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DETROIT AIR

COMPRESSED AIR INNOVATION THROUGH TECHNOLOGY

PRODUCT CATALOGUE

AIR DRYERS



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DT Series refrigerated air dryers combine technology and quality to produce a very stable air-drying solution.

PLC control allows for full protection against power fluctuations, motor overload, high or low gas pressures and freezing. The self-diagnosing PLC system enhances stability of the system, thereby enhancing service life. Cabinet designs are based around client servicing needs with fans, heat exchange units and electrical systems being very accessible. All models come fitted with an electrical auto-drain for automatic water purging from the system.

The use of 3-in-1 plate coolers allows for a compact footprint and reduced manufacturing cost while offering increased cooling capacity and energy savings. Savings of 15% - 50% have been achieved over older models fitted with conventional heat exchange systems. In line with international standards, environmentally friendly refrigerants, 134A and 407C are used. Both 134A and 407C refrigerants meet high international standards for environmental protection.

Operating in ambient temperatures of up to 45°C with inlet temperatures of up to 65°C, the DT Series dryers will perform as they should. Sized up to 80m³ flow at pressures of up to 1.6MPa/16 bar, the DT Series of dryers are suitable for small and large installations.

- ★ **DT SERIES AIR DRYER**
- ★ **SR SERIES HIGH-TEMPERATURE DRYERS**
- ★ **DX DESICCANT DRYER SERIES**
- ★ **MODULAR DESICCANT DRYERS**

GENERAL FEATURES

- Environmentally friendly refrigerants
- Built-in Electronic Auto Drain
- Adjustable expansion valve
- Built-in air/water separation device
- Three-in-one heat exchanger design and increased efficiency and cooling capacity
- Air flow channel design for uniform heat exchange
- Up to 45°C ambient operating temperature
 - Inlet temperature up to 65°C
 - Pressure dew point of 2~10°C
 - PLC protection and control
- Powder coated cabinet



INTELLIGENT PLC CONTROL

The PLC utilises multi-channel pressure and temperature monitoring with real-time dew point temperature display to accurately self-diagnose and self-protect. Protection functions include anti-freeze, high and low voltage, high current, high motor temperature. Fault codes are displayed on-screen, should a fault occur.



ENERGY SAVINGS

The higher efficiency of the three-in-one plate cooler means smaller compressor motors can be used to achieve the same cooling capacity as larger models utilising tube type coolers. This also means lower production costs and smaller footprints. These savings are passed onto you.



AMBIENT TEMPERATURE

DT Series refrigerated dryers can effectively operate in ambient temperatures of up to 45°C with inlet temperatures of up to 65°C. Should the ambient temperature become too low, the PLC will shut down the motor to avoid ice build-up in the system. Low air flow ice build-up is also avoided and protected against.



EXCELLENT ACCESSIBILITY OPTIMUM SERVICEABILITY

Large removable enclosure doors provide excellent component accessibility for unrivalled ease of maintenance. Service and maintenance work can therefore be performed quickly and efficiently, which means maximum efficiency and compressed air availability.



OPTIMISED COOLING SYSTEM

Heat exchange is provided by an aluminium plate cooler. The design of this cooler enables between 15% - 50% energy savings over standard tube-type coolers. These coolers are significantly smaller than the standard type and have a far longer service life with significant energy savings.





