

# HMT

H.M.T. (Hard Materials Technologies) GmbH



# Blasting Nozzle Selecting Guide

Aside from nozzle patterns design, which is simply understood by nozzles operators, there are 3 basic factors: Compressed Air Supply for the Nozzle, Bore Size and Nozzle Materials, critical for optimum cost/performance.

## 1, Compressed Air Supply for the Nozzle

Normally, the air supply system should be able to provide at least 50% more air volume (cfm) than a new nozzle in order to develop the required working blasting pressure, whether that is 100 psi or 140 psi. That ensures a nozzle can provide good service consistently even after it is slightly worn. Excessive wear should be avoided to prevent a dramatic decrease in productivity.

In addition, the nozzle entry throat must be matched with the inside diameter of the air supply hose. Any wrong size combination might lead to wear points, pressure drop, and excessive internal turbulence.

### ■ Matching Nozzle Size and Compressor Size for Required Production Rate

production rate required (sq.ft ./hr)	blast nozzle orifice	production rate at 100 psi nozzle pressure	production rate at 90 psi nozzle pressure	production rate at 80 psi nozzle pressure	compressor size cfm at 100 psi nozzle pressure
Up to 100	1/4"	100	85	70	185 cfm 40 - 50 h,p,
101 - 160	5/16"	160	136	112	250 cfm 60 - 75 h,p,
161 - 230	3/8"	230	195	161	375 cfm 75 - 100 h,p,
231 - 317	7/16"	317	270	222	450 cfm 125 h,p,
318 - 400	1/2"	400	340	280	600 cfm 150 h,p,

This chart is estimated and based upon use of a long venturi nozzle,SSPC-6 commercial blast specification.

## Nozzle Air and Pressure Requirements Chart

### ■ Nozzle Pressure -PSI (Bar)

nozzle orifice mm(in)	air,power, and abrasive requirements	50psi (3,45bar)	60psi (4,14bar)	70psi (4,83bar)	80psi (5,52bar)	90psi (6,21bar)	100psi (6,89bar)	125psi (8,62bar)
3,2 (1/8)	air: cu m/min (cu ft/min)	0,34 (12)	0,37 (13)	0,42 (15)	0,51 (18)	0,54 (19)	0,59 (21)	0,74 (26)
	horsepower: kw (hp)	1,30 (1,75)	1,49 (2)	1,86 (2,5)	2,24 (3)	2,61 (3,5)	2,98 (4)	4,47 (6)
	abrasive: kg/hr (lb/hr)	32 (70)	36 (80)	41 (90)	45 (100)	50 (110)	54 (120)	61 (135)
4,8 (3/16)	air: cu m/min (cu ft/min)	0,71 (25)	0,85 (30)	0,99 (35)	1,13 (40)	1,22 (43)	1,27 (45)	1,70 (60)
	horsepower: kw (hp)	3,73 (5)	5,97 (8)	6,71 (9)	7,08 (9,5)	7,46 (10)	7,83 (10,5)	11,93 (16)
	abrasive: kg/hr (lb/hr)	68 (150)	77 (170)	91 (200)	98 (215)	109 (240)	118 (260)	145 (320)
6,35 (1/4)	air: cu m/min (cu ft/min)	1,42 (50)	1,56 (55)	1,70 (60)	1,98 (70)	2,12 (75)	2,27 (80)	2,69 (95)
	horsepower: kw (hp)	7,46 (10)	8,95 (12)	9,69 (13)	11,93 (16)	12,68 (17)	13,42 (18)	18,64 (25)
	abrasive: kg/hr (lb/hr)	122 (270)	136 (300)	159 (350)	181 (400)	204 (450)	227 (500)	306 (675)
8 (5/16)	air: cu m/min (cu ft/min)	2,27 (80)	2,55 (90)	2,83 (100)	3,26 (115)	3,54 (125)	3,96 (140)	5,35 (190)
	horsepower: kw (hp)	12,68 (17)	14,91 (20)	18,64 (25)	20,13 (27)	20,88 (28)	22,37 (30)	26,85 (36)
	abrasive: kg/hr (lb/hr)	213 (470)	240 (530)	272 (600)	306 (675)	340 (750)	374 (825)	454 (1000)
9,5 (3/8)	air: cu m/min (cu ft/min)	3,12 (110)	3,54 (125)	4,11 (145)	4,53 (160)	4,96 (175)	5,66 (200)	7,79 (275)
	horsepower: kw (hp)	18,64 (25)	21,63 (29)	23,86 (32)	26,10 (35)	29,83 (40)	33,56 (45)	42,50 (57)
	abrasive: kg/hr (lb/hr)	306 (675)	352 (775)	397 (875)	442 (975)	481 (1060)	499 (1100)	612 (1350)
11 (7/16)	air: cu m/min (cu ft/min)	4,25 (150)	4,81 (170)	5,66 (200)	6,09 (215)	6,80 (240)	7,22 (255)	8,92 (315)
	horsepower: kw (hp)	26,10 (35)	29,83 (40)	33,56 (45)	37,28 (50)	41,01 (55)	44,74 (60)	52,20 (70)
	abrasive: kg/hr (lb/hr)	408 (900)	454 (1000)	544 (1200)	590 (1300)	635 (1400)	703 (1550)	816 (1800)
12,7 (1/2)	air: cu m/min (cu ft/min)	5,66 (200)	6,37 (225)	7,08 (250)	7,79 (275)	8,50 (300)	9,63 (340)	12,18 (430)
	horsepower: kw (hp)	33,56 (45)	37,28 (50)	41,01 (55)	46,98 (63)	52,20 (70)	55,93 (75)	70,84 (95)
	abrasive: kg/hr (lb/hr)	544 (1200)	612 (1350)	680 (1500)	771 (1700)	839 (1850)	919 (2025)	1145 (2525)
16 (5/8)	air: cu m/min (cu ft/min)	8,50 (300)	9,91 (350)	11,33 (400)	12,74 (450)	14,16 (500)	15,58 (550)	19,82 (700)
	horsepower: kw (hp)	52,20 (70)	59,66 (80)	67,11 (90)	74,57 (100)	82,03 (110)	89,48 (120)	111,85 (150)
	abrasive: kg/hr (lb/hr)	862 (1900)	998 (2200)	1089 (2400)	1225 (2700)	1361 (3000)	1497 (3300)	1814 (4000)
19 (3/4)	air: cu m/min (cu ft/min)	12,18 (430)	14,16 (500)	16,28 (575)	18,41 (650)	19,82 (700)	22,66 (800)	31,15 (1100)
	horsepower: kw (hp)	74,57 (100)	85,76 (115)	96,94 (130)	108,13 (145)	119,31 (160)	130,05 (175)	160,33 (215)
	abrasive: kg/hr (lb/hr)	1225 (2700)	1406 (3100)	1588 (3500)	1769 (3900)	1950 (4300)	2132 (4700)	2586 (5700)

This table is to be used as reference only. Actual results may vary depending on specific abrasive medium used. This table is based on abrasive with a bulk density of 100 pounds per cubic foot.

## 2, Bore Size

For optimum productivity, the nozzle bore size is selected based on the desired blast pressure and the available air pressure and flow. In addition to the blast nozzle, the compressor is supplying air to an air helmet and other components such as air motors and pneumatic controls, generally with 20% of its air capacity. For instance, Chart 1 shows that 250 cfm is sufficient for a 7/16" nozzle operating at 100 psi. However, a larger nozzle, or a worn 7/16" nozzle, will require more air flow to maintain 100 psi. This extra flow requirement will either overwork your compressor or decrease productivity. On the other hand, choosing a nozzle with a bore smaller than your compressor can supply will result in less than maximum productivity from the system.

## 3, Nozzle Materials

Nozzle material selection depends on many factors including which abrasive applied, how often the blasting job is done, the size of the job and the rigors of the job site. Here are general nozzle material choosing guidelines for various materials from our portfolio.

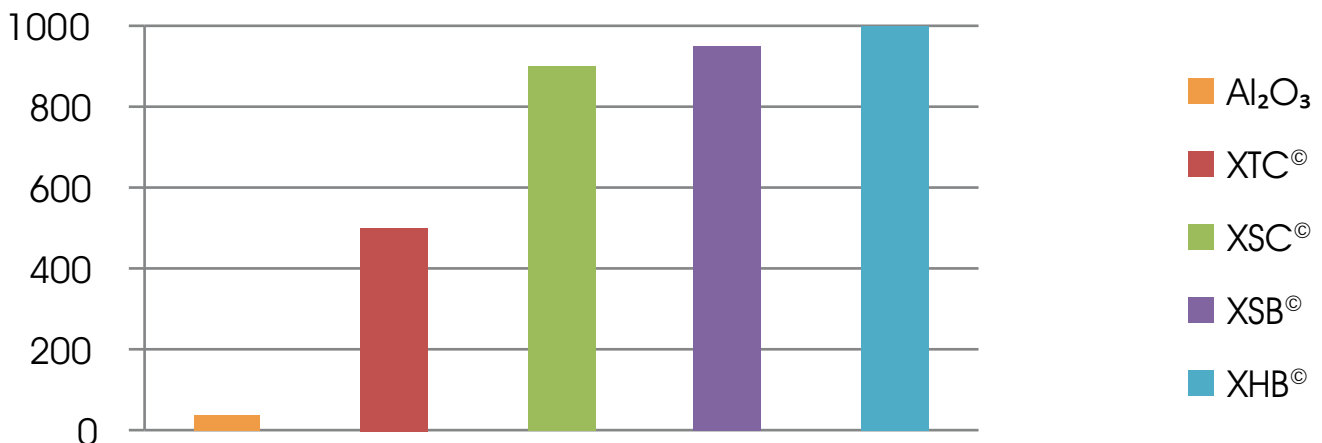
Tungsten Carbide (XTC®) Nozzles offer long life and economy when rough handling can not be avoided and mineral or coal slag or steel grit abrasives are used. We have 2 grades of XTC , oriented to different budgets: YG6-TC, the top wear grade and TiC-TC, the economical but slightly-inferior-in-service-life solution.

