



SPRAY NOZZLES FOR INDUSTRIAL APPLICATIONS



SPRAY NOZZLES & ASSEMBLY FITTINGS

GENERAL CATALOGUE

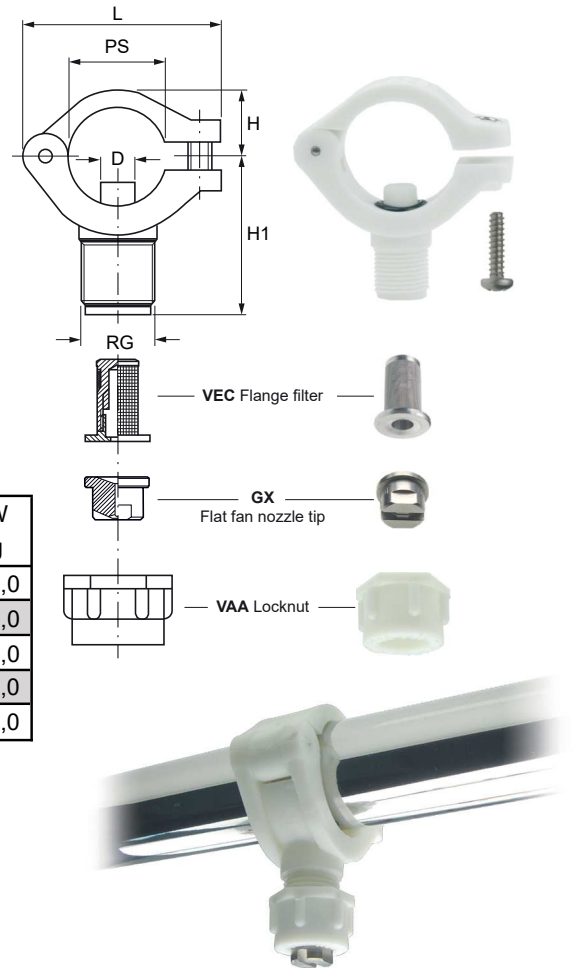
PLASTIC PIPE CLAMPS

ZPB plastic pipe clamps allow a quick, professional and convenient instalment of GX, BX or KX flanged nozzles onto manifolds. Using these clamps it's not necessary to weld nipples or use thick pipes, all you need is one hole in the pipe. ZPB body is made in PP reinforced glass fiber while screws and bolts are in stainless steel AISI 316 to assure a good corrosion resistance. VEA, VEC and VED flanged filters are available on request to prevent clogging.

- **Typical applications** Pre-treatment for coating process
Parts cleaning
- **Max working temperature** **LT** 80°C
- **Max working pressure** **LP** 8 bar
- **Materials** Body **D6** PP, chemically bonded fiberglass
O-ring **E8** NBR
Metal parts **B2** AISI 304 Stainless steel

Codice	RG inch	PS inch	PD mm	D mm	H mm	H1 mm	L mm	W g
ZPB 0050 D6SG	3/8"	1/2"	21 / 22	7,60	15,0	36,0	44,5	20,0
ZPB 0074 D6SG		-	25	7,60	19,0	39,0	51,5	24,0
ZPB 0075 D6SG		3/4"	26 / 27	7,60	19,0	39,0	51,5	26,0
ZPB 0100 D6SG		1"	33 / 34	10,0	23,0	46,0	62,0	30,0
ZPB 0125 D6SG		1-1/4"	42 / 43	12,0	35,0	55,0	85,0	75,0

