



# **Tenute ad elevate prestazioni** High performance seals



## TENUTE - SEALS

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QUANDO  
TENERCI VUOL  
DIRE CRESCERE.  
PER SUPERARE  
NOI STESSI.

**OIL & GAS**

**MECCANICA**  
MECHANICS

**FOOD & BEVERAGE**

**FARMACEUTICA**  
PHARMACEUTICAL

**CHIMICA**  
CPI

**PLASTICA**  
PLASTIC

**LAVORAZIONE CARTA**  
PAPER MILL

**LAVORAZIONE PELLI**  
LEATHER PROCESSING

**LAVORAZIONE LEGNO**  
WOOD PROCESSING

**MOVIMENTAZIONE TERRA**  
EARTH MOVING

**MOVIMENTAZIONE CARICHI**  
MATERIAL HANDLING EQUIPMENT

**SISTEMI DI TENUTA**  
**FLUID CONNECTORS**  
**OLEODINAMICA**

**SEALING SOLUTIONS**  
**FLUID CONNECTORS**  
**HYDRAULICS**



## I NOSTRI SERVIZI OUR SERVICES



**CONSULENZA E ASSISTENZA TECNICA**  
CONSULTANCY AND TECHNICAL ASSISTANCE



**MILIONI DI PRODOTTI A MAGAZZINO**  
MILLIONS OF PRODUCTS IN STOCK



**LOGISTICA INTEGRATA E KANBAN**  
INTEGRATED LOGISTICS AND KANBAN



**CONTROLLO QUALITÀ IN ENTRATA E IN USCITA**  
INBOUND AND OUTBOUND QUALITY CONTROL



**PROGETTAZIONE E PRODUZIONE A DISEGNO DI GUARNIZIONI**  
DESIGN AND CUSTOMIZED SEALS PRODUCTION



**ETICHETTE PERSONALIZZATE E QR CODE**  
CUSTOMIZED LABELS AND QR CODES



**ORDINI WEB**  
WEB ORDERS



**RILEVAZIONE CAMPIONI E KIT DEL CLIENTE**  
ARTICLE DETECTION AND KIT ASSEMBLY



**ASSEMBLAGGIO E COLLAUDO TUBI E RACCORDI**  
ASSEMBLY AND TESTING OF HOSES AND FITTINGS



**EVENTI FORMATIVI**  
TRAINING EVENTS

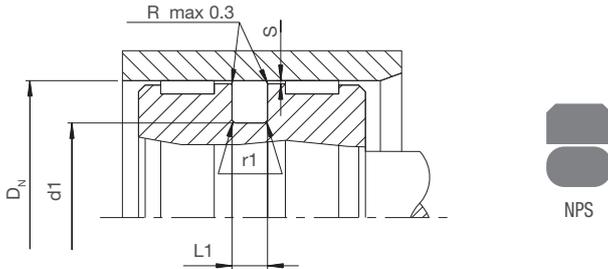
SOMETIMES  
SEALING  
IS ABOUT  
GROWING.  
TO PUSH  
OURSELVES  
FURTHER.

## Guarnizioni per pistone - Piston seals

### NPS

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 80 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

