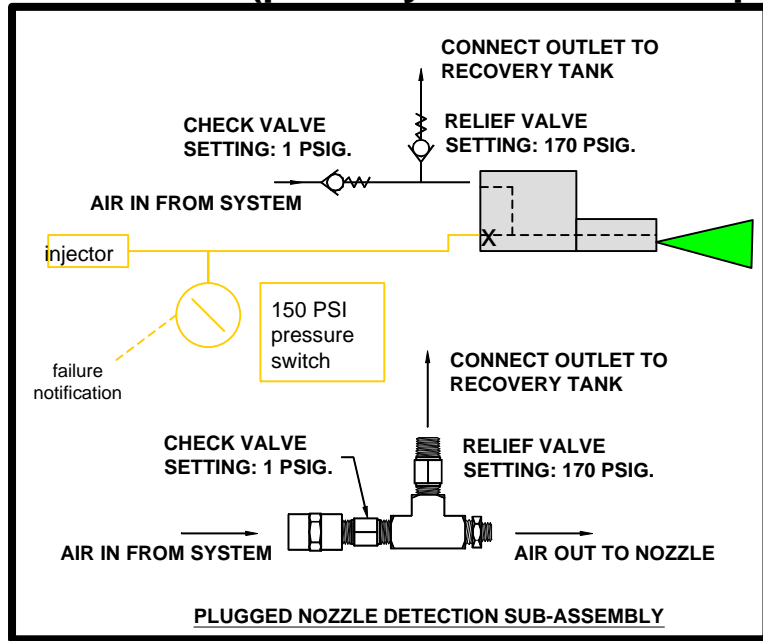


**Standard System w/ Enclosure**



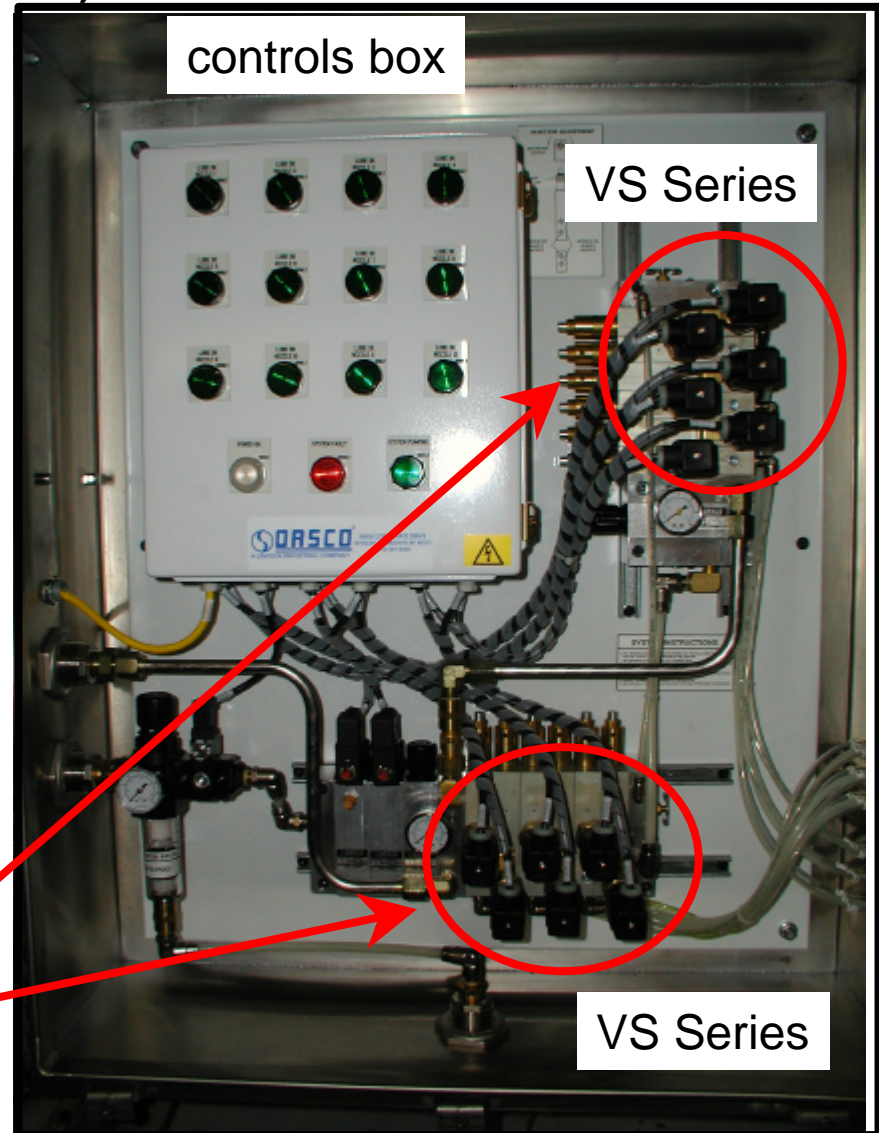
### 3. Plug Nozzle Detection:

