

Imperial
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NOTCH-GRIP

GROOVE-TURN LINE

Engineered for **MAXIMUM** Precision Grooving and Threading



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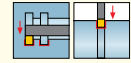
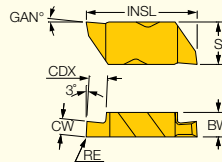
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ING/INGP-R/L
Precision Double-Ended Flat
Top Grooving Inserts



Right-hand shown

Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data
	CW	CDX	RE	GAN	BW	S	INSL	IC808	IC807	f groove (IPR)
INGP2031R/L	.031	.050	.004	5.0	.150	.219	.514		●	.0008-.0016
ING2031R/L	.031	.050	.004	.0	.150	.219	.514		●	.0008-.0016
ING2041R/L	.041	.050	.004	.0	.150	.219	.514		●	.0012-.0020
ING2047R/L	.047	.050	.004	.0	.150	.219	.514		●	.0012-.0020
INGP2062R/L	.062	.110	.007	5.0	.150	.219	.514		●	.0016-.0024
ING2062R/L	.062	.110	.007	.0	.150	.219	.514		●	.0016-.0024
ING2094R/L	.094	.110	.007	.0	.150	.219	.514		●	.0020-.0031
ING2125R/L	.125	.110	.007	.0	.150	.219	.514		●	.0031-.0047
ING3031R/L	.031	.050	.004	.0	.195	.341	.900	●		.0008-.0016
INGP3047R/L	.047	.075	.007	5.0	.195	.344	.890		●	.0012-.0020
ING3047R/L	.047	.075	.007	.0	.195	.341	.900	●		.0012-.0020
ING3058R/L	.058	.094	.007	.0	.195	.341	.900	●		.0012-.0020
INGP3062R/L	.062	.120	.007	5.0	.195	.344	.890		●	.0016-.0024
ING3062R/L	.062	.094	.007	.0	.195	.341	.900	●		.0016-.0024
ING3072R/L	.072	.094	.007	.0	.195	.341	.900	●		.0016-.0031
ING3078R/L	.078	.094	.007	.0	.195	.341	.900	●		.0016-.0035
ING3088R/L	.088	.094	.007	.0	.195	.341	.900	●		.0020-.0035
INGP3094R/L	.094	.180	.007	5.0	.195	.344	.890		●	.0020-.0031
ING3094R/L	.094	.150	.007	.0	.195	.195	.900	●		.0020-.0035
ING3097R/L	.097	.150	.013	.0	.195	.195	.900	●		.0024-.0039
ING3105R/L	.105	.150	.007	.0	.195	.195	.900	●		.0027-.0043
ING3110R/L	.110	.150	.013	.0	.195	.195	.900	●		.0027-.0043
ING3122R/L	.122	.150	.007	.0	.195	.195	.900	●		.0027-.0047
INGP3125R/L	.125	.180	.007	5.0	.195	.195	.890		●	.0031-.0047
ING3125R/L	.125	.150	.007	.0	.195	.341	.900	●		.0031-.0051
ING3142R/L	.142	.150	.013	.0	.195	.341	.900	●		.0035-.0059
ING3156R/L	.156	.150	.007	.0	.195	.341	.900	●		.0039-.0079
ING3178R/L	.178	.150	.007	.0	.195	.341	.900	●		.0043-.0083
ING3185R/L	.185	.150	.022	.0	.195	.341	.900	●		.0043-.0087
ING3189R/L	.189	.150	.022	.0	.195	.341	.900	●		.0043-.0087
ING4125R/L	.125	.250	.007	.0	.255	.453	1.122		●	.0031-.0047
ING4189R/L	.189	.250	.022	.0	.255	.453	1.120		●	.0039-.0079
ING4250R/L	.250	.250	.022	.0	.255	.453	1.120		●	.0039-.0087

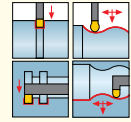
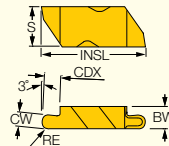
For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).



NOTCH-GRIP
GROOVE-TURN LINE

INR/INRP-R/L

Precision Double-Ended Flat
Top Round Grooving Inserts



Right-hand shown

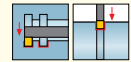
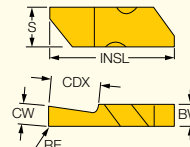
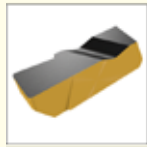
Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data f groove (IPR)
	CW	CDX	RE	GAN	BW	S	INSL	IC808	IC807	
INR2031R/L	.062	.110	.031	.0	.150	.219	.511		●	.0012-.0020
INR2047R/L	.094	.110	.047	.0	.150	.219	.509		●	.0016-.0027
INR3031R/L	.062	.094	.031	.0	.195	.341	.900	●		.0016-.0031
INRP3031R/L	.062	.031	.031	5.0	.195	.344	.887		●	.0012-.0020
INR3047R/L	.094	.150	.047	.0	.195	.341	.900	●		.0024-.0047
INRP3047R/L	.094	.180	.047	5.0	.195	.344	.885		●	.0016-.0027
INR3062R/L	.125	.150	.063	.0	.195	.341	.900	●		.0031-.0063
INRP3062R/L	.125	.180	.062	5.0	.195	.344	.884		●	.0027-.0043
INR3078R/L	.156	.150	.078	.0	.195	.341	.900	●		.0039-.0079
INR3094R/L	.188	.150	.094	.0	.195	.341	.900	●		.0047-.0087
INR4125R/L	.250	.250	.125	.0	.255	.453	1.109		●	.0039-.0087

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLISR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE

INGD-R/L

Precision, Single-Ended Flat
Top Deep Grooving Inserts



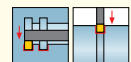
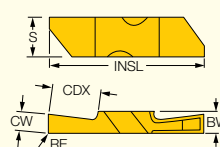
Designation	Dimensions							IC807	Recommended Machining Data f groove (IPR)
	CW	CDX	RE	BW	S	INSL			
INGD3062R/L	.062	.120	.007	.195	.344	.890		●	.0016-.0024
INGD3094R/L	.094	.250	.007	.195	.344	.990		●	.0020-.0031
INGD3125R/L	.125	.250	.007	.195	.344	.990		●	.0031-.0047
INGD3189R/L	.189	.250	.022	.195	.344	.988		●	.0039-.0079

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLISR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE

INGT-R/L

Precision, Double-Ended Flat
Top Deep Grooving Inserts



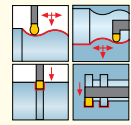
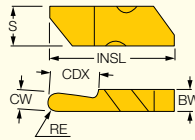
Designation	Dimensions							IC807	Recommended Machining Data f groove (IPR)
	CW	CDX	RE	BW	S	INSL			
INGT3094R/L	.094	.275	.007	.195	.344	1.340		●	.0020-.0031
INGT3125R/L	.125	.437	.007	.195	.344	1.340		●	.0031-.0047

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLISR/L (16) • FLISR/LT (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE

INRD-R/L

Precision, Single-Ended Full Radius Deep Grooving Inserts with a Flat Rake



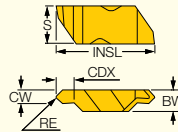
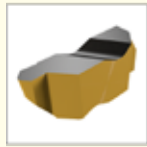
Designation	Dimensions						IC807	Recommended Machining Data
	CW	CDX	RE	BW	S	INSL		
INRD3062R/L	.125	.250	.062	.195	.344	.984	●	f groove (IPR) .0027-.0043

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE

INU-R/L

Precision Double-Ended Inserts for External Undercutting



Designation	Dimensions						IC807	Recommended Machining Data
	CW	CDX	RE	BW	S	INSL		
INU3094L	.094	.125	.020	.195	.344	.891	●	f groove (IPR) .0020-.0031
INU3094R	.094	.125	.020	.195	.344	.891	●	f groove (IPR) .0020-.0031

• Not recommended for turning.

For tools, see pages: FLRR/L (17).

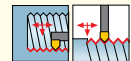
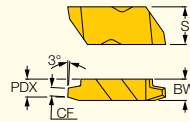
ISCAR THREAD

NOTCH-GRIP
GROOVE-TURN LINE

ISCAR THREAD

FLA

Double-Ended Precision Threading Inserts for ACME Threading Applications



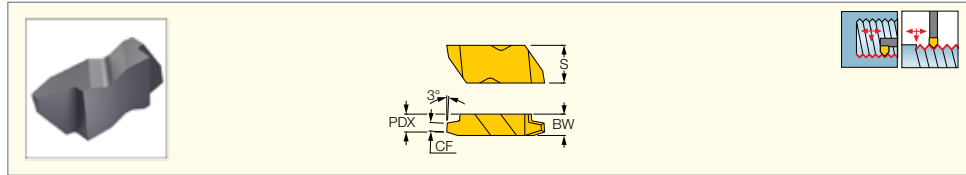
Designation	Dimensions						IC908
	TPI	PDX	CF	BW	S		
FLA-3R/L16	16.0	.15	.020	.195	.344	●	
FLA-3R/L14	14.0	.15	.024	.195	.344	●	
FLA-3R/L12	12.0	.15	.028	.195	.344	●	
FLA-3R/L10	10.0	.15	.032	.195	.344	●	
FLA-3R/L8	8.0	.15	.041	.195	.344	●	
FLA-3R/L6	6.0	.15	.057	.195	.344	●	
FLA-3R/L5	5.0	.15	.069	.195	.344	●	
FLA-3R/L4	4.0	.13	.087	.195	.344	●	
FLA-4R/L8	8.0	.20	.041	.255	.453	●	
FLA-4R/L6	6.0	.20	.057	.255	.453	●	
FLA-4R/L5	5.0	.20	.069	.255	.453	●	
FLA-4R/L4	4.0	.20	.087	.255	.453	●	
FLA-6R/L3	3.0	.28	.118	.383	.453	●	
FLA-6R/L2.5	2.5	.28	.143	.383	.453	●	
FLA-6R/L2	2.0	.28	.180	.383	.453	●	

• For ACME thread limits, see page 38

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLAS
Double-Ended Precision
Threading Inserts for STUB
ACME Threading Applications

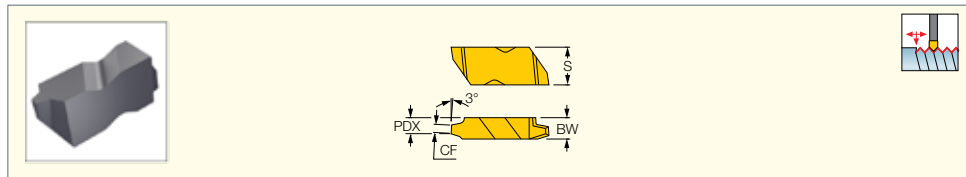


Dimensions							IC908
Designation	TPI	PDX	CF	BW	S		
FLAS-3R/L16	16.0	.15	.024	.195	.344	●	
FLAS-3R/L14	14.0	.15	.028	.195	.344	●	
FLAS-3R/L12	12.0	.15	.033	.195	.344	●	
FLAS-3R/L10	10.0	.15	.037	.195	.344	●	
FLAS-3R/L8	8.0	.15	.048	.195	.344	●	
FLAS-3R/L6	6.0	.15	.065	.195	.344	●	
FLAS-3R/L5	5.0	.15	.079	.195	.344	●	
FLAS-3R/L4	4.0	.15	.100	.195	.344	●	
FLAS-4R/L3	3.0	.20	.135	.255	.453	●	
FLAS-6R/L2	2.0	.28	.206	.383	.453	●	

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE

FLA-PT-E
Double-Ended Precision External
Threading Inserts for Partial
Topping with Radii ACME
Threading Applications

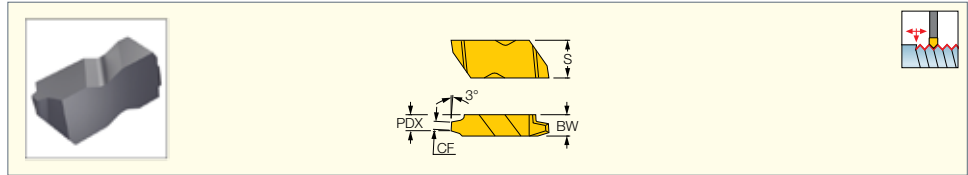


Dimensions							IC908
Designation	TPI	PDX	CF	BW	S		
FLA-3R16-PT-E	16.0	.15	.020	.195	.344	●	
FLA-3R14-PT-E	14.0	.15	.024	.195	.344	●	
FLA-3R12-PT-E	12.0	.15	.028	.195	.344	●	
FLA-3R10-PT-E	10.0	.15	.032	.195	.344	●	
FLA-3R8-PT-E	8.0	.15	.041	.195	.344	●	
FLA-3R6-PT-E	6.0	.15	.057	.195	.344	●	
FLA-3R5-PT-E	5.0	.15	.069	.195	.344	●	
FLA-3R4-PT-E	4.0	.13	.087	.195	.344	●	
FLA-4R8-PT-E	8.0	.20	.041	.255	.453	●	
FLA-4R6-PT-E	6.0	.20	.057	.255	.453	●	
FLA-4R5-PT-E	5.0	.20	.069	.255	.453	●	
FLA-4R4-PT-E	4.0	.20	.087	.255	.453	●	
FLA-6R3-PT-E	3.0	.28	.118	.383	.453	●	
FLA-6R2.5-PT-E	2.5	.28	.143	.383	.453	●	
FLA-6R2-T-E	2.0	.28	.180	.383	.453	●	

For tools, see pages: FLASR/L (17) • FLSR/L (16).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLAS-PT-E
Double-Ended Precision External Threading Inserts for Partial Topping STUB ACME Threading Applications

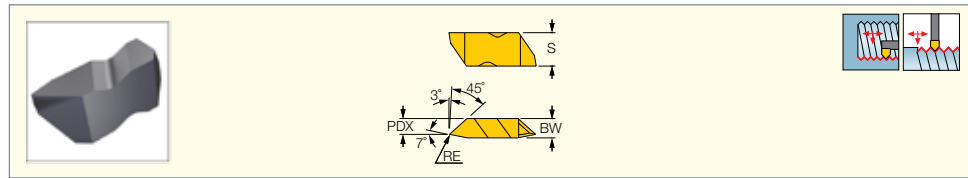


Dimensions							IC908
Designation	TPI	PDX	CF	BW	S		
FLAS-3R16-PT-E	16.0	.15	.024	.195	.344	•	
FLAS-3R14-PT-E	14.0	.15	.028	.195	.344	•	
FLAS-3R12-PT-E	12.0	.15	.033	.195	.344	•	
FLAS-3R10-PT-E	10.0	.15	.037	.195	.344	•	
FLAS-3R8-PT-E	8.0	.15	.048	.195	.344	•	
FLAS-3R6-PT-E	6.0	.15	.065	.195	.344	•	
FLAS-3R5-PT-E	5.0	.15	.079	.195	.344	•	
FLAS-3R4-PT-E	4.0	.15	.100	.195	.344	•	
FLAS-4R3-PT-E	3.0	.20	.136	.255	.453	•	
FLAS-6R2-PT-E	2.0	.28	.206	.383	.453	•	

For tools, see pages: FLASR/L (17) • FLSR/L (16).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLT-B-A
Double-Ended Precision Threading Inserts for 7° Lead AMERICAN STANDARD BUTTRESS Applications



Dimensions							IC908
Designation	TPIN ⁽¹⁾	TPIX ⁽²⁾	RE	BW	PDX	S	
FLT-B-2R/LA	16	20	.0020	.150	.13	.219	•
FLT-B-3R/LA	8	16	.0050	.195	.17	.344	•
FLT-B-4R/LA	4	6	.0080	.255	.20	.453	•

• For user guide, see pages 37-38

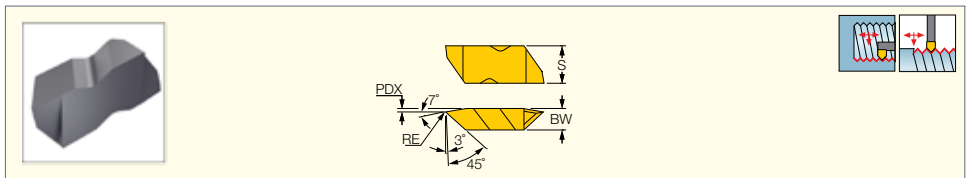
⁽¹⁾ TPI min.

