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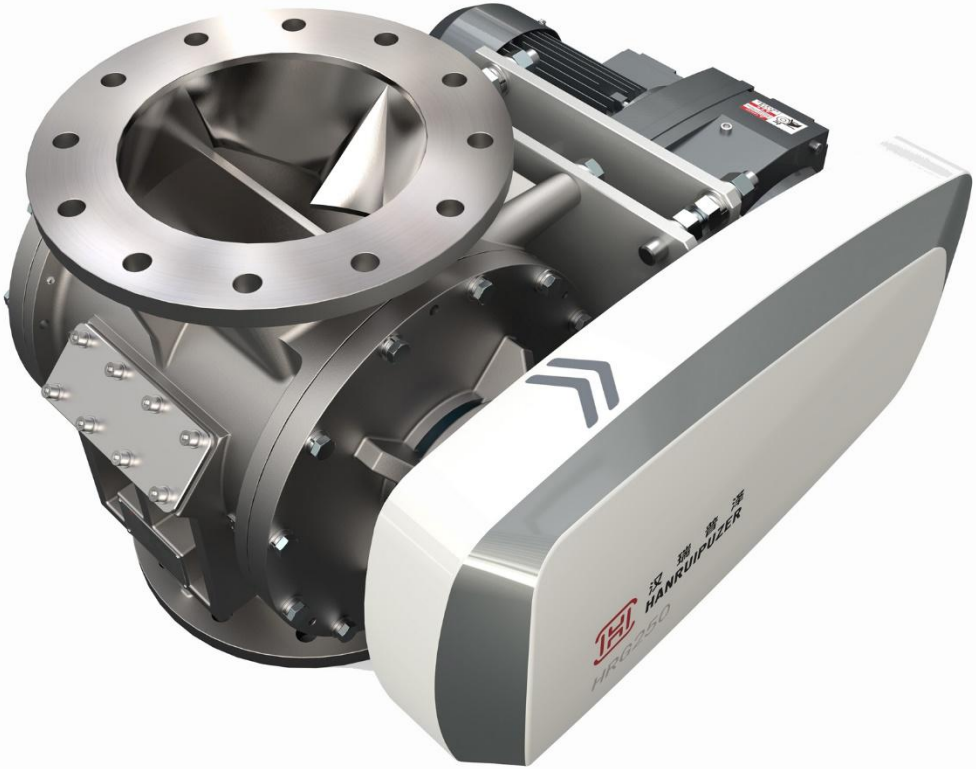


Rotary Feeder

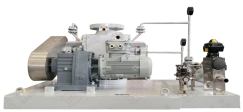
Product Brochure

Hanrui Puzer Powder Technology (Shanghai) Co., Ltd. was established in 2002. The factory is located in Tinglin Industrial Zone, Jinshan District, Shanghai. It is a high-tech and specialized enterprise integrating innovative research and development, intelligent equipment manufacturing, engineering design, system integration, on-site construction and installation, technical guidance, commissioning, and full-process production maintenance services. The company is engaged in one-stop solutions and services for powder and granular solid material handling engineering and in-plant logistics engineering.

Overview

The rotary feeder (also known as rotary valve or star feeder) is a specialized device used in solid material (powder, granular material, powder-granule mixtures) conveying systems for discharging, packaging, mixing, dust removal, metering, and quantitative conveying. The working principle is that a rotor with equally divided compartments rotates inside the housing driven by a motor and reducer. Material from the upper hopper or feeding device fills the rotor cavities, and the material is discharged from the lower part of the housing as the rotor rotates.

Classification：

<table>
<tr><td colspan="7">Powder: particle size < 1mm, Granules: 1mm < particle size < 3mm, Large particles: particle size > 3mm</td></tr>
<tr><td>Bigger Volume
  </td><td>Anti-Chopping type
  </td><td>Sanitary Type
  </td><td>Blow-throuth Type
  </td><td>High Pressure Type
  </td><td>Scraper Blades Type
  </td><td rowspan="2">Ultra High Pressure Type
  </td></tr>
<tr><td><1.5bar</td><td><1.5bar</td><td><1.5bar</td><td><1.5bar</td><td><3.5bar</td><td><1.5bar</td></tr>
<tr><td colspan="6">Pressure difference between inlet and outlet
  </td><td>System Pressure<80bar
Differential pressure<6bar</td></tr>
</table>

Standard Type HRA
(For pneumatic conveying systems)