Silicon Carbide (XSC®) Nozzles offer service life and durability max. double tungsten carbide provided rough handling is avoided, but are only about half the weight. Our XSC nozzles are an excellent choice for those operators on long-period job and prefer a lightweight nozzle.

Hot-pressed Boron Carbide (XHB®) Nozzles provide long life with optimum air and abrasive use. XHB, the 2nd hardest material only after diamond, is ideal for aggressive abrasives such as aluminum oxide and selected mineral aggregates when rough handling can be avoided. XHB will typically outwear tungsten carbide by five to ten times.

Self-sintered Boron Carbide (XSB®) Nozzles serve as an economical substitute for XHB nozzles when they are operated with other mild media than alumina and selected mineral aggregates. XSB is tougher than XHB, so stronger against rough handling than the latter.

Up to Hours



## **Proven Methods to Increase Nozzle Service Life**

Avoid dropping or banging nozzles against anything to reduce breaking risks.

Be sure to use a nozzle designed for certain application and the abrasive assigned.

Inspect and replace, if necessary, the gasket, or washer after every 10 to 20 hours of use. It can help prevent the nozzle's entry throat from being blasted away.

## **Inspect and Replace Nozzles**

Here are three simple tests to decide whether the nozzle has been worn out and to be replaced:

1. Insert a drill bit of a size that matches the original bore of the nozzle. If there's any slop, it's time to replace it. Nozzle wear means pressure loss. Pressure loss means lost productivity, there is a 1.5% loss of productivity for every pound of air pressure lost.
2. Hold an open nozzle up to the light and look down the bore. Any ripple or orange peel effect inside the carbide liner will create internal turbulence that reduces abrasive velocity. If you notice any uneven wear or pressure drop, it's time to replace.
3. Check the nozzle's exterior, too. The materials used to build nozzles are tough, but can be brittle. Nozzle jacketing materials are designed to help protect breakable liners from impact damage. If the jacket is cracked or dented, chances are the liner is also cracked. If the liner is fractured, even with hairline cracks, the nozzle should be replaced immediately. It is not safe to use a cracked nozzle.

**Remember that all nozzles will eventually wear out. Keep a supply of back-up nozzles on hand to minimize down time.**

## Abrasive Blast Nozzles

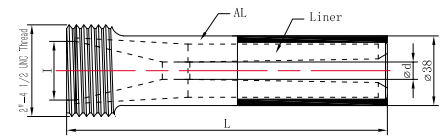
Our XSC® nozzles whose liners are made, through self-sintering technique with a nano-level ultra-fine silicon carbide recipe offer at least 20% higher lifetime, at similar cost, than their competitors.

### ● Long Conventional Venturi Nozzles

**Description:** Long venturi nozzles with XSC® liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
12661	XSCLV-3/50	4.8	140
10110	XSCLV-4/50	6.4	140
10120	XSCLV-5/50	7.9	145
10130	XSCLV-6/50	9.5	170
10140	XSCLV-7/50	11.0	195
10150	XSCLV-8/50	12.7	220
10160	XSCLV-10/50	16.0	235
10170	XSCLV-12/50	19.0	235

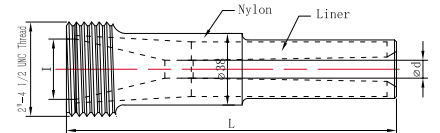
l=1 1/4" or 32mm



**Description:** Long venturi nozzles with XSC® liners and UNC 2"-4 1/2 threaded antistatic nylon jackets.

P/N	MODEL	d(mm)	L(mm)
14720	XSCNLV-4	6.4	140
14730	XSCNLV-5	7.9	145
14740	XSCNLV-6	9.5	170
14750	XSCNLV-7	11.0	195
14760	XSCNLV-8	12.7	220

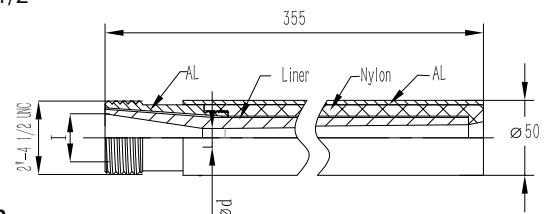
l=1 1/4" or 32mm



**Description:** Ultra long venturi nozzles with XSC® liners and UNC 2"-4 1/2 threaded Al jackets lined with shock buffering and weight saving polymer.

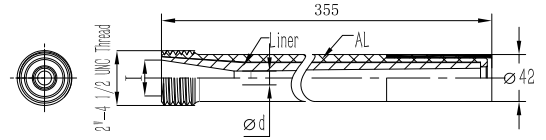
P/N	MODEL	d(mm)	L(mm)
14680	XSCULVS-6/50	9.5	355
14690	XSCULVS-8/50	12.5	355

l=1 1/4" or 32mm



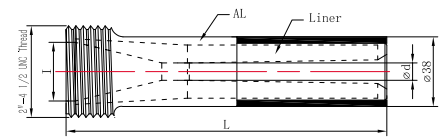
**Description:** Ultra long venturi nozzles with XSC® liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)	
14700	XSCULVS-6/50	9.5	355	
14710	XSCULVS-8/50	12.5	355	l=1 1/4" or 32mm



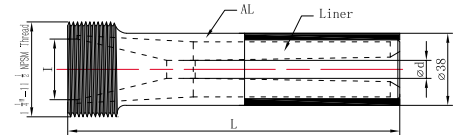
**Description:** Long venturi nozzles with XSC® liners and UNC 2"-4 1/2 coarse threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)	
14630	XSCSLV-4/50	6.4	140	
14640	XSCSLV-5/50	7.9	145	
14650	XSCSLV-6/50	9.5	170	l=1" or 25mm
14660	XSCSLV-7/50	11.0	195	
14670	XSCSLV-8/50	12.7	220	



**Description:** Long venturi nozzles with XSC® liners and NPSM 1 1/4"-1 1/2 Al jackets plus rubber sleeves.

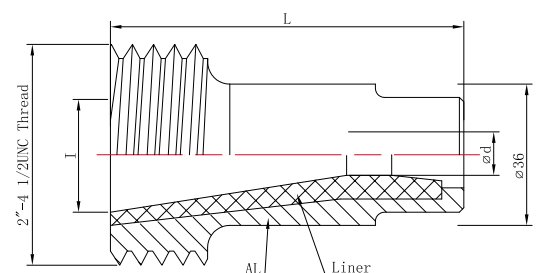
P/N	MODEL	d(mm)	L(mm)	
12810	XSCFLV-4	6.4	140	
12820	XSCFLV-5	7.9	145	
12830	XSCFLV-6	9.5	170	l=1" or 25mm
12840	XSCFLV-7	11.0	195	
12850	XSCFLV-8	12.7	220	



## ● Medium Venturi Nozzles

**Description:** Medium venturi nozzles with XSC® liners and UNC 2"-4 1/2 threaded Al jackets.

P/N	MODEL	d(mm)	L(mm)	
10460	XSCMV-4/50	6.4	85	
10470	XSCMV-5/50	7.9	85	
10480	XSCMV-6/50	9.5	85	l=1" or 25mm
10490	XSCMV-7/50	11.0	85	
10500	XSCMV-8/50	12.0	85	

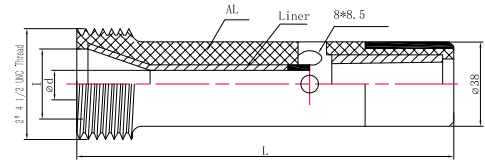


## ● Long Double Venturi Nozzles

**Description:** Long double venturi nozzles with XSC® liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
10410	XSCDV-4/50	6.4	135
10420	XSCDV-5/50	7.9	155
10430	XSCDV-6/50	9.5	175
10440	XSCDV-7/50	11.0	215
10450	XSCDV-8/50	12.7	230

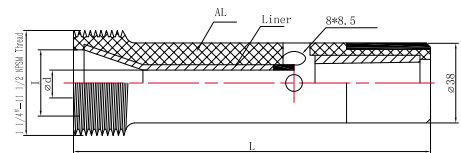
L=1 1/4" or 32mm



**Description:** Long double venturi nozzles with XSC® liners and NPSM 1 1/4"-1 1/2 Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
12860	XSCFDV-4	6.4	135
12870	XSCFDV-5	7.9	155
12880	XSCFDV-6	9.5	170
12890	XSCFDV-7	11.0	215
12900	XSCFDV-8	12.7	230

L=1" or 25mm

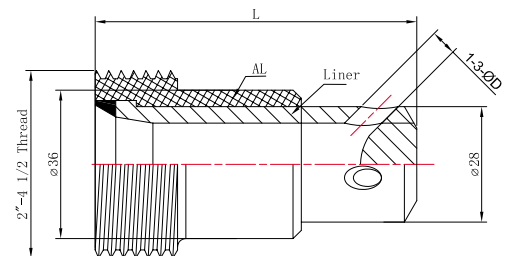


## ● Angle Nozzles

45 degree angle sandblasting nozzles are available in single and triple (equi-spaced) side outlets. They are ideal for blasting recesses, behind angles and inside pipes.

