PRODUCT UPDATE – May 2025 (last update 03.10.2026)



Our complete range of

NOZZLES FOR WOODWARD-L'ORANGE® INJECTORS

suitable for large engines applications

On 9 September 1933, Rudolf L'Orange and his brother Harro founded the L'Orange Brothers Engine Accessories Company in Stuttgart. They developed and invented new injection systems such as the "zweimengendüse" for continuous atomization. The company was sold to MTU Germany in 1985 and then incorporated into the Tognum Group in 2006 (Rolls-Royce Power Systems AG since 2014). In 2018 Rolls-Royce Power Systems sold the company to its competitor Woodward in the USA. Nowdays **Woodward L'Orange GmbH** is a German engineering manufacturing company headquartered in Stuttgart. It is one of the leading manufacturers of injection systems for large diesel engines worldwide. It developed and produced the first common-rail system for large diesel engines. Woodward L'Orange is a supplier to engine builders from 1000 to 40000 kW. It designs and produces injection parts for most 4-stroke engines for both **marine and power plant applications**.

Check out in next pages our nozzles

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Other manufacturer's name, symbol,
code numbers are quoted for reference purposes only.
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Our products have no concern with Genuine products and not certified by IMO.

Woodward-L'Orange

SEVEN Part Number	Photo	Stamping	Spray details	Ø	Cooled/ Uncooled	Opening Pressure (bar)	Injector Reference	Engine Brand	Engine type	Note and other ref.
NBW6910A		VUM-U910A/E	13x0,43x82°	10	Cooled	360	VUM-G014a	MAN B&W	32/40 CD	IMO1235
NBW6910B		VUM-U910B/E	13x0,39x82°	10	Cooled	360	VUM-G014b	MAN B&W	32/40 CD	IMO1611
NBW6910C		VUM-U910C/E	13x0,41x82°	10	Cooled	360	VUM-G014c	MAN B&W	32/40 CD	IMO1758
NLG10ACA		LT-ACA	8x0,34x145°	6	Uncooled					
NLG10ACC		LT-ACC	9x0,35x145°	7	Uncooled					
NLG10ACF		LT-ACF	8x0,35x150°	7	Uncooled			Rolls Royce Bergen Diesel	K	022822
NLG10ADA		LT-ADA	10x0,33x150°	7	Uncooled			Rolls Royce Bergen Diesel	K	022991
NLG10LBD		LT-LBD	8x0,20x150°	6	Uncooled					
NLG10LGQ		LT-LGQ	8x0,35x140°	6	Uncooled					
NLG10LJG		LT-LJG	8x0,25x150°	6	Uncooled					
NLG10LUG		LT-LUG/E	6x0,39x155°	6	Uncooled	350 bar	VTO-G043a	Deutz MWM	D440, D441	1215 2978 6.0530.01.3.0003
NLG10LXA		LT-LXA	9x0,35+1x0,20	6	Uncooled					10 HOLES
NLG10LXAA		LT-LXA	9x0,35x140°	6	Uncooled					9 HOLES
NLG10LXW		LT-LXW	8x0,31x150°	6	Uncooled	350 bar	VTO-G030a	Deutz MWM	D440 (K), D441 (K)	1215 2995 6.0530.01.3.0029
NLG10LYB		LT-LYB	7x0,36x140°	6	Uncooled					
NLG10LZQ		LT-LZQ	8x0.36x140°	6	Uncooled					
NLG10LZR		LT-LZR	8x0,36x150°	6	Uncooled	350 bar	VTO-G030e	Deutz MWM	D440 (K), D441 (K)	1215 3004 6.0530.01.3.0039
NLG12AAH		LLT-AAH	6x0,51x150°	7	Uncooled			MTU	MA956	590 017 05 12

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NLG1490A		**LTB-U900A**	8x0,42x144°	6	Uncooled					DLLZ145T900a

NLG15BBE		**LTO-BBEm**	5x0,45x155°	8	Uncooled			Wärtsilä SWD	TM270 TE290	
NLG15BBG		**LTO-BBG**	8x0,37x132°	8	Uncooled					HL132T37H200P5

