



engine parts

1



Freccia bi-fuel line rappresenta una nuova gamma di valvole e guidavalvole realizzate per i motori a benzina trasformati con alimentazione a metano e GPL.

L'elevata temperatura di esercizio sviluppata dalla combustione di questi carburanti, associata allo scarso potere lubrificante e refrigerante di metano e GPL impongono al momento della revisione della testa l'utilizzo di valvole e guidavalvole prodotte con materiali appositamente concepiti.

Le valvole **Freccia bi-fuel line** sono prodotte con acciai di ultima generazione resistenti al calore e all'usura, il riporto di stellite sulla sede garantisce una maggiore resistenza alla corrosione, elemento fondamentale per prolungare la vita della valvola e del motore.

Le guidavalvole **Freccia bi-fuel line** vengono offerte in due tipologie differenti: in materiale sinterizzato o in bronzo.

La certezza del buon funzionamento e della durata nel tempo del motore può essere garantita solo dall'utilizzo congiunto di valvole e guidavalvole **Freccia bi-fuel line**

Freccia bi-fuel line represents a new range of valves and valve guides for gasoline engines transformed into engines powered by natural gas and GPL.

The high operating temperature developed by the combustion of these fuels, associated with the poor lubricating and cooling power of natural gas and GPL, call for the use of engine valves and valve guides especially studied and manufactured with special materials. During the cylinder head overhauling it is necessary to use such type of components.

Freccia bi-fuel line valves are manufactured with last generation steels, highly resistant to heat and wear; the stellite deposit on the valve seat increases the resistance to corrosion. This is of fundamental importance to prolong the valve life and the engine life.

Freccia bi-fuel line valve guides are offered in 2 different materials: sintered alloy or bronze.

The guarantee of good and lasting functioning of the engine is given only by the joint use of **Freccia bi-fuel line** engine valves and valve guides.



PARTI MOTORE

ENGINE PARTS

PIECES DE MOTEURS

MOTORENTEILE

COMPONENTES DEL MOTOR

ЧАСТИ ДВИГАТЕЛЯ



QUALITÀ ACCIAI E SPECIFICHE

MATERIALS SPECIFICATIONS

QUALITE DES ACIERS ET SPECIFIQUES

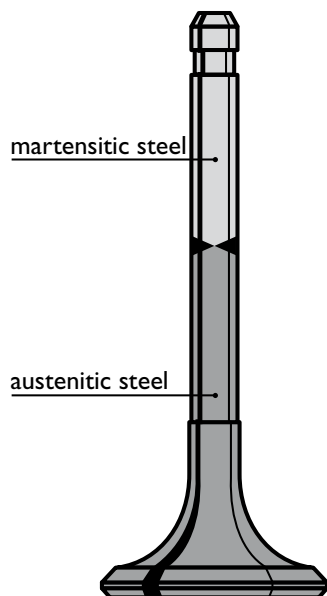
MATERIAL SPEZIFIKATIONEN

**CALIDAD DE LOS ACEROS
Y ESPECIFICACIONES**

**ЧАСТИ ДВИГАТЕЛЯ СПЕЦИФИКАЦИЯ
МАТЕРИАЛОВ**

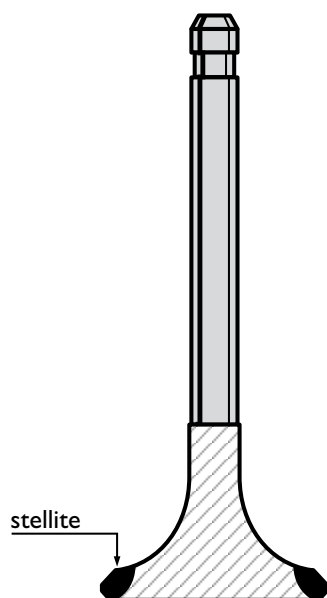


BM



- I** Valvole di scarico bimetalliche per motori a scoppio e Diesel con particolari esigenze. Queste valvole presentano la testa in acciaio R o I, i quali hanno una elevata resistenza al calore, e lo stelo in acciaio S, che ha una notevole resistenza all'usura. L'accoppiamento dei due acciai, austenitici e amagnetici per la testa e martensitico per lo stelo, consente l'indurimento dell'estremità dello stelo.
- GB** Bimetallic valves for Diesel and petrol engines with particular needs; the head of these valves is manufactured in R or I steel and is very resistant to heat, while the stem, made in S steel, is very resistant to wear. The combination of these two steels, austenitic amagnetic for the head and martensitic for the stem, allows the hardening of the stem end.
- F** Soupapes d'échappement bimétalliques pour moteurs à explosion et Diesel avec des exigences particulières; ces soupapes présentent la tête en acier R ou I avec une résistance à la chaleur élevée et la tige en acier S avec une grande résistance à l'usure. L'accouplement des deux aciers, austénitique et amagnétique pour la tête et martensitique pour la tige permet le durcissement du bout tige.
- D** Bimetall-Auslaßventile für Benzin- und Dieselmotoren mit besonderen Anforderungen: diese Ventile haben einen sehr hitzbeständigen Ventilkopf aus R oder I Stahl und einen sehr verschleißfesten Schaft aus S Stahl. Die Verbindung von zweien Stählen, d.h. einem Austenit-Stahl für den Ventilkopf und einem Martensit-Stahl für den Schaft gibt die Verhärtung des Schaftendes zu.
- E** Válvulas de escape bimetalicas para motores de explosión y Diesel de exigencias especiales. Estas válvulas poseen la cabeza en acero R o I, que tienen una alta resistencia al calor, y el vástago en acero S, de alta resistencia al desgaste. La combinacion de los dos aceros, auteníticos y amagnéticos en la cabeza de la valvula y martensítico para el vástago, permiten el endurecimiento del extremo del vástago.
- RUS** Клапана выбрасывающие двухметальные для двигателей от искры и дизельных с особенными требованиями. Эти клапана имеют головную часть из стали R или I, и которые имеют повышенную устойчивость к высоким температурам, и стержень из стали S, которая имеет повышенную устойчивость на износ. Сочетание двух видов стали аустенитичной и обезмагниченной для головной части и типа мартенстико для стержня, позволяет затвердить конечность оси.

AR



- I** Valvola stellitata. Al fine di migliorare la resistenza all'usura ed alla corrosione della sede valvola, si ricorre ad un riporto di stellite sulla medesima. Tale riporto è particolarmente consigliato per motori alimentati con benzina senza piombo.
- GB** In order to improve the valve seat resistance to wear and to corrosion, the seat itself undergoes a stellite coating process. This is particularly recommended for engines which function with unleaded fuel.
- F** Pour améliorer la résistance de la siége de la soupape à la chaleur et à la corrosion, la siége est soumise à un traitement de report de stellite, qui est particulièrement conseillé pour moteurs alimentées avec carburants sans plomb.
- D** Um die Verschleiß- und Korrosionfestigkeit des Sitzes zu verbessern, wird der Ventilsitz einer Bearbeitung mit Stelliteauflage unterbreitet. Diese Bearbeitung ist besonders für bleifrei Benzinmotoren geeignet.
- E** Válvula a base de stellite. A fin de mejorar la resistencia al desgaste y a la corrosión del asiento de la válvula, se recurre a una transferencia de aleación Stellite sobre la válvula. Dicha aplicación es especialmente aconsejable para motores que usan gasolina sin plomo.
- RUS** Клапан стелитированный. Для улучшения выносливости на износ и коррозию седельных клапанов, прибегают к покрытию стелитом это же клапана. Такое покрытие осбенно рекомендованно для моторов на бензине без олова.