⁽²⁾ TPI max.

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLT-B-B
Double-Ended Precision Threading Inserts for 45° Lead AMERICAN STANDARD BUTTRESS Applications



Dimensions							IC908
Designation	TPIN ⁽¹⁾	TPIX ⁽²⁾	RE	BW	PDX	S	
FLT-B-2R/LB	16	20	.0020	.150	.01	.219	•
FLT-B-3R/LB	8	16	.0050	.195	.01	.344	•
FLT-B-4R/LB	4	6	.0080	.255	.02	.453	•

• For user guide, see pages 37-38

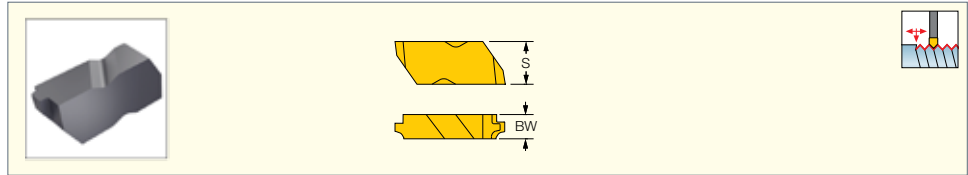
⁽¹⁾ TPI min.

⁽²⁾ TPI max.

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-B-E
Double-Ended Precision Threading Inserts for External API BUTTRESS Applications

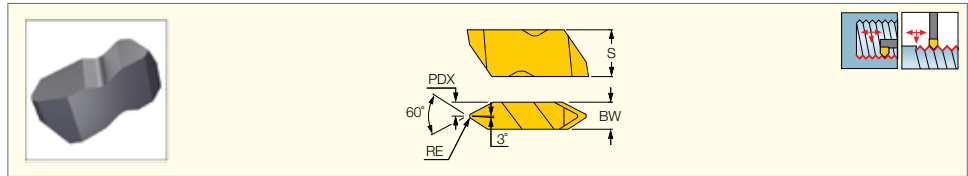


Dimensions						IC908
Designation	TPI	IPF	BW	S		
FLDC-3-5B75E	5.0	3/4	.250	.344		•
FLDC-3-5B1E	5.0	1	.250	.344		•
FLDC-4-5B75E	5.0	3/4	.255	.453		•
FLDC-4-5B1E	5.0	1	.255	.453		•

For tools, see pages: FLASR/L (17) .

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLD
Double-Ended, Precision, Partial Profile Threading Inserts, for API Applications

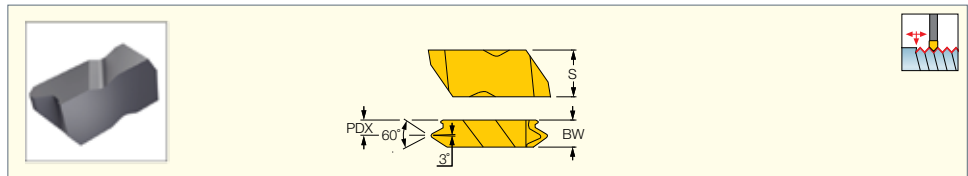


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLD-3038R/L	4.0	.033	.08	.195	.344	•
FLD-3040R/L	5.0	.015	.08	.195	.344	•
FLD-4038R/L	4.0	.033	.13	.255	.453	•
FLD-4040R/L	5.0	.015	.13	.255	.453	•
FLD-4050R/L	4.0	.020	.13	.255	.453	•

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-E
Double-Ended Precision Threading Inserts for External API Rotary Shoulder Connection Applications

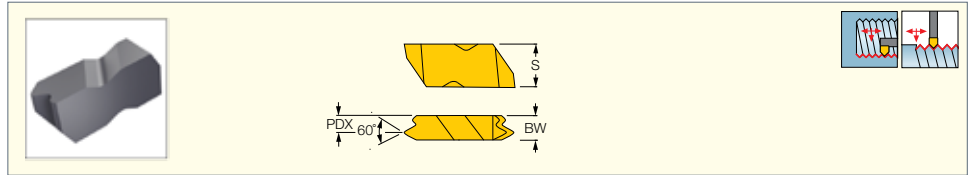


Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-530E	5.0	3	.15	.250	.344	•
FLDC-4-425E	4.0	2	.18	.312	.453	•
FLDC-4-428E	4.0	2	.18	.312	.453	•
FLDC-4-435E	4.0	3	.18	.312	.453	•
FLDC-4-438E	4.0	3	.18	.312	.453	•

For tools, see pages: FLASR/L (17) .

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-RD-75
Double-Ended Precision Threading Inserts for API Round Threading Applications

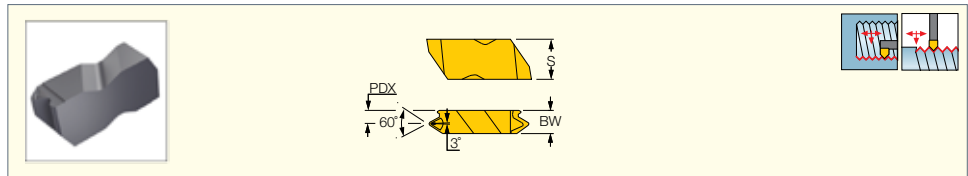


Dimensions							IC908
Designation	TPI	IPF	PDX	BW	S		
FLDC-3-8RDR/L75	8.0	3/4	.20	.125	.344	•	
FLDC-3-10RDR/L75	10.0	3/4	.20	.125	.344	•	

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-RD-75-CB
Double-Ended, Precision Threading Inserts with a Chipbreaker, for API Round Applications

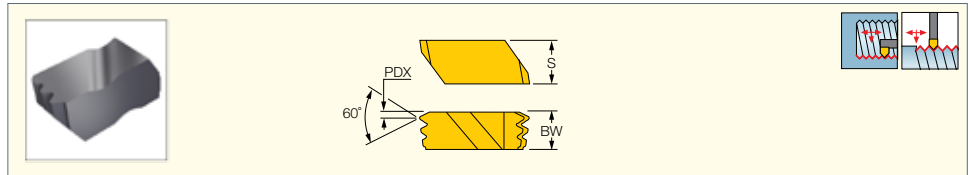


Dimensions							IC908
Designation	TPI	IPF	PDX	BW	S		
FLDC-3-8RDR/L75-CB	8.0	3/4	.20	.125	.344	•	

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-RD-75M
Double-Ended, Precision, Multi-Tooth Threading Inserts, for API Round Applications

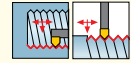
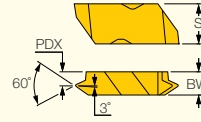


Dimensions							IC908
Designation	TPI	IPF	PDX	BW	S		
FLDC-6-10RDR75	10.0	3/4	.13	.383	.453	•	
FLDC-6-8RDR75	8.0	3/4	.07	.383	.453	•	

For tools, see pages: FLSR/L (16).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-V-75
Double-Ended Precision Threading
Inserts for NPT Threading Applications

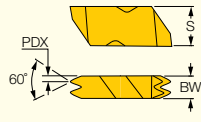


Designation	Dimensions					IC908
	TPI	IPF	PDX	BW	S	
FLDC-3-8VR/L75	8.0	3/4	.10	.195	.344	•
FLDC-3-115VR/L75	11.5	3/4	.15	.195	.344	•
FLDC-3-14VR/L-75	14.0	3/4	.15	.195	.344	•
FLDC-3-18VR/L-75	18.0	3/4	.15	.195	.344	•
FLDC-3-27VR/L-75	27.0	3/4	.16	.195	.344	•

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-NPT-E
Double-Ended, Precision,
Multi-Tooth Threading Inserts, for
External NPT Threading Applications

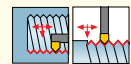
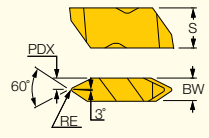


Designation	Dimensions					IC908
	TPI	IPF	PDX	BW	S	
FLDC-3-8NPT 2E	8.0	3/4	.06	.250	.344	•
FLDC-3-11.5NPT-2E	11.5	3/4	.05	.250	.344	•

For tools, see pages: FLASR/L (17) .

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJ
Double-Ended Precision Threading
Inserts for UNJ Threading Applications

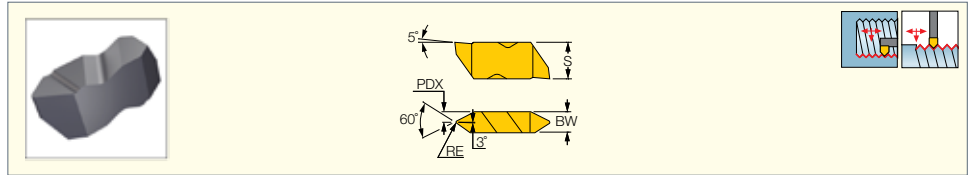


Designation	Dimensions					IC908
	TPI	RE	PDX	BW	S	
FLJ-3010R/L16	16.0	.009	.10	.195	.344	•
FLJ-3014R/L12	12.0	.013	.10	.195	.344	•
FLJ-3020R/L8	8.0	.019	.10	.195	.344	•

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJP
Double-Ended, Precision Threading Inserts with a Positive Rake, for UNJ Threading Applications

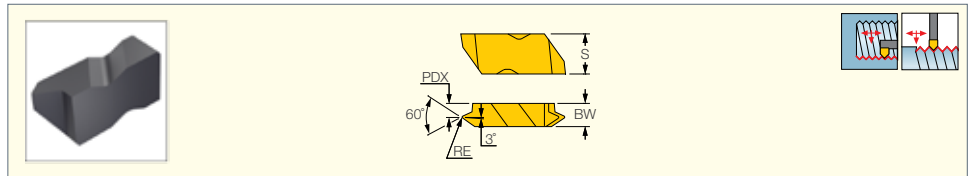


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJP-3010R/L16	16.0	.009	.10	.195	.344	●
FLJP-3014R/L12	12.0	.013	.10	.195	.344	●
FLJP-3020R/L8	8.0	.019	.10	.195	.344	●

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJF
Double-Ended, Precision Threading Inserts, for Cutting UNJ Fine Pitch Thread Close to Shoulders

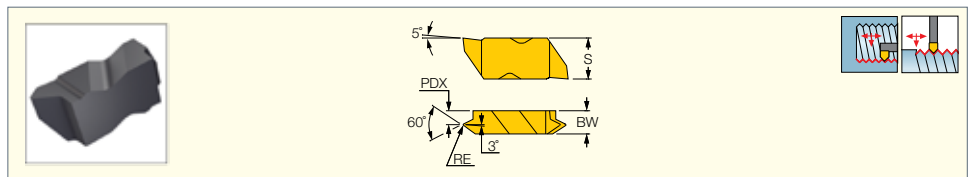


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJF-3005R/L32	32.0	.005	.14	.195	.344	●
FLJF-3006R/L28	28.0	.006	.14	.195	.344	●
FLJF-3007R/L24	24.0	.006	.14	.195	.344	●
FLJF-3008R/L20	20.0	.007	.14	.195	.344	●
FLJF-3009R/L18	18.0	.008	.14	.195	.344	●
FLJF-3010R/L16	16.0	.009	.14	.195	.344	●
FLJF-3012R/L14	14.0	.011	.14	.195	.344	●

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJK
Double-Ended, Precision Threading Inserts, with a Positive Rake, for Cutting UNJ Fine Pitch Thread

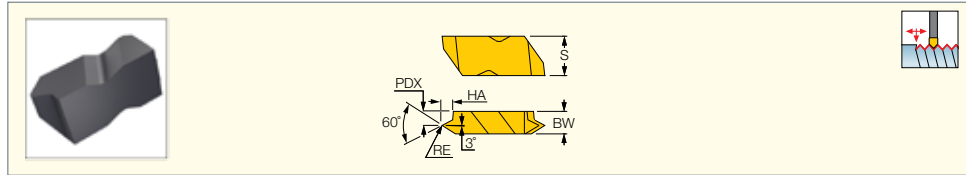


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJK-3005R/L32	32.0	.005	.14	.195	.344	●
FLJK-3006R/L28	28.0	.006	.14	.195	.344	●
FLJK-3007R/L24	24.0	.006	.14	.195	.344	●
FLJK-3008R/L20	20.0	.007	.14	.195	.344	●
FLJK-3009R/L18	18.0	.008	.14	.195	.344	●
FLJK-3010R/L16	16.0	.009	.14	.195	.344	●
FLJK-3012R/L14	14.0	.011	.14	.195	.344	●

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTC-E
Double-Ended, Precision, Full
Profile Threading Inserts, for UN
External Thread Applications

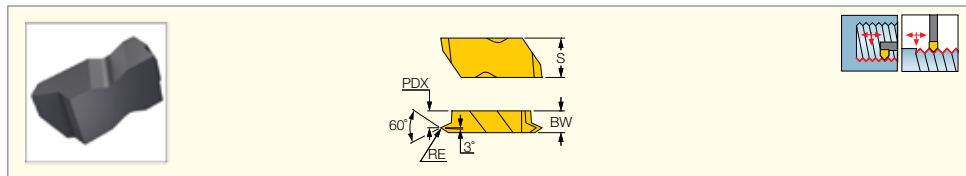


Designation	Dimensions						IC908
	TPI	RE	PDX	HA	BW	S	
FLTC-3R/L7E	7.0	.017	.11	.108	.195	.344	●
FLTC-3R/L8E	8.0	.015	.11	.094	.195	.344	●
FLTC-3R/L9E	9.0	.013	.11	.084	.195	.344	●
FLTC-3R/L10E	10.0	.012	.11	.076	.195	.344	●
FLTC-3R/L11E	11.0	.011	.11	.069	.195	.344	●
FLTC-3R/L12E	12.0	.010	.15	.051	.195	.344	●
FLTC-3R/L14E	14.0	.009	.15	.054	.195	.344	●
FLTC-3R/L16E	16.0	.008	.15	.046	.195	.344	●
FLTC-3R/L18E	18.0	.007	.15	.041	.195	.344	●
FLTC-3R/L20E	20.0	.006	.15	.037	.195	.344	●
FLTC-3R/L24E	24.0	.005	.15	.031	.195	.344	●
FLTC-3R/L28E	28.0	.003	.15	.023	.195	.344	●
FLTC-3R/L32E	32.0	.003	.15	.021	.195	.344	●

