

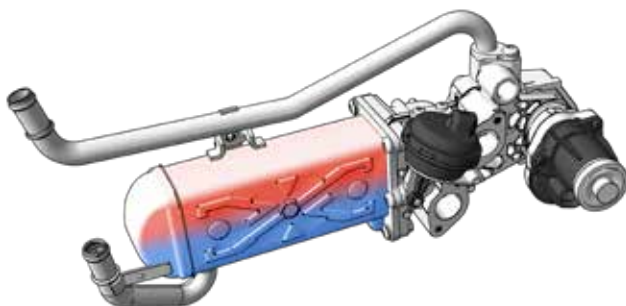
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it straight away.

BRIEF INFORMATION

EGR

- OE quality applied for an exact fit
- Lower emissions, improved engine efficiency, lower fuel consumption
- Including mounting instructions for proper installation
- Continuous product range extension

PRODUCT FEATURES



Actuation and function type

- Vacuum operated – earliest developments of EGR systems.
- Electronically operated – second generation of EGRs with more precise and on the spot exhaust gas regulating.
- Electronic operated with integrated cooling function – modern depollution systems capable of reducing exhaust gas temperature before entering engine intake.

Application

HELLA provides a wide range of application for European, Japanese and North American manufacturers.

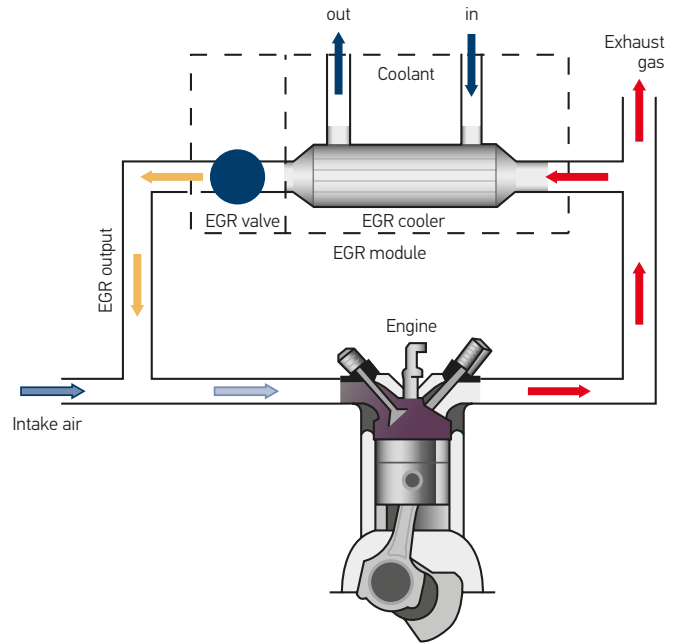
Design and function

With the rising prominence of CO₂ emissions and reaching the Euro-VI thresholds in September 2014, the EGR valve is becoming increasingly important. Nitrous oxides are dramatically reduced by channeling off part of the exhaust gas into the induction air. There is also reduced soot formation in the diesel engine, and a drop in fuel consumption for petrol engines. In this process, the EGR valve regulates the amount of exhaust gas that is returned and are designed to reduce the amount of NO_x resulting from the functioning of the internal combustion engine. HELLA's vehicle-specific EGR valves are tailored to the precise needs of the engines, thus making an important contribution to protecting the environment.

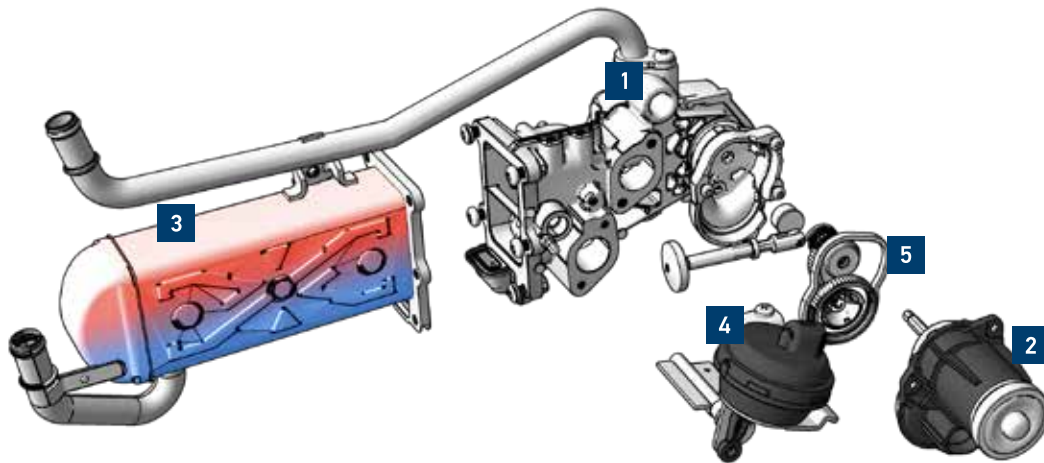
FUNCTIONAL DIAGRAM

EGR valves are installed in a bypass channel between the intake manifold and the exhaust manifold. Recirculating part of the exhaust gas volume can reduce emissions of nitrogen oxides (NOx), through the effect of cooling the combustion chamber.

