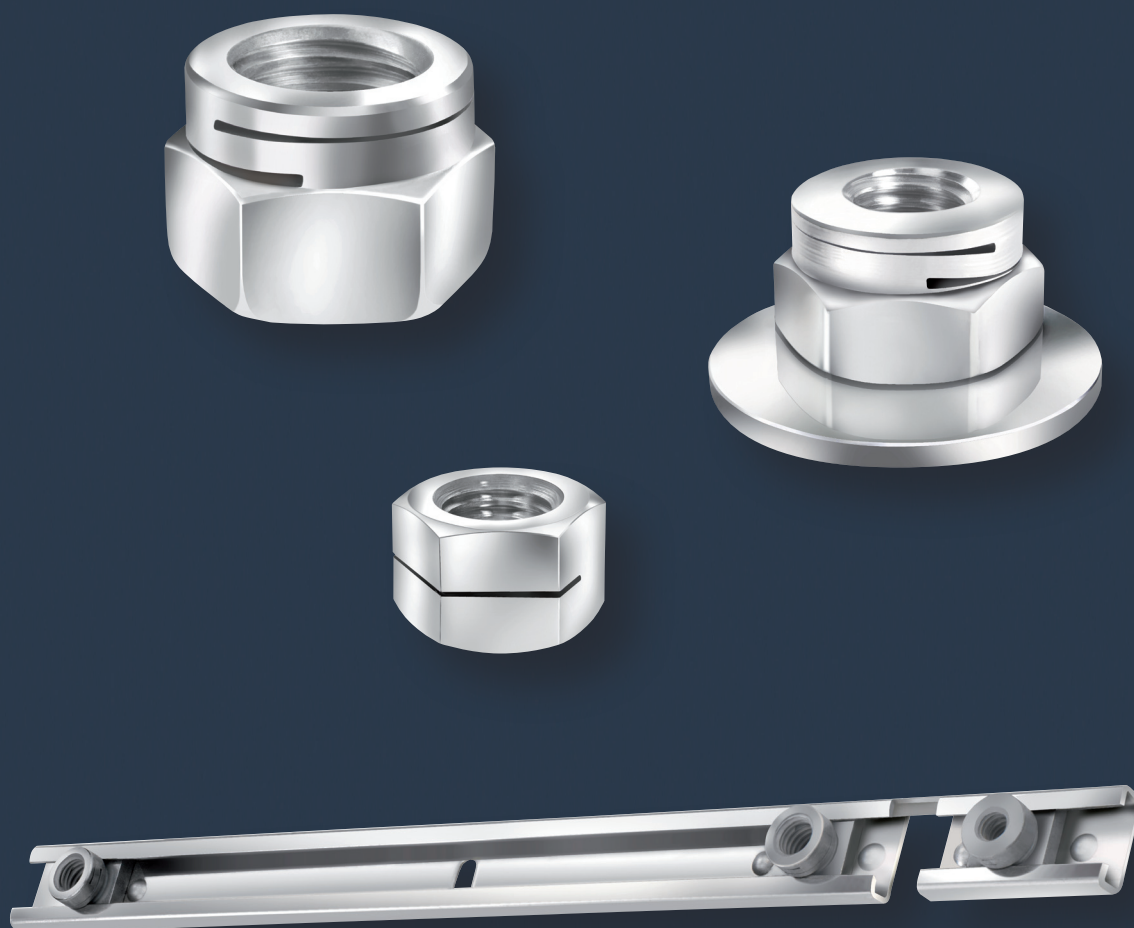


# TECHNICAL SHEETS



**J. LANFRANCO & C<sup>IE</sup>**

MANUFACTURER



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## FOREWORD OF THE MANUFACTURER

To ensure a safe male / female clamping condition, it is important to consider a combination of the following parameters when designing controlled bolt joint assemblies using self locking nuts (HFR):

1. SELECTION OF THE CORRECT GRADE OF RAW MATERIAL
2. TIGHTENING TORQUE (Nm)
3. TENSION IN THE BOLT (KN)
4. PREVAILING TORQUE (Nm)
5. COEFFICIENT OF FRICTION
6. SURFACE TREATMENT

In order to achieve a security fastening in conformity with industry standards, the 6 points above must be respected.

The following technical sheets will aid you in the selection of the self-locking nut adapted to your requirements.



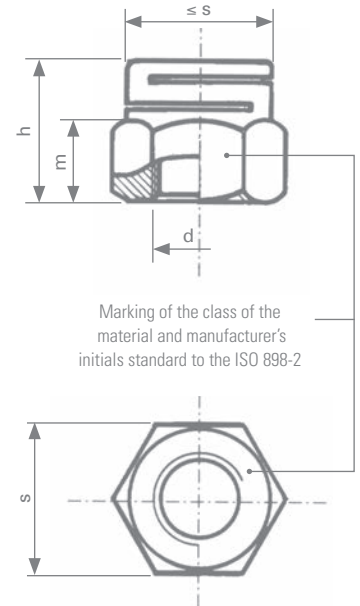
**ESL**
**HFR NUT**
**ALL METALS – METRIC**

**Definition:** all metals reusable slotted self-locking hexagon nut standard to the NFE 25 411 and SNCF ST 001-002 FPn6

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** steel ISO 898-2 / NF EN ISO 2320

d	pitch	s	h	m
M 2	0,40	4,00	4,50	2,30
M 2,5	0,45	5,00	4,50	2,30
M 3	0,50	5,50	4,50	2,50
M 4	0,70	7,00	5,30	2,60
M 5	0,80	8,00	6,30	3,00
M 6	1,00	10,00	7,00	3,60
M 7	1,00	11,00	8,10	4,80
M 8	1,25	13,00	8,80	4,80
M 10	1,50	16,00	11,00	6,00
M 12	1,75	18,00	13,00	7,20
M 14	2,00	21,00	15,00	8,40
M 16	2,00	24,00	18,70	11,50
M 18	2,50	27,00	20,00	11,50
M 20	2,50	30,00	21,00	12,00
M 22	2,50	34,00	21,50	12,50
M 24	3,00	36,00	25,50	15,40
M 27	3,00	41,00	28,00	17,00
M 30	3,50	46,00	31,50	18,50
M 33	3,50	50,00	32,00	18,70
M 36	4,00	55,00	34,50	19,50
M 39	4,00	60,00	37,00	20,50
M 42	4,50	65,00	39,50	23,00
M 45	4,50	70,00	43,00	24,00
M 48	5,00	75,00	46,00	25,00



Quality class	Classification	Range of application
Class 8 steel	QV	Self-color -50° C + 300° C <sup>(1)</sup>
Class 10 steel	QK	
Class 12 steel	QL	

Others: Brass - Bronze - Light alloy - Titanium...