For tools, see pages: FLASR/L (17) • FLSR/L (16).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTF
Double-Ended, Precision
Threading Inserts, for 60° Fine
Pitch Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLTF-2R/L	12.0	24.0	14.0	44.0	.0020	.11	.150	.219	●
FLTF-3R/L	9.0	24.0	10.0	44.0	.0020	.14	.195	.344	●
FLTF-4R/L	9.0	24.0	10.0	44.0	.0020	.20	.255	.453	●

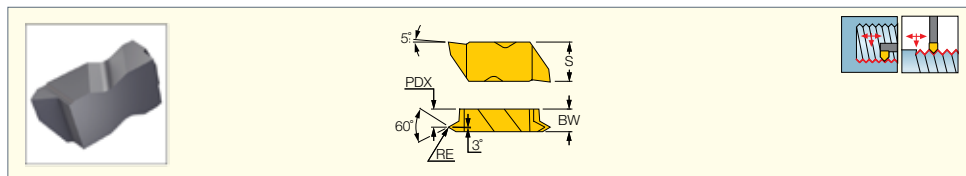
• For 60° V-thread limits, see page 38

- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTK
Double-Ended, Precision Positive
Rake Threading Inserts, for 60°
Fine Pitch Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLTK-2R/L	12.0	24.0	14.0	44.0	.0020	.11	.150	.219	●
FLTK-3R/L	9.0	24.0	10.0	44.0	.0020	.14	.195	.344	●
FLTK-4R/L	9.0	24.0	10.0	44.0	.0020	.20	.255	.453	●

• For 60° V-thread limits, see page 38

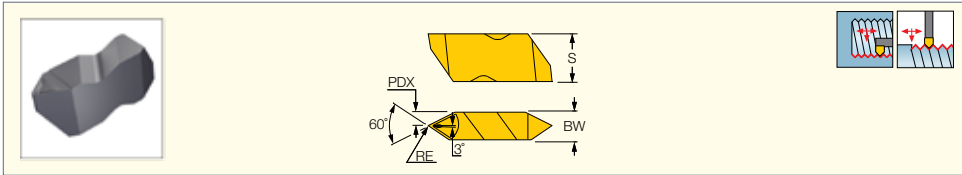
- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCHGRIP
GROOVE-TURN LINE

FLT-CB

Double-Ended Precision Threading Inserts with Chipbreakers, for 60° Coarse and Fine Pitch Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLT-3R/L-HCB	5.0	12.0	6.0	20.0	.0051	.10	.195	.344	●
FLT-3R/LC-HCB	5.0	6.0	6.0	11.0	.0118	.10	.195	.344	●
FLT-3R/L-CB	8.0	12.0	8.0	20.0	.0051	.10	.195	.344	●
FLT-3R/L-FCB	7.0	20.0	8.0	36.0	.0031	.10	.195	.344	●
FLT-4R/L-HCB	4.0	12.0	4.0	20.0	.0051	.13	.255	.453	●

- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

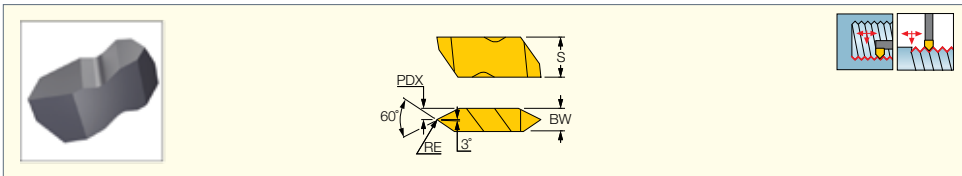
For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCHGRIP
GROOVE-TURN LINE

ISCARTHREAD

FLT

Double-Ended, Precision Threading Inserts, for 60° Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLT-2R/L	7.0	20.0	8.0	36.0	.0030	.07	.150	.219	●
FLT-3R/L	5.0	12.0	6.0	20.0	.0050	.10	.195	.344	●
FLT-3010R/L	5.0	12.0	6.0	18.0	.0090	.10	.195	.344	●
FLT-4R/L	4.0	12.0	4.0	20.0	.0050	.13	.255	.453	●

• For 60° V-thread limits, see page 38

- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

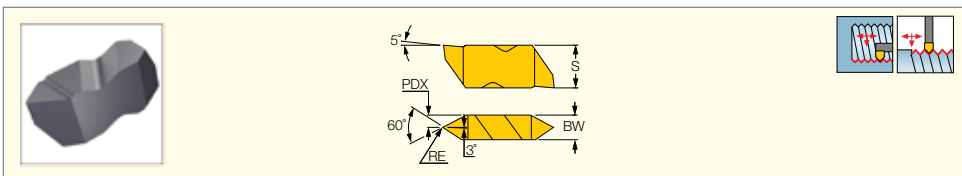
For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCHGRIP
GROOVE-TURN LINE

ISCARTHREAD

FLTP

Double-Ended, Precision Positive Rake Threading Inserts, for 60° Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLTP-2R/L	7.0	20.0	8.0	36.0	.0030	.07	.150	.219	●
FLTP-3R/L	5.0	12.0	6.0	20.0	.0050	.10	.195	.344	●
FLTP-4R/L	4.0	12.0	4.0	20.0	.0050	.13	.255	.453	●

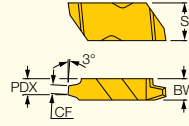
• For 60° V-thread limits, see page 38

- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

For tools, see pages: A-FLER/L (17) • FLASR/L (17) • FLSR/L (16) • H-FLER (18) • HS-FLER (19).

NOTCHGRIP
GROOVE-TURN LINE
ISCAR THREAD

FLA-PT-I
Double-Ended Precision Internal
Threading Inserts for Partial Topping
ACME Threading Applications

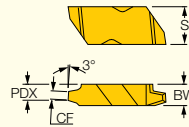


Designation	Dimensions					IC908
	TPI	PDX	CF	BW	S	
FLA-3L16-PT-I	16.0	.15	.020	.195	.344	●
FLA-3L14-PT-I	14.0	.15	.024	.195	.344	●
FLA-3L12-PT-I	12.0	.15	.028	.195	.344	●
FLA-3L10-PT-I	10.0	.15	.032	.195	.344	●
FLA-3L8-PT-I	8.0	.15	.041	.195	.344	●
FLA-3L6-PT-I	6.0	.15	.057	.195	.344	●
FLA-3L5-PT-I	5.0	.15	.069	.195	.344	●
FLA-3L4-PT-I	4.0	.13	.087	.195	.344	●
FLA-4L8-PT-I	8.0	.20	.041	.255	.453	●
FLA-4L6-PT-I	6.0	.20	.057	.255	.453	●
FLA-4L5-PT-I	5.0	.20	.069	.255	.453	●
FLA-4L4-PT-I	4.0	.20	.087	.255	.453	●
FLA-6L3-PT-I	3.0	.28	.118	.383	.453	●
FLA-6L2.5-PT-I	2.5	.28	.143	.383	.453	●
FLA-6L2-PT-I	2.0	.28	.180	.383	.453	●

• For internal thread limits, see page 38
For tools, see pages: A-FLER/L (17) • H-FLER (18) • HS-FLER (19).

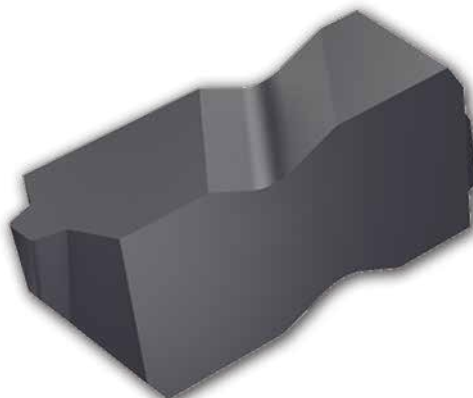
NOTCHGRIP
GROOVE-TURN LINE
ISCAR THREAD

FLAS-PT-I
Double-Ended Precision Internal
Threading Inserts for Partial Topping
STUB ACME Threading Applications



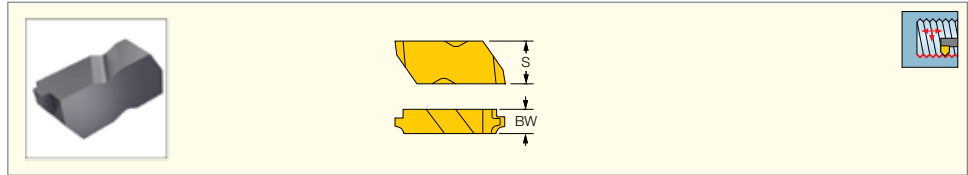
Designation	Dimensions					IC908
	TPI	PDX	CF	BW	S	
FLAS-3L16-PT-I	16.0	.15	.024	.195	.344	●
FLAS-3L14-PT-I	14.0	.15	.028	.195	.344	●
FLAS-3L12-PT-I	12.0	.15	.033	.195	.344	●
FLAS-3L10-PT-I	10.0	.15	.037	.195	.344	●
FLAS-3L8-PT-I	8.0	.15	.048	.195	.344	●
FLAS-3L6-PT-I	6.0	.15	.065	.195	.344	●
FLAS-3L5-PT-I	5.0	.15	.079	.195	.344	●
FLAS-3L4-PT-I	4.0	.15	.100	.195	.344	●
FLAS-4L3-PT-I	3.0	.20	.135	.255	.453	●
FLAS-6L2-PT-I	2.0	.28	.206	.383	.453	●

• For internal thread limits, see page 38
For tools, see pages: A-FLER/L (17) • H-FLER (18) • HS-FLER (19).



NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-B-I
Double-Ended Precision Threading Inserts for Internal API BUTTRESS Applications

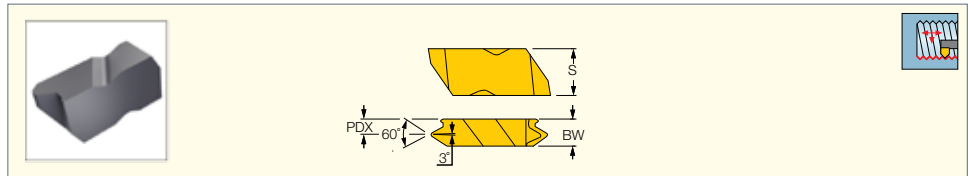


Dimensions						IC908
Designation	TPI	IPF	BW	S		
FLDC-3-5B75I	5.0	3/4	.250	.344		•
FLDC-3-5B1I	5.0	1	.250	.344		•
FLDC-4-5B75I	5.0	3/4	.255	.453		•
FLDC-4-5B1I	5.0	1	.255	.453		•

For tools, see pages: A-FLER/L (17) • H-FLER (18) • HS-FLER (19).

NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-I
Double-Ended Precision Threading Inserts for Internal API Rotary Shoulder Connection Applications

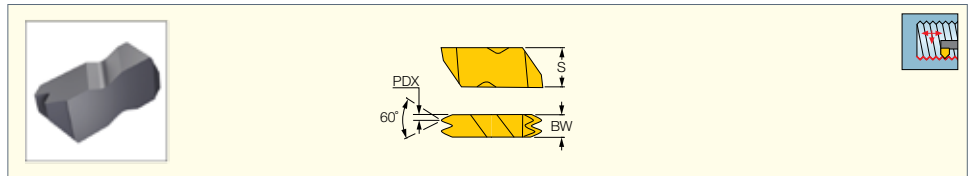


Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-530I	5.0	3	.15	.250	.344	•
FLDC-4-425I	4.0	2	.18	.312	.453	•
FLDC-4-428I	4.0	2	.18	.312	.453	•
FLDC-4-435I	4.0	3	.18	.312	.453	•
FLDC-4-438I	4.0	3	.18	.312	.453	•

For tools, see pages: A-FLER/L (17) • H-FLER (18) • HS-FLER (19).

NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-NPT-I
Double-Ended, Precision, Multi-Tooth Threading Inserts, for Internal NPT Threading Applications



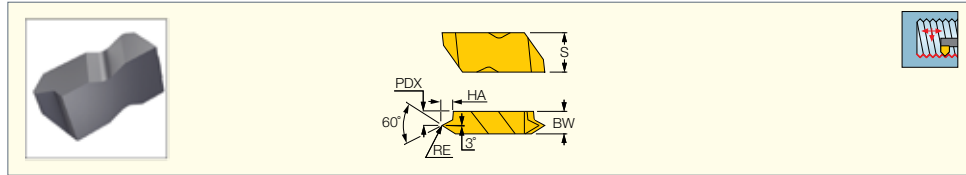
Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-8NPT 2I	8.0	3/4	.06	.250	.344	•
FLDC-3-11.5NPT-2I	11.5	3/4	.05	.250	.344	•

• For internal thread limits, see page 38

For tools, see pages: A-FLER/L (17) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTC-I
Double-Ended, Precision, Full
Profile Threading Inserts, for UN
Internal Thread Applications

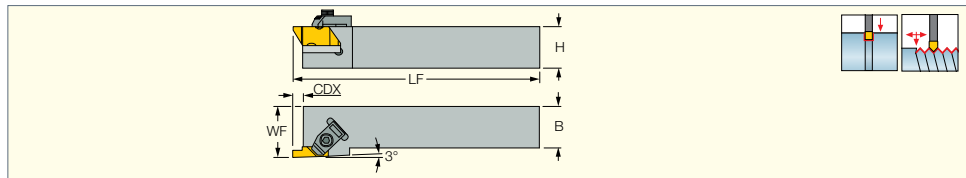


Designation	Dimensions						IC908
	TPI	RE	PDX	HA	BW	S	
FLTC-3R/L7I	7.0	.009	.11	.092	.195	.344	●
FLTC-3R/L8I	8.0	.007	.11	.081	.195	.344	●
FLTC-3R/L9I	9.0	.006	.11	.072	.195	.344	●
FLTC-3R/L10I	10.0	.005	.11	.065	.195	.344	●
FLTC-3R/L11I	11.0	.005	.11	.059	.195	.344	●
FLTC-3R/L12I	12.0	.004	.15	.048	.195	.344	●
FLTC-3R/L14I	14.0	.003	.15	.044	.195	.344	●
FLTC-3R/L16I	16.0	.003	.15	.040	.195	.344	●
FLTC-3R/L18I	18.0	.003	.15	.036	.195	.344	●
FLTC-3R/L20I	20.0	.003	.15	.031	.195	.344	●
FLTC-3R/L24I	24.0	.003	.15	.026	.195	.344	●
FLTC-3R/L28I	28.0	.003	.15	.023	.195	.344	●

• For internal thread limits, see page 38

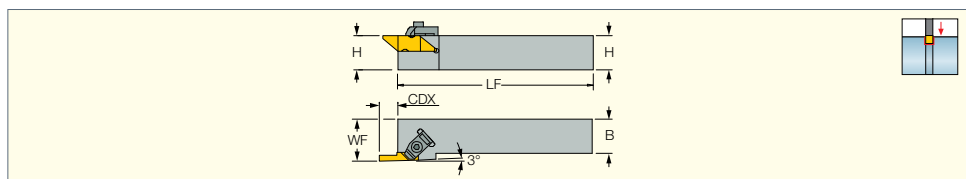
For tools, see pages: A-FLER/L (17) • H-FLER (18) • HS-FLER (19).

