

iVECTOR.

A NEW GENERATION OF
INTELLIGENT FAN CONVECTORS

NOW INCLUDING
the iVECTOR 4-pipe



heatingthroughinnovation.



MODERN HEATING SOLUTIONS.

In the UK today, we consume vast quantities of energy in our buildings. For example, the power we use to heat our homes and provide us with hot water alone accounts for more than 20% of our national CO₂ emissions!

In today's world of growing environmental concerns and rising fuel prices it is clear that the challenge for modern heating solutions is how to provide indoor comfort in the most energy efficient way possible.

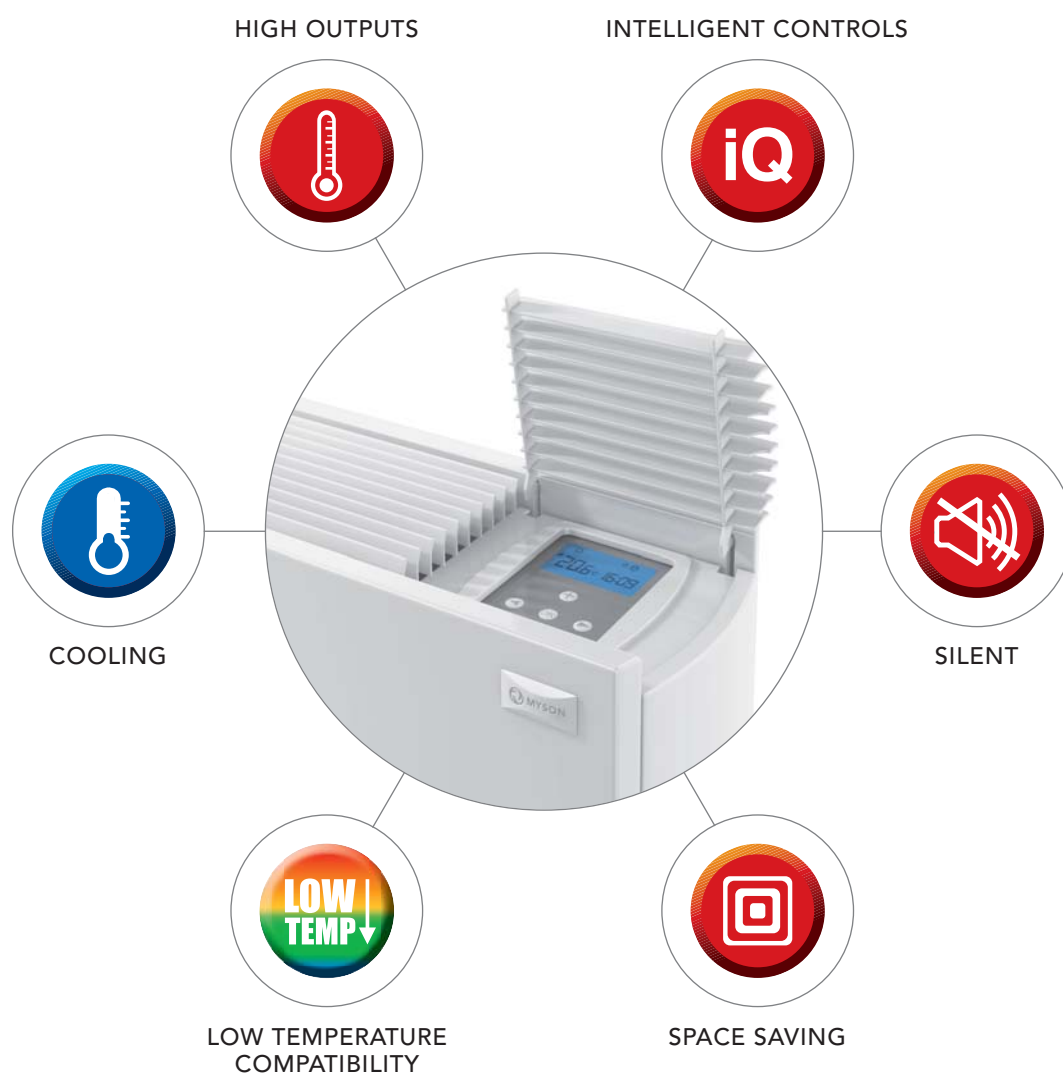


MYSON is one of the oldest and most respected names in the heating industry. We have been manufacturing fan convectors for over 50 years. As one of the UK's leading brands, with a reputation for maximising the role of innovation and technology in our operations, we are committed to helping reduce national CO₂ emissions by developing energy efficient products that are capable of operating effectively at low flow temperatures.

