2024

ALVAN®

Series 6000

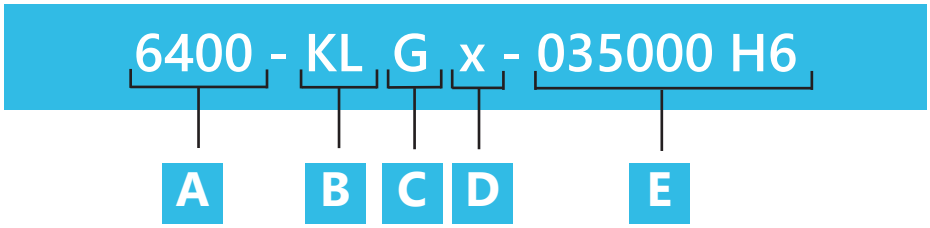
Features & Benefits

- Diameter range from 32,61 mm to 100,60 mm (Ø 100,61÷150 on request)
- Available in cermet and carbide, coated and uncoated
- Easy to assembly
- Easy to use
- Supplied at the ordered size
- Expanding heads only
- Straight or left helical flutes
- Modular Ceric system only
- Delivered in 6/8 weeks

S.C.A.M.I.

MADE IN ITALY

Code Description of the heads series 6000



A A= Series

6400= Straight flutes with radial coolant
6401= Straight flutes with central coolant
6700= Left hand helical flutes with radial coolant

B B= Cutting material and coating

KL= Hard Metal cutting edges
KI = Hard Metal cutting edges I coated
KK= Hard Metal cutting edges K coated
KR= Hard Metal cutting edges R coated
SV= Cermet cutting edges
SK= Cermet cutting edges K coated
SR= Cermet cutting edges R coated

C C= Lead in (see on page 4)

D D= Specific requirement

H= half circular face
Z= oversized tapering

E E= Diameter and tolerance

HEADS

Coated Hard metal & Cermet brazed carbide

Heads are available coated N, C, A, K, H, D, R and T				H.M.	H.M. coated	CERMET	Straight Flutes	Helical Flutes
MATERIAL TO WORK	N / mm ^{2}	Head Ø mm	STOCK ALLOWANCE Ø mm	SURFACE SPEED m/min	SURFACE SPEED m/min	SURFACE SPEED m/min	FEED mm/rev	FEED mm/rev
Mild Steel Unalloyed Low alloyed Structural steel Fused Metal	Up to 600	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	10 - 20	60 - 80	90 - 300 H coated	0,25 - 0,60 0,30 - 0,80 0,60 - 1,00	0,50 - 1,00 0,60 - 1,20 0,70 - 1,50
	Greater than 600	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	7 - 15	40 - 70	80 - 200 H coated	0,30 - 0,60 0,40 - 0,80 0,50 - 0,90	0,40 - 0,80 0,50 - 1,00 0,60 - 1,20
Alloy steel Stainless steel	400 - 1000	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	6 - 10	40 - 60	50 - 60	0,30 - 0,60 0,40 - 0,80 0,50 - 0,90	0,40 - 0,80 0,50 - 1,00 0,60 - 1,20
Strongly alloy steel Steel with manganese	800 - 1500	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	4 - 8	60 - 120	40 - 50	0,25 - 0,50 0,30 - 0,60 0,40 - 0,70	0,30 - 0,60 0,40 - 0,80 0,50 - 1,00
Grey cast iron Spheroidal cast iron (pearlitic) Malleable cast iron	Up to 200HB Greater than 200HB	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	≤ 200 HB 20 - 40 ≥ 200 HB 15 - 30	120 - 200		0,20 - 0,60 0,30 - 0,70 0,40 - 0,80	0,50 - 1,00 0,60 - 1,20 0,80 - 1,60
Spheroidal cast iron (ferritic)	300 - 700	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	10 - 15		90 - 140 K coated	0,20 - 0,60 0,30 - 0,70 0,40 - 0,80	0,50 - 1,00 0,60 - 1,20 0,80 - 1,60
Copper and alloys Brass	Up to 500	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	60 - 200	100 - 200		0,20 - 0,40 0,30 - 0,60 0,40 - 0,80	
Bronze Bronze phosphorous	Up to 600	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	20 - 40	80 - 160	100 - 300	0,30 - 0,60	0,40 - 1,00 0,50 - 1,20 0,60 - 1,50
Alluminium and light alloys	Up to 500	11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	20 - 100	on request		0,30 - 0,60 0,40 - 1,00 0,40 - 1,00	
Titanium and alloys		11,80-21,60 21,61-39,60 39,61-45,59 45,60-80,60	0,15 - 0,25 0,20 - 0,40 0,30 - 0,40	6 - 10	15 - 30		0,20 - 0,40 0,30 - 0,50 0,40 - 0,60	

