

Special paint supply with AirPig System

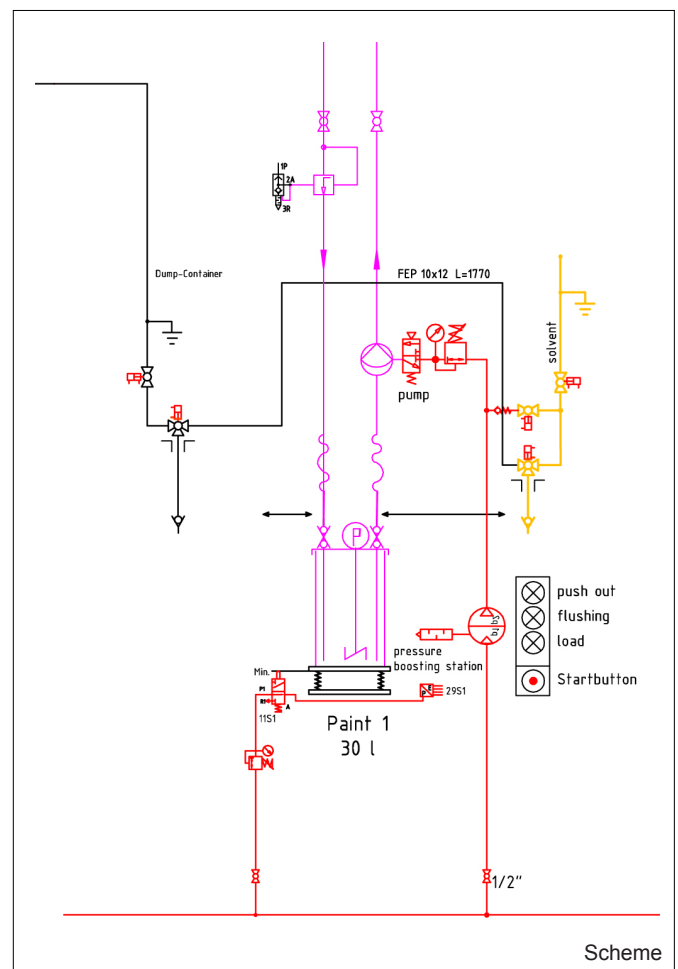
Paint recovery using compressed air



Paint supply system with paint recovery from paint station and closed circulating pipeline during colour change through ball valve interconnection.

The recovery and cleaning process controlled by PLC to reduce the material and rinsing agent loss significantly as compared to the existing manual colour change.

The conveying of paint material is carried out via diaphragm pump; avoid dry running (diaphragm rupture). The supply by rinsing material from the container room must be ensured.



Function

The simple, cost-effective paint supply system automatically takes the paint out of the circular pipe by using compressed air during colour changes and returns it to container; this will reduce the paint wastage of the colour change. The operator links the feed line to the rinsing unit. First of all the paint is removed using compressed air. This is followed by the rinse process in which the rinsing agent is pulsed through the pipes to clean them more effectively. After this, the next paint container with the new colour is connected to the system and the circular pipe is refilled.



BETTER SOLUTIONS ARE THE RESULT OF CONVINCING DETAILS.

Paint and cost saving with AirPig system (example bumper painting)

Issue	Current system	AirMolch system	Unit
Basic data			
Number of colour changes per day in the special paint supply system	15	15	Number/day
Working days per week	5	5	Number/day
Working weeks per year	45	45	Number/day
Number of colour changes per day in the booth (3-shift operation)	35	35	Number/day
Length of the circular pipe	2 x 41	2 x 41	m/DN8
Colour changes in the mixing room			
Paint wastage per colour change in the special paint supply system	3	0,33	l/kg
Solvent wastage per colour change in the special paint supply system	40	3,5	l
Colour change time in the special paint supply system	0,75	0,14	h
Paint wastage per year with 15 colour changes in the special paint supply system, a 5-day working week and 45 working weeks in the year	10.125,00	1.113,75	l/kg
Solvent wastage per year with 15 colour changes in the special paint supply system, a 5-day working week and 45 working weeks in the year	135.000,00	11.812,50	l
Time needed per year with 15 colour changes in the special paint supply system, a 5-day working week and 45 working weeks in the year	2.531,25	472,50	h
Costs per colour change			
Cost of paint wastage per colour changes in the special paint supply system	60	6,60	EUR
Cost of solvent wastage per colour changes in the special paint supply system	54,4	4,76	EUR
Cost of time needed per colour changes in the special paint supply system	3,07	0,57	EUR
Costs per year			
Costs of paint wastage per year with 15 colour changes in the special paint supply system, a 5-day working week and 45 working weeks in the year	202.500,00	22.275,00	EUR
Costs of solvent wastage per year with 15 colour changes in the special paint supply system, a 5-day working week and 45 working weeks in the year	183.600,00	16.065,00	EUR
Costs of time needed per year with 15 colour changes in the special paint supply system, a 5-day working week and 45 working weeks in the year	10.361,00	1.923,75	EUR
Paint costs	20,00		EUR/kg
Solvent costs	1,36		EUR/l
Staff costs	4,10		EUR/h