HOW TO MAKE UP THE **PRODUCT CODE** EX.: ZPB 0050 D6



(PLASTIC BAYONET PIPE CLAMPS) **ZPC**

PLASTIC BAYONET PIPE CLAMPS

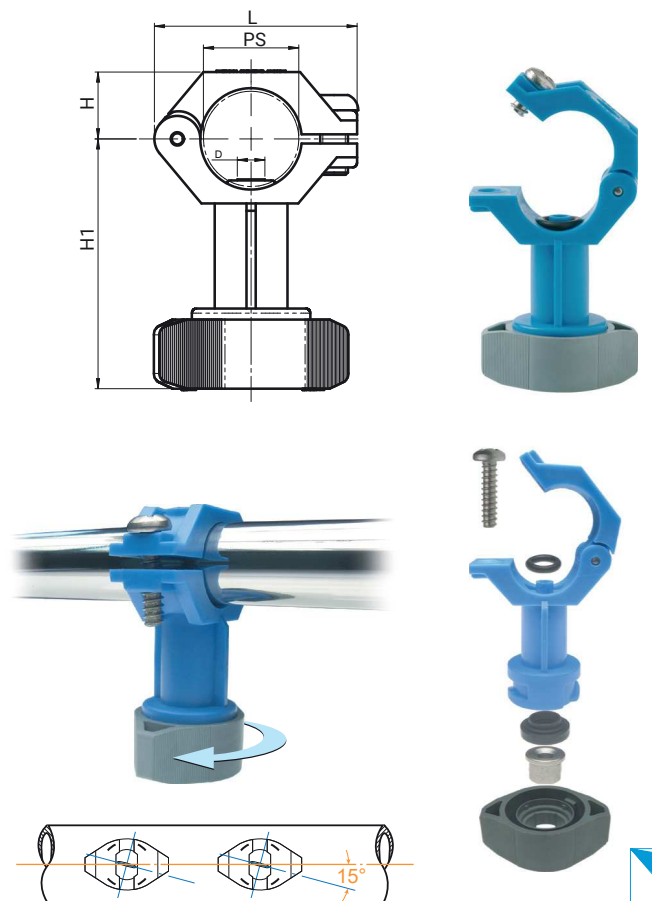
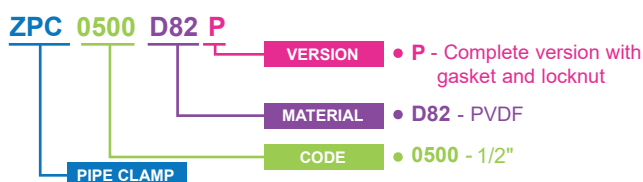
ZPC plastic bayonet pipe clamps serve for a quick and easy instalment of GX type flat fan flanged nozzles.

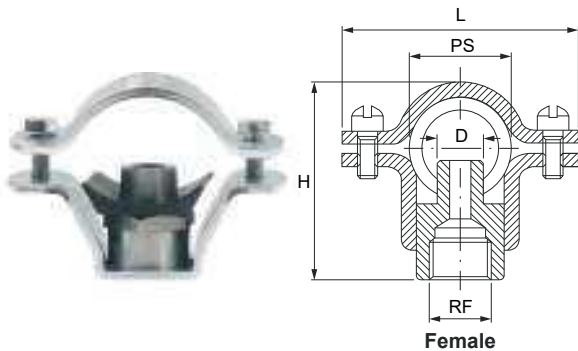
No need to weld nozzles or use thick pipes to thread. It's sufficient to make a hole in the pipe and fix the clamp in. The clamp body is in PVDF while screws and bolts are in stainless steel AISI 316, suitable for high temperatures. Their quick-fit cap is easy to disassemble for cleaning. The flat fan orientation has an offset angle of 10° from the main manifold axis to avoid jets overlapping.

- **Typical applications** PCB wet process
Pre-treatment for coating process
- **Pipe size** **PS** 1/2"
- **Max working temperature** **LT** 90°C
- **Max working pressure** **LP** 8 bar
- **Materials** Body **D82** PVDF, moulded
O-ring **E7** Viton
Metal parts **B3** AISI 316 Stainless steel

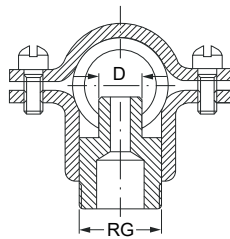
Code	PS poll	PD mm	D mm	H mm	H1 mm	L mm	W g
ZPC 0500 D82P	1/2"	20/22	6.0	14.5	54.0	44.0	45.0

HOW TO MAKE UP THE **PRODUCT CODE** EX.: ZPC 0500 D82P





Female



Male



ZPM Metal clamps + PF Hollow cone nozzle

METAL PIPE CLAMPS

ZPM metal pipe clamps are suitable for a quick, easy and safe instalment of various types of nozzles on pipes. They can be fit into a pipe simply by making a hole on it. As it's not necessary to thread thick pipes or weld the nozzles, these clamps assure a relevant time and costs saving.