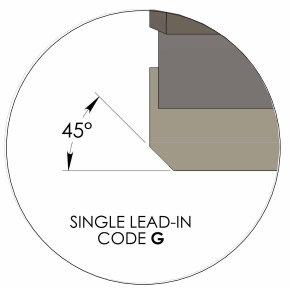
APPROACH ANGLES

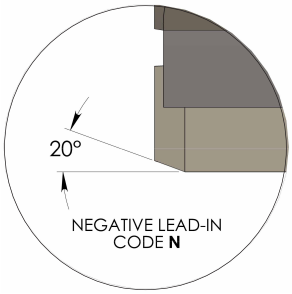
MATERIAL TO WORK	TENSILE STRENGTH	APPROACH ANGLE*
Iron and mild steel (C< 0,2%)	50 Kg/mm^2	G - A - E
Mild steel (C 0,2 < 0,3%)	60 Kg/mm^2	N - A - E
Mild steel (C 0,3 < 0,4%)	70 Kg/mm^2	N - A - E
Mild steel (C 0,4 < 0,5%)	80 Kg/mm^2	N - A - E
Alloy steel	$\leq$ 80 Kg/mm^2	G - N - A - E
Alloy steel	90 Kg/mm^2	G - N - E
Alloy steel	100 Kg/mm^2	G - N - M
Alloy steel	> 100 Kg/mm^2	G - N - M
Stainless and refractory steel	from 50 Kg/mm^2 to 90 kg/ mm^2	G - N - M
Grey, spheroidal and malleable cast iron	from 150 HB to 320 HB	V - N - E
Titanium and titanium alloy		T - E
Pure copper		G - N - E
Electrolytic copper		G - N - E
Brass / Bronze		G - N - E
Alluminium alloy < 10% Si		V - A - E
Alluminium alloy > 11% Si		V - E
Magnesium alloy		G - A - E
Thermoplastic material		V - E
Thermosetting resins		V - E
Stiffened synthetic material		V - E

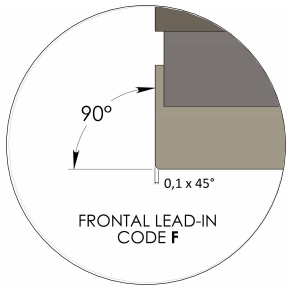
***Do not use negative lead-in on blind holes**

Negative lead-in "N" can be used on large range of materials: please apply to our technical department.