<sup>(1)</sup> Values are only given as an indication

**Surface treatment (standard to ROHS requirements)**

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Self Color		BT	

**Example of ordering code**

	Type	Diam X pitch	Class	Protection	
classification	ESL	100150	QV	ZL	00
wording	ESL	M10 X 1,50	8	Zinc Lanthane ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

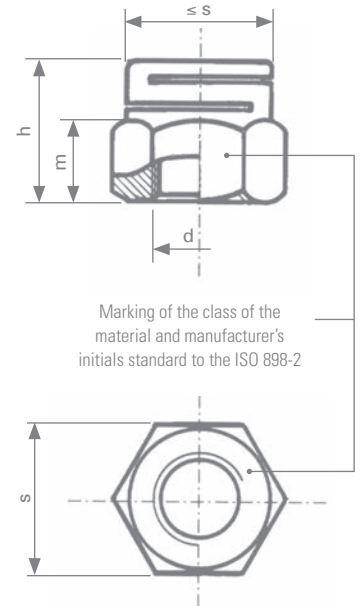
**ESL**
**HFR NUT**
**STAINLESS STEEL**

**Definition:** all metals reusable slotted self-locking hexagon nut standard to the NFE 25 411 and SNCF ST 001-002 FPn6

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** stainless steel NF EN ISO 3506-2 / NF E 25035

d	pitch	s	h	m
M 2	0,40	4,00	4,50	2,30
M 2,5	0,45	5,00	4,50	2,30
M 3	0,50	5,50	4,50	2,50
M 4	0,70	7,00	5,30	2,60
M 5	0,80	8,00	6,30	3,00
M 6	1,00	10,00	7,00	3,60
M 7	1,00	11,00	8,10	4,80
M 8	1,25	13,00	8,80	4,80
M 10	1,50	16,00	11,00	6,00
M 12	1,75	18,00	13,00	7,20
M 14	2,00	21,00	15,00	8,40
M 16	2,00	24,00	17,00	9,50
M 18	2,50	27,00	19,50	11,50
M 20	2,50	30,00	21,00	12,00
M 22	2,50	34,00	21,50	12,50
M 24	3,00	36,00	25,50	15,40
M 27	3,00	41,00	28,00	17,00
M 30	3,50	46,00	31,50	18,50
M 33	3,50	50,00	32,00	18,70
M 36	4,00	55,00	34,50	19,50
M 39	4,00	60,00	37,00	20,50
M 42	4,50	65,00	39,50	23,00
M 45	4,50	70,00	43,00	24,00
M 48	5,00	75,00	46,00	25,00



Quality class	Classification	Range of application
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C + 400° C <sup>(1)</sup>
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

**Surface treatment (standard to ROHS requirements)**

Surface treatment	Classification
Passivation	PA
Antigalling	Stanal ® 400
	Sherardisation (NF EN 13811)
Self color	BT

**Example of ordering code**

	Type	Diam X pitch	Class	Protection	
classification	ESL	100150	ZH	ST	00
wording	ESL	M10 X 1,50	A4 80	Stanal ® 400	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

**ESL**
**HFR NUT**
**ALL METALS – UNC / UNF**

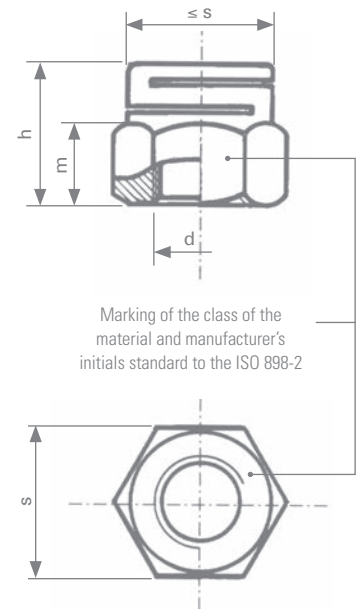
**Definition:** all metals reusable slotted self-locking hexagon nut standard to the NFE 25 411 and SNCF ST 001-002 FPN6

**Threading:** series UNC / UNF ANSI B1.1 and BS 1580 - BSF / BSW on request

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035



d / inches	d / mm	pitch / UNC	pitch / UNF	s / mm	h / mm	m / mm	Codes
N°8	4,16	32	36	8,00	5,30	2,60	H
N°10	4,82	24	32	9,00	6,30	3,00	I
1/4	6,35	20	28	11,00	7,50	4,00	K
5/16	7,94	18	24	13,00	8,80	4,80	L
3/8	9,52	16	24	14,00	8,80	4,80	M
7/16	11,11	14	20	17,00	11,00	6,00	N
1/2	12,70	13	20	18,00	13,00	7,20	O
9/16	14,29	12	18	22,00	15,00	8,00	P
5/8	15,87	11	18	24,00	17,00	9,50	Q
3/4	19,05	10	16	28,00	21,00	12,00	R
7/8	22,22	9	14	33,00	22,00	12,50	S
1	25,40	8	12	41,00	24,00	13,50	T
1 1/4	31,75	7	12	46,00	29,50	16,00	V
1 1/2	38,10	6	12	55,00	32,00	17,50	X
1 3/4	44,45	5	-	on request			Z
2	50,80	4	-	75,00	46,00	25,50	Y



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-80	ZH	

Others: Brass - Bronze - Light alloy - Titanium...

<sup>(1)</sup> Values are only given as indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

**Example of ordering code**

	Type	Diam X pitch	Class	Protection	
classification	ESL	N00UNC	QV	ZL	00
wording	ESL	ø 7/16" UNC	8	Zinc Lanthane®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

**ESL**
**HFR NUT**
**ALL METALS – UNC / UNF – BS STANDARD**

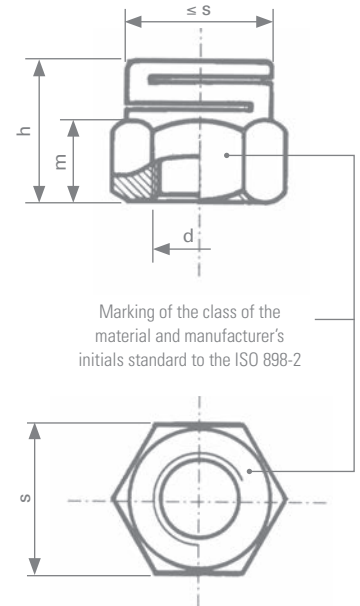
**Definition:** all metals reusable slotted self-locking hexagon nut

**Threading:** series UNC / UNF ANSI B1.1 and BS 1580 - BSF / BSW on request

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035



d / inches	d / mm	pitch / UNC	pitch / UNF	s / min.	s / max.	h	m	codes
N°1	1,854	64	72	6,172	6,375	5,30	2,60	B
N°2	2,184	56	64	6,172	6,375	5,30	2,60	C
N°3	2,515	48	56	6,172	6,375	5,30	2,60	D
N°4	2,845	40	48	6,172	6,375	5,30	2,60	E
N°5	3,175	40	44	6,172	6,375	5,30	2,60	F
N°6	3,505	32	40	7,747	7,950	6,30	3,00	G
N°8	4,166	32	36	8,534	8,763	6,30	3,00	H
N°10	4,826	24	32	9,321	9,550	6,30	3,00	I
N°12	5,486	24	28	10,871	11,125	7,50	4,50	J
1/4	6,350	20	28	10,871	11,125	7,50	4,50	K
5/16	7,938	18	24	12,420	12,700	8,80	4,80	L
3/8	9,525	16	24	13,995	14,274	8,80	4,80	M
7/16	11,113	14	20	17,145	17,475	11,00	6,00	N
1/2	12,700	13	20	18,694	19,050	13,00	7,20	O
9/16	12,032	12	18	21,869	22,225	15,00	8,00	P
5/8	15,875	11	18	23,418	23,825	17,00	9,50	Q
3/4	19,050	10	16	27,635	28,575	21,00	12,00	R
7/8	22,225	9	14	32,232	33,324	22,00	12,50	S
1	25,400	8	12	36,830	38,100	24,00	13,50	T
1 1/8	28,575	7	12	41,427	42,875	25,00	14,00	U
1 1/4	31,750	7	12	46,024	47,701	29,50	16,00	V
1 3/8	34,925	6	12	50,647	52,374	32,00	17,00	W
1 1/2	38,100	6	12	55,245	57,150	35,00	18,50	X



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

Others: Brass - Bronze - Light alloy - Titanium...

