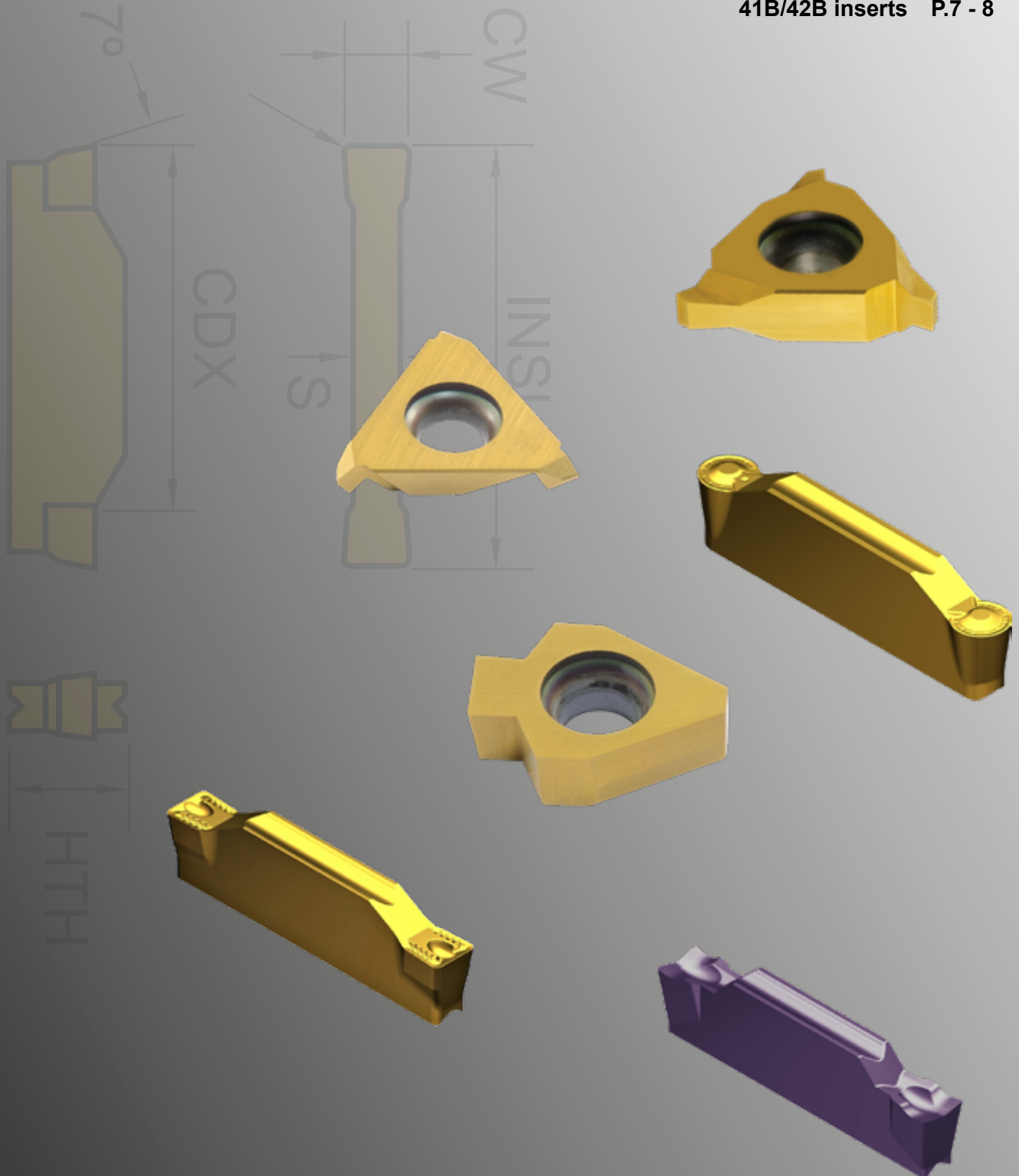


GROOVING INSERTS

Grade & Geometry guide	P.2
TDP inserts	P.3 - 4
TDN inserts	P.3 - 4
TDY inserts	P.3
13C inserts	P.5
13T inserts	P.6
41B/42B inserts	P.7 - 8