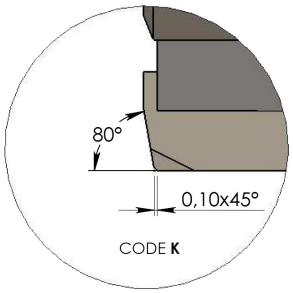
LEAD-IN FOR STRAIGHT FLUTES





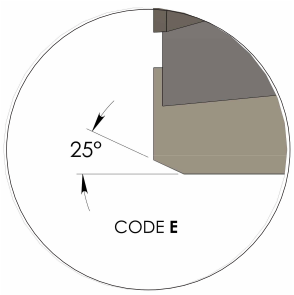


"F" lead-in to reduce the feed of 40%

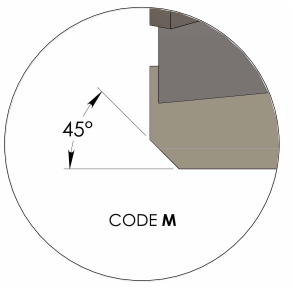


Chipbreaker

LEAD-IN FOR HELICAL FLUTES

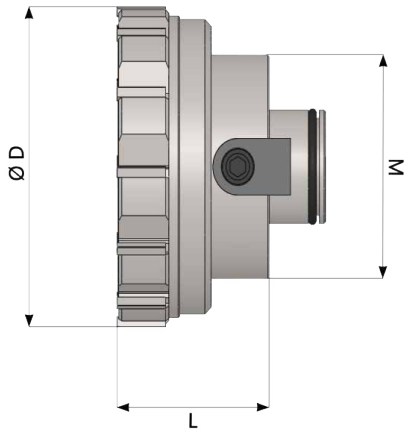


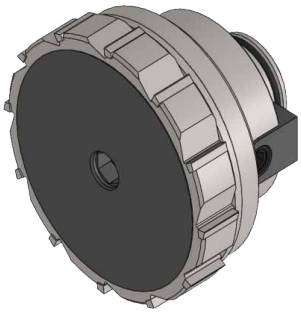
"E" lead-in is suitable for working most materials suche as cast iron, steel and aluminium



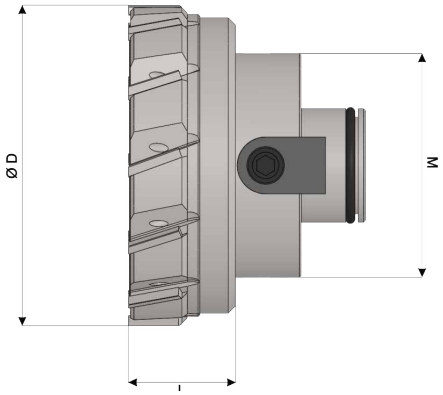
"M" lead-in allows an easier depth penetration in steels with a surface hardness greater than 200 HB