<sup>(1)</sup> Values are only given as indication

**Surface treatment (standard to ROHS requirements)**

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

**Example of ordering code**

	Type	Diam X pitch	Class	Protection	
classification	ESL	N00UNC	QV	ZL	00
wording	ESL	ø 7/16" UNC	8	Zinc Lanthane®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# ERM

## HFR FLANGE NUT

## WITH FREE WASHER ALL METALS – METRIC

**Definition:** all metals reusable slotted self-locking hexagon flange nut with free washer

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

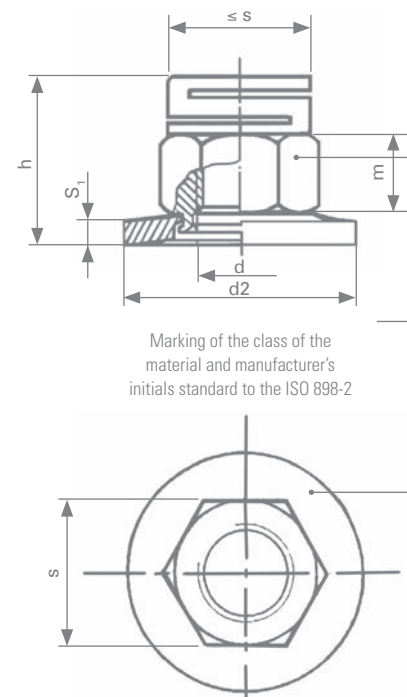
d	pitch	s	h	m	d <sub>2</sub> *	s <sub>1</sub>
M 4	0,70	7,00	7,00	2,60	12,00	1,10
M 5	0,80	8,00	8,50	3,00	14,00	1,30
M 6	1,00	10,00	9,00	4,50	18,00	1,40
M 8	1,25	13,00	11,00	4,80	22,00	1,60
M 10	1,50	16,00	13,40	6,00	22,00 / 27,00	1,80
M 12	1,75	18,00	15,80	7,20	27,00	1,80
M 14	2,00	21,00	17,80	8,40	30,00	2,40
M 16	2,00	24,00	19,80	9,50	40,00	3,20

Sizes: \* Only given as an indication. On request for other type and other diameter of washers

Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-80	ZH	

Others: Brass - Bronze - Light alloy - Titanium...

<sup>(1)</sup> Values are only given as indication



### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	ERM	100150	ZH	ST	01
wording	ERM	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread



**ERM**
**HFR FLANGE NUT**
**WITH FREE WASHER ALL METALS – UNC / UNF**

**Definition:** all metals reusable slotted self-locking hexagon flange nut with free washer

**Threading:** series UNC / UNF ANSI B1.1 and BS 1580 - BSF / BSW on request

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

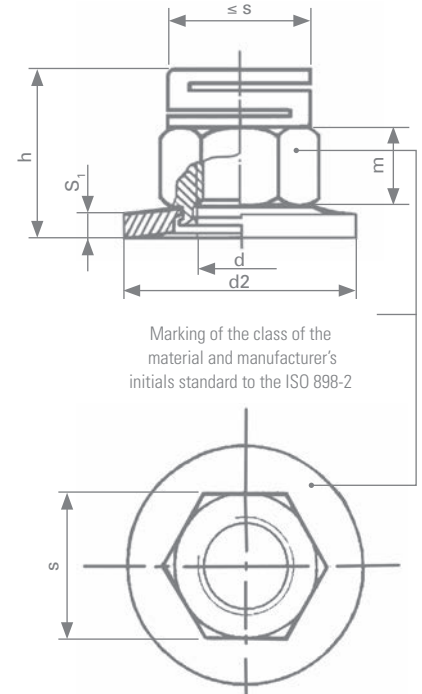


d nominal	pitch / UNC	pitch / UNF	s	h	m	d <sub>2</sub> *	s <sub>1</sub>	codes
N°10	24	32	9,00	8,00	3,00	14,00	1,30	I
1/4	20	28	11,00	9,50	4,00	18,00	1,40	K
5/16	18	24	13,00	10,80	4,80	22,00	1,60	L
3/8	16	24	14,00	10,80	4,80	22,00	1,60	M
7/16	14	20	17,00	13,50	6,00	27,00	1,80	N
1/2	13	20	18,00	15,80	7,20	30,00	2,40	O
5/8	11	18	24,00	21,00	9,50	40,00	3,20	Q
3/4	10	16	28,00	25,00	12,00	40,00	3,20	R

\* Different type and diameter of washers can be supplied on request

Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication



Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

Example of ordering code					
	Type	Diam X pitch	Class	Protection	
classification	ERM	N00UNF	QV	ZL	01
wording	ERM	ø 7/16" UNF	8	Zinc Lanthane®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# THM

## HFR NUT

## THIN TYPE

**Definition:** all metals reusable two slotted self-locking hexagon nut

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

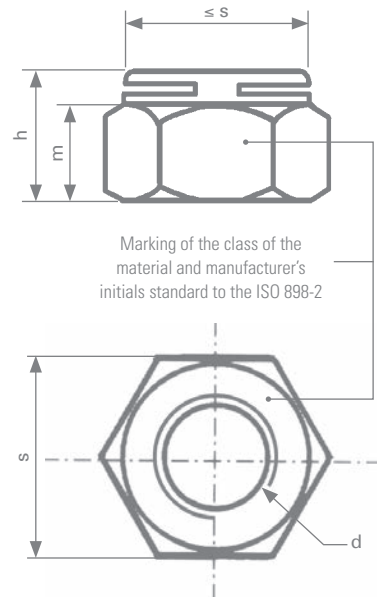
**Range of operations:** from diameter M4 to M45



d nominal	pitch	h	m	s
M 4	0,70	4,50	2,50	7,00
M 5	0,80	4,80	2,60	8,00
M 6	1,00	5,20	2,70	10,00
M 8	1,25	6,00	3,50	13,00
M 10	1,50	7,50	4,50	17,00
M 12	1,75	9,00	5,50	19,00
M 14	2,00	11,00	7,00	22,00
M 16	2,00	12,00	8,00	24,00
M 18	2,50	14,00	9,50	27,00
M 20	2,50	15,00	10,50	30,00
M 22	2,50	17,00	12,00	32,00
M 24	3,00	19,00	13,00	36,00
M 27	3,00	20,00	14,00	41,00
M 30	3,50	21,50	15,00	46,00
M 33	3,50	23,00	16,50	50,00
M 36	4,00	25,00	18,00	55,00
M 39	4,00	26,00	19,00	60,00
M 42	4,50	30,00	22,00	65,00
M 45	4,50	32,00	24,00	70,00

Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication



Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	THM	100150	ZH	ST	00
wording	THM	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# THU