The iVECTOR.

The **iVECTOR** is the first in a new generation of intelligent fan convectors. It has been designed specifically to combine all the traditional advantages of a fan convector with a range of new product features made possible by our latest energy efficient heating technology. Overall, the **iVECTOR** provides an exciting package of significant benefits:

INTRODUCTION TO INTELLIGENT HEATING.



EFFICIENT &
EFFECTIVE
PERFORMANCE



High outputs

The **iVECTOR** has a large surface area heat exchanger. This feature combined with forced convection from its in-built fan produces high heat outputs.



Space saving

Due to these high heat outputs, **iVECTORs** are much smaller than panel radiators with equivalent outputs and so take up less wall space.



Silent

Sound levels were a key consideration during the development stage of the **iVECTOR**. **MYSON** are proud to have now delivered the quietest fan convector we have ever made, with no compromise on heat outputs.



Rapid heat

The **iVECTOR** has a much lower water content than other heat emitters, such as panel radiators and underfloor heating. In fact, the water content is less than 10% of that of a traditional radiator. Its lower thermal mass means the **iVECTOR** works quickly and efficiently.



Style

With its compact size and modern design, the **iVECTOR** is a product that delivers indoor comfort without compromising on style.



Intelligent controls

The **iVECTOR** has the most advanced controller that **MYSON** have ever developed and it is flexible enough to suit all lifestyle requirements with both 'easy' and 'full' operating modes plus an in-built option to link to a building management system (BMS).



Low temperature compatibility

The **iVECTOR** works efficiently with both low temperature systems, such as heat pumps, and traditional systems, such as gas/oil-fired boilers.



Easy to install

Due to its solid, one-piece casing the **iVECTOR** is extremely easy to install.



Cooling

Not only is the **iVECTOR** great at heating spaces but, when connected to a chilled water supply, it can now rapidly cool spaces as well.



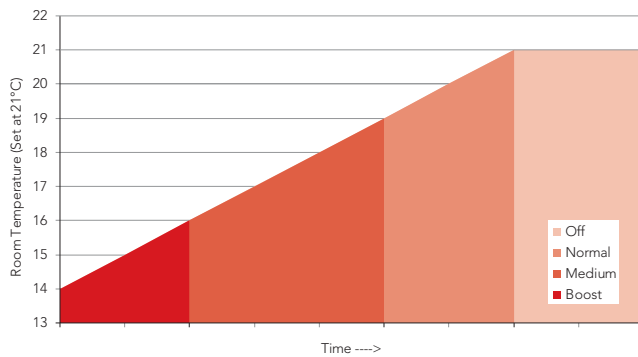


The intelligent, electronic control system in every **iVECTOR** provides a wide range of easy to use heating and cooling operating options. Its two-tier level of programming incorporates an 'easy' mode for basic operation and a 'full' mode for more advanced functions.

- Each **iVECTOR** is individually programmable
- 24/7 programmer with 1 hour time periods
- Night set-back function
- Lockable LCD backlit display
- Option to link to a building management system (BMS)
- The controller will also automatically select and vary the fan speeds as required, depending on the current room temperature and the required room temperature set by the user.

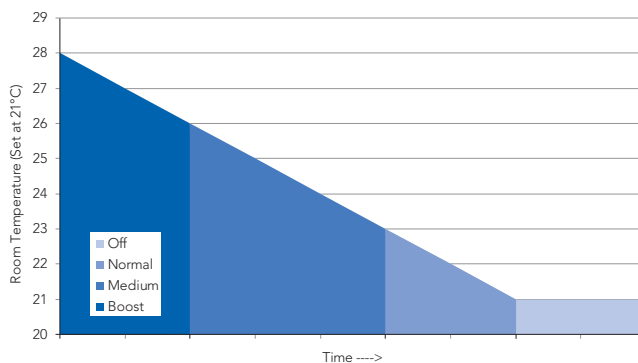
All of the features mentioned above are included with every **iVECTOR** at no extra cost.

