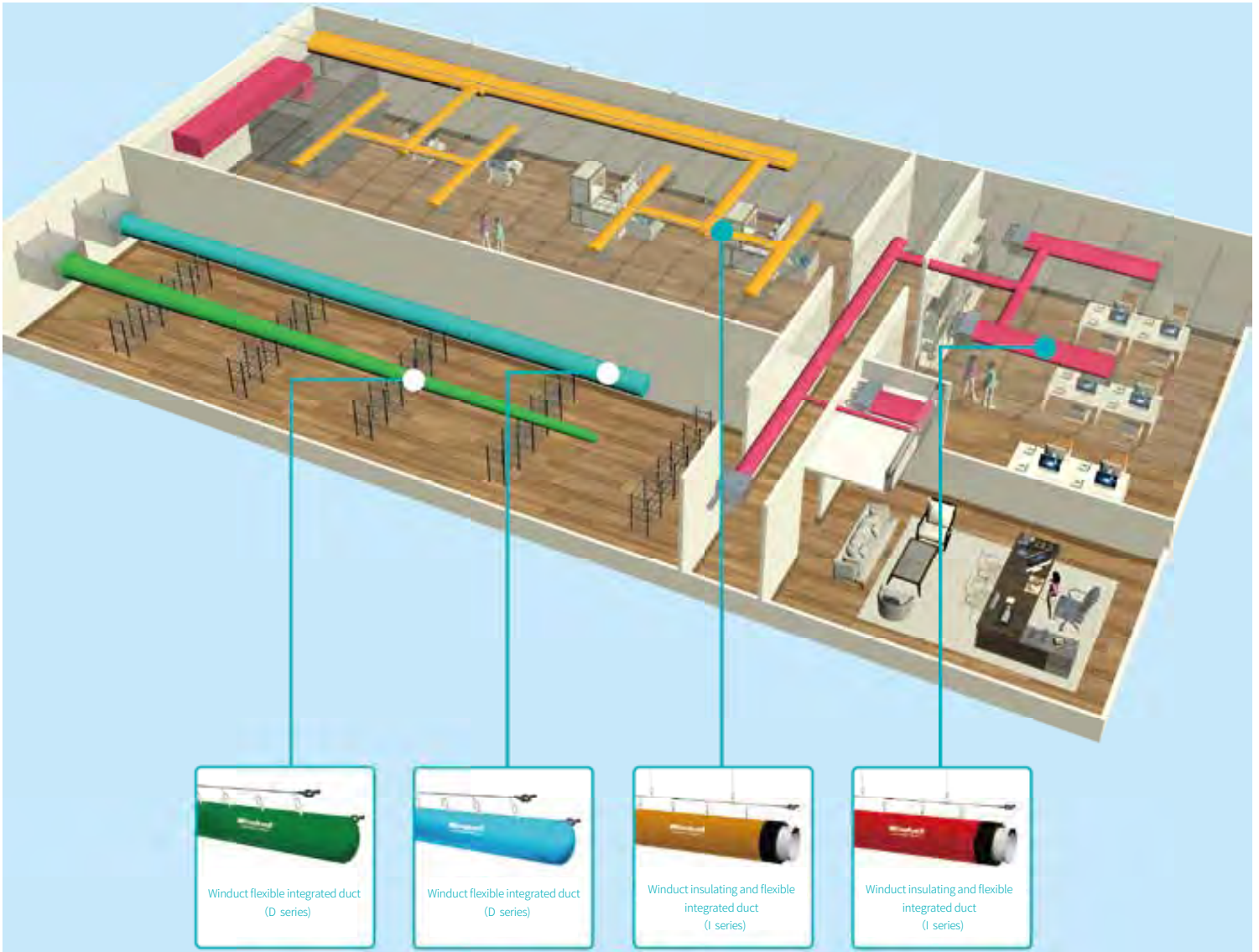