- **Thread size** 1/8", 1/4", 3/8", 1/2"
- **Connection** BSP, NPT
- **Typical applications** Pre-treatment for coating process
Exhaust Scrubber
- **Pipe size** PS 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2"
- **Max working temperature** LT 80°C
- **Max working pressure** LP 20 bar
- **Materials**
 - Body **B2** AISI 304 Stainless steel
 - A8** Zinc coated steel
 - Screws **B2** AISI 304 Stainless steel
 - Nipples **B31** AISI 316L Stainless steel
 - T1** Brass
 - Gasket **E0** EPDM

Code	PS inch	RF/RG inch	LP bar	LQ l/min	D mm	H mm	L mm
ZPM 0050 xxAW	1/2"	1/8"	17	11	7	40	49
ZPM 0050 xxBW		1/4"				48	
ZPM 0050 xxUW		3/8"					
ZPM 0075 xxAW	3/4"	1/8"	17	11	7	45	58
ZPM 0075 xxBW		1/4"					
ZPM 0075 xxUW		3/8"				53	
ZPM 0100 xxAW	1"	1/8"	17	11	7	45	65
ZPM 0100 xxBW		1/4"					
ZPM 0100 xxUW		3/8"				53	
ZPM 0125 xxYW	1 1/4"	1/4"	9	45	18	68	71
ZPM 0125 xxYW		3/8"					
ZPM 0125 xxYW		1/2"					
ZPM 0150 xxYW	1 1/2"	1/4"	9	45	18	72	90
ZPM 0150 xxYW		3/8"					
ZPM 0150 xxYW		1/2"					
ZPM 0200 xxYW	2"	1/4"	9	45	18	85	100
ZPM 0200 xxYW		3/8"					
ZPM 0200 xxYW		1/2"					
ZPM 0250 xxYW	2 1/2"	1/4"	9	45	18	110	118
ZPM 0250 xxYW		3/8"					
ZPM 0250 xxYW		1/2"					

CODE COMPLEMENTS EX.: ZPM 0050 A8 AA

Replace **xx** and **YW** in the above codes as shown below

NOTE: Nipple thread (letter **Y**) can be 3/8" BSP F (letter **C**) or 1/2" BSP F (letter **D**) only for pipe sizes (PS in the above table) equal or grater than 1-1/2".

ZPM 0050 **xx** **Y** **W**

XX	For clamp material	Y	For nipple thread	W	For nipple material
A8	Zinc coated steel	A	1/8" BSP Female	A	Brass
B2	AISI 304	B	1/4" BSP Female	B	AISI 303
		C	3/8" BSP Female	C	AISI 316L
		D	1/2" BSP Female		
		U	3/8" BSP Male		

DISK NOZZLE PIPE CLAMP

ZPH pipe clamps are specially designed for the quick and easy instalment of disc nozzles onto pipes.

These clamps are very convenient as there's no need to buy expensive metal tips or welded nozzle tips.