NOTCH-GRIP
GROOVE-TURN LINE
FLSR/L
Tools for External Grooving
and Threading Inserts



Designation	Po. Size	H	B	CDX	WF	LF	Insert
FLSR/L-62	2.0	.375	.375	.140	.56	2.500	FL/IN_-2L
FLSR/L-82V	2.0	.500	.500	.140	.75	3.500	FL/IN_-2L
FLSR-102B	2.0	.625	.625	.140	1.00	4.500	FL/IN_-2R
FLSR/L-122B	2.0	.750	.750	.140	1.00	4.500	FL/IN_-2L
FLSR/L-162C	2.0	1.000	1.000	.140	1.25	5.000	FL/IN_-2L
FLSR/L-123B	3.0	.750	.750	.210	1.00	4.500	FL/IN_-3L
FLSR/L-163C	3.0	1.000	1.000	.210	1.25	5.000	FL/IN_-3L
FLSR/L-163D	3.0	1.000	1.000	.210	1.25	6.000	FL/IN_-3L
FLSR/L-203D	3.0	1.250	1.250	.210	1.50	6.000	FL/IN_-3L
FLSR/L-164D	4.0	1.000	1.000	.290	1.25	6.000	FL/IN_-4L
FLSR/L-204D	4.0	1.250	1.250	.290	1.50	6.000	FL/IN_-4L
FLSR/L-205D	5.0	1.250	1.250	.400	1.50	6.000	FL/IN_-5L
FLSR/L-206D	6.0	1.250	1.250	.290	1.50	6.000	FL/IN_-6L

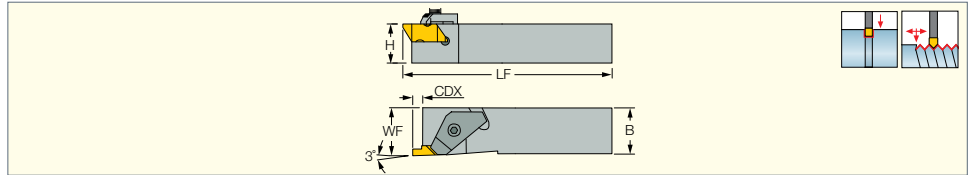
NOTCH-GRIP
GROOVE-TURN LINE
FLSR/LT
External Tools for Deep
Grooving Inserts



Designation	Po. Size	H	B	CDX	WF	LF	Insert
FLSR/LT-163D	3.0	1.000	1.000	.440	1.25	6.000	FLGT3.
FLSR/LT-203D	3.0	1.250	1.250	.440	1.50	6.000	FLGT3.
FLSR/LT-164D	4.0	1.000	1.000	.560	1.25	6.000	FLGT4.
FLSR/LT-204D	4.0	1.250	1.250	.560	1.50	6.000	FLGT4.

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

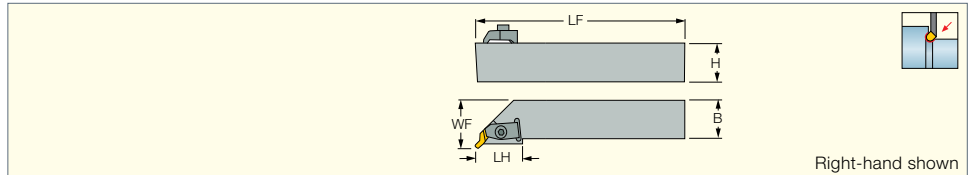
FLASR/L
External Tools for Grooving and Threading for Swiss-type Machines



Designation	Po. Size	H	B	CDX	WF	LF	Insert
FLASR/L-062D	2.0	.375	.375	.138	.38	6.000	FL/IN_-2
FLASR/L-082D	2.0	.500	.500	.138	.50	6.000	FL/IN_-2
FLASR-102B	2.0	.625	.625	.138	.63	4.500	FL/IN_-2
FLASR/L-103B	3.0	.625	.625	.210	.63	4.500	FL/IN_-3

NOTCH-GRIP
GROOVE-TURN LINE

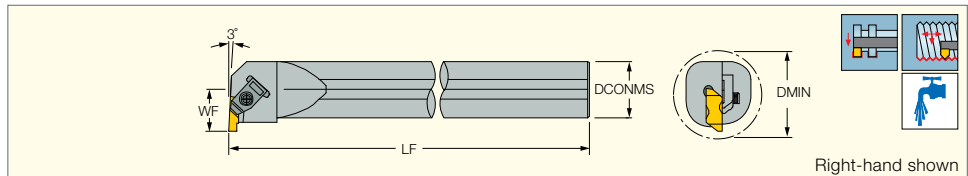
FLRR/L
External Tools for 45° Undercutting



Designation	Po. Size	H	B	WF	LH	LF	Insert
FLRR/L-123B	3.0	.750	.750	1.00	1.250	4.500	INU-3
FLRR/L-163D	3.0	1.000	1.000	1.25	1.250	6.000	INU-3
FLRR/L-203D	3.0	1.250	1.250	1.50	1.250	6.000	INU-3

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

A-FLER/L
Internal Grooving and Threading Bars with Coolant Channels



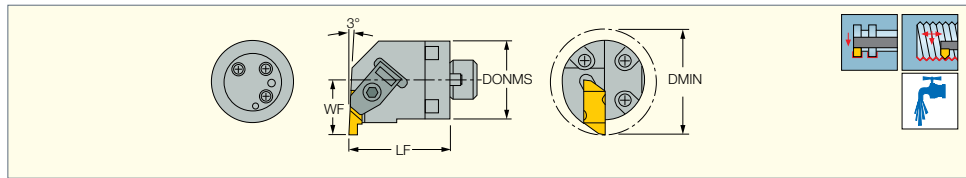
Designation	Po. Size	DCONMS	DMIN	WF	LF	Insert
A08-FLER/L2	2.0	.500	.730	.44	8.000	FL/IN-2
A10-FLER2	2.0	.625	1.000	.50	10.000	FL/IN-2
A12-FLER/L2	2.0	.750	1.125	.56	10.000	FL/IN-2
A16-FLER/L2	2.0	1.000	1.375	.69	12.000	FL/IN-2
A16-FLER/L3	3.0	1.000	1.375	.69	12.000	FL/IN-3
A20-FLER/L3	3.0	1.250	1.750	.88	14.000	FL/IN-3
A24-FLER/L3	3.0	1.500	2.000	1.00	14.000	FL/IN-3
A28-FLER3	3.0	1.750	2.250	1.13	14.000	FL/IN-3
A32-FLER/L3	3.0	2.000	2.500	1.25	16.000	FL/IN-3
A28-FLER/L4	4.0	1.750	2.250	1.25	16.000	FL/IN-4
A32-FLER/L4	4.0	2.000	2.750	1.30	16.000	FL/IN-4
A32-FLER5	5.0	2.000	2.812	1.41	16.000	FL/IN-5
A32-FLER6	6.0	2.000	2.750	1.38	16.000	FL/IN-6

• Use left-hand inserts on right-hand tools and vice versa.

NOTCH-GRIP
GROOVE-TURN LINE

H-FLER

Grooving and Threading
Interchangeable Heads (H-Type)



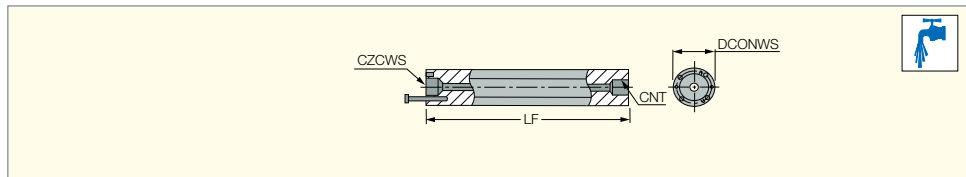
Designation	Po. Size	DCONMS	DMIN	WF	LF	CZCMS	Insert
H20-FLER3W	3.0	1.250	1.750	.88	1.625	H20	FL/IN-3L
H24-FLER3W	3.0	1.500	2.000	1.00	1.625	H24	FL/IN-3L
H28-FLER3W	3.0	1.750	2.250	1.13	1.625	H28	FL/IN-3L
H32-FLER3W	3.0	2.000	2.500	1.25	1.625	H32	FL/IN-3L
H40-FLER3W	3.0	2.500	3.000	1.50	1.625	H40	FL/IN-3L
H28-FLER4W	4.0	1.750	2.500	1.25	1.625	H28	FL/IN-4L
H32-FLER4W	4.0	2.000	2.750	1.38	1.625	H32	FL/IN-4L
H36-FLER4W	4.0	2.250	3.000	1.50	1.625	H36	FL/IN-4L
H40-FLER4W	4.0	2.500	3.250	1.63	1.625	H40	FL/IN-4L
H28-FLER6W	6.0	1.750	2.500	1.25	1.625	H28	FL/IN-6L
H32-FLER6W	6.0	2.000	2.750	1.38	1.625	H32	FL/IN-6L
H40-FLER6W	6.0	2.500	3.250	1.63	1.625	H40	FL/IN-6L

• Use left-hand inserts on right-hand tools and vice versa. • Compatible with standard market adaptation.

Straight Shank

S-4400W

Steel Shanks with Through Coolant
for H-Type Interchangeable Heads

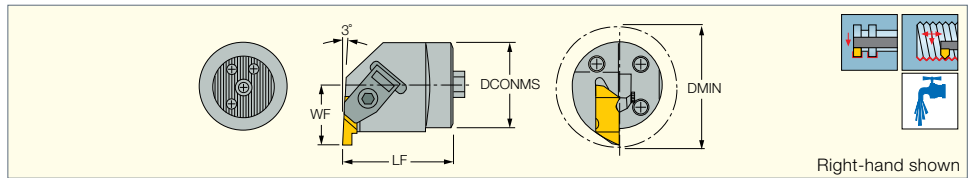


Designation	DCONWS	LF	CZCWS ⁽¹⁾	CNT
S-4416W	1.000	9.000	H16	1/4-18NPT
S-4420W	1.250	9.000	H20	3/8-18NPT
S-4424W	1.500	10.000	H24	3/8-18NPT
S-4428W	1.750	12.000	H28	3/8-18NPT
S-4432W	2.000	13.000	H32	3/8-18NPT
S-4440W	2.500	17.000	H40	3/8-18NPT

⁽¹⁾ Connection size code workpiece side

NOTCHGRIP
GROOVE-TURN LINE

HS-FLER
Grooving and Threading
Interchangeable Heads (HS-Type)

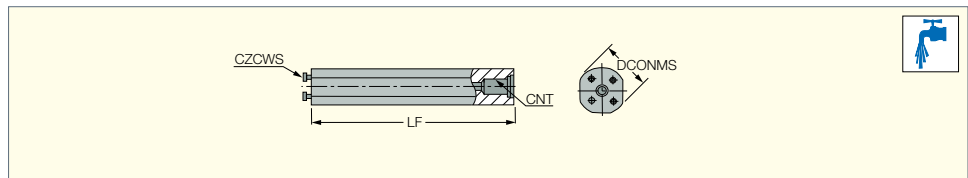


Designation	Po. Size	DCONMS	DMIN	WF	LF	CZCMS ⁽¹⁾	Insert
HS32-FLER3W	3.0	1.250	1.730	.870	1.340	HS32	FL/IN-3L
HS40-FLER3W	3.0	1.570	2.210	1.100	1.580	HS40	FL/IN-3L
HS50-FLER3W	3.0	1.970	2.760	1.380	1.650	HS50	FL/IN-3L
HS60-FLER3W	3.0	2.360	3.480	1.740	1.750	HS60	FL/IN-3L
HS50-FLER4W	4.0	1.970	2.760	1.380	1.650	HS50	FL/IN-4L
HS60-FLER4W	4.0	2.360	3.480	1.740	1.750	HS60	FL/IN-4L

- Lefthand heads on request
 - Use left-hand inserts on right-hand tools and vice versa.
 - Compatible with standard market adaptation.
- ⁽¹⁾ Connection size code machine side

Straight Shank

S-570
Steel Shanks with Through Coolant
for HS-Type Interchangeable Heads



Designation	DCONMS	LF	CZCWS ⁽¹⁾	CNT
S-570-10-16	.625	4.210	HS16	1/8 - 27NPT
S-570-12-20	.750	5.200	HS20	1/4 - 18NPT
S-570-16-25	1.000	7.200	HS25	1/4 - 18NPT
S-570-20-32	1.250	8.740	HS32	3/8 - 18NPT
S-570-24-40	1.500	10.750	HS40	1/2 - 14NPT
S-570-32-50	2.000	14.410	HS50	1/2 - 14NPT

⁽¹⁾ Connection size code workpiece side

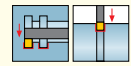
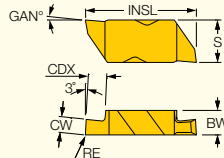
Metric Measurements

NOTCH GRIP
GROOVE-TURN LINE





ING/INGP-R/L
Precision Double-Ended Flat
Top Grooving Inserts



Right-hand shown

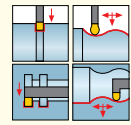
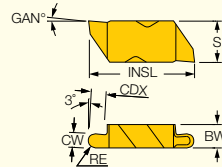
Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	CW	CDX	RE	GAN	BW	S	INSL	IC808	IC807	
INGP2031R/L (0.79)	0.79	1.27	0.09	5.0	3.81	5.56	13.06		●	0.02-0.04
ING2031R/L (0.79)	0.79	1.27	0.09	0.0	3.81	5.56	13.06		●	0.02-0.04
ING2041R/L (1.04)	1.04	1.27	0.09	0.0	3.81	5.56	13.06		●	0.03-0.05
ING2047R/L (1.19)	1.19	1.27	0.09	0.0	3.81	5.56	13.06		●	0.03-0.05
INGP2062R/L (1.57)	1.57	2.79	0.19	5.0	3.81	5.56	13.05		●	0.04-0.06
ING2062R/L (1.57)	1.57	2.79	0.19	0.0	3.81	5.56	13.05		●	0.04-0.06
ING2094R/L (2.39)	2.39	2.79	0.19	0.0	3.81	5.56	13.05		●	0.05-0.08
ING2125R/L (3.18)	3.18	2.79	0.19	0.0	3.81	5.56	13.05		●	0.08-0.12
ING3031R/L (0.79)	0.79	1.27	0.09	0.0	4.95	8.65	22.86	●		0.02-0.04
INGP3047R/L (1.19)	1.19	1.90	0.19	5.0	4.95	8.74	22.60		●	0.03-0.05
ING3047R/L (1.19)	1.19	1.91	0.19	0.0	4.95	8.65	22.86	●		0.03-0.05
ING3058R/L (1.47)	1.47	2.39	0.19	0.0	4.95	8.65	22.86	●		0.03-0.05
INGP3062R/L (1.57)	1.57	3.05	0.19	5.0	4.95	8.74	22.60		●	0.04-0.06
ING3062R/L (1.58)	1.58	2.39	0.19	0.0	4.95	8.65	22.86	●		0.04-0.06
ING3072R/L (1.83)	1.83	2.39	0.19	0.0	4.95	8.65	22.86	●		0.04-0.08
ING3078R/L (1.98)	1.98	2.39	0.19	0.0	4.95	8.65	22.86	●		0.04-0.09
ING3088R/L (2.24)	2.24	2.39	0.19	0.0	4.95	8.65	22.86	●		0.05-0.09
INGP3094R/L (2.39)	2.39	4.57	0.19	5.0	4.95	8.74	22.60		●	0.05-0.08
ING3094R/L (2.39)	2.39	3.81	0.19	0.0	4.95	4.95	22.86	●		0.05-0.09
ING3097R/L (2.46)	2.46	3.81	0.32	0.0	4.95	4.95	22.86	●		0.06-0.10
ING3105R/L (2.67)	2.67	3.81	0.19	0.0	4.95	4.95	22.86	●		0.07-0.11
ING3110R/L (2.79)	2.79	3.81	0.32	0.0	4.95	4.95	22.86	●		0.07-0.11
ING3122R/L (3.10)	3.10	3.81	0.19	0.0	4.95	4.95	22.86	●		0.07-0.12
INGP3125R/L (3.18)	3.18	4.57	0.19	5.0	4.95	4.95	22.60		●	0.08-0.12
ING3125R/L (3.18)	3.18	3.81	0.19	0.0	4.95	8.65	22.86	●		0.08-0.13
ING3142R/L (3.61)	3.61	3.81	0.32	0.0	4.95	8.65	22.86	●		0.09-0.15
ING3156R/L (3.96)	3.96	3.81	0.19	0.0	4.95	8.65	22.86	●		0.10-0.20
ING3178R/L (4.52)	4.52	3.81	0.19	0.0	4.95	8.65	22.86	●		0.11-0.21
ING3185R/L (4.70)	4.70	3.81	0.57	0.0	4.95	8.65	22.86	●		0.11-0.22
ING3189R/L (4.80)	4.80	3.81	0.57	0.0	4.95	8.65	22.86	●		0.11-0.22
ING4125R/L (3.18)	3.18	6.35	0.19	0.0	6.48	11.51	28.49		●	0.08-0.12
ING4189R/L (4.80)	4.80	6.35	0.57	0.0	6.48	11.51	28.45		●	0.10-0.20
ING4250R/L (6.35)	6.35	6.35	0.57	0.0	6.48	11.51	28.45		●	0.10-0.22

For tools, see pages: A-FLER/L (36) • FLSR/L (35).



