

TurboJets

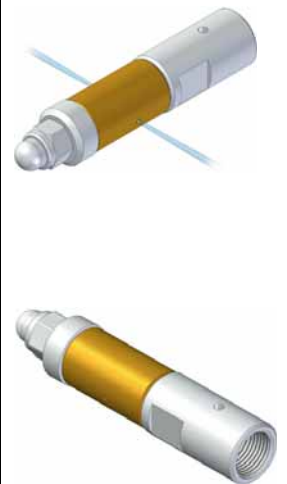
Pipe cleaning nozzles - selfspinning

HAMMELMANN TurboJets have a rotating nozzle body that prevents striping inside the tubes. The rotation speeds up to 20,000 r.p.m. are effected by the reaction force the water jets emitting the nozzles. For economic reasons the layout of the above nozzles is such that, based on a 6 metre long high pressure hose, the pressure loss is max. 25 % of the operating pressure available. Driving nozzles available upon request, see page 14.C.4.

1000 bar, polisher

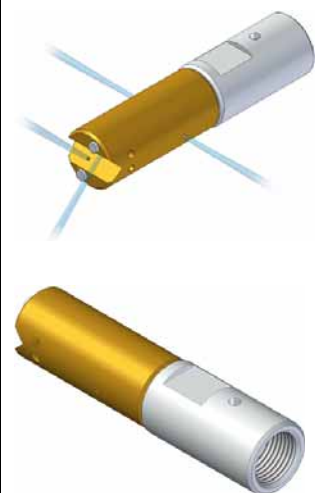
Nozzle Ø [mm]	Connection thread female	Tube Ø [mm]		Nozzles	Output at 1000 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
10	M 7	12	25	2 x Ø 0,80 radial	approx. 15	b	04.00786.0049
12	G 1/8"	15	30	2 x Ø 0,80 radial	approx. 23	b	04.00786.0044
		15	30	2 x Ø 1,00 radial	approx. 33	b	04.00786.0015
		15	30	2 x Ø 1,00 radial	approx. 33	c	04.00786.0030*
18	G 1/4"	20	40	2 x Ø 0,80 radial	approx. 36	a, c	04.00786.0039*
		20	40	2 x Ø 0,90 radial	approx. 40	a, c	04.00786.0034*
		20	40	2 x Ø 1,00 radial	approx. 44	a, b	04.00786.0010
		20	40	2 x Ø 1,00 radial	approx. 44	a, c	04.00786.0032*
22	G 1/4"	25	50	2 x Ø 0,80 radial	approx. 36	a, c	04.00786.0038*
		25	50	2 x Ø 0,90 radial	approx. 40	a, c	04.00786.0033*
		25	50	2 x Ø 1,00 radial	approx. 44	a, b	04.00786.0026
		25	50	2 x Ø 1,20 radial	approx. 61	a, b	04.00786.0013
		25	50	2 x Ø 1,20 radial	approx. 61	a, c	04.00786.0031*

* reduced r.p.m.



1000 bar, with front cutting nozzles

Nozzle Ø [mm]	Connection thread female	Tube Ø [mm]		Nozzles	Output at 1000 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
12	G 1/8"	15	30	2 x Ø 0,50 axial	approx. 23	b	04.00786.0047
				2 x Ø 0,50 radial			
		15	30	2 x Ø 0,80 axial	approx. 39	b	04.00786.0014
2 x Ø 0,80 radial							
18	G 1/4"	20	40	2 x Ø 0,80 axial	approx. 50	a,b	04.00786.0011
				2 x Ø 0,80 radial			
22	G 1/4"	25	50	2 x Ø 0,45 axial	approx. 39	a,b	04.00786.0048
				2 x Ø 0,30 radial			
		25	50	2 x Ø 0,60 axial	approx. 47	a,b	04.00786.0025
				2 x Ø 0,60 radial			
		25	50	2 x Ø 1,00 axial	approx. 72	a,b	04.00786.0012
				2 x Ø 1,00 radial			