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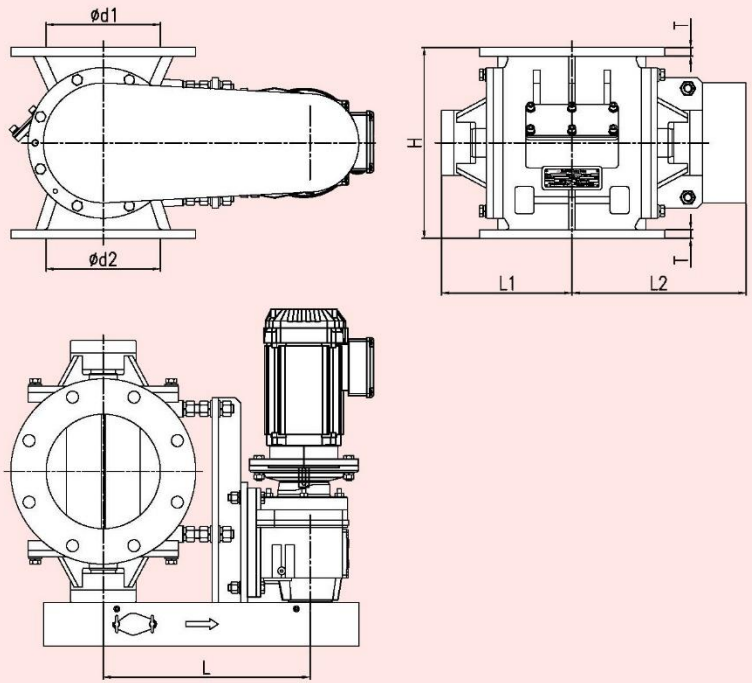
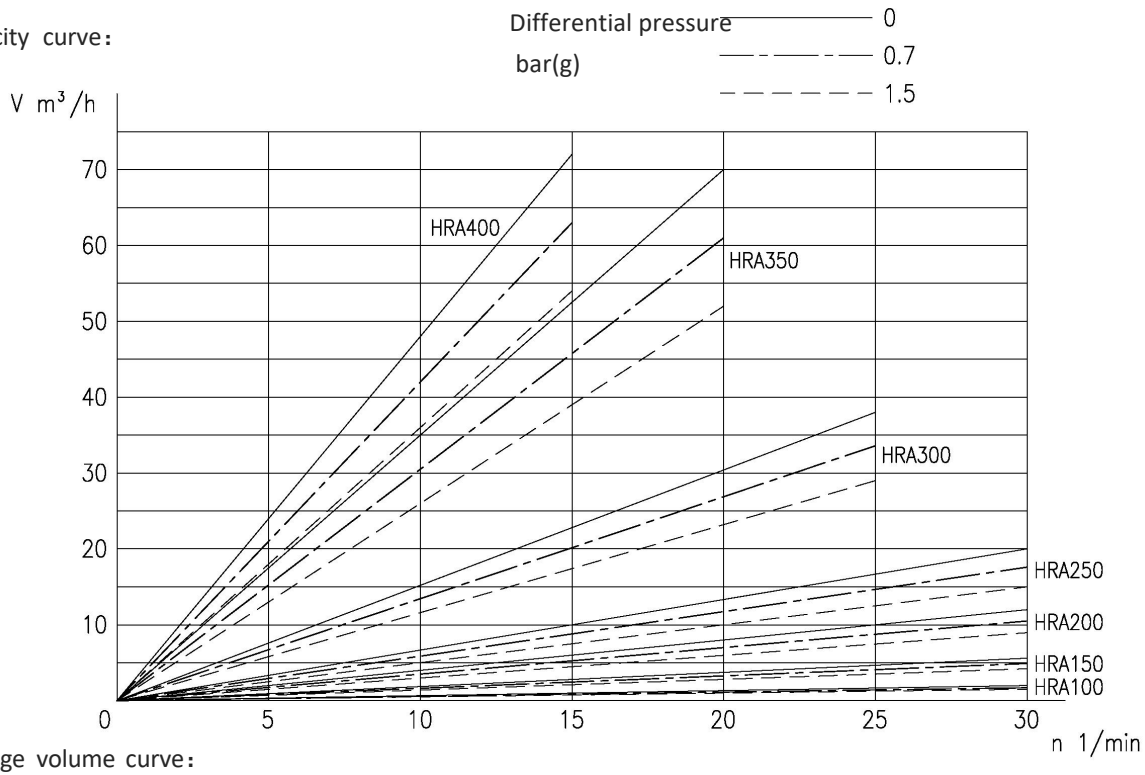
Pressure range	<System pressure and pressure difference of 1.5 bar
Pressure Surge Proof	Approximately 10 bar
Valve body temperature range	-20 ~ 220℃
Shaft Gas Seal + Oil seal + Outboard Bearing	By purging the Labyrinth ring, airflow and oil seal separate the material from the bearing



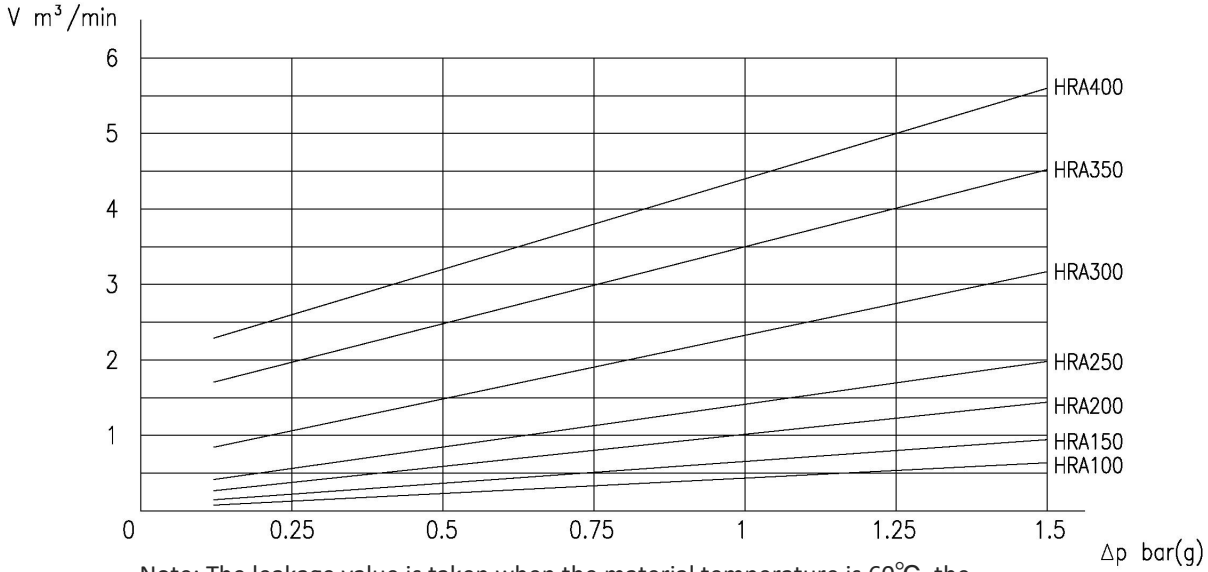
Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*Weight (kg)
HRA100	DN100	4”	100	100	280	10	285	174	254	43
HRA150	DN150	6”	150	155	330	10	315	192	272	62
HRA200	DN200	8”	210	200	350	16	370	240	320	110
HRA250	DN250	10”	250	250	420	18	440	265	345	168
HRA300	DN300	12”	300	300	490	18	470	330	430	260
HRA350	DN350	14”	350	350	700	24	540	414	534	580
HRA400	DN400	16”	400	400	800	24	630	439	559	798
HRA500	DN500	20”	500	500	970	28	680	504	624	1175