## HFR NUT

## STANDARD TYPE

**Definition:** all metals reusable two slotted self-locking hexagon nut

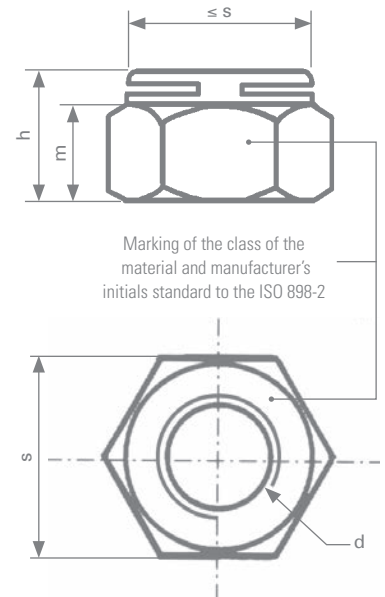
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

**Range of operations:** from diameter M4 to M45



d nominal	pitch	h	m	s
M 4	0,70	5,50	3,50	7,00
M 5	0,80	6,50	4,30	8,00
M 6	1,00	7,50	5,00	10,00
M 8	1,25	8,50	6,00	13,00
M 10	1,50	11,00	8,00	17,00
M 12	1,75	13,00	9,50	19,00
M 14	2,00	15,00	11,00	22,00
M 16	2,00	17,00	13,00	24,00
M 18	2,50	20,00	15,50	27,00
M 20	2,50	22,00	17,50	30,00
M 22	2,50	23,00	18,00	32,00
M 24	3,00	25,00	19,00	36,00
M 27	3,00	27,00	21,00	41,00
M 30	3,50	30,00	23,50	46,00
M 33	3,50	33,00	26,50	50,00
M 36	4,00	36,00	29,00	55,00
M 39	4,00	38,00	31,00	60,00
M 42	4,50	42,00	34,00	65,00
M 45	4,50	45,00	37,00	70,00



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	THU	M10 X 1,50	ZH	ST	00
wording	THU	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# HCB

## HFR NUT

HEIGHT (h) = 0,8d

**Definition:** all metals self-locking hexagon nut with one slot

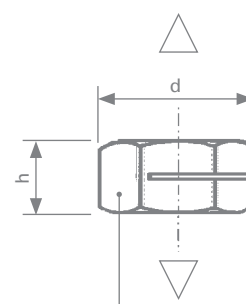
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320

for stainless steel ISO 3506-2 / NF E 25035

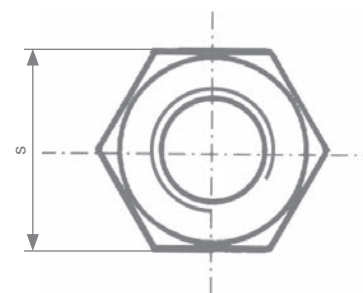
**Range of operations:** from diameter M5 to M48

d	pitch	h - min.	h - max.	s
M 5	0,80	3,70	4,70	8,00
M 6	1,00	4,70	5,20	10,00
M 8	1,25	6,14	6,80	13,00
M 10	1,50	7,64	8,40	16,00
M 12	1,75	9,50	10,80	18,00
M 14	2,00	10,30	12,80	21,00
M 16	2,00	12,30	14,80	24,00
M 18	2,50	14,20	15,80	27,00
M 20	2,50	14,90	18,00	30,00
M 22	2,50	16,90	19,40	34,00
M 24	3,00	17,70	21,50	36,00
M 27	3,00	20,70	23,80	41,00
M 30	3,50	22,70	25,60	46,00
M 33	3,50	24,70	28,70	50,00
M 36	4,00	27,40	31,00	55,00
M 39	4,00	29,40	33,40	60,00
M 42	4,50	32,40	34,00	65,00
M 45	4,50	34,40	36,30	70,00
M 48	5,00	36,40	38,70	75,00



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2

△ Assembly direction



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	HCB	M10 X 1,50	ZH	ST	00
wording	HCB	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# HCE

## HFR NUT

## HEIGHT (h) = d

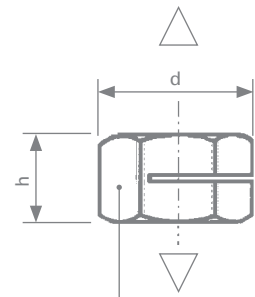
**Definition:** all metals self-locking hexagon nut with one slot

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

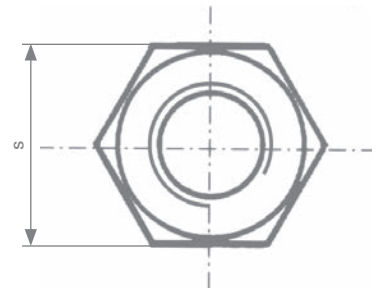
**Range of operations:** from diameter M4 to M48

d	pitch	h - min.	h - max.	s
M 4	0,70	3,90	4,10	7,00
M 5	0,80	4,80	5,10	8,00
M 6	1,00	5,40	6,00	10,00
M 8	1,25	7,14	8,00	13,00
M 10	1,50	8,94	10,00	16,00
M 12	1,75	11,57	12,00	18,00
M 14	2,00	13,40	14,10	21,00
M 16	2,00	15,70	16,40	24,00
M 18	2,50	16,90	18,00	27,00
M 20	2,50	19,00	20,30	30,00
M 22	2,50	20,50	22,00	34,00
M 24	3,00	22,60	24,00	36,00
M 27	3,00	25,40	27,00	41,00
M 30	3,50	27,30	30,00	46,00
M 33	3,50	30,90	33,00	50,00
M 36	4,00	33,10	36,00	55,00
M 39	4,00	35,90	40,40	60,00
M 42	4,50	36,60	43,40	65,00
M 45	4,50	38,90	46,40	70,00
M 48	5,00	41,20	49,40	75,00



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2

△ Assembly direction



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	HCE	100150	ZH	ST	00
winding	HCE	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# HCT

## HFR NUT

HEIGHT (h) = 1,3d

**Definition:** all metals self-locking hexagon nut with one slot

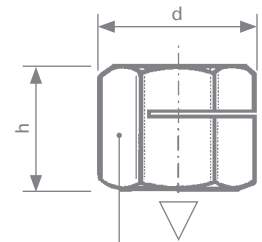
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

**Range of operations:** from diameter M3 to M48

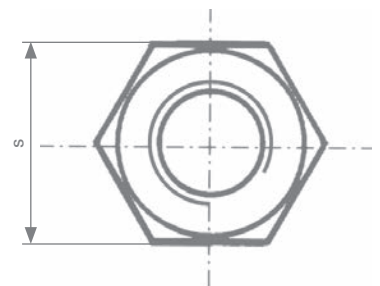


d	pitch	h - min.	h - max.	s
M 3	0,50	3,80	4,00	5,50
M 4	0,70	5,10	5,30	7,00
M 5	0,80	6,20	6,70	8,00
M 6	1,00	7,60	8,00	10,00
M 8	1,25	10,20	10,60	13,00
M 10	1,50	12,75	13,25	16,00
M 12	1,75	15,35	15,85	18,00
M 14	2,00	18,00	18,40	21,00
M 16	2,00	20,60	21,00	24,00
M 18	2,50	23,20	23,60	27,00
M 20	2,50	25,80	26,20	30,00
M 22	2,50	28,40	28,80	34,00
M 24	3,00	31,00	31,40	36,00
M 27	3,00	34,90	35,30	41,00
M 30	3,50	36,80	39,20	46,00
M 33	3,50	42,70	43,10	50,00
M 36	4,00	46,50	47,10	55,00
M 39	4,00	50,40	51,00	60,00
M 42	4,50	54,30	54,90	65,00
M 45	4,50	58,20	58,80	70,00
M 48	5,00	62,10	62,70	75,00