INSERT GRADE GUIDE

		P STEEL				M STAINLESS STEEL				K CAST IRON			
		05	15	25	35	05	15	25	35	05	15	25	35
PVD	ET602G			602G				602G				602G	
	ET602			602				602				602	
	ET63P							63P					
		HARDER ← → TOUGHER				HARDER ← → TOUGHER				HARDER ← → TOUGHER			
		N NON-FERROUS				S HRSA				H HARDENED STEEL			
		05	15	25	35	05	15	25	35	05	15	25	35
PVD	ET602G	602G						602G					
	ET602							602				602	
	ET63P							63P					
		HARDER ← → TOUGHER				HARDER ← → TOUGHER				HARDER ← → TOUGHER			

	P20 - P35	ET602G First choice for general grooving and turning. PVD multi-layer coating, suitable for most materials
	M20 - M40	
	K20 - K40	
	N05 - N35	
	S15 - S25	
PVD - TiAlN-TiN		
	P30 - P40	ET602 Ultra dense PVD coating optimised for grooving applications in steel and cast iron
	M20 - M40	
	K30 - K40	
	S15 - S25	
	H15 - H25	
PVD - TiAlN		

	M20 - M40	ET63P First choice for stainless steel and HRSA materials. PVD coating optimised for grooving applications
	S20 - S35	
PVD - TiAlN-TiN		

INSERT GEOMETRY

P	M	K	N	S	H	Edge Preparation Guide	
●	●	○	○	●	●		TDP For Aluminium, Stainless Steel and HRSA and for deep grooving
●	●	●	○	○	○		TDN General grooving and parting-off
●	●	●	○	●	●		TDY External Grooving and Turning, medium feed rate
●	●	●	○	●	●		TDY-L All Grooving and Turning, low feed rate
●	●	●	○	●	●		TDY-M All Grooving and Turning, medium feed rate First choice for face grooving and turning
●	●	●	○	●	●		TDY-R All Grooving and Turning, full radius for profiling



GROOVING INSERTS



DOUBLE ENDED TYPE

▶ EDP Code PG..... Example: TDP 2002 ET602G = PG00042

		INSERT	CW	INSL	HTH	S			
		TD.. 2	2.0	20	4.7	1.7	P	●	●
		TD.. 3	3.0	20	4.7	2.4	M	○	○
		TD.. 4	4.0	20	4.7	3.0	K	●	●
		TD.. 5	5.0	20	4.7	4.0	N	○	○
							S	○	○
							H	○	○

TDP TDN TDY	DESIGNATION	RE (mm)	CDX (mm)	fn (mm/rev)	ap (mm)	ET602G	ET602	ET63P
	TDP 2002	0.2	19	0.04 - 0.12	-	■ 00042	● 00017	● 00039
	TDP 3002	0.2	19	0.05 - 0.16	-		● 00018	● 00040
	TDP 4003	0.3	19	0.06 - 0.18	-	■ 00044	● 00019	● 00041
	TDN 2002	0.2	19	0.06 - 0.18	-	■ 00045	● 00020	● 00036
	TDN 3002	0.2	19	0.07 - 0.22	-		● 00021	● 00037
	TDN 4003	0.3	19	0.08 - 0.25	-	■ 00047	● 00022	● 00038
	TDN 5003	0.3	19	0.09 - 0.29	-		● 00025	
	TDY 3E-0.4	0.4	19	0.10 - 0.20	0.5 - 2.2	● 00023		
	TDY 4E-0.4	0.4	19	0.15 - 0.26	0.5 - 2.8	● 00024		
	TDY 5E-0.4	0.4	19	0.15 - 0.30	0.5 - 3.2	● 00127		
	TDY 2E-03L	0.3	19	0.04 - 0.20	0.4 - 1.5	● 00109		● 00110
	TDY 3E-03L	0.3	19	0.05 - 0.23	0.4 - 2.0	● 00111		● 00112
	TDY 4E-04L	0.4	19	0.06 - 0.26	0.5 - 2.3	● 00113		● 00114
	TDY 3E-04M	0.4	19	0.08 - 0.27	0.5 - 2.8	● 00115		● 00116
	TDY 4E-04M	0.4	19	0.10 - 0.27	0.8 - 2.8	● 00117		● 00118
	TDY 4E-08M	0.8	19	0.10 - 0.27	0.8 - 2.8	● 00119		● 00120
	TDY 2E-1.0R	1.0	19	0.05 - 0.15	0.1 - 0.8	● 00121		● 00122
	TDY 3E-1.5R	1.5	19	0.08 - 0.18	0.1 - 1.2	● 00123		● 00124
	TDY 4E-2.0R	2.0	19	0.10 - 0.20	0.1 - 1.6	● 00125		● 00126