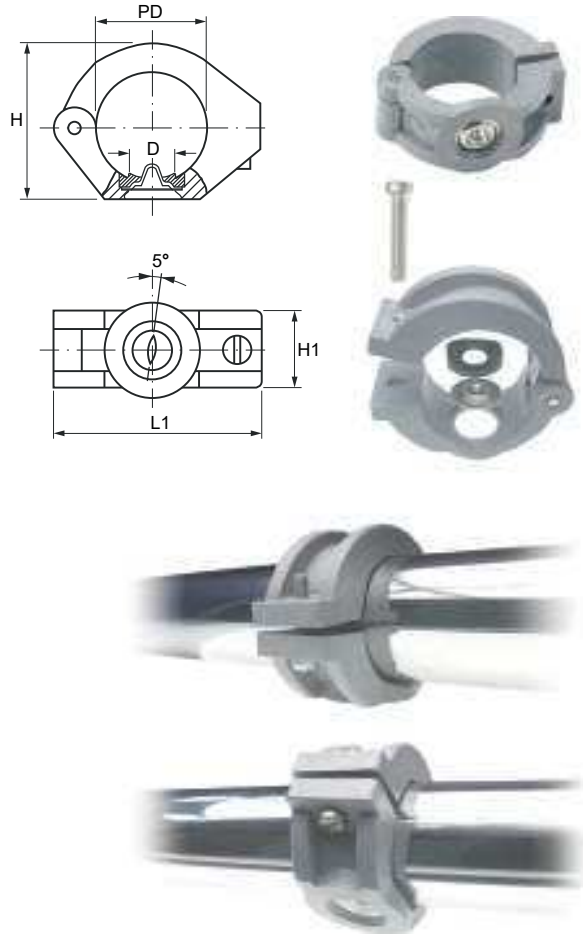
You must drill a 19 mm diameter hole on the pipe, insert the clamp into it and fix it with screws.

Their design, which allows to position the disc nozzles with a 5° offset angle, assures a proper jet orientation. These clamps avoid spray jets interference and are ideal for nozzles cleaning steel brushes.

- **Max working temperature** LT 80°C
- **Max working pressure** LP 7 bar
- **Fitting dimensions**
 - Outer pipe diameter **50 mm**
 - Inner pipe diameter **47 mm**
 - Feed hole **19 mm**
- **Materials**
 - Clamp **D6** PP, chemically bonded fiberglass
 - Pin, bolt **B3** AISI 316 Stainless steel
- **Typical application** Paper machines self-cleaning pipes

Code	OD mm	D mm	H mm	H1 mm	L1 mm
ZPH 0150 D6	52	19	70	34	91

HOW TO MAKE UP THE **PRODUCT CODE** EX.: ZPH 0150 D6

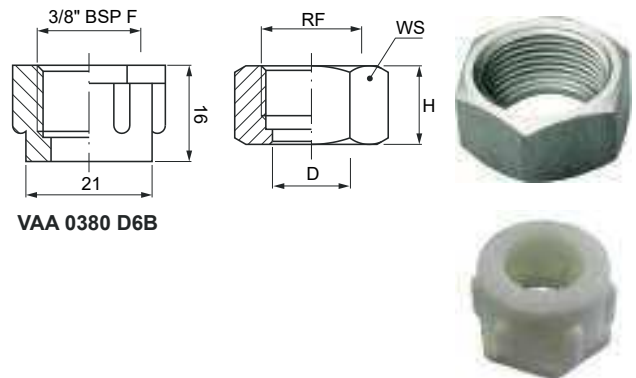


(LOCKNUTS) **VAA**

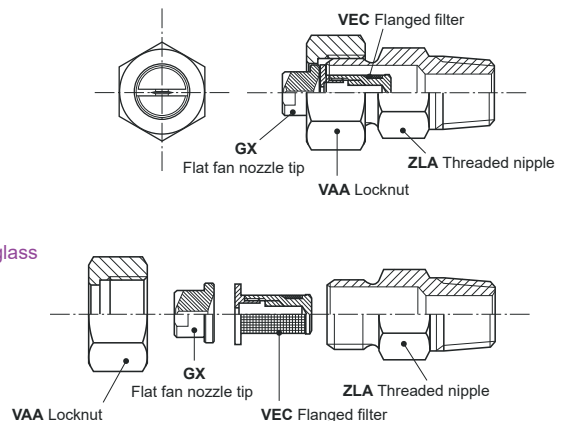
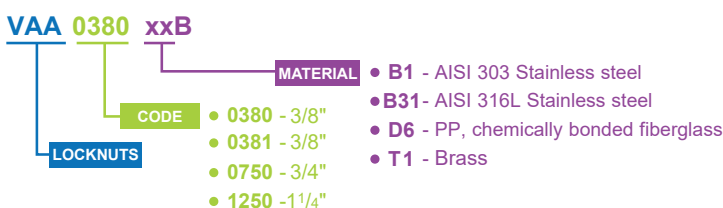
LOCKNUTS

VAA locknuts go with ZAA, ZAC, ZLA and ZPB to fix different nozzles.

