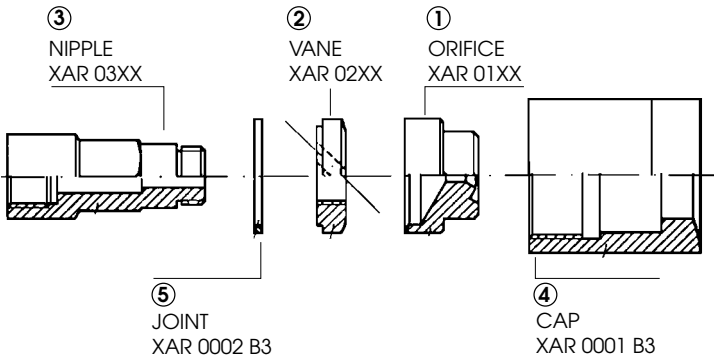
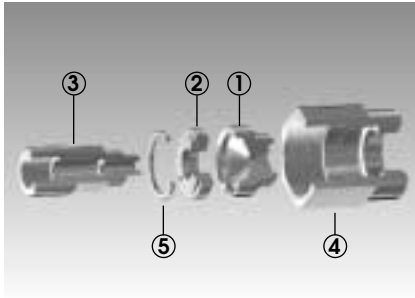


## HYDRAULIC SPILL-BACK LANCES

### COMPOSITION OF A SPILL-BACK NOZZLE



The spill-back nozzle, whose working principle has been explained at page 6, is actually made out of three pieces:


1. The actual nozzle orifice to spray atomized water into the cooling tower.
2. A vane which leads the water into the whirling chamber and gives it a rotary movement
3. A nipple which provides the passage to the return line

These three elements are kept together and fixed to the lance body by means of a locking cap (4).

The cap XAR 0001 B3 and the joint XAR 0002 B3 are identical for all types, while nipple, vane and orifice have a different design for each single nozzle size. The table on the side gives, for all sizes, the identification codes for complete nozzles and for single components as well as the flow value in liters per minute.

The given flow value is to be understood as the maximum flow at the pressure of 35 Bars, that is with the return line closed.

All nozzle components are normally manufactured out of AISI 316 grade Stainless steel. In case of rather high feed pressure, nozzle components can be subject to high wear, that causes a relatively rapid decadence of the performances of the nozzle. In these cases the nozzle orifice can be delivered in materials with higher wear resistance.

	Nozzle Set-up	Orifice	Vane	Nipple	Flow rate (lpm)
90°	ARU 1011 xx	XAR 0101 xx	XAR 0211 B3	XAR 0311 B3	5.30
	ARU 1012 xx	XAR 0102 xx	XAR 0212 B3	XAR 0312 B3	8.40
	ARU 1013 xx	XAR 0103 xx	XAR 0213 B3	XAR 0313 B3	10.5
	ARU 1015 xx	XAR 0105 xx	XAR 0215 B3	XAR 0315 B3	13.0
	ARU 1017 xx	XAR 0107 xx	XAR 0217 B3	XAR 0317 B3	16.5
	ARU 1019 xx	XAR 0109 xx	XAR 0219 B3	XAR 0319 B3	21.0

The available options are listed below, together with the respective PNR material codes.

Orifice Materials	PNR codes
AISI 316 Stainless steel	B3
AISI 420 Hardened stainless steel	C1
Titanium	H1
Tungsten carbide	F1