

## **AIRENG GENERAL DESIGN GUIDELINE**

### AIRENG CONVEYING VELOCITIES

MATERIAL CONVEYED	VELOCITY M/S	VELOCITY Ft/min.
VAPOURS, GAS, FUMES, VERY FINE DUSTS	7.5-10.5	1500-2000
FINE DRY DUST	15-18	3000-3500
AVERAGE INDUSTRIAL DUSTS	18-21	3500-4000
CORSE PARTICLES	18-23	3500-4500
GRANULE, MOIST/HEAVY LOADS, PNEUMATIC CONVEYING	23 <sup>+</sup>	4500 <sup>+</sup>

MATERIAL	VEL. M/S	VEL. Ft/min.	DENSITY kg/M <sup>3</sup>	INLET LOSS Pa
ALUMINIUM CANS	21.3	4200		
BARLEY	27.9	5500	610	870
BOTTLES PET	21.3	4200		
BEANS	25.4	5000	450	750
CEMENT	35.6	7000	1600	1250
CINDERS	30.5	6000	720	1000
COAL POWDERED	20.3	4000	880	750
COFFEE BEANS	22.9	4500	420	750
CORK-GROUND	15.2	3000	220	380
CORN COBS	27.9	5500	400	620
CORN	27.9	5500	720	850
COTTON	17.8	3500	80	500
FEATHERS	15.2	3000	80	380
FRUIT-DRIED	20.3	4000	480	750
GRINDING DUST	22.9	4500	480	500
IRON OXIDE	33	6500		
LIME	27.9	5500	480	750
LINT	10.2	2000	80	250
MALT	22.9	4500	560	750
OATS	22.9	4500		
PAPER-SHREDS	25.4	5000	320	750
RAGS	20.3	4000	480	620
RUBBER DUST	20.3	4000	480	750
SALT	27.9	5500		
SAND	35.6	7000	1680	1250
SANDBLAST DUST	25.4	5000	720	870
SAWDUST	17.8	3500	190	620
TANBARK	17.8	3500	320	620
WHEAT	30.5	6000	740	1000
WOOD SHAVINGS	17.8	3500	240	750
WOOL	20.3	4000	80	500

#### AIRENG RECOMMENDED AIRCHANGE RATES\*

LOCATION	CHANGES / HOUR	LOCATION	CHANGES / HOUR
RESIDENCES, CHURCHES, STORAGE AREAS	1-2	CAFES, CANTEENS, DANCE HALLS	8-12
LIBRARIES, BANKS, CLASSROOMS	2-4	RESTAURANT, LAUNDRIES, DOMESTIC KITCHENS,	10-15
OFFICES, ASSEMBLY HALLS, LABORATORIES	4-6	COMMERCIAL KITCHENS, BAKERIES, BOILERS	15-30
HOSPITALS, WASHROOMS, TOILETS, BARS	6-8	DRY CLEANERS, ENGINE ROOMS, POOLS/BATHS	15-30
THEATRES, CINEMAS, GARAGES, WORKSHOPS	6-10	PAINT SHOPS, FOUNDRIES, FURNACES	30-60

\* HIGHER AIR CHANGES MAY BE REQUIRED ON A PER PERSON, HEAT, FUMES & MOISTURE BASES.