DT SERIES AIR DRYER



MODEL		DT-10A	DT-20A	DT-30A	DT-50A	DT-60A	DT-75A	DT-100A	DT-125A	DT-150A	DT-200A	DT-300A	DT-400A	DT-500A	DT-600A	DT-700A
AMBIENT TEMPERATURE	℃	38/Max. 45														
INLET TEMPERATURE	℃	38/Max. 65														
WORKING PRESSURE	MPa	0.7/Max 1.6														
PRESSURE DEW POINT	℃	2~10 (Air dew point: 23~17)														
MAX. AIR VOLUME	M³/MIN	1.2	2.4	3.6	6.5	8.5	11	13	14.5	17	21	44	49	60	70	80
POWER SUPPLY	V/Hz	220/50									380/50					
INPUT POWER	kW	0.37	0.52	0.73	1.26	1.87	2.43	2.63	2.7	3.7	4	5.5	6.3	7.5	9.2	11.2
AIR PIPE CONNECTION		RC3/4"		RC1"	RC1-1/2"	RC2"			RC2.5"		DN80		DN100		DN125	
EVAPORATOR TYPE		Aluminium ALLOY PLATE														
REFRIGERANT MODEL		R134A		R410A							R407C					
SYSTEM MAX. PRESSURE DROP	MPa	0.025														
INTELLIGENT CONTROL & PROTECTION		INCLUDED														
DISPLAY INTERFACE		LED dew point display, LED alarm code display, operation status indication														
INTELLIGENT ANTI-FREEZING PROTECTION		Constant pressure expansion valve and compressor automatic start / stop														
TEMPERATURE CONTROL		Automatic control of condensing temperature / dew point temperature														
HIGH VOLTAGE PROTECTION		Temperature sensor		Temperature sensor and inductive intelligent protection												
LOW VOLTAGE PROTECTION		Temperature sensor and inductive intelligent protection														
WEIGHT	Kg	34	42	50	63	73	85	94	135	150	220	310	360	385	530	630
DIMENSIONS	L	480	520	640	700	770	770	800	1000	1100	1100	1300	1450	1450	1600	1650
	W	380	410	520	540	590	590	610	850	900	950	1000	1100	1100	1100	1200
	H	665	725	850	950	990	990	1030	1160	1200	1300	1550	1700	1700	1800	1900





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DT-AV MODELS UP TO DT-100AV:

- Environmentally friendly refrigerants
- Built-in Electronic Auto Drain
- Adjustable expansion valve
- Built-in air/water separation device
- Three-in-one heat exchanger design and increased efficiency and cooling capacity
- Air flow channel design for uniform heat exchange
- Up to 45°C ambient operating temperature
 - Inlet temperature up to 65°C
 - Pressure dew point of 2~10°C
 - PLC protection and control
- Powder coated cabinet



ENERGY SAVING:

The application of DC frequency conversion technology allows the air dryer to achieve true automatic cooling and conditioning capability. The minimum operating power is only about 20% of that of a non variable-frequency air dryer. The electricity savings in one year can be substantial, potentially equalling or surpassing the cost of the air dryer itself.

EFFICIENCY:

The integration of a three-in-one aluminium-plate-type-heat-exchanger, combined with DC frequency conversion technology, significantly enhances the air dryer's performance. This advancement makes it easy to maintain control over the dew point.

CONNECTIVITY:

The optional Internet of Things component offers the convenience of remotely monitoring dryers via mobile phones or other networked display terminals.

INTELLIGENCE:

The air dryer adapts intelligently to changes in working conditions. The compressor's frequency can be automatically adjusted, and the operating status can be autonomously determined. DT-AV features include a comprehensive self-diagnosis function, a user-friendly man-machine interface display, and a clear overview of the operating status at a glance.

ENVIRONMENTAL PROTECTION:

In adherence to the International Montreal Protocol, this series of models exclusively utilizes R134a and R410A environmentally friendly refrigerants. These refrigerants cause zero damage to the ozone layer and align with international market demands.

STABILITY:

The frequency conversion technology's automatic adjustment function broadens the operating temperature range of the air dryer. In extremely high temperatures, full-speed output rapidly stabilizes the dew point temperature to the desired level. During the extreme low temperatures of winter, the frequency output is adjusted to prevent ice blockages in the air dryer, ensuring a stable dew point and significant energy savings.

DT-AV MODELS DT-125AV AND UP:

- Environmentally friendly refrigerants
- Built-in Electronic Auto Drain
- Adjustable expansion valve
- Built-in air/water separation device
- Three-in-one heat exchanger design and increased efficiency and cooling capacity
- Air flow channel design for uniform heat exchange
- Up to 45°C ambient operating temperature
 - Inlet temperature up to 65°C
 - Pressure dew point of 2~10°C
 - PLC protection and control
- Powder coated cabinet



ENERGY SAVING:

The integration of flexible frequency conversion technology equips the dryer with frequency adjustment capabilities, significantly reducing the minimum operating power to just around 30% compared to a conventional non-variable-frequency dryer. The electricity savings over a year can be substantial, potentially equalling or even exceeding the initial cost of the dryer.

EFFICIENCY:

The integration of a three-in-one aluminium-plate-type-heat-exchanger, combined with DC frequency conversion technology, significantly enhances the air dryer's performance. This advancement makes it easy to maintain control over the dew point.

