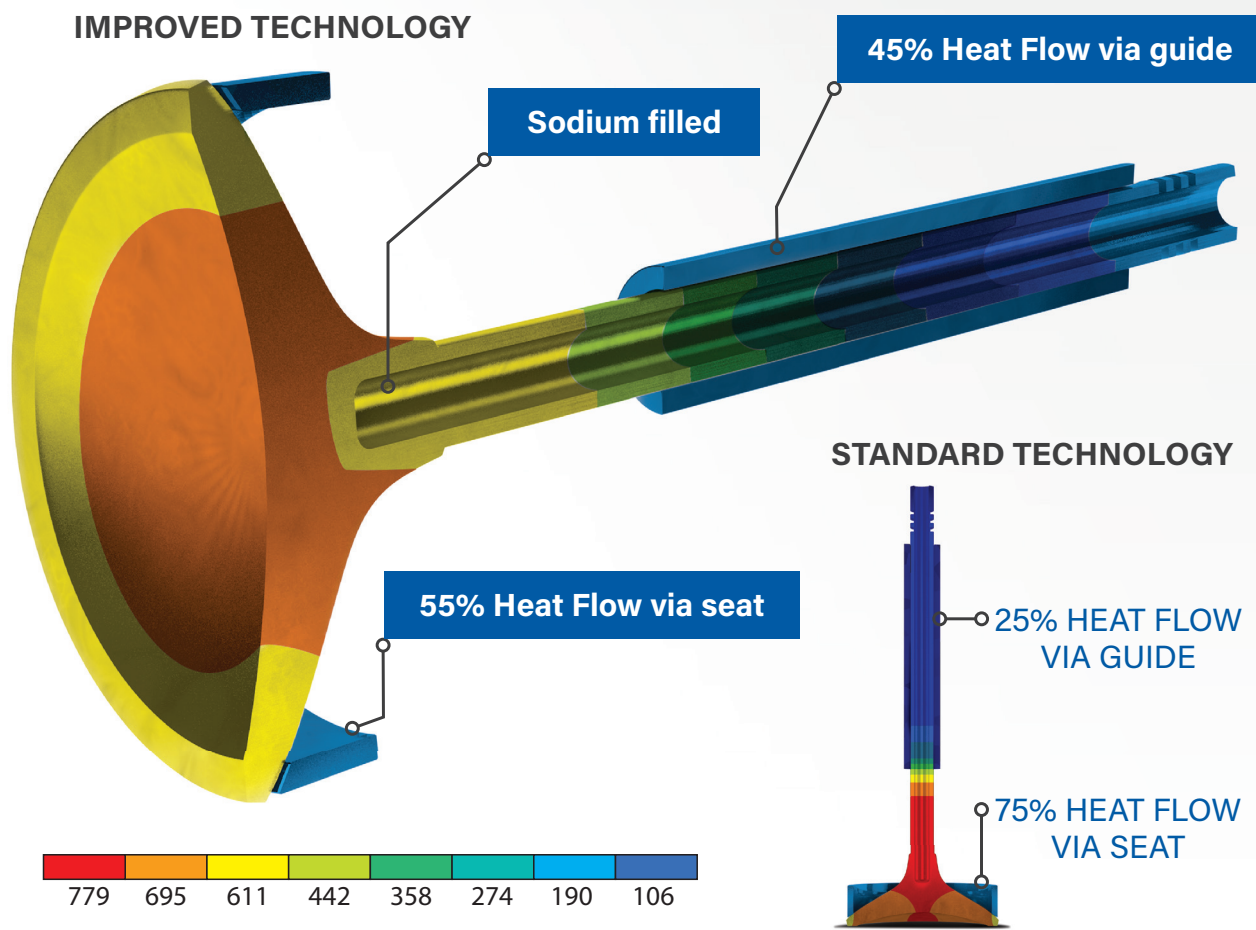




# AE<sup>®</sup> INTRODUCES SODIUM-FILLED HOLLOW VALVES



The heat dissipation via the valve guide is improved with sodium-filled valves, which helps to increase durability of the valve. Its hollow structure makes the valve lighter and helps reduce automotive emissions.

## TECHNOLOGY HIGHLIGHTS

- Temperature reduction in the underhead region between 80°C to 150°C
- Heat dissipation reduced from the seat and transferred through to the guide by 20%
- Weight reduction by up to 16%



**ENGINE EXPERTISE**  
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MOTORPARTS**



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# OE QUALITY YOU CAN TRUST



- An ultra-hard durable seat surface resistant to wear
- Reduced emissions and enhanced engine performance due to improved valve sealing

## AE® BRINGS ITS INNOVATIVE, OE-PROVEN TECHNOLOGY TO THE AFTERMARKET

- 99% of the AE valve range is produced in Federal-Mogul's OE plant
- All AE valves are tested for roundness and concentricity
- Every single AE valve is laser marked with an AE part number for easy identification