■ = Available while stocks last

ISO	P			M		K		N	S	H
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
vc (m/min)	ET602G	90 - 180	80 - 120	80 - 110	60 - 150	45 - 130	110 - 185	110 - 140	250 - 440	20 - 40
	ET602	-	80 - 120	80 - 110	-	-	110 - 185	110 - 140	-	25 - 50
	ET63P	-	-	-	70 - 160	55 - 140	-	-	-	25 - 45



DOUBLE ENDED TYPE, 6° HANDED

▶ EDP Code PG..... Example: TDPR 2002 ET602 = PG00026

TDP TDN	DESIGNATION	RE (mm)	CDX (mm)	f _n (mm/rev)	a _p (mm)	ET602G	ET602	ET63P
	TDPR 2002	0.2	19	0.04 - 0.12	-		●	●
	TDPR 3002	0.2	19	0.05 - 0.16	-		○	○
								●
								○
								●
	TDNR 2002	0.2	19	0.06 - 0.18	-		●	●
	TDNR 3002	0.2	19	0.07 - 0.22	-		○	○
								●
	TDPL 2002	0.2	19	0.04 - 0.12	-		●	●
	TDPL 3002	0.2	19	0.05 - 0.16	-		○	○
								●
	TDNL 2002	0.2	19	0.06 - 0.18	-		●	●
	TDNL 3002	0.2	19	0.07 - 0.22	-		○	○
								●

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
v _c (m/min)	ET602G	90 - 180	80 - 120	80 - 110	60 - 150	45 - 130	110 - 185	110 - 140	250 - 440	20 - 40	-
	ET602	-	80 - 120	80 - 110	-	-	110 - 185	110 - 140	-	-	25 - 50
	ET63P	-	-	-	70 - 160	55 - 140	-	-	-	25 - 45	-



GROOVING INSERTS

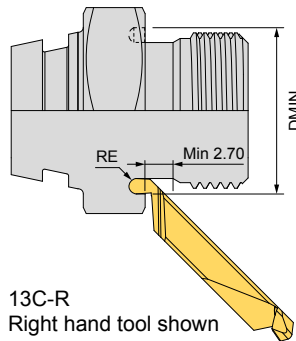
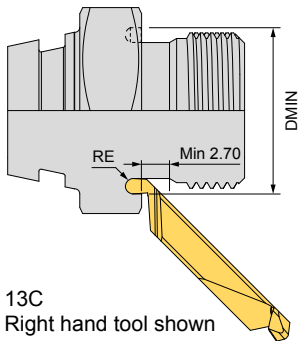


CORNER RECESSING TYPE

► EDP Code PG..... Example: 13CR 1.50 ET602G = PG00057

		INSERT	CW	IC	S				
		13CR/L 1.50	1.5	13	3.25	P	●	●	●
		13CR/L 2.00	2.0	13	3.25	M	○	○	●
		13CR/L 2.40	2.4	13	3.25	K	●	●	●
		13CR/L 2.0R	2.0	13	3.25	N	○	○	○
						S	○	○	●
						H		○	

