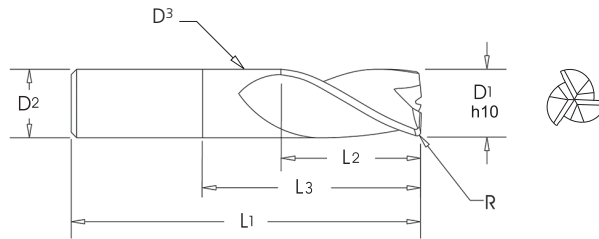
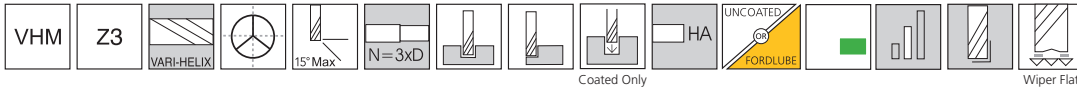


M.A. FORD EUROPE LTD



# TuffCut® X-AL Series 137V N3 & 137V N3 AL



Tool Number				D1	D2	D3	L1	L2	L3	R
Uncoated	Stk	Coated	Stk							
137V 03N3	●	137V 03N3AL	●	3.0	3.0	2.8	51.0	8.0	11.0	-
137V 03N3-0.2R	●	137V 03N3-0.2RAL	●	3.0	3.0	2.8	51.0	8.0	11.0	0.2
137V 03N3-0.5R	●	137V 03N3-0.5RAL	●	3.0	3.0	2.8	51.0	8.0	11.0	0.5
137V 03N3-1.0R	●	137V 03N3-1.0RAL	●	3.0	3.0	2.8	51.0	8.0	11.0	1.0
137V 04N3	●	137V 04N3AL	●	4.0	4.0	3.8	51.0	11.0	14.0	-
137V 04N3-0.2R	●	137V 04N3-0.2RAL	●	4.0	4.0	3.8	51.0	11.0	14.0	0.2
137V 04N3-0.5R	●	137V 04N3-0.5RAL	○	4.0	4.0	3.8	51.0	11.0	14.0	0.5
137V 04N3-1.0R	●	137V 04N3-1.0RAL	○	4.0	4.0	3.8	51.0	11.0	14.0	1.0
137V 05N3	●	137V 05N3AL	●	5.0	5.0	4.8	57.0	13.0	17.0	-
137V 05N3-0.2R	●	137V 05N3-0.2RAL	●	5.0	5.0	4.8	57.0	13.0	17.0	0.2
137V 05N3-0.5R	●	137V 05N3-0.5RAL	●	5.0	5.0	4.8	57.0	13.0	17.0	0.5
137V 05N3-1.0R	●	137V 05N3-1.0RAL	●	5.0	5.0	4.8	57.0	13.0	17.0	1.0
137V 06N3	●	137V 06N3AL	●	6.0	6.0	5.8	64.0	13.0	20.0	-
137V 06N3-0.2R	●	137V 06N3-0.2RAL	○	6.0	6.0	5.8	64.0	13.0	20.0	0.2
137V 06N3-0.5R	●	137V 06N3-0.5RAL	●	6.0	6.0	5.8	64.0	13.0	20.0	0.5
137V 06N3-1.0R	●	137V 06N3-1.0RAL	●	6.0	6.0	5.8	64.0	13.0	20.0	1.0
137V 06N3-1.5R	●	137V 06N3-1.5RAL	●	6.0	6.0	5.8	64.0	13.0	20.0	1.5
137V 06N3-2.0R	●	137V 06N3-2.0RAL	○	6.0	6.0	5.8	64.0	13.0	20.0	2.0
137V 08N3	●	137V 08N3AL	●	8.0	8.0	7.8	64.0	19.0	26.0	-
137V 08N3-0.2R	●	137V 08N3-0.2RAL	○	8.0	8.0	7.8	64.0	19.0	26.0	0.2
137V 08N3-0.5R	●	137V 08N3-0.5RAL	●	8.0	8.0	7.8	64.0	19.0	26.0	0.5
137V 08N3-1.0R	●	137V 08N3-1.0RAL	●	8.0	8.0	7.8	64.0	19.0	26.0	1.0
137V 08N3-1.5R	●	137V 08N3-1.5RAL	○	8.0	8.0	7.8	64.0	19.0	26.0	1.5
137V 08N3-2.0R	●	137V 08N3-2.0RAL	●	8.0	8.0	7.8	64.0	19.0	26.0	2.0
137V 08N3-3.0R	●	137V 08N3-3.0RAL	●	8.0	8.0	7.8	64.0	19.0	26.0	3.0