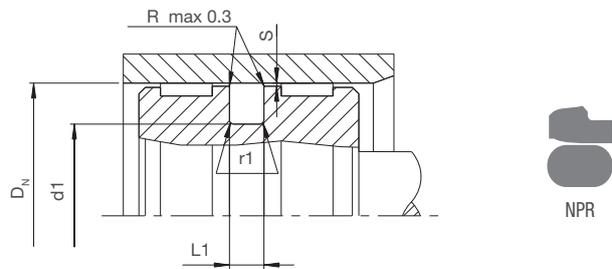


Diametro cilindro D <sub>N</sub> H9 Bore diameter D <sub>N</sub> H9			Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*		
Standard Standard NPS	Leggera Light NPS/L	App. pesante Heavy duty NPS/P	d1 h9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
8 - 14.9	15 - 39.9	-	D <sub>N</sub> - 4.9	2.2	0.4	0.40	0.30	0.20
15 - 39.9	40 - 79.9	-	D <sub>N</sub> - 7.5	3.2	0.6	0.60	0.50	0.30
40 - 79.9	80 - 132.9	15 - 39.9	D <sub>N</sub> - 11	4.2	1	0.70	0.50	0.30
80 - 132.9	133 - 329.9	40 - 79.9	D <sub>N</sub> - 15.5	6.3	1.3	0.80	0.60	0.40
133 - 329.9	330 - 669.9	80 - 132.9	D <sub>N</sub> - 21	8.1	1.8	0.80	0.60	0.40
330 - 669.9	670 - 999.9	133 - 329.9	D <sub>N</sub> - 25.5	8.1	1.8	0.90	0.70	0.50
670 - 999.9	1000 - 1200	310 - 669.9	D <sub>N</sub> - 28	9.5	2.5	1	0.80	0.60
1000 - 2700	-	670 - 999.9	D <sub>N</sub> - 38	13.8	3	1.20	0.90	0.70

### NPR

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 80 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

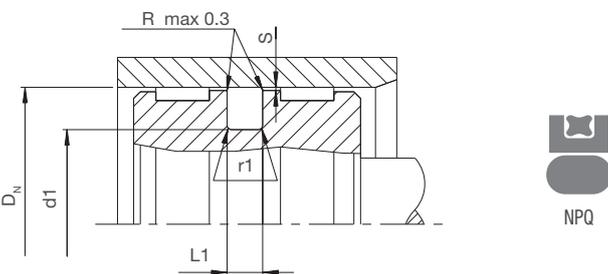


Diametro cilindro D <sub>N</sub> H9 Bore diameter D <sub>N</sub> H9			Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max		
Standard Standard NPR14	Leggera Light NPR16	App. pesante Heavy duty NPR12	d1 h9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
8 - 16.9	17 - 26.9	-	D <sub>N</sub> - 4.9	2.2	0.4	0.30	0.20	0.15
17 - 26.9	27 - 59.9	-	D <sub>N</sub> - 7.3	3.2	0.6	0.40	0.25	0.15
27 - 59.9	60 - 199.9	17 - 26.9	D <sub>N</sub> - 10.7	4.2	1	0.50	0.30	0.20
60 - 199.9	200 - 255.9	27 - 59.9	D <sub>N</sub> - 15.1	6.3	1.3	0.70	0.40	0.25
200 - 255.9	256 - 669.9	60 - 199.9	D <sub>N</sub> - 20.5	8.1	1.8	0.80	0.60	0.35
256 - 669.9	670 - 999.9	200 - 255.9	D <sub>N</sub> - 24	8.1	1.8	0.90	0.70	0.40
670 - 999.9	1000 - 1200	256 - 669.9	D <sub>N</sub> - 28	9.5	2.5	1	0.80	0.60
1000 - 2700	-	670 - 999.9	D <sub>N</sub> - 38	13.8	3	1.20	0.90	0.60

### NPQ

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 40 MPa
Velocità di scorrimento - Surface speed	≤ 2 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

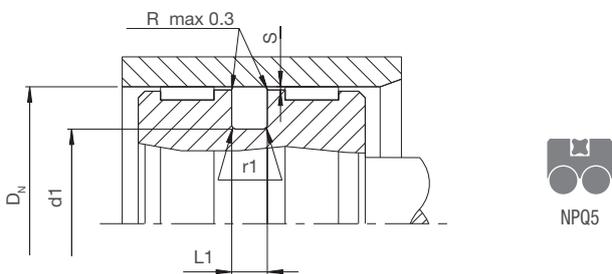


Diametro cilindro D <sub>N</sub> H9 Bore diameter D <sub>N</sub> H9				Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max		
Applicazione standard Standard application		Applicazione leggera Light application		d1 h9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
Mod. Series no.	Diametri Range Ø	Mod. Series no.	Diametri Range Ø						
NPQ12	15 - 39.9	NPQ14	40 - 79.9	D <sub>N</sub> - 11	4.2	1	0.25	0.15	0.10
NPQ12	40 - 79.9	NPQ14	80 - 132.9	D <sub>N</sub> - 15.5	6.3	1.3	0.30	0.20	0.15
NPQ22	80 - 132.9	NPQ24	133 - 252.9	D <sub>N</sub> - 21	8.1	1.8	0.30	0.20	0.15
NPQ22	133 - 252.9	NPQ24	-	D <sub>N</sub> - 24.5	8.1	1.8	0.30	0.20	0.15
NPQ32	253 - 462.9	-	-	D <sub>N</sub> - 28	9.5	2.5	0.45	0.30	0.25
NPQ52	463 - 700	-	-	D <sub>N</sub> - 35	11.5	3	0.55	0.40	0.35