**Description:** Angle nozzles with XSC® liners and a UNC 2"-4 1/2 threaded Al jacket.

P/N	MODEL	d(mm)	L(mm)
10180	XSCAN-2X1/50	1x3.2	78
10190	XSCAN-2X2/50	2x3.2	78
10200	XSCAN-2X3/50	3x3.2	78
10210	XSCAN-3X1/50	1x4.8	78
10220	XSCAN-3X2/50	2x4.8	78
10230	XSCAN-3X3/50	3x4.8	78
10240	XSCAN-4X1/50	1x6.4	78
10250	XSCAN-4X2/50	2x6.4	78
10260	XSCAN-4X3/50	3x6.4	78
10270	XSCAN-5X1/50	1x8.0	78
10280	XSCAN-5X2/50	2x8.0	78
10290	XSCAN-5X3/50	3x8.0	78
10300	XSCAN-6X1/50	1x9.5	78
10310	XSCAN-6X2/50	2x9.5	78
10320	XSCAN-6X3/50	3x9.5	78





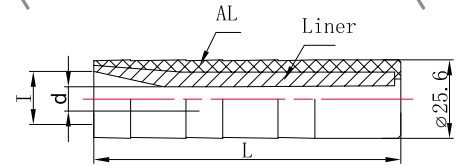
## ● Stick-up Nozzles

**Description:** Stick-up nozzles with XSC® liners and Al jackets fit ID 25mm

hoses

P/N	MODEL	d(mm)	L(mm)
10330	XSCSU-4/25	6.4	100
10340	XSCSU-5/25	7.9	100
12690	XSCSU-6/25	9.5	100

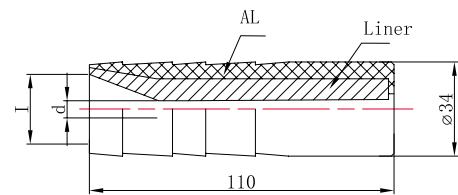
**l=7/10" or 18mm**



**Description:** Stick-up nozzles with XSC® liners and Al jackets fit ID 32mm hoses.

P/N	MODEL	d(mm)	L(mm)
10350	XSCSU-4/32	6.4	110
10360	XSCSU-5/32	7.9	110
10370	XSCSU-6/32	9.5	110
10380	XSCSU-7/32	11.0	110
10390	XSCSU-8/32	12.0	110
10400	XSCSU-9/32	14.0	110
12670	XSCSU-10/32	16.0	110
12680	XSCSU-12/32	19.0	110

**l=1" or 25mm**

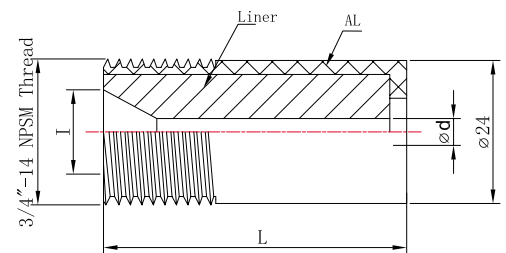


## ● Short Straight-bore Nozzles

**Description:** Short straight-bore nozzles with XSC® liners and NPSM 3/4"-14 fine threaded Al jackets.

P/N	MODEL	d(mm)	L(mm)
13010	XSCSBF-2	3.2	45
13020	XSCSBF-3	4.8	45
13030	XSCSBF-4	6.4	45
13040	XSCSBF-5	7.9	45
13050	XSCSBF-6	9.5	45
13060	XSCSBF-7	11.0	45
13070	XSCSBF-8	13.0	45

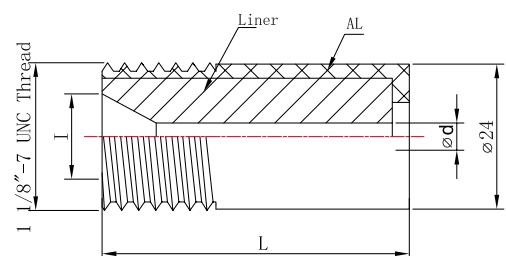
**l=1/2" or 13mm**



**Description:** Short straight-bore nozzles with XSC® liners and UNC 1 1/8"-7 coarse threaded Al jackets.

P/N	MODEL	d(mm)	L(mm)
13080	XSCSBC-2	3.2	45
13090	XSCSBC-3	4.8	45
14000	XSCSBC-4	6.4	45
14010	XSCSBC-5	7.9	45
14020	XSCSBC-6	9.5	45
14030	XSCSBC-7	11.0	45
14040	XSCSBC-8	13.0	45

**l=1/2" or 13mm**



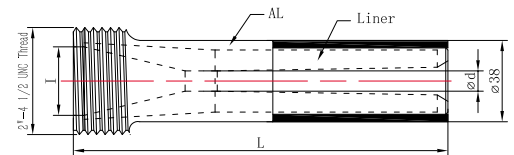
XSB® nozzles liners are made, through self sintering technique, with a ultra-fine boron carbide recipe. With close hardness and mechanical wearability to conventional hot-pressed B<sub>4</sub>C material used in abrasive blasting, its innovative manufacturing process allows production of even the most complex shapes at a drastically reduced cost.

## ● Long Conventional Venturi Nozzles

**Description:** Long venturi nozzles with XSB® liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
12660	XSBLV-3/50	4.8	140
10510	XSBLV-4/50	6.4	140
10520	XSBLV-5/50	7.9	145
10530	XSBLV-6/50	9.5	170
10540	XSBLV-7/50	11.0	195
10550	XSBLV-8/50	12.7	220
10560	XSBLV-10/50	16.0	235
10570	XSBLV-12/50	19.0	235

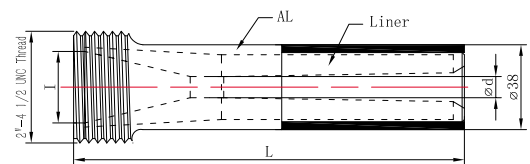
l=1 1/4" or 32mm



**Description:** Long venturi nozzles with XSB® liners and UNC 2"-4 1/2 Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
14270	XSBSLV-4/50	6.4	140
14280	XSBSLV-5/50	7.9	145
14290	XSBSLV-6/50	9.5	170
14300	XSBSLV-7/50	11.0	195
14310	XSBSLV-8/50	12.7	220
14320	XSBSLV-10/50	16.0	235
14330	XSBSLV-12/50	19.0	235

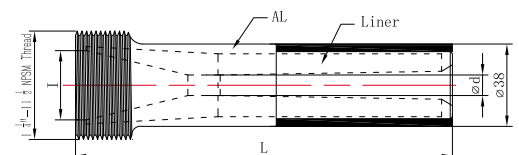
l=1" or 25mm



**Description:** Long venturi nozzles with XSB® liners and NPSM 1 1/4"-11 1/2 fine Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
12910	XSBFLV-4	6.4	140
12920	XSBFLV-5	7.9	145
12930	XSBFLV-6	9.5	170
12940	XSBFLV-7	11.0	195
12950	XSBFLV-8	12.7	220

l=1" or 25mm



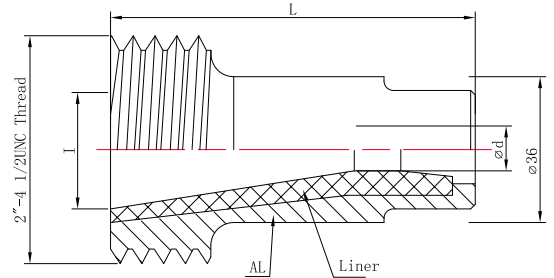
## ● Medium Venturi Nozzles

**Description:** Medium venturi nozzles with XSB® liners and UNC 2"-4 1/2 threaded

Al jackets

P/N	MODEL	d(mm)	L(mm)
10690	XSBMV-4/50	6.4	85
10700	XSBMV-5/50	7.9	85
10710	XSBMV-6/50	9.5	85
10720	XSBMV-7/50	11.0	85
10730	XSBMV-8/50	12.0	85

l=1" or 25mm



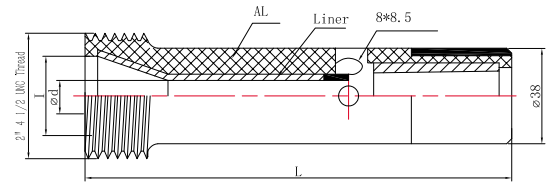
## ● Long Double Venturi Nozzles

**Description:** Long double venturi nozzles with XSB® liners and UNC 2"-4 1/2 Al

jackets.