NLG15BEV		**LTO-BEV**	6x0,40x130°	7	Uncooled			Caterpillar MaK	M282AK	
NLG15BFH		**LTO-BFH**	5x0,38x110°	7	Uncooled			Caterpillar MaK	M281	
NLG15BFW		**LTO-BFW**	4x0,50x110°	7	Uncooled			Caterpillar MaK	M331 - M332	
NLG15BGR		**LTO-BGR**	4x0,55x110°	7	Uncooled			Caterpillar MaK	M282	
NLG15BHE		**LTO-BHE**	8x0,32x145°	7	Cooled	320 bar	VTO-G056a VTO-G087a	MAN B&W	23/30 23/30A	
NLG15BKV		**LTO-BKV**	10x0,39x148°	7	Cooled	320 bar	VTO-G061b	MAN B&W	28/32	
NLG15BKZ		**LTO-BKZ**	9x0,41x156°	7	Cooled	320 bar	VTO-G061c	MAN B&W	28/32	
NLG15BLJ		**LTO-BLJ**	10x0,33x150°	7	Cooled	280 bar	VTO-G058a	Rolls Royce Bergen Diesel	K	
NLG15BLQ		**LTO-BLQ**	8x0,33x148°	7	Cooled	320 bar	VTO-G087c	MAN B&W	23/30A	
NLG15BMW		**LTO-BMW**	8x0,33x148°	7	Uncooled	320 bar	VTO-G069a	MAN B&W	23/30	
NLG15BPF		**LTO-BPF/E**	8x0,32x145°	7	Uncooled	320 bar	VTO-G249a	MAN B&W	23/30A	IMO-17.02
NLG15BPJ		**LTO-BPJ**	10x0,32x148°	6	Cooled	320 bar	VTO-G087d	MAN B&W	23/30A	IMO-17.06

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NLG15BGZ **NLG15BJH** **NLG15BNE** **NLG15BPG/EV**		**LTO-BGZ** **LTO-BJH** **LTO-BNE** **LTO-BPG**	8x0,36x150° 8x0,36x150° 10x0,39x148° 10x0,39x148°	7 7 7 7	Cooled Uncooled Cooled Uncooled	320 bar 320 bar 320 bar 320 bar	VTO-G072 VTO-G071 VTO-G074a VTO-G248a	Wärtsilä Wärtsilä MAN B&W MAN B&W	WV22 WV22 28/32A 28/32A	IMO-17.01
NLG16089 **NLG16090**		**LTO-U9089a/E** **LTO-U9089b/E**	8x0,29x145° 9x0,28x145°	6 6	Uncooled Uncooled	450 bar 450 bar	VTO-G112a VTO-G112b	MAN B&W MAN B&W	16/24 16/24	
NLG16108		**LTO-U9108a**	8x0,34x159°	7	Uncooled		VTO-G166 VTO-G466	MTU	4000.01	
NMK15112 **NMK15113** **NMK15114**		**LTO-U9140b/E** **LTO-U9140a/E** **LTO-U9140c/E**	10x0,31x140° 12x0,34x150°	7 7 7	Uncooled Uncooled Uncooled			Caterpillar MaK Caterpillar MaK Caterpillar MaK	M20 M20 M20	A1/2 250 220 014 A1/3 250 220 032 A1/4 250 220 034

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NLG16171		**LTO-U9171w/EV1**	10x0,32x148°	7	Cooled					

NLG15BME **NLG15BMQ** **NLG15BNG**		**LTO-BME/E** **LTO-BMQ** **LTO-BNG**	7x0,43x145° 7x0,41x140° 7x0,41x145°	7 7 7	Uncooled Uncooled Uncooled	355 bar 355 bar 355 bar	VTO-G247a VTO-G247b VTO-G247c	Deutz KHD Deutz KHD Deutz KHD	BVM628 BVM628 BVM628	

NLG15BNZ **NLG15BNZ1**		**LTO-BNZ** **LTO-BNZ**	10x0,36x130° 10x0,36x130°	7 7	Cooled Cooled			Wärtsilä Wichmann Wärtsilä Wichmann	 WX28	old version new version

NLG30UBQ **NLG30UDR** **NLG30UFP**		**LU-UBQ** **LU-UDR** **LU-UFP**	8x0,45x130° 8x0,40x130° 6x0,45x115°	8 8 8	Uncooled Uncooled Uncooled			Caterpillar MaK Caterpillar MaK Caterpillar MaK	M581 - M582 M451 M451	

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NLG60033 **NLG60Y33**		**VUM-U933** **VUM-U933y**	1x3,0 1x3,0	8 8	Uncooled Uncooled			MAN B&W MAN B&W	GV23,5/33; GV30/45; VV30/45 GV23,5/33; GV30/45; VV30/45	
NLG60034		**VUM-U934a/E**	9x0,45x148°	8	Uncooled	400 bar	VUM-G008	MAN B&W	27/38	
NLG60036 **NLG600361**		**VUM-U936a/E** **VUM-U936b/E**	8x0,29x145° 9x0,28x145°	6 6	Uncooled Uncooled			MAN B&W MAN B&W	16/24 16/24	
NLG65906		**VUO-U906**	1x2.5	8	Uncooled			Wärtsilä SWD	TMA330 TMAS336 TEB450	