QUALITÀ ACCIAI E SPECIFICHE MATERIALS SPECIFICATIONS



B

- I Bronzo con % di manganese; ottima conduttività termica e molto resistente all'usura. Particolarmente adatto a motori di ultima generazione con testate in alluminio. Lega utilizzata dalle principali case costruttrici europee.
- GB Bronze with % of manganese; excellent thermal conductivity and very wear resistant. Particularly fit for last generation engines with aluminium heads. Alloy used by leading European manufacturers.
- F Bronze avec % de manganese; excellente conductivité thermique et très résistante à l'usure. Particulièrement indiqué pour les moteurs de la dernière génération avec culasses en aluminium. Alliage utilisé par les principaux constructeurs européens.
- D Bronze mit Magnesiumanteil; hervorragende Wärmeleitfähigkeit und hoher Verschleißwiderstand. Diese Metall-Legierung findet Verwendung bei führenden europäischen Herstellern. Insbesondere geeignet für die letzte Zylinderkopfgeneration aus Aluminium.
- E Bronce con % de manganeso; óptima conductividad térmica y muy resistente al desgaste. Particularmente adaptado a los motores de última generación con culatas de aluminio. Material utilizado en las principales marcas constructoras de Europa.
- RUS Вронза с % магния отличный проводник тепла и очень устойчива на износ. Особенно подходит для моторов последнего поколения с головной частью из алюминия. Сплав используемый на ведущих европейских заводах.

SM

- I Lega sinterizzata ad elevata resistenza meccanica.
- GB Sintered alloy with high mechanical resistance.
- F Alliage fritté avec haute résistance mécanique.
- D Sinterlegierung mit hohem mechanischem Widerstand.
- E Aleación sinterizada a una elevada resistencia mecánica.
- RUS Сплав агломерированный с повышенной механической устойчивостью.



GUIDA ALL'USO DEL CATALOGO

HOW TO USE THE CATALOGUE

EMPLOI DU CATALOGUE



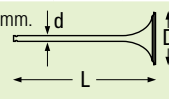

**ANLEITUNG ZUR BENUTZUNG DES
KATALOGES**

EMPLEO DEL CATALOGO

**РУКОВОДСТВО ПО
ИСПОЛЬЗОВАНИЮ КАТАЛОГА**

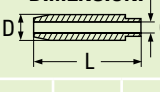

VALVOLE ENGINE VALVES



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material		
<div>Anno Year An Jahr Año Год</div>	<div>Cilindri Cylinders Cylindres Zylinder Cilindros Цилиндр</div>	<div>Marca, motore Make, engine Marque, moteur Typ, Motor Marca, motor, características Марка</div>	<div>Allesaggio Cylinder bore Alésage du cylindre Zylinderbohrung Diámetro Внутренний диаметр</div>	<div>Numero riferimento originale valvole Original part number for valves Número de reference première monte de la soupape Originalnummer der Ventile Número referencia original válvula Номер относящийся к оригинальному клапану</div> <div>IN valvola aspirazione - EX valvola scarico IN Inlet Valve - EX Exhaust valve IN Soupape admission - EX Soupape échappement IN Einlassventil - EX Auslassventil IN válvula admisión - EX válvula escape IN клапан вытяжной - EX клапан выброса</div> <div>Riferimento Freccia valvole + materiale Freccia reference for valves + material Référence Freccia soupapes + matières Freccia Ventilnummer + Werkstoff Referencia Freccia válvula + material Указатель Freccia клапана + Материалы</div>	<div>Tipo fermo valvola Valve stem end type Type de gorge de fixation soupape Ausführung Ventilschaftende Tipo fijación válvula Тип стопора клапана</div>	<div>Angolo sede valvola Valve seat angle Angle du siège de soupape Sitzwinkel am Ventil Ángulo asiento válvula Угол седла клапана</div>		

GUIDAVALVOLE
VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI	MATERIALE material	FORMA shape
					
					

Numero riferimento originale guidavalvole
Original part number for guides
Numéro de référence de première monte
du guide de soupape
Originalnummer der Ventilführungen
Número referencia original guía
Номер отметки оригинальной
направляющей

Riferimento Freccia guidavalvole
Freccia reference for valve guides
Référence Freccia guides de soupape
Freccia Ventilführungsnummer
Referencia Freccia guía
Указатель Freccia направляющих

IN aspirazione - EX scarico
IN Inlet - EX Exhaust
IN admission - EX échappement
IN Einlassventilführung - EX
Auslassventilführung
IN admisión - EX escape
IN вытяжной - EX выброса

Quote nominali guidavalvole
Nominal dimensions of the valve guides
Cotes nominales des guides de soupape
Nennabmessungen der Ventilführungen
Dimensión nominal guía
Номинальная отметка направляющих

Materiali guidavalvole
Valve guides materials
Matières des guides de soupape
Werkstoff der Ventilführungen
Material guía de válvula
Материалы направляющих клапанов

Forma guidavalvola
Valve guides shape
Forme des guides de soupape
Form der Ventilführungen
Forma guía de válvula
Форма направляющих клапанов

PI PUNTERIE • LIFTERS
RA BILANCIERI
ROCKER ARMS



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I	NOTE remarks
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Numero originale punterie / bilancieri
Original part number for lifters / rocker arms
Numéro de référence de première monte des
poussoirs / basculeurs
Originalnummer des Stössels / Kipphebel
Número original taquet / balancines
Оригинальный номер толкателя /
Коромысла клапанов

Riferimento Freccia punterie / bilancieri
Freccia reference for lifters / rocker arms
Référence Freccia des poussoirs / basculeurs
Freccia Stösselnummer / Kipphebelnummer
Referencia Freccia taquet / balancines
Указатель Freccia толкателя / Коромысла
клапанов

I punterie idrauliche - M punterie meccaniche
I Hydraulic lifters - M mechanical lifters
I poussoirs hydrauliques - M poussoirs
mécaniques
I hydraulisch - M mechanisch
I taquet hidráulico - M taquet mecánico
I толкатели гидравлические - M толкатели
механические

CONDIZIONI GENERALI DI VENDITA

Le seguenti condizioni si intendono integralmente accettate dal Cliente all'atto del conferimento dell'ordine

CONVENZIONE APPLICATA

La normativa internazionale che si applica per la vendita internazionale è la CONVENZIONE DELLE NAZIONI UNITE SULLA VENDITA INTERNAZIONALE DELLE MERCI (VIENNA 11 APRILE 1980) - Convenzione di diritto uniforme

CONDIZIONI GENERALI DI GARANZIA

Freccia International srl commercializza valvole per motori prodotte da Scarpa & Colombo, Azienda certificata **ISO 9001:2000 (Vision 2000)**.

Nel caso di riscontro di difetti, il Committente ne deve dare comunicazione per iscritto a Freccia International srl **nel più breve tempo possibile** dettagliando tale reclamo. I particolari difettosi dovranno in ogni caso essere ritornati a spese del Cliente a Freccia International srl.

Nel caso che il componente, fornito difettoso, **non sia stato ancora utilizzato**, Freccia International srl rimpiazzerà lo stesso con uno conforme e senza addebito.

Per componenti **già assemblati difettosi**, Freccia International srl riconoscerà il solo costo dei propri particolari forniti non conformi.

Per ogni altra contestazione la responsabilità di Freccia International srl **resterà esclusa in caso di utilizzo e/o montaggio dei prodotti non conformemente alle specifiche condizioni** previste dal presente contratto (rif. al Par. "Regole per il corretto montaggio").