The weights in the table do not include the motor and the reducer

Capacity curve：



Leakage volume curve：



Note: The leakage value is taken when the material temperature is 60℃, the rotor speed is 20rpm, and the material is being conveyed

Bigger Volume HRB

(For pneumatic conveying systems)

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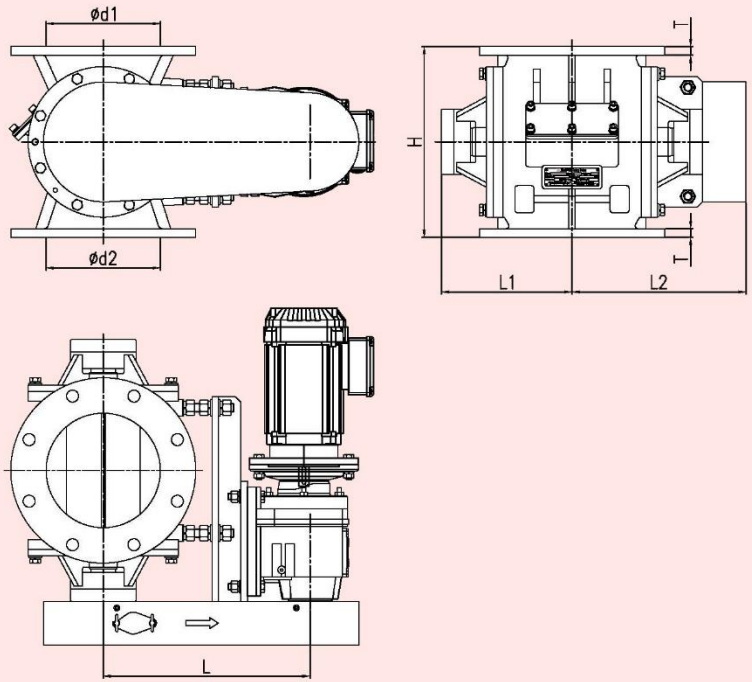
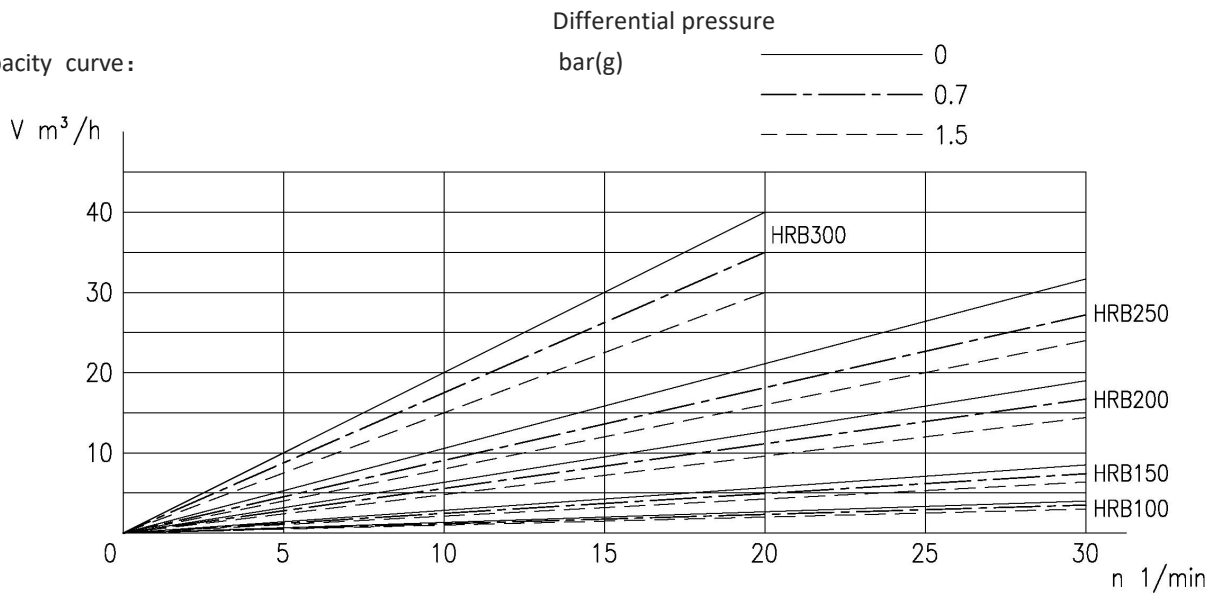
Pressure range	<System pressure and pressure difference of 1.5 bar
Pressure Surge Proof	Approximately 10 bar
Valve body temperature range	-20 ~ 220℃
Shaft Gas Seal + Oil seal + Outboard Bearing	By purging the Labyrinth ring, airflow and oil seal separate the material from the bearing



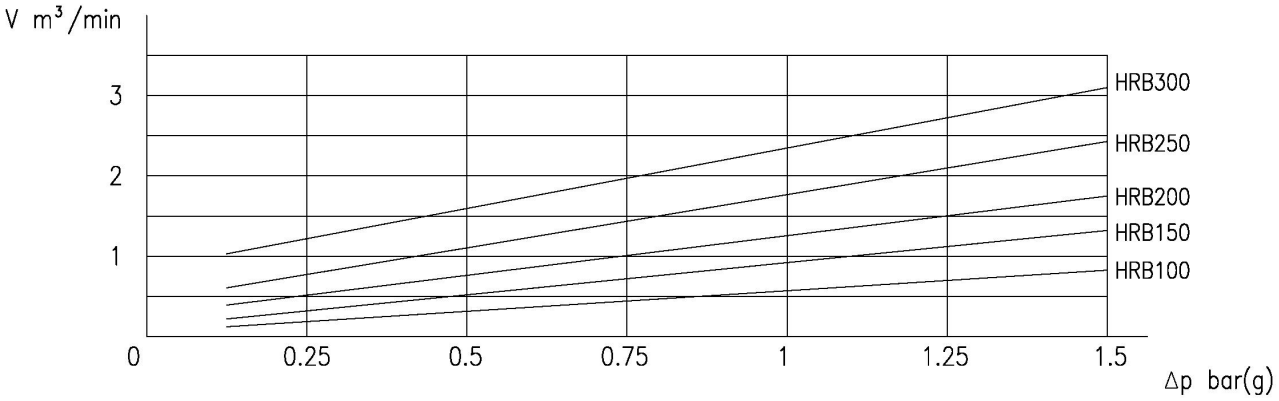
Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*(kg)
HRB100	DN100	4”	100	100	310	10	315	187	267	61
HRB150	DN150	6”	150	150	360	12	365	218	298	95
HRB200	DN200	8”	200	200	350	16	350	265	345	161
HRB250	DN250	10”	250	250	500	18	440	294	394	220
HRB300	DN300	12”	305	305	600	20	530	327	447	330