### NPQ5

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 60 MPa
Velocità di scorrimento - Surface speed	≤ 3 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

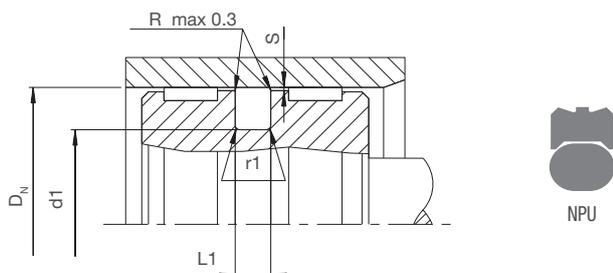


Mod. Series no.	Diametro cilindro D <sub>N</sub> H9 Bore diameter D <sub>N</sub> H9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*		
	Serie raccomandata Recommended range	Serie estesa Extended range	d1 h9 Ø	L1+0.2	r1	10 MPa	20 MPa	30 MPa
NPQ5	40 - 79.9	25 - 140	D <sub>N</sub> - 10	6.3	0.6	0.30	0.20	0.15
	80 - 132.9	50 - 250	D <sub>N</sub> - 13	8.3	1	0.40	0.30	0.15
	133 - 462.9	100 - 480	D <sub>N</sub> - 18	12.3	1.3	0.40	0.30	0.20
	463 - 700	425 - 700	D <sub>N</sub> - 31	16.3	1.8	0.50	0.40	0.30

## NPU

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 40 MPa
Velocità di scorrimento - Surface speed	≤ 0.8 m/s
Temperatura di lavoro* - Working temperature*	-30/+100 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

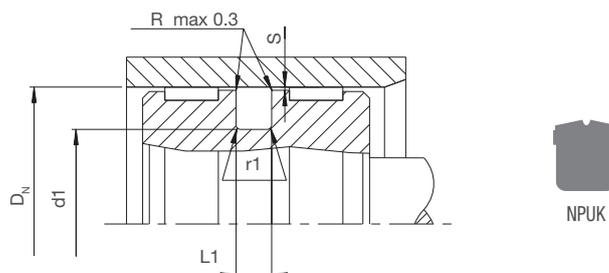


Mod. Series no.	Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max
	d1 h9 Ø	L1+0.2	r1	
NPU	D <sub>N</sub> - 4.9	2.2	0.4	0.20
	D <sub>N</sub> - 7.5	3.2	0.6	0.25
	D <sub>N</sub> - 11	4.2	1	0.25
	D <sub>N</sub> - 15.5	6.3	1.3	0.30
	D <sub>N</sub> - 21	8.1	1.8	0.30

## NPUK

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 40 MPa
Velocità di scorrimento - Surface speed	≤ 0.5 m/s
Temperatura di lavoro* - Working temperature*	-30/+100 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

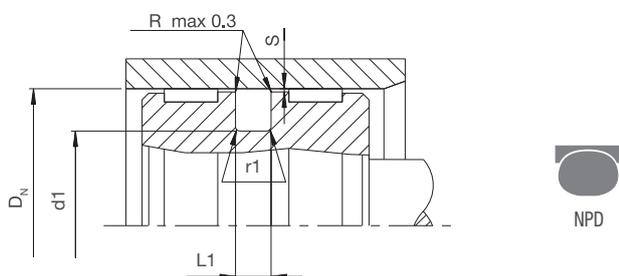


Mod. Series no.	Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max
	d1 h9 Ø	L1+0.2	r1	
NPUK	D <sub>N</sub> - 7.5	3.2	0.6	0.25
	D <sub>N</sub> - 11	4.2	1	0.25
	D <sub>N</sub> - 15.5	6.3	1.3	0.30
	D <sub>N</sub> - 21	8.1	1.8	0.30
	D <sub>N</sub> - 21	8.1	1.8	0.30

## NPD

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 25 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