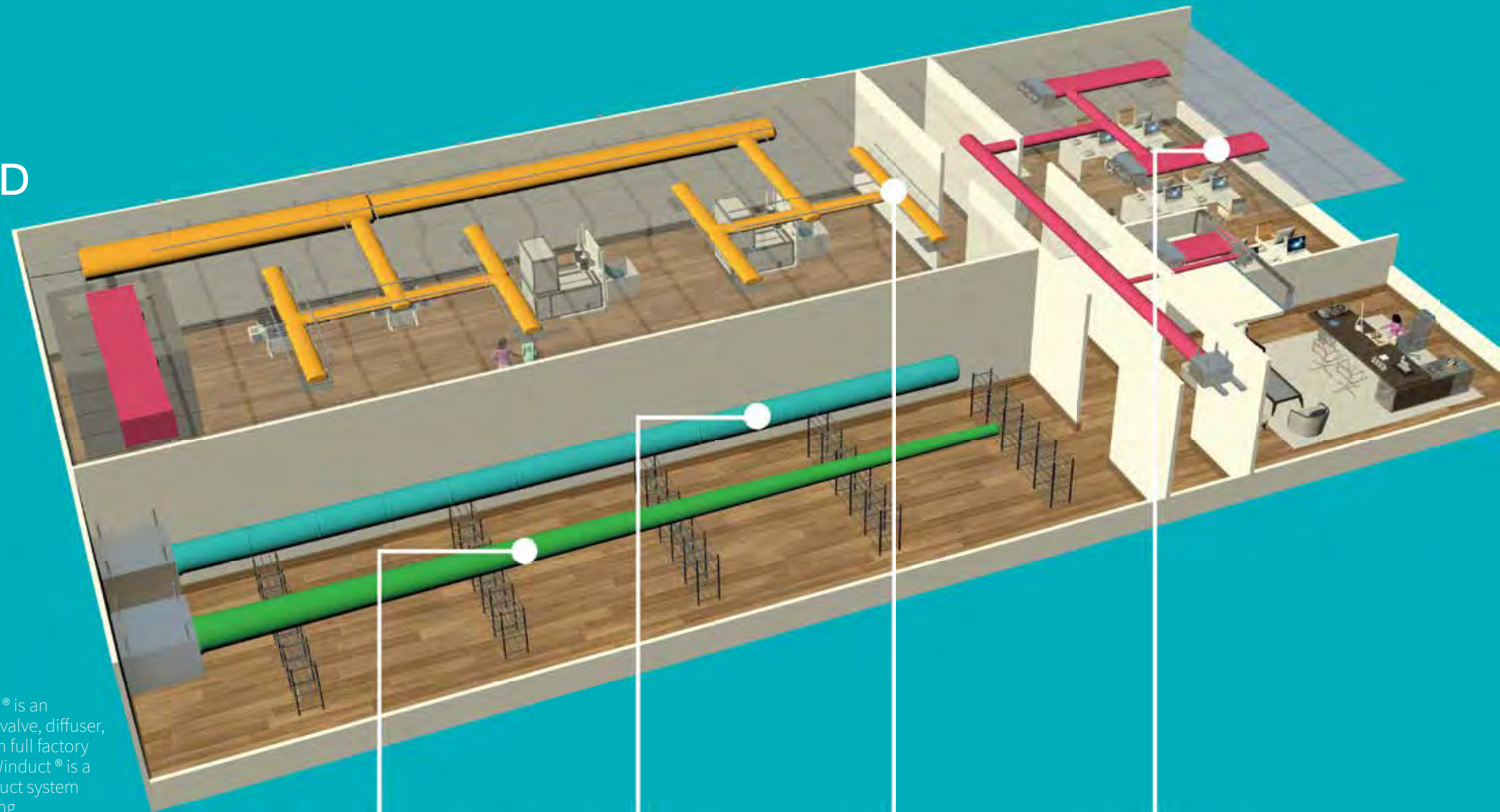