● Stock ○ Check Availability



# TuffCut® X-AL Series 137V N3 & 137V N3 AL

Tool Number				D1	D2	D3	L1	L2	L3	R
Uncoated	Stk	Coated	Stk							
137V 10N3	●	137V 10N3AL	●	10.0	10.0	9.8	73.0	22.0	32.0	-
137V 10N3-0.2R	●	137V 10N3-0.2RAL	●	10.0	10.0	9.8	73.0	22.0	32.0	0.2
137V 10N3-0.3R	●	137V 10N3-0.3RAL	-	10.0	10.0	9.8	73.0	22.0	32.0	0.3
137V 10N3-0.5R	●	137V 10N3-0.5RAL	○	10.0	10.0	9.8	73.0	22.0	32.0	0.5
137V 10N3-1.0R	●	137V 10N3-1.0RAL	●	10.0	10.0	9.8	73.0	22.0	32.0	1.0
137V 10N3-1.5R	●	137V 10N3-1.5RAL	○	10.0	10.0	9.8	73.0	22.0	32.0	1.5
137V 10N3-2.0R	●	137V 10N3-2.0RAL	○	10.0	10.0	9.8	73.0	22.0	32.0	2.0
137V 10N3-3.0R	●	137V 10N3-3.0RAL	●	10.0	10.0	9.8	73.0	22.0	32.0	3.0
137V 10N3-4.0R	●	137V 10N3-4.0RAL	○	10.0	10.0	9.8	73.0	22.0	32.0	4.0
137V 12N3	●	137V 12N3AL	●	12.0	12.0	11.8	84.0	26.0	38.0	-
137V 12N3-0.2R	●	137V 12N3-0.2RAL	○	12.0	12.0	11.8	84.0	26.0	38.0	0.2
137V 12N3-0.5R	●	137V 12N3-0.5RAL	○	12.0	12.0	11.8	84.0	26.0	38.0	0.5
137V 12N3-1.0R	●	137V 12N3-1.0RAL	●	12.0	12.0	11.8	84.0	26.0	38.0	1.0
137V 12N3-1.5R	●	137V 12N3-1.5RAL	○	12.0	12.0	11.8	84.0	26.0	38.0	1.5
137V 12N3-2.0R	●	137V 12N3-2.0RAL	●	12.0	12.0	11.8	84.0	26.0	38.0	2.0
137V 12N3-2.50R	●	137V 12N3-2.50RAL	-	12.0	12.0	11.8	84.0	26.0	38.0	2.5
137V 12N3-3.0R	●	137V 12N3-3.0RAL	●	12.0	12.0	11.8	84.0	26.0	38.0	3.0
137V 12N3-4.0R	●	137V 12N3-4.0RAL	●	12.0	12.0	11.8	84.0	26.0	38.0	4.0
137V 16N3	●	137V 16N3AL	●	16.0	16.0	15.8	93.0	32.0	50.0	-
137V 16N3-0.2R	●	137V 16N3-0.2RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	0.2
137V 16N3-0.5R	●	137V 16N3-0.5RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	0.5
137V 16N3-1.0R	●	137V 16N3-1.0RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	1.0
137V 16N3-1.5R	●	137V 16N3-1.5RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	1.5
137V 16N3-2.0R	●	137V 16N3-2.0RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	2.0
137V 16N3-3.0R	●	137V 16N3-3.0RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	3.0
137V 16N3-4.0R	●	137V 16N3-4.0RAL	●	16.0	16.0	15.8	93.0	32.0	50.0	4.0
137V 20N3	●	137V 20N3AL	●	20.0	20.0	19.8	105.0	38.0	62.0	-
137V 20N3-0.2R	●	137V 20N3-0.2RAL	○	20.0	20.0	19.8	105.0	38.0	62.0	0.2
137V 20N3-0.5R	●	137V 20N3-0.5RAL	●	20.0	20.0	19.8	105.0	38.0	62.0	0.5
137V 20N3-1.0R	●	137V 20N3-1.0RAL	●	20.0	20.0	19.8	105.0	38.0	62.0	1.0
137V 20N3-1.5R	●	137V 20N3-1.5RAL	○	20.0	20.0	19.8	105.0	38.0	62.0	1.5
137V 20N3-2.0R	●	137V 20N3-2.0RAL	●	20.0	20.0	19.8	105.0	38.0	62.0	2.0
137V 20N3-3.0R	●	137V 20N3-3.0RAL	○	20.0	20.0	19.8	105.0	38.0	62.0	3.0
137V 20N3-4.0R	●	137V 20N3-4.0RAL	●	20.0	20.0	19.8	105.0	38.0	62.0	4.0
137V 20N3-5.0R	●	137V 20N3-5.0RAL	-	20.0	20.0	19.8	105.0	38.0	62.0	5.0
137V 20N3-6.0R	●	137V 20N3-6.0RAL	-	20.0	20.0	19.8	105.0	38.0	62.0	6.0