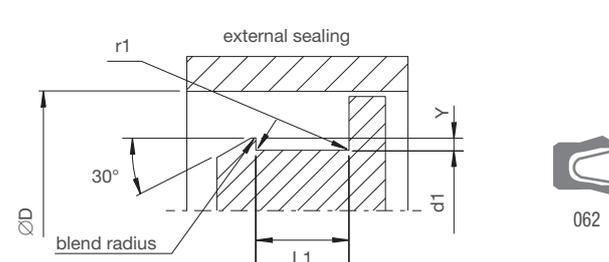
\*A seconda del materiale dell'O-ring - \*Depending on O-ring material



Mod. Series no.	Diametro cilindro D <sub>N</sub> H9 Bore diameter D <sub>N</sub> H9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*			
	Serie standard Standard range	Serie estesa Extended range	d1 h9 Ø	L1+0.2	r1	2 MPa	10 MPa	20 MPa	30 MPa
	NPD0	5 - 13.9	5 - 139.9	D <sub>N</sub> - 2.9	2.4	0.4	0.10	0.10	0.08
NPD1	14 - 24.9	8 - 259.9	D <sub>N</sub> - 4.5	3.6	0.4	0.15	0.15	0.10	0.07
NPD2	25 - 45.9	12 - 469.9	D <sub>N</sub> - 6.2	4.8	0.6	0.25	0.20	0.15	0.08
NPD3	46 - 124.9	20 - 669.9	D <sub>N</sub> - 9.4	7.1	0.8	0.35	0.25	0.20	0.10
NPD4	125 - 669.9	80 - 999.9	D <sub>N</sub> - 12.2	9.5	0.8	0.50	0.30	0.25	0.15
NPD5	670 - 999.9	125 - 999.9	D <sub>N</sub> - 15	10	1	0.60	0.40	0.30	0.20

## 062 SPRINGLIP

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 45 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro - Working temperature	-200/+260 °C



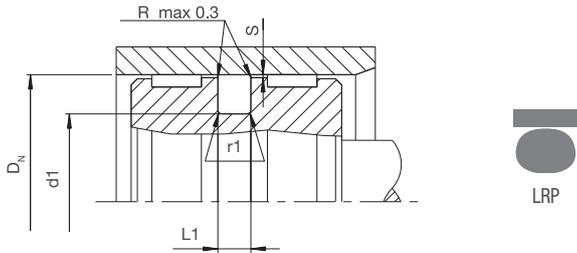
Mod. Series no.	Diametro cilindro D H9 Bore diameter D H9		Sede Groove	Larg. sede Groove width	R	Altezza gradino Step height	Gioco radiale S max* Radial clearance S max*	
	Serie standard Standard range	Serie estesa Extended range	d1 h9 Ø	L1+0.2	r1	Y min	< 10 MPa	< 40 MPa
	145	1/16	6 - 13.9	6 - 40	D - 2.9	2.4	0.4	0.10
225	3/32	14 - 24.9	10 - 200	D - 4.5	3.6	0.4	0.15	0.07
310	1/8	25 - 45.9	16 - 400	D - 6.2	4.8	0.6	0.20	0.08
470	3/16	46 - 124.9	28 - 700	D - 9.4	7.1	0.8	0.25	0.10
610	1/4	125 - 999.9	45 - 999.9	D - 12.2	9.5	0.8	0.30	0.12
950	3/8	1000 - 2500	100 - 2500	D - 19	15	0.8	0.50	0.20

## Guarnizioni per pistone - Piston seals

### LRP

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 25 MPa
Velocità di scorrimento - Surface speed	≤ 4 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

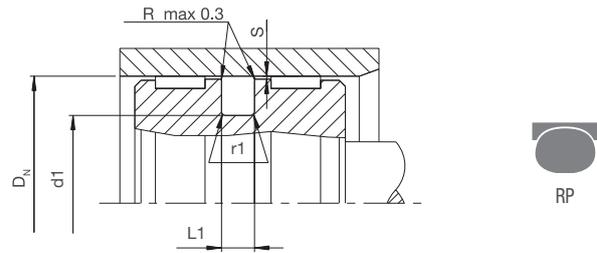


Mod. Series no.	Range D <sub>N</sub> D <sub>N</sub> range	Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max
		d1 h9 Ø	L1+0.2	r1	
LRP	8 - 15	D <sub>N</sub> - 4.6	2.0	0.4	0.20
	16 - 25	D <sub>N</sub> - 6.2	3.0	0.6	0.25
	28 - 49	D <sub>N</sub> - 8.0	4.0	1	0.25
	50 - 74	D <sub>N</sub> - 11.7	6.0	1.3	0.30
	75 - 130	D <sub>N</sub> - 12.1	6.0	1.8	0.30
	131 - 150	D <sub>N</sub> - 15.5	8.0	1.8	0.30
	151 - 300	D <sub>N</sub> - 16.3	8.0	2.5	0.30