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NLG62BAA		**VUO-BAA**	6x0,55x130°	7	Uncooled			Deutz KHD	BVM366	273797C3
NLG62BAC		**VUO-BAC**	6x0,45x130°	7	Uncooled	350 bar	VUO-G022c	Deutz KHD	BVM545	273797A3
NLG62BAD		**VUO-BAD**	6x0,52x110°	7	Uncooled			Deutz KHD	BVM358	273797D3
NLG62BAE		**VUO-BAE**	6x0,40x110°	7	Uncooled	350 bar	VUO-G022e	Deutz KHD	BVM536 BVM545	273797J3

NLG62BAF		**VUO-BAF**	6x0,45x110°	7	Uncooled	350 bar	VUO-G022f	Deutz KHD	BVM545	273797K3
NLG62BAG		**VUO-BAG**	6x0,40x130°	7	Uncooled	350 bar	VUO-G022g	Deutz KHD	BVM545	273797L3
NLG62BAK		**VUO-BAK**	6x0,35x130°	7	Uncooled	350 bar	VUO-G022k	Deutz KHD	BVM536 BVM545	273797P3
NLG62BAL		**VUO-BAL**	6x0,30x130°	7	Uncooled	350 bar	VUO-G022l	Deutz KHD	BVM536 BVM545	
NLG62BAM		**VUO-BAM**	6x0,45x120°	7	Uncooled	350 bar	VUO-G022mb VUO-G022mc	Deutz KHD	BVM545	2032292KZ
NLG62BAN		**VUO-BAN**	6x0,40x120°	7	Uncooled	350 bar	VUO-G022n	Deutz KHD	BVM545	2032435KZ
NLG62CAA		**VUO-CAA**	6x0,55x110°	7	Uncooled	350 bar	VUO-G120a	Deutz KHD	BVM358	DO123-19-09-10
NLG62CAB		**VUO-CAB**	6x0,55x120°	7	Uncooled	350 bar	VUO-G320b	Deutz KHD	BVM350	DO123-19-09-20
NLG62CAC		**VUO-CAC**	6x0,50x110°	7	Uncooled	350 bar	VUO-G120c	Deutz KHD	BVM358	DO123-19-09-30
NLG62CAD		**VUO-CAD**	6x0,50x120°	7	Uncooled	350 bar	VUO-G320da	Deutz KHD	BVM350	DO123-19-09-40
NLG62CAE		**VUO-CAE**	6x0,60x120°	7	Uncooled			Deutz KHD	BVM350	D02020762
NLG65944		**VUO-U944a**	6x0,60x110°	8	Uncooled	350 bar	VUO-G220aa VUO-G220ab	Deutz KHD	BVM350 BVM358	
NLG65945		**VUO-U944b**	6x0,60x135°	8	Uncooled	350 bar	VUO-G420b	Deutz KHD	BVM350 BVM358	
NLG65946		**VUO-U944c**	6x0,65x110°	8	Uncooled	350 bar	VUO-G220c VUO-G220ca	Deutz KHD	BVM350 BVM358	

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NLG65909		**VUO-U909ay/E**	8x0,52x130°	8	Cooled	350 bar	VUO-G055a	Deutz KHD	BVM540	2001658KZ0125-19
NLG65910		**VUO-U910a**	8x0,52x130°	8	Uncooled	350 bar	VUO-G056a	Deutz KHD	BVM540	2000506KZ0125-19
NLG69A14		**VUO-U9014a/E**	8x0,54x140°	8	Cooled	350 bar	VUO-G174a	Deutz KHD	BVM640	2092952
NLG67376		**VUO-U976a/E**	9x0,48x155°	8	Cooled			Deutz MWM Wärtsilä	D510, D511 Vasa 32	
NLG67383		**VUO-U976l/E**	10x0,48x160°	8	Cooled	350 bar	VUO-G058	Deutz MWM	D510, DG510	
NLG67388		**VUO-U976p/E**	10x0,48x150°	8	Cooled	350 bar	VUO-G058p	Deutz MWM	D510, DG510	
NLG67389		**VUO-U976q/E**	10x0,50x150°	8	Cooled	280 bar	VUO-G072	Deutz MWM	D510B	
NLG67808		**VUO-U988a/E**	9x0,48x155°	8	Uncooled			Wärtsilä	Vasa 32	