● Stock ○ Check Availability



# TuffCut® X-AL Series 137V N4 & 137V N4 AL

Tool Number				D1	D2	D3	L1	L2	L3	R
Uncoated	Stk	Coated	Stk							
137V 03N4	●	137V 03N4AL	○	3.0	3.0	2.8	51.0	4.5	14.0	-
137V 03N4-0.2R	●	137V 03N4-0.2RAL	○	3.0	3.0	2.8	51.0	4.5	14.0	0.2
137V 03N4-0.5R	●	137V 03N4-0.5RAL	○	3.0	3.0	2.8	51.0	4.5	14.0	0.5
137V 03N4-1.0R	●	137V 03N4-1.0RAL	○	3.0	3.0	2.8	51.0	4.5	14.0	1.0
137V 04N4	●	137V 04N4AL	●	4.0	4.0	3.8	51.0	6.0	18.0	-
137V 04N4-0.2R	●	137V 04N4-0.2RAL	●	4.0	4.0	3.8	51.0	6.0	18.0	0.2
137V 04N4-0.5R	●	137V 04N4-0.5RAL	○	4.0	4.0	3.8	51.0	6.0	18.0	0.5
137V 04N4-1.0R	●	137V 04N4-1.0RAL	○	4.0	4.0	3.8	51.0	6.0	18.0	1.0
137V 05N4	●	137V 05N4AL	●	5.0	5.0	4.8	57.0	7.5	22.0	-
137V 05N4-0.2R	●	137V 05N4-0.2RAL	●	5.0	5.0	4.8	57.0	7.5	22.0	0.2
137V 05N4-0.5R	●	137V 05N4-0.5RAL	○	5.0	5.0	4.8	57.0	7.5	22.0	0.5
137V 05N4-1.0R	●	137V 05N4-1.0RAL	○	5.0	5.0	4.8	57.0	7.5	22.0	1.0
137V 06N4	●	137V 06N4AL	●	6.0	6.0	5.8	64.0	9.0	26.0	-
137V 06N4-0.2R	●	137V 06N4-0.2RAL	●	6.0	6.0	5.8	64.0	9.0	26.0	0.2
137V 06N4-0.5R	●	137V 06N4-0.5RAL	○	6.0	6.0	5.8	64.0	9.0	26.0	0.5
137V 06N4-1.0R	●	137V 06N4-1.0RAL	○	6.0	6.0	5.8	64.0	9.0	26.0	1.0
137V 06N4-1.5R	●	137V 06N4-1.5RAL	○	6.0	6.0	5.8	64.0	9.0	26.0	1.5
137V 06N4-2.0R	●	137V 06N4-2.0RAL	○	6.0	6.0	5.8	64.0	9.0	26.0	2.0
137V 08N4	●	137V 08N4AL	●	8.0	8.0	7.8	70.0	12.0	34.0	-
137V 08N4-0.2R	●	137V 08N4-0.2RAL	●	8.0	8.0	7.8	70.0	12.0	34.0	0.2