### RP

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 25 MPa
Velocità di scorrimento - Surface speed	≤ 4 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material



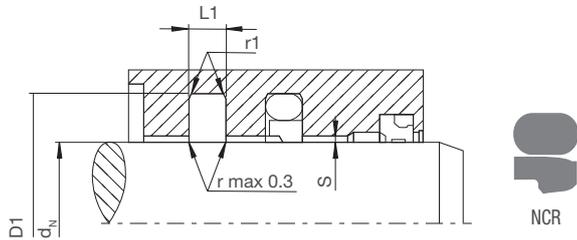
Mod. Series no.	Range D <sub>N</sub> D <sub>N</sub> range	Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max
		d1 h9 Ø	L1+0.2	r1	
RP	6 - 13	D <sub>N</sub> - 3.3	2.5	0.4	0.20
	14 - 25	D <sub>N</sub> - 5.1	3.5	0.6	0.25
	26 - 45	D <sub>N</sub> - 7.1	4.5	1	0.25
	46 - 125	D <sub>N</sub> - 10.5	7.0	1.3	0.30
	126 - 410	D <sub>N</sub> - 13.7	9.5	1.8	0.30

## Guarnizioni per stelo - Rod seals

### NCR

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 80 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

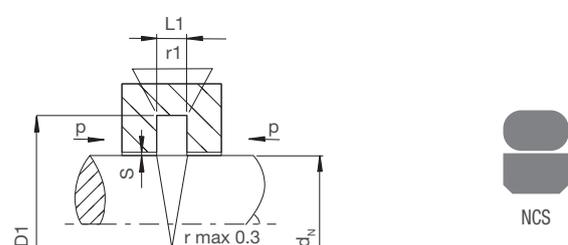


Diametro stelo d <sub>N</sub> f8/h9 Rod diameter d <sub>N</sub> f8/h9			Sede Groove	Larg. sede Groove width	R	Gioco radiale S max** Radial clearance S max**		
Standard Standard NCR	Leggera Light NCR/L	App. pesante Heavy duty NCR/P	D1 H9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
3 - 7.9	8 - 18.9	-	d <sub>N</sub> + 4.9	2.2	0.4	0.30	0.20	0.15
8 - 18.9	19 - 37.9	-	d <sub>N</sub> + 7.3	3.2	0.6	0.40	0.25	0.15
19 - 37.9	38 - 199.9	8 - 18.9	d <sub>N</sub> + 10.7	4.2	1	0.40	0.25	0.20
38 - 199.9	200 - 255.9	19 - 37.9	d <sub>N</sub> + 15.1	6.3	1.3	0.50	0.30	0.20
200 - 255.9	256 - 649.9	38 - 199.9	d <sub>N</sub> + 20.5	8.1	1.8	0.60	0.35	0.25
256 - 649.9	650 - 999.9	200 - 255.9	d <sub>N</sub> + 24	8.1	1.8	0.60	0.35	0.25
650 - 999.9	> 1000	256 - 649.9	d <sub>N</sub> + 27.3	9.5	2.5	0.70	0.50	0.30
> 1000	-	650 - 999.9	d <sub>N</sub> + 38	13.8	3	1	0.70	0.60

### NCS

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 80 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material