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2

△ Assembly direction



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	HCT	100150	ZH	ST	00
wording	HCT	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# ESF

# HFR NUT

# RIVETING

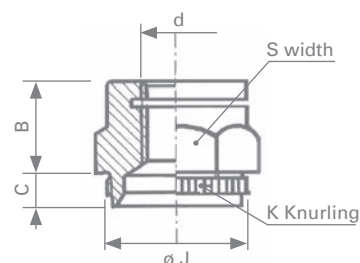
**Definition:** all metals self-locking riveting nut, with locking slot

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

d	s	Jo + 0,05	B	C	sheet thickness	ø Boring
M 4	8,00	6,74	5,30	1,60	1,50	6,55
				2,20	2,00	à
				2,60	2,50	6,65
M 6	11,00	8,90	7,00	2,20	2,00	8,70
				2,60	2,50	à
				3,40	3,00	8,80
M 8	14,00	10,50	9,80	2,60	2,50	10,30
				3,40	3,00	à
				4,20	4,00	10,40

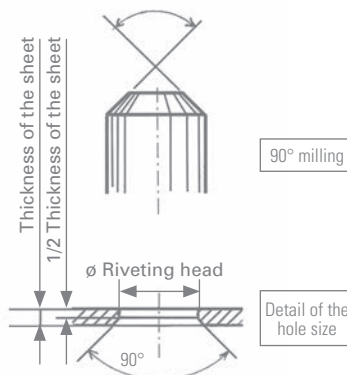
Sizes: The sheet thicknesses were given as examples, please contact us for other thicknesses



Assembly instruction



ESF riveting nut



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Stainless steel A4-80	ZH	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>

<sup>(1)</sup> Values are only given as an indication

### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	ESF	060100	QV	ZL	26
wording	ESF	M6 X 1,00	8	White Lanthane®	2,6*

\*Sheet thickness

**On request:** other materials, plating, sizes, imperial thread

# HMP

# HFR NUT

# NYLON INSERT ISO 10511

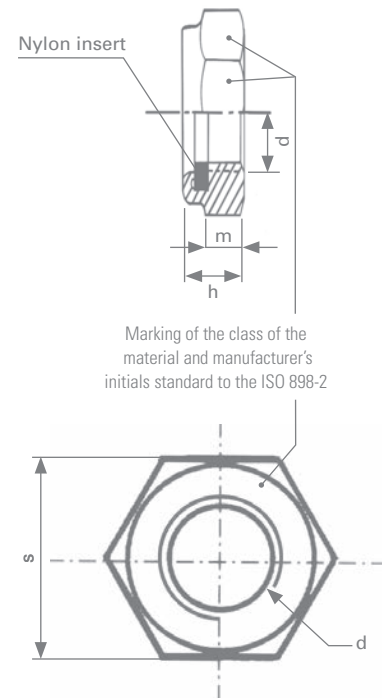
**Definition:** self-locking nut with nylon insert

**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

**Range of operations:** from diameter M3 to M36

d	pitch	h - min.	h - max.	m - min.	s
M 3	0,50	3,42	3,90	1,55	5,50
M 4	0,70	4,52	5,00	1,95	7,00
M 5	0,80	4,52	5,00	2,45	8,00
M 6	1,00	5,52	6,00	2,90	10,00
M 8	1,25	6,18	6,76	3,70	13,00
M 10	1,50	7,98	8,56	4,70	16,00
M 12	1,75	9,53	10,23	5,70	18,00
M 14	2,00	10,22	11,32	6,42	21,00
M 16	2,00	11,32	12,42	7,42	24,00
M 18	2,50	14,40	15,50	9,00	27,00
M 20	2,50	13,10	14,90	9,10	30,00
M 24	3,00	16,00	17,80	10,90	36,00
M 27	3,00	20,40	22,20	13,50	41,00
M 30	3,50	20,10	22,20	13,90	46,00
M 36	4,00	23,40	25,50	16,90	55,00



Quality class	Classification	Range of application	
Class 04 steel	QN	Usual ring	Brown ring
Class 05 steel	QS	-40° C +120° C <sup>(1)</sup>	-40° C +230° C <sup>(1)</sup>
Stainless steel A2-70	ZE		
Stainless steel A4-70	ZK		
Stainless steel A4-80	ZH		

<sup>(1)</sup> Values are only given as an indication

### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	HMP	100150	ZH	ST	00
wording	HMP	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread



# HUP

# HFR NUT

# NYLON INSERT ISO 7040

**Definition:** self-locking nut with nylon insert

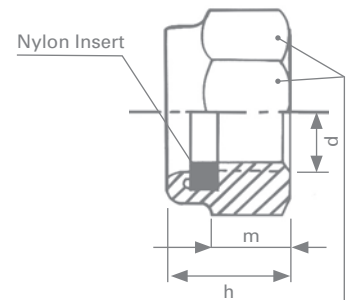
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

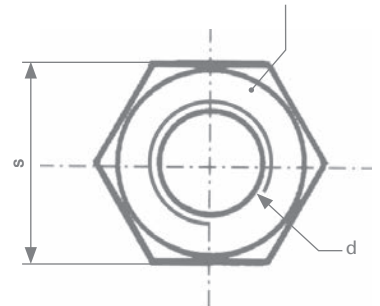
**Range of operations:** from diameter M3 to M36



d	pitch	h - min.	h - max.	m - min.	s
M 3	0,50	4,02	4,50	2,15	5,50
M 4	0,70	5,52	6,00	2,90	7,00
M 5	0,80	6,22	6,80	4,40	8,00
M 6	1,00	7,42	8,00	4,90	10,00
M 8	1,25	8,92	9,50	6,44	13,00
M 10	1,50	11,20	11,90	8,04	16,00
M 12	1,75	14,20	14,90	10,37	18,00
M 14	2,00	15,90	17,00	12,10	21,00
M 16	2,00	17,80	19,10	14,10	24,00
M 18	2,50	21,00	22,30	15,10	27,00
M 20	2,50	20,70	22,80	16,90	30,00
M 24	3,00	25,00	27,10	20,20	36,00
M 27	3,00	30,40	32,50	22,50	41,00
M 30	3,50	30,10	32,60	24,30	46,00
M 36	4,00	36,40	38,90	29,40	55,00



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2



Quality class	Classification	Range of application	
Class 8 steel / Grade 5	QV	Usual ring	Brown ring
Class 10 steel / Grade 8	QK	-40° C +120° C <sup>(1)</sup>	-40° C +230° C <sup>(1)</sup>
Stainless steel A2-70	ZE		
Stainless steel A4-70	ZK		
Stainless steel A4-80	ZH		

<sup>(1)</sup> Values are only given as an indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	HUP	100150	ZH	ST	00
	HUP	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# EUM