Comfort Mode - Fan Speeds (Winter Heating)



Winter Heating - If the room temperature is 5°C or lower than the set point then the **iVECTOR** will activate boost mode, which will ensure the room heats up quickly. When the room is within 5°C of the set point then the **iVECTOR** will automatically switch to medium until the room temperature is within 2°C, then the normal fan speed will be selected. The **iVECTOR** will then maintain the normal fan speed until the set point has been achieved.

Comfort Mode - Fan Speeds (Summer Cooling)



Summer Cooling - The process is the same as the Winter Heating cycle however the temperatures will be above the set point rather than below.

INTELLIGENT & EASY TO USE CONTROLS.



For more information on the **iVECTOR**'s intelligent and easy to use controls, watch our video by scanning the QR code.





A FLEXIBLE SOLUTION.

The **iVECTOR** is a flexible heating solution. It has been designed to operate efficiently in a variety of systems and situations. The **iVECTOR** has a powerful combination of features that enable it to provide a fast, accurate and co-ordinated response to the heating requirements of every room in a building.

The **iVECTOR** has proven to be a popular choice within the commercial sector, having been installed in a variety of locations, such as schools, universities, care homes and retail facilities. The **iVECTOR** has also been installed in special areas such as a boat house, garden centres and car showrooms.



More flexibility:

- A cost effective option for use with both traditional boilers and renewable heat sources.
- Easy to install alone or add to an existing heating system in individual rooms, as and when required.
- Operates efficiently alongside other heat emitters on the same low water temperature system. For example, underfloor heating could be installed on a ground floor and the **iVECTOR** on upper floors. It can also be combined with radiators and towel warmers in the same building.

LOW TEMPERATURE COMPATIBILITY.

In recent times, gas boilers have overwhelmingly been the UK's most popular choice for generating heat in buildings. Today, however, the list of options is growing, with renewable technologies such as heat pumps becoming more popular.



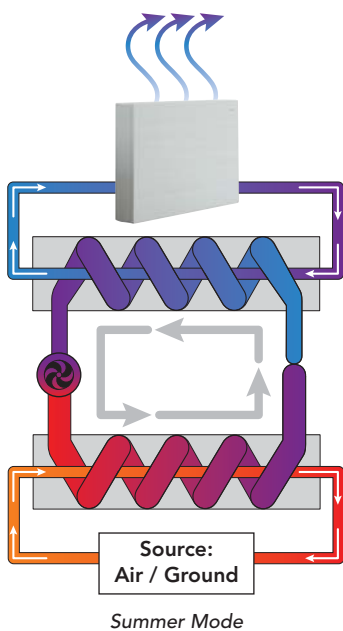
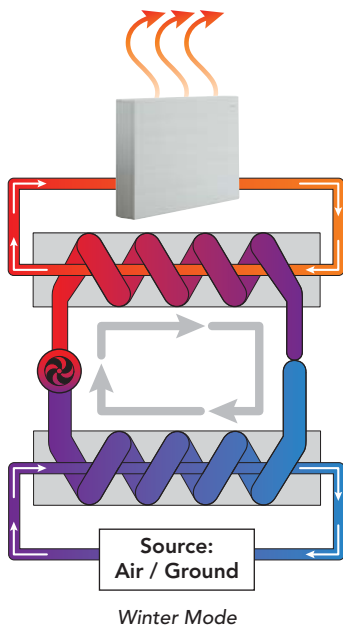
Both of these products
give the same output

Lower water temperatures = greater system efficiencies

Did you know:

- Heat pumps are at their most efficient when operating at lower water temperatures, typically around 35 - 45°C.
- Underfloor heating is a popular choice for low water temperature systems. It can, however, be difficult to install within retrofit projects.
- **Modern panel radiators are compatible with low water temperature systems;** however, to maintain comfort levels existing radiators may need to be replaced with larger sizes.
- The **iVECTOR** works perfectly with low water temperature systems. Its high heat outputs mean that it is a great, space saving heating solution.

ENHANCED
INDOOR
COMFORT
CONTROL.



Heating and Cooling Options.