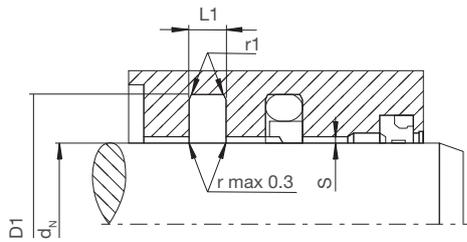
Diametro stelo d <sub>N</sub> f8/h9 Rod diameter d <sub>N</sub> f8/h9			Sede Groove	Larg. sede Groove width	R	Gioco radiale S max** Radial clearance S max**		
Standard Standard NCS	Leggera Light NCS/L	App. pesante Heavy duty NCS/P	D1 H9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
3 - 7.9	8 - 18.9	-	d <sub>N</sub> + 4.9	2.2	0.4	0.40	0.30	0.20
8 - 18.9	19 - 37.9	-	d <sub>N</sub> + 7.3	3.2	0.6	0.60	0.50	0.30
19 - 37.9	38 - 199.9	8 - 18.9	d <sub>N</sub> + 10.7	4.2	1	0.70	0.50	0.30
38 - 199.9	200 - 255.9	19 - 37.9	d <sub>N</sub> + 15.1	6.3	1.3	0.80	0.60	0.40
200 - 255.9	256 - 649.9	38 - 199.9	d <sub>N</sub> + 20.5	8.1	1.8	0.80	0.60	0.40
256 - 649.9	650 - 999.9	200 - 255.9	d <sub>N</sub> + 24	8.1	1.8	0.90	0.70	0.50
650 - 999.9	> 1000	256 - 649.9	d <sub>N</sub> + 27.3	9.5	2.5	1	0.80	0.60
> 1000	-	650 - 999.9	d <sub>N</sub> + 38	13.8	3	1.20	0.90	0.70

## Guarnizioni per stelo - Rod seals

### NCQ

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 40 MPa
Velocità di scorrimento - Surface speed	≤ 2 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

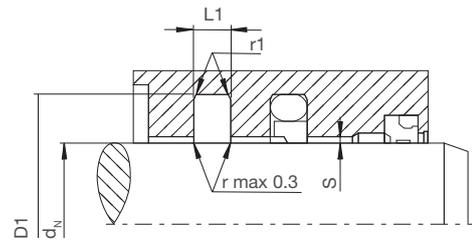


Mod. Series no.	Diametro cilindro d <sub>N</sub> f8/h9 Rod Diameter d <sub>N</sub> f8/h9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*		
	App. standard Standard application	Serie disponibile Available range	D1 H9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
NCQ20	19 - 37.9	18 - 450	d <sub>N</sub> + 11	4.2	1	0.25	0.15	0.10
NCQ30	38 - 199.9	30 - 650	d <sub>N</sub> + 15.5	6.3	1.3	0.30	0.20	0.15
NCQ40	200 - 255.9	105 - 999.9	d <sub>N</sub> + 21	8.1	1.8	0.30	0.20	0.15
NCQ80	256 - 649.9	120 - 999.9	d <sub>N</sub> + 24.5	8.1	1.8	0.30	0.20	0.15
NCQ50	650 - 999.9	285 - 999.9	d <sub>N</sub> + 28	9.5	2.5	0.45	0.30	0.25
NCQ5X	-	1000 - 1200	d <sub>N</sub> + 28	9.5	2.5	0.45	0.40	0.35
NCQ60	-	650 - 999.9	d <sub>N</sub> + 38	13.8	3	0.70	0.60	0.45
NCQ6X	1000 - 2200	-	d <sub>N</sub> + 38	13.8	3	0.70	0.60	0.45

### NCQ5

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 60 MPa
Velocità di scorrimento - Surface speed	≤ 3 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

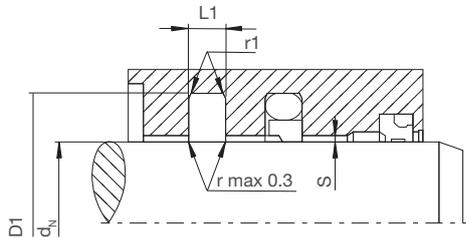


Mod. Series no.	Diametro cilindro d <sub>N</sub> f8/h9 Rod Diameter d <sub>N</sub> f8/h9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*		
	App. standard Standard application	Serie disponibile Available range	D1 H9 Ø	L1+0.2	r1	10 MPa	20 MPa	40 MPa
NCQ510	40 - 79.9	32 - 250	d <sub>N</sub> + 10	6.3	0.6	0.30	0.20	0.15
NCQ520	80 - 132.9	50 - 450	d <sub>N</sub> + 13	8.3	1	0.40	0.30	0.15
NCQ530	133 - 462.9	80 - 650	d <sub>N</sub> + 18	12.3	1.3	0.40	0.30	0.20
NCQ540	190 - 999.9	180 - 199.9	d <sub>N</sub> + 31	16.3	1.8	0.50	0.40	0.30
NCQ54X	1000 - 2200	-	d <sub>N</sub> + 31	16.3	1.8	0.50	0.40	0.30