Series 200 (partially monitored at spray nozzle)



This hybrid system monitors blockage at the nozzle tip.

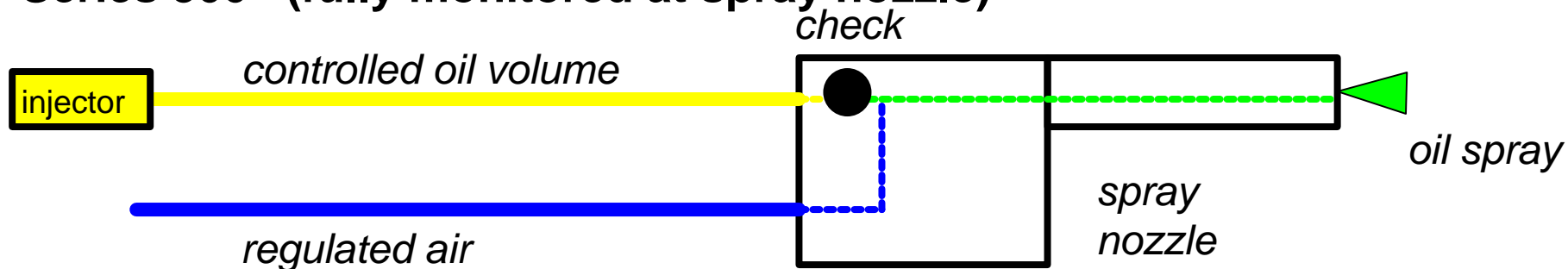
*oil pressure switches*





## 4. Monitored Systems:

Series 300 (fully monitored at spray nozzle)



### Concept:

1. monitor "Oil Line"

**Oil line integrity**

2. monitor the "Air Line"