P/N	MODEL	d(mm)	L(mm)
14340	XSBSDV-4/50	6.4	135
14350	XSBSDV-5/50	7.9	155
14360	XSBSDV-6/50	9.5	170
14370	XSBSDV-7/50	11.0	215
14380	XSBSDV-8/50	12.7	230

l=1" or 25mm

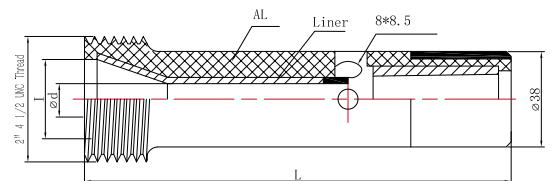


**Description:** Long double venturi nozzles with XSB® liners and UNC 2"-4 1/2

threaded Al Jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
10640	XSBDV-4/50	6.4	135
10650	XSBDV-5/50	7.9	155
10660	XSBDV-6/50	9.5	170
10670	XSBDV-7/50	11.0	215
10680	XSBDV-8/50	12.7	230

l=1 1/4" or 32mm

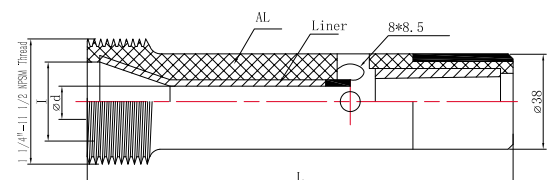


**Description:** Long double venturi nozzles with XSB® liners and NPSM 1 1/4"-11 1/2

Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
12960	XSBFDV-4	6.4	135
12970	XSBFDV-5	7.9	155
12980	XSBFDV-6	9.5	170
12990	XSBFDV-7	11.0	215
13000	XSBFDV-8	12.7	230

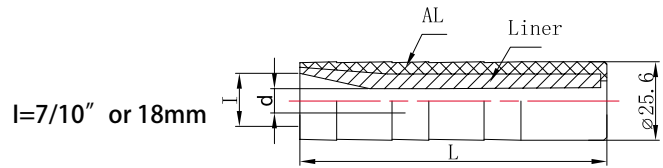
l=1" or 25mm



## ● Stick-up Nozzles

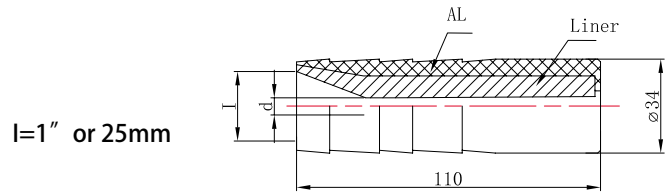
**Description:** Stick-up nozzles with XSB® liners and Al jackets fit ID 25mm hoses.

P/N	MODEL	d(mm)	L(mm)
10580	XSBSU-4/50	6.4	100
10590	XSBSU-5/50	7.9	100
12700	XSBSU-6/50	9.5	100



**Description:** Stick-up nozzles with XSB® liners and Al jackets fit ID 32mm hoses.

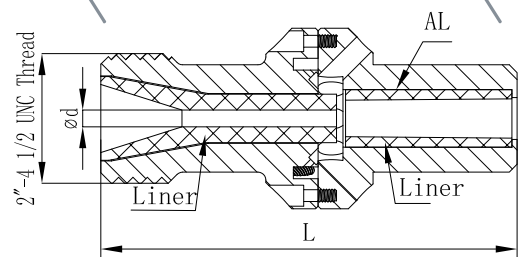
P/N	MODEL	d(mm)	L(mm)
10600	XSBSU-4/32	6.4	110
10610	XSBSU-5/32	7.9	110
10620	XSBSU-6/32	9.5	110
10630	XSBSU-7/32	11.0	110
12460	XSBSU-8/32	12.0	110
12470	XSBSU-9/32	14.0	110
12710	XSBSU-10/32	16.0	110
12720	XSBSU-12/32	19.0	110



## ● Water Induction Nozzles

**Description:** Water induction nozzles with XSB® liners and UNC 2"-4 1/2 threaded Al Jackets.

P/N	MODEL	d(mm)	L(mm)
12480	BWIN-4/50	6.4	160
12490	BWIN-5/50	7.9	160
12500	BWIN-6/50	9.5	160
15420	BWIN-7/50	11.0	208
15430	BWIN-8/50	12.7	223

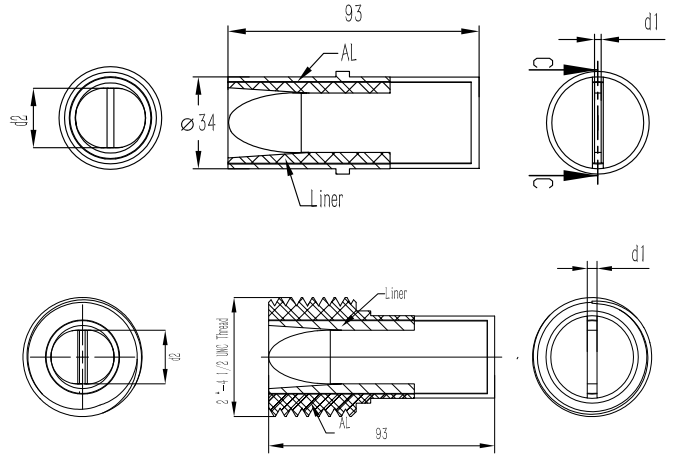


## ● Flatjet Nozzles

Description: Flatjet nozzles with XSB® liners and UNC 2"-4 1/2 threaded or flanged

Al jackets.

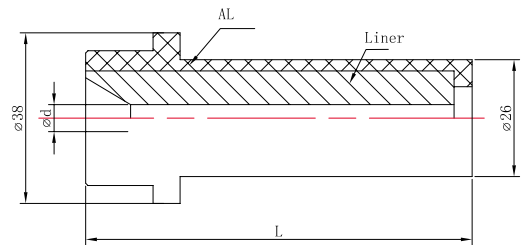
P/N	MODEL	Outlet d1xd2(mm)	L(mm)
14540	XSBFJF-1	2.0x16.5	93
14550	XSBFJF-2	2.0x22.0	93
14560	XSBFJF-3	2.5x22.0	93
14570	XSBFJF-4	3.0x22.0	93
14580	XSBFJT-1	2.0x16.5	93
14590	XSBFJT-2	2.0x22.0	93
14600	XSBFJT-3	2.5x22.0	93
14610	XSBFJT-4	3.0x22.0	93



## ● Long Straight-bore Nozzles

Description: Straight-bore nozzles with XSB® liners and Al jackets.

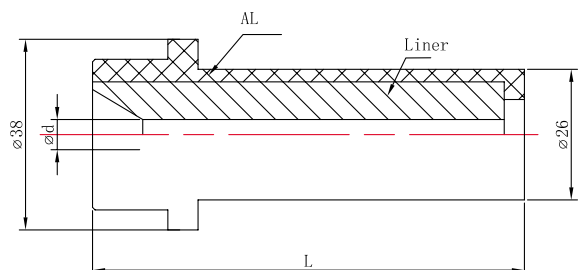
P/N	MODEL	d(mm)	L(mm)
10740	XSBNHL-6	6.0	100
10750	XSBNHL-7	7.0	100
10760	XSBNHL-8	8.0	100
10770	XSBNHL-9	9.0	100
10780	XSBNHL-10	10.0	100
10790	XSBNHL-11	11.0	100
10800	XSBNHL-12	12.0	100
10810	XSBNHL-13	13.0	100
10820	XSBNHL-14	14.0	100



## ● Straight-bore Nozzles

Description: Straight-bore nozzles with XSB® liners and Al jackets

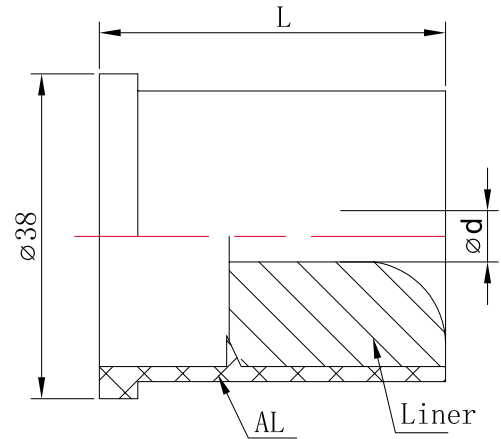
P/N	MODEL	d(mm)	L(mm)
10830	XSBNH-6	6.0	86
10840	XSBNH-7	7.0	86
10850	XSBNH-8	8.0	86
10860	XSBNH-9	9.0	86
10870	XSBNH-10	10.0	86
10880	XSBNH-11	11.0	86
10890	XSBNH-12	12.0	86
10900	XSBNH-13	13.0	86
10910	XSBNH-14	14.0	86



## ● Lead-in Nozzles

**Description:** Straight-bore nozzles with XSB® liners and Al jackets for use in combination with the XSBNH series

P/N	MODEL	d(mm)	L(mm)
10920	XSBLD-6	6.0	40.5
10930	XSBLD-7	7.0	40.5
10940	XSBLD-8	8.0	40.5
10950	XSBLD-9	9.0	40.5
10960	XSBLD-10	10.0	40.5
10970	XSBLD-11	11.0	40.5
10980	XSBLD-12	12.0	40.5
10990	XSBLD-13	13.0	40.5
11000	XSBLD-14	14.0	40.5

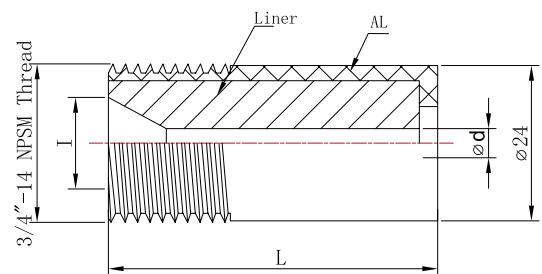


## ● Short Straight-bore Nozzles

**Description:** Short straight-bore nozzles with XSB® liners and NPSM 3/4"-14 threaded Al jackets

P/N	MODEL	d(mm)	L(mm)
11200	XSBSBF-2	3.2	45
11210	XSBSBF-3	4.8	45
11220	XSBSBF-4	6.4	45
11230	XSBSBF-5	8.0	45
11240	XSBSBF-6	9.5	45
12550	XSBSBF-7	11.0	45
11250	XSBSBF-8	13.0	45