# Winduct



## Winduct Flexible Integrated Duct System

# WINDUCT FLEXIBLE INTEGRATED DUCT SYSTEM



Made of a special fabric, Winduct® is an alternative to conventional duct, valve, diffuser, insulation, etc. Manufactured with full factory standards and installed on site, Winduct® is a flexible, integrated, new type of duct system with no need for on-site processing.

**Winduct® flexible integrated duct systems are available in two main series:**

D series flexible integrated duct

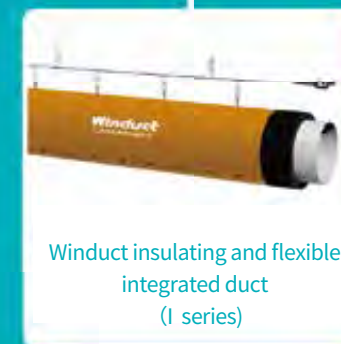
I series adiabatic flexible integrated duct



Winduct flexible integrated duct  
(D series)



Winduct flexible integrated duct  
(D series)



Winduct insulating and flexible  
integrated duct  
(I series)



Winduct insulating and flexible  
integrated duct  
(I series)

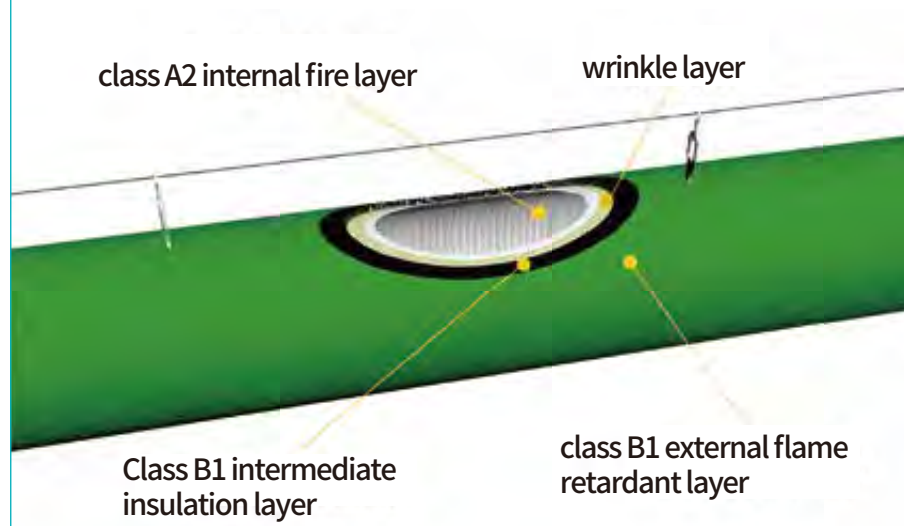
### Winduct-I series insulating and flexible integrated ducts

Winduct - I series adiabatic flexible integration duct is using special composite technology, would be a perfect fusion and thermal insulation materials and special fabrics, flexible duct insulation system used for HVAC transmission pipeline in every field, and by connecting traditional wind valve, tuyere air valve, diffuser or fabric, fabric tuyere air supply without end system such as the wind.

**I series Winduct® flexible integrated air ducts are divided into three series according to fire performance:**

- IRA fire-resistant series
- IRB fire-resistant series
- IGA integrated fire-resistant series

#### Winduct- IRB refractory series

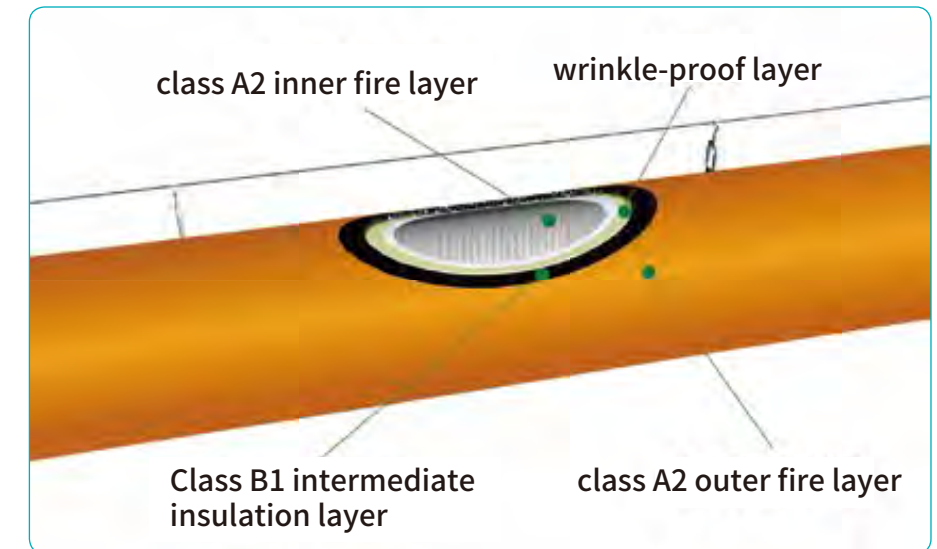


Winduct -- IRB flame resistant series is a series insulated flexible integrated ducts, which are made of flame retardant and low thermal conductivity insulating rubber and plastics material + **fire retardant grade B1**, and are manufactured with nano hot-melt composite technology. With anti - impact, anti - bacterial, anti - static and other characteristics.