137V 08N4-0.5R	●	137V 08N4-0.5RAL	○	8.0	8.0	7.8	70.0	12.0	34.0	0.5
137V 08N4-1.0R	●	137V 08N4-1.0RAL	●	8.0	8.0	7.8	70.0	12.0	34.0	1.0
137V 08N4-1.5R	●	137V 08N4-1.5RAL	○	8.0	8.0	7.8	70.0	12.0	34.0	1.5
137V 08N4-2.0R	●	137V 08N4-2.0RAL	○	8.0	8.0	7.8	70.0	12.0	34.0	2.0
137V 08N4-3.0R	●	137V 08N4-3.0RAL	●	8.0	8.0	7.8	70.0	12.0	34.0	3.0
137V 10N4	●	137V 10N4AL	●	10.0	10.0	9.8	90.0	15.0	42.0	-
137V 10N4-0.2R	●	137V 10N4-0.2RAL	●	10.0	10.0	9.8	90.0	15.0	42.0	0.2
137V 10N4-0.5R	●	137V 10N4-0.5RAL	○	10.0	10.0	9.8	90.0	15.0	42.0	0.5
137V 10N4-1.0R	●	137V 10N4-1.0RAL	○	10.0	10.0	9.8	90.0	15.0	42.0	1.0
137V 10N4-1.5R	●	137V 10N4-1.5RAL	●	10.0	10.0	9.8	90.0	15.0	42.0	1.5
137V 10N4-2.0R	●	137V 10N4-2.0RAL	○	10.0	10.0	9.8	90.0	15.0	42.0	2.0
137V 10N4-3.0R	●	137V 10N4-3.0RAL	●	10.0	10.0	9.8	90.0	15.0	42.0	3.0
137V 10N4-4.0R	●	137V 10N4-4.0RAL	○	10.0	10.0	9.8	90.0	15.0	42.0	4.0
137V 12N4	●	137V 12N4AL	●	12.0	12.0	11.8	100.0	18.0	50.0	-
137V 12N4-0.2R	●	137V 12N4-0.2RAL	●	12.0	12.0	11.8	100.0	18.0	50.0	0.2
137V 12N4-0.5R	●	137V 12N4-0.5RAL	●	12.0	12.0	11.8	100.0	18.0	50.0	0.5
137V 12N4-1.0R	●	137V 12N4-1.0RAL	○	12.0	12.0	11.8	100.0	18.0	50.0	1.0
137V 12N4-1.5R	●	137V 12N4-1.5RAL	○	12.0	12.0	11.8	100.0	18.0	50.0	1.5
137V 12N4-2.0R	●	137V 12N4-2.0RAL	○	12.0	12.0	11.8	100.0	18.0	50.0	2.0
137V 12N4-3.0R	●	137V 12N4-3.0RAL	●	12.0	12.0	11.8	100.0	18.0	50.0	3.0
137V 12N4-4.0R	●	137V 12N4-4.0RAL	○	12.0	12.0	11.8	100.0	18.0	50.0	4.0

