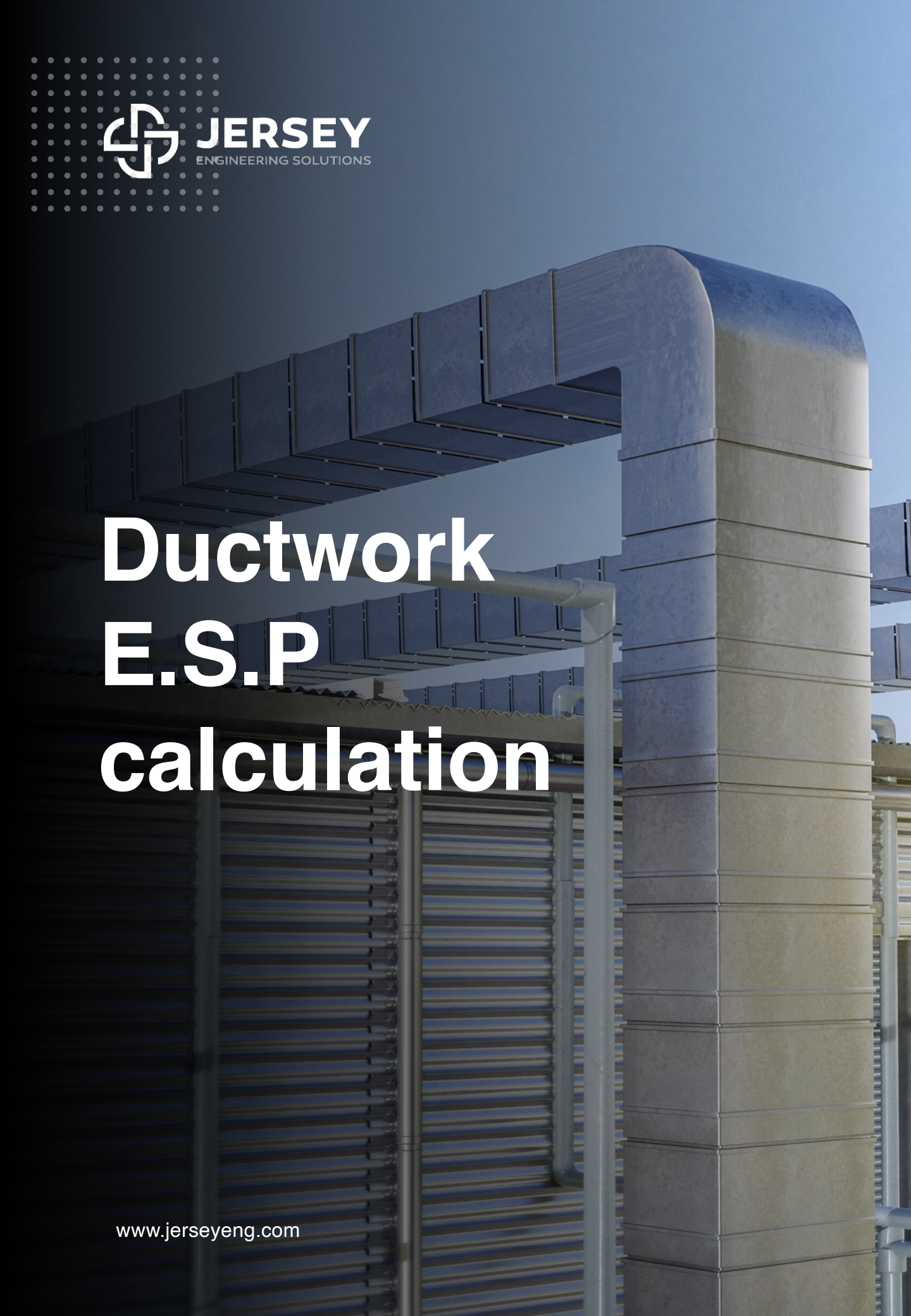
JERSEY
ENGINEERING SOLUTIONS



Ductwork E.S.P calculation

www.jerseyeng.com

Unlocking Engineering Possibilities

JERSEY
ENGINEERING SOLUTIONS

Helping the MEP industry, mechanical reps & design build contractors, by freeing them to be their best

We've combined US based engineering expertise and industry specific experience with our 200 plus professional team of engineers in India and Qatar who skillfully manage your engineering design related workload so that your organization can cherish the much needed freedom to explore a new world of possibilities.

05 +

LOCATIONS

Our services are distributed across 5 countries making us truly international.