NLG65934		**VUO-U932c**	1x4.0	8	Cooled	350 bar	VUO-G038c/E	Wärtsilä SWD	TM410	
NLG65935		**VUO-U932d**	1x4.0	8	Cooled	350 bar		Wärtsilä SWD	TM410	
NLG67169		**VUO-U969a**	1x4.0	8	Cooled	260 bar 260 bar 260 bar 260 bar 350 bar 350 bar	VUO-G036g VUO-G036r VUO-G136fb VUO-G136ib VUO-G236fb VUO-G236ib	Caterpillar MaK	M551 M552	

NLG66744		**VUO-U954acy/E**	8x0,60x140°	8	Cooled	260 bar	VUO-G065	Caterpillar MaK	M35	
NLG66746		**VUO-U954aey/E**	6x0,55x130°	8	Cooled			Caterpillar MaK	M453	
NLG66748		**VUO-U954afy/E**	8x0,53x140°	8	Cooled			Caterpillar MaK	M453	
NLG66750		**VUO-U954by/E**	9x0,42x130°	8	Cooled	300 bar	VUO-G080b	Caterpillar MaK	M453	
NLG66752		**VUO-U954fy/E**	6x0,50x110°	8	Cooled	300 bar	VUO-G080f	Caterpillar MaK	M453	
NLG66754		**VUO-U954gy/E**	6x0,55x110°	8	Cooled	300 bar	VUO-G080g	Caterpillar MaK	M453	
NLG66954		**VUO-U955a/E**	5x0,55x120°	8	Uncooled					
NLG66956		**VUO-U955b/E**	9x0,42x130°	8	Uncooled	260 bar 300 bar	VUO-G047b VUO-G079b	Caterpillar MaK	M453	
NLG66957		**VUO-U955c/E**	9x0,40x130°	8	Uncooled					
NLG66958		**VUO-U955d/E**	9x0,45x130°	8	Uncooled					
NLG66959		**VUO-U955e/E**	5x0,60x110°	8	Uncooled					

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NLG66960		**VUO-U955f/E**	6x0,55x110°	8	Uncooled	260 bar 300 bar	VUO-G047f VUO-G247f VUO-G079f	Caterpillar MaK	M453	
NLG66961		**VUO-U955g/E**	6x0,60x110°	8	Uncooled	300 bar		Caterpillar MaK	M453	
NLG66962		**VUO-U955h/E**	6x0,50x110°	8	Uncooled	260 bar 300 bar 300 bar	VUO-G047h VUO-G247h VUO-G079h	Caterpillar MaK	M453	
NLG66963		**VUO-U955k/E**	8x0,60x140°	8	Uncooled	260 bar	VUO-G066	Caterpillar MaK	M35	
NLG66964		**VUO-U955i/E**	6x0,45x110°	8	Uncooled					
NLG66965		**VUO-U955l/E**	8x0,47x140°	8	Uncooled			Caterpillar MaK	M453	
NLG66966		**VUO-U955m/E**	8x0,53x140°	8	Uncooled					
NLG67050		**VUO-U967l**	9x0,50x140°	8	Uncooled			S.E.M.T. Pielstick	PA6V280	
NLG67052		**VUO-U967ly**	9x0,50x140°	8	Uncooled	320 bar	VUP-G007ly	S.E.M.T. Pielstick	PA6V280	Heavy Oil
NLG69013		**VUO-U9013by/E**		8	Cooled	260 bar	VUO-G048a	Caterpillar MaK	M453	

NLG68C99		**VUO-U999c/E**	9x0,51x130°	8	Cooled	350 bar	VUO-G054	Deutz MWM	D501	

NLG70034		**VUO-U9034b/E**	10x0,53x150°	8	Cooled	330 bar	VUO-G087b	Deutz MWM	TBD645	1243 0021

NLG70137		**VUO-U9037c/E**	12x0,50x150°	8	Cooled	450 bar	VUO-G106c	Caterpillar MaK	M32	E2/1 260 220 012

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NLG70196		**VUO-U9096C/E**	9x0,48x155°	8	Cooled	320 bar	VUO-G097c	Wärtsilä	WV32	009420080

NLG70214 **NLG70215** **NLG70216**		**VUO-U9115a/E** **VUO-U9115p/E** **VUO-U9116a/E**	10x0,54x155° 10x0,54x158° 10x0,54x155°	9,00 9,00 9,00	Uncooled Uncooled Cooled	600 bar 600 bar 600 bar	VUO-G201a VUO-G203pV1 VUO-G202a	Wärtsilä Wärtsilä Wärtsilä	W32F W32F W32F	09500346 PAAE014820 09500345