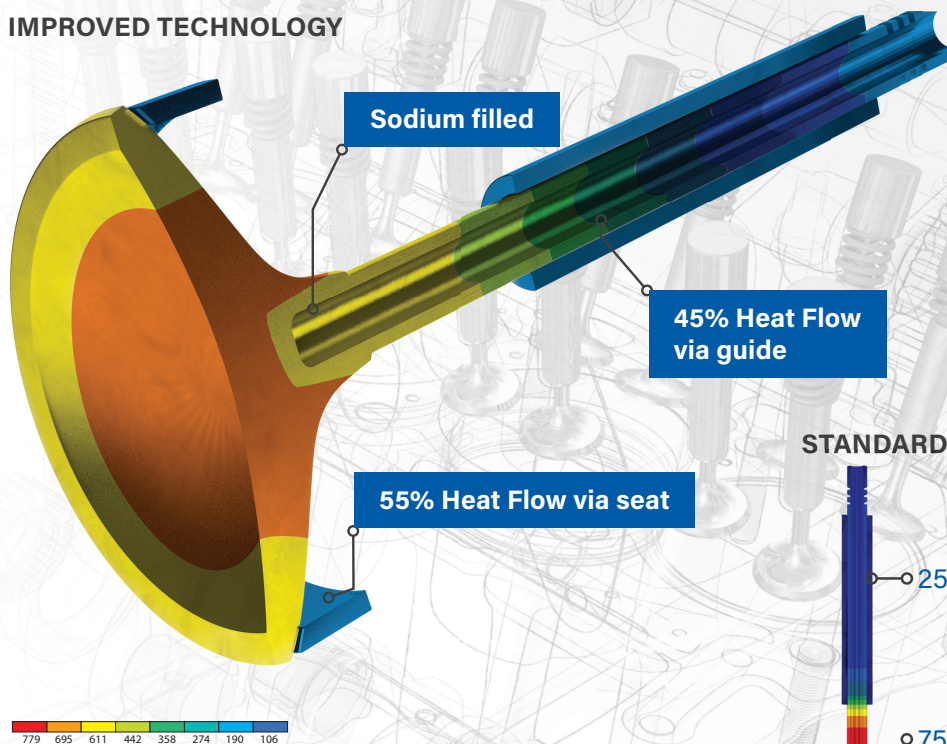
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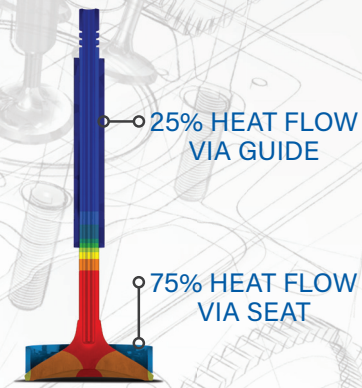


# AE<sup>®</sup> INTRODUCES SODIUM-FILLED HOLLOW VALVES

IMPROVED TECHNOLOGY



STANDARD TECHNOLOGY



Sodium-filled valves are designed with **advanced heat transfer technology** for enhanced performance, durability and heat flow management.

### HEAT FLOW MANAGEMENT

Engine valves control the gas exchange in the combustion chamber and are amongst the most highly stressed parts in the engine. Since they are limited by the temperature resistance of the base material, sodium filling in the hollow valves enables to withstand higher temperatures by improving heat flow via the stem and guide interface. This helps to reduce the temperature in the valve head area by 80°C to 150°C compared to a solid valve.



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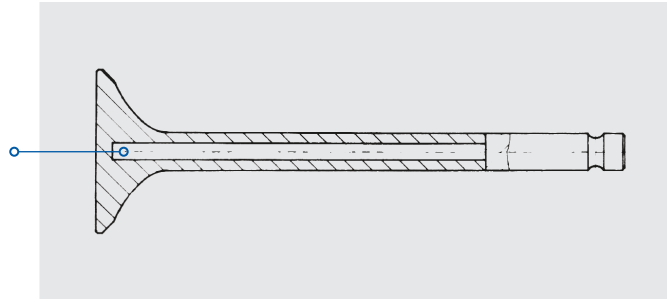


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## WEIGHT REDUCTION

Engines are becoming lighter due to set emission limits. This impacts all automotive components. Sodium-filled valves have a hollow structure, which makes them between 6% to 16% lighter. This significantly reduces automotive emissions.



## IN-HOUSE OE QUALITY

All 24 OE quality parts of the brand-new V80000 range are produced in Federal-Mogul's Global valvetrain plants. They contain a new part number structure for increased clarity and efficient lookup. AE's valve program now includes a range of all 3 valve types: mono-metal, bi-metal and high tech sodium-filled hollow valves. All made with top-tier materials to ensure high wear resistance.

