



# Piezoelectric injector

# Catalogue

Update 06/2020

FIRAD S.p.A. <sup>®</sup> - Via Barge 93, 12031 Bagnolo Piemonte (CN) - ITALY

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**OEM CODES AND PARTS NUMBERS ARE  
GIVEN FOR REFERENCE PURPOSE ONLY**

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## ABBREVIATIONS

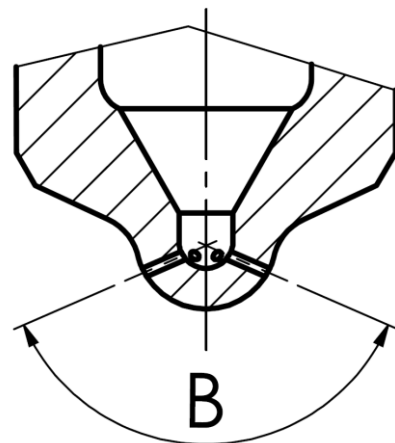
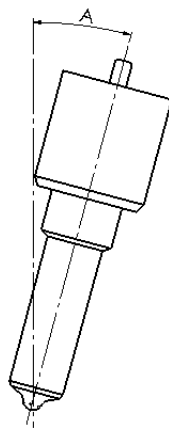
### - Holes

In this section are reported the information about how many micro holes there are and their diameter, in this following way: <N.microholes> x <Diameter microholes>

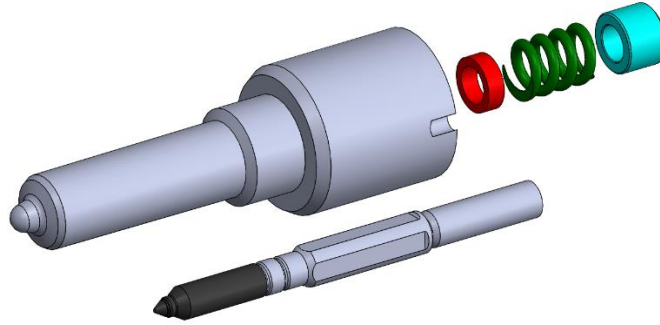
### - Angles

In this section are reported the information related to nozzle and micro holes angular position

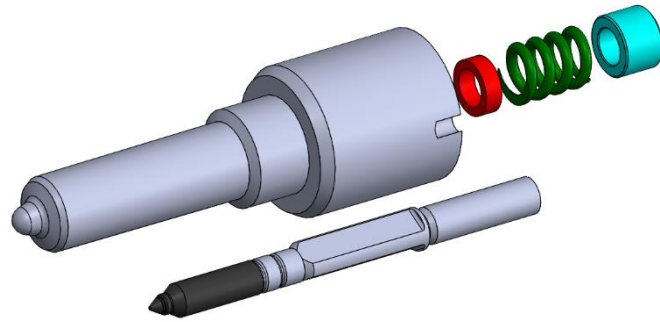
Engine Angle	Spray Angle
A	B



## Bosch piezoelectric nozzle



FIRAD code	BOSCH® Stamping	BOSCH® Injector Code	BOSCH® Inj. Remanufactured Code	OE code	Vehicle/ Engine
PEF 05AW	F00VX30005	0 445 115 037 0 445 115 036		VOLKSWAGEN 059 130 277 AB	VW - Audi 3,0



FIRAD code	BOSCH® Stamping	BOSCH® Injector Code	BOSCH® Inj. Remanufactured Code	OE code	Vehicle/ Engine
PEF 02R	F00VX30002	0 445 115 007	0 986 435 350	OPEL 93161695 OPEL 4431258 RENAULT 82 00 505 056 RENAULT 82 00 804 536 RENAULT 16 60 034 29R RENAULT 77 01 476 567 RENAULT 77 01 477 158 RENAULT 82 00 409 398 RENAULT 82 00 340 068 VAUXHALL 93161695	Renault (Espace-Laguna 2,0 DCi-Koleos)
PEF 07	F00VX30007	0 445 115 048	0 986 435 354	BMW 13 53 7 801 940 BMW 13 53 7 805 685 BMW 7 792 721 BMW 13 53 7 807 207 BMW 7 785 685 BMW 13 53 7 807 208	BMW 2.0