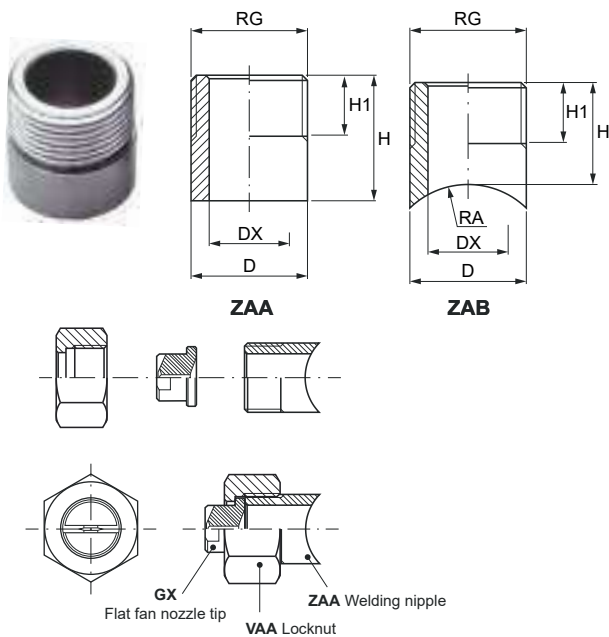
Code	RF inch	D mm	H mm	WS mm	Material	
					Plastic	Metal
VAA 0380 xxB	3/8"	12.9	12	22	•	•
VAA 0381 xxB	3/8"	12.5	15	22		•
VAA 0750 xxB	3/4"	20.5	16	32		•
VAA 1250 xxB	1 1/4"	32.5	27	50		•



HOW TO MAKE UP THE **PRODUCT CODE** EX.: VAA 0380 B1B



ZAA / ZAB (STANDARD WELD NIPPLES)



STANDARD WELD NIPPLES

ZAA/ZAB welding nipples allow the assembly of GX, BX or KX series nozzle tips onto pipes and spray manifolds. One end of the nipple is fixed onto the pipe and the other to the nozzle tip. ZAA is a standard model with a flat welding surface. ZAB is radiused type with a curved welding surface that fits the pipe diameter. VAA locknut goes with ZAA/ZAB weld nozzle tip. Additionally, we suggest you to add VEA, VEC or VED flanged filters to avoid clogging when you use small orifice nozzles. Please refer to page 91 for more information.

- **Thread size** 3/8", 3/4"
- **Materials** B1 AISI 303 Stainless steel D1 PP
B31 AISI 316L Stainless steel D8 PVDF

Code	RG poll	H mm	H1 mm	D mm	DX mm	RA mm	W g
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Standard

ZAA C018 xxG	3/8"	18	10	17	11.5	-	20
ZAA E027 xxG	3/4"	27	15	27	18.0	-	61

Radiused

ZAB C018 xxD	3/8"	18	10	17	11.5	10.0	20
ZAB C018 xxE						12.5	
ZAB C018 xxF						16.0	
ZAB C018 xxG						20.0	
ZAB C018 xxH						25.0	

PNR Italia is available to supply additional models with measures on request.

ZAC (DOVETAIL WELDING NIPPLES)



DOVETAIL WELDING NIPPLES

ZAC welding nipples are manufactured with a dovetail end to match GY type dovetail nozzle tips.

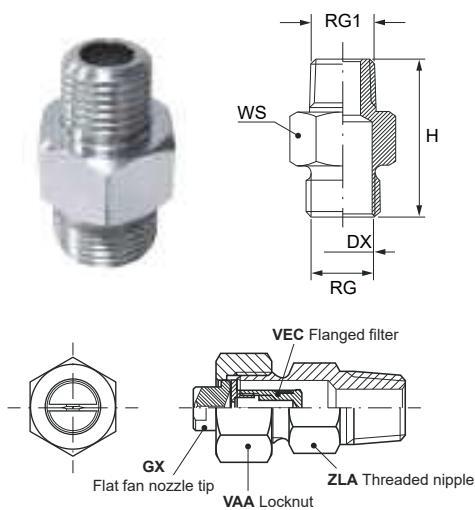
One end of the nipple is fastened onto the pipe and the other end to the nozzle tip by means of a VAA locknut. The dovetail design of these nipples keeps them properly orientated in the desired position, thus shortening time for nozzle tips cleaning and orientation adjustments.