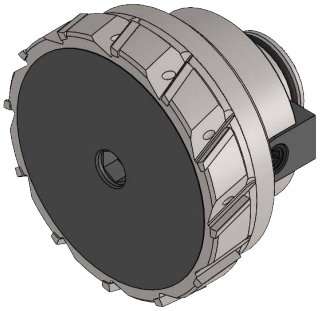
SERIES 6400 - 6401





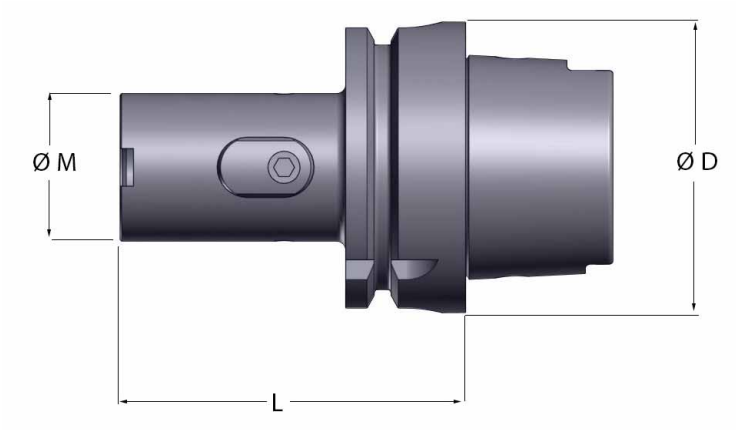
SERIES 6700





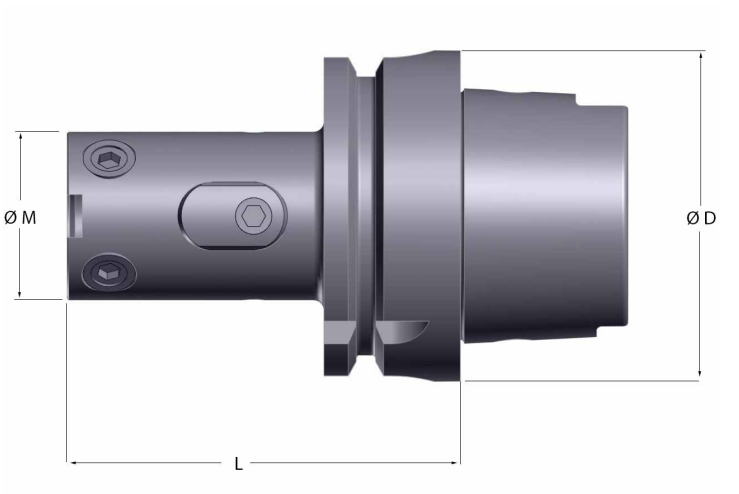
RANGE	MODULAR	CUTTING EDGES	LENGTH
32,61 ÷ 37,60	M24A	8	38 mm
37,61 ÷ 45,60	M32A	8	38 mm
45,61 ÷ 56,60	M40A	10	42 mm
56,61 ÷ 68,60	M50	10	46 mm
68,61 ÷ 79,60	M63	10	48 mm
79,61 ÷ 100,60	M63	12	48 mm

HSK-A DIN 69893/1
MODULAR WITH LATERAL CLAMPING



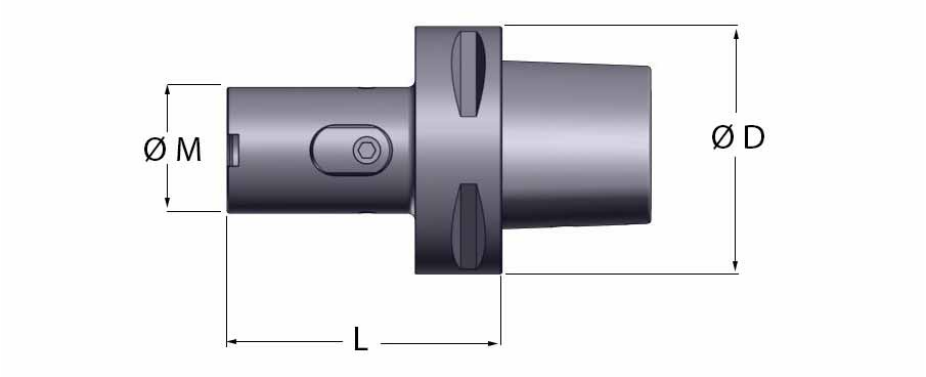
Code	D	L	M
HSK-A.63.M24A.75	63	75	26
HSK-A.63.M32A.75	63	75	32
HSK-A.63.M40A.75	63	75	40
HSK-A.63.M50A.70	63	70	50
HSK-A.63.M63A.75	63	75	63

HSK-A DIN 69893/1
MODULAR WITH LATERAL CLAMPING AND RADIAL ADJUSTEMENT



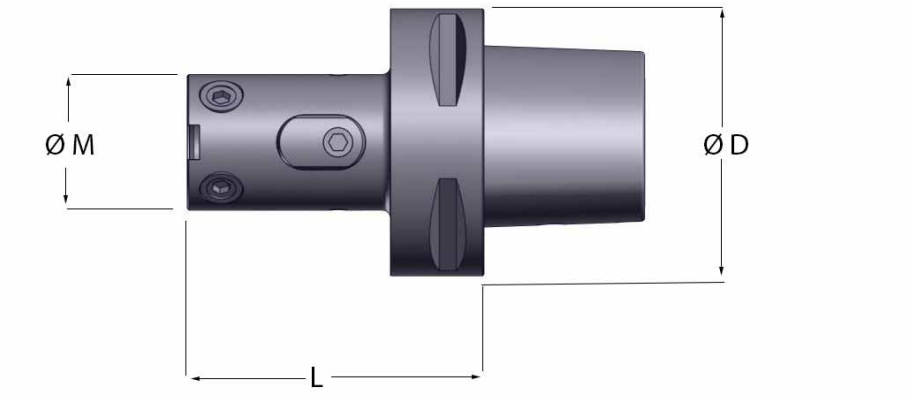
Code	D	L	M
HSK-A.63.M24AR.75	63	75	26
HSK-A.63.M32AR.75	63	75	32
HSK-A.63.M40AR.75	63	75	40
HSK-A.63.50L.70	63	70	50
HSK-A.63.63L.75	63	75	63