Quindi:

Freccia International srl non potrà essere ritenuta responsabile per qualsiasi altro esborso o danno conseguente l'utilizzo e/o il montaggio erroneo del prodotto o l'utilizzo e/o il montaggio di un prodotto che si riscontra già difettoso prima del montaggio.

La responsabilità di Freccia International srl resterà esclusa anche per danni derivanti ai prodotti per fatto non imputabile nemmeno indirettamente a Freccia International srl quali imballaggio, trasporto o stoccaggio dei prodotti effettuato a cura del Compratore con mezzi inadeguati.

Inoltre Freccia International srl non potrà essere ritenuta responsabile per perdite o danni subiti dal Compratore conseguentemente (ma non limitatamente a) cancellazioni di ordini da parte dei suoi Clienti, penali per ritardate consegne ai Clienti, nonché per qualsivoglia altro danno o penalità o rimborso inerente i rapporti del Compratore con i propri Clienti.

Per qualsiasi controversia è competente unicamente il Foro di Milano

REGOLE PER IL CORRETTO MONTAGGIO

Freccia International srl **raccomanda il montaggio corretto "a regola d'arte"** di tutti i suoi prodotti secondo quanto prescrivono le Case Costruttrici.

Freccia International srl **prescrive la sostituzione a nuovo di tutti i componenti che interagiscono con la valvola:** guidavalvole, punterie idrauliche (ove presenti), piattelli, semiconi, molle, sedi-testa, paraoli.

La mancata sostituzione di tali componenti (con altri nuovi) può causare una usura precoce della valvola o la rottura immediata della stessa.

Il rimpiazzo del paraolio montato sulla guida-valvola è necessario per evitare trafileggi eccessivi di olio.

Inoltre onde evitare difetti nell'allineamento degli assi dei componenti, è necessario il ripristino delle corrette tolleranze dimensionali, di posizione e di forma prescritte dalle case costruttrici.

Raccomandazioni:

1 In fase di montaggio lubrificare il foro della guida e la sede-valvola.

2 Evitare di colpire con il martello (anche quello di gomma) la zona terminale dello stelo già in tensione dalle molle nell'errata convinzione di assestare valvole e componenti accoppiati.

3 PER MOTORI DOTATI DI PUNTERIE IDRAULICHE, a motore completamente montato, è necessario fare compiere al motore stesso (manualmente) alcuni giri e quindi attendere almeno 30 minuti prima di avviare (questo accorgimento è necessario per permettere alle punterie idrauliche di svolgere il loro compito in maniera progressiva e senza "urti").

4 Sostituire olio motore vecchio e relativo filtro.

5 PER MOTORI DOTATI DI PUNTERIE MECCANICHE, dopo il montaggio ripristinare il gioco punterie/pastiglie- registro valvole al valore prescritto dalle case costruttrici e ripetere l'operazione dopo 1000 km di funzionamento.

6 Le valvole operano in condizioni di intenso stress meccanico e sono sottoposte ad alta temperatura e ad attacchi chimici. Pertanto quando sono chiuse devono avere una perfetta tenuta altrimenti si verifica un'immediata caduta di potenza e si innesca una prematura usura della valvola.

GENERAL SALES CONDITIONS

The following terms and conditions are intended as accepted in full by the Customer to the order

AGREEMENT APPLIED

The International convention applied on international sales is the UNITED NATIONS AGREEMENT FOR THE INTERNATIONAL SALES OF GOODS -VIENNA APRIL 11TH. 1980 - that represents a uniform law agreement

GENERAL WARRANTY CONDITIONS

Freccia International srl sells engine valves manufactured by Scarpa & Colombo, a Company Certified **ISO 9001:2000 - Vision 2000**.

In case of any defect, the Purchaser must notify Freccia International srl of it **as soon as possible** in a detailed written claim.

The Purchaser must return the defective items, freight paid, to the Freccia International srl factory address.

In case of defective component we supplied and **which has not been assembled into the engine** yet, Freccia International srl will replace it with a new suitable one, free of charge.

In case of defective components we supplied and which have been assembled into the engine, Freccia International srl will refund only the cost of its own defective components.

As regards any other claim, the liability of Freccia International srl **will be excluded in case of the goods have already been used, and/or assembled without following the instructions** stated in the present agreement. - See paragraph: Instructions for a correct assembly.

Therefore:

Freccia International srl cannot be held liable for any expenditure or any other damage resulting from the wrong usage or assembly of the item or from the usage and/or assembly of an item that results already defective before the assembly.

The liability of Freccia International srl must also be excluded in case of damages to its products, indirectly attributed to Freccia International srl, such as packaging, transport, stocking of the products if caused by the Purchaser with unfit means of transport.

In addition, Freccia International srl will not be held liable for any expenditure or any other damages resulting either from cancellations of orders from its Customers, or from penalties for delayed delivery to its Customers, or from any other damage or penalty or refund concerning the relationship between the Purchaser and his own Customers.

Only the Court of Milan is competent to deal with any controversy.

INSTRUCTIONS FOR A CORRECT ASSEMBLY

Freccia International srl **recommends a correct assembly** of all its components in conformity with the instructions of the manufacturing Companies.

Freccia International srl **prescribes to replace all the components interacting with the valves with newly-made ones**, that is new guides, new hydraulic lifters - when provided -, new shims, new valve cotters, new springs, new valve seats and new valve seals.

If the replacement of the above-mentioned components with new ones is not carried out, an earlier wear-out or a sudden breaking of the valve itself may occur.

The replacement of the oil seal fitted on the valve-guide is required in order to avoid too much flowing of the oil.

In addition, in order to avoid defects in the alignment of the axes of the components, it is necessary to replace the correct size, position and shape tolerances, as suggested by the Original Manufacturing Companies.

Warning:

1 While assembling the components, lubricate the guide bore and the valve seat.

2 Avoid to striking with a hammer -even a rubber one- the terminal part of the stem, already under tension of the springs, with the wrong idea of putting both valves and the matched components in the right position.

3 WITH REFERENCE TO ENGINES EQUIPPED WITH HYDRAULIC LIFTERS, once the engine has been completely assembled, it is necessary to make the engine run shortly - even by hand - and then wait at least 30 minutes before starting it again. This caution is necessary in order to let the hydraulic lifters work properly in a progressive way, and without shocks.

4 Replace the previous engine oil and its filter

5 WITH REFERENCE TO ENGINES EQUIPPED WITH MECHANICAL LIFTERS, after assembling the components, restore the clearance lifters/shims to the value suggested by the Original Manufacturer Companies and repeat this operation after running 1.000 Km.



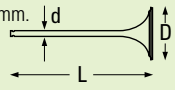


6 The valves work subjected to an intensive mechanical strain, a high temperature and chemical attacks. Therefore, when closed they must completely seal the combustion space, otherwise an immediate loss of power and a possible early valve failure may occur.