- **Thread size** 3/8", 3/4", 1 1/4"
- **Material** B1 AISI 303 Stainless steel D2 PP
B31 AISI 316L Stainless steel D8 PVDF

Code	RG poll	H mm	H1 mm	D mm	DX mm	W g
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ZAC C018 xx	3/8"	18.0	10.0	17	7.5	20
ZAC E027 xx	3/4"	27.5	14.0	27	14.0	61
ZAC G040 xx	1 1/4"	40.0	21.0	42	20.0	280

ZLA / ZLC (STANDARD THREADED NIPPLES)



STANDARD THREADED NIPPLES

ZLA threaded nipples have a flanged end to match nozzle tips type GX, BX or KX. One end of the nipple gets assembled onto the pipe and the other end to the nozzle tip to which it is fixed by means of a VAA locknut. In addition, flanged filters VEA, VEC and VED can be assembled to avoid clogging. Please find more information on page 91.

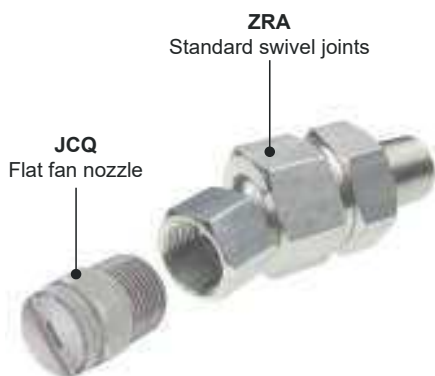
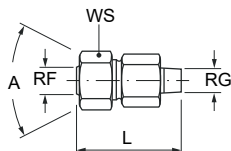
- **Inlet thread size** 1/8", 1/4", 3/8", 1/2", 3/4"
- **Outlet thread size** 1/8", 1/4", 3/8", 1/2", 3/4"
- **Connection** RG1: BSPT (A), BSP (C) RG: BSP
- **Materiali** B1 AISI 303 Stainless steel T1 Ottone D2 PP
B31 AISI 316L Stainless steel D1 PVC D8 PVDF

Code	RG poll	RG1 poll	DX mm	H mm	WS mm	W g	RG1				
							1/8"	1/4"	3/8"	1/2"	3/4"
ZLx 1212 xxB	1/8"	1/8"	5.00	25.0	14	18	•	•	•	•	•
ZLx 2525 xxB	1/4"	1/4"	7.50	29.0	19	20		•	•	•	•
ZLx 3838 xxB	3/8"	3/8"	10.0	35.0	19	25	•	•	•	•	•
ZLx 5050 xxB	1/2"	1/2"	15.0	38.0	27	50			•	•	•
ZLx 7575 xxB	3/4"	3/4"	18.0	40.0	32	90				•	•

The table on the right shows the different combinations PNR Italia can produce, based on the inlet thread size RG1 and the outlet thread size RG. Our Technical Office is at your disposal to give you codes and dimensions.



ZRA 1212 B1



SWIVEL JOINTS

STANDARD SWIVEL JOINTS

ZRA/ZRB/ZRC are standard swivel joints for manufacturing plants requiring product diversification. The fitting and adjustment of the joints can be done easily by tightening the hexagonal screw cap.

- **Typical applications** Cleaning equipment used in pre-treatment for coating process.
Continuous casting cooling.
- **Inlet thread size** 1/8", 1/4", 3/8", 1/2", 3/4"
- **Outlet thread size** 1/8", 1/4", 3/8", 1/2", 3/4"
- **Max working pressure** LP 21 bar
- **Materials**
 - B1** AISI 303 Stainless steel
 - B31** AISI 316L Stainless steel
 - T1** Brass