● Stock ○ Check Availability



# TuffCut® X-AL Series 137V N4 & 137V N4 AL

Tool Number				D1	D2	D3	L1	L2	L3	R
Uncoated	Stk	Coated	Stk							
137V 16N4	●	137V 16N4AL	●	16.0	16.0	15.8	120.0	24.0	66.0	-
137V 16N4-0.2R	●	137V 16N4-0.2RAL	○	16.0	16.0	15.8	120.0	24.0	66.0	0.2
137V 16N4-0.5R	●	137V 16N4-0.5RAL	●	16.0	16.0	15.8	120.0	24.0	66.0	0.5
137V 16N4-1.0R	●	137V 16N4-1.0RAL	●	16.0	16.0	15.8	120.0	24.0	66.0	1.0
137V 16N4-1.5R	●	137V 16N4-1.5RAL	○	16.0	16.0	15.8	120.0	24.0	66.0	1.5
137V 16N4-2.0R	●	137V 16N4-2.0RAL	○	16.0	16.0	15.8	120.0	24.0	66.0	2.0
137V 16N4-3.0R	●	137V 16N4-3.0RAL	○	16.0	16.0	15.8	120.0	24.0	66.0	3.0
137V 16N4-4.0R	●	137V 16N4-4.0RAL	○	16.0	16.0	15.8	120.0	24.0	66.0	4.0
137V 20N4	●	137V 20N4AL	●	20.0	20.0	19.8	135.0	30.0	82.0	-
137V 20N4-0.2R	●	137V 20N4-0.2RAL	○	20.0	20.0	19.8	135.0	30.0	82.0	0.2
137V 20N4-0.5R	●	137V 20N4-0.5RAL	○	20.0	20.0	19.8	135.0	30.0	82.0	0.5
137V 20N4-1.0R	●	137V 20N4-1.0RAL	●	20.0	20.0	19.8	135.0	30.0	82.0	1.0
137V 20N4-1.5R	●	137V 20N4-1.5RAL	○	20.0	20.0	19.8	135.0	30.0	82.0	1.5
137V 20N4-2.0R	●	137V 20N4-2.0RAL	○	20.0	20.0	19.8	135.0	30.0	82.0	2.0
137V 20N4-3.0R	●	137V 20N4-3.0RAL	○	20.0	20.0	19.8	135.0	30.0	82.0	3.0
137V 20N4-4.0R	●	137V 20N4-4.0RAL	○	20.0	20.0	19.8	135.0	30.0	82.0	4.0