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FIRAD code	BOSCH® Stamping	BOSCH® Injector Code	BOSCH® Inj. Remanufactured Code	OE code	Vehicle/ Engine
		0 445 115 070	0 986 435 354	BMW 13 53 7 807 208 BMW 13 53 7 809 193 BMW 13 53 7 792 721	
PEF 10	F00VX20010	0 445 115 063 0 445 115 064	0 986 435 355	JEEP 68028 405AA CHRYSLER 68028 405AA MERCEDES 642 070 13 87 MERCEDES A 642 070 05 87 MERCEDES 642 070 13 87 80 MERCEDES A 642 070 18 87 MERCEDES A 642 070 13 87 80 MERCEDES 642 070 18 87 MERCEDES 642 070 05 87 MERCEDES A 642 070 13 87	Mercedes-Jeep-Crysler
PEF 14+	F00VX40014+	0 445 115 028 0 445 115 029	0 986 435 352	VOLKSWAGEN 076 130 277	VW CRAFTER 2,5 TDI
PEF 17	F00VX20017	0 445 115 068 0 445 115 069	0 986 435 356	MERCEDES A 646 070 14 87 MERCEDES 646 070 14 87	Mercedes - Vito - Sprinter
PEF 20	F00VX30020	0 445 115 042 0 445 115 091	0 986 435 362	CITROEN 96 592 291 LAND ROVER LR 001325 PEUGEOT 96 592 291 PEUGEOT PSA 96 592 29180 ROVER LR 0013 25	Citroen Land Rover
PEF 26	F00VX30026	0 445 116 001	0 986 435 363	BMW 13 53 7 797 878 BMW 13 53 7 809 190 BMW 13 53 7 797 877	BMW 120-320-520 X3 2,0d
PEF 29	F00VX40029	0 445 116 034 0 445 116 035	0 445 116 029 0 986 435 369	VOLKSWAGEN 03L 130 277 C	AUDI A3-A4 2.0 TDI / VW GOLF- PASSAT 2.TD1
		0445116029 0445116030	0 986 435 360	AUDI 03L 130 277 SEAT 03L 130 277 SKODA 03L 130 277 VOLKSWAGEN 03L 130 277	
PEF 30	F00VX40030	0 445 116 014 0 445 116 015	0 986 435 357	AUDI 059 130 277 AR VOLKSWAGEN 059 130 277 AR	VW - Tuareg 3.0 / AUDI A4 - A6 2.7 -3.0 TDI
PEF 31	F00VX40031	0 445 116 010 0 445 116 011	0 986 435 367 0 986 435 368	AUDI 03L 130 277 A VOLKSWAGEN 03L 130 277 A	VW Jetta
PEF 38	F00VX50038	0 445 120 104 0 445 120 207	0 986 435 539 0 986 435 540	MERCEDES 472 070 00 87 MERCEDES 472 070 03 87 MERCEDES 472 070 05 87 MERCEDES 472 070 07 87 MERCEDES A 472 070 08 87 MERCEDES A 472 070 00 87 MERCEDES A 472 070 03 87 MERCEDES A 472 070 05 87 MERCEDES A 472 070 07 87 MERCEDES 472 070 08 87	Mercedes
PEF 39	F00VX40039	0 445 117 019 0 445 117 020	0 986 435 412	AUDI 057 130 277 AM PORSCHE 958 110 128 30 VOLKSWAGEN 057 130 277 AM	VW- Audi (Q7 4,2 TDI)
PEF 41	F00VX30041	0 445 116 024			
PEF 42	F00VX40042 (0)	0 445 116 012 0 445 116 013	0 986 435 403	CITROEN 1980 W5 FORD 9X2Q9 K546 DA	