It is applicable to all kinds of places in ding industry, public and commercial fields.

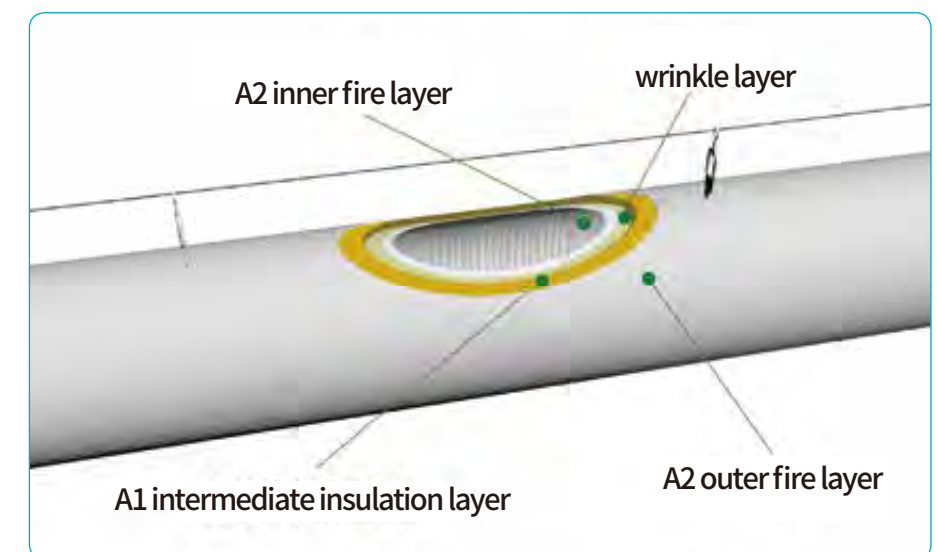
#### Winduct- IRA refractory series

Winduct -- IRA series insulated flexible integrated duct system is made of a special type of material, which is flame retardant, low thermal conductivity, insulating rubber and plastic material, **with a fire rating of A2**. With good heat preservation performance, anti - impact, anti - corrosion, anti - oil, not easy to damage, flexibility and other characteristics.



#### Winduct -IGA integrated incombustible series

Winduct -- the whole incombustible series of IGA home insulated flexible integrated duct is made of **incombustible grade A1** insulation material + **fire proof grade A2** special material and is manufactured with nano hot melt composite technology. Higher safety factor, durable.



## Winduct-D series flexible integrated duct system

Winduct – D series flexible integrated duct system is a flexible duct duct with a special fabric as the base material. It is a new type of end-end air supply system which collects air supply pipe, air valve, diffuser, static pressure box and air supply port. It mainly relies on the unique air outlet forms such as cloth surface infiltration and nozzle jet flow to simulate the maximum air outlet effect and meet the requirements of energy saving and comfort.

### winduct® flexible integrated duct according to fire performance into two series:

DA non-combustible series  
DB non-combustible series

### Winduct -DA incombustible series flexible integrated duct

Winduct - DA incombustible type series, flexible gas duct is to choose **A2 grade** special cloth as the backing material, flexible duct, fire prevention performance meet the national requirements specification standard A2 (s1 - to - d0 ) level, high safety coefficient, strong and durable.

### Winduct -- DB refractory series flexible integrated duct

Winduct – DB refractory series flexible integrated duct B1-class refractory special fabric is selected as the base material flexible air duct, using unique support mechanism technology, with flame-retardant polymer material as the support keel, it can be in non-operating state, keep the air duct round unchanged.



B1 class special fabric



A2 class non-combustible special fabric

## PRODUCT ADVANTAGES

**High system integration**

The flexible integrated air duct system is an integrated product, the factory prefabrication rate is 100%, the finished product sheet on site is installed through zipper splined air duct section with steel rope or slide rod suspension, which is simple and fast, shorten the construction period, improve the quality of the project, and there is no material loss on site.

**Green safe and environmental protection**

Special environment-friendly fireproof fabric manufacturing, long service life, easy to disassemble and assemble, simple to maintain the operation and administration, reusable.