● Stock ○ Check Availability



# TuffCut® X-AL Series 137V N5 & 137V N5 AL

Tool Number				D1	D2	D3	L1	L2	L3	R
Uncoated	Stk	Coated	Stk							
137V 03N5	●	137V 03N5AL	●	3.0	3.0	2.8	51.0	4.5	17.0	-
137V 03N5-0.2R	●	137V 03N5-0.2RAL	●	3.0	3.0	2.8	51.0	4.5	17.0	0.2
137V 03N5-0.5R	●	137V 03N5-0.5RAL	○	3.0	3.0	2.8	51.0	4.5	17.0	0.5
137V 03N5-1.0R	●	137V 03N5-1.0RAL	○	3.0	3.0	2.8	51.0	4.5	17.0	1.0
137V 04N5	●	137V 04N5AL	○	4.0	4.0	3.8	51.0	6.0	22.0	-
137V 04N5-0.2R	●	137V 04N5-0.2RAL	●	4.0	4.0	3.8	51.0	6.0	22.0	0.2
137V 04N5-0.5R	●	137V 04N5-0.5RAL	●	4.0	4.0	3.8	51.0	6.0	22.0	0.5
137V 04N5-1.0R	●	137V 04N5-1.0RAL	●	4.0	4.0	3.8	51.0	6.0	22.0	1.0
137V 05N5	●	137V 05N5AL	●	5.0	5.0	4.8	57.0	7.5	27.0	-
137V 05N5-0.2R	●	137V 05N5-0.2RAL	●	5.0	5.0	4.8	57.0	7.5	27.0	0.2
137V 05N5-0.5R	●	137V 05N5-0.5RAL	○	5.0	5.0	4.8	57.0	7.5	27.0	0.5
137V 05N5-1.0R	●	137V 05N5-1.0RAL	○	5.0	5.0	4.8	57.0	7.5	27.0	1.0
137V 06N5	●	137V 06N5AL	●	6.0	6.0	5.8	64.0	9.0	32.0	-
137V 06N5-0.2R	●	137V 06N5-0.2RAL	○	6.0	6.0	5.8	64.0	9.0	32.0	0.2
137V 06N5-0.5R	●	137V 06N5-0.5RAL	●	6.0	6.0	5.8	64.0	9.0	32.0	0.5
137V 06N5-1.0R	●	137V 06N5-1.0RAL	○	6.0	6.0	5.8	64.0	9.0	32.0	1.0
137V 06N5-1.5R	●	137V 06N5-1.5RAL	○	6.0	6.0	5.8	64.0	9.0	32.0	1.5
137V 06N5-2.0R	●	137V 06N5-2.0RAL	○	6.0	6.0	5.8	64.0	9.0	32.0	2.0
137V 08N5	●	137V 08N5AL	●	8.0	8.0	7.8	75.0	12.0	42.0	-
137V 08N5-0.2R	●	137V 08N5-0.2RAL	●	8.0	8.0	7.8	75.0	12.0	42.0	0.2
137V 08N5-0.5R	●	137V 08N5-0.5RAL	●	8.0	8.0	7.8	75.0	12.0	42.0	0.5
137V 08N5-1.0R	●	137V 08N5-1.0RAL	○	8.0	8.0	7.8	75.0	12.0	42.0	1.0
137V 08N5-1.5R	●	137V 08N5-1.5RAL	○	8.0	8.0	7.8	75.0	12.0	42.0	1.5
137V 08N5-2.0R	●	137V 08N5-2.0RAL	●	8.0	8.0	7.8	75.0	12.0	42.0	2.0
137V 08N5-3.0R	●	137V 08N5-3.0RAL	○	8.0	8.0	7.8	75.0	12.0	42.0	3.0
137V 10N5	●	137V 10N5AL	●	10.0	10.0	9.8	90.0	15.0	52.0	-
137V 10N5-0.2R	●	137V 10N5-0.2RAL	●	10.0	10.0	9.8	90.0	15.0	52.0	0.2
137V 10N5-0.5R	●	137V 10N5-0.5RAL	●	10.0	10.0	9.8	90.0	15.0	52.0	0.5
137V 10N5-1.0R	●	137V 10N5-1.0RAL	●	10.0	10.0	9.8	90.0	15.0	52.0	1.0
137V 10N5-1.5R	●	137V 10N5-1.5RAL	○	10.0	10.0	9.8	90.0	15.0	52.0	1.5
137V 10N5-2.0R	●	137V 10N5-2.0RAL	○	10.0	10.0	9.8	90.0	15.0	52.0	2.0
137V 10N5-3.0R	●	137V 10N5-3.0RAL	○	10.0	10.0	9.8	90.0	15.0	52.0	3.0
137V 10N5-4.0R	●	137V 10N5-4.0RAL	○	10.0	10.0	9.8	90.0	15.0	52.0	4.0
137V 12N5	●	137V 12N5AL	●	12.0	12.0	11.8	110.0	18.0	62.0	-
137V 12N5-0.2R	●	137V 12N5-0.2RAL	●	12.0	12.0	11.8	110.0	18.0	62.0	0.2
137V 12N5-0.5R	●	137V 12N5-0.5RAL	●	12.0	12.0	11.8	110.0	18.0	62.0	0.5
137V 12N5-1.0R	●	137V 12N5-1.0RAL	●	12.0	12.0	11.8	110.0	18.0	62.0	1.0
137V 12N5-1.5R	●	137V 12N5-1.5RAL	○	12.0	12.0	11.8	110.0	18.0	62.0	1.5
137V 12N5-2.0R	●	137V 12N5-2.0RAL	●	12.0	12.0	11.8	110.0	18.0	62.0	2.0
137V 12N5-3.0R	●	137V 12N5-3.0RAL	●	12.0	12.0	11.8	110.0	18.0	62.0	3.0
137V 12N5-4.0R	●	137V 12N5-4.0RAL	○	12.0	12.0	11.8	110.0	18.0	62.0	4.0