The weights in the table do not include the motor and the reducer

Capacity curve：



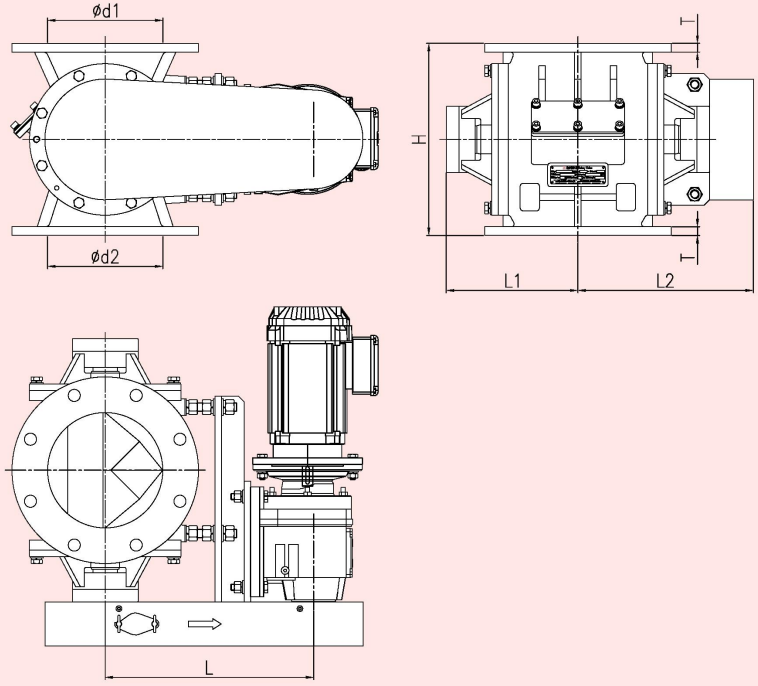
Leakage volume curve：



Note: The leakage value is taken when the material temperature is 60℃, the rotor speed is 20rpm, and the material is being conveyed

Anti-chopping HRB (For pneumatic conveying systems)

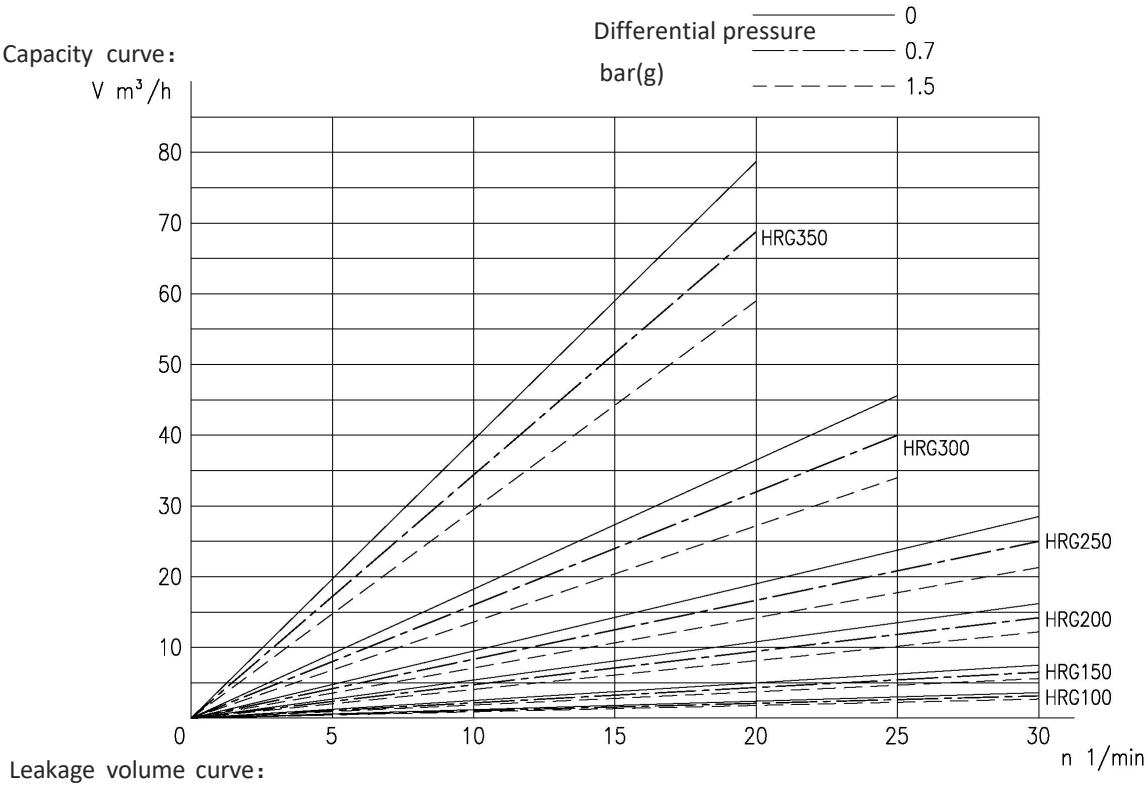
Pressure range	<System pressure and pressure difference of 1.5 bar
Pressure Surge Proof	Approximately 10 bar
Valve body temperature range	-20 ~ 220℃
Shaft Gas Seal + Oil seal + Outboard Bearing	The special shape of the feed inlet realizes the anti-chopping function