**Transmission performance**

Air distribution uniform wind feels comfortable, flexible duct system design for the home into a round and oval, through strict precision design according to the actual working condition, design a variety of wind way, to ensure uniform air and comfortable to the controlled area.

**Effectively reduce energy consumption**

For circular and rectangular tubes of the same size (with the same cross-sectional area, such as 610 and 700-400), the circular is about 2.1pa /m and the rectangular resistance is about 2.8pa /m under the same working condition when the wind speed inside the tube is 10m /s, Circular duct diameter ratio of the rectangular duct, can promote nearly 1.3 times of air output, the pressure loss decreased by 20% to 30%.



## PRODUCT ADVANTAGES

**No condensation water to prevent condensation**

The flexible integrated air duct system for home can convey and distribute cold air, warm air and fresh air. The air duct material is permeable, which can create a temperature protection layer on the surface of the air duct, and simulate the effect of insulation material to effectively isolate the temperature difference between inside and outside, so that the flexible integrated air duct for home will not produce condensation phenomenon in any working condition.

**Heat preservation performance**

Nanometer hot melt composite technology is used to make the perfect composite of high quality environmental protection insulation materials and special cloth. - the air duct with body compound forming, with infinite wet resistance factor, can effectively prevent moisture infiltration, effectively reduce the heat and cold loss in the air conditioning wind transmission process, and has better insulation performance.

**Compression performance**

Different from the easy shear pressure deformation of rectangular iron pipe, the flexible integrated wind pipe system adopts circular and oblate shapes, reasonably converts the internal pressure into the transverse tensile force of the pipe wall, and can withstand the pressure above 3000pa-5000pal, which is far higher than the applicable range of traditional wind pipe below 2000Pa.

**Sound absorption and noise reduction performance**

Different from the easy shear pressure deformation of rectangular iron pipe, the flexible integrated wind pipe system adopts circular and oblate shapes, reasonably converts the internal pressure into the transverse tensile force of the pipe wall, and can withstand the pressure above 3000pa-5000pal, which is far higher than the applicable range of traditional wind pipe below 2000Pa.



### Product application scope

#### Industrial field

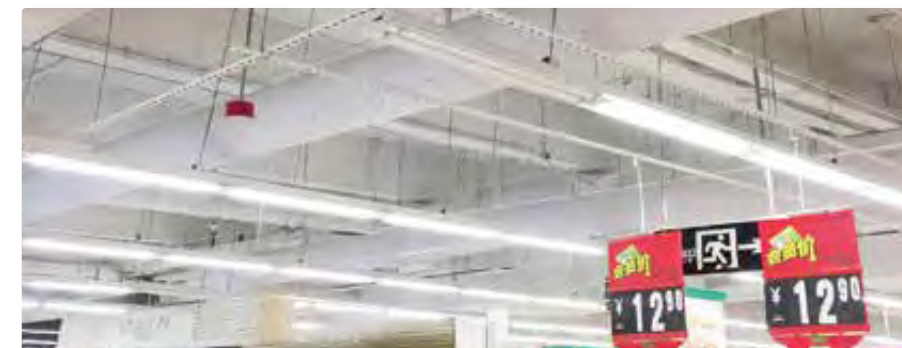
(food, medicine, electronics, tobacco, automobile, refrigeration, logistics storage, etc.)

The workshop area is large, the height is high, and the equipment line is dense, which requires the post to provide air, the wind speed is accurate, and there are many space obstacles. The steel structure workshop has higher requirements on the snow bearing of every house. Large air supply, wide air supply area, high temperature and humidity requirements. For home series air duct with simple installation, easy cleaning. Air tube material is very light, basically no requirements for building load bearing, uniform air, no condensation, beautiful, noise reduction, mildew, antibacterial, clean and other characteristics.



#### Commercial field (shopping malls, supermarkets, office buildings)

space height is lower, the supporting facilities more measures, construction period is tight, the beautiful degree, and air quality have higher requirements. The flexible rubber and plastic integrated air duct system is more suitable for this field, with convenient construction, short installation period and flexible pipeline placement on site. Easy maintenance, beautiful and generous.



#### Public areas (stadiums, exhibition centers, airport stations)

Most of them are tall buildings with complex structure. They have higher requirements on the range, appearance, bearing and noise reduction of air duct. The ultra-light material is the home flexible integrated air duct, which can ensure the precision of the high altitude air jet and the best air supply comfort, and achieve the best energy saving effect.