Code	RG poll	RF poll	L mm	A deg	CH mm	W g
ZRA 1212 xx YZ	1/8"	1/8"	38	50°	22	57
ZRA 2525 xx YZ	1/4"	1/4"	59	50°	22	75
ZRA 3838 xx YZ	3/8"	3/8"	72	50°	27	155
ZRA 5050 xx YZ	1/2"	1/2"	82	50°	27	186
ZRA 7575 xx YZ	3/4"	3/4"	92	50°	41	468

Code	RF poll	RF poll	L mm	A deg	CH mm	W g
ZRB 1212 xx YZ	1/8"	1/8"	29	50°	22	57
ZRB 2525 xx YZ	1/4"	1/4"	49	50°	22	75
ZRB 3838 xx YZ	3/8"	3/8"	52	50°	27	155
ZRB 5050 xx YZ	1/2"	1/2"	72	50°	27	186
ZRB 7575 xx YZ	3/4"	3/4"	85	50°	32	468

Code	RF poll	L mm	A deg	CH mm	W g
ZRC 1212 xx YZ	1/8"	32	50°	22	57
ZRC 2626 xx YZ	1/4"	67	50°	27	147
ZRC 7575 xx YZ	3/4"	92	50°	32	468

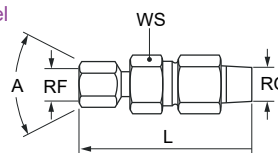
HOW TO MAKE UP THE PRODUCT CODE

ZRx 1212 xx YZ

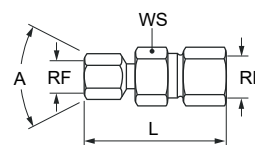
- THREAD**
 - B - BSP (female), BSPT (male)
 - N - NPT
- VARIANT**
 - S - Standard (three parts)
 - R - Reduced (two parts)
- MATERIAL**
 - B1 - AISI 303 Stainless steel
 - B31 - AISI 316L Stainless steel
 - T1 - Brass
- INLET THREAD SIZE**
 - 12 - 1/8"
 - 25 - 1/4"
 - 38 - 3/8"
 - 50 - 1/2"
 - 75 - 3/4"
- OUTLET THREAD SIZE**
 - 12 - 1/8"
 - 25 - 1/4"
 - 38 - 3/8"
 - 50 - 1/2"
 - 75 - 3/4"

Type	Inlet	Outlet
ZRA	Male	Female
ZRB	Female	Female
ZRC	Welded	Female

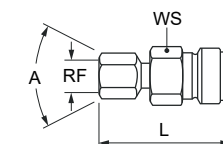
ZRA



ZRB



ZRC

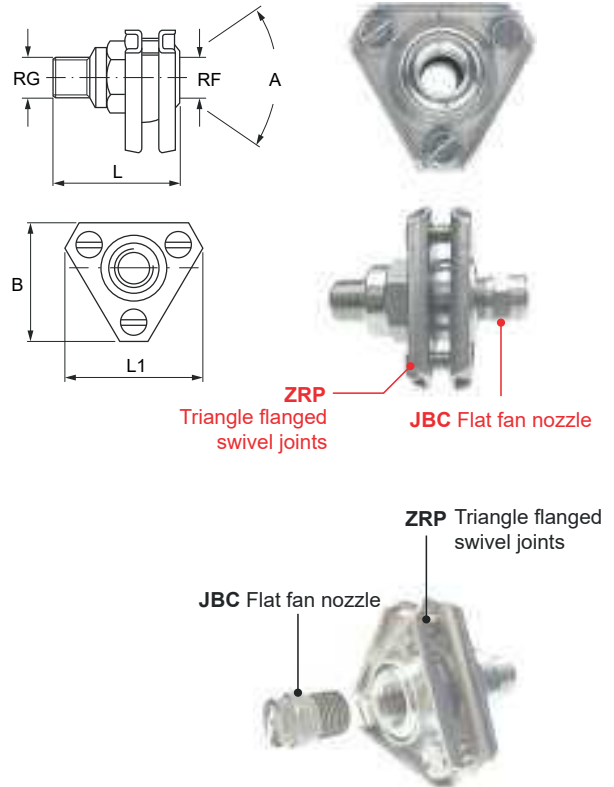


TRIANGLE FLANGED SWIVEL JOINTS

ZRP triangular flanged swivel joints have a robust metallic structure, are easy to fit and adjust and are widely used in manufacturing plants requiring product diversification.