13C 13C-R	DESIGNATION	RE (mm)	CDX (mm)	f _n (mm/rev)	DMIN (mm)	ET602G	ET602	ET63P
	13C 13CR 1.50	0.4	1.6	0.03 - 0.10	8	● 00057		
	13CL 1.50	0.4	1.6	0.03 - 0.10	8	● 00058		
	13CR 2.00	0.5	1.8	0.04 - 0.12	12	● 00059		
	13CL 2.00	0.5	1.8	0.04 - 0.12	12	● 00060		
	13CR 2.40	0.6	2.0	0.04 - 0.14	20	● 00061		
	13CL 2.40	0.6	2.0	0.04 - 0.14	20	● 00062		
	13C-R 13CR 2.0R	1.0	1.8	0.04 - 0.12	12	● 00063		
	13CL 2.0R	1.0	1.8	0.04 - 0.12	12	● 00064		



ISO	P			M		K		N	S	H
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
Vc (m/min)	ET602G	90 - 180	80 - 120	80 - 110	60 - 150	45 - 130	110 - 185	110 - 140	250 - 440	20 - 40
	ET602	-	80 - 120	80 - 110	-	-	110 - 185	110 - 140	-	25 - 50
	ET63P	-	-	-	70 - 160	55 - 140	-	-	-	25 - 45

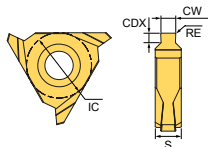


GROOVING INSERTS



RING GROOVING TYPE

► EDP Code PG..... Example: 13T 1.25 ET602G = PG00065



INSERT	IC	S
13T	13	3.25

	P	M	K	N	S	H
	●	○	○	○	○	○
	○	○	○	○	○	○
	○	○	○	○	○	○
	○	○	○	○	○	○
	○	○	○	○	○	○
	○	○	○	○	○	○

13T	DESIGNATION	CW (mm)	RE (mm)	CDX (mm)	f _n (mm/rev)	ET602G	ET602	ET63P
	13T 1.25	1.25	0.2	1.3	0.04 - 0.16	● 00065		
	13T 1.35	1.35	0.2	1.3	0.04 - 0.16	● 00066		
	13T 1.45	1.45	0.2	1.3	0.04 - 0.16	● 00067		
	13T 1.50	1.50	0.2	1.3	0.04 - 0.16	● 00068		
	13T 1.65	1.65	0.2	1.8	0.04 - 0.16	● 00069		
	13T 1.75	1.75	0.2	1.8	0.04 - 0.16	● 00070		
	13T 1.85	1.82	0.2	2.3	0.04 - 0.16	● 00071		
	13T 2.00	2.00	0.2	2.3	0.06 - 0.18	● 00072		
	13T 2.20	2.20	0.2	3.3	0.06 - 0.18	● 00073		
	13T 2.30	2.30	0.2	3.3	0.06 - 0.18	● 00074		
	13T 2.50	2.50	0.3	3.3	0.06 - 0.18	● 00075		
	13T 2.65	2.65	0.3	3.3	0.06 - 0.18	● 00076		
	13T 2.70	2.70	0.3	3.3	0.06 - 0.18	● 00077		
	13T 2.80	2.80	0.3	3.3	0.06 - 0.18	● 00078		
	13T 3.00	3.00	0.3	3.3	0.07 - 0.22	● 00079		
	13T 3.20	3.20	0.3	3.3	0.07 - 0.22	● 00080		
	13T 3.30	3.30	0.3	3.3	0.07 - 0.22	● 00081		
	13T 3.50	3.50	0.3	3.8	0.07 - 0.22	● 00082		
	13T 3.70	3.70	0.3	3.8	0.07 - 0.22	● 00083		
13T 3.90	3.90	0.3	3.8	0.07 - 0.22	● 00084			
13T 4.00	4.00	0.3	3.8	0.08 - 0.25	● 00085			