NOTCH-GRIP
GROOVE-TURN LINE

INR/INRP-R/L
Precision Double-Ended Flat
Top Round Grooving Inserts



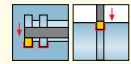
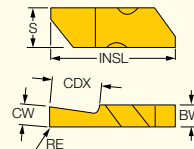
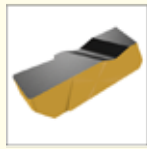
Right-hand shown

Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	CW	CDX	RE	GAN	BW	S	INSL	IC808	IC807	
INR2031R/L (1.57)	1.57	2.79	0.79	0.0	3.81	5.56	12.98		●	0.03-0.05
INR2047R/L (2.39)	2.39	2.79	1.19	0.0	3.81	5.56	12.94		●	0.04-0.07
INR 1.58-0.79R/L	1.58	2.39	0.79	0.0	4.95	8.65	22.86	●		0.04-0.08
INRP3031R/L (1.57)	1.57	0.79	0.79	5.0	4.95	8.74	22.54		●	0.03-0.05
INR 2.39-1.19R/L	2.39	3.81	1.19	0.0	4.95	8.65	22.86	●		0.06-0.12
INRP3047R/L (2.39)	2.39	4.57	1.19	5.0	4.95	8.74	22.49		●	0.04-0.07
INR 3.18-1.59R/L	3.18	3.81	1.59	0.0	4.95	8.65	22.86	●		0.08-0.16
INRP3062R/L (3.18)	3.18	4.57	1.57	5.0	4.95	8.74	22.46		●	0.07-0.11
INR 3.96-1.98R/L	3.96	3.81	1.98	0.0	4.95	8.65	22.86	●		0.10-0.20
INR 4.78-2.39R/L	4.78	3.81	2.39	0.0	4.95	8.65	22.86	●		0.12-0.22
INR4125R/L (6.35)	6.35	6.35	3.18	0.0	6.48	11.51	28.18		●	0.10-0.22

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE

INGD-R/L
Precision, Single-Ended Flat
Top Deep Grooving Inserts

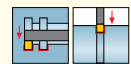
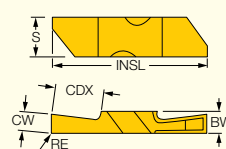


Designation	Dimensions							IC807	Recommended Machining Data f groove (mm/rev)
	CW	CDX	RE	BW	S	INSL			
INGD3062R/L (1.57)	1.57	3.05	0.19	4.95	8.74	22.60	●	0.04-0.06	
INGD3094R/L (2.39)	2.39	6.35	0.19	4.95	8.74	25.14	●	0.05-0.08	
INGD3125R/L (3.18)	3.18	6.35	0.19	4.95	8.74	25.14	●	0.08-0.12	
INGD3189R/L (4.80)	4.80	6.35	0.57	4.95	8.74	25.10	●	0.10-0.20	

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE

INGT-R/L
Precision, Double-Ended Flat
Top Deep Grooving Inserts



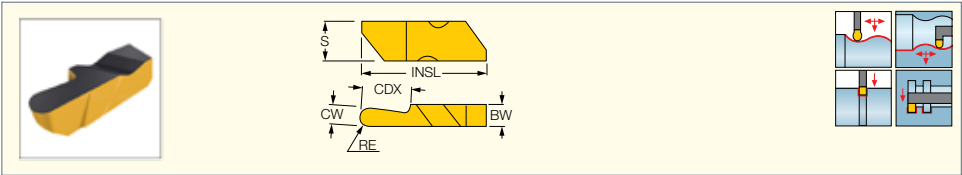
Designation	Dimensions							IC807	Recommended Machining Data f groove (mm/rev)
	CW	CDX	RE	BW	S	INSL			
INGT3094R/L (2.39)	2.39	6.99	0.19	4.95	8.74	34.03	●	0.05-0.08	
INGT3125R/L (3.18)	3.18	11.10	0.19	4.95	8.74	34.03	●	0.08-0.12	

For tools, see pages: A-FLER/L (36) • FLSR/L (35) • FLSR/LT (35).

NOTCH-GRIP
GROOVE-TURN LINE

INRD-R/L

Precision, Single-Ended Full Radius Deep Grooving Inserts with a Flat Rake



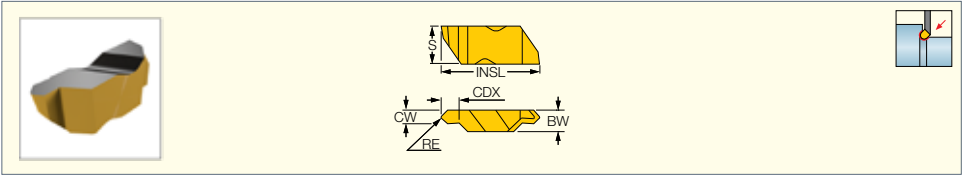
Designation	Dimensions						IC807	Recommended Machining Data
	CW	CDX	RE	BW	S	INSL		
INRD3062R/L (3.18)	3.18	6.35	1.57	4.95	8.74	24.99	●	f groove (mm/rev) 0.07-0.11

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE

INU-R/L

Precision Double-Ended Inserts for External Undercutting



Designation	Dimensions						IC807	Recommended Machining Data
	CW	CDX	RE	BW	S	INSL		
INU3094L (2.39)	2.39	3.18	0.51	4.95	8.74	22.62	●	f groove (mm/rev) 0.05-0.08
INU3094R (2.39)	2.39	3.18	0.51	4.95	8.74	22.62	●	0.05-0.08

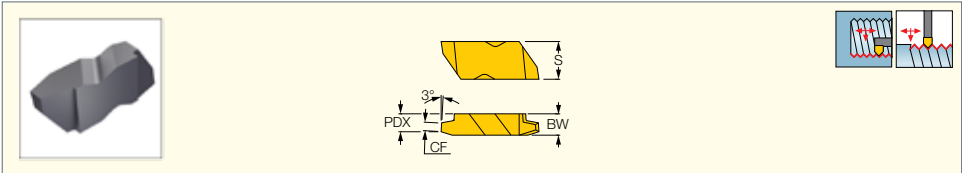
• Not recommended for turning.

ISCARTHREAD

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLA

Double-Ended Precision Threading Inserts for ACME Threading Applications



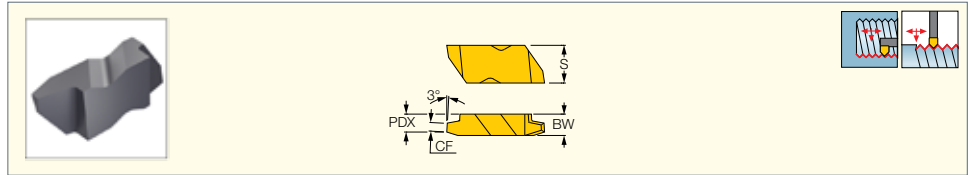
Designation	Dimensions					IC908
	TPI	PDX	CF	BW	S	
FLA-3R/L16	16.0	.15	.020	.195	.344	●
FLA-3R/L14	14.0	.15	.024	.195	.344	●
FLA-3R/L12	12.0	.15	.028	.195	.344	●
FLA-3R/L10	10.0	.15	.032	.195	.344	●
FLA-3R/L8	8.0	.15	.041	.195	.344	●
FLA-3R/L6	6.0	.15	.057	.195	.344	●
FLA-3R/L5	5.0	.15	.069	.195	.344	●
FLA-3R/L4	4.0	.13	.087	.195	.344	●
FLA-4R/L8	8.0	.20	.041	.255	.453	●
FLA-4R/L6	6.0	.20	.057	.255	.453	●
FLA-4R/L5	5.0	.20	.069	.255	.453	●
FLA-4R/L4	4.0	.20	.087	.255	.453	●
FLA-6R/L3	3.0	.28	.118	.383	.453	●
FLA-6R/L2.5	2.5	.28	.143	.383	.453	●
FLA-6R/L2	2.0	.28	.180	.383	.453	●

• For ACME thread limits, see page 38

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLAS
Double-Ended Precision
Threading Inserts for STUB
ACME Threading Applications

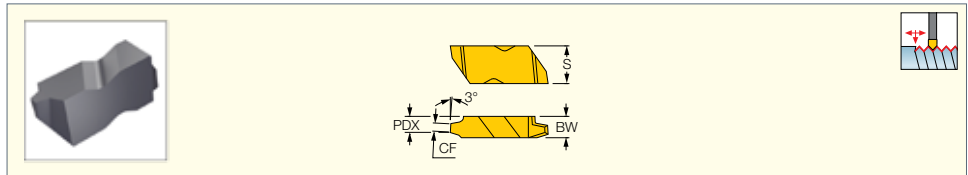


Dimensions							IC908
Designation	TPI	PDX	CF	BW	S		
FLAS-3R/L16	16.0	3.8	0.60	4.95	8.74	•	
FLAS-3R/L14	14.0	3.8	0.70	4.95	8.74	•	
FLAS-3R/L12	12.0	3.8	0.83	4.95	8.74	•	
FLAS-3R/L10	10.0	3.8	0.94	4.95	8.74	•	
FLAS-3R/L8	8.0	3.8	1.21	4.95	8.74	•	
FLAS-3R/L6	6.0	3.8	1.66	4.95	8.74	•	
FLAS-3R/L5	5.0	3.8	2.01	4.95	8.74	•	
FLAS-3R/L4	4.0	3.8	2.55	4.95	8.74	•	
FLAS-4R/L3	3.0	5.1	3.44	6.48	11.51	•	
FLAS-6R/L2	2.0	7.2	5.23	9.73	11.51	•	

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE

FLA-PT-E
Double-Ended Precision External
Threading Inserts for Partial
Topping with Radii ACME
Threading Applications

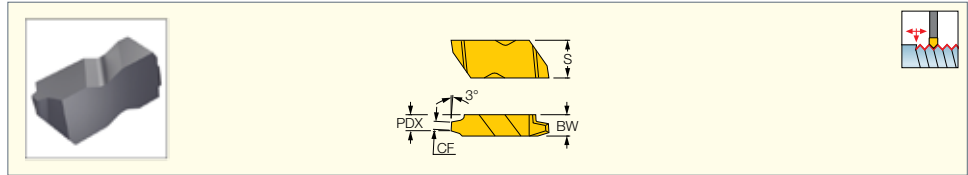


Dimensions							IC908
Designation	TPI	PDX	CF	BW	S		
FLA-3R16-PT-E	16.0	.15	.020	.195	.344	•	
FLA-3R14-PT-E	14.0	.15	.024	.195	.344	•	
FLA-3R12-PT-E	12.0	.15	.028	.195	.344	•	
FLA-3R10-PT-E	10.0	.15	.032	.195	.344	•	
FLA-3R8-PT-E	8.0	.15	.041	.195	.344	•	
FLA-3R6-PT-E	6.0	.15	.057	.195	.344	•	
FLA-3R5-PT-E	5.0	.15	.069	.195	.344	•	
FLA-3R4-PT-E	4.0	.13	.087	.195	.344	•	
FLA-4R8-PT-E	8.0	.20	.041	.255	.453	•	
FLA-4R6-PT-E	6.0	.20	.057	.255	.453	•	
FLA-4R5-PT-E	5.0	.20	.069	.255	.453	•	
FLA-4R4-PT-E	4.0	.20	.087	.255	.453	•	
FLA-6R3-PT-E	3.0	.28	.118	.383	.453	•	
FLA-6R2.5-PT-E	2.5	.28	.143	.383	.453	•	
FLA-6R2-T-E	2.0	.28	.180	.383	.453	•	

For tools, see pages: FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLAS-PT-E
Double-Ended Precision External Threading Inserts for Partial Topping STUB ACME Threading Applications

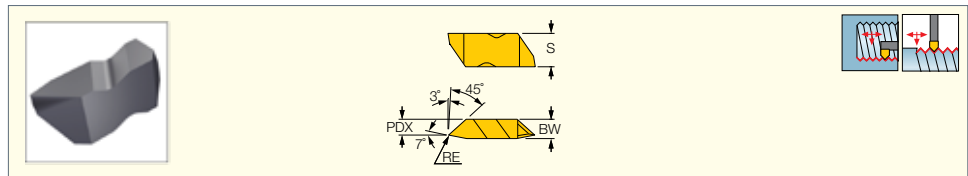


Designation	Dimensions						IC908
	TPI	PDX	CF	BW	S		
FLAS-3R16-PT-E	16.0	3.8	0.60	4.95	8.74	•	
FLAS-3R14-PT-E	14.0	3.8	0.70	4.95	8.74	•	
FLAS-3R12-PT-E	12.0	3.8	0.83	4.95	8.74	•	
FLAS-3R10-PT-E	10.0	3.8	0.94	4.95	8.74	•	
FLAS-3R8-PT-E	8.0	3.8	1.21	4.95	8.74	•	
FLAS-3R6-PT-E	6.0	3.8	1.66	4.95	8.74	•	
FLAS-3R5-PT-E	5.0	3.8	2.01	4.95	8.74	•	
FLAS-3R4-PT-E	4.0	3.8	2.55	4.95	8.74	•	
FLAS-4R3-PT-E	3.0	5.1	3.44	6.48	11.51	•	
FLAS-6R2-PT-E	2.0	7.2	5.23	9.73	11.51	•	

For tools, see pages: FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLT-B-A
Double-Ended Precision Threading Inserts for 7° Lead AMERICAN STANDARD BUTTRESS Applications



Designation	Dimensions						IC908
	TPIN ⁽¹⁾	TPIX ⁽²⁾	RE	BW	PDX	S	
FLT-B-2R/LA	16	20	.0020	.150	.13	.219	•
FLT-B-3R/LA	8	16	.0050	.195	.17	.344	•
FLT-B-4R/LA	4	6	.0080	.255	.20	.453	•

• For user guide, see pages 37-38

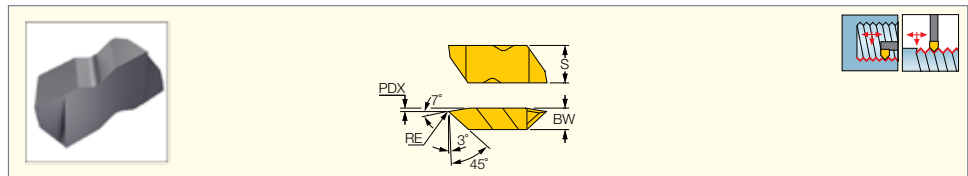
⁽¹⁾ TPI min.