- **Typical applications** Cleaning equipment used in pre-treatment for coating process.
Continuous casting cooling.
- **Inlet thread size** 1/8", 1/4", 3/8"
- **Outlet thread size** 1/8", 1/4", 3/8"
- **Max working pressure** LP 15 bar

Code	RG inch	RF inch	L mm	B mm	L1 mm	A deg	W g
ZRP 1212 xx	1/8"	1/8"	30	40	35	50°	65
ZRP 2512 xx	1/4"	1/8"	32				92
ZRP 2525 xx	1/4"	1/4"	40	50	45	60°	140
ZRP 2538 xx	1/4"	3/8"	40				150
ZRP 3825 xx	3/8"	1/4"	40				150
ZRP 3838 xx	3/8"	3/8"	40				150



HOW TO MAKE UP THE PRODUCT CODE

EX.: ZRP 1212 B1

ZRP 1212 xx

- JOINT TYPE**
- OUTLET THREAD SIZE**
 - 12 - 1/8"
 - 25 - 1/4"
- LNLET THREAD SIZE**
 - 38 - 3/8"
- MATERIAL**
 - B1 - AISI 303 Stainless steel
 - T1 - Brass

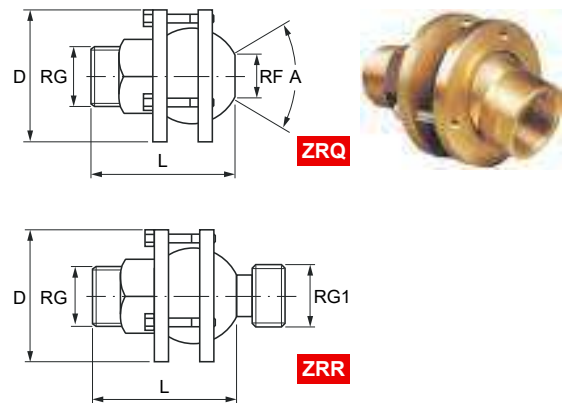
(LARGE CAPACITY SWIVEL JOINTS) **ZRQ**

LARGE CAPACITY SWIVEL JOINTS

ZRQ series swivel joints are suitable for operating environments requiring large capacities and product diversification. Once set, they can be easily fitted and adjusted .

- **Typical applications** Cleaning equipment used in pre-treatment for coating process.
Continuous casting cooling.
- **Inlet / Outlet thread size** 1", 1 1/4", 1 1/2", 2", 2 1/2"
- **Max working pressure** LP 9 bar
- **Materials**
 - B1 AISI 303 Stainless steel
 - B31 AISI 316L Stainless steel
 - T1 Brass

Code	RG inch	RG1 inch	RF inch	L mm	D mm	A deg	W kg
ZRQ 8080 xx	1"	-	1"	89	92	40°	1.8
ZRQ 8282 xx	1 1/4"	-	1 1/4"	130			2.1
ZRQ 8482 xx	1 1/2"	-	1 1/4"	133			2.4
ZRR 8282 xx	1 1/4"	1 1/4"	-	130	92	40°	2.2
ZRR 8284 xx	1 1/2"	1 1/4"	-	130			2.2
ZRR 8484 xx	1 1/2"	1 1/2"	-	130			2.4
ZRR 8686 xx	2"	2 1/2"	-	203	158	40°	8.0
ZRR 8888 xx	2 1/2"	2 1/2"	-	229			8.8



HOW TO MAKE UP THE PRODUCT CODE

EX.: ZRQ 8080 B1

ZRQ 8080 xx

- JOINT TYPE**
 - ZRQ - Female
 - ZRR - Male
- OUTLET THREAD SIZE**
 - 80 - 1"
 - 82 - 1 1/4"
 - 84 - 1 1/2"
 - 86 - 2"
 - 88 - 2 1/2"
- MATERIAL**
 - B1 - AISI 303 Stainless steel
 - B31 - AISI 316L Stainless steel
 - T1 - Brass