STABILITY:

The frequency conversion technology's automatic adjustment function broadens the operating temperature range of the air dryer. In extremely high temperatures, full-speed output rapidly stabilizes the dew point temperature to the desired level. During the extreme low temperatures of winter, the frequency output is adjusted to prevent ice blockages in the air dryer, ensuring a stable dew point and significant energy savings.

INTELLIGENCE:

The air dryer intelligently adapts to changes in working conditions by automatically adjusting the compressor's frequency. It boasts a comprehensive self-diagnosis function and a true-colour touch-screen interface that provides an instant view of the operating status.

ENVIRONMENTAL PROTECTION:

In compliance with the International Montreal Protocol, all models in this series utilize R407C, an environmentally friendly refrigerant. This refrigerant causes no harm to the ozone layer and meets the requirements of the international market.

CONNECTIVITY:

The optional Internet of Things component offers the convenience of remotely monitoring dryers via mobile phones or other networked display terminals.





DT-AV SERIES AIR DRYER



MODEL		DT-10AV	DT-20AV	DT-30AV	DT-50AV	DT-60AV	DT-75AV	DT-100AV
AMBIENT TEMPERATURE	°C	-10~45°C						
INLET TEMPERATURE	°C	-15~65°C						
WORKING PRESSURE	MPa	0.7~1.6						
PRESSURE DEW POINT	°C	2~8°C						
MAX. AIR VOLUME	M³/MIN	1.2	2.4	3.6	6.5	8.5	10.5	13
POWER SUPPLY	V/Hz	220 V AC						
INPUT POWER	kW	0.28	0.34	0.37	0.99	1.5	1.6	1.97
AIR PIPE CONNECTION		3/4"		1"	1 1/2"	2"		
EVAPORATOR TYPE		ALLOY PLATE						
REFRIGERANT MODEL		R134A			R410A			
SYSTEM MAX. PRESSURE DROP	MPa	0.02MPa AT 0.7MPa INLET PRESSURE						
INTELLIGENT CONTROL & PROTECTION								
DISPLAY INTERFACE		LED - STATUS WITH DEW POINT AND TEMPERATURE						
INTELLIGENT ANTI-FREEZING PROTECTION		CONSTAND PRESSURE EXPANSION VALVE						
TEMPERATURE CONTROL		CONDENSER TEMP. + DEW POINT AUTOMATIC CONTROL						
HIGH VOLTAGE PROTECTION		TEMP. SENSOR			TEMP. SENSOR + PRESS. SENSOR CONTROL			
LOW VOLTAGE PROTECTION		TEMP. SENSOR			TEMP. SENSOR + PRESS. SENSOR CONTROL			
WEIGHT	Kg	33	40	53	69	86	91	103
	L	510	550	630	730	800	800	830
	W	380	410	490	540	590	590	610
	H	665	725	850	950	990	990	1030





DT-AV SERIES AIR DRYER



MODEL		DT-125AV	DT-150AV	DT-175AV	DT-200AV	DT-250AV	DT-350AV	DT-400AV	DT-500AV	DT-600AV	DT-700AV	DT-800AV
AMBIENT TEMPERATURE	°C	-10~45°C										
INLET TEMPERATURE	°C	-15~65°C										
WORKING PRESSURE	MPa	0.7~1.6										
PRESSURE DEW POINT	°C	2~8°C										
MAX. AIR VOLUME	M ³ /MIN	17	23	27	33	42	55	65	85	110	130	165
POWER SUPPLY	V/Hz	380 V AC										
INPUT POWER	kW	3.8	4	4.9	5.8	6.3	9.7	11.3	13.6	18.6	22.7	27.6
AIR PIPE CONNECTION		2"	2 1/2"	DN80		DN100		DN125		DN150		
EVAPORATOR TYPE		ALLOY PLATE										
REFRIGERANT MODEL		407C										
SYSTEM MAX. PRESSURE DROP	MPa	0.025MPa										
INTELLIGENT CONTROL & PROTECTION												
DISPLAY INTERFACE		TOUCH SCREEN - STATUS WITH DEW POINT AND TEMPERATURE										
INTELLIGENT ANTI-FREEZING PROTECTION		AUTOMATIC TEMP. CONTROL/ANTIFREEZE SOLENOID VALVE										
TEMPERATURE CONTROL		CONDENSER TEMP. + DEW POINT AUTOMATIC CONTROL										
HIGH VOLTAGE PROTECTION		TEMP. SENSOR + PRESS. SENSOR CONTROL										
LOW VOLTAGE PROTECTION		TEMP. SENSOR + PRESS. SENSOR CONTROL										
WEIGHT	Kg	217	242	275	340	442	582	768	915	1120	1350	1680
	L	1250	1350	1400	1625	1450	1630	1980	2280	2460	2100	2300
	W	850	900	950	1000	1100	1150	1650	1800	1800	2420	2420
	H	1100	1160	1230	1480	1640	1760	1743	1743	1960	2110	2110