AE Valve Part No.	Type	Make	Application	Engine	FUEL	OE	Head Ø	Stem Ø	Length	Seat Angle	Type	Feature (Na)	Seat Feature	Surface Feature
V80000	In Valve	BMW	116 i (E81)	N43 B16 A	Petrol	11 34 7 555 760	30,00	6,00	106,60	45°	Mono-Metal			
V80001	Ex Valve	BMW	116 i (E81)	N43 B16 A	Petrol	11 34 7 552 053	27,00	6,00	114,70	45°	Bi-Metallic		Stellite Seat	Chrome Stem
V80002	In Valve	BMW	550 i (F10)	N63 B44A	Petrol	11 34 7 570 163	33,20	6,00	102,80	45°	Mono-Metal			
V80003	Ex Valve	BMW	550 i (F10)	N63 B44A	Petrol	11 34 7 570 164	29,00	6,00	106,00	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	
V80004	In Valve	MERCEDES-BENZ	SLK 250 (R172)	M 271.820	Petrol	271 053 10 01	32,00	6,00	105,40	45°	Mono-Metal			Chrome Stem
V80005	Ex Valve	MERCEDES-BENZ	SLK 250 (R172)	M 271.820	Petrol	271 050 11 27	28,00	6,00	109,30	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	Chrome Stem
V80006	In Valve	MERCEDES-BENZ	S-CLASS S350 (W221)	M 278.928 Euro 5	Petrol	278 050 01 26	37,00	6,00	104,10	45°	Mono-Metal			Chrome Stem
V80007	Ex Valve	MERCEDES-BENZ	S-CLASS S350 (W221)	M 278.928 Euro 5	Petrol	276 050 00 27	30,00	6,00	107,30	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	Chrome Stem
V80008	In Valve	MERCEDES-BENZ	E-CLASS E200 (W212)	A 160 (176.041) / M 270.910	Petrol	270 053 00 01	31,50	6,00	115,80	45°	Mono-Metal			Chrome Stem
V80009	Ex Valve	MERCEDES-BENZ	E-CLASS E200 (W212)	A 160 (176.041) / M 270.910	Petrol	270 050 01 00	25,00	6,00	107,00	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	Chrome Stem
V80010	In Valve	VWAG	PASSAT 1.4 TSI EcoFuel	CG6B Euro 5	Petrol	03C109 601L	29,50	6,00	100,60	45°	Mono-Metal		Stellite Seat	Nitrided
V80011	Ex Valve	VWAG	PASSAT 1.4 TSI EcoFuel	CG6B Euro 5	Petrol	03C109 611Q	26,00	6,00	100,60	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	Nitrided
V80012	In Valve	VWAG	GOLF VII 1.2 TSI	CJZA, CJZB, CYVA, CYVB	Petrol	04E109 601A	26,50	5,00	110,25	45°	Mono-Metal			
V80013	Ex Valve	VWAG	GOLF VII 1.2 TSI	CJZA, CJZB, CYVA, CYVB	Petrol	04E109 611K	23,50	5,00	110,09	30°	Bi-Metallic		Stellite Seat	Chrome Stem
V80016	In Valve	OPEL / VAUXHALL	ASTRA Mk V (H) 1.8 116V	A 18 XER Euro 5 LPG	LPG	55572520 / 642 030	31,20	5,00	113,80	45°	Mono-Metal		Stellite Seat	Nitrided
V80017	Ex Valve	OPEL / VAUXHALL	ASTRA Mk V (H) 1.8 116V	A 18 XER Euro 5 LPG	LPG	55572521 / 641 099	27,50	5,00	113,20	45°	Bi-Metallic		Stellite Seat	Nitrided
V80018	In Valve	TOYOTA	COROLLA Verso 1.8 VVT-i	1ZZ-FE	Petrol	13711-22030	32,00	5,50	88,70	45°	Mono-Metal			Nitrided
V80019	Ex Valve	TOYOTA	COROLLA Verso 1.8 VVT-i	1ZZ-FE	Petrol	13715-22030	27,50	5,50	88,70	45°	Mono-Metal			Nitrided
V80020	In Valve	CITROËN / PEUGEOT	308 II 1.2 THP 130	EB2DTS - 1.2THP 130ps	Petrol	98 019 609 80	26,42	5,00	93,50	45°	Mono-Metal			
V80021	Ex Valve	CITROËN / PEUGEOT	308 II 1.2 THP 130	EB2DTS - 1.2THP 130ps	Petrol	98 076 459 80	23,78	5,00	92,91	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	
V80022	In Valve	VWAG	LT Mk II 2.8 TDI	AGK, ATA, AUH, BCQ 2.8D	Diesel	062 109 601	33,00	7,00	105,10	30°	Mono-Metal			Chrome Stem
V80023	Ex Valve	VWAG	LT Mk II 2.8 TDI	AGK, ATA, AUH, BCQ 2.8D	Diesel	062 109 611A	39,70	7,00	105,10	45°	Bi-Metallic		Stellite Seat	Chrome Stem
V80024	Ex Valve	VWAG	TOUAREG 3.6 V6 TSI	CGEA Euro 5 & CABA/B	Petrol	079 109 611 D	28,00	6,00	101,90	45°	Bi-Metallic	Sodium-Filled	Stellite Seat	Chrome Stem
V80025	In Valve	BMW	335 i (E93)	N43 B20 A & N54 B30A	Petrol	11 34 7 553 775	31,40	5,00	106,60	45°	Mono-Metal			Chrome Stem

All boxes contain 2 valves.



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