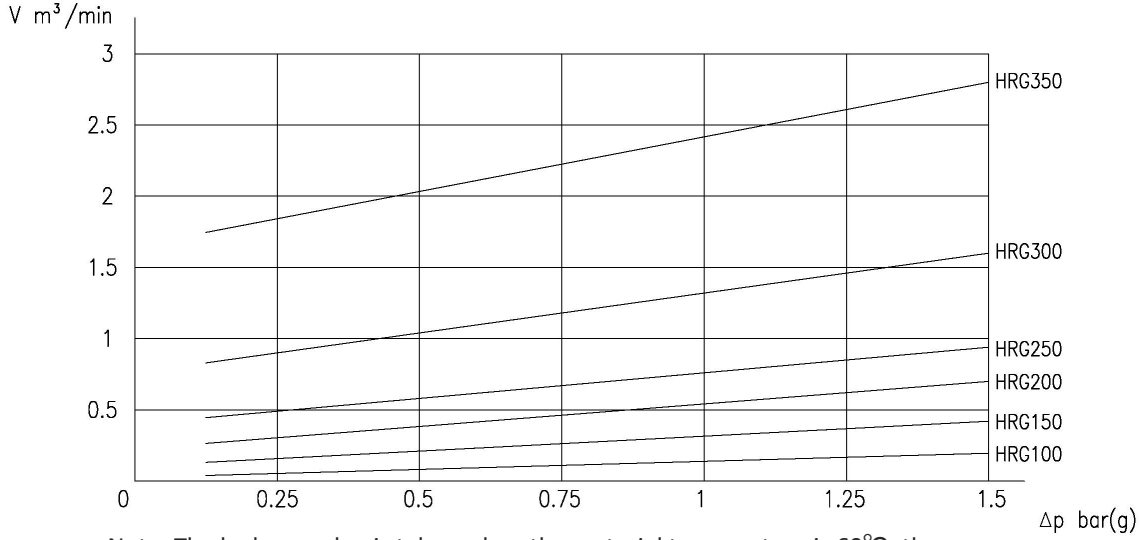
Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*kg
HRG100	DN100	4”	102	102	310	16	315	202	282	78
HRG150	DN150	6”	152	150	360	18	365	221	301	105
HRG200	DN200	8”	210	200	450	20	350	277	357	172
HRG250	DN250	10”	252	250	500	22	400	300	400	242
HRG300	DN300	12”	305	305	600	24	530	363	483	443
HRG350	DN350	14“	350	350	750	24	620	417	537	715

The weights in the table do not include the motor and the reducer

Capacity curve：



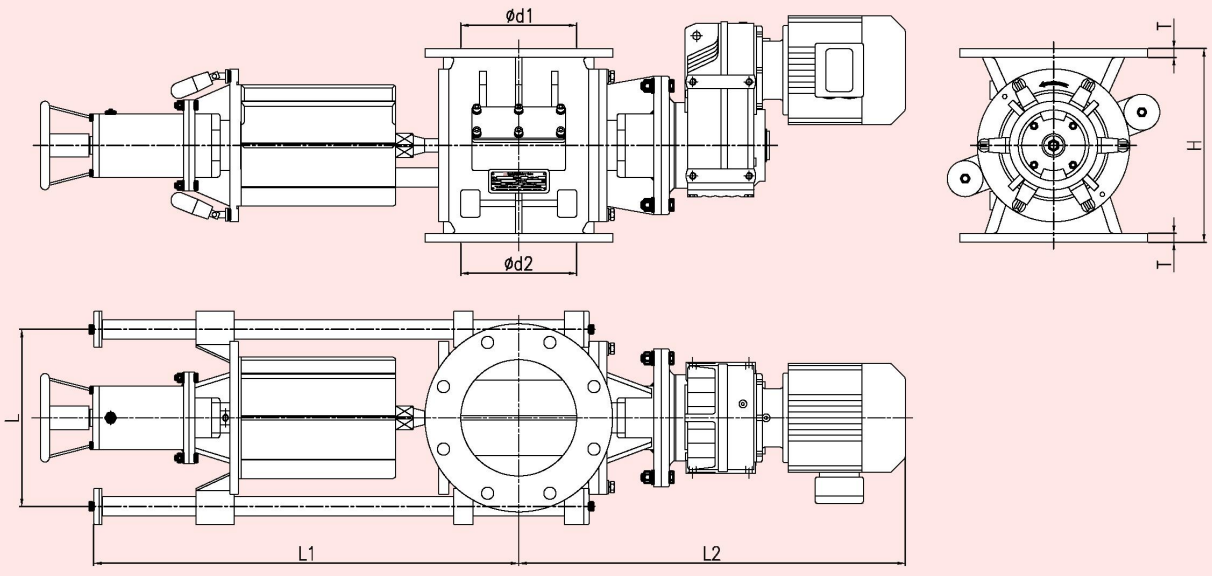
Leakage volume curve：



Note: The leakage value is taken when the material temperature is 60℃, the impeller speed is 20rpm, and the material is being conveyed

Sanitary type (For pneumatic conveying systems)

Pressure range	<System pressure and pressure difference of 1.5 bar
Pressure Surge Proof	Approximately 10 bar
Valve body temperature range	-20 ~ 220℃
Shaft Gas Seal + Oil seal + Outboard Bearing	The rotor can be removed from one end cover. After cleaning, it can be quickly pushed back to its original position



Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*kg
HRA150	DN150	6”	150	155	330	10	270	580	640	80
HRB150	DN150	6”	150	150	360	12	320	750	700	120
HRA200	DN200	8”	210	200	350	16	320	750	700	130
HRB200	DN200	8”	200	200	450	16	400	850	730	185
HRA250	DN250	10”	250	250	420	18	400	850	730	200
HRB250	DN250	10”	250	250	500	18	480	920	780	240
HRA300	DN300	12”	300	300	490	18	480	920	780	300

The weights in the table do not include the motor and the reducer

The conveying capacity and leakage of this type can be referred to the data of the standard type

Blow-throuth (For pneumatic conveying systems)