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FIRAD code	BOSCH® Stamping	BOSCH® Injector Code	BOSCH® Inj. Remanufactured Code	OE code	Vehicle/ Engine
				JAGUAR 02C2C40577 JAGUAR C2C 40577 LAND ROVER LR 017923 PEUGEOT 1980 W5 ROVER LR017923	
		0 445 116 064		CITROEN 1980 W5 FORD 9X2Q9 K546 DA FORD 9X2Q 9K546 DB FORD 9X2Q 9K546 DC JAGUAR 02C2C40577 JAGUAR C2C 40577 JAGUAR 02JDE37866 LAND ROVER LR095361 LAND ROVER LR 017923 PEUGEOT 1980 W5 ROVER LR01792	
<b>PEF 43</b>	F00VX40043	0 445 116 025 0 445 116 026	0 986 435 404	MERCEDES A 642 070 11 87 MERCEDES 642 070 11 87 80 MERCEDES A 642 070 11 87 80 MERCEDES 642 070 11 87	Mercedes E300 / CLS350
<b>PEF 45</b>	F00VX40045	0 445 117 008	0 986 435 409	CHEVROLET 12 620 535 CHEVROLET 19 210 900 GMC 12620535 GMC 19210900	Chevrolet/GMC
<b>PEF 51</b>	F00VX40051	0 445 117 010	0 986 435 410	CHEVROLET 19 256 590 CHEVROLET 12 620 534 GMC 12620534 GMC 19256590 OPEL 12620534	Chevrolet/GMC Silverad/Sierra
<b>PEF 60</b>	F00VX40060	0 445 117 016		FORD BC3Q 9K546 AD	Ford F250/350
		0 445 117 015	0 986 435 415	FORD BC3Q 9K546 AB	
		0 445 117 023 0 445 117 024	0 986 435 415	FORD BC3Q 9K546 AD FORD BC3Q 9K546 AB FORD BC3Z-9H529-B FORD BC3Z-9H529-A	
<b>PEF 63</b>	F00VX30063 (0)				
<b>PEF 66</b>	F00VX40066 (0)	0 445 117 021 0 445 117 022			
<b>PEF 68</b>	F00VX40068				
<b>PEF 77</b>	F00VX50077	0 445 120 287 0 445 120 288		MERCEDES A 4710700587	Mercedes ACTROS
<b>PEF 80</b>	F00VX40080				
<b>PEF 115</b>	F00VX40115	0 445 117 040 0 445 117 043	0 986 435 433	FORD FC3Q 9K546 AA FORD FC3Z9H529B FORD FC3Z9H529A	Ford F250/350/550/650/750
<b>PEF 376</b>	B437176376	0 445 120 298 0 445 120 299	0 986 435 622	MERCEDES 470 070 00 87 MERCEDES 470 070 00 87 0080 MERCEDES A 470 070 00 87 0080	Actros Euro 6

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				MERCEDES A 470 070 00 87	

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## Bosch piezoelectric nozzle geometric features

FIRAD code	BOSCH® Stamping	BOSCH® Injector Code	Engine angle	Spray angle	Holes
PEF 02R	F00VX30002	0 445 115 007	0°	150°	6 x 0,140
PEF 05AW	F00VX30005	0 445 115 037	0°	158°	7 x 0,145
PEF 07	F00VX30007	0 445 115 048	0°	159°30'	6 x 0,155
PEF 10	F00VX20010	0 445 115 063	0°	157°	8 x 0,130
PEF 14+	F00VX40014+	0 445 115 028	24°	165°	7 x 0,140
PEF 17	F00VX20017	0 445 115 069	0°	158°	7 x 0,140
PEF 20	F00VX30020	0 445 115 042 0 445 115 091	0°	157°	7 x 0,120
PEF 26	F00VX30026	0 445 116 001	0°	159°	7 x 0,140
PEF 29	F00VX40029	0 445 116 035 0 445 116 029	0°	162°	8 x 0,120
PEF 30	F00VX40030	0 445 116 015	0°	158°	8 x 0,125
PEF 31	F00VX40031	0 445 116 011	0°	163°	8 x 0,115
PEF 38	F00VX50038	0 445 120 104 0 445 120 207	0°	141°	6 x 0,195
PEF 39	F00VX40039	0 445 117 020	0°	158°	8 x 0,120
<b>PEF 41</b>	<b>F00VX30041</b>	<b>0 445 116 024</b>	<b>0°</b>	<b>160°</b>	<b>7 x 0,140</b>
PEF 43	F00VX40043	0 445 116 025	0°	157°	8 x 0,130
PEF 45	F00VX40045	0 445 117 008	0°	158°	7 x 0,100
PEF 51	F00VX40051	0 445 117 010	0°	160°	8 x 0,130
PEF 60	F00VX40060	0 445 117 016	0°	150°	8 x 0,145
PEF 63	F00VX30063 (0)		0°	155°	8 x 0,115
<b>PEF 66</b>	<b>F00VX40066 (0)</b>	<b>0 445 117 021</b> <b>0 445 117 022</b>	<b>0°</b>	<b>158°</b>	<b>8 x 0,105</b>
PEF 68	F00VX40068		0°	152°	8 x 0,125
<b>PEF 77</b>	<b>F00VX50077</b>	<b>0 445 120 287</b> <b>0 445 120 288</b>	<b>0°</b>	<b>129°</b>	<b>6 x 0,165</b>
PEF 80	F00VX40080		0°	154°	8 x 0,105
PEF 115	F00VX40115	0 445 117 040 0 445 117 043	0°	150°	8 x 0,140
PEF 376	B437176376	0 445 120 298 0 445 120 299	0°	146°	7 x 0,195