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VALVOLE **ENGINE VALVES**



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		

ALFA ROMEO

1996	4	Alfa 145 1.6 ie 16V TS Alfa 146 1.6 ie 16V TS Eng. AR321.01/02 Eng. AR676.01	82	7766564 60811153 60811154 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
2001		Alfa 147 1.6 ie 16V TS Eng. AR321.04									
1996		Alfa 155 1.6 ie 16V TS Eng. AR676.01									
1997		Alfa 156 1.6 ie 16V TS Eng. AR321.02 Eng. AR676.01 1598 cc.									
1996	4	Alfa 145 1.8 ie 16V TS Alfa 146 ie 1.8 16V TS Eng. AR322.01 Eng. AR671.06/99	82	7766564 60811153 60811154 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
11/96		Alfa 155 1.8 16V TS Eng. AR671.06									
1997		Alfa 156 1.8 16V TS									
1994		GTV 1.8 ie 16V TS									
1998		Spider 1.8 ie 16V TS Eng. AR322.01									
2003		GT 1.8 ie 16V TS Eng. AR322.05 1747 cc.									
1996	4	Alfa 145 2.0 ie 16V TS Alfa 146 2.0 ie 16V TS Eng. 323.01 Eng. AR672.04/99	83	7766564 60811153 60811154 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
1995		Alfa 155 2.0 ie 16V TS Eng. AR672.04/99									
1997		Alfa 155 2.0 ie 16V TS Eng. AR323.01/03									
1997		GTV 2.0 ie 16V TS Spider 2.0 ie 16V TS Eng. AR323.01 Eng. AR162.01 1969 cc.									
1998		Alfa 166 2.0 ie 16V TS Eng. AR341.03 Eng. AR363.01									
2003	4	GT 2000 JTS 16V Eng. 937A1.000 Eng. AR322.05 1970 cc									

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
6081186 6081189	GS3531 GS3532 G11515 G11516	IN EX IN EX	42 46 42 46	7.02 7.02 7.02 7.02	13.03 13.03 13.03 13.03	SM SM B B	C.I. C.I. C.I. C.I.
6081186 6081189	GS3531 GS3532 G11515 G11516	IN EX IN EX	42 46 42 46	7.02 7.02 7.02 7.02	13.03 13.03 13.03 13.03	SM SM B B	C.I. C.I. C.I. C.I.
6081186 6081189	GS3531 GS3532 G11515 G11516	IN EX IN EX	42 46 42 46	7.02 7.02 7.02 7.02	13.03 13.03 13.03 13.03	SM SM B B	C.I. C.I. C.I. C.I.

PI PUNTERIE · LIFTERS RA BILANCIERI ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
60812654 46465330 46413078	PI 06-0004	I
60812654 46465330 46413078	PI 06-0004	I
60812654 46465330 46413078 46787055	PI 06-0004	I



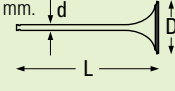




NOTE
remarks

ALFA ROMEO

VALVOLE ENGINE VALVES



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		

CHEVROLET

1986	3	Tico - Matiz Eng. F8B - F8CV 796 cc.	68.5	12911-78B00-000 12915-78B00-222 11915A78B01-000	IN EX	R7024/SARCR R7025/BMARCR	35.7 31.7	5.5 5.5	110.5 110.3	S S	45° 45°
2003	4	Matiz 1.0 i Eng. B10S 995 cc.	68.5	12911-78B00-000 12915-78B00-222 11915A78B01-000	IN EX	R7024/SARCR R7025/BMARCR	35.7 31.7	5.5 5.5	110.5 110.3	S S	45° 45°
2002 2006	4	Kalos 1.2 Aveo 1.2 Eng. F12S3 1148 cc	68.5	94580146 96352793	IN EX	R7024/SARCR R7025/BMARCR	35.7 31.7	5.5 5.5	110.5 110.3	S S	45° 45°

DACIA

2006	4	Logan 1.6 i 16V Eng. K4M.690 1598 cc.	79.5	7701471378 7701473354	IN EX	R7017/SARCR R7018/BMARCR	32.7 28	5.5 5.5	109.3 107.7	E E	45° 45°
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1995 1995/04 1998	4 4	Panda 1.1 ie Eng. 176B2.000 Panda 1.1 ie Eng. 187A1.000 Up to eng. N. 2533527 Seicento 1.1 ie Eng. 176B2.000 Eng. 187A1.000 Up to eng. N. 2543170 1108 cc.	70	7770334 46436048 46553046 5942728 7666227 46514754 46553047	IN EX	R7026/SARCR R7027/BMARCR	31.5 27.3	7 7	97.1 97.2	EE EE	45° 45°
2004 2004	4 4	Panda 1.1 ie Eng. 187A1.000 From eng. N. 2533528 Seicento 1.1 ie Eng. 187A1.000 From eng. N.2543171 1108 cc.	70	NATURAL POWER ENGINE	IN EX	R6624/SARCR R6625/BMARNT	31.9 27.3	5 5	98.4 98.7	I I	30° 30°
1993 2003 2001/03	4 4 4	Punto 75S - SX - Punto 75EL - ELX Eng. 176A8.000 1242 cc. Nuova Panda 1.2 8V Eng. 188A4.000 Up to eng. N. 2533527 1242 cc. Doblò 1.2 ie Eng. 22A5.000 Up to eng. N. 2533527 1242 cc.	70.8	7770334 46436048 5942728 7666227 46514754	IN EX	R7026/SARCR R7027/BMARCR	31.5 27.3	7 7	97.1 97.2	EE EE	45° 45°

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
11115A-70B00	GS11184	IN/EX	43	5.5	11.07	SM	C.I.-X
11115A-70B00	GS11184	IN/EX	43	5.5	11.07	SM	C.I.-X
94580080	GS11184	IN/EX	43	5.5	11.07	SM	C.I.-X
7700109151	G11238 G11239 G11471	IN/EX IN/EX IN/EX	40.5 40.5 40.5	5.5 5.5 5.5	11.07 11.12 11.07	B B B	L C.I.
4265699	GS2196 G11531	IN/EX IN/EX	42.5 42.5	7.03 7.03	13.04 13.04	SM B	C.I. C.I.
55190559	GS11425 G11440	IN/EX IN/EX	44 44	5.00 5.00	10.03 10.03	SM B	C.I.
4265699	GS2196 G11531	IN/EX IN/EX	42.5 42.5	7.03 7.03	13.04 13.04	SM B	C.I. C.I.
7765039	GS3554	IN/EX	40.4	7.03	13.04	SM	C.I.

PI PUNTERIE · LIFTERS RA BILANCIERI ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
96323003	RA06-935	
96323003	RA06-935	
7700107555 7700107556	PI 06-0013 RA06-917	I
5942273 60503405 60816361	PI 03-105	M
55200250	PI 03-110	M
5942273 60503405 60816361	PI 03-105	M