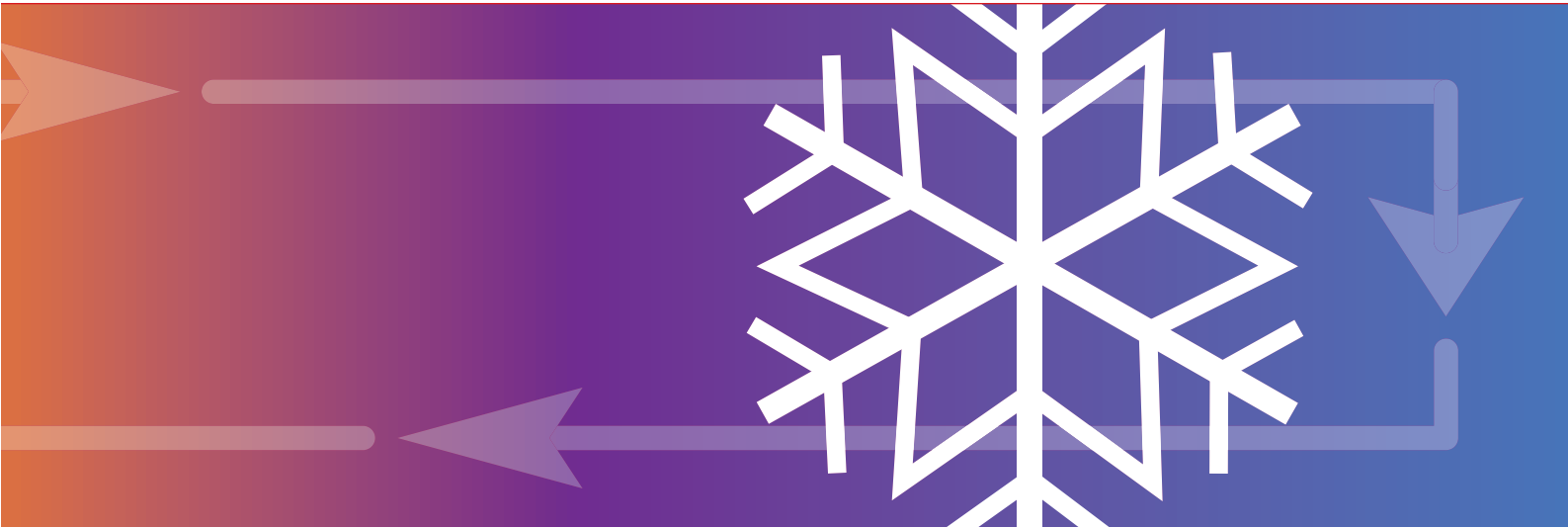
The **iVECTOR** can be used to enhance indoor comfort during all weather conditions and in a variety of situations due to its heating and cooling operational options. Where cooling is required, there are now two models to choose from - the original 2-pipe **iVECTOR** and the newly introduced 4-pipe version which is built with cooling in mind.

2-Pipe Model

A system using 2-pipe **iVECTOR**s can normally be used for **either** heating **or** cooling. For heating purposes, the **iVECTOR**s in a system all need to be connected to a heat source, i.e. boiler or heat pump, and for cooling operation they have to be connected to a chiller.

However, if a reverse cycle heat pump is installed in the system then it is possible for all **iVECTOR**s on the system to either **heat or cool**, depending on which cycle the heat pump is in. A key point to note is that both the heated and chilled water flow through the same 2 pipes, therefore, the entire system must either be in heating or cooling mode.

The introduction of a 4-pipe **iVECTOR** provides much more flexibility and further opportunities for enhanced indoor comfort.



4-Pipe Model

The 4-pipe **iVECTOR** model has two pipes connecting to a heat source and two pipes connecting to a chiller. This feature enables an enhanced facility for indoor comfort within a building whereby the **iVECTOR** can provide both heating and cooling to different parts of the same building at the same time - an extremely useful option when one area is in shade whilst another concurrently has a sunny aspect i.e. north and south facing aspects.