### NDD

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 12 MPa
Velocità di scorrimento - Surface speed	≤ 4 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

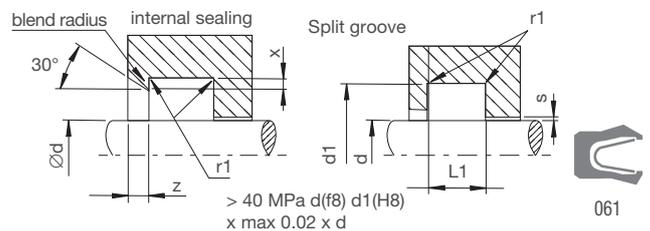
\*A seconda del materiale dell'O-ring - \*Depending on O-ring material



Mod. Series no.	Diametro stelo d <sub>N</sub> f8/h9 Rod Diameter d <sub>N</sub> f8/h9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max			
	Serie standard Standard range	Serie estesa Extended range	D1 H9 Ø	L1+0.2	r1	2 MPa	10 MPa	20 MPa	35 MPa
NDD0	4 - 9.9	2 - 129.9	d <sub>N</sub> + 2.9	2.4	0.4	0.10	0.10	0.08	0.05
NDD1	10 - 19.9	5 - 249.9	d <sub>N</sub> + 4.5	3.6	0.4	0.15	0.15	0.10	0.07
NDD2	20 - 39.9	5 - 449.9	d <sub>N</sub> + 6.2	4.8	0.6	0.25	0.20	0.15	0.08
NDD3	40 - 119.9	12 - 649.9	d <sub>N</sub> + 9.4	7.1	0.8	0.35	0.25	0.20	0.10
NDD4	120 - 649.9	60 - 999.9	d <sub>N</sub> + 12.2	9.5	0.8	0.50	0.30	0.25	0.15
NDD5	650 - 999.9	110 - 999.9	d <sub>N</sub> + 15	10	1	0.60	0.40	0.30	0.20

### 061 SPRINGLIP

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 45 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro - Working temperature	-200/+260 °C



> 40 MPa d(f8) d1(H8)  
x max 0.02 x d

061

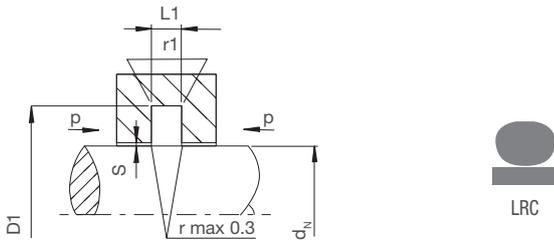
Mod. Series no.	Diametro stelo d <sub>N</sub> f8/h9 Rod Diameter d <sub>N</sub> f8/h9		Sede Groove	Larg. sede Groove width	R	Altezza gradino Step height	Gioco radiale S max* Radial clearance S max*			
	Serie raccomandata Recommended range	Serie estesa Extended range	d1 H9 Ø	L1+0.2	r1	X min	< 2 MPa	< 10 MPa	< 20 MPa	< 40 MPa
145 1/16	3 - 9.9	3 - 40	d + 2.9	2.4	0.4	0.4	0.20	0.10	0.08	0.05
225 3/32	10 - 19.9	6 - 200	d + 4.5	3.6	0.4	0.6	0.25	0.15	0.10	0.07
310 1/8	20 - 39.9	10 - 400	d + 6.2	4.8	0.6	0.7	0.35	0.20	0.15	0.08
470 3/16	40 - 119.9	20 - 700	d + 9.4	7.1	0.8	0.8	0.50	0.25	0.20	0.10
610 1/4	120 - 630	35 - 1600	d + 12.2	9.5	0.8	0.9	0.60	0.30	0.25	0.12
950 3/8	1000 - 2600	80 - 2600	d + 19	15	0.8	0.9	0.90	0.50	0.40	0.20

## Guarnizioni per stelo - Rod seals

### LRC

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 25 MPa
Velocità di scorrimento - Surface speed	≤ 4 m/s
Temperatura di lavoro* - Working temperature*	-45/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

