

# **SAPPHIRE NOZZLE 972**

The sapphire nozzle type 972 was designed to be used as a pointed nozzle for hand lances, or as an insert for rotary nozzles, or as an insert for spray-bars. The nozzle is characterized above all by its service life, efficiency and quality and can be used up to an operating pressure of 3000 bar.

The nozzle neck is manufactured very precisely and has a perfect concentricity with the sealing edge. The sealing edge 56° has no roundings or double angles and a greater wall thickness compared to conventional nozzles. Therefore there can be no deformation of the nozzle body at the sealing edge.

The heart of the nozzle, its the sapphire has a consistent and high quality. All sapphire are checkedfor scratches, cracks and flow.

This product is compatible with the following brands or products.

- Series 3546/3024 UHP-X
- OS6tm



#### **PROPERTIES AND ADVANTAGES**

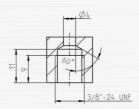
- LONG LIFETIME
- CONSTANT JET QUALITY
- HIGH-POWER AND FOCUSED WATER JET
- NEEDLE JET WITH HIGH ENERGY DENSITY
- EASY TO INSTALL AND DISASSEMBLE
- SWISS QUALITY

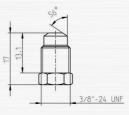
CHARACTERISTICS	TYPE				
CHARACTERISTICS	972				
Operating pressure (bar)	max. 3000				
Operating temp. (°C)	max. 150°				
Tightening torque (Nm)	max. 40°				

### SAPPHIRE INSERT NOZZLE 972

#### **APPLICATIONS**

- AUTOMOBILE AND AIRCRAFT INDUSTRY
- CONSTRUCTION INDUSTRY
- CONCRETE DEMOLITION
- MECHANICAL AND APPARATUS ENGINEERING
- SURFACE TREATMENT
- OFFSHORE DEPLOYMENT
- CEMENT AND CONCRETE INDUSTRY
- SURFACE CLEANING
- INDUSTRIAL CLEANING
- SPRAYBARS







## PERFORMANCES

					Р	RESSURE IN PS	I / BAR			
		JS SI NOZZLE ØD MM	psi	psi	psi	psi	psi	psi	psi	psi
ART, NO	NOZZLE SIZE IN US		2900	7250	10875	14500	21750	29000	36250	43500
GAL/MIN AT	GAL/MIN AT 40 PSI		bar	bar	bar	bar	bar	bar	bar	bar
			200	500	750	1000	1500	2000	2500	3000
			FLOW RATE IN L/MIN							
972.010	0002	0.10	0.064	0.100	0.122	0.141	0.171	0.196	0.217	0.237
972.0125	0003	0.125	0.100	0.157	0.191	0.220	0.267	0.306	0.340	0.370
972.015	0004	0.15	0.143	0.226	0.275	0.316	0.385	0.441	0.489	0.532
972.0175	0006	0.175	0.195	0.307	0.375	0.431	0.523	0.600	0.666	0.725
972.020	0008	0.20	0.255	0.401	0.489	0.563	0.684	0.784	0.870	0.946
972.025	0012	0.25	0.399	0.627	0.764	0.879	1.068	1.224	1.359	1.479
972.030	0018	0.30	0.574	0.903	1.101	1.266	1.538	1.763	1.957	2.130
972035	0025	0.35	0.804	1.265	1.542	1.774	2.155	2.470	2.742	2.984
972.040	0032	0.40	1.050	1.652	2.015	2.317	2.815	3.226	3.582	3.897
972.045	0041	0.45	1.329	2.091	2.550	2.932	3.563	4.083	4.533	4.933
972.050	0050	0.50	1.641	2.581	3.148	3.620	4.399	5.041	5.596	6.090