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Refrigerated compressed air dryer

Refrigeration dryer selection coefficient (according to selection manual)

Actual nominal volumetric flow rate (m³/min) = Selection processing capacity × KA × KB × KC

WORKING PRESSURE CORRECTION COEFFICIENT KA

WORKING PRESSURE MPa(g)	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6
CORRECTION FACTOR KA	0.55	0.72	0.8	0.9	1	1.02	1.06	1.1	1.15	1.18	1.22	1.25	1.28	1.299

INLET TEMPERATURE CORRECTION COEFFICIENT KB

INLET TEMPERATURE °C	40	45	50	55	60	65	70	75	80
CORRECTION SERIES KB	1.36	1.3	1.2	1.15	1.1	1	0.7	0.5	0.35

AMBIENT TEMPERATURE CORRECTION COEFFICIENT (AIR COOLING) KC

AMBIENT TEMPERATURE °C	20	25	30	35	38	42	45	50
CORRECTION SERIES KC	1.45	1.35	1.22	1.1	1.05	1	0.75	0.6

COOLING WATER TEMPERATURE CORRECTION COEFFICIENT (WATER COOLING) KC

COOLING WATER TEMPERATURE °C	10	15	20	25	28	32	35	38
CORRECTION SERIES KC	1.45	1.35	1.22	1.1	1.05	1	0.75	0.6





SR SERIES HIGH-TEMPERATURE DRYERS

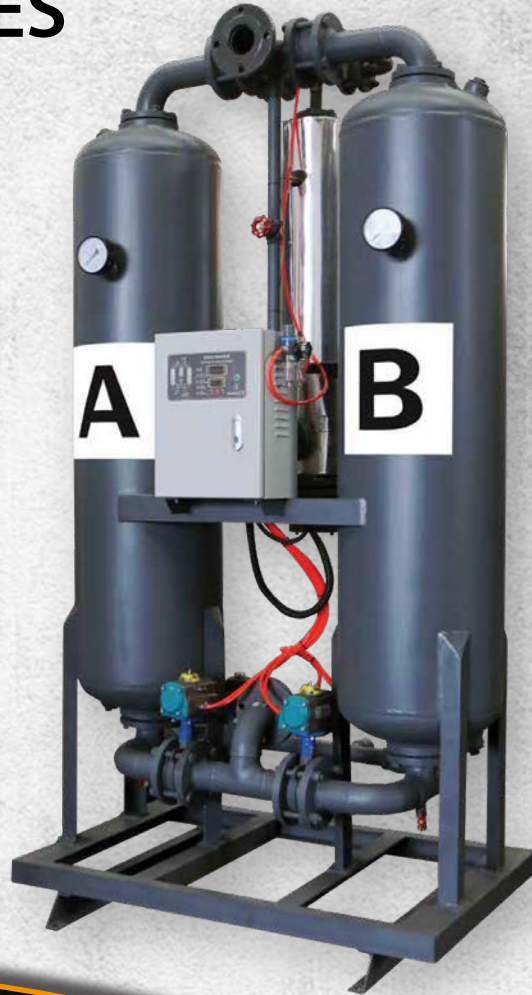


MODEL		SR-10A	SR-20A	SR-30A	SR-50A	SR-60A	SR-75A	SR-100A	SR-125A	SR-150A	SR-200A	SR-300A	SR-400A	SR-500A	SR-600A	SR-700A	
AMBIENT TEMPERATURE °C		38/Max. 45															
INLET TEMPERATURE °C		38/Max. 75															
WORKING PRESSURE MPa		0.7/Max 1.0															
PRESSURE DEW POINT °C		2~8															
MAX. AIR VOLUME M³/MIN		1.5	2.6	3.8	6.7	8.1	11	13.8	16	20	27.5	35.5	46	55	65	75	
POWER SUPPLY V/Hz		220/50							380/50								
INPUT POWER kW		0.35	0.5	0.75	1.5	1.5	2.0	2.75	5	5	5.8	7.5	7.5	10.0	10.5	11.25	
AIR PIPE CONNECTION		RC1"		RC1- 1/2"			RC2"		RC2.5"			DN100		DN125	DN150		
EVAPORATOR TYPE		Tube Type															
REFRIGERANT MODEL		R134A		R410A													
SYSTEM MAX. PRESSURE DROP MPa		0.025															
INTELLIGENT CONTROL & PROTECTION		INCLUDED															
DISPLAY INTERFACE		LED dew point display, LED alarm code display, operation status indication															
INTELLIGENT ANTI-FREEZING PROTECTION		Constant pressure expansion valve and compressor automatic start / stop															
TEMPERATURE CONTROL		Automatic control of condensing temperature / dew point temperature															
HIGH VOLTAGE PROTECTION		Over voltage protection circuit															
LOW VOLTAGE PROTECTION		Over current protection circuit															
WEIGHT Kg		34	42	50	63	73	85	94	135	150	220	310	360	385	530	630	
DIMENSIONS		L	750	800	930	1000		1100	1100	1240	1500		2100		2100	2300	2350
		W	420	440	500	570		600	600	600	800		950		1000	1100	1100