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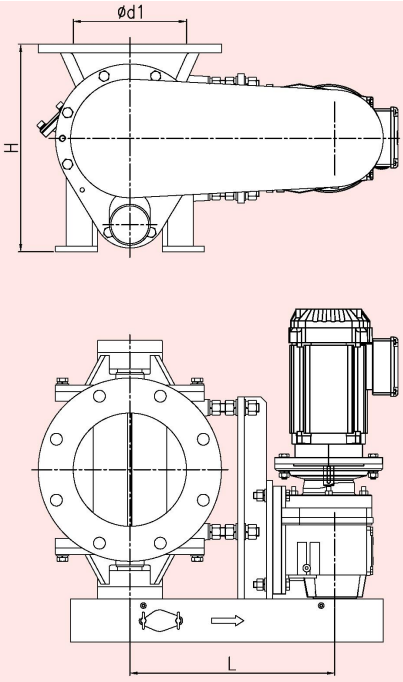
Pressure range	<System pressure and pressure difference of 1.5 bar
Pressure Surge Proof	Approximately 10 bar
Valve body temperature range	-20 ~ 220℃
Shaft Gas Seal + Oil seal + Outboard Bearing	The material is directly blown away by the airflow beneath the valve



Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*kg
HRA200	DN200	8”	200	76	450	16	320	300	300	180
HRB200	DN200	8”	200	89	550	16	400	300	300	250
HRA250	DN250	10”	250	89	570	18	400	400	400	270
HRB250	DN250	10”	250	108	600	18	480	400	400	330
HRA300	DN300	12”	300	108	620	18	480	500	500	400
HRB300	DN300	12”	300	133	750	20	530	500	500	550
HRA350	DN350	14”	350	133	850	24	550	600	600	700
HRA400	DN400	16”	400	133	950	28	650	600	600	950

The weights in the table do not include the motor and the reducer

The conveying capacity and leakage of this type can be referred to the data of the standard type

High Pressure type HRP

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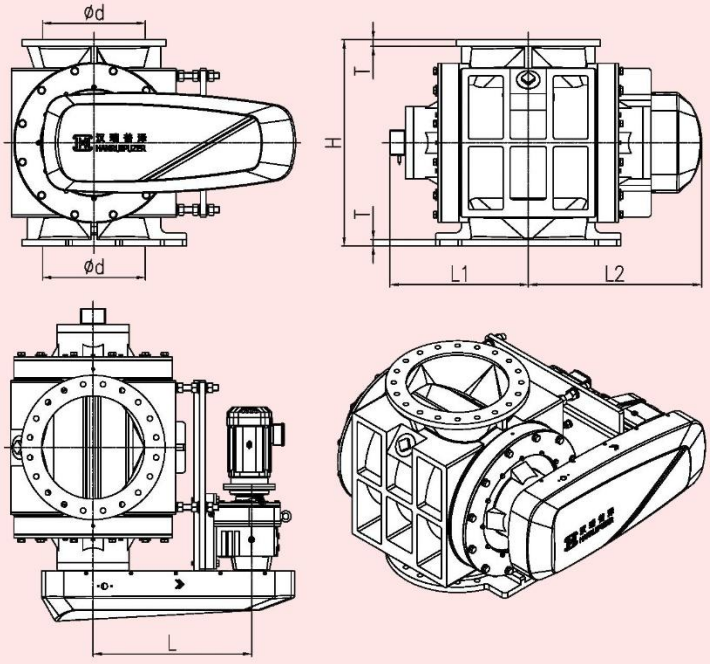
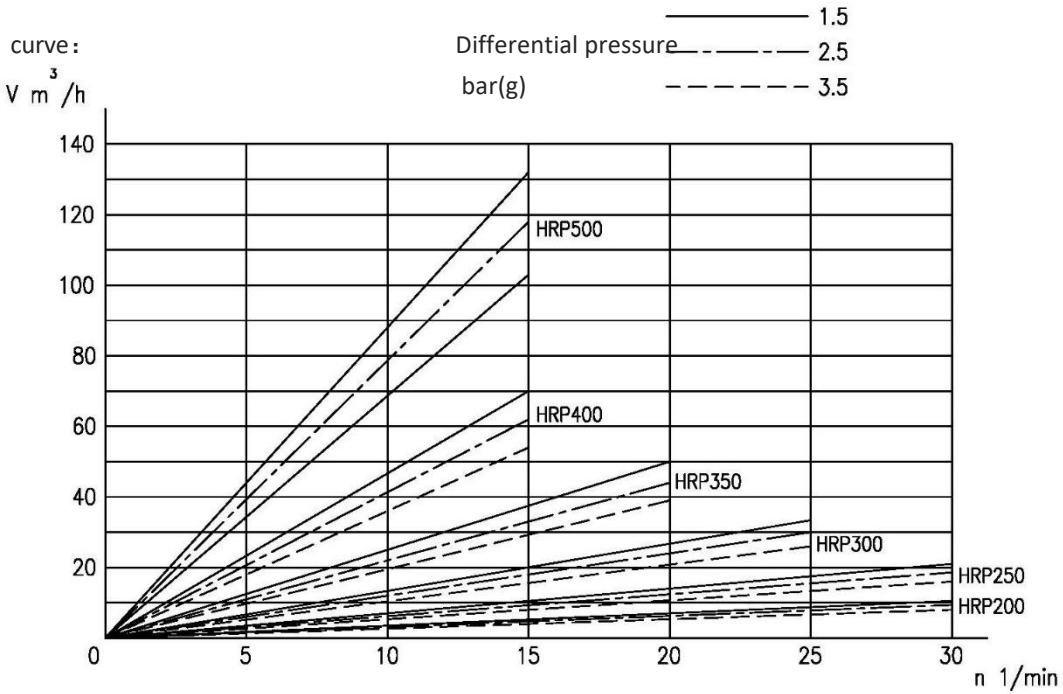
Pressure Range	≤3.5bar system pressure and differential pressure
Pressure Surge Proof	Approx. 10bar
Valve Body Temperature Range	-20 ~ 220℃
Suitable for Granular Material Conveying	Special-shaped feed port design to prevent material clogging
Main Body Material	Stainless steel, aluminum alloy
Sealing Configuration	SS304+PTFE lip seal (longer service life)
Material Filling Efficiency Improvement	Balancing port design for discharging high-pressure gas from outlet