⁽²⁾ TPI max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLT-B-B
Double-Ended Precision Threading Inserts for 45° Lead AMERICAN STANDARD BUTTRESS Applications



Designation	Dimensions						IC908
	TPIN ⁽¹⁾	TPIX ⁽²⁾	RE	BW	PDX	S	
FLT-B-2R/LB	16	20	.0020	.150	.01	.219	•
FLT-B-3R/LB	8	16	.0050	.195	.01	.344	•
FLT-B-4R/LB	4	6	.0080	.255	.02	.453	•

• For user guide, see pages 37-38

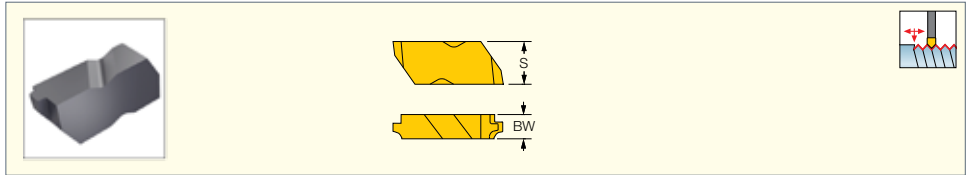
⁽¹⁾ TPI min.

⁽²⁾ TPI max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCHGRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-B-E
Double-Ended Precision Threading Inserts for External API BUTTRESS Applications

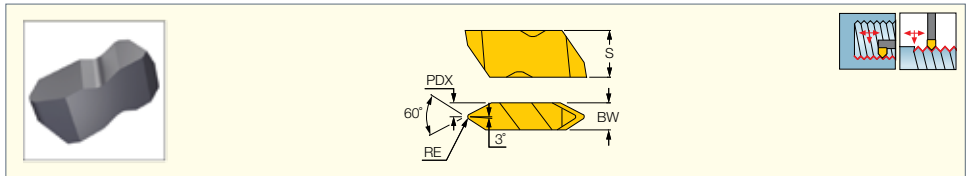


Dimensions						IC908
Designation	TPI	IPF	BW	S		
FLDC-3-5B75E	5.0	3/4	6.35	8.74		●
FLDC-3-5B1E	5.0	1	6.35	8.74		●
FLDC-4-5B75E	5.0	3/4	6.48	11.51		●
FLDC-4-5B1E	5.0	1	6.48	11.51		●

For tools, see pages: FLSR/L (35).

NOTCHGRIP
GROOVE-TURN LINE
ISCAR THREAD

FLD
Double-Ended, Precision, Partial Profile Threading Inserts, for API Applications

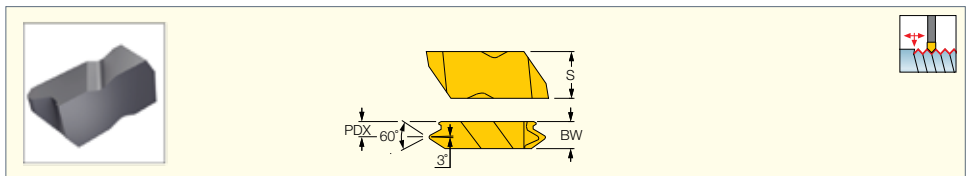


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLD-3038R/L	4.0	0.84	2.1	4.95	8.74	●
FLD-3040R/L	5.0	0.38	2.1	4.95	8.74	●
FLD-4038R/L	4.0	0.84	3.3	6.48	11.51	●
FLD-4040R/L	5.0	0.38	3.3	6.48	11.51	●
FLD-4050R/L	4.0	0.51	3.3	6.48	11.51	●

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCHGRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-E
Double-Ended Precision Threading Inserts for External API Rotary Shoulder Connection Applications

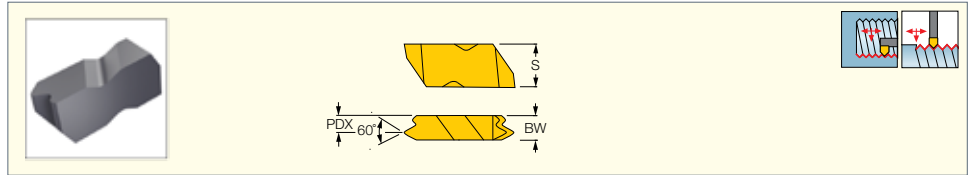


Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-530E	5.0	3	3.7	6.35	8.74	●
FLDC-4-425E	4.0	2	4.6	7.92	11.51	●
FLDC-4-428E	4.0	2	4.6	7.92	11.51	●
FLDC-4-435E	4.0	3	4.6	7.92	11.51	●
FLDC-4-438E	4.0	3	4.6	7.92	11.51	●

For tools, see pages: FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-RD-75
Double-Ended Precision
Threading Inserts for API Round
Threading Applications

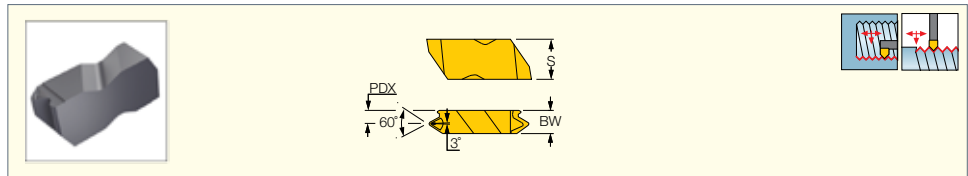


Dimensions							IC908
Designation	TPI	IPF	PDX	BW	S		
FLDC-3-8RDR/L75	8.0	3/4	5.0	3.18	8.74	•	
FLDC-3-10RDR/L75	10.0	3/4	5.0	3.18	8.74	•	

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-RD-75-CB
Double-Ended, Precision Threading
Inserts with a Chipbreaker, for
API Round Applications

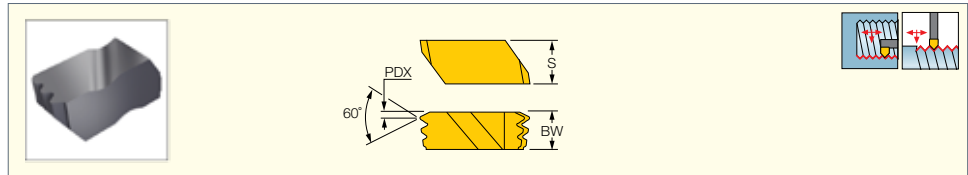


Dimensions							IC908
Designation	TPI	IPF	PDX	BW	S		
FLDC-3-8RDR/L75-CB	8.0	3/4	5.0	3.18	8.74	•	

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-RD-75M
Double-Ended, Precision,
Multi-Tooth Threading Inserts,
for API Round Applications

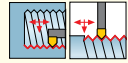
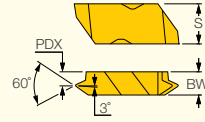


Dimensions							IC908
Designation	TPI	IPF	PDX	BW	S		
FLDC-6-10RDR75	10.0	3/4	.13	.383	.453	•	
FLDC-6-8RDR75	8.0	3/4	.07	.383	.453	•	

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-V-75
Double-Ended Precision Threading Inserts for NPT Threading Applications

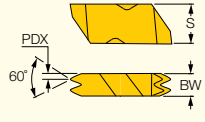


Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-8VR/L75	8.0	3/4	2.5	4.95	8.74	•
FLDC-3-115VR/L75	11.5	3/4	3.7	4.95	8.74	•
FLDC-3-14VR/L-75	14.0	3/4	3.8	4.95	8.74	•
FLDC-3-18VR/L-75	18.0	3/4	3.9	4.95	8.74	•
FLDC-3-27VR/L-75	27.0	3/4	4.1	4.95	8.74	•

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLDC-NPT-E
Double-Ended, Precision, Multi-Tooth Threading Inserts, for External NPT Threading Applications

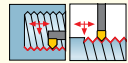
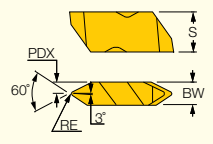


Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-8NPT 2E	8.0	3/4	1.5	6.35	8.74	•
FLDC-3-11.5NPT-2E	11.5	3/4	1.2	6.35	8.74	•

For tools, see page: FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJ
Double-Ended Precision Threading Inserts for UNJ Threading Applications

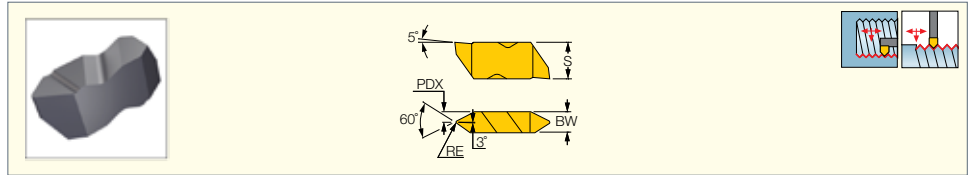


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJ-3010R/L16	16.0	0.24	2.5	4.95	8.74	•
FLJ-3014R/L12	12.0	0.32	2.5	4.95	8.74	•
FLJ-3020R/L8	8.0	0.48	2.5	4.95	8.74	•

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJP
Double-Ended, Precision Threading Inserts with a Positive Rake, for UNJ Threading Applications

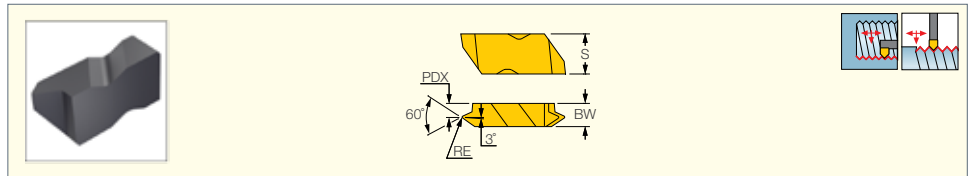


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJP-3010R/L16	16.0	0.24	2.5	4.95	8.74	●
FLJP-3014R/L12	12.0	0.32	2.5	4.95	8.74	●
FLJP-3020R/L8	8.0	0.48	2.5	4.95	8.74	●

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJF
Double-Ended, Precision Threading Inserts, for Cutting UNJ Fine Pitch Thread Close to Shoulders

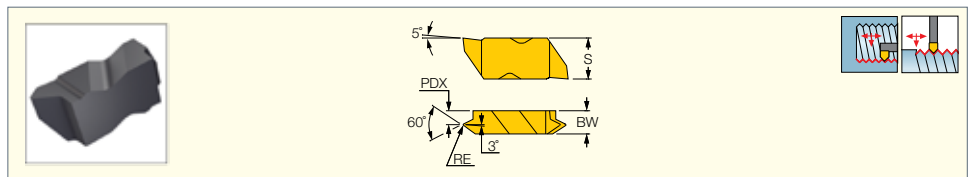


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJF-3005R/L32	32.0	0.12	3.6	4.95	8.74	●
FLJF-3006R/L28	28.0	0.14	3.6	4.95	8.74	●
FLJF-3007R/L24	24.0	0.16	3.6	4.95	8.74	●
FLJF-3008R/L20	20.0	0.19	3.6	4.95	8.74	●
FLJF-3009R/L18	18.0	0.21	3.6	4.95	8.74	●
FLJF-3010R/L16	16.0	0.24	3.6	4.95	8.74	●
FLJF-3012R/L14	14.0	0.27	3.6	4.95	8.74	●

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLJK
Double-Ended, Precision Threading Inserts, with a Positive Rake, for Cutting UNJ Fine Pitch Thread

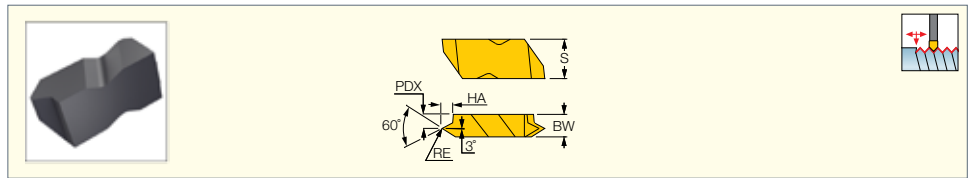


Dimensions						IC908
Designation	TPI	RE	PDX	BW	S	
FLJK-3005R/L32	32.0	0.12	3.6	4.95	8.74	●
FLJK-3006R/L28	28.0	0.14	3.6	4.95	8.74	●
FLJK-3007R/L24	24.0	0.16	3.6	4.95	8.74	●
FLJK-3008R/L20	20.0	0.19	3.6	4.95	8.74	●
FLJK-3009R/L18	18.0	0.21	3.6	4.95	8.74	●
FLJK-3010R/L16	16.0	0.24	3.6	4.95	8.74	●
FLJK-3012R/L14	14.0	0.27	3.6	4.95	8.74	●

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTC-E
Double-Ended, Precision, Full Profile Threading Inserts, for UN External Thread Applications

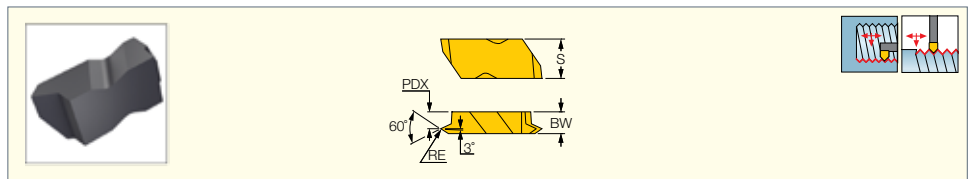


Designation	Dimensions							IC908
	TPI	RE	PDX	HA	BW	S		
FLTC-3R/L7E	7.0	0.43	2.7	2.74	4.95	8.74	●	
FLTC-3R/L8E	8.0	0.38	2.7	2.39	4.95	8.74	●	
FLTC-3R/L9E	9.0	0.33	2.7	2.13	4.95	8.74	●	
FLTC-3R/L10E	10.0	0.30	2.7	1.93	4.95	8.74	●	
FLTC-3R/L11E	11.0	0.28	2.7	1.75	4.95	8.74	●	
FLTC-3R/L12E	12.0	0.25	3.8	1.30	4.95	8.74	●	
FLTC-3R/L14E	14.0	0.23	3.8	1.37	4.95	8.74	●	
FLTC-3R/L16E	16.0	0.20	3.8	1.17	4.95	8.74	●	
FLTC-3R/L18E	18.0	0.18	3.8	1.04	4.95	8.74	●	
FLTC-3R/L20E	20.0	0.15	3.8	0.94	4.95	8.74	●	
FLTC-3R/L24E	24.0	0.13	3.8	0.79	4.95	8.74	●	
FLTC-3R/L28E	28.0	0.08	3.8	0.58	4.95	8.74	●	
FLTC-3R/L32E	32.0	0.08	3.8	0.53	4.95	8.74	●	

For tools, see page: FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTF
Double-Ended, Precision Threading Inserts, for 60° Fine Pitch Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLTF-2R/L	12.0	24.0	14.0	44.0	0.05	2.8	3.81	5.56	●
FLTF-3R/L	9.0	24.0	10.0	44.0	0.05	3.6	4.95	8.74	●
FLTF-4R/L	9.0	24.0	10.0	44.0	0.05	5.1	6.48	11.51	●

• For 60° V-thread limits, see page 38

⁽¹⁾ TPI int. min.