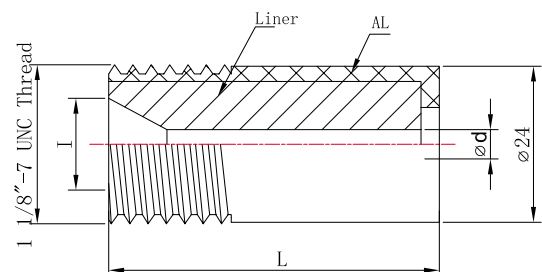
l=1/2" or 13mm



**Description:** Short straight-bore nozzles with XSB® liners and UNC 1 1/8"-7 threaded Al jackets

P/N	MODEL	d(mm)	L(mm)
11260	XSBSBC-2	3.2	45
11270	XSBSBC-3	4.8	45
11280	XSBSBC-4	6.4	45
11290	XSBSBC-5	8.0	45
11300	XSBSBC-6	9.5	45
12530	XSBSBC-7	11.0	45
11310	XSBSBC-8	13.0	45

l=1/2" or 13mm



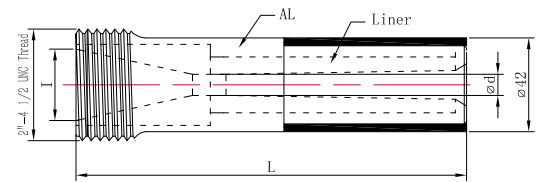
Our XHB<sup>®</sup> nozzles have liners made from hot-pressed boron carbide (HB<sub>4</sub>C) technique. As one of the hardest materials ever known, HB<sub>4</sub>C offers excellent chemical and wear resistance for various demanding applications. Therefore, our HBC nozzles are used for those most wearing abrasives such as alumina and silicon carbide.

## ● Long Conventional Venturi Nozzles

**Description:** Long venturi nozzles with XHB<sup>®</sup> liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves

P/N	MODEL	d(mm)	L(mm)
11320	XHBLV-4/50	6.4	135
11330	XHBLV-5/50	7.9	150
11340	XHBLV-6/50	9.5	165
11350	XHBLV-7/50	11.0	195
11360	XHBLV-8/50	12.7	220
11370	XHBLV-10/50	16.0	240
11380	XHBLV-12/50	19.0	240

L=1 1/4" or 32mm

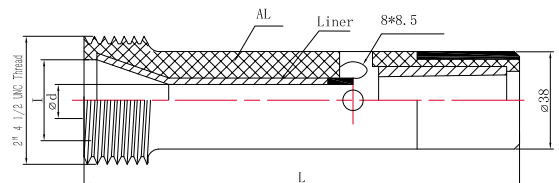


## ● Long Double Venturi Nozzles

**Description:** Long double venturi nozzles with XHB<sup>®</sup> liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
14200	XHBDV-4/50	6.4	135
14210	XHBDV-5/50	7.9	155
14220	XHBDV-6/50	9.5	175
14230	XHBDV-7/50	11.0	220
14240	XHBDV-8/50	12.7	235
14250	XHBDV-10/50	16.0	235
14260	XHBDV-12/50	19.0	235

L=1 1/4" or 32mm

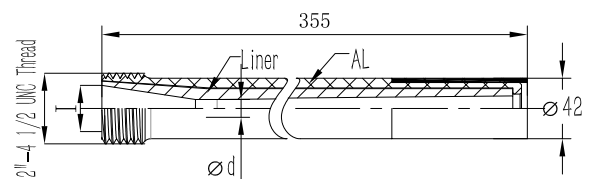


## ● Ultra Long Venturi Nozzles

**Description:** Ultra long venturi nozzles with XHB<sup>®</sup> liners and a UNC 2"-4 1/2 coarse threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
15630	XHBULVS-6/50	9.5	355
15640	XHBULVS-8/50	12.5	355

L=1 1/4" or 32mm

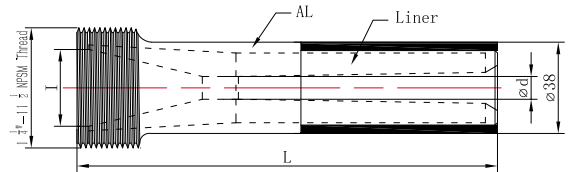


## ● Long Conventional Venturi Nozzles

**Description:** Long venturi nozzles with XHB® liners and NPSM 1 1/4"-11 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
14050	XHBFLV-4	6.4	140
14060	XHBFLV-5	7.9	150
14070	XHBFLV-6	9.5	165
14080	XHBFLV-7	11.0	195
14090	XHBFLV-8	12.7	220

L=1" or 25mm

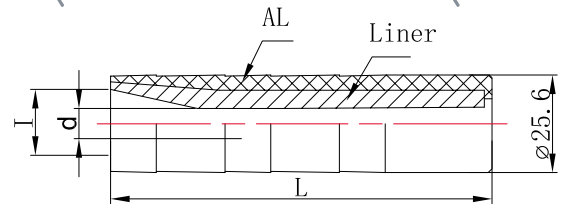


## ● Stick-up Nozzles

**Description:** Stick-up nozzles with XHB® liners and Al jackets fit ID 25mm hoses.

P/N	MODEL	d(mm)	L(mm)
11390	XHBSU-4/25	6.4	100
11400	XHBSU-5/25	7.9	100
12780	XHBSU-6/25	9.5	100

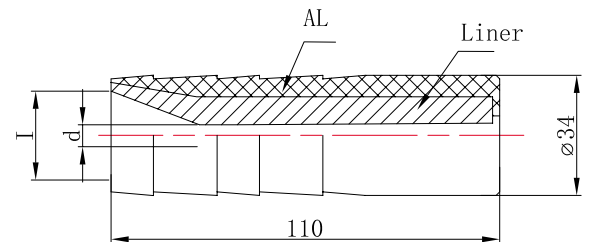
L=7/10" or 18mm



**Description:** Stick-up nozzles with XHB® liners and Al jackets fit ID 32mm hoses.

P/N	MODEL	d(mm)	L(mm)
11410	XHBSU-4/32	6.4	110
11420	XHBSU-5/32	7.9	110
11430	XHBSU-6/32	9.5	110
11440	XHBSU-7/32	11.0	110
12510	XHBSU-8/32	12.0	110
12520	XHBSU-9/32	14.0	110
12790	XHBSU-10/32	16.0	110
12800	XHBSU-12/32	19.0	110

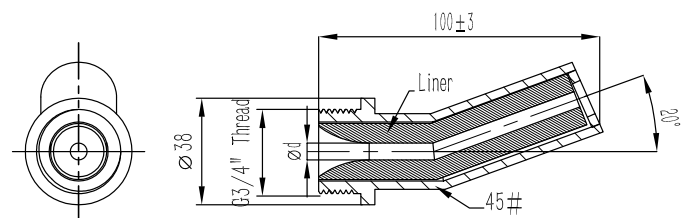
L=1" or 25mm



## ● Angle Nozzles

**Description:** Angle nozzles with XHB® liners and G3/4" threaded and flanged steel jackets, ideal for blasting recesses, behind angles and inside pipes.

P/N	MODEL	d(mm)	L(mm)
14860	XHBTA-6	6.0	100
14870	XHBTA-8	8.0	100
14880	XHBTA-10	10.0	100
14890	XHBTA-12	12.0	100

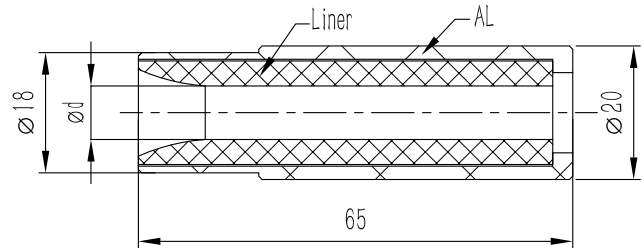




## ● Injector Nozzles

Description: Injector nozzles with an Al jacket and XHB® liners.

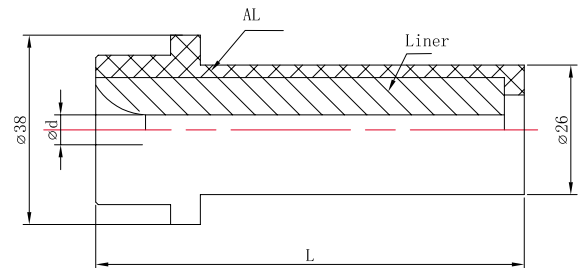
P/N	MODEL	d(mm)	L(mm)
15650	XHBIN-6	6.0	65
15660	XHBIN-8	8.0	65
15670	XHBIN-10	10.0	65
15680	XHBIN-12	12.0	65



## ● Straight-bore Nozzles

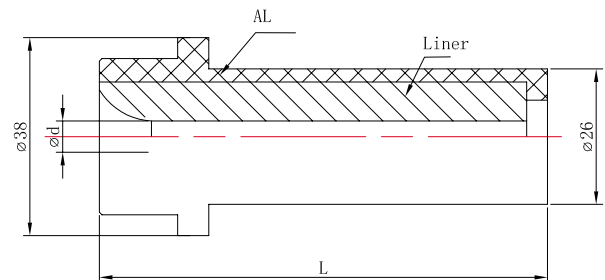
Description: Straight-bore nozzles with XHB® liners and Al jackets

P/N	MODEL	d(mm)	L(mm)
11640	XHBNH-6	6.0	86
11650	XHBNH-7	7.0	86
11660	XHBNH-8	8.0	86
11670	XHBNH-9	9.0	86
11680	XHBNH-10	10.0	86
11690	XHBNH-11	11.0	86
11700	XHBNH-12	12.0	86
11710	XHBNH-13	13.0	86
11720	XHBNH-14	14.0	86



Description: Straight-bore nozzles with XHB® liners and Al jackets.