- The main difference between the 2 and 4-pipe **iVECTOR** is that the 4-pipe **iVECTOR** has 2 heat exchangers, one for heating and one for cooling.
- This means that each heat exchanger has its own set of flow and return pipes, one from a boiler and one from a chiller.
- Critically this means, from a system design point of view, that if a system has multiple **iVECTOR**s installed some can be used for heating whilst others can be used for cooling at the same time.
- When would this facility be required? A large building may experience different temperatures in different areas. For example, a south facing façade will typically be warmer than a north facing one. This means that while heating may be required on the north side of the building, the south side with its increased solar gains may require cooling.
- This means that the **iVECTOR** allows a system to work to its full flexibility and buildings can maintain an all-round comfortable temperature throughout the year.

Note: The 4-pipe **iVECTOR** will require the 4-pipe valve kit for heating and cooling modes.



2-Pipe 3/4" BSP Connection



4-Pipe 3/4" BSP Connection

TECHNICAL DATA.

2-Pipe.

Dimensions.

Model	Nominal Height (mm)	Depth (mm)	Length (mm)
iV60x080	600	153	800
iV60x100	600	153	1000
iV60x120	600	153	1200
iV60x140	600	153	1400
iV60x160	600	153	1600

Sound Levels.

Model	Sound Pressure (dBA) (at 2.5m)		
	Normal	Medium	Boost
iV60x080	24.8	37.7	47.9
iV60x100	27	35.8	47.9
iV60x120	24	40.5	51.7
iV60x140	24.9	35.5	54.8
iV60x160	27	35	56.3

Sound levels tested in accordance with ISO 3741.

Weight, Water Content and Motor Power.

Model	Motor Power (W)	Water Content (l)	Unpacked Weight (kg)
iV60x080	32	0.66	22.8
iV60x100	35	0.92	27.7
iV60x120	44	1.19	32.5
iV60x140	53	1.45	37.5
iV60x160	65	1.72	42.6

Flow Rates/Pressure Losses - Heating/Cooling.

Flow (l/h)	Pressure Drop (kPa)				
	iV60x080	iV60x100	iV60x120	iV60x140	iV60x160
100	0.7	1	1.4	1.6	1.9
150	1.4	2.1	2.9	3.2	3.7
220	2.9	4.1	5.5	6.1	7.1
330	6.1	8.5	11.1	12.2	14.2
500	13	17.8	22.9	24.9	28.7
750	27.5	36.5	46.2	49.8	57.1

Air Flow Rates.

Condition	Fan Speed	Air Flow m³/h				
		iV60x080	iV60x100	iV60x120	iV60x140	iV60x160
Heating	Normal	90	135	180	225	270
	Medium	148	221	295	369	443
	Boost	247	370	493	616	740
Cooling	Normal	65	98	130	163	195
	Medium	110	165	220	275	330
	Boost	202	302	403	504	605

Performance Data.

Model	Fan Speed	Heat Output (Watts)								Cooling (Watts)	
		Flow (l/h)	ΔT20	ΔT25	ΔT30	ΔT35	ΔT40	ΔT45	ΔT50	Condition 7-12-27	
										Total	Sensible
iV60x080	Normal	341	738	940	1146	1355	1567	1781	1997	707	527
	Medium	341	989	1260	1537	1817	2101	2388	2678	1126	829
	Boost	341	1360	1733	2113	2499	2889	3284	3682	1648	1227
iV60x100	Normal	450	1012	1289	1572	1859	2149	2443	2739	1011	753
	Medium	450	1352	1723	2101	2484	2872	3265	3661	1600	1178
	Boost	450	1892	2412	2941	3477	4020	4569	5124	2304	1716
iV60x120	Normal	600	1214	1548	1887	2231	2580	2932	3288	1520	931
	Medium	600	1643	2094	2553	3018	3490	3967	4448	1960	1442
	Boost	600	2409	3070	3743	4425	5117	5815	6521	2918	2173
iV60x140	Normal	700	1428	1820	2219	2624	3034	3449	3867	1490	1110
	Medium	700	1945	2478	3022	3573	4131	4695	5265	2320	1707
	Boost	700	2916	3716	4531	5357	6194	7040	7894	3533	2631
iV60x160	Normal	800	1647	2099	2560	3027	3499	3977	4460	1729	1288
	Medium	800	2246	2863	3491	4127	4772	5424	6082	2679	1972
	Boost	800	3422	4362	5318	6288	7270	8263	9266	4147	3088

For BTUs multiply Watts by 3.412.

Relative Humidity: Sensible cooling at 50%.