NOTE
remarks



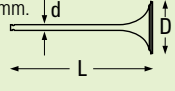


CHEVROLET

DACIA

FIAT

VALVOLE **ENGINE VALVES**



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		
2004 2004 2004	4 4	Panda 1.2 ie Punto 1.2 ie Eng. 188A4.000 From eng. N. 2533528 1242 cc. Doblò 1.2 ie Eng. 22A5.000 From eng. N. 2533528 1242 cc.	70.8	NATURAL POWER ENGINE	IN EX	R6624/SARCR R6625/BMARNT	31.9 27.3	5 5	98.4 98.7	I I	30° 30°
2006	4	Grande Punto 1.2 ie Eng. 199A4.000 1242 cc.	70.8	NATURAL POWER ENGINE	IN EX	R6626/SARCR R6627/BMARNT	33.3 28.1	5 5	99.9 100.5	I I	30° 30°
2005	4	Idea 1.4 ie 8V Doblò 1.4 ie 8V Eng. 350A1.000 1368 cc.	72	NATURAL POWER ENGINE	IN EX	R6626/SARCR R6627/BMARNT	33.3 28.1	5 5	99.9 100.5	I I	30° 30°
2006	4	Grande Punto 1.4 ie Eng. 199A7.000 1368 cc.	72	NATURAL POWER ENGINE	IN EX	R6626/SARCR R6627/BMARNT	33.3 28.1	5 5	99.9 100.5	I I	30° 30°
2005	4	Stilo 1.6 ie PDA 16V Eng. 192B30 1598 cc.	79	55557862 71739797	IN EX	R7011/SARCR R7012/BMARCR	31,2 27.5	5 5	117,2 116.2	I I	45° 45°
1999 1999/04 2001	4	Marea 1.6 ie 16V Palio 1.6 ie 16V Stilo 1.6 16V Eng. 182B6.000 103CV 1596 cc.	80.5	46761369 46517325 55192067 46761370 46451209 55196738	IN EX	R7001/SARCR R7002/BMARCR	30.4 29.8	7 7	102.45 102.60	EE EE	45° 45°
1999/04	4	Multipla 1.6 ie 16V Bipower/Blupower Eng. 182B6.000 103CV 1596 cc.	80.5	46761369 55192067 46761370 55196738	IN EX	R7001/SARCR R7002/BMARCR	30.4 29.8	7 7	102.45 102.60	EE EE	45° 45°
2001/04	4	Doblò 1.6 ie 16V Bipower/Natural Power Eng. 182B6.000 1596 cc.	80.5	55192067 55196738	IN EX	R7001/SARCR R7002/BMARCR	30.4 29.8	7 7	102.45 102.60	EE EE	45° 45°

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
55190559	GS11425 G11440	IN/EX IN/EX	44 44	5.00 5.00	10.03 10.03	SM B	C.I.
55190559	GS11425 G11440	IN/EX IN/EX	44 44	5.00 5.00	10.03 10.03	SM B	C.I. C.I.
55190559	GS11425 G11440	IN/EX IN/EX	44 44	5.00 5.00	10.03 10.03	SM B	C.I. C.I.
55190559	GS11425 G11440	IN/EX IN/EX	44 44	5.00 5.00	10.03 10.03	SM B	C.I. C.I.
71739771	GS13598 G11532	IN/EX IN/EX	39 39	5 5	10.05 10.05	SM B	C.I. C.I.
4265699 7756897	GS2196 GS3531 G11531 G11515	IN EX IN EX	42.5 42 42.5 42	7.03 7.02 7.03 7.02	13.04 13.03 13.04 13.03	SM SM B B	C.I. C.I. C.I. C.I.
4265699 7756897	GS2196 GS3531 G11531 G11515	IN EX IN EX	42.5 42 42.5 42	7.03 7.02 7.03 7.02	13.04 13.03 13.04 13.03	SM SM B B	C.I. C.I. C.I. C.I.
4265699 7756897	GS2196 GS3531 G11531 G11515	IN EX IN EX	42.5 42 42.5 42	7.03 7.02 7.03 7.02	13.04 13.03 13.04 13.03	SM SM B B	C.I. C.I. C.I. C.I.

PI PUNTERIE · LIFTERS RA BILANCIERI ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
55200250	PI 03-110	M
55202354	PI 03-110	M
55202354	PI 03-110	M
55202354	PI 03-110	M
46465330 46787055	PI 06-0004	I
46465330 46787055	PI 06-0004	I
46465330 46787055	PI 06-0004	I



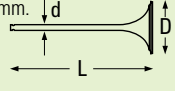




NOTE
remarks

FIAT

VALVOLE **ENGINE VALVES**



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		
1995	4	Barchetta 1.8 ie 16V Eng. 183A1.000 Eng. 188A6.000	82	7766564 7766565 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
1995		Brava 1.8 ie 16V Bravo 1.8 ie 16V Eng. 182A2.000									
1993		Coupè 1.8 ie 16V Eng. 183A1.000									
1996		Marea 1.8 ie 16V Eng. 182A2.000									
1999		Punto 1.8 ie 16V Eng. 183A1.000 Eng. 188A6.000									
2001		Stilo 1.8 ie 16V Eng. 192A4.000 1747 cc.									
1998/00	5	Bravo 2.0 ie 20V Eng. 182B7.000 Coupè 2.0 ie 20V Eng. 182B3.000 Marea 2.0 ie 16V Eng. 182B7.000 Eng. 185A8.000 1998 cc.	82	7766564 7766565 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
2006	4	Croma 1.8 ie 16V Eng. 939A4.000 1796 cc.	82	55557741 71744388	IN EX	R7005/SARCR R7006/BMARCR	31 27.5	5 5	114 113.2	I I	45° 45°
2001	5	Stilo 2.4 ie 20V Abarth Eng. 192A2.000 2446 cc.	83	7766564 7766565 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
1995	4	Brava 1.6 ie 16V Bravo 1.6 ie 16V Marea 1.6 ie 16V Marea 1.6 ie 16V BP Palio 1.6 ie 16V Eng. 182A4.000 Eng. 182A6.000 1581 cc. Until eng. 9911364	86.4	46413806 46462158 46413807 46462159	IN EX	R7001/SARCR R7002/BMARCR	30.3 29.85	7 7	102.45 102.60	EE EE	45° 45°

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
71739771	GS11479	IN/EX	37	5	10.05	SM	C.I.
	G11533	IN/EX	37	5	10.05	B	C.I.
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
4265699	GS2196	IN	42.5	7.03	13.04	SM	C.I.
7756897	GS3531	EX	42	7.02	13.03	SM	C.I.
	G11531	IN	42.5	7.03	13.04	B	C.I.
	G11515	EX	42	7.02	13.03	B	C.I.

PI PUNTERIE · LIFTERS RA BILANCIERI ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
46465330	PI 06-0004	I
46787055		
46465330	PI 06-0004	I
46787055		
46465330	PI 06-0004	I
46787055		
46465330	PI 06-0004	I
46787055		



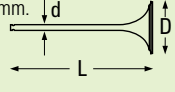




NOTE
remarks

FIAT

VALVOLE ENGINE VALVES



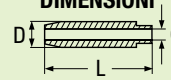
ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
			←Ø→				D	d	L		
1995	4	Brava 1.6 ie 16V	86.4	46761369							
1995		Bravo 1.6 ie 16V		46517325							
1996		Marea 1.6 ie 16V		55192067	IN	R7001/SARCR	30.3	7	102.45	EE	45°
		Marea 1.6 ie 16V BP		46761370	EX	R7002/BMARCR	29.85	7	102.60	EE	45°
1996		Palio 1.6 ie 16V		46451209							
		Eng. 182A4.000		55196738							
		Eng. 182A6.000									
		1581 cc.									
		From eng. N. 9911365									
1999	4	Multipia 1.6 ie 16V	86.4	46517325	IN	R7001/SARCR	30.3	7	102.45	EE	45°
		Bipower/Blupower		46451209	EX	R7002/BMARCR	29.85	7	102.60	EE	45°
		Eng. 182A4.000									
		Eng. 186A3.000									
		Eng. 186A4.000									
		1581 cc.									