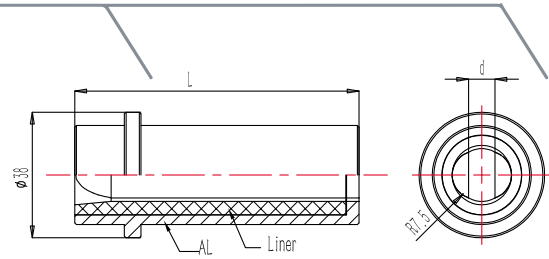
P/N	MODEL	d(mm)	L(mm)
14770	XHBNHL-6	6.0	100
14780	XHBNHL-7	7.0	100
14790	XHBNHL-8	8.0	100
14800	XHBNHL-9	9.0	100
14810	XHBNHL-10	10.0	100
14820	XHBNHL-11	11.0	100
14830	XHBNHL-12	12.0	100
14840	XHBNHL-13	13.0	100
14850	XHBNHL-14	14.0	100



## ● Fishtail Nozzles

Description: Fishtail nozzles with XHB® liners and Al jackets.

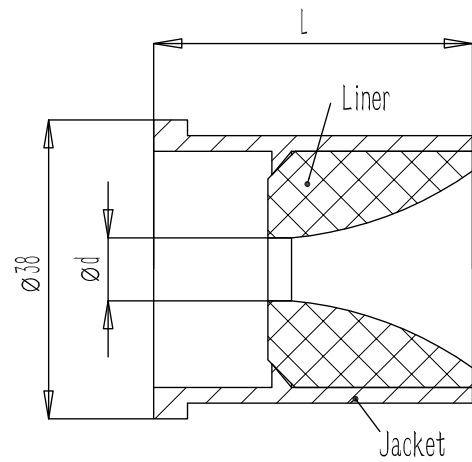
P/N	MODEL	Outlet(mm)	L(mm)
14620	XHBFT-1	5.0x15.0	75
15540	XHBFT-2	8.0x16.0	86



## ● Lead-in Nozzles

Description: Straight-bore nozzles with XHB® liners and Al jackets for use in combination with the XHBNH series

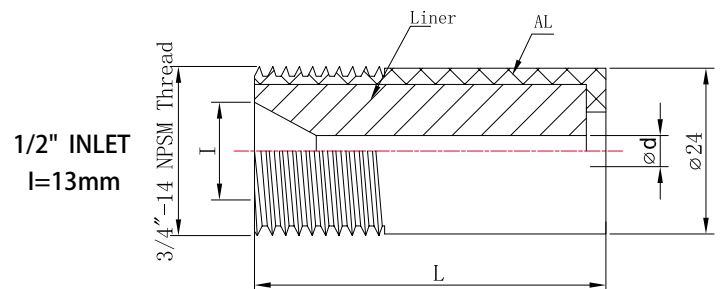
P/N	MODEL	d(mm)	L(mm)
11730	XHBLD-6	6.0	40.5
11740	XHBLD-7	7.0	40.5
11750	XHBLD-8	8.0	40.5
11760	XHBLD-9	9.0	40.5
11770	XHBLD-10	10.0	40.5
11780	XHBLD-11	11.0	40.5
11790	XHBLD-12	12.0	40.5
11800	XHBLD-13	13.0	40.5
11810	XHBLD-14	14.0	40.5



## ● Short Straight-bore Nozzles

Description: Short straight-bore nozzles with XHB® liners and NPSM 3/4"-14 threaded Al jackets

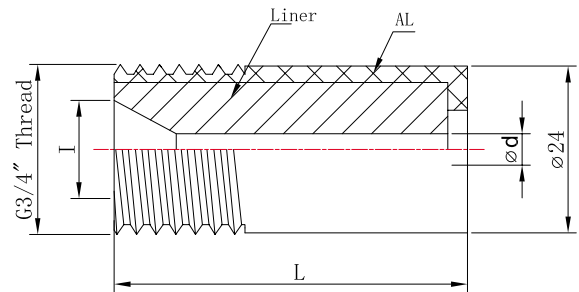
P/N	MODEL	d(mm)	L(mm)
11820	XHBSBF-2	3.2	45
11830	XHBSBF-3	4.8	45
11840	XHBSBF-4	6.4	45
11850	XHBSBF-5	8.0	45
11860	XHBSBF-6	9.5	45
12560	XHBSBF-7	11.0	45
11870	XHBSBF-8	13.0	45



## ● Short Straight-bore Nozzles

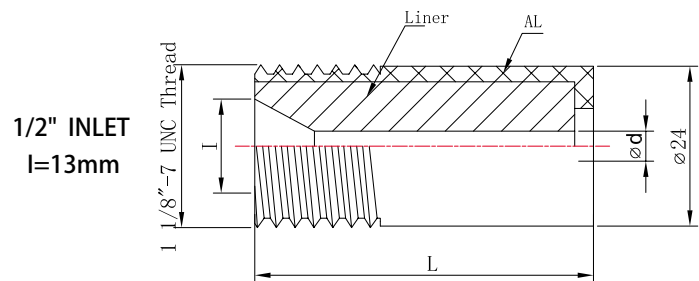
**Description:** Short straight-bore nozzles with XHB® liners and G3/4" threaded Al jackets.

P/N	MODEL	d(mm)	L(mm)
14970	XHBSBG-2	3.2	45
14980	XHBSBG-3	4.8	45
14990	XHBSBG-4	6.4	45
15100	XHBSBG-5	8.0	45
15110	XHBSBG-6	10.0	45
15120	XHBSBG-7	11.0	45
15130	XHBSBG-8	13.0	45



**Description:** Short straight-bore nozzles with XHB® liners and UNC 1 1/8"-7 threaded Al jackets

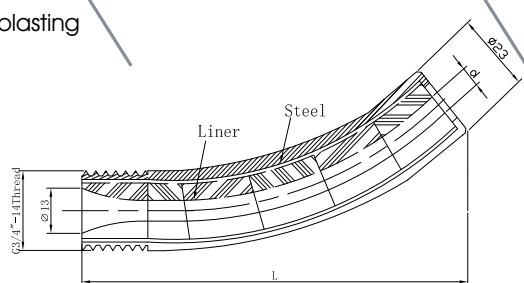
P/N	MODEL	d(mm)	L(mm)
11880	XHBSBC-2	3.2	45
11890	XHBSBC-3	4.8	45
11900	XHBSBC-4	6.4	45
11910	XHBSBC-5	8.0	45
11920	XHBSBC-6	9.5	45
12540	XHBSBC-7	11.0	45
11930	XHBSBC-8	13.0	45



## ● Banana Nozzles and Adaptors

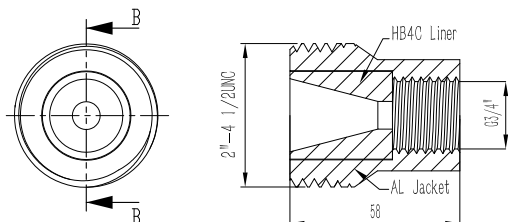
**Description:** Curved nozzles with XHB® liners and G3/4" thread, ideal for blasting recesses, behind angles and inside pipes.

P/N	MODEL	d(mm)	L(mm)	ANGEL(°)
15440	XHBBC-40/6	6.0	117	40
15450	XHBBC-40/8	8.0	117	40
15460	XHBBC-40/10	10.0	117	40
15500	XHBBC-40/11	11.0	117	40
15510	XHBBC-40/13	12.5	117	40



**Description:** Adaptors with XHB® liners and Al jackets, always used to connect a curved nozzle and a UNC 2"-4 1/2 holder for blasting recesses, behind angles and inside pipes.

P/N	MODEL	d(mm)	L(mm)
15470	XHBBA-4/50	6.0	50
15480	XHBBA-5/50	8.0	50
15490	XHBBA-6/50	10.0	50
15520	XHBBA-7/50	11.0	50
15530	XHBBA-8/50	12.5	50



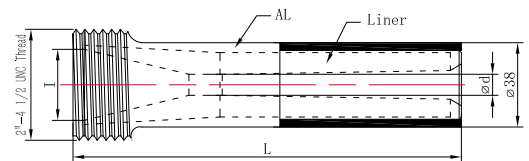
Our XTC® and XTIC® nozzles' liners are made from tungsten carbide with cobalt or titanium as the binder. Therefore, they offer excellent resistance to impacting and flexing especially.