08 +

EXPERIENCE

Leadership team with a solid five decade plus HVAC market experience & eight plus years in the service industry.

200 +

STRENGTH

Our team comprises of over 200+ skilled professionals from different engineering fields.

13,000 +

SERVICES

We have completed more than 13,000+ projects across the World.

DUCTWORK E.S.P
CALCULATIONS

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ENGINEERING SOLUTIONS

We specialize in delivering comprehensive solutions for Air Conditioning (AC) ductwork, including accurate External Static Pressure (ESP) calculations. Understanding the significance of ESP in HVAC systems, we offer detailed services tailored to ensure optimal performance and efficiency.

DETAILED ANALYSIS

We conduct meticulous assessments to determine the external static pressure within your HVAC system.

DUCTWORK DESIGN OPTIMIZATION

Our experts optimize ductwork design to minimize pressure drops, ensuring efficient airflow and system performance.

EQUIPMENT SELECTION SUPPORT

We assist in selecting HVAC equipment compatible with the calculated ESP, ensuring optimal system functionality.

TROUBLESHOOTING & OPTIMIZATION

If your system faces performance issues, we provide troubleshooting services to identify and rectify ESP-related problems.

Output Sample:

EXTERNAL STATIC PRESSURE CALCULATION

Project : Mercedes Flagship Building Commercial Complex

NO.	UNIT NO.	QTY.	TYPE	AREA SERVED	EXTERNAL STATIC PRESSURE	
					SPECIFIED / CALCULATED	Pa
1	EX.F-01	1	AXIAL INLINE FAN	TOILET EXHAUST	SPECIFIED	125
					CALCULATED	95
2	EX.F-02	1	AXIAL INLINE FAN	SHOWROOM	SPECIFIED	125
					CALCULATED	115
3	EX.F-02	1	AXIAL INLINE FAN	SHOWROOM	SPECIFIED	125
					CALCULATED	115

Sl. No.	TYPE	Quantity	AIR FLOW	DUCT SIZE					FLOW VELOCITY		VELOCITY PRESSURE		FITTING PRESSURE LOSS COEFFICIENT	FITTING PRESSURE DROP	DUCT PRESSURE LOSS	DUCT PRESSURE LOSS	TOTAL PRESSURE DROP
				WIDTH-1	HEIGHT-1	WIDTH-2	HEIGHT-2	LENGTH	Actual								
			L/S	(MM)					(M/S)		(Pa)			(Pa)	(Pa/m)	(Pa)	(Pa)
			Q	W1	H1	W2	H2	L	Vo	V1	Pvi	Pvi	Co	Po	Pd		Pt
AIR IN																	
1	EO	1	47.2	150	150	-	-										20.00
2	STRAIGHT	1	47.2	150	150	-	-	1000	2.1	-	2.65	3.01	0.00	0.00	0.50	0.50	0.5
3	TEE (BRANCH)	1	47.2	150	150	200	100	100	1.8	-	2.0	-	0.8	1.60	0	0	2
4	STRAIGHT	1	47.2	200	100	-	-	1810	2.4		3.35	4.04	0.00	0.00	0.72	1.30	1.3
5	TEE (MAIN)	1	47.2	150	150	200	100	100	2.4	4.7	3.0	13.0	2.2	6.69	0	0	7
6	STRAIGHT	1	94.4	200	100	-	-	1200	4.7		13.41	16.16	0.00	0.00	2.59	3.11	3.1
7	TEE (BRANCH)	1	94.4	200	100	250	150	100	4.7	-	13.0	-	0.8	10.66	0	0	11
8	STRAIGHT	1	141.6	250	150	-	-	9000	3.8		8.58	10.07	0.00	0.00	1.11	10.03	10.0
9	REDUCER	1	142	250	150	450	200	150	3.8	1.6	8.58	1.49	0.416	3.57	0	0	4
AIR OUT																	
10	REDUCER	1	142	250	150	450	200	150	3.8	1.6	8.58	1.49	0.081	0.69	0	0	1
11	STRAIGHT	1	141.6	250	150	-	-	1800	3.8		8.58	10.07	0.00	0.00	1.11	2.01	2.0
12	REDUCER	1	142	250	150	300	200	150	3.8	2.4	8.58	3.35	0.053	0.46	0	0	0.5
13	EAG	1	141.6	250	150	-	-										25.00

	Total Ext. Press. Loss	86
Safety Factor	10%	9
Pressure Drop		94
ROUND OFF (Pa)		95

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