POLYGONAL MODULAR SHANK (ISO26623-1) WITH LATERAL CLAMPING



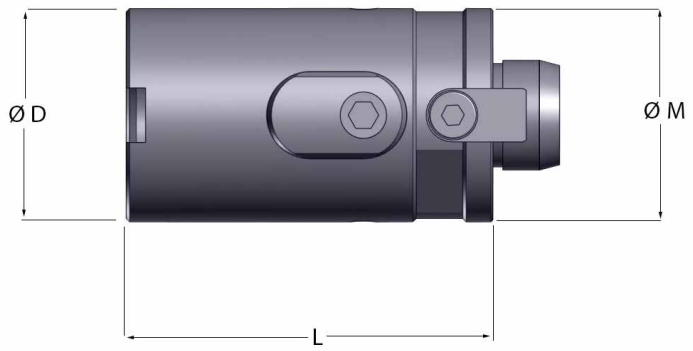
Code	D	L	M
PSC63.M24A.70	63	70	26
PSC63.M32A.70	63	70	32
PSC63.M40A.70	63	70	40
PSC63.M50A.70	63	70	50
PSC63.M63A.70	63	70	63

POLYGONAL MODULAR SHANK (ISO26623-1) WITH LATERAL CLAMPING AND RADIAL ADJUSTEMENT



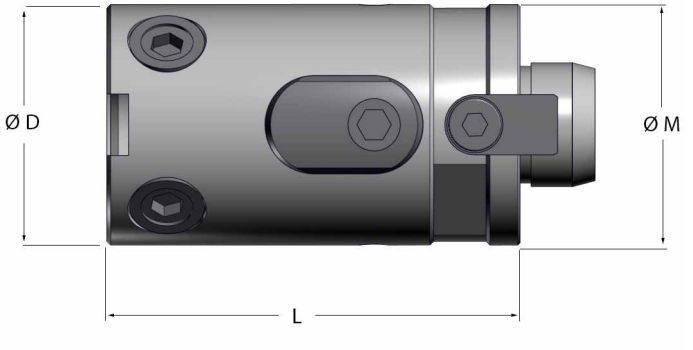
Code	D	L	M
PSC63.M24AR.70	63	70	26
PSC63.M32AR.70	63	70	32
PSC63.M40AR.70	63	70	40
PSC63.50L.70	63	70	50
PSC63.63L.70	63	70	63

MODULAR WITH LATERAL CLAMPING



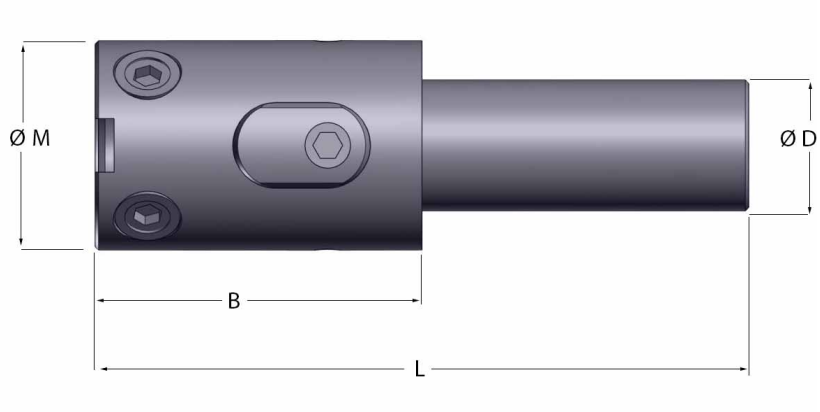
Code	D	L	M
10.24.M24A.50	26	50	24
10.32.M32A.55	32	55	32
10.40.M40A.60	40	60	40
10.50.M50A.60	50	60	50
10.63.M63A.80	63	80	63

MODULAR WITH LATERAL CLAMPING AND RADIAL ADJUSTEMENT



Code	D	L	M
10.24.M24AR.50	26	50	24
10.32.M32AR.55	32	55	32
10.40.M40AR.60	40	60	40
10.50.50L.60	50	50	60
10.63.63L.80	63	63	80