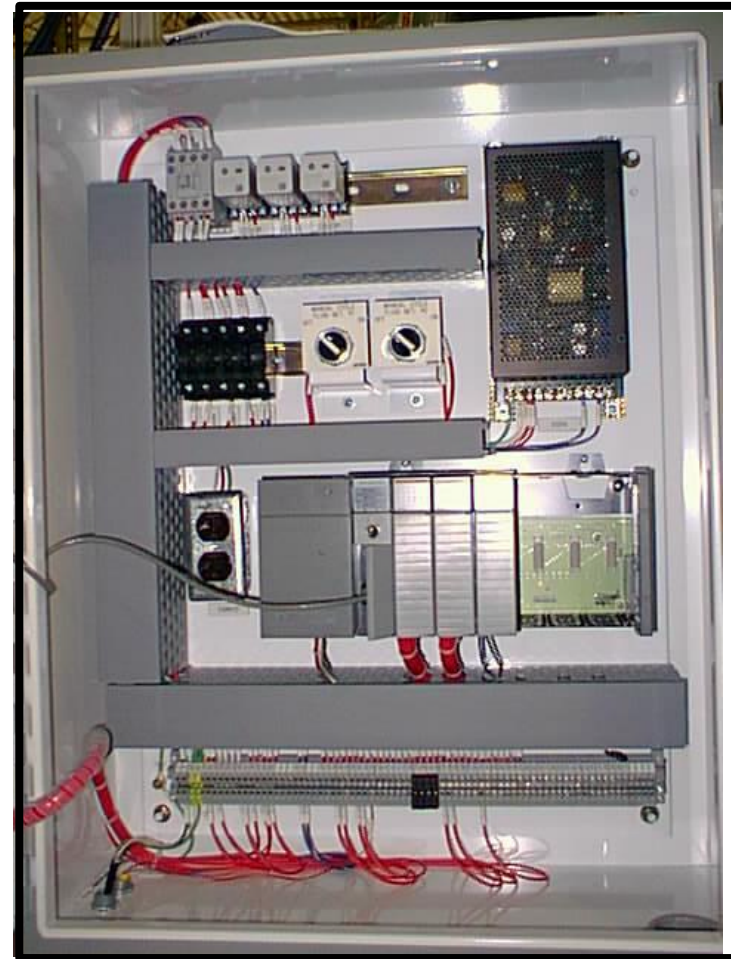
**Air line integrity**

3. monitor the "Injector"

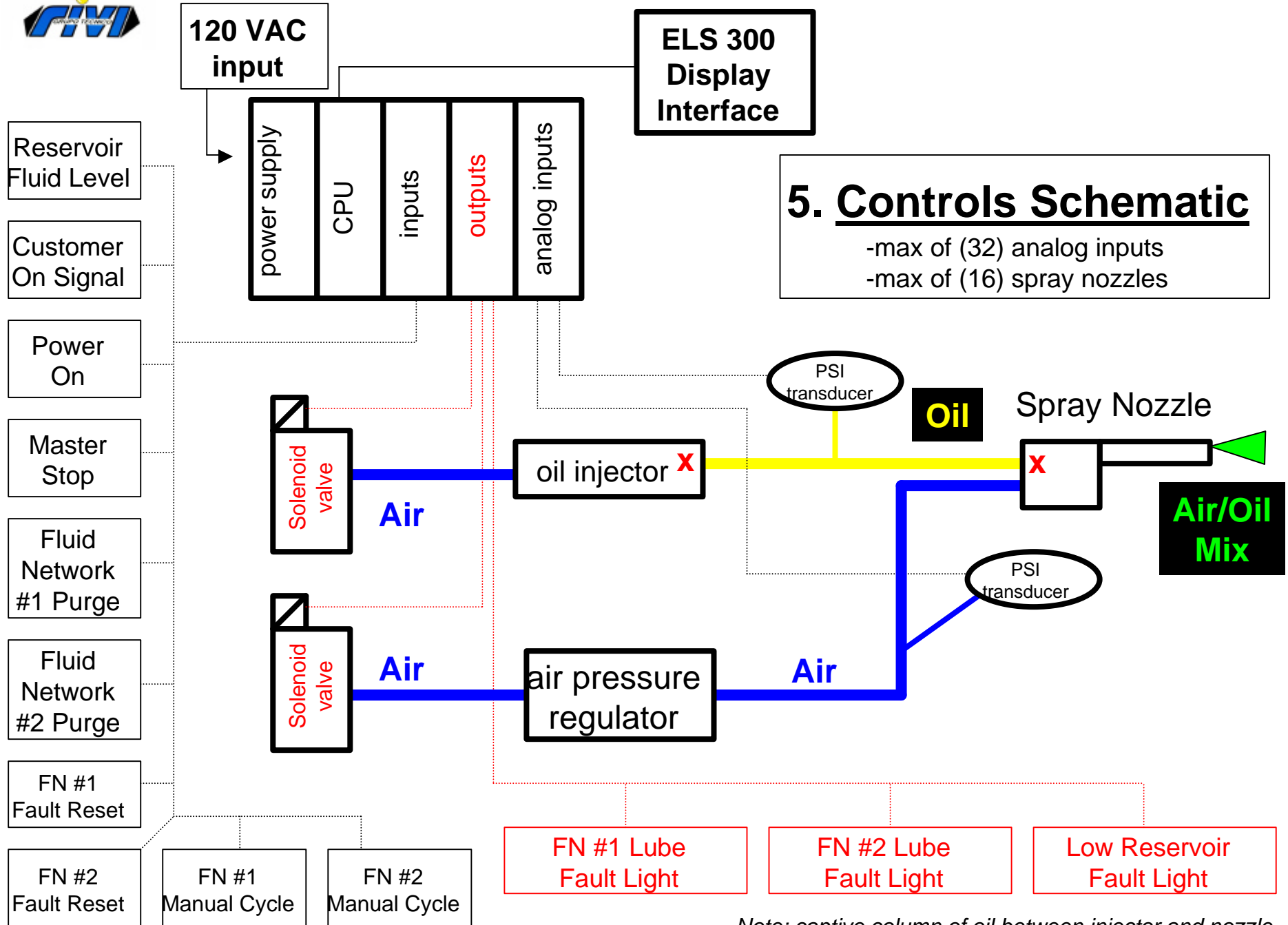
**Injector Output Performance**



## 4. Monitored Systems: Series 300 (fully monitored at spray nozzle)



Controls Box shown above.