Winduct flexible integrated duct system



## Round duct dimensions

Tube wind speed (m/s)			Wind volume (m <sup>3</sup> /h)		
Diameter(mm)	Perimeter (mm)	Cross-sectional area (m <sup>2</sup> )	7m/s	8m/s	9m/s
200	628	0.03	792	905	1018
250	785	0.05	1237	1414	1590
300	942	0.07	1781	2036	2290
350	1099	0.10	2424	2771	3117
400	1256	0.13	3167	3619	4071
450	1413	0.16	4008	4580	5153
500	1570	0.20	4948	5655	6362
550	1727	0.24	5987	6842	7697
600	1884	0.28	7125	8143	9161
650	2041	0.33	8362	9556	10751
700	2198	0.38	9698	11083	12469
750	2355	0.44	11133	12723	14313
800	2512	0.50	12667	14476	16286
850	2669	0.57	14299	16342	18385
900	2826	0.64	16031	18321	20611
950	2983	0.71	17862	20413	22965
1000	3140	0.79	19791	22619	25446
1050	3297	0.87	21820	24937	28054
1100	3454	0.95	23948	27369	30790
1150	3611	1.04	26174	29913	33653
1200	3768	1.13	28500	32571	36642
1250	3925	1.23	30924	35342	39760
1300	4082	1.33	33448	38226	43004
1350	4239	1.43	36070	41223	46376
1400	4396	1.54	38791	44333	49874
1450	4553	1.65	41612	47556	53501
1500	4710	1.77	44531	50892	57254
1550	4867	1.89	47549	54342	61134
1600	5024	2.01	50666	57904	65142
1650	5181	2.14	53882	61580	69277
1700	5338	2.27	57197	65368	73539
1750	5495	2.41	60611	69270	77929
1800	5652	2.54	64124	73285	82446

Winduct flexible integrated duct system



## Rectangular duct dimensions

Rectangular duct inlet wind speed (m/s)				Wind volume (m <sup>3</sup> /h)		
Width(mm)	Length(mm)	Perimeter(mm)	Cross-sectional area (m <sup>2</sup> )	7m/s	8m/s	9m/s
400	800	2400	0.32	6912	8064	9216
500	650	2300	0.33	7020	8190	9360
550	600	2300	0.33	7128	8316	9504
600	550	2300	0.33	7128	8316	9504
400	1200	3200	0.48	10368	12096	13824
500	1000	3000	0.50	10800	12600	14400
550	900	2900	0.50	10692	12474	14256
600	800	2800	0.48	10368	12096	13824
450	1500	3900	0.68	14580	17010	19440
500	1300	3600	0.65	14040	16380	18720
550	1200	3500	0.66	14256	16632	19008
600	1100	3400	0.66	14256	16632	19008
450	1800	4500	0.81	17496	20412	23328
500	1600	4200	0.80	17280	20160	23040
550	1500	4100	0.83	17820	20790	23760
600	1350	3900	0.81	17496	20412	23328
450	2200	5300	0.99	21384	24948	28512
500	2000	5000	1.00	21600	25200	28800
550	1800	4700	0.99	21384	24948	28512
600	1600	4400	0.96	20736	24192	27648
450	2500	5900	1.13	24300	28350	32400
500	2300	5600	1.15	24840	28980	33120
550	2000	5100	1.10	23760	27720	31680
600	1900	5000	1.14	24624	28728	32832
450	2850	6600	1.28	27702	32319	36936
500	2650	6300	1.33	28620	33390	38160
550	2300	5700	1.27	27324	31878	36432
600	2200	5600	1.32	28512	33264	38016
500	3000	7000	1.50	32400	37800	43200
550	2650	6400	1.46	31482	36729	41976
600	2400	6000	1.44	31104	36288	41472
500	3200	7400	1.60	34560	40320	46080
550	3000	7100	1.65	35640	41580	47520
600	2750	6700	1.65	35640	41580	47520
600	3200	7600	1.92	41472	48384	55296
700	2850	7100	2.00	43092	50274	57456