		H	740	810	890	980		1070	1070	1070	1400		1530		1750	2050	2100





DX DESICCANT DRYER SERIES



WIDE RANGE OF APPLICATIONS

DX Series desiccant dryers are an excellent choice for any industry requiring sub-zero cooling capabilities. With pricing comparable with high-end refrigeration dryers, we offer a cost-effective solution to your dry air needs. DX Series Dryers offer among the lowest Total Cost of Ownership in the industry with excellent quality to match.

WIDE RANGE OF APPLICATIONS

Pressure Dew Points as low as -70°C are offered across the range with air flow capacities up to 155m³/min. All vessels are manufactured to CE standards and conform to local pressure vessel laws. Customised systems are available to suit your specific needs and industry on request.

MODEL		DX-10A	DX-20A	DX-25A	DX-50A	DX-60A	DX-75A	DX-100A	DX-125A	DX-150A	DX-175A	DX-200A	DX-250A	DX-350A	
MAX CAPACITY	M ³ /MIN	1,2	2,4	3,2	6,5	8,5	11,5	13,5	17	23	27	34	45	55	
MAX CAPACITY	CFM	42,4	84,8	113,1	229	300	406	477	600	812	954	1201	1590	1766	
INLET PRESSURE	MPa/PSI	Rated 0,7, max. 1,0, / 100, max. 145. Customised for high voltage													
INLET TEMPERATURE	°C	Rated 38°C, max. 45°C													
POWER SUPPLY	V/Hz	220V/50Hz													
INPUT POWER	kW	0,2													
GAS CONSUMPTION		10% ~ 22% rated treatment gas													
PRESSURE DEW POINT		-20 ~ 40 (Up to - 70°C optional)													
PRESSURE DROP	MPa	≤0.021													
WORKING MODE		Automatic switching of two towers, adjustable cycle of 4-10 minutes													
MAIN ACCESSORIES															
ADSORBENT		Activated alumina / molecular sieve													
PNEUMATIC VALVE		304 stainless steel angle seat valve								304 stainless steel angle seat valve / butterfly valve					
CHECK VALVE		304 stainless steel lift check valve													
TWO POSITION FIVE WAY SOLENOID VALVE		Adek / CHINT													
AIR PIPE CONNECTION		RC1"			RC1-1/2"		RC2"			DN65		DN80		DN100	
OVERALL DIMENSIONS	L	670	670	850	1000	1100	1200	1300	1280	1380	1650	1700	1960	2010	
	W	460	500	500	700	700	700	700	820	820	900	955	960	960	
	H	1350	1765	1385	1700	2050	2030	2285	2480	2515	2450	2410	2600	2670	
WEIGHT	KG	105	135	187	238	282	466	520	670	798	980	1287	1624	1624	





MODULAR DESICCANT DRYER



DESIGNED FOR EFFICIENCY

MDX series Modular Desiccant Dryers offer an excellent space- saving solution over the standard DX range, but with reduced maintenance times and manpower. Increases in efficiency above the DX range means savings of up to 10% in energy costs can be realised.