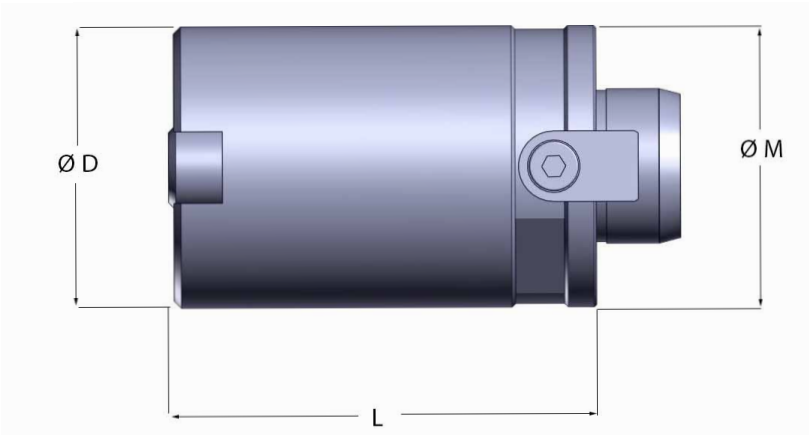
ADJUSTING CYLINDRICAL BASIC SHANK



Code	D	B	L	M
15.C16.M24AR.50	16	50	98	26
15.C20.M32AR.50	20	50	100	32
15.C25.M40AR.50	25	50	110	40
15.C32.M50L.50	32	50	120	50
15.C40.M63L.50	40	50	120	63

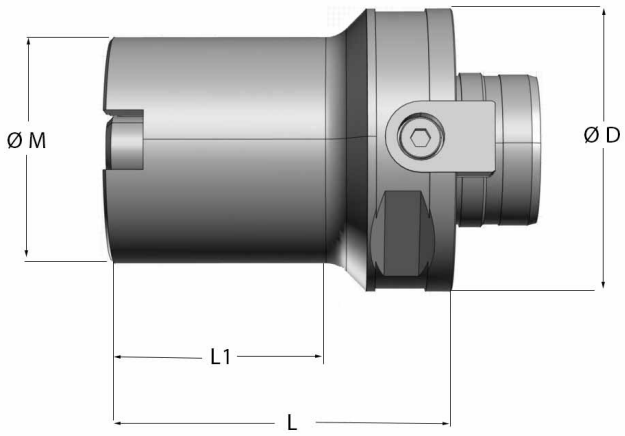
NB. Flat on request

MODULAR EXTENSION



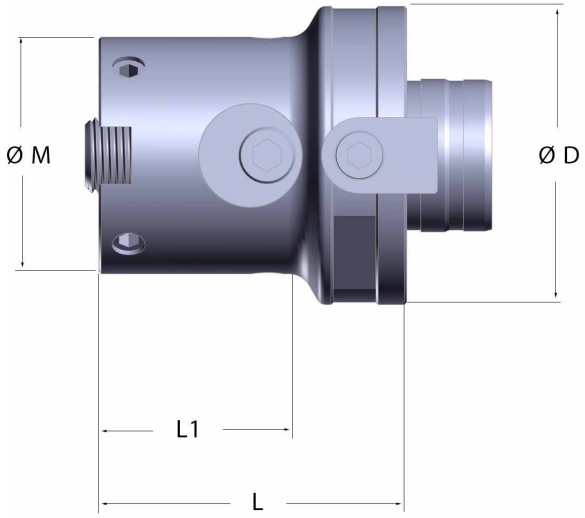
Code	D	L	M
10.24.24.80	24	80	24
10.32.32.120	32	120	32
10.32.32.50	32	50	32
10.32.32.80	32	80	32
10.40.40.120	40	120	40
10.40.40.90	40	90	40
10.50.50.60	50	60	50
10.50.50.100	50	100	50
10.63.63.80	63	80	63
10.63.63.120	63	120	63