## SAPPHIRE INSERT NOZZLE 972

		PRESSURE IN PSI / BAR									
	NOZZLE SIZE IN US		psi 2900	psi 7250	psi 10875	psi 14500	psi 21750	psi 29000	psi 36250	psi 43500	
	GAL/MIN AT 40 PSI	NOZZLE ØD MM	bar	bar	bar	bar	bar	bar	bar	bar	
			200	500	750	1000	1500	2000	2500	3000	
			FLOW RATE IN L/MIN								
972.055	0061	0.55	1.986	3.123	3.809	4.380	5.322	6.100	6.772	7.368	
972.060	0073	0.60	2.363	3.717	4.533	5.213	6.334	7.259	8.059	8.769	
972.065	0085	0.65	2.773	4.362	5.320	6.118	7.434	8.519	9.458	10.29	
972.070	0099	0.70	3.217	5.059	6.170	7.095	8.621	9.881	10.969	11.93	
972.075	0114	0.75	3.692	5.808	7.083	8.145	9.897	11.342	12.592	13.70	
972.080	0131	0.80	4.261	6.702	8.174	9.399	11.421	13.090	14.531	15.81	
972.085	0148	0.85	4.810	7.566	9.228	10.611	12.893	14.777	16.404	17.85	
972.090	0166	0.90	5.393	8.483	10.345	11.896	14.455	16.566	18.391	20.01	
972.095	0187	0.95	6.094	9.584	11.689	13.441	16.332	18.718	20.780	22.61	
972.100	0213	1.00	6.939	10.915	13.311	15.307	18.600	21.317	23.664	25.75	
972.110	0258	1.10	8.397	13.207	16.107	18.522	22.505	25.793	28.634	31.15	
972.120	0307	1.20	9.993	15.717	19.168	22.042	26.783	30.696	34.077	37.08	
972.130	0361	1.30	11.728	18.446	22.496	25.869	31.433	36.025	39.993	43.51	
972.140	0418	1.40	13.601	21.393	26.090	30.002	36.455	41.780	46.382	50.47	
972.150	0480	1.50	15.614	24.558	29.950	34.441	41.849	47.962	53.245	57.93	
972.160	0546	1.60	17.765	27.942	34.077	39.187	47.615	54.570	60.581	65.920	
972.170	0617	1.70	20.055	31.544	38.470	44.238	53.753	61.605	68.390	74.41	
972.180	0692	1.80	22.484	35.364	43.129	49.596	60.263	69.066	76.673	83.43	
972.190	0771	1.90	25.051	39.402	48.054	55.259	67.144	76.953	85.428	92.95	
972.200	0854	2.00	27.758	43.659	53.245	61.229	74.398	85.266	94.658	103.00	
972.210	0941	2.10	30.603	48.134	58.703	67.505	82.024	94.006	104.360	113.55	
972.220	1103	2.20	35.856	56.397	68.780	79.093	96.104	110.143	122.274	133.05	
972.230	1205	2.30	39.190	61.641	75.175	86.447	105.040	120.384	133.643	145.42	
972.240	1313	2.40	42.672	67.117	81.854	94.127	114.372	131.080	145.517	158.34	
972.250	1424	2.50	46.302	72.827	88.817	102.135	124.102	142.230	157.896	171.81	
972.260	1540	2.60	50.080	78.770	96.064	110.469	134.228	153.836	170.780	185.83	
972.270	1661	2.70	54.007	84.945	103.596	119.130	144.752	165.898	184.170	200.40	
972.280	1786	2.80	58.081	91.354	111.412	128.118	155.673	178.414	198.064	215.52	
972.290	1917	2.90	62.304	97.996	119.512	137.432	166.991	191.385	212.465	231.19	
972.300	2051	3.00	66.675	104.871	127.896	147.074	178.707	204.812	227.370	247.41	

#### INSTRUCTIONS

WHEN MANUALLY OPERATING HIGH PRESSURE GUNS AND LANCES THE REPULSIVE FORCE ON THE AXIS SHOULD NOT EXCEED 250N! IF THE REPULSIVE FORCE EXCEEDS 150N, A SUPPORT / BODY ARMOUR IS REQUIRED!



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< 150 N < 250 N > 250 N