● Stock ○ Check Availability



# TuffCut® X-AL Series 137V N5 & 137V N5 AL




Tool Number				D1	D2	D3	L1	L2	L3	R
Uncoated	Stk	Coated	Stk							
137V 16N5	●	137V 16N5AL	●	16.0	16.0	15.8	130.0	24.0	82.0	-
137V 16N5-0.2R	●	137V 16N5-0.2RAL	●	16.0	16.0	15.8	130.0	24.0	82.0	0.2
137V 16N5-0.5R	●	137V 16N5-0.5RAL	●	16.0	16.0	15.8	130.0	24.0	82.0	0.5
137V 16N5-1.0R	●	137V 16N5-1.0RAL	●	16.0	16.0	15.8	130.0	24.0	82.0	1.0
137V 16N5-1.5R	●	137V 16N5-1.5RAL	○	16.0	16.0	15.8	130.0	24.0	82.0	1.5
137V 16N5-2.0R	●	137V 16N5-2.0RAL	○	16.0	16.0	15.8	130.0	24.0	82.0	2.0
137V 16N5-3.0R	●	137V 16N5-3.0RAL	●	16.0	16.0	15.8	130.0	24.0	82.0	3.0
137V 16N5-4.0R	●	137V 16N5-4.0RAL	○	16.0	16.0	15.8	130.0	24.0	82.0	4.0
137V 20N5	●	137V 20N5AL	●	20.0	20.0	19.8	150.0	30.0	102.0	-
137V 20N5-0.2R	●	137V 20N5-0.2RAL	●	20.0	20.0	19.8	150.0	30.0	102.0	0.2
137V 20N5-0.5R	●	137V 20N5-0.5RAL	●	20.0	20.0	19.8	150.0	30.0	102.0	0.5
137V 20N5-1.0R	●	137V 20N5-1.0RAL	●	20.0	20.0	19.8	150.0	30.0	102.0	1.0
137V 20N5-1.5R	●	137V 20N5-1.5RAL	○	20.0	20.0	19.8	150.0	30.0	102.0	1.5
137V 20N5-2.0R	●	137V 20N5-2.0RAL	○	20.0	20.0	19.8	150.0	30.0	102.0	2.0
137V 20N5-3.0R	●	137V 20N5-3.0RAL	○	20.0	20.0	19.8	150.0	30.0	102.0	3.0
137V 20N5-4.0R	●	137V 20N5-4.0RAL	○	20.0	20.0	19.8	150.0	30.0	102.0	4.0




● Stock ○ Check Availability



# TuffCut® X-AL Series 137V & 137V AL

## Recommended cutting data

Series	Type of cut		Vc	Diameter - mm					
				ø 3.0	ø 4.0	ø 5.0	ø 6.0	ø 8.0	
	Ae	Ap	M/Min	fz	fz	fz	fz	fz	
137V N3-AL 137V N4-AL 137V N5-AL		1 x D	0.25 x D	400-600	0.03	0.04	0.05	0.06	0.08
		1 x D	0.5 x D	400-600	0.03	0.04	0.05	0.06	0.08
		1 x D	1 x D	400-600	0.02	0.03	0.04	0.05	0.07
		0.75 x D	0.5 x D	500-700	0.045	0.06	0.075	0.09	0.12
		0.5 x D	1 x D	500-700	0.03	0.04	0.05	0.06	0.08
		0.5 x D	1.5 x D	500-700	0.03	0.04	0.05	0.06	0.08
		≤ 0.1 x D	≤ 0.9 x L <sup>2</sup>	800-1000	0.036	0.054	0.072	0.09	0.126

Series	Type of cut		Vc	Diameter - mm				
				ø 10.0	ø 12.0	ø 16.0	ø 20.0	
	Ae	Ap	M/Min	fz	fz	fz	fz	
137V N3-AL 137V N4-AL 137V N5-AL		1 x D	0.25 x D	400-600	0.10	0.12	0.16	0.20
		1 x D	0.5 x D	400-600	0.10	0.12	0.16	0.20
		1 x D	1 x D	400-600	0.09	0.11	0.15	0.19
		0.75 x D	0.5 x D	500-700	0.15	0.18	0.24	0.30
		0.5 x D	1 x D	500-700	0.10	0.12	0.16	0.20
		0.5 x D	1.5 x D	500-700	0.10	0.12	0.16	0.20
		≤ 0.1 x D	≤ 0.9 x L <sup>2</sup>	800-1000	0.162	0.2	0.27	0.342

Notes:

1. Plunging to 1 x D = 20% of Slotting Feed Rate.
2. Ramping (15° max) to 2 x D = 33% of Slotting Feed Rate

Fordlube Coating Properties	
Microhardness (HV)	4000
Max. Service Temp.	700° C / 1292° F
Friction Coefficient	0.3
Designation	AL
Colour	Light Gold