a) with nozzle inserts b) bronze rotor c) stainless steel rotor

Hammelmann GmbH

Carl-Zeiss-Straße 6-8
59302 Oelde • Germany
mail@hammelmann.de

Telefon (0 25 22) 76-0
Telefax (0 25 22) 76-140
www.hammelmann.de

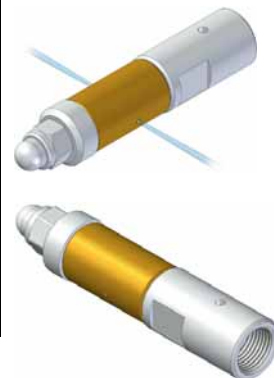
HAMMELMANN®

TurboJets

Pipe cleaning nozzles - selfspinning

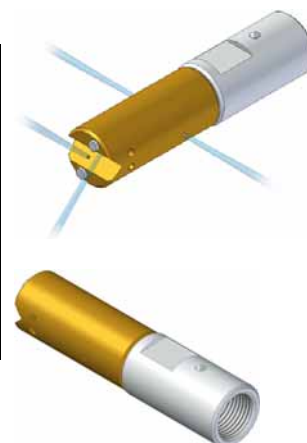
1500 bar, polisher

Nozzle Ø [mm]	Connection thread female	Tube Ø [mm]		Nozzles	Output at 1500 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
12	M 7	15	30	2 x Ø 0,90 radial	approx. 30	c	00.00788.0008
14	G 1/8"	17	35	2 x Ø 1,00 radial	approx. 38	c	00.00788.0009
18	G 1/4"	20	40	2 x Ø 1,10 radial	approx. 45	c	00.00788.0010
22	G 1/4"	25	50	2 x Ø 1,00 radial	approx. 50	a, b	00.00788.0011
28	G 1/4"	33	60	2 x Ø 1,10 radial	approx. 62	a, b	00.00788.0012



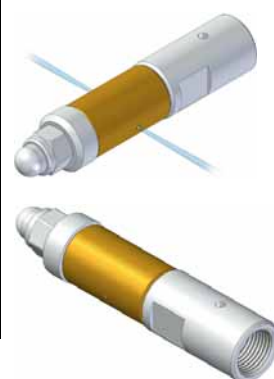
1500 bar, with front cutting nozzles

Nozzle Ø [mm]	Connection thread female	Tube Ø [mm]		Nozzles	Output at 1500 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
18	G 1/4"	20	40	2 x Ø 0,60 axial	approx. 40	a, c	00.00788.0006
				2 x Ø 0,60 radial			
22	G 1/4"	25	50	2 x Ø 0,60 axial	approx. 40	a, c	00.00788.0007
				2 x Ø 0,60 radial			



2500 bar, polisher

Nozzle Ø [mm]	Connection thread with sealing cone female	Tube Ø [mm]		Nozzles	Output at 2500 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
15	3/8"-24 UNF LH	18	35	2 x Ø 0,60 radial	approx. 25	a, b	00.00788.0013
16	3/8"-24 UNF LH	19	35	2 x Ø 0,60 radial	approx. 25	a, b	00.00788.0014
18	3/8"-24 UNF LH	20	40	2 x Ø 0,70 radial	approx. 32	a, b	00.00788.0015
20	M 14 x 1,5 LH	23	45	2 x Ø 0,70 radial	approx. 32	a, b	00.00788.0016



a) with nozzle inserts b) bronze rotor c) stainless steel rotor

HAMMELMANN®

TurboJets

Pipe cleaning nozzles - selfspinning

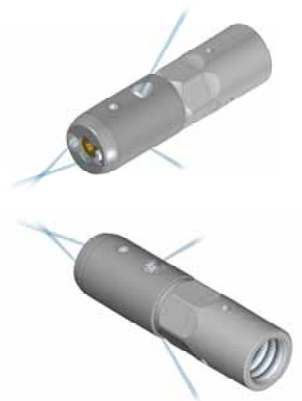
2800 bar, polisher, with magnetic brake system for reduced speed and max. cutting power

Nozzle Ø [mm]	Connection thread female	Tube Ø [mm]		Nozzles	Output at 2800 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
18	M 14 x 1.5 LH	20	40	2 x Ø 0,40 radial	approx. 21,5	a, c	00.00788.0019
18	9/16"-24 UNF LH	20	40	2 x Ø 0,40 radial	approx. 21,5	a, c	00.00788.0020