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET602G	90 - 180	80 - 120	80 - 110	60 - 150	45 - 130	110 - 185	110 - 140	250 - 440	20 - 40	-
	ET602	-	80 - 120	80 - 110	-	-	110 - 185	110 - 140	-	-	25 - 50
	ET63P	-	-	-	70 - 160	55 - 140	-	-	-	25 - 45	-



GROOVING INSERTS



KEYWAY BROACHING TYPE

► EDP Code PG..... Example: 41B 061208-C11 ET602G = PG00086

41B 42B	DESIGNATION	CW (mm)	RE (mm)	CDX (mm)	v _f (mm/min)	a _p (mm)	TOLERANCE STD			
							C11	DIN138	P9	DIN6885
							P	●	●	
							M	○	○	●
							K	●	●	
							N	○		
							S	○	○	●
							H		○	

INSERT	S
41B	4.0
42B	6.0

ISO	P			M		K	N	S	H		
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
v _c (m/min)	ET602G	90 - 180	80 - 120	80 - 110	60 - 150	45 - 130	110 - 185	110 - 140	250 - 440	20 - 40	-
	ET602	-	80 - 120	80 - 110	-	-	110 - 185	110 - 140	-	-	25 - 50
	ET63P	-	-	-	70 - 160	55 - 140	-	-	-	25 - 45	-

41B 42B	DESIGNATION	CW (mm)	RE (mm)	CDX (mm)	v _f (mm/min)	a _p (mm)	ET602G	ET602	ET63P
	41B 061208-C11	6.12	0.85	2.6			3000 - 8000	0.02 - 0.08	● 00086
	41B 071308-C11	7.13	0.85	3.3	● 00087				
	41B 081310-C11	8.13	1.05	3.4	● 00088				
	41B 049802-P9	4.98	0.20	2.7	● 00089				
	41B 059802-P9	5.98	0.20	3.4	● 00090				
	41B 079802-P9	7.98	0.20	4.1	● 00091				
	41B 050102-JS9	5.01	0.20	2.7	● 00092				
	41B 060102-JS9	6.01	0.20	3.4	● 00093				
	41B 080102-JS9	8.01	0.20	4.1	● 00094				
	42B 101310-C11	10.13	1.05	4.2	● 00095				
	42B 121513-C11	12.15	1.35	5.1	● 00096				
	42B 121517-C11	12.15	1.75	6.6	● 00097				
	42B 121522-C11	12.15	2.25	8.5	● 00098				
	42B 099803-P9	9.98	0.30	4.2	● 00099				
	42B 119703-P9	11.97	0.30	5.7	● 00100				
	42B 139703-P9	13.97	0.30	6.8	● 00101				
	42B 100103-JS9	10.01	0.30	4.2	● 00102				
	42B 120005-JS9	12.00	0.50	8.5	● 00103				
42B 120103-JS9	12.01	0.30	5.7	● 00104					
42B 140103-JS9	14.01	0.30	6.8	● 00105					



GROOVING INSERTS



KEYWAY BROACHING TYPE

► EDP Code PG..... Example: 41BC 015045-17 ET602G = PG00106

	INSERT	S	WIDTH	DMIN					
	41BC	4.0	1.50	17.0		P	●	●	
	42BC	6.0	3.00	22.0		M	○	○	●
			6.00	30.0		K	●	●	
						N	○		
						S	○	○	●
						H		○	

41BC 42BC	DESIGNATION	CW (mm)	RE (mm)	CDX (mm)	v_f (mm/min)	a_p (mm)	ET602G	ET602	ET63P
	41BC 015045-17	1.50	-	-	3000 - 8000	0.02 - 0.08	● 00106		
	41BC 030045-22	3.00	-	-			● 00107		
	42BC 060045-30	6.00	-	-			● 00108		

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
v_c (m/min)	ET602G	90 - 180	80 - 120	80 - 110	60 - 150	45 - 130	110 - 185	110 - 140	250 - 440	20 - 40	-
	ET602	-	80 - 120	80 - 110	-	-	110 - 185	110 - 140	-	-	25 - 50
	ET63P	-	-	-	70 - 160	55 - 140	-	-	-	25 - 45	-