MODULAR REDUCTIONS



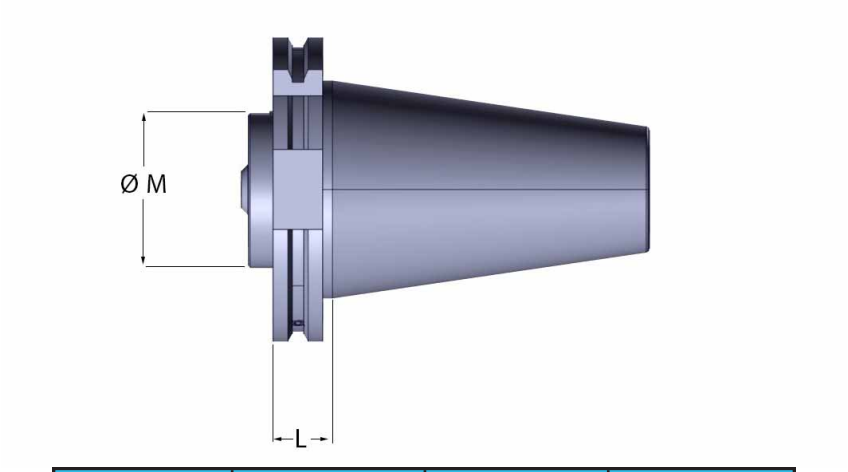
Code	D	M	L	L1
15.50.24.50	50	24	50	27
15.50.32.60	50	32	60	35
15.50.40.60	50	40	60	40
15.63.40.60	63	40	60	35
15.63.50.60	63	50	60	31.5

ADJUSTABLE MODULAR REDUCTIONS



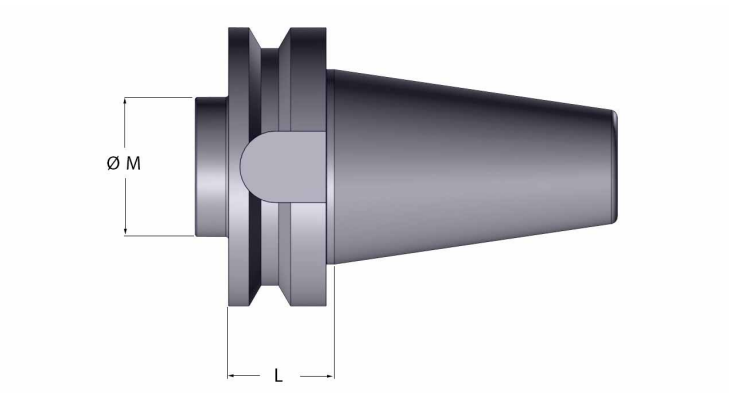
Code	D	M	L	L1
15.63.50L.65	63	50	65	43

BASIC SHANKS DIN 69871/1 B+A



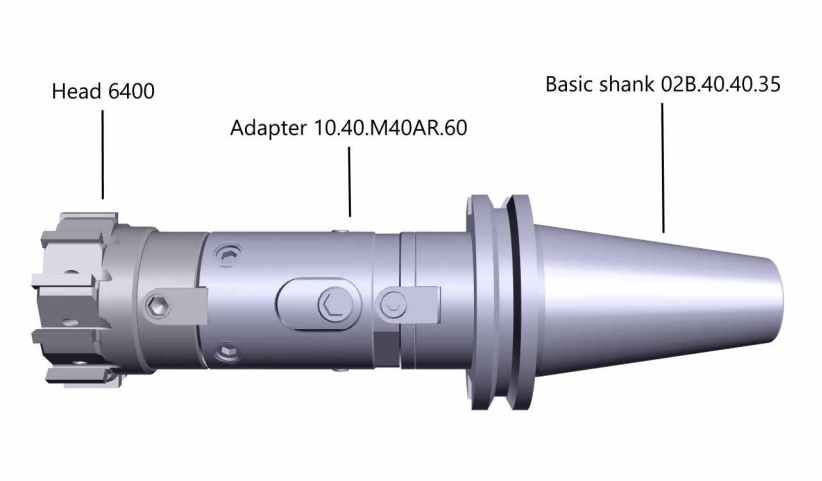
Code	M	L	ISO
02B.40.24.35	24	35	40
02B.40.32.35	32	35	40
02B.40.40.35	40	35	40
02B.40.50.27	50	27	40
02B.40.50.50	50	50	40
02B.40.63.50	63	50	40
02B.50.50.27	50	27	50
02B.50.50.50	50	50	50
02B.50.63.27	63	27	50
02B.50.63.50	63	50	50