## ● Long Conventional Venturi Nozzles

**Description:** Long venturi nozzles with XTC® liners and UNC 2"-4 1/2 threaded Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
11940	XTCLV-4/50	6.4	140
11950	XTCLV-5/50	7.9	155
11960	XTCLV-6/50	9.5	175
11970	XTCLV-7/50	11.0	210
11980	XTCLV-8/50	12.7	230
11990	XTCLV-10/50	16.0	235
12000	XTCLV-12/50	19.0	235

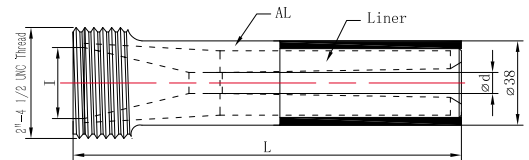
l=1 1/4" or 32mm



**Description:** Long venturi nozzles with XTIC® ( a composite of tungsten carbide and titanium carbide at a 50% by 50% ratio ) liners and Al jackets plus rubber sleeves, an economy replacement for XTC® nozzles , when with less wearable abrasives.

P/N	MODEL	d(mm)	L(mm)
15210	XTICLV-4/50	6.4	140
15220	XTICLV-5/50	7.9	155
15230	XTICLV-6/50	9.5	175
15240	XTICLV-7/50	11.0	210
15250	XTICLV-8/50	12.7	230
15260	XTICLV-10/50	16.0	235
15270	XTICLV-12/50	19.0	235

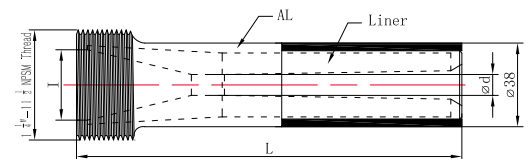
l=1 1/4" or 32mm



**Description:** Long venturi nozzles with XTC® liners and fine NPSM 1 1/4"-11 1/2 Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)
14100	XTCFV-4	6.4	140
14110	XTCFV-5	7.9	155
14120	XTCFV-6	9.5	175
14130	XTCFV-7	11.0	210
14140	XTCFV-8	12.7	230

l=1" or 25mm

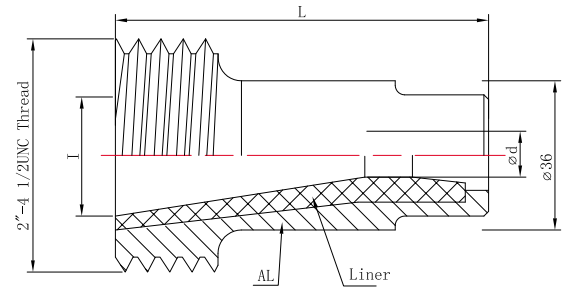


## ● Medium Venturi Nozzles

**Description:** Medium venturi nozzles with XTC® liners and UNC 2"-4 1/2 threaded

Al jackets

P/N	MODEL	d(mm)	L(mm)	
12330	XTCMV-4/50	6.4	85	I=1" or 25mm
12340	XTCMV-5/50	7.9	85	
12350	XTCMV-6/50	9.5	85	
12360	XTCMV-7/50	11.0	85	
12370	XTCMV-8/50	12.0	85	

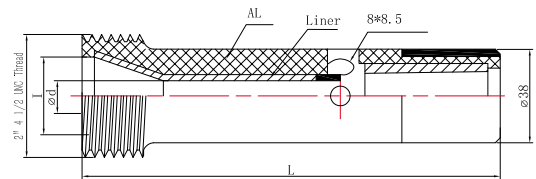


## ● Long Double Venturi Nozzles

**Description:** Long double venturi nozzles with XTC® liners and UNC 2"-4 1/2

threaded Al Jackets plus rubber sleeves

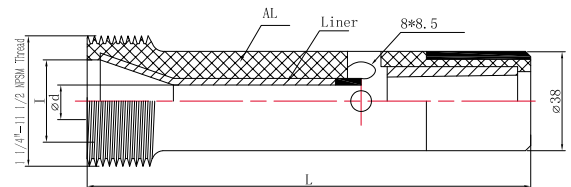
P/N	MODEL	d(mm)	L(mm)	
12280	XTCDV-4/50	6.4	135	I=1 1/4" or 32mm
12290	XTCDV-5/50	7.9	155	
12300	XTCDV-6/50	9.5	170	
12310	XTCDV-7/50	11.0	215	
12320	XTCDV-8/50	12.7	230	



**Description:** Long double venturi nozzles with XTC® liners and NPSM 1 1/4"-11 1/2

Al jackets plus rubber sleeves.

P/N	MODEL	d(mm)	L(mm)	
14150	XTCFDV-4	6.4	140	I=1" or 25mm
14160	XTCFDV-5	7.9	150	
14170	XTCFDV-6	9.5	170	
14180	XTCFDV-7	11.0	220	
14190	XTCFDV-8	12.7	225	

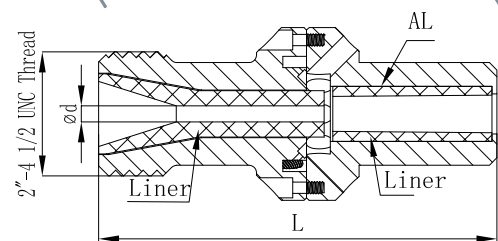


## ● Water Induction Nozzles

**Description:** Water induction nozzles with XTC® liners and UNC 2"-4 1/2 threaded

Al jackets

P/N	MODEL	d(mm)	L(mm)
12380	TWIN-4/50	6.4	160
12390	TWIN-5/50	7.9	160
12400	TWIN-6/50	9.5	160

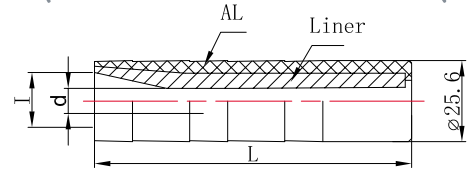


## ● Stick-up Nozzles

Description: Stick-up nozzles with XTC® liners and Al jackets fitting ID 25mm hoses.

P/N	MODEL	d(mm)	L(mm)
12260	XTCSU-3/25	5.0	100
12010	XTCSU-4/25	6.4	100
12020	XTCSU-5/25	7.9	100

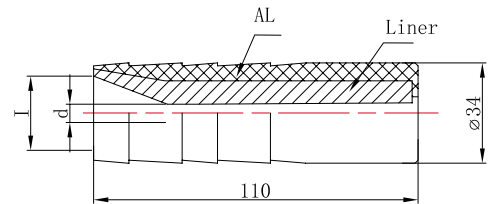
l=7/10" or 18mm



Description: Stick-up nozzles with XTC® liners and Al jackets fitting ID 32mm hoses.

P/N	MODEL	d(mm)	L(mm)
12030	XTCSU-4/32	6.4	120
12040	XTCSU-5/32	7.9	120
12050	XTCSU-6/32	9.5	120
12060	XTCSU-7/32	11.0	120
12270	XTCSU-8/32	12.7	120

l=1" or 25mm

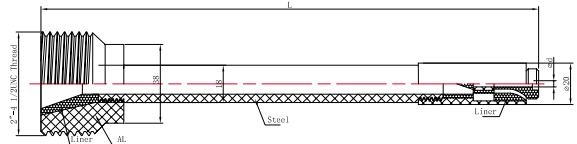


## ● Long Pipe Inside Blast Nozzle

The long Internal Pipe Blasting Nozzle (PI-360°L) is designed to clean the interiors of pipes ranging from ID 20.5~50.8mm. The maximum length of the working area is 200mm.

Description: Venturi nozzle with a XTC® liner and a UNC 2"-4 1/2" coarse threaded Al jacket.

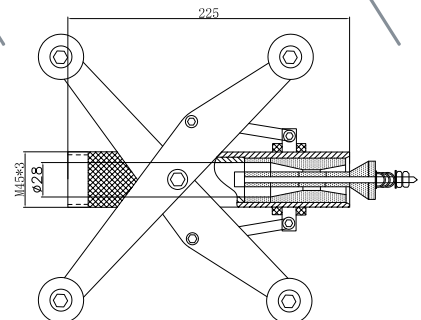
P/N	MODEL	d(mm)	L(mm)
12070	XTCPI-360° L	N/A	240



## ● Portable Internal Pipe Blast Tool

The Portable Internal Pipe Blast Tool is the perfect choice for cleaning pipes ranging ID 50-300mm. It is composed of a venturi nozzle, a deflection tip, centering collars and a carriage.

P/N	MODEL	d(mm)	L(mm)
12080	XTCPI-360° T	N/A	N/A

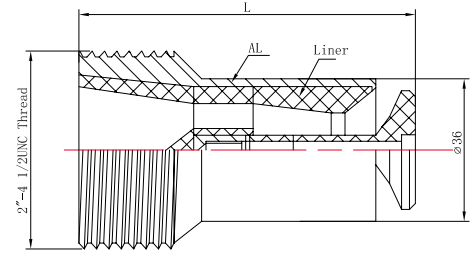


## ● Internal Pipe Blasting Nozzle

The smart Internal Pipe Blasting Nozzle directs the air/abrasive mixture at a deflection tip where the abrasive is distributed even in a 360 degree spread thus effectively blasting the inside of a pipe as it is pulled through. The deflection tip can be supplied separately from the nozzle.