*Note: captive column of oil between injector and nozzle.*



## 6. Series 300

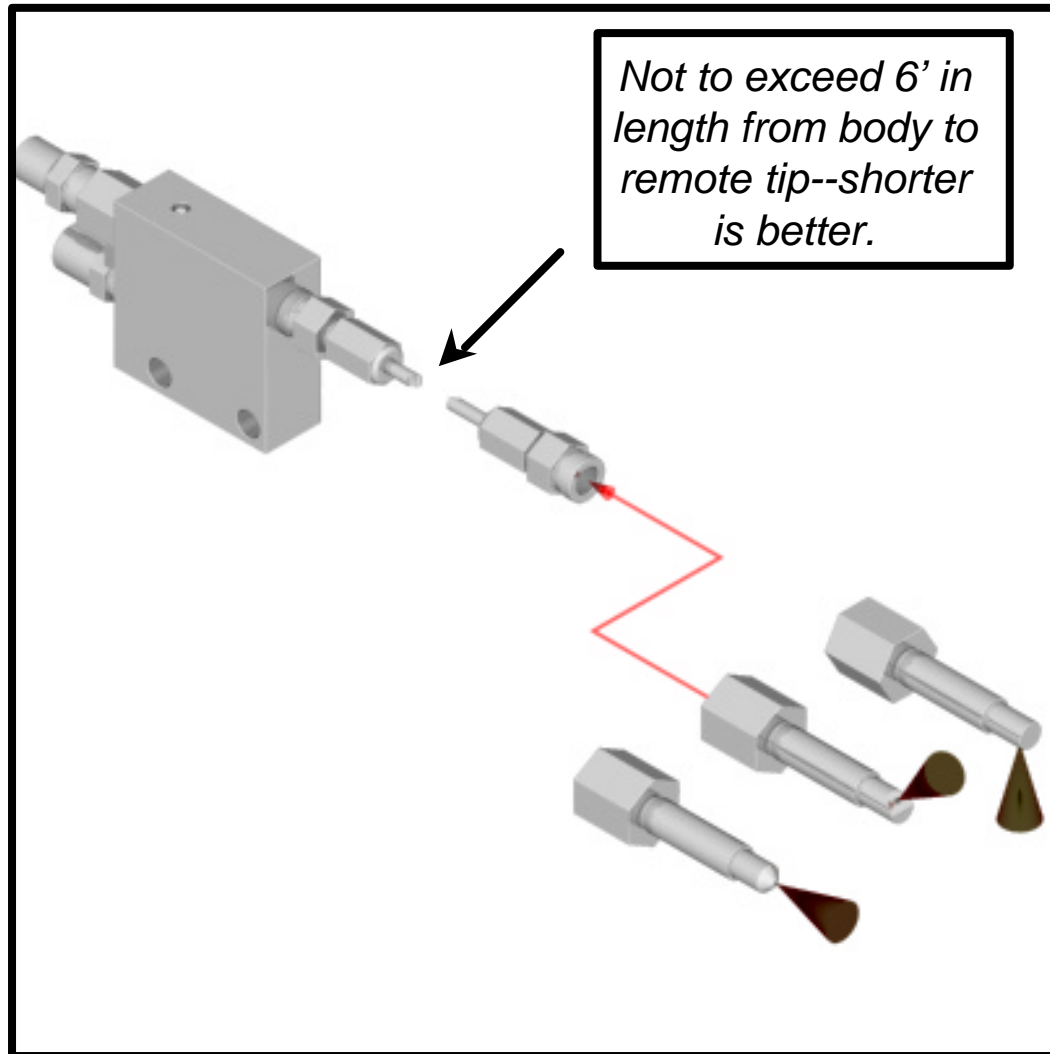
### Fully Monitored Applications

*This technology is applied in applications where the customer has considerable benefit in having real-time feedback with respect to the lubrication of equipment and processes integral to the success of their business.*