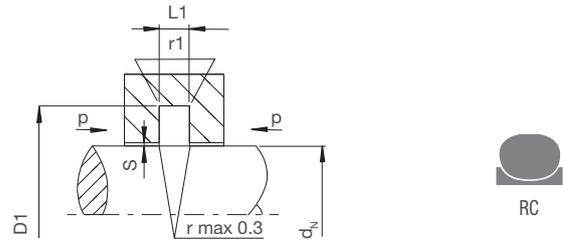


Mod. Series no.	Range d <sub>N</sub> d <sub>N</sub> range	Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max
		D1 h9 Ø	L1+0.2	r1	
LRC	5 - 8	d <sub>N</sub> + 4.5	2.0	0.4	0.20
	9 - 25	d <sub>N</sub> + 6.2	3.0	0.6	0.25
	26 - 49	d <sub>N</sub> + 8.0	4.0	1	0.25
	50 - 75	d <sub>N</sub> + 11.7	6.0	1.3	0.30
	76 - 110	d <sub>N</sub> + 12.1	6.0	1.8	0.30
	120 - 169	d <sub>N</sub> + 15.5	8.0	1.8	0.30
	170 - 300	d <sub>N</sub> + 16.3	8.0	2.5	0.30

### RC

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 12 MPa
Velocità di scorrimento - Surface speed	≤ 4 m/s
Temperatura di lavoro* - Working temperature*	-45/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material



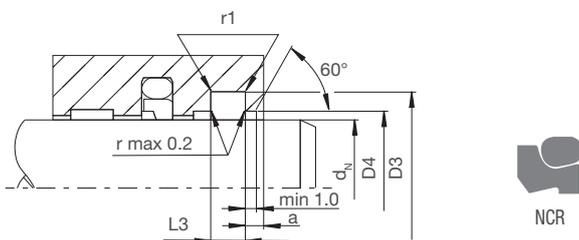
Mod. Series no.	Range d <sub>N</sub> d <sub>N</sub> range	Sede Groove	Larg. sede Groove width	R	Gioco radiale S max Radial clearance S max
		D1 h9 Ø	L1+0.2	r1	
RC	3 - 8	d <sub>N</sub> + 3.3	2.5	0.4	0.20
	9 - 17	d <sub>N</sub> + 5.1	3.5	0.6	0.25
	18 - 36	d <sub>N</sub> + 7.1	4.5	1	0.25
	38 - 111	d <sub>N</sub> + 10.5	7.0	1.3	0.30
	112 - 393	d <sub>N</sub> + 13.7	9.5	1.8	0.30

## Raschiatori - Scrapers

### NRC

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	□
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

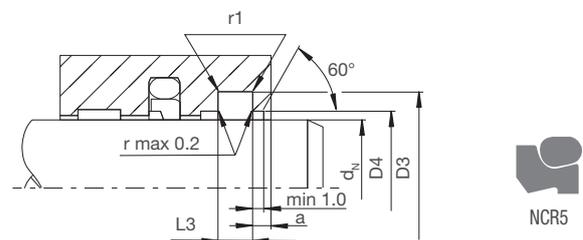


Mod. Series no.	Diametro stelo d <sub>N</sub> f8/h9 Rod Diameter d <sub>N</sub> f8/h9		Sede Groove	Larg. sede Groove width	Cilindro Bore	Larghezza gradino Step width
	Serie raccomandata Recommended range	Serie estesa Extended range	D3 H9 Ø	L3+0.2	D4 H11 Ø	a min
NRC	4 - 11.9	4 - 130	d <sub>N</sub> + 4.8	3.7	d <sub>N</sub> + 1.5	2
	12 - 64.9	10 - 245	d <sub>N</sub> + 6.8	5	d <sub>N</sub> + 1.5	2
	65 - 250.9	25 - 400	d <sub>N</sub> + 8.8	6	d <sub>N</sub> + 1.5	3
	251 - 420.9	40 - 655	d <sub>N</sub> + 12.2	8.4	d <sub>N</sub> + 2	4
	421 - 650.9	110 - 655	d <sub>N</sub> + 16	11	d <sub>N</sub> + 2	4
	651 - 999.9	140 - 999.9	d <sub>N</sub> + 20	14	d <sub>N</sub> + 2.5	5
	a 1000	a 1000	d <sub>N</sub> + 20	14	d <sub>N</sub> + 2.5	5

### NRCC5

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	□
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