The EGR valve is controlled by the engine control unit (ECU) through information received from multiple sensors related to engine management. The exhaust gas recirculation rate is controlled depending on the engine speed, coolant temperature and engine load.



TECHNICAL DETAILS

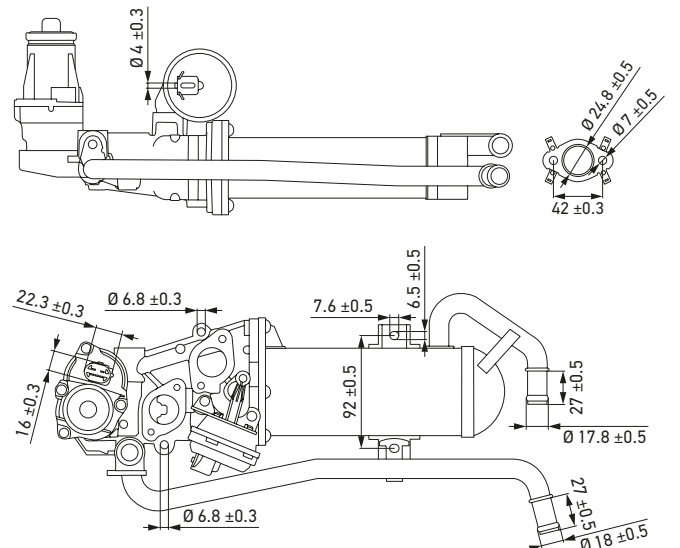


- [1] **Housing with valve mechanism:** Developed to house all internal EGR parts and provide optimum gas flow during all engine operating conditions.
- [2] **Drive motor:** Controls the EGR valve movement via a toothed gear drivetrain.
- [3] **Heat exchanger:** Allows efficient heat transfer between coolant circuit and passing exhaust gases.

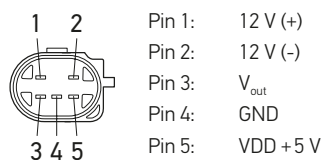
- [4] **By-pass valve vacuum control:** Regulates the amount of exhaust gases which pass through the cooler considering engine operating temperature and load.
- [5] **Mash gear mechanism:** Transfers the movement from the motor to the valve.

Technical data (6NU 358 167-011)	
Operating voltage	≤ 14 V
Rated voltage	12 V
Vibration resistance	Yes
Installation location	Engine

Dimensional sketch (6NU 358 167-011)



Pin assignment (6NU 358 167-011)