⁽²⁾ TPI int. max.

⁽³⁾ TPI ext. min.

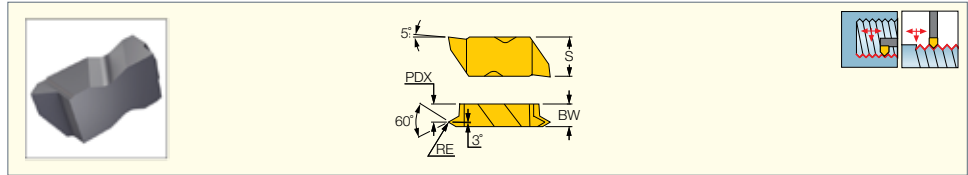
⁽⁴⁾ TPI ext. max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).



NOTCH-GRIP
GROOVE-TURN LINE
ISCARTHREAD

FLTK
Double-Ended, Precision Positive Rake Threading Inserts, for 60° Fine Pitch Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLTK-2R/L	12.0	24.0	14.0	44.0	0.05	2.8	3.81	5.56	●
FLTK-3R/L	9.0	24.0	10.0	44.0	0.05	3.6	4.95	8.74	●
FLTK-4R/L	9.0	24.0	10.0	44.0	0.05	5.1	6.48	11.51	●

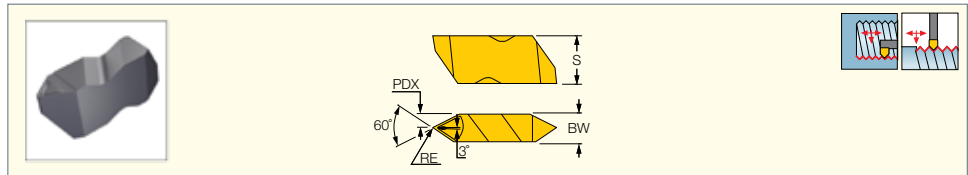
• For 60° V-thread limits, see page 38

- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE

FLT-CB
Double-Ended Precision Threading Inserts with Chipbreakers, for 60° Coarse and Fine Pitch Threading Applications



Designation	Dimensions								IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S	
FLT-3R/L-HCB	5.0	12.0	6.0	20.0	0.13	2.5	4.95	8.74	●
FLT-3R/LC-HCB	5.0	6.0	6.0	11.0	0.30	2.5	4.95	8.74	●
FLT-3R/L-CB	8.0	12.0	8.0	20.0	0.13	2.5	4.95	8.74	●
FLT-3R/L-FCB	7.0	20.0	8.0	36.0	0.08	2.5	4.95	8.74	●
FLT-4R/L-HCB	4.0	12.0	4.0	20.0	0.13	3.3	6.48	11.51	●

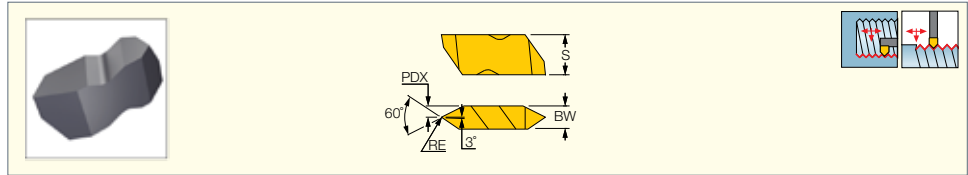
- (1) TPI int. min.
- (2) TPI int. max.
- (3) TPI ext. min.
- (4) TPI ext. max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).



NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLT
Double-Ended, Precision Threading Inserts, for 60° Threading Applications



Designation	Dimensions									IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S		
FLT-2R/L	7.0	20.0	8.0	36.0	0.08	1.9	3.81	5.56	•	
FLT-3R/L	5.0	12.0	6.0	20.0	0.13	2.5	4.95	8.74	•	
FLT-3010R/L	5.0	12.0	6.0	18.0	0.23	2.5	4.95	8.74	•	
FLT-4R/L	4.0	12.0	4.0	20.0	0.13	3.3	6.48	11.51	•	

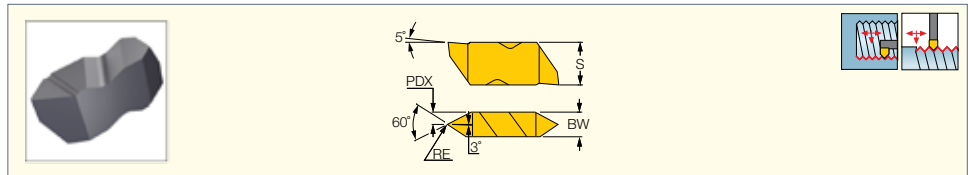
• For 60° V-thread limits, see page 38

- ⁽¹⁾ TPI int. min.
- ⁽²⁾ TPI int. max.
- ⁽³⁾ TPI ext. min.
- ⁽⁴⁾ TPI ext. max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTP
Double-Ended, Precision Positive Rake Threading Inserts, for 60° Threading Applications



Designation	Dimensions									IC908
	TPIIN ⁽¹⁾	TPIIX ⁽²⁾	TPIEN ⁽³⁾	TPIEX ⁽⁴⁾	RE	PDX	BW	S		
FLTP-2R/L	7.0	20.0	8.0	36.0	0.08	1.9	3.80	5.56	•	
FLTP-3R/L	5.0	12.0	6.0	20.0	0.13	2.5	5.00	8.74	•	
FLTP-4R/L	4.0	12.0	4.0	20.0	0.13	3.3	6.50	11.51	•	

• For 60° V-thread limits, see page 38

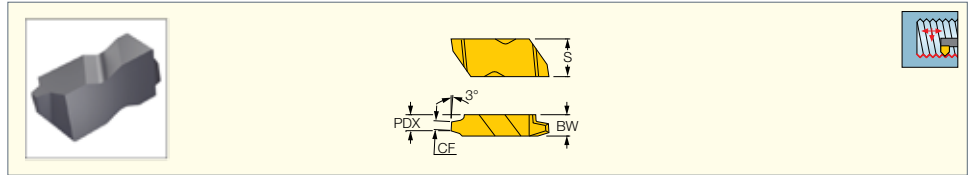
- ⁽¹⁾ TPI int. min.
- ⁽²⁾ TPI int. max.
- ⁽³⁾ TPI ext. min.
- ⁽⁴⁾ TPI ext. max.

For tools, see pages: A-FLER/L (36) • FLSR/L (35).



NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLA-PT-I
Double-Ended Precision Internal Threading Inserts for Partial Topping ACME Threading Applications

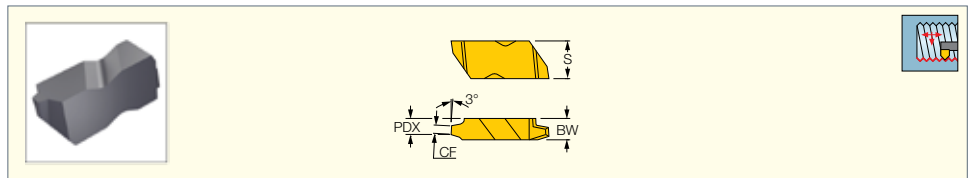


Designation	Dimensions					IC908
	TPI	PDX	CF	BW	S	
FLA-3L16-PT-I	16.0	3.8	0.52	4.95	8.74	●
FLA-3L14-PT-I	14.0	3.8	0.61	4.95	8.74	●
FLA-3L12-PT-I	12.0	3.8	0.72	4.95	8.74	●
FLA-3L10-PT-I	10.0	3.8	0.81	4.95	8.74	●
FLA-3L8-PT-I	8.0	3.8	1.04	4.95	8.74	●
FLA-3L6-PT-I	6.0	3.8	1.44	4.95	8.74	●
FLA-3L5-PT-I	5.0	3.8	1.75	4.95	8.74	●
FLA-3L4-PT-I	4.0	3.4	2.22	4.95	8.74	●
FLA-4L8-PT-I	8.0	5.1	1.04	6.48	11.51	●
FLA-4L6-PT-I	6.0	5.1	1.44	6.48	11.51	●
FLA-4L5-PT-I	5.0	5.1	1.75	6.48	11.51	●
FLA-4L4-PT-I	4.0	5.1	2.22	6.48	11.51	●
FLA-6L3-PT-I	3.0	7.2	3.01	9.73	11.51	●
FLA-6L2.5-PT-I	2.5	7.2	3.63	9.73	11.51	●
FLA-6L2-PT-I	2.0	7.2	4.58	9.73	11.51	●

• For internal thread limits, see page 38
For tools, see page: A-FLER/L (36).

NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLAS-PT-I
Double-Ended Precision Internal Threading Inserts for Partial Topping STUB ACME Threading Applications

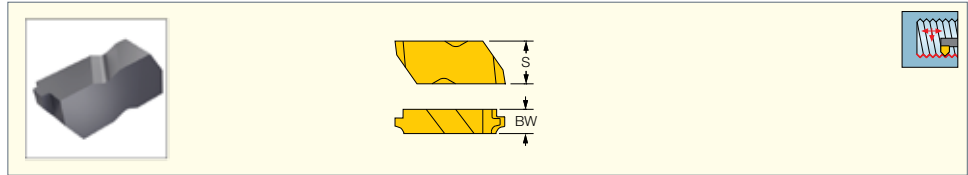


Designation	Dimensions					IC908
	TPI	PDX	CF	BW	S	
FLAS-3L16-PT-I	16.0	3.8	0.60	4.95	8.74	●
FLAS-3L14-PT-I	14.0	3.8	0.70	4.95	8.74	●
FLAS-3L12-PT-I	12.0	3.8	0.83	4.95	8.74	●
FLAS-3L10-PT-I	10.0	3.8	0.94	4.95	8.74	●
FLAS-3L8-PT-I	8.0	3.8	1.21	4.95	8.74	●
FLAS-3L6-PT-I	6.0	3.8	1.66	4.95	8.74	●
FLAS-3L5-PT-I	5.0	3.8	2.01	4.95	8.74	●
FLAS-3L4-PT-I	4.0	3.8	2.55	4.95	8.74	●
FLAS-4L3-PT-I	3.0	5.1	3.44	6.48	11.51	●
FLAS-6L2-PT-I	2.0	7.2	5.23	9.73	11.51	●

• For internal thread limits, see page 38
For tools, see page: A-FLER/L (36).

NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-B-I
Double-Ended Precision Threading Inserts for Internal API BUTTRESS Applications

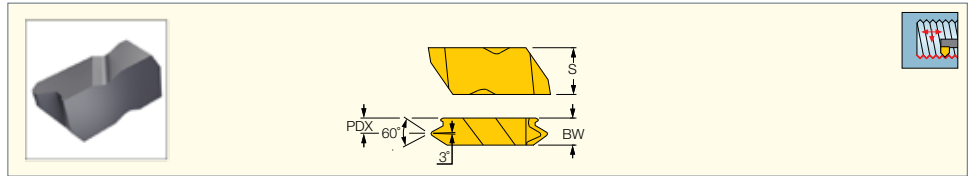


Dimensions						IC908
Designation	TPI	IPF	BW	S		
FLDC-3-5B75I	5.0	3/4	6.35	8.74	•	
FLDC-3-5B1I	5.0	1	6.35	8.74	•	
FLDC-4-5B75I	5.0	3/4	6.48	11.51	•	
FLDC-4-5B1I	5.0	1	6.48	11.51	•	

For tools, see page: A-FLER/L (36).

NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-I
Double-Ended Precision Threading Inserts for Internal API Rotary Shoulder Connection Applications

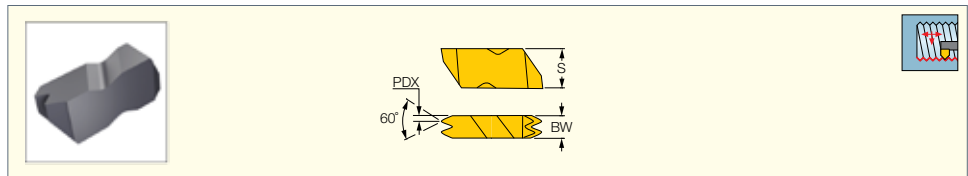


Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-530I	5.0	3	3.7	6.35	8.74	•
FLDC-4-425I	4.0	2	4.6	7.92	11.51	•
FLDC-4-428I	4.0	2	4.6	7.92	11.51	•
FLDC-4-435I	4.0	3	4.6	7.92	11.51	•
FLDC-4-438I	4.0	3	4.6	7.92	11.51	•

For tools, see page: A-FLER/L (36).

NOTCHGRIP
GROOVE-TURN LINE
ISCARTHREAD

FLDC-NPT-I
Double-Ended, Precision, Multi-Tooth Threading Inserts, for Internal NPT Threading Applications



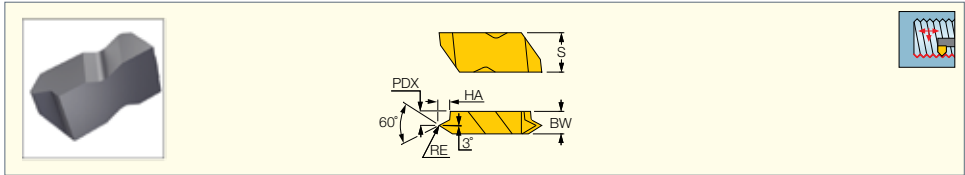
Dimensions						IC908
Designation	TPI	IPF	PDX	BW	S	
FLDC-3-8NPT 2I	8.0	3/4	1.5	6.35	8.74	•
FLDC-3-11.5NPT-2I	11.5	3/4	1.2	6.35	8.74	•

• For internal thread limits, see page 38

For tools, see page: A-FLER/L (36).