**Description:** Venturi nozzle with a XTC® liner and a UNC 2"-4 1/2 coarse threaded Al jacket.

P/N	MODEL	d(mm)	L(mm)	REMARK
12090	XTCPI-360°	N/A	91	Nozzle
12100	XTCDT	6	11	Deflection Tip

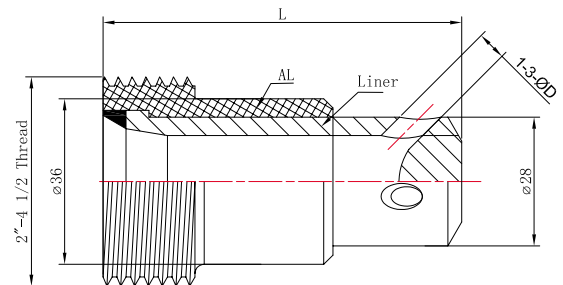


## ● Angle Nozzles

45 degree angle sandblasting nozzles are available in single and triple (equi-spaced) side outlets. They are ideal for blasting recesses, behind angles and inside pipes.

**Description:** Angle nozzles with XTC® liners and a UNC 2"-4 1/2 coarse threaded Al jacket.

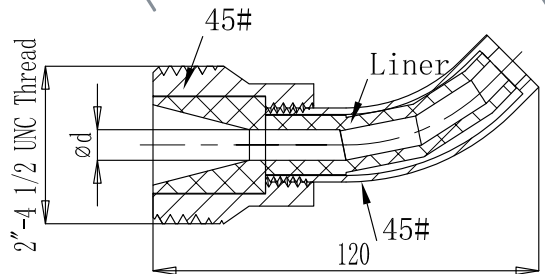
P/N	MODEL	d(mm)	L(mm)
12110	XTCAN-2X1/50	1x3.2	78
12120	XTCAN-2X2/50	2x3.2	78
12130	XTCAN-2X3/50	3x3.2	78
12140	XTCAN-3X1/50	1x4.8	78
12150	XTCAN-3X2/50	2x4.8	78
12160	XTCAN-3X3/50	3x4.8	78
12170	XTCAN-4X1/50	1x6.4	78
12180	XTCAN-4X2/50	2x6.4	78
12190	XTCAN-4X3/50	3x6.4	78
12200	XTCAN-5X1/50	1x8.0	78
12210	XTCAN-5X2/50	2x8.0	78
12220	XTCAN-5X3/50	3x8.0	78
12230	XTCAN-6X1/50	1x9.5	78
12240	XTCAN-6X2/50	2x9.5	78
12250	XTCAN-6X3/50	3x9.5	78



## Banana Nozzles

**Description:** Banana nozzles with XTC® liners and UNC 2"-4 1/2 threaded Al jackets.

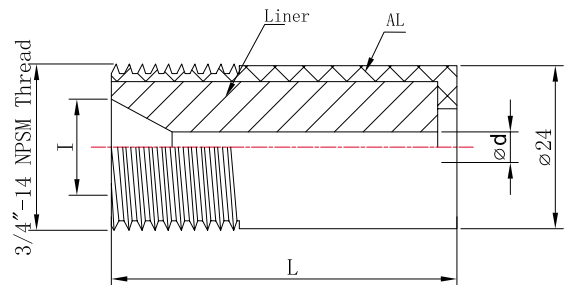
P/N	MODEL	d(mm)	L(mm)
12410	BN-4/50	6.4	120
12420	BN-5/50	7.9	120
12430	BN-6/50	9.5	120



## Short Straight-bore Nozzles

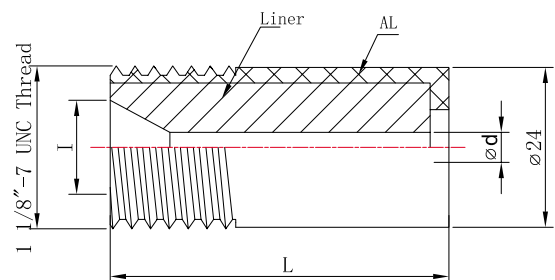
**Description:** Short straight-bore nozzles with XTC® liner and NPSM 3/4"-14 threaded Al jackets.

P/N	MODEL	d(mm)	L(mm)
15280	XTCSBF-2	3.2	42
15290	XTCSBF-3	4.8	42
15300	XTCSBF-4	6.4	42
15310	XTCSBF-5	7.9	42
15320	XTCSBF-6	9.5	42
15330	XTCSBF-7	11.0	42
15340	XTCSBF-8	12.7	42



**Description:** Short straight-bore nozzles with XTC® liner and UNC 1 1/8"-7 threaded Al jackets.

P/N	MODEL	d(mm)	L(mm)
15350	XTCSBC-2	3.2	42
15360	XTCSBC-3	4.8	42
15370	XTCSBC-4	6.4	42
15380	XTCSBC-5	7.9	42
15390	XTCSBC-6	9.5	42
15400	XTCSBC-7	11.0	42
15410	XTCSBC-8	12.7	42





## ● Fan Nozzles

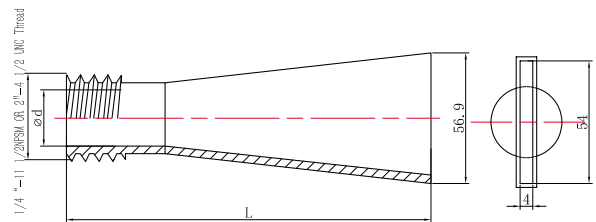
Our Fan Nozzles made from casted cobalt alloys are Excellent for medium cleaning and stripping applications where an even dispersion of the abrasive throughout the wide uniform blast pattern is required. On large, the flat outlets of the fan blasting nozzles can double the production rate.

**Description:** Fit NPSM 1 1/4"-11 1/2 Thread

P/N	MODEL	ID(mm)	OUTLET (mm)
11150	XCABF-1	16	4x54

**Description:** Fit UNC 2"-4 1/2 Thread

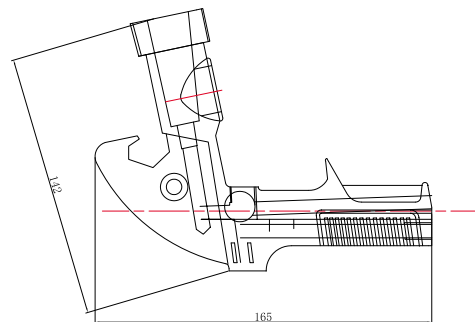
P/N	MODEL	ID(mm)	OUTLET (mm)
11160	XCABF-2	16	4x54



## ● Blast Gun

The high-performance Blast Gun provides comfortable grip for operator and allows precise control of blast pattern. Its matt-chrome-coating prevents rust formation over the complete lifetime. Its inside and nozzles are made with wear resistant ceramics.

P/N	MODEL	DESCRIPTION
11170	XBG-1	GUN BODY
11180	XBG-2	NOZZLE
11190	XBG-3	SCREW

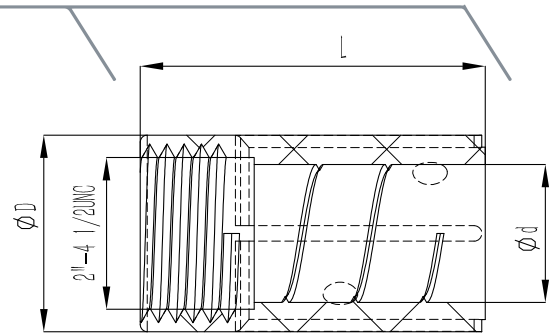


## ● Nylon Holders

Description: Fit UNC2"-4 1/2 Thread

P/N	MODEL	HOSE DIA(mm)
11040	XNH-1	39
11050	XNH-2	48
12730	XNH-3	33
14640	XNH-5	55

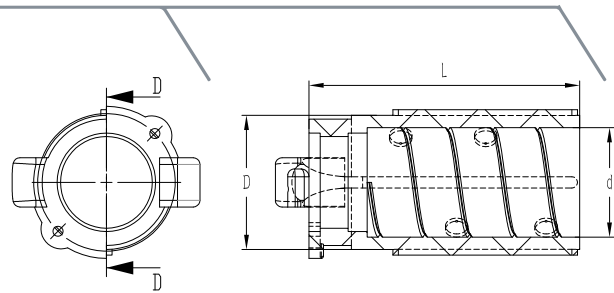
REMARKS: SCREWS NOT INCLUDED



## ● Nylon Quick Couplings

P/N	MODEL	HOSE DIA(mm)
11060	XHC-1	39
11070	XHC-2	48
12740	XHC-3	55
12760	XHC-4	33

REMARKS: SCREWS NOT INCLUDED



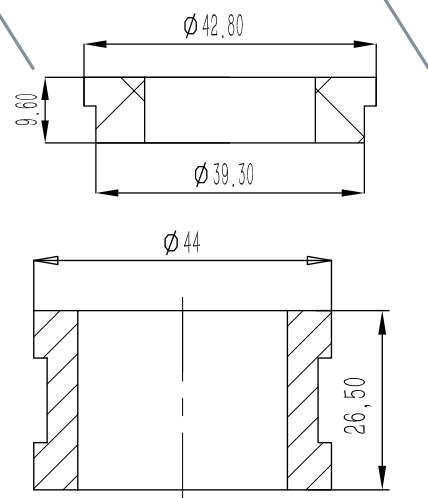
## ● Rubber Washers

Rubber Washer for Nozzle

P/N	MODEL	DIA(mm)
11080	XNW-1	32
15620	XNW-2	25

Rubber Washer for Quick Couplings

P/N	MODEL	DIA(mm)
11090	XCW-1	39
11100	XCW-2	48





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