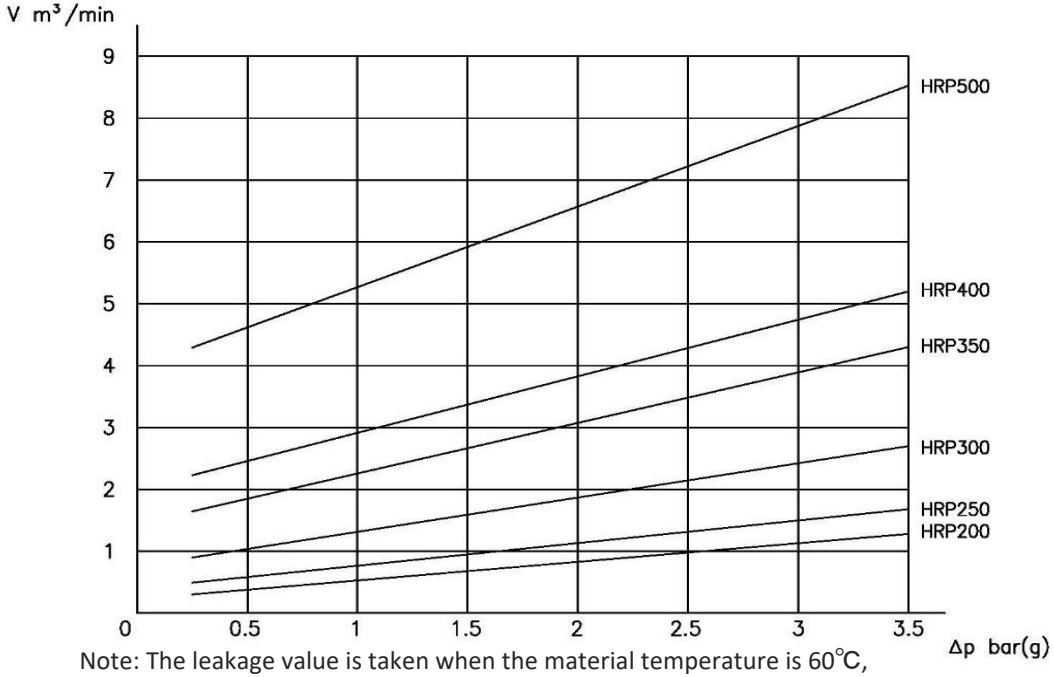
Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*kg
HRP200	DN200	8”	210	200	430	22	350	330	370	120
HRP250	DN250	10”	260	250	490	22	380	400	435	160
HRP300	DN300	12”	310	300	590	24	460	450	520	250
HRP350	DN350	14“	360	350	700	26	560	520	585	400
HRP400	DN400	16“	400	400	850	28	620	590	650	650
HRP500	DN500	20”	500	500	1000	32	770	675	840	1200

The weights in the table do not include the motor and the reducer

Capacity curve:



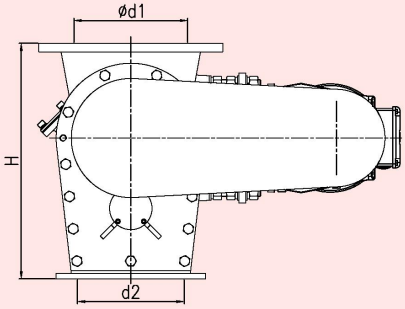
Leakage volume curve:

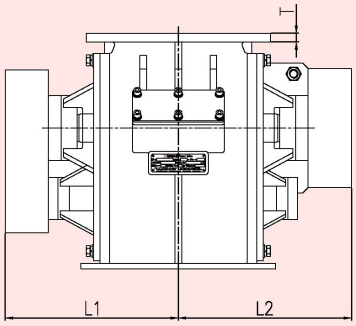


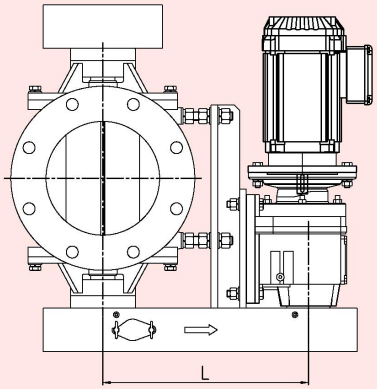
Note: The leakage value is taken when the material temperature is 60℃, the rotor speed is 20rpm, and the material is being conveyed

Scraper Blades Type

Pressure range	<System pressure and pressure difference of 1.5 bar
Pressure Surge Proof	Approximately 10 bar
Valve body temperature range	-20 ~ 220℃
Shaft Gas Seal + Oil seal + Outboard Bearing	A special scraper structure is designed below the impeller







Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*kg
HRA250	DN250	10”	250	□250	650	22	440	345	345	320
HRA300	DN300	12”	300	□300	750	22	470	430	430	480
HRA350	DN350	14”	350	□350	1050	24	550	534	534	900
HRA400	DN400	16”	400	□400	1150	24	650	620	620	1200
HRA500	DN500	20”	500	□500	1300	24	750	710	710	1600
HRA600	DN600	24”	600	□600	1500	26	850	750	750	2000