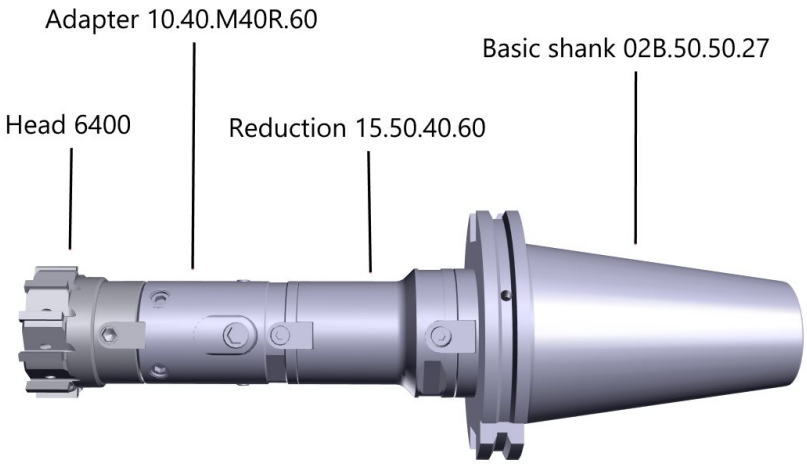
BASIC SHANKS JMTBA MAS-403 BT B+BT

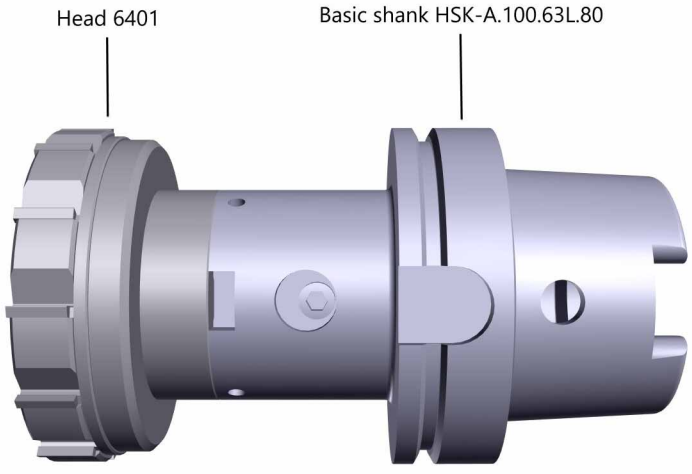


Code	M	L	ISO
BTB.40.24.35	35	24	40
BTB.40.32.35	35	32	40
BTB.40.40.35	35	40	40
BTB.40.50.50	50	50	40
BTB.40.63.50	50	63	40
BTB.50.50.50	50	50	50
BTB.50.63.50	50	63	50

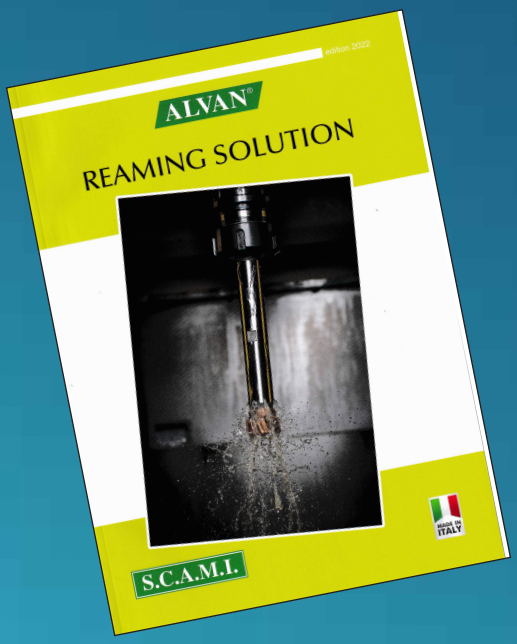
ASSEMBLY EXAMPLES







Other products literature



Represented by

S.C.A.M.I. snc
Via Lancia,13 - 10040 Volvera (TO) - ITALY
www.scami-alvan.com

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