PROGRAM OVERVIEW *

Manufacturer	Product description	Part number	Manufacturer	Product description	Part number				
Alfa Romeo / Fiat / Lancia	EGR valve	6NU 010 171-331			6NU 010 171-001				
		6NU 014 864-741			6NU 014 864-071				
		6NU 014 864-761			6NU 010 171-861				
		6NU 010 171-291			6NU 010 171-161				
		6NU 010 171-431			6NU 010 171-831				
		6NU 010 171-301			6NU 010 171-901				
		6NU 010 171-721			6NU 010 171-651				
		6NU 010 171-641			6NU 010 171-041				
		6NU 010 171-351			6NU 010 171-881				
		6NU 010 171-311			6NU 010 171-241				
		6NU 010 171-811			6NU 010 171-791				
		6NU 010 171-371			6NU 010 171-781				
		6NU 010 171-501			6NU 010 171-011				
		6NU 010 171-411			6NU 010 171-891				
Audi / VW / Seat / Skoda	EGR valve	6NU 014 864-671	Ford	EGR valve	6NU 010 171-911				
		6NU 014 864-461			6NU 010 171-251				
		6NU 358 167-001			6NU 010 171-761				
		6NU 358 167-021			6NU 010 171-971				
		6NU 358 167-031			6NU 014 864-711				
		6NU 358 167-041			6NU 010 171-491				
		6NU 358 167-051			6NU 010 171-731				
		6NU 014 864-471			6NU 010 171-531				
		6NU 014 864-511			6NU 014 864-561				
		6NU 014 864-721			6NU 014 864-611				
		6NU 358 167-011			6NU 014 864-701				
		6NU 010 171-751			6NU 014 864-531				
		6NU 010 171-871			6NU 014 864-641				
		6NU 014 864-091			6NU 014 864-641				
6NU 010 171-701	6NU 014 864-431								
6NU 010 171-921	6NU 014 864-651								
6NU 010 171-691	6NU 014 864-651								
6NU 014 864-681	6NU 014 864-661								
6NU 014 864-751	6NU 014 864-731								
Chevrolet	EGR valve	6NU 014 864-601	GM	EGR valve	6NU 014 864-711				
		6NU 010 171-671			6NU 010 171-971				
		6NU 010 171-231			6NU 014 864-711				
Citroen	EGR valve	6NU 010 171-771	Honda	EGR valve	6NU 010 171-491				
		6NU 010 171-931			6NU 010 171-731				
		6NU 010 171-461			6NU 010 171-531				
		6NU 010 171-481			6NU 014 864-561				
Fiat	EGR valve	6NU 010 171-071	Hyundai / Kia	EGR valve	6NU 014 864-611				
		6NU 014 864-521			6NU 014 864-561				
		6NU 010 171-091			6NU 014 864-611				
		6NU 010 171-111			6NU 014 864-611				
Ford	EGR valve	6NU 010 171-271	Isuzu	EGR valve	6NU 014 864-701				
		6NU 010 171-661			Iveco	EGR valve	6NU 010 171-571		
		6NU 010 171-801					Land Rover	EGR valve	6NU 010 171-821
		6NU 010 171-171							6NU 014 864-531
		6NU 010 171-451							6NU 014 864-641
		6NU 010 171-381							6NU 014 864-641
6NU 010 171-441	6NU 014 864-431								
6NU 010 171-521	6NU 014 864-651								
Opel / Vauxhall	EGR valve	6NU 014 864-111	Mercedes-Benz	EGR valve	6NU 014 864-651				
		6NU 010 171-341			Nissan	EGR valve	6NU 014 864-661		
		6NU 010 171-601					6NU 014 864-731		
		6NU 010 171-561					6NU 014 864-731		
		6NU 010 171-681					6NU 014 864-731		
		6NU 010 171-681					6NU 014 864-731		
6NU 010 171-611	6NU 014 864-731								

* You can get an up-to-date overview of the product range from HELLA PARTNER WORLD via QR code on top of the brief info or in TecDoc and your local catalogue.

PROGRAM OVERVIEW *

Manufacturer	Product description	Part number		
Peugeot	EGR valve	6NU 010 171-101		
	EGR module	6NU 010171-181		
Renault	EGR valve	6NU 014 864-121		
		6NU 010 171-741		
		6NU 014 864-101		
		6NU 014 864-081		
		6NU 010 171-851		
		6NU 014 864-481		
		6NU 014 864-501		
		6NU 014 864-691		
		Saab	EGR valve	6NU 010 171-401
		Toyota	EGR valve	6NU 014 864-571
6NU 014 864-621				
6NU 014 864-541				
6NU 014 864-581				
Volvo	EGR valve	6NU 014 864-591		

Q&A

– EGR –



1 Why is the modern EGR such an important part in today's exhaust depollution systems?

The EGR has the important role of balancing the exact amount of exhaust gases needed for the engine to achieve maximum performance and efficiency while keeping the lowest level of NOx emissions possible.

2 Is the use of the EGR limited to the type of the internal combustion engine?

No, the EGR is used in both modern gasoline and diesel engines.

3 Are modern vehicles able to self diagnose the EGR component, thus warning the driver?

Although many users wrongly associate the “check engine” warning light with EGR function, it is important to know that only specialised workshops can fully diagnose an EGR problem, mechanical and electrical wise.

4 What are the main obvious signs of a faulty EGR?

Most common symptoms of a bad EGR relate to engine knocking sound, stalling or rough idling, smell of unburnt fuel, loss of engine performance, check engine warning light present.

5 Do other parts linked to the depollution system of a vehicle have an influence on EGR behaviour?

Yes, actually the working condition of parts like the turbocharger, the DPF, the intake and exhaust manifolds can have direct effect on EGR behaviour.

6 Can we avoid any expensive spare parts replacement or major repairs by replacing a bad EGR at first signs of malfunction?

Yes, driving with a stuck EGR valve in either open or closed position can influence the lifespan of parts directly linked to it, such as the turbocharger or the DPF. In some cases, a defective EGR can even lead to permanent engine damage as well.