FORD

2004	4	Focus 1.4 i 16V	71.9	1320926	IN	R7019/SARCR	28	6	99.4	I	45°
		Eng. ASDA		1113189	EX	R7021/BMARCR	24.1	6	101.4	I	45°
		1388 cc		1S6C6505BA							
2009	4	Fiesta VI 1.4 i 16V	76	1320926	IN	R7019/SARCR	28	6	99.4	I	45°
		1388 cc.		1113189	EX	R7021/BMARCR	24.1	6	101.4	I	45°
				1S6C6505BA							
2009	4	Fiesta VI 1.4 i 16V		1673829	IN	R6617/SNT	28.1	6	99.40	I	45°
		BIFUEL ENGINE		1673827	EX	R6618/RARNT	24.13	6	101.4	I	45°
		1388 cc.									
1979	4	Focus 1.6i 16V	79	1122364	IN	R7020/SARCR	30	6	99	I	45°
		Eng. FYDA-FYDB-FYDC		1S4G6507CA							
		Eng. FYDD		1113189	EX	R7021/BMARCR	24.1	6	101.4	I	45°
2004		Focus 1.6 i 16V		1S6C6505BA							
2004		Focus C-Max 1.6 i 16V									
		Eng. HWD A-HWDB									
2004		Focus 1.6 i 16V Ti-VCT									
2004		Focus C-MAX 1.6 i 16V Ti-VCT									
		Eng. HXDA									
2002		Fusion 1.6 i 16V									
		Eng. FYJA									
		1596 cc. Zetec									
2007	4	New Mondeo 1.6 i16V	79	1122364	IN	R7020/SARCR	30	6	99	I	45°
		Eng. RHBA		1S4G6507CA							
		1596 cc.		1113189	EX	R7021/BMARCR	24.1	6	101.4	I	45°
				1S6C6505BA							
2007	4	C-Max 1.6 i 16V	79	1122364	IN	R7020/SARCR	30	6	99	I	45°
		Eng. HWD A-HWDB		1113189	EX	R7021/BMARCR	24.1	6	101.4	I	45°
		1596 cc.									

GUIDA VALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
							
			L	d	D		
4265699 7756897	GS2196	IN	42.5	7.03	13.04	SM	C.I
	GS3531	EX	42	7.02	13.03	SM	C.I.
	G11531	IN	42.5	7.03	13.04	B	C.I
	G11515	EX	42	7.02	13.03	B	C.I.
4265699 7756897	GS2196	IN	42.5	7.03	13.04	SM	C.I
	GS3531	EX	42	7.02	13.03	SM	C.I.
	G11531	IN	42.5	7.03	13.04	B	C.I
	G11515	EX	42	7.02	13.03	B	C.I.
	G11534	IN/EX	36	6.08	12.03	B	L
	GS11221	IN/EX	39	6	11.05	SM	L
	G11535	IN/EX	39	6	11.05	B	L
	GS3499	IN/EX	40.5	6	11.04	SM	L-X
	GS3499	IN/EX	40.5	6	11.04	SM	L-X
	GS3499	IN/EX	40.5	6	11.04	SM	L-X

PI PUNTERIE • LIFTERS
RA BILANCIERI
ROCKER ARMS

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NOTE
remarks

FIAT

FORD

VALVOLE ENGINE VALVES



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		
1998	4	Focus 1.8i 16V Eng. EYDB-EYDC-EYDF Zetec 1796 cc.	80.6	1053845 1053843	IN EX	R7022/SARCR R7023/BMARCR	33 28	6 6	98 97.7	I I	45° 45°
08/00 2002 2002	4	Focus 1.8 i 16V Eng. EYDB-EYDC-EYDF Tourneo 1.8 i 16V Transit 1.8 i 16V Eng. EYPA 1796 cc. Zetec	80.6	1131988 1124514	IN EX	R7022/SARCR R7023/BMARCR	33 28	6 6	98 97.7	I I	45° 45°
1998	4	Focus 2.0i 16V Eng. EDDB-EDDC-EDDF Zetec 1998 cc.	84.8	1053845 1053843 1124514	IN EX	R7022/SARCR R7023/BMARCR	33 28	6 6	98 97.7	I I	45° 45°
1998/00	4	Mondeo 2.0i 16V Eng. CJB A-CJBB Duratec HE 1999 cc.	87.5	1053845 1053843 1124514	IN EX	R7022/SARCR R7023/BMARCR	33 28	6 6	98 97.7	I I	45° 45°

LANCIA

1996	4	Y 1.1 ie 8V Eng. 176B2.000 1108 cc.	70	46436048 7666227	IN EX	R7026/SARCR R7027/BMARCR	31.5 27.3	7 7	97.1 97.2	EE EE	45° 45°
1996		Y 1.2 ie 8V Eng. 840A3.000 - 188A4.000 1242 cc.	70.8								
2003/04	4	Ypsilon 1.2 ie Eng. 188A4.000 Up to eng. N. 2533527 1242 cc.	70	7770334 7666227	IN EX	R7026/SARCR R7027/BMARCR	31.5 27.3	7 7	97.1 97.2	EE EE	45° 45°
2005	4	Ypsilon 1.4 8V Musa 1.4 8V Eng. 350A1.000 1368 cc.	72	NATURAL POWER ENGINE	IN EX	R6626/SARCR R6627/BMARNT	33.3 28.1	5 5	99.9 100.5	I I	30° 30°
1999	4	Lybra 1.8 ie 16V Eng. 839A4.000 Eng. 839A7.000 1747 cc.	82	7766564 7766565 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
1996 1999	5	Kappa 2.0 ie 16V Eng. 838A6.000 Lybra 2.0 ie 16V Eng. 1282B7.000 - 185A8.000 1998 cc.	82	7766564 7766565	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
2001	5	Thesis 2.0 20V Turbo Eng. 841E.000 1998 cc.	82	7766564 7766565	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
	G11534	IN/EX	36	6.08	12.03	B	L
	GS11221	IN/EX	39	6	11.05	SM	L
	G11535	IN/EX	39	6	11.05	B	L
	G11534	IN/EX	36	6.08	12.03	B	L
	GS11221	IN/EX	39	6	11.05	SM	L
	G11535	IN/EX	39	6	11.05	B	L
	G11534	IN/EX	36	6.08	12.03	B	L
	GS11221	IN/EX	39	6	11.05	SM	L
	G11535	IN/EX	39	6	11.05	B	L
	G11534	IN/EX	36	6.08	12.03	B	L
	GS11221	IN/EX	39	6	11.05	SM	L
	G11535	IN/EX	39	6	11.05	B	L
4265699	GS2196	IN/EX	42.5	7.03	13.04	SM	C.I.
	G11531	IN/EX	42.5	7.03	13.04	B	C.I.
7765039	GS3554	IN/EX	40.4	7.03	13.04	SM	C.I.
4265699	GS2196	IN/EX	42.5	7.03	13.04	SM	C.I.
	G11531	IN/EX	42.5	7.03	13.04	B	C.I.
55190559	GS11425	IN/EX	44	5.00	10.03	SM	C.I.
	G11440	IN/EX	44	5.00	10.03	B	C.I.
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.