## HFR FLANGE NUT

## NYLON INSERT WITH FREE WASHER

**Definition:** all metals reusable slotted self-locking nut, with nylon insert

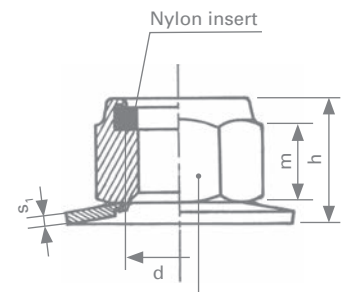
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

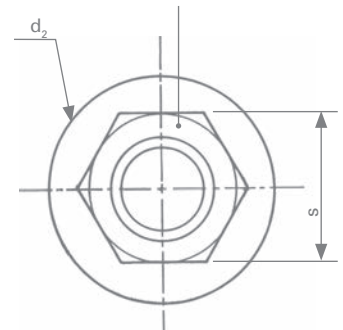
d	pitch	s	h	m	d <sub>2</sub> *	s <sub>1</sub>
M 4	0,70	7,00	7,70	3,30	12,00	1,10
M 5	0,80	8,00	8,70	4,50	14,00	1,30
M 6	1,00	10,00	10,10	5,60	18,00	1,40
M 8	1,25	13,00	12,00	7,30	22,00	1,60
M 10	1,50	16,00	14,80	8,40	27,00	1,80
M 12	1,75	18,00	18,40	11,40	27,00 / 30,00 **	1,80
M 14	2,00	21,00	20,50	13,30	32,00	2,40
M 16	2,00	24,00	23,70	14,20	40,00	3,20

Sizes: \* Only given as an indication. On request for other type and other diameter of washers

\*\* Stainless steel for diameter 27; steel for diameter 30.



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -40° C +120° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Stainless steel A2-70	ZE	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	EUM	100150	ZH	ST	00
welding	EUM	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

**Definition:** all metals self-locking hexagon nut, with marking on the top of the nut

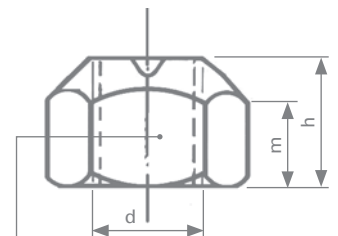
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

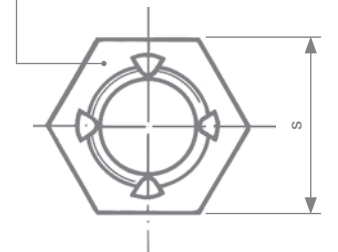
**Range of operations:** from diameter M5 to M36



d	pitch	h - min.	h - max.	m - min.	s
M 5	0,80	4,80	5,10	3,52	8,00
M 6	1,00	5,40	6,00	3,92	10,00
M 8	1,25	7,14	8,00	5,15	13,00
M 10	1,50	8,94	10,00	6,43	16,00
M 12	1,75	11,57	12,00	8,30	18,00
M 14	2,00	13,40	14,10	9,68	21,00
M 16	2,00	15,70	16,40	11,28	24,00
M 18	2,50	15,80	16,20	12,70	27,00
M 20	2,50	19,00	20,30	13,52	30,00
M 24	3,00	22,60	23,90	16,16	36,00
M 27	3,00	on request			
M 30	3,50	27,30	30,00	19,44	46,00
M 36	4,00	33,10	36,00	23,52	55,00



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Class 10 steel / Grade 8	QK	
Class 12 steel / Grade 10	QL	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

**Example of ordering code**

	Type	Diam X pitch	Class	Protection	
classification	GSL	100150	ZH	ST	01
wording	GSL	M10 X 1,50	A4 80	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# SRF

## HFR FLANGE NUT

## ALL METALS

**Definition:** all metals self-locking hexagon flange nut  
locking by deformation of the last threads given by recessions at the top of the nut

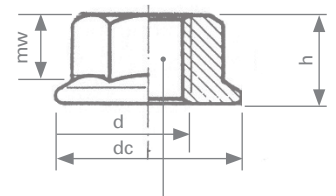
**Threading:** standard to ISO 965-2

**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

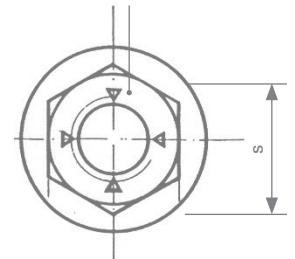
**Range of operations:** from diameter M5 to M20 (steel)  
from diameter M5 to M12 (stainless steel)



d	dc	s	h	mw
M 5	11,80	8,00	5,00	2,20
M 6	14,20	10,00	6,00	3,10
M 8	17,90	13,00	8,00	4,50
M 10	21,80	15,00	10,00	5,50
M 12	26,00	18,00	12,00	6,70
M 14	29,90	21,00	14,00	7,80
M 16	34,50	24,00	16,00	9,00
M 20	42,80	30,00	20,00	11,10



Marking of the class of the material and manufacturer's initials standard to the ISO 898-2



Quality class	Classification	Range of application
Class 8 steel / Grade 5	QV	Self color -50° C +300° C <sup>(1)</sup>
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>

Others: Brass - Bronze - Light alloy - Titanium...

<sup>(1)</sup> Values are only given as an indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	SRF	100150	QV	ZL	00
wording	SRF	M10 X 1,50	8	White Lanthane®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread

# HHS HUS HMS

## HFR NUT

## STARNUTS

**Definition:** all metals self-locking hexagon nut locking by deformation of the last threads given by recessions at the top of the nut standard to the NF EN ISO 7719 (NFE 25401)

**Threading:** standard to ISO 965-2

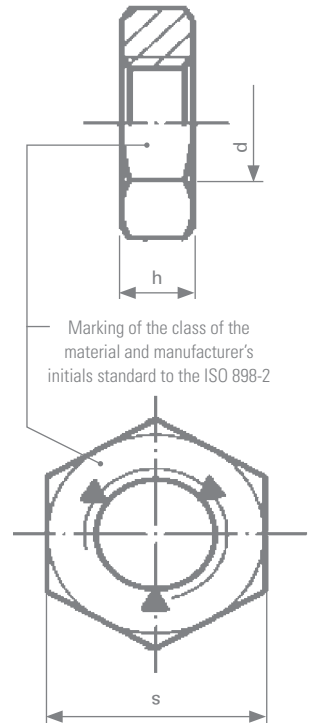
**Characteristic and performance test:** for steel ISO 898-2 / ISO 2320  
for stainless steel ISO 3506-2 / NF E 25035

**Dimensions:** all forms allowed Hh H Hm: ISO 4033 Symbol Hh (high)  
ISO 4032 Symbol H (regular)  
ISO 4035 Symbol Hm (low)