NLG70241		**VUO-U9141d/EV**	9x0,335x156°		Uncooled	450 bar	VUO-G260dV	MAN	L21/31	D11.22107-1724

NLG70279		**VUO-U9179c/EE**	12x0,51x150°	8	Cooled					

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NLG70281		**VUO-U9181a**	10x0,315x156°		Uncooled		VUO-G286A VUO-G315A	MAN	21/31	

NLG72104 **NLG72106** **NLG72107** **NLG72512**		**VUY-U904a** **VUY-U904c** **VUY-U904d** **VUY-U912**	5x0,55x140° 5x0,50x140° 8x0,35x130° 5x0,50x140°	8 8 8 8	Uncooled Uncooled Uncooled Cooled					U1A 5-50 140 U1A 550 140 5 U1A 835 130 U1AF 550 140 52

NLG72115 **NLG72116** **NLG72117**		**VUY-U905a** **VUY-U905b** **VUY-U905c**	10x0,46x130° 10x0,60x140° 10x0,55x140°	8 8 8	Uncooled Uncooled Uncooled			Hanshin Hanshin Hanshin	6LU32 6LU32 6LU32/6LU38	

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NLG72129		**VUY-U909**	5x0,50x140°	8	Cooled			SKL	NVD48-A2U	U1A550-140
NLG75V01		**VVM-U901**	1x4.50	11	Uncooled			MAN	RV/40/54	E11221050084
NLG76135		**VVO-U935K**	10x0,71x150°	10	Uncooled			Wärtsilä	W46	
NLG76143 **NLG76153**		**VVO-U943g/E** **VVO-U953g/E**	11x0,59x154° 11x0,59x155°	9 9	Cooled Cooled	450 bar	VVO-G036g	Wärtsilä Wärtsilä SWD	SW38 W38A	

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NLG76176		**VVO-U976L/E**	12x0,57x155°	9	Uncooled					

NLG77A00		**VVP-U900a**	10x0,60x140°	10	Cooled			S.E.M.T. Pielstick	PC2-5 PC2-6	4 holes
NLG77A01		**VVP-U900a**	10x0,60x140°	10	Cooled			S.E.M.T. Pielstick	PC2-5 PC2-6	6 holes
NLG77B00		**VVP-U900b**	10x0,55x140°	10	Cooled			S.E.M.T. Pielstick	PC2-3DF PC2-5LCV	4 holes
NLG77B01		**VVP-U900b**	10x0,55x140°	10	Cooled			S.E.M.T. Pielstick	PC2-3DF PC2-5LCV	6 holes
NLG77C00		**VVP-U900c**	10x0,65x140°	10	Cooled			S.E.M.T. Pielstick	PC2-5 PC2-6	4 holes
NLG77C01		**VVP-U900c**	10x0,65x140°	10	Cooled			S.E.M.T. Pielstick	PC2-5 PC2-6	6 holes
NLG77D00		**VVP-U900d**	10x0,50x140°	10	Cooled			S.E.M.T. Pielstick	PC2-2 PC2-5	
NLG77E00		**VVP-U900e**	10x0,52x140°	10	Cooled			S.E.M.T. Pielstick	PC2-2 PC2-5	
NLG77F00		**VVP-U900f**	9x0,68x140°	10	Cooled			S.E.M.T. Pielstick		
NLG77I00		**VVP-U900i**	10x0,48x140°	10	Cooled			S.E.M.T. Pielstick		
NLG77L00		**VVP-U900l**	10x0,625x140°	10	Cooled			S.E.M.T. Pielstick	PC2-5	
NLG77M00		**VVP-U900m**	10x0,725x140°	10	Cooled			S.E.M.T. Pielstick	PC2-5	

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NLG78101		**VXP-U901a**	10x1,00x140°	13	Cooled					
NLG79105		**VXW-U905**	1x3.0	10	Cooled					
NLG79200		**VWK-U900A/E**	11x0,72x150°	11	Uncooled			Caterpillar MaK	M43	J1/1
NLG79201		**VWK-U901A/E**	11x0,71x150°	11	Cooled			Caterpillar MaK	M43	J4/4
NLG79301		**VWM-U901**	1x4,5	10	Uncooled			MAN	DZ53/76/80	4D14852
NLG79502		**VWW-U902a**	1x2.0	10	Cooled					

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NZS1065 **NZS1070** **NZS1075**		**WAF 1065-140-45** **WAF 1070-140-45** **WAF 1070-155-45**	10x0,65x140° 10x0,70x140° 10x0,70x155°	12 12 12	Cooled Cooled Cooled			SKL SKL SKL	NVD48-42 NVD48-42	G203011200 G203017000

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