PI PUNTERIE · LIFTERS RA BILANCIERI ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
5942273	PI 03-105	M
5942273	PI 03-105	M
55202354	PI 03-110	M
46465330	PI 06-0004	I
46787055	PI 06-0004	I
46787055	PI 06-0004	I





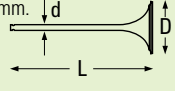


NOTE
remarks

FORD

LANCIA

VALVOLE ENGINE VALVES



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		
1994	5	Kappa LS - LX20V Eng. 838A2.000 - 838B2.000 2446 cc.	83	7766564 7766565 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
2001	5	Thesis 2.4 ie 20V Eng. 841D.000 2446 cc	83	7766564 7766565 60674496	IN EX	R7003/SARCR R7004/BMARCR	33.5 28	7 7	113.1 108.6	I I	45° 45°
1995	4	Delta 1.6 ie 16V Eng. 182A6.000 Eng. 182A4.000 From eng. N. 10785 1581 cc.	86.4	46761369 46761370	IN EX	R7001/SARCR R7002/BMARCR	30.4 29.8	7 7	102.45 102.60	EE EE	45° 45°
1999	4	Lybra 1.6i 16V Eng. 182A6.000 Eng. 182A4.000 1581 cc.	86.4	46761369 46761370	IN EX	R7001/SARCR R7002/BMARCR	30.4 29.8	7 7	102.45 102.60	EE EE	45° 45°

MAZDA

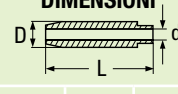
2003	4	2 1.4 i 16V Eng. FXJA-FYJA 1388 cc.	76	C6011-21111 C4011-2121	IN EX	R7019/SARCR R7021/BMARCR	28 24.1	6 6	99.4 101.4	I I	45° 45°
2003	4	2 1.6 16V Eng. FYJA 1596 cc.	79	C601-12111 C4011-2121	IN EX	R7020/SARCR R7021/BMARCR	30 24.1	6 6	99 101.4	I I	45° 45°

NISSAN

2003	4	Kubistar 1.2 Eng. D7F726 1149 cc.	69	13201-00QAG 13202-00QAH	IN EX	R7013/SARCR R7014/BMARCR	32.8 29.9	6 6	106.8 106.8	E E	30° 45°
2003	4	Kubistar 1.2 i 16V Eng. D4F712 1149 cc.	69	13201-00QAJ 13202-00QAK	IN EX	R7015/SARCR R7016/BMARCR	26 22	5.5 5.5	110.7 112.5	I I	45° 45°
2002 2005 2006 2006	4	Micra 1.6 16V Tiida 1.6 16V Note 1.6 16V Qashqai 1.6 16V Eng. HR16DE 1598 cc.	78	13201-ED00A 13202-ED00C	IN EX	R7028/SARCR R7029/BMARCR	31,10 25,40	5 5	101,77 102.5	S S	45° 45°
2002 08/2003	4	Platina 1.6 16V Kubistar 1.6 16V Eng. K4M 1598 cc.	79.5		IN EX	R7017/SARCR R7018/BMARCR	32.7 28	5.5 5.5	109.3 107.7	E E	45° 45°

GUIDA VALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
							
			L	d	D		
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
7756897	GS3531	IN	42	7.02	13.03	SM	C.I.
7779402	GS3532	EX	46	7.02	13.03	SM	C.I.
	G11515	IN	42	7.02	13.03	B	C.I.
	G11516	EX	46	7.02	13.03	B	C.I.
4265699	GS2196	IN	42.5	7.03	13.04	SM	C.I.
7756897	GS3531	EX	42	7.02	13.03	SM	C.I.
	G11531	IN	42.5	7.03	13.04	B	C.I.
	G11515	EX	42	7.02	13.03	B	C.I.
4265699	GS2196	IN	42.5	7.03	13.04	SM	C.I.
7756897	GS3531	EX	42	7.02	13.03	SM	C.I.
	G11531	IN	42.5	7.03	13.04	B	C.I.
	G11515	EX	42	7.02	13.03	B	C.I.
	G11534	IN/EX	36	6.08	12.03	B	L
	GS11221	IN/EX	39	6	11.05	SM	L
	G11535	IN/EX	39	6	11.05	B	L
	GS3499	IN/EX	40.5	6	11.04	SM	L-X
	G11232	IN/EX	45	6.00	11.07	B	L
	G11233				11.12		
	G11234				11.17		
	G11238	IN/EX	40.5	5.5	11.07	B	L
	G11239				11.12		
	G11240				11.17		
13212-ED060	GS11464	IN	42.2	5	9.05	SM	L-X
	GS11466	EX	42.2	5	9.05	SM	L-X-U
	G11536	IN	42.2	5	9.05	B	L-X
	G11537	EX	42.2	5	9.05	B	L-X-U
7700109151	G11238 G11239 G11240	IN/EX	40.5	5.5	11.07 11.12 11.17	B	L

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RA BILANCIERI
ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
46787055	PI 06-0004	I
46787055	PI 06-0004	I
46465330	PI 06-0004	I
46465330	PI 06-0004	I
7700107555	PI 06-0013 RA06-917	I



NOTE
remarks



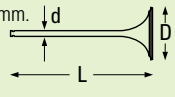


LANCIA

MAZDA

NISSAN

VALVOLE ENGINE VALVES



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		
1993	4	Corsa 1.4 i 16V	77.6	641034	IN	R7007/SARCR	31	6	103.1	I	45°
1996	4	Astra 1.4 i 16V		641340	EX	R7008/BMARCR	27.5	6	102.2	I	45°
1994		Tigra 1.4 i 16V									
		Eng. X14XE-Z14XE									
		1389 cc.									
2003	4	Meriva 1.4 i 16V									
2003		Nuova Astra 1.4 i 16V									
		Eng. Z14XE									
		1364 cc.									
1993	4	Corsa 1.6 i 16V	77.6	641034	IN	R7007/SARCR	31	6	103.1	I	45°
1994		Tigra 1.6 i 16V		641340	EX	R7008/BMARCR	27.5	6	102.2	I	45°
		Eng. C16XE-X16XE									
1995		Vectra 1.6 i 16V									
1999		Zafira 1.6 i 16V									
		Eng. X16XEL-Z16XE									
1998	4	Astra 1.6 i 16V									
2003		Meriva 1.6 i 16V									
		Eng. Z16XE									
2003		Astra 1.6 i 16V									
		Eng. X16XE									
		1598 cc.									
2003/04	4	Astra 1.6 i 16V	79	641034	IN	R7007/SARCR	31	6	103.1	I	45°
		Eng. Z16YNG		641340	EX	R7008/BMARCR	27.5	6	102.2	I	45°
		1598 cc.									
2004	4	Astra 1.6 i 16V	79	642011	IN	R7011/SARCR	31,2	5	117,2	I	45°
2005		Zafira 1.6 i 16V		641379	EX	R7012/BMARCR	27.5	5	116.2	I	45°
2006		Vectra 1.6 i 16V		641401							
		Eng. Z16XEP - XE1 - XER									
		1598 cc.									
2007	4	Astra 1.6 i Turbo 16V	79	641076	IN	R7005/SARCR	31	5	114	I	45°
		Eng. Z16LET		641391	EX	R7006/BMARCR	27.5	5	113.2	I	45°
		1598 cc.		641392							
2008	4	Insigna 1.6 i 16V	79	642078	IN	R7011/SARCR	31,2	5	117,2	I	45°
		Eng. A16XER - A16LET		55557862							
		1598 cc.		641379	EX	R7012/BMARCR	27.5	5	116.2	I	45°
				641401							
				55558728							
2009	4	Insigna 1.6 i 16V	79	55572519	IN	R6634/SARNT	31.2	5	117.2	I	45°
		Eng. Z16XER-Z16XEP		641100							
		A16XER-A16LET		55572518	EX	R6635/BMARNT	27.5	5	116.2	I	45°
		GPL ENGINE		642029							
		1598 cc.									
2005	4	Zafira B 1.8 i 16V	80.5	641076	IN	R7005/SARCR	31	5	114	I	45°
2008		Insigna 1.8 i 16V		641391	EX	R7006/BMARCR	27.5	5	113.2	I	45°
		Eng. Z18 XEP/XER		641392							
		1796 cc.									