**Diameter:** M3 to M36



d	pitch	s	h HMS		h HUS		h HHS	
			min.	max.	min.	max.	min.	max.
M 3	0,50	5,50	1,55	1,80	2,15	2,40	-	-
M 4	0,70	7,00	1,95	2,20	2,90	3,20	-	-
M 5	0,80	8,00	2,45	2,70	4,40	4,70	4,80	5,10
M 6	1,00	10,00	2,90	3,20	4,90	5,20	5,40	5,70
M 8	1,25	13,00	3,70	4,00	6,44	6,80	7,14	7,50
M 10	1,50	16,00	4,70	5,00	8,04	8,40	8,94	9,30
M 12	1,75	18,00	5,70	6,00	10,37	10,80	11,57	12,00
M 14	2,00	21,00	6,45	7,00	12,10	12,80	13,40	14,10
M 16	2,00	24,00	7,42	8,00	14,10	14,80	15,70	16,40
M 18	2,50	27,00	8,42	9,00	15,10	15,80	16,90	17,60
M 20	2,50	30,00	9,10	10,00	16,90	18,00	19,00	20,30
M 22	2,50	34,00	9,90	11,00	18,10	19,40	20,50	21,80
M 24	3,00	36,00	10,90	12,00	20,20	21,50	22,60	23,90
M 27	3,00	41,00	12,40	13,50	22,50	23,80	25,40	26,70
M 30	3,50	46,00	13,90	15,00	24,30	25,60	27,30	28,60
M 33	3,50	50,00	15,40	16,50	27,40	28,70	30,90	32,50
M 36	4,00	55,00	16,90	18,00	29,40	31,00	33,10	34,70



Quality class	Classification	Range of application
Class 04 steel	QN	Self color -50° C +300° C <sup>(1)</sup>
Class 05 steel	QS	
Class 8 steel / Grade 5	QV	
Class 10 steel / Grade 8	QK	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-70	ZK	
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

Surface treatment (standard to ROHS requirements)			
Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

Example of ordering code					
	Type	Diam X pitch	Class	Protection	
classification	HUS	100150	QV	ZL	00
woding	HUS	M10 X 1,50	8	White Lanthane®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread



## MODULAR FIXTURES

## STAINLESS STEEL CHANNEL

January 2013

**Threading:** standard to ISO 262 / ISO 965-2

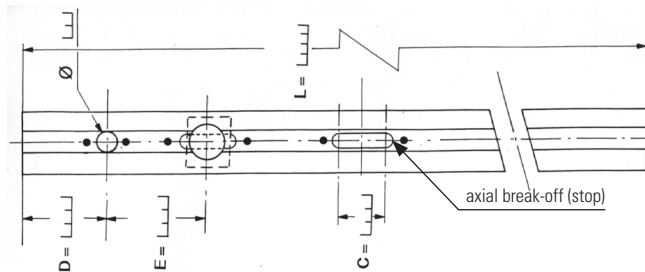
**Characteristic and performance tests:** ISO 2320 / ISO 3506-2

**Material:** stainless steel A2-70

**Surface treatment:** stainless steel - Antigalling : - Stanal ® 400  
(Standard to ROHS requirements) - Sherardisation

- Passivation

**Field of application:** contact us



<p><b>Ref. 201144</b></p> <p><b>Material: AISI 304 Z6 CN 1809</b></p>	M3 to M5	M3 to M5 deflections	M3 to M5	M3 to M6
<p><b>Ref. 203010</b></p> <p><b>Material: AISI 304L Z2 CN 1810</b></p>	M3 to M8	M3 to M8 deflections	M3 to M8	M3 to M8
<p><b>Ref. 203326</b></p> <p><b>Material: AISI 304L Z2 CN 1810</b></p>	M6 to M12	M6 to M12 deflections	M6 to M10	M8 to M12
<p><b>Ref. 203048</b></p> <p><b>Material: AISI 304L Z2 CN 1810</b></p>	M6 to M10	M6 to M10 deflections	M6 to M8	M6 to M12



### Ease of use:

- From 25 mm to 6 meters long
- Unlimited quantity of nuts and / or screws can be positioned within the channel
- Range of diameter for nuts and / or screws
- Range of type of nuts and/or screws (possible combination)
- Equidistance between products
- Internal technical setup (oval holes, lights, spring mounts, prepunched rivet holes)
- Channels may be manufactured straight, bent and / or curved.

For special applications and inserts, please do not hesitate to **contact us**



# MODULAR FIXTURES

## LIGHT ALLOY CHANNEL

January 2013

**Threading:** standard to ISO 262 / ISO 965-2

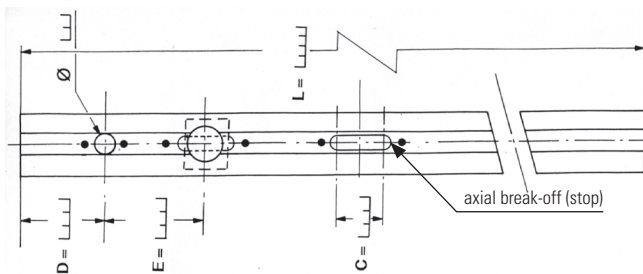
**Characteristic and performance tests:** ISO 2320

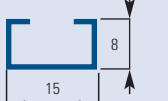

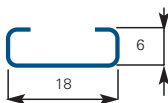

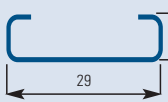

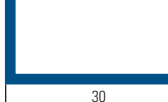

**Material:** light alloy

**Surface treatment:** all treatments

**(Standards to ROHS requirements)**

**Field of application:** contact us



<p><b>Ref. 101000</b></p>  <p><b>Material: AISI 6060 A GS T5</b></p>	<p>M3 to M5    M3 to M5    M3 to M5    M3 to M6</p>  <p>deflections</p>
<p><b>Ref. 403010</b></p>  <p><b>Material: AISI 1050 A A5</b></p>	<p>M3 to M8    M3 to M8    M3 to M8    M3 to M8</p>  <p>deflections</p>
<p><b>Ref. 403048</b></p>  <p><b>Material: AISI 1050 A A5</b></p>	<p>M6 to M10    M6 to M10    M6 to M10    M6 to M12</p>  <p>deflections</p>
<p><b>Ref. 501000</b></p>  <p><b>Material: AISI 6060 A GS T5</b></p>	<p>M6 to M10    M6 to M10    M6 to M10    M6 to M12</p>  <p>deflections</p>



### Ease of use:

- From 25 mm to 6 meters long
- Unlimited quantity of nuts and / or screws can be positioned within the channel
- Range of diameter for nuts and / or screws
- Range of type of nuts and / or screws (possible combination)
- Equidistance between products
- Internal technical setup (oval holes, lights, spring mounts, prepunched rivet holes)
- Channels may be manufactured straight, bent and / or curved.