NOTCH-GRIP
GROOVE-TURN LINE
ISCAR THREAD

FLTC-I
Double-Ended, Precision, Full Profile Threading Inserts, for UN Internal Thread Applications



Designation	Dimensions						IC908
	TPI	RE	PDX	HA	BW	S	
FLTC-3R/L7I	7.0	0.23	2.7	2.34	4.95	8.74	●
FLTC-3R/L8I	8.0	0.18	2.7	2.06	4.95	8.74	●
FLTC-3R/L9I	9.0	0.15	2.7	1.83	4.95	8.74	●
FLTC-3R/L10I	10.0	0.13	2.7	1.65	4.95	8.74	●
FLTC-3R/L11I	11.0	0.13	2.7	1.50	4.95	8.74	●
FLTC-3R/L12I	12.0	0.10	3.8	1.22	4.95	8.74	●
FLTC-3R/L14I	14.0	0.08	3.8	1.12	4.95	8.74	●
FLTC-3R/L16I	16.0	0.08	3.8	1.02	4.95	8.74	●
FLTC-3R/L18I	18.0	0.08	3.8	0.91	4.95	8.74	●
FLTC-3R/L20I	20.0	0.08	3.8	0.79	4.95	8.74	●
FLTC-3R/L24I	24.0	0.08	3.8	0.66	4.95	8.74	●
FLTC-3R/L28I	28.0	0.08	3.8	0.58	4.95	8.74	●

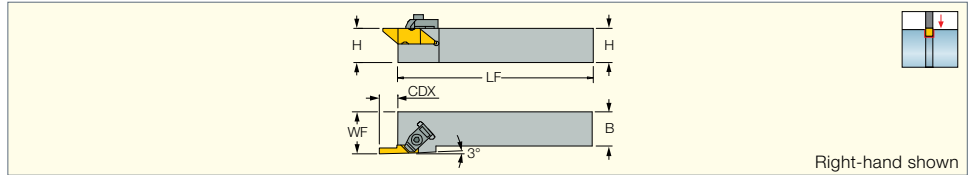
• For internal thread limits, see page 38
For tools, see page: A-FLER/L (36).



NOTCH-GRIP
GROOVE-TURN LINE

FLSR/LT

External Tools for Deep Grooving Inserts



Right-hand shown

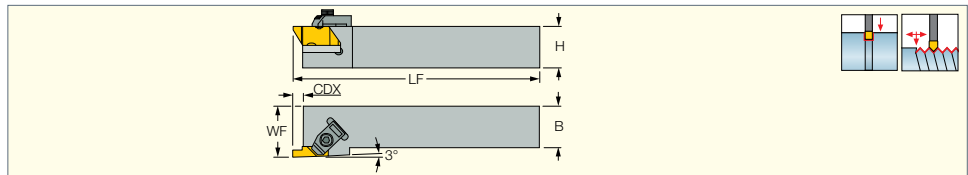
Designation	Po. Size	H	B	CDX	WF	LF	Insert
FLSR/LT-2525M3	3.0	25.00	25.0	11.20	32.0	152.40	FLGT-3.
FLSR/LT-3232M3	3.0	32.00	32.0	11.20	40.0	152.40	FLGT-3.
FLSR/LT-2525M4	4.0	25.00	25.0	14.20	32.0	152.40	FLGT-4.
FLSR/LT-3232M4	4.0	32.00	32.0	14.20	40.0	152.40	FLGT-4.

• For user guide, see pages 37-38

NOTCH-GRIP
GROOVE-TURN LINE

FLSR/L

Tools for External Grooving and Threading Inserts



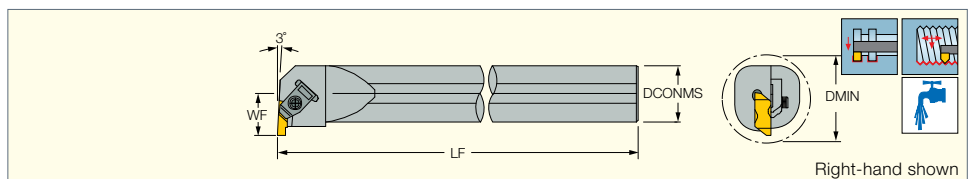
Designation	Po. Size	H	B	CDX	WF	LF	Insert
FLSR/L-2020M2	2.0	20.00	20.0	3.00	25.0	125.00	FL/IN_-2
FLSR/L-2525M2	2.0	25.00	25.0	3.00	32.0	150.00	FL/IN_-2
FLSR/L-2020M3	3.0	20.00	20.0	5.00	32.0	125.00	FL/IN_-3
FLSR/L-2525M3	3.0	25.00	25.0	5.00	32.0	150.00	FL/IN_-3

NOTCH-GRIP
GROOVE-TURN LINE

ISCARTHREAD

A-FLER/L

Internal Grooving and Threading Bars with Coolant Channels



Right-hand shown

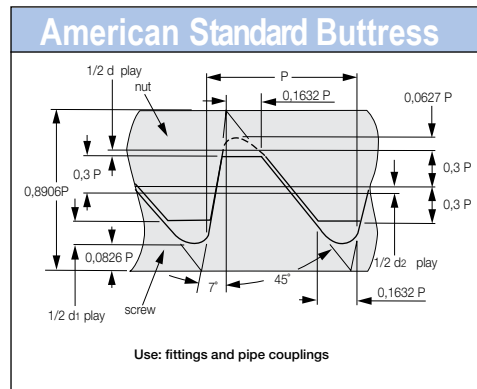
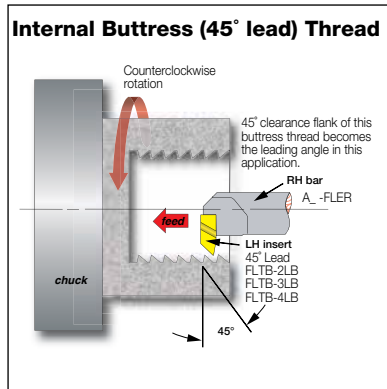
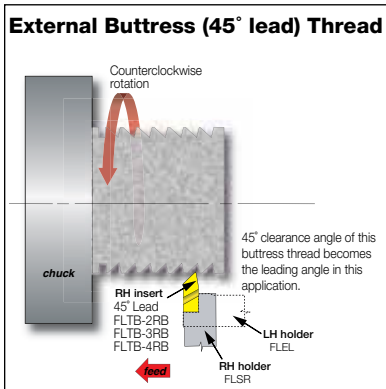
Designation	Po. Size	DCONMS	DMIN	WF	LF	Insert
A16M-FLER2	2.0	16.00	25.40	12.7	250.00	FL/IN-2
A20M-FLER2	2.0	20.00	28.60	13.8	250.00	FL/IN-2
A25M-FLER/L2	2.0	25.00	34.90	17.7	300.00	FL/IN-2
A25M-FLER/L3	3.0	25.00	34.90	17.7	300.00	FL/IN-3
A32M-FLER/L3	3.0	32.00	44.45	22.1	350.00	FL/IN-3
A40M-FLER/L3	3.0	40.00	50.80	24.5	350.00	FL/IN-3
A50M-FLER/L4	4.0	50.00	63.50	35.3	400.00	FL/IN-4

• Use left-hand inserts on right-hand tools and vice versa.

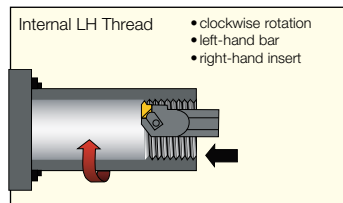
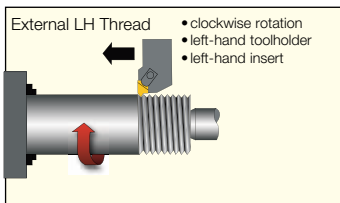
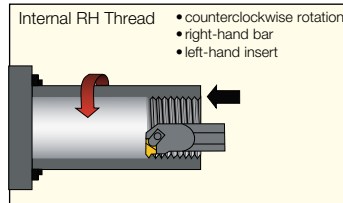
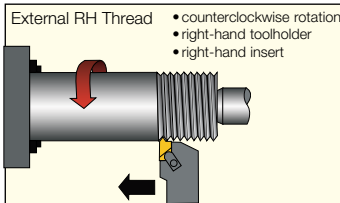
USER GUIDE

American Standard Buttress Thread Designations

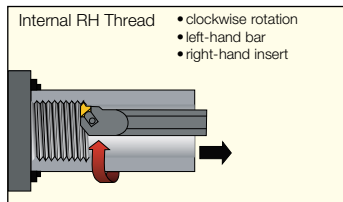
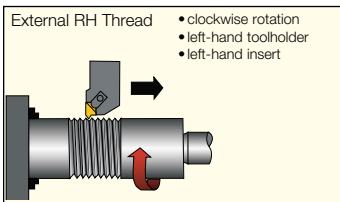
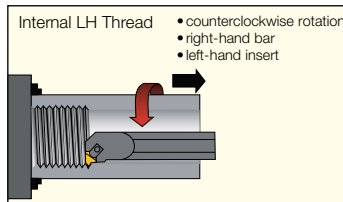
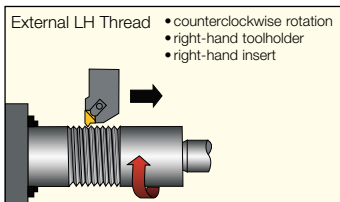
- When only the designation BUTT is used, the thread is a "pull" type buttress (external thread pulls) with the clearance flank (45°) leading and the pressure flank (7°) following.
- When the designation PUSH-BUTT is used, the thread is a push type buttress (external thread pushes) with the load flank (7°) leading and the 45° clearance flank following.
- Whenever possible this description should be confirmed by a simplified view showing thread angles on the drawing of the product that has the buttress thread.
- Always remember that the position of your holder and direction of your feed will determine the lead angle on the insert.



Feed direction towards the chuck



Feed direction towards the tailstock



USER GUIDE

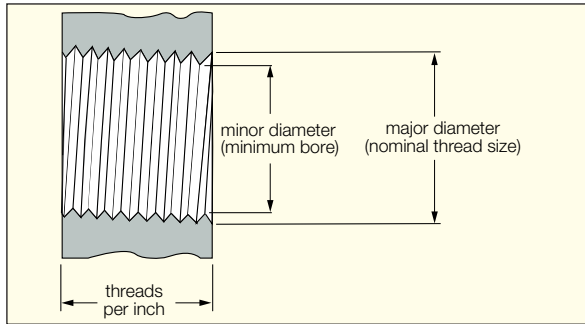
Threading Limits with Standard NOTCH-GRIP Inserts

The following charts list the largest pitch that can be applied on internal applications for Acme and V-Threading NOTCH-GRIP inserts in sizes 2,3, 4 and 6.

60° V-Threading Limits

FLT-2 Inserts Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		6	1-7/8
7	1-3/4	1.595	40.51
8	1-5/8	1.490	37.85
9	1-9/16	1.442	36.63
10	1-1/2	1.392	35.36
11	1-7/16	1.339	34.01
12	1-3/8	1.285	32.64
13	1-5/16	1.229	31.22
14	1-1/4	1.173	29.79
16	1-1/4	1.182	30.02
18	1-1/8	1.065	27.05
20	1-1/8	1.071	27.20
24	1-1/16	1.017	25.83

* 24 TPI and finer can be cut with a #2 series insert provided that the minor diameter is 1.000 or larger.



FLT-3 & 4 Inserts Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		4**	3
4-1/2**	2-7/8	2.634	66.90
5	2-3/4	2.534	64.36
6	2-1/2	2.320	58.93
7	2-1/4	2.095	53.21
8	2	1.865	47.37
9	1-15/16	1.817	46.15
10	1-7/8	1.767	44.88
11	1-13/16	1.714	43.54
12	1-3/4	1.660	42.16
13	1-5/8	1.542	39.17
14	1-9/16	1.485	37.72
16*	1-7/16	1.370	34.80

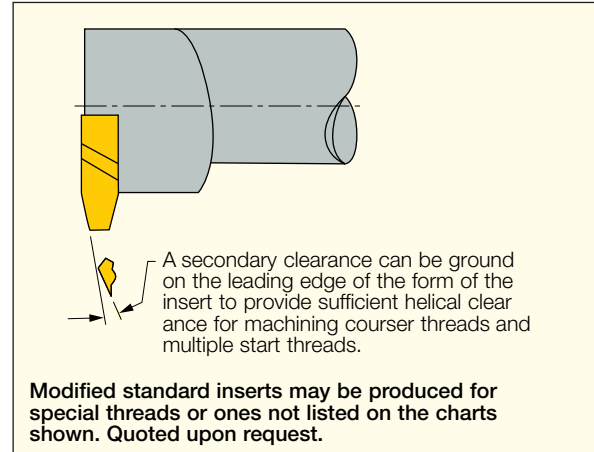
* 16 pitch acme threads and finer can be cut provided the minor diameter is 1.370 or larger.

** FLT-4 only.

Acme Threading Limits

FLA-2 Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		6	2-1/2
8	2-1/4	2.125	53.98
10	2	1.900	48.26
12	1-3/4	1.667	42.34
14	1-5/8	1.554	39.47
16*	1-1/2	1.438	36.53

* 16 pitch acme threads and finer can be cut provided the minor diameter is 1.438 or larger.



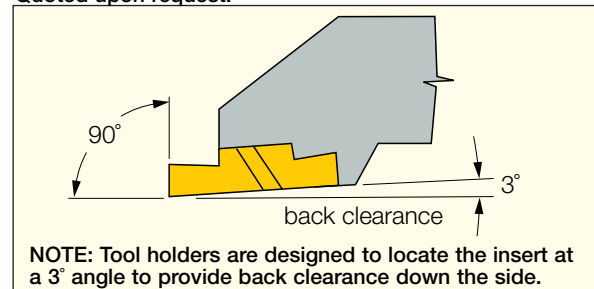
Modified standard inserts may be produced for special threads or ones not listed on the charts shown. Quoted upon request.

FLA-3, 4 & 6 Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		2*	5
2-1/2**	4-1/2	4.100	104.14
3**	4	3.665	93.09
4	3-1/2	3.250	82.55
5	3	2.800	71.12
6	2-1/2	2.333	59.26
8	2-1/4	2.125	53.98
10	2	1.900	48.26
12	1-3/4	1.667	42.34
14	1-5/8	1.554	39.47
16*	1-1/2	1.438	36.53

* 16 pitch acme threads and finer can be cut provided the minor diameter is 1.438 or larger.

** FLA-6 only.

NOTE: Positive rake ACME inserts are recommended for stainless steels and high-temp alloy applications. Quoted upon request.



NOTE: Tool holders are designed to locate the insert at a 3° angle to provide back clearance down the side.

FLTB-2A & 2B Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		8	1-3/4
10	1-5/8	1.505	38.23
12	1-1/2	1.400	35.56
16	1-1/4	1.175	29.85
20	1-1/16	1.002	25.45

FLTB-3A & 4A Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		4*	2-1/2
5	2-1/4	2.010	51.05
6	2	1.800	45.72
8	1-3/4	1.600	40.64
10	1-5/8	1.505	38.23
12**	1-1/2	1.400	35.56

* FLTB-4A insert only

** 16 or 20 threads per inch can be cut providing minor diameter is 1.375 or larger.

FLTB-3B & 4B Threads per Inch	Internal Threading Limitations Nominal Thread Size	Minimum Minor Diameter	
		Inch	MM
		4	*2-7/8
5	2-3/4	2.510	63.75
6	2-3/8	1.175	29.85
8	2-1/8	1.975	50.17
10	1-7/8	1.755	44.58
12	1-5/8	1.525	38.74
16	1-1/2	1.407	35.74
20	1-7/16	1.378	35.00

* FLTB-4B insert only

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