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
	GS3511 G3543	IN/EX IN/EX	45 45	6 6	10.05 10.05	SM B	C.I. C.I.
	GS3511 G3543	IN/EX IN/EX	45 45	6 6	10.05 10.05	SM B	C.I. C.I.
	GS3511 G3543	IN/EX IN/EX	45 45	6 6	10.05 10.05	SM B	C.I. C.I.
71739771	GS13598	IN/EX	39	5	10.05	SM	C.I.
642014	G11532	IN/EX	39	5	10.05	B	C.I.
	GS11479	IN/EX	37	5	10.05	SM	C.I.
	G11533	IN/EX	37	5	10.05	B	C.I.
642014	GS11479	IN/EX	37	5	10.05	SM	C.I.
	G11533	IN/EX	37	5	10.05	B	C.I.
642014	GS11479	IN/EX	37	5	10.05	SM	C.I.
	G11533	IN/EX	37	5	10.05	B	C.I.
642014	GS11479	IN/EX	37	5	10.05	SM	C.I.
	G11533	IN/EX	37	5	10.05	B	C.I.
642014	GS11479	IN/EX	37	5	10.05	SM	C.I.
	G11533	IN/EX	37	5	10.05	B	C.I.

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N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
640003	PI 06-0010	I
640003	PI 06-0010	I
640003	PI 06-0010	I



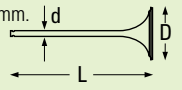




NOTE
remarks

OPEL

VALVOLE **ENGINE VALVES**



ANNO year	CIL cyls	MARCA E MODELLO make-type		N. ORIGINALE o.e. number	IN/EX 	RIFERIMENTO FRECCIA + MATERIALE Freccia reference + material	mm. 				
							D	d	L		

RENAULT

1997	4	Clio 1.2 i	69	7701469266	IN	R7013/SARCR	32.8	6	106.8	E	30°
1997		Kangoo 1.2 i		7701469269	EX	R7014/BMARCR	29.9	6	106.8	E	45°
1997		Twingo 1.1 i									
1998		Kangoo Express 1.2 i									
		Eng. 7F.700/701/702/706									
		720/726/730									
		Eng. D7F.A7/D7/G7/j7									
		1149 cc.									
2004	4	Clio 1.2 i 16V	69	7701472986	IN	R7015/SARCR	26	5.5	110.7	I	45°
2001		Kangoo 1.2 i 16V		7701473004	EX	R7016/BMARCR	22	5.5	112.5	I	45°
2001		Twingo 1.2 i 16V									
2001		Modus 1.2 i 16V									
2001		Kangoo Express 1.2 i 16V									
		Eng. D4F-D4F.D7									
		Eng. D4F.712/714/416									
		1149 cc.									
1999	4	Clio 1.4 i 16V	79.5	7701471378	IN	R7017/SARCR	32.7	5.5	109.3	E	45°
		Eng. K4J.A7/B7/C7		7701471379	EX	R7018/BMARCR	28	5.5	107.7	E	45°
2005		Clio 1.4 i 16C		7701473354							
		Eng. KL4J.GA									
1996		Megane 1.4 i 16V									
		Eng. K4J.C7/D7									
		Eng. K4J.714/730/750									
2004		Megane 1.4 i 16V									
2004		Modus 1.4 i 16V									
		Eng. K4J.G7									
		1390 cc.									
1998	4	Clio 1.6 i 16V	79.5	7701471378	IN	R7017/SARCR	32.7	5.5	109.3	E	45°
2001		Kangoo 1.6 i 16V		7701471379	EX	R7018/BMARCR	28	5.5	107.7	E	45°
1996		Megane 1.6 i 16V		7701473354							
2001		Kangoo Express 1.6 i 16V									
		Eng. K4M.A7/B7/G7									
		Eng. K4M.700									
2005		Clio 1.6 i 16V									
		Eng. K4M.8									
1997		Laguna 1.6 i 16V									
		Eng. K4M.D7									
2005		Laguna 1.6 i 16V									
		Eng. K4M.57									
2002		Megane 1.6 i 16V									
		Eng. K4M.T7/W7									
2004		Modus 1.6 i 16V									
		Eng. K4M.7									
		1598 cc.									

GUIDAVALVOLE VALVE GUIDES



N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	IN/EX	DIMENSIONI			MATERIALE material	FORMA shape
			L	d	D		
	G11232 G11233 G11234	IN/EX	45	6.00	11.07 11.12 11.17	B	L
7700109151	G11238 G11239 G11240	IN/EX	40.5	5.5	11.07 11.12 11.17	B	L
	G11471	IN/EX	40.5	5.5	11.07	B	C.I.
7700109151	G11238 G11239 G11240	IN/EX	40.5	5.5	11.07 11.12 11.17	B	L
	G11471	IN/EX	40.5	5.5	11.07	B	C.I.
7700109151	G11238 G11239 G11240	IN/EX	40.5	5.5	11.07 11.12 11.17	B	L
	G11471	IN/EX	40.5	5.5	11.07	B	C.I.

PI PUNTERIE · LIFTERS RA BILANCIERI ROCKER ARMS

N. ORIGINALE o.e. number	RIF. FRECCIA Freccia ref.	M/I
7700107555	PI 06-0013	I
7700107555	PI 06-0013	I



NOTE
remarks

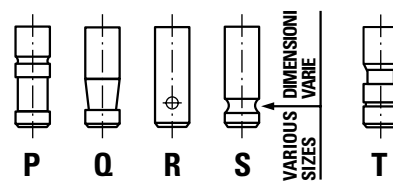
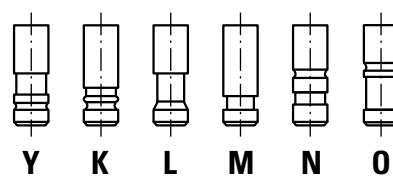
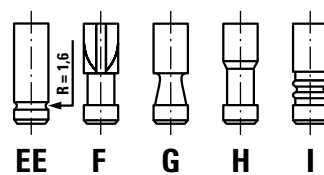
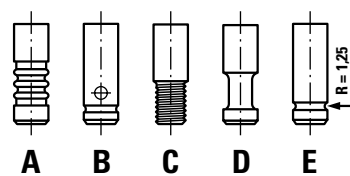
RENAULT

I riferimenti e le denominazioni originali sono esposti a puro titolo indicativo poiché i suddetti materiali **NON SONO ORIGINALI**, ma con questi intercambiabili.

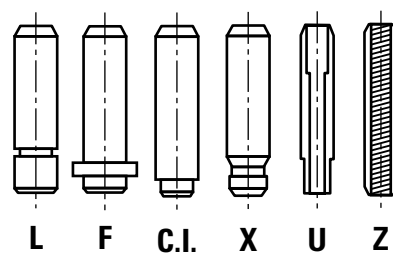
The valves manufactured by us are not original ones but perfectly interchangeable. The original references are shown only for identification.

Tous les noms et numéros des pièces des fabricants des véhicules indiqués dans le catalogue doivent être utilisés uniquement comme références.

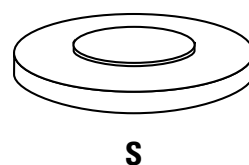
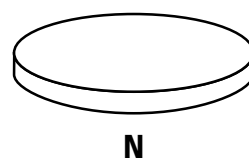
Shapes of valves



Shapes of guides



Shapes of valve shims





ENGINE VALVES
ENGINE VALVE GUIDES
GASKETS
HEAD BOLTS
VALVE SHIMS
LIFTERS
CAMSHAFTS
ROCKER ARMS

freccia international srl

via I Maggio 30/32 - 20028 San Vittore Olona (MI) - Italia
tel. +39 0331 515317 - fax +39 0331 744817
www.freccia.com info@freccia.com