For special applications and inserts, please do not hesitate to **contact us**

# CLANFIX

## HFR NUT

## STEEL / STAINLESS STEEL

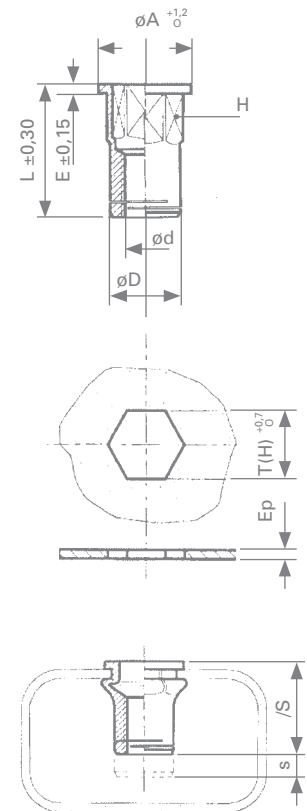
**Definition:** blind rivet self-lock nut

**Threading:** standard to ISO 262 and ISO 965-2

**Characteristic and performance test:** for steel standard to NF EN ISO 2320  
for stainless steel standard to NF EN ISO 3506-2



d	sheet thickness (Ep)	T	T(H)	diameter (A)	diameter (D)	L	E
M 4 x 0,70	1,00 -> 2,50	7,00	7,00	9,00	7,00	16,20	1,00
M 5 x 0,80	1,50 -> 3,00	9,00	9,00	11,00	9,00	20,40	1,20
M 6 x 1,00	1,50 -> 3,50	11,00	11,00	14,00	11,00	23,40	1,50
M 8 x 1,25	2,00 -> 4,00	13,00	13,00	16,00	13,00	28,80	1,50
M 10 x 1,50	2,50 -> 4,50	16,00	16,00	20,00	16,00	32,20	1,70
M 12 x 1,75	3,00 -> 5,00	18,00	18,00	23,00	18,00	37,30	2,00



Quality class	Classification	Range of application
Steel	QJ	Self color -50° C +300° C <sup>(1)</sup>
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>
Stainless steel A4-80	ZH	

<sup>(1)</sup> Values are only given as an indication

### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h
Zinc lamellar (steel)	600 h to 1000 h salt spray		on request
Antigalling (stainless steel)	Stanal ® 400	ST	
	Sherardisation (NF EN 13811)	SH	
Self Color		BT	

### Example of ordering code

	Type	Diam X pitch	Class	Protection	
classification	CLAN	100150	ZH	ST	00
wording	CLANFIX	M10 X 1,50	Stainless steel 316L	Stanal ®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread



# SPR

# HFR NUT

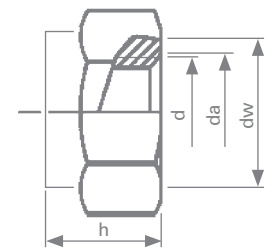
# SPRING STOP NUT

**Definition:** all metals self-locking nut with metallic insert

**Threading:** standard to ISO 965-2

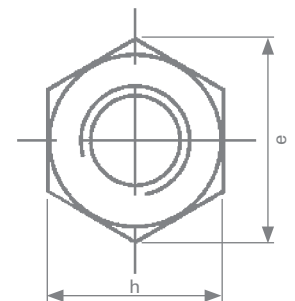


d	pitch	da	dw - min.	h	s	E - min.
M 3	0,50	3,00 – 3,45	4,80	2,70 – 3,30	5,32 – 5,50	6,01
M 4	0,70	4,00 – 4,60	5,90	3,50 – 4,10	6,78 – 7,00	7,66
M 5	0,80	5,00 – 5,75	6,90	4,30 – 4,90	7,78 – 8,00	8,79
M 6	1,00	6,00 – 6,75	8,90	4,60 – 5,40	9,78 – 10,00	11,05
M 8	1,25	8,00 – 8,75	11,60	6,90 – 7,70	12,73 – 13,00	14,38
M 10	1,50	10,00 – 10,80	15,60	7,90 – 8,70	16,73 – 17,00	18,90
M 12	1,75	12,00 – 13,00	17,40	10,10 – 10,90	18,67 – 19,00	21,10
M 14	2,00	14,00 – 15,10	20,50	12,00 – 13,00	21,67 – 22,00	24,49
M 16	2,00	16,00 – 17,30	22,50	14,00 – 15,00	23,67 – 24,00	26,75
M 18	2,50	18,00 – 19,50	24,90	15,50 – 16,50	26,16 – 27,00	29,56
M 20	2,50	20,00 – 21,50	27,70	17,00 – 18,00	29,16 – 30,00	32,95



Quality class	Classification	Range of application
Class 5 steel	QF	Self color -50° C +300° C <sup>(1)</sup>
Class 6 steel	QJ	
Stainless steel A2-70	ZE	Corrosive atmosphere -200° C +400° C <sup>(1)</sup>

<sup>(1)</sup> Values are only given as an indication



### Surface treatment (standard to ROHS requirements)

Electrolytic coating (steel)	Color	Classification	ISO 4042
	Yellow	ZJ	ISO 4042
	White Lanthane ® Finish	ZL	400 h
	White Lanthane ® Finish + Top coat	ZF	600 h

### Example of ordering code

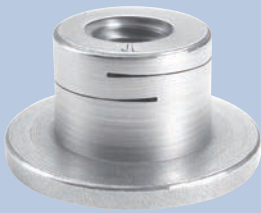
	Type	Diam X Pitch	Class	Protection	
classification	SPR	100150	QF	ZL	00
wording	SPR	M10 X 150	Steel	White Lanthane®	*

\*Standard size

**On request:** other materials, plating, sizes, imperial thread



# SPECIAL PRODUCTS



SELF-LOCKING BUSHING NUT



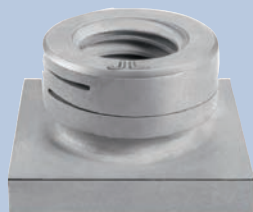
CONICAL SELF-LOCKING NUT  
BY HEXAGONAL  
DEFORMATION



TURRET SELF-LOCKING NUT  
WITH SINGLE SLOT



SLOTTED ROUND NUT



SELF-LOCKING CHANNEL NUT  
DOUBLE SLOTTED



SELF-LOCKING ACORN NUT  
BY AXIAL DEFORMATION



SQUARE SELF-LOCKING NUT



SELF-LOCKING ACORN NUT  
WITH NYLON INSERT



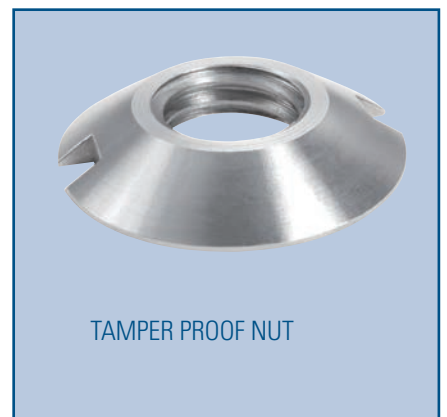
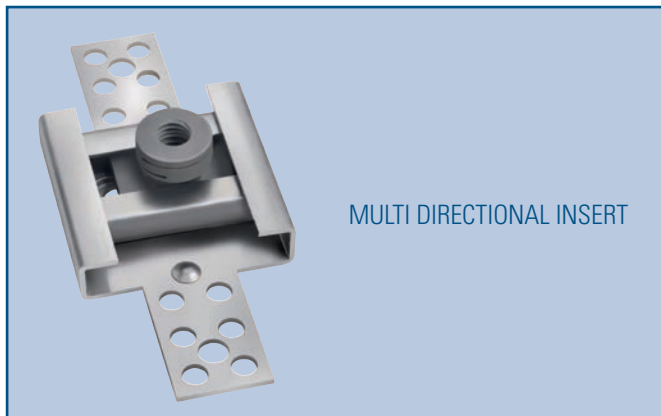
NYLON INSERT CLINCH NUT



ACORN NUT WITH DISC  
SPRING WASHER

**On request:** other materials, plating, sizes, imperial thread

# SPECIAL PRODUCTS



**On request:** other materials, plating, sizes, imperial thread



# J. LANFRANCO & C<sup>IE</sup>

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