2800 bar, with front cutting nozzles and magnetic brake system for reduced speed and max. cutting power

Nozzle Ø [mm]	Connection thread female	Tube Ø [mm]		Nozzles	Output at 2800 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
18	M 14 x 1.5 LH	20	40	2 x Ø 0,35 pull	approx. 25	a, c	00.00788.0017
				2 x Ø 0,30 push			
18	9/16"-24 UNF LH	20	40	2 x Ø 0,35 pull	approx. 25	a, c	00.00788.0018
				2 x Ø 0,30 push			



2500 bar, polisher with magnetic brake for reduced speed and max. cutting power, nozzle inserts

Nozzle Ø [mm]	Connection thread female Hose ID	Tube Ø [mm]		Nozzles	Output at 2500 bar (incl. leakage) [l/min.]		Code no.
		min.	max.				
19	M 14 x 1,5 LH DN 5	25	45	2 x Ø 0,50 radial	approx. 17	a, c	04.00786.0053
		25	45	2 x Ø 0,60 radial	approx. 20	a, c	04.00786.0051
		25	45	2 x Ø 0,70 radial	approx. 24	a, c	04.00786.0052



a) with nozzle inserts b) bronze rotor c) stainless steel rotor

Accessories TurboJets

The driving nozzles are installed as an adapter between the lance or hose and the *TurboJet*. The driving nozzle has 3 angled bores in the pulling direction which drives the turbo jet into the tube by the reaction force of the water emitting the bores. The diameter of the diving bores is determined by the application. More driving nozzles are available upon request.

Max. Ø drive nozzle set [mm]	Connection thread Hose ID	Operating pressure [bar]	Nozzles	Output at 1000 bar [l/min.]	Code no.
13	G 1/8" male M 8 female DN 4	1000	3 x Ø 0,40 pull	approx. 6	01.00797.0089
			3 x Ø 0,60 pull	approx. 13	01.00797.0077
			3 x Ø 0,80 pull	approx. 23	01.00797.0072
			3 x Ø 1,00 pull	approx. 35	01.00797.0073
13	G 1/8" male M 10 x 1 fem. DN 6	1000	3 x Ø 0,50 pull	approx. 9	01.00797.0076
			3 x Ø 0,60 pull	approx. 13	01.00797.0075
			3 x Ø 0,80 pull	approx. 23	01.00797.0070
			3 x Ø 1,00 pull	approx. 35	01.00797.0071
18	G 1/4" male M 8 female DN 4	1000	3 x Ø 0,40 pull	approx. 6	01.00797.0090
			3 x Ø 0,80 pull	approx. 23	01.00797.0065
			3 x Ø 1,00 pull	approx. 35	01.00797.0066
			3 x Ø 1,20 pull	approx. 51	01.00797.0067
18	G 1/4" male M 10 x 1 fem. DN 6	1000	3 x Ø 0,60 pull	approx. 13	01.00797.0074
			3 x Ø 0,80 pull	approx. 23	01.00797.0062
			3 x Ø 1,00 pull	approx. 35	01.00797.0063
			3 x Ø 1,10 pull	approx. 43	01.00797.0091
			3 x Ø 1,20 pull	approx. 51	01.00797.0064



Max. Ø drive nozzle set [mm]	Connection thread Hose ID	Operating pressure [bar]	Nozzles	Max. flowrate [l/min.]	Code no.
19	M 14 x 1,5 LH male/female DN 5	3000	3 x pull Type S	approx. 30	01.00797.0093
18	M 14 x 1,5 LH male/female DN 5	2800	3 x pull Type W	approx. 30	01.00797.0094
18	9/16"-24 UNF LH male/female DN 5	2800	3 x pull Type W	approx. 30	01.00797.0095



Seal ring for *TurboJet* and "drive nozzle set", max. 1000 bar

for M 8	02.01709.0001
for M 10 x 1 or G 1/8"	02.01709.0002
for G 1/4"	04.00706.0022



HAMMELMANN®