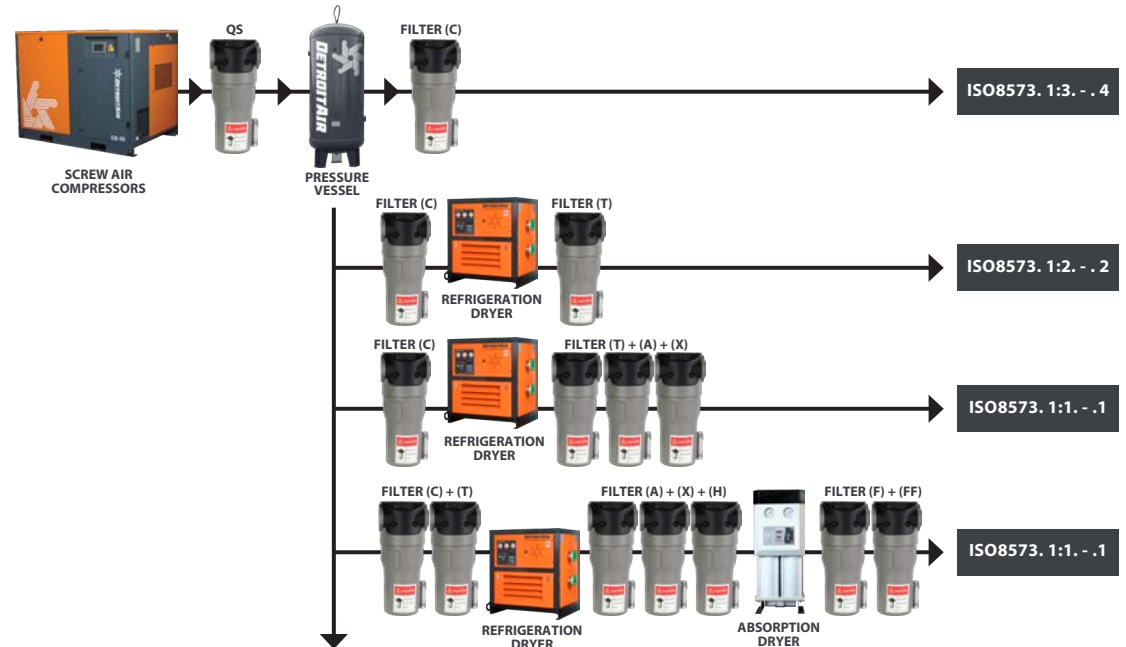
LOW OWNERSHIP COSTS

Low cost of ownership is part of the package we offer at Detroit Air, coupled with long warranties backed by excellent service and parts availability, we ensure plant operation is stable and efficient. Our goal is to always ensure our clients save money and remain efficient in all aspects of compressed air production.

MODEL	MDX-15A	MDX-20A	MDX-30A	MDX-50A	MDX-75A	MDX-100A	MDX-125A	MDX-150A	MDX-175A	MDX-200A	MDX-250A	MDX-300A	MDX-350A	MDX-400A	MDX-450A
MAX CAPACITY	1.6	2.5	3.5	7.0	10.5	14.0	17.5	21.0	24.5	28.0	35.0	42.0	49.0	56.0	63.0
M ³ /MIN															
CONNECTION SIZE	G1		G1-1/2		G2	G2-1/2				DN80	DN100	DN125	DN150		
DIMENSIONS	L	325	325	325	615	777	939	1101	1263	1425	1587	1101	1263	1425	1587
	W	240	240	240	445	445	445	445	445	445	445	445	445	445	445
	H	790	1090	1390	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
WEIGHT	KG	42	55	72	155	212	270	325	385	440	500	670	770	880	1000
REFILL WEIGHT	KG	16	24	32	64	96	128	160	192	224	256	320	384	448	512

CONNECTION DIAGRAM

MEET THE REQUIREMENTS OF ALL INDUSTRIES





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