4-Pipe.

Dimensions.

Model	Nominal Height (mm)	Depth (mm)	Length (mm)
iV60x080	600	153	800
iV60x100	600	153	1000
iV60x120	600	153	1200
iV60x140	600	153	1400
iV60x160	600	153	1600

Sound Levels.

Model	Sound Pressure (dBA) (at 2.5m)		
	Normal	Medium	Boost
iV60x080	24.8	37.7	47.9
iV60x100	27	35.8	47.9
iV60x120	24	40.5	51.7
iV60x140	24.9	35.5	54.8
iV60x160	27	35	56.3

Sound levels tested in accordance with ISO 3741.

Weight, Water Content and Motor Power.

Model	Motor Power (W)	Water Content (l)		Unpacked Weight (kg)
		Heating	Cooling	
iV60x080	32	0.33	0.66	24.8
iV60x100	35	0.46	0.92	30.1
iV60x120	44	0.6	1.19	35.3
iV60x140	53	0.73	1.45	40.7
iV60x160	65	0.86	1.72	46.2

Flow Rates/Pressure Losses - Cooling.

Flow (l/h)	Pressure Drop (kPa)				
	iV60x080	iV60x100	iV60x120	iV60x140	iV60x160
100	0.7	1	1.4	1.6	1.9
150	1.4	2.1	2.9	3.2	3.7
220	2.9	4.1	5.5	6.1	7.1
330	6.1	8.5	11.1	12.2	14.2
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750	27.5	36.5	46.2	49.8	57.1

Flow Rates/Pressure Losses - Heating.

Flow (l/h)	Pressure Drop (kPa)				
	iV60x080	iV60x100	iV60x120	iV60x140	iV60x160
100	1.4	2	2.8	3.2	3.8
150	2.8	4.2	5.8	6.4	7.4
220	5.8	8.2	11	12.2	14.2
330	12.2	17	22.2	24.4	28.4
500	26	35.6	45.8	49.8	57.4

Air Flow Rates.

Condition	Fan Speed	Air Flow m ³ /h				
		iV60x080	iV60x100	iV60x120	iV60x140	iV60x160
Heating	Normal	90	135	180	225	270
	Medium	148	221	295	369	443
	Boost	247	370	493	616	740
Cooling	Normal	65	98	130	163	195
	Medium	110	165	220	275	330
	Boost	202	302	403	504	605

Performance Data.

Model	Fan Speed	Heat Output (Watts)								Cooling (Watts)		
		Flow (l/h)	ΔT20	ΔT25	ΔT30	ΔT35	ΔT40	ΔT45	ΔT50	Condition 7-12-27		
										Flow (l/h)	Total	Sensible
iV60x080	Normal	300	517	658	802	949	1097	1247	1398	350	672	501
	Medium	300	692	882	1076	1272	1471	1672	1875	350	1070	788
	Boost	300	952	1213	1479	1749	2022	2299	2577	350	1566	1166
iV60x100	Normal	350	708	902	1100	1301	1504	1710	1917	450	960	715
	Medium	350	946	1206	1471	1739	2010	2286	2563	450	1520	1119
	Boost	350	1324	1688	2059	2334	2814	3198	3587	450	2189	1630
iV60x120	Normal	400	850	1084	1321	1562	1806	2052	2302	600	1444	884
	Medium	400	1150	1466	1787	2113	2443	2777	3114	600	1862	1370
	Boost	400	1686	2149	2620	3098	3582	4071	4565	600	2772	2064
iV60x140	Normal	450	1000	1274	1553	1837	2124	2414	2707	700	1416	1055
	Medium	450	1362	1735	2115	2501	2892	3287	3686	700	2204	1622
	Boost	450	2041	2601	3172	3750	4336	4928	5526	700	3356	2499
iV60x160	Normal	500	1153	1469	1792	2119	2449	2784	3122	800	1643	1224
	Medium	500	1572	2004	2444	2889	3340	3797	4257	800	2545	1873
	Boost	500	2395	3053	3723	4402	5089	5784	6486	800	3940	2934

For BTUs multiply Watts by 3.412.

Relative Humidity: Sensible cooling at 50%.

Electrical Data: All iVECTOR models require an electrical supply of 220-240V 50Hz fused at 3A.



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