Common  
Applications

- *Engine Assembly*
- *Tenterframes*
- *Oven Chain*
- *High-Speed Spindles*
- *Other*



## 7. Remote Tip Nozzle

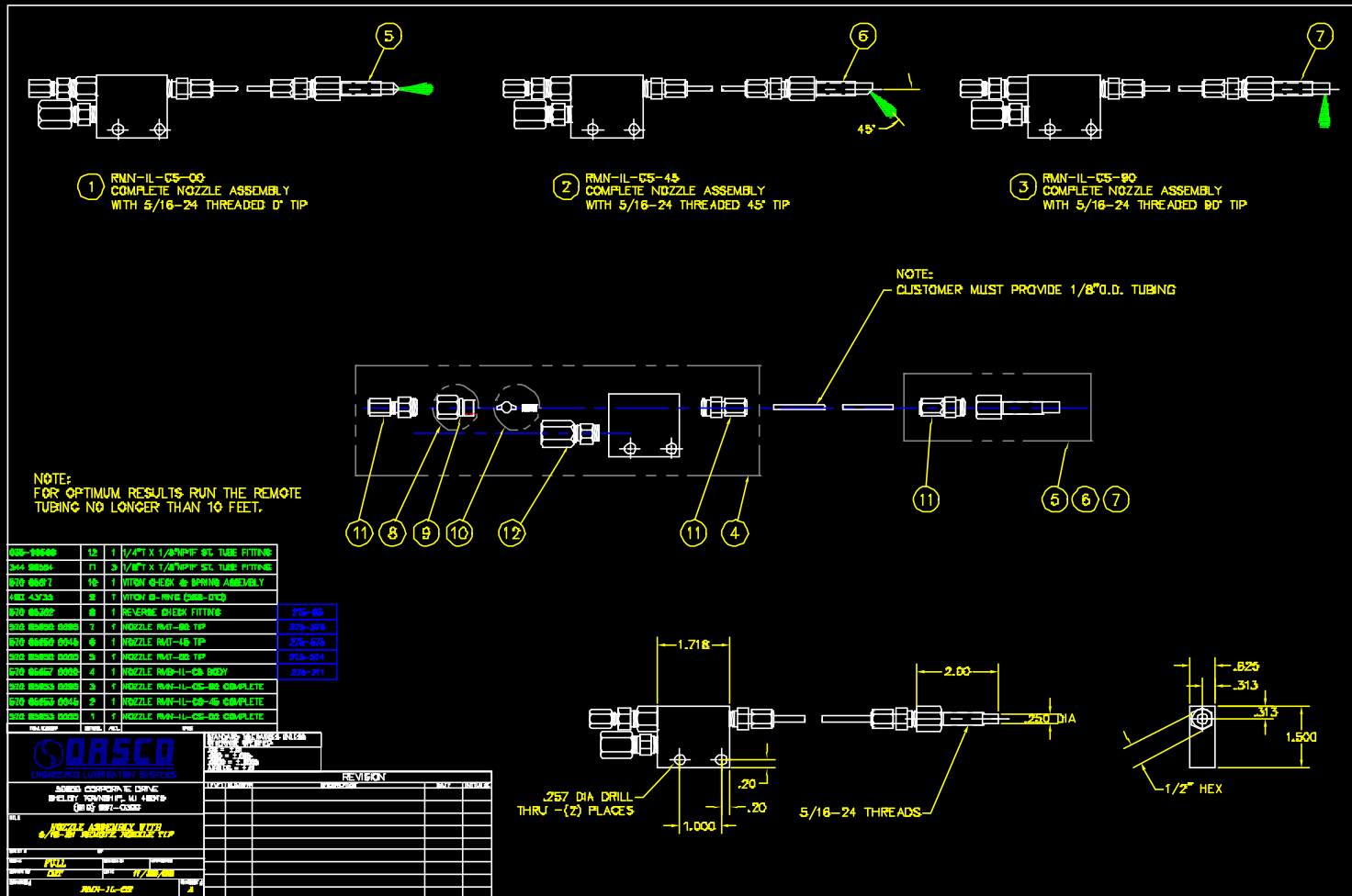
*(show with optional tips)*

RMN-IL-CS-00 or RMN-IL-CS-45 or RMN-IL-CS-90

*(part numbers shown above respectively)*



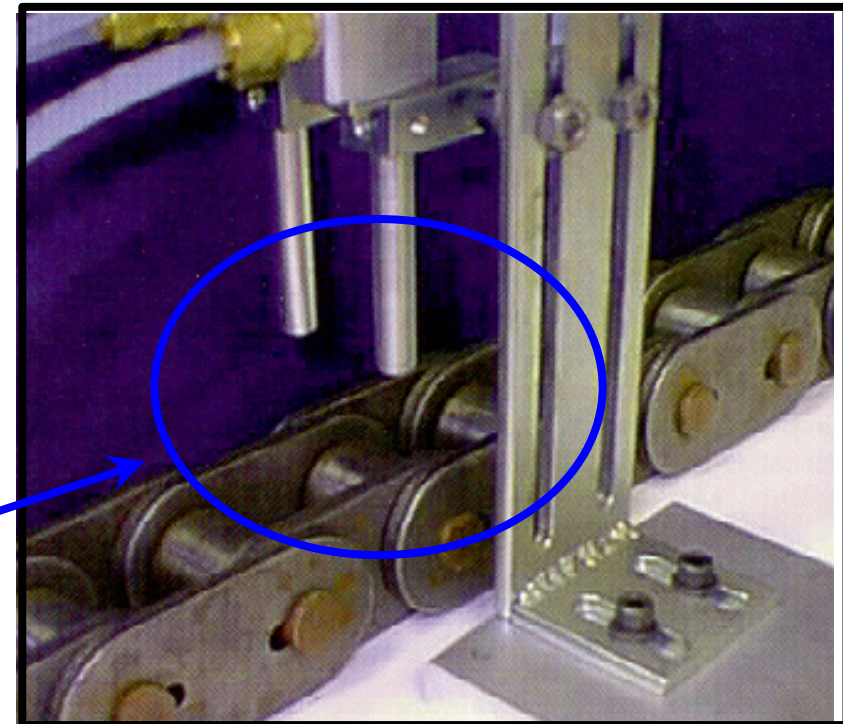
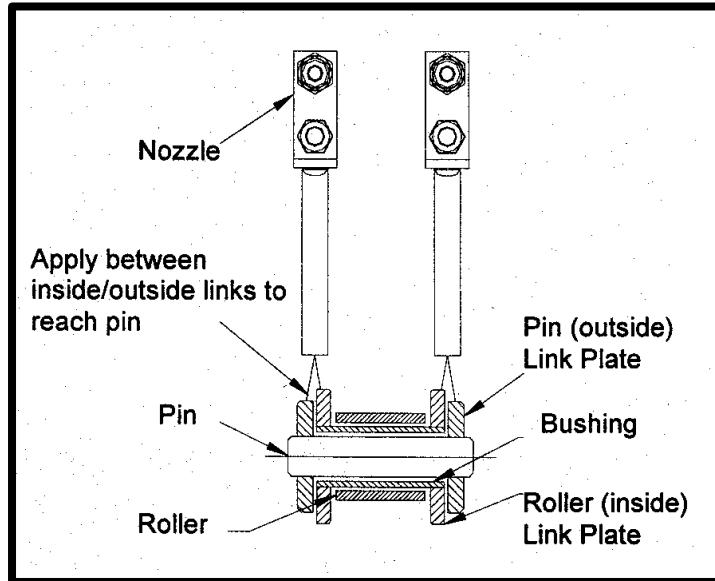
# 7. ORSCO Remote-Tip Spray Nozzles



Part Numbers: **RMN-IL-CS-00** & **RMN-IL-CS-45** & **RMN-IL-CS-90**



## 7. ORSCO Nozzle Location Placement



The spray nozzle tips should be located no more than 1" from the spray surface.

The more you are able to minimize this distance, the better your results will be. It is an advantage to locate the nozzles in an area where there is minimal chain deflection as this will protect the nozzles from being damaged.

-nozzles include *viton* material in check ball, so they are limited to ambient temperatures of approximately 350 F or less.