Winduct flexible integrated duct system

## Round duct dimensions



Pipe diameter selection Metric System mm	Perimeter mm	Cross-sectional area m <sup>2</sup>	Corresponding air volume (recommended value)cmh			Length selection of straight pipe		
			Residential	Public	industrial	0.375m	0.75m	1.5m
150	471	0.02	382	573	636	●	●	●
200	628	0.03	679	1018	1131	●	●	●
300	942	0.07	1527	2290	2545	●	●	●
400	1256	0.13	2714	4071	4524	●	●	●
450	1413	0.16	3435	5153	5725	●	●	●
500	1571	0.20	4241	6362	7068	●	●	●
600	1885	0.28	6107	9161	10178	●	●	●
700	2199	0.38	8312	12469	13854	●	●	●
800	2513	0.50	10857	16286	18095	●	●	●
900	2827	0.64	13741	20611	22902	●	●	●
1000	3142	0.79	16964	25446	28274	●	●	●
1100	3456	0.95	20527	30790	34211	●	●	●
1200	3770	1.13	24428	36642	40714	●	●	●
1300	4084	1.33	28669	43004	47782	●	●	●
1400	4398	1.54	33250	49874	55416	●	●	●
1500	4712	1.77	38169	57254	63615	●	●	●
1600	5026	2.01	43428	65142	72380	●	●	●
1700	5341	2.27	49026	73539	81710	●	●	●
1800	5655	2.54	54964	82446	91606	●	●	●
1900	5969	2.84	61240	91861	102067	●	●	●
2000	6283	3.14	67856	101785	113094	●	●	●
2100	6597	3.46	74812	112218	124686	●	●	●
2200	6911	3.80	82106	123159	136844	●	●	●
2300	7225	4.15	89740	134610	149567	●	●	●
2400	7540	4.52	97713	146570	162855	●	●	●

Remark:

1. Uniform diameter reduction length of 375mm (including diameter reduction inlet of wind disc)
2. Ordering method: standard length shall be adopted, not customized length(that is, all 1.5m standard tubes are produced, and the parts less than 1.5m are assembled with 0.375m and 0.75m standard lengths)
3. As an independent part, the cover shall have a uniform length of 100mm.

Winduct adiabatic flexible integrated air duct system

## Flat circular duct dimensions



Pipe diameter selection				Corresponding air volume (recommended value)cmh			Length selection of straight pipe		
Height mm	Width mm	Perimeter mm	Cross-sectional area m <sup>2</sup>	Residential	Public	industrial	0.375m	0.75m	1.5m
200	400	969	0.06		905		●	●	●
200	600	1336	0.09		1357		●	●	●
200	800	1716	0.13		1810		●	●	●
200	1000	2101	0.16		2262		●	●	●
300	650	1543	0.15	3308	4962	5513	●	●	●
300	900	2005	0.21	4580	6870	7634	●	●	●
300	1100	2383	0.26	5598	8397	9330	●	●	●
300	1650	3443	0.39	8397	12596	13995	●	●	●
400	650	1673	0.20	4411	6616	7351	●	●	●
400	900	2118	0.28	6107	9161	10178	●	●	●
400	1150	2579	0.36	7803	11705	13006	●	●	●
400	1650	3527	0.52	11196	16794	18661	●	●	●
500	900	2244	0.35	7634	11451	12723	●	●	●
500	1150	2693	0.45	9754	14632	16257	●	●	●
500	1650	3623	0.65	13995	20993	23326	●	●	●
500	2150	4577	0.84	18236	27355	30394	●	●	●
650	1150	2882	0.59	12681	19021	21134	●	●	●
650	1650	3786	0.84	18194	27291	30323	●	●	●
650	2150	4720	1.10	23707	35561	39512	●	●	●
650	2700	5767	1.38	29772	44658	49620	●	●	●
750	1650	3904	0.97	20993	31490	34988	●	●	●
750	2150	4825	1.27	27355	41032	45591	●	●	●
750	2700	5861	1.59	34352	51528	57254	●	●	●
750	3200	6817	1.88	40714	61071	67856	●	●	●
800	1650	3965	1.04	22393	33589	37321	●	●	●
800	2150	4880	1.35	29178	43767	48630	●	●	●
800	2700	5911	1.70	36642	54964	61071	●	●	●
800	3200	6863	2.01	43428	65142	72380	●	●	●

Note: when multiple rows of suspension, the suspension spacing is the same



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**Winduct**