* The weights in the table do not include the motor and the reducer

**The leakage volume of this type can be referred to the standard type data

***The conveying capacity of this type depends on the specific requirements of the project

Ultra High Pressure type

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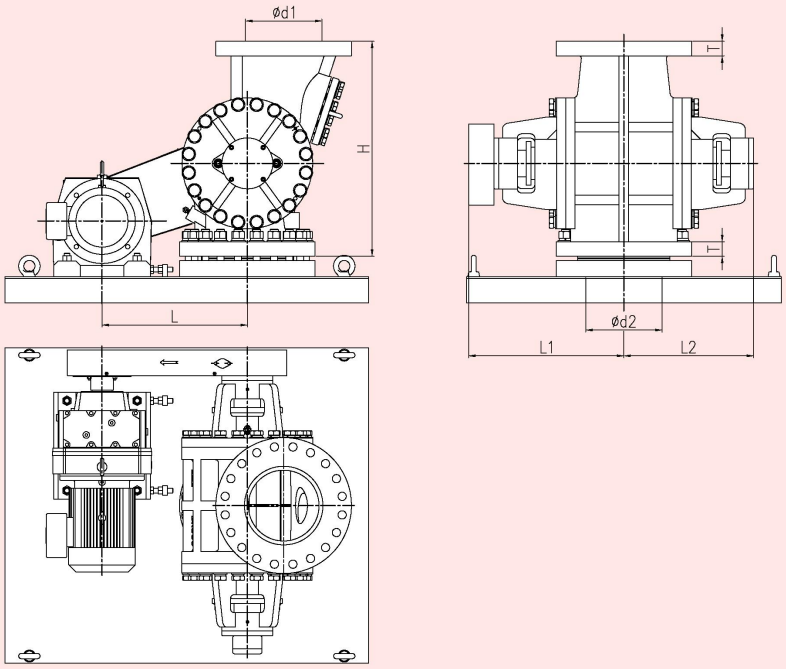
Pressure range	System pressure ranging from 4bar to 80bar
Pressure Surge Proof	Approximately 10bar ~ 100bar
Valve body temperature range	-20 ~ 300℃
Shaft Gas Seal + Oil seal + Outboard Bearing	Materials are conveyed to downstream equipment under high pressure



Spec	d1/d2(DIN)	d1/d2(ASME)	d1	d2	H	T	L	L1	L2	*kg
HRA50	DN50	2”	50	50	350	**	250	240	360	320
HRA80	DN80	3”	80	80	450	**	350	260	380	350
HRA100	DN100	4”	100	100	500	**	400	300	420	400
HRA150	DN150	6”	150	155	550	**	450	350	470	480
HRA200	DN200	8”	210	200	650	**	500	420	560	550
HRA250	DN250	10”	250	250	750	**	550	480	610	750
HRA300	DN300	12”	300	300	900	**	600	530	660	900

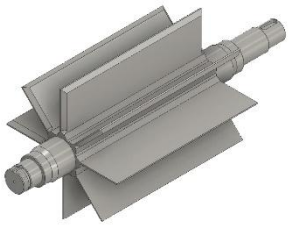
* The weights in the table do not include the motor and the reducer

**The leakage volume of this type can be referred to the standard type data

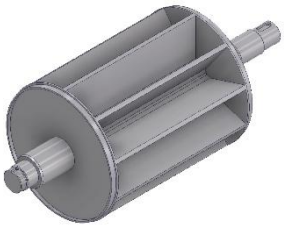
***The conveying capacity of this type depends on the specific requirements of the project

Rotor Options

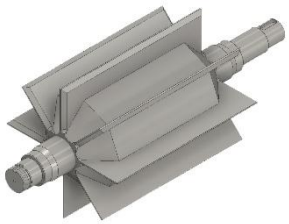
Different rotors are designed according to different working conditions



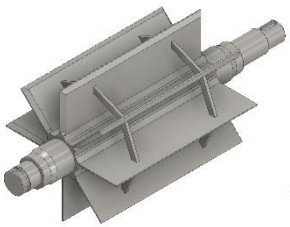
Open-Type Rotor
Note: The three edges of the blades are chamfered



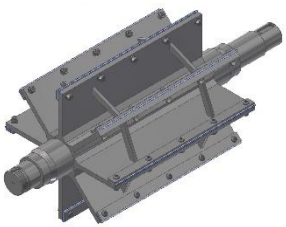
Close-Type Rotor
Note: Design of end plates on both sides of the blade



Rotor With Shallow Pockets Type
Note: Reduces the effective volume of each rotor chamber

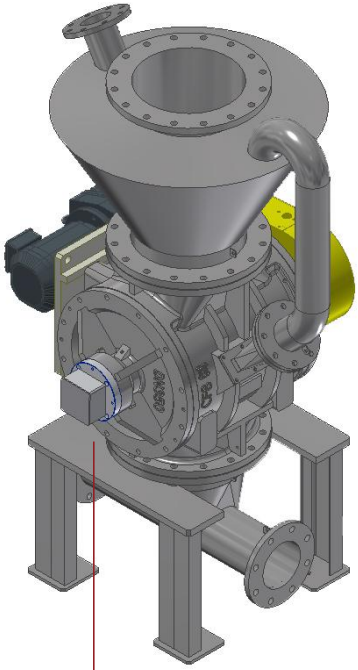


Reinforced type
Note: Suitable for occasions with higher pressure and strength requirements



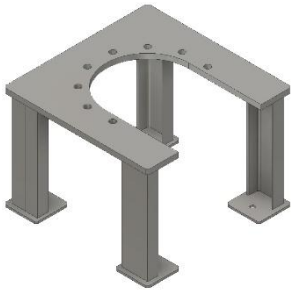
Adjustable Clearance type
Note: Removable components are designed at the top of the blades

Options and Accessories



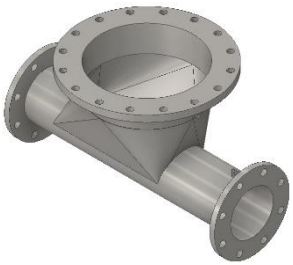
Plenum Chamber

1. Located at the rotary feeder inlet;
2. Achieves higher pneumatic conveying efficiency;
3. The internal straight pipe reduces the cross-section to ensure conveying capacity.



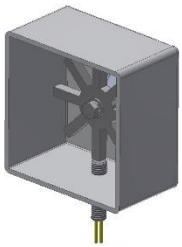
Support frame

1. Located below the rotary feeder;
2. Designed with different sizes according to the varying loads above.



Injector

1. Located at the rotary feeder outlet.
2. The inlet is connected to the rotary feeder, and the lower pipe. is connected to the pneumatic conveying pipeline.
3. The specifications of the conveying pipeline are optional to suit different pneumatic conveying capacities.
4. The interior of the pipe can be lined with ceramic.



Axial speed measurement assembly

1. Located at the end cover of the rotary feeder.
2. Speed measurement function is realized through sensors;

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SPECIALIZED IN ROTARY VALVE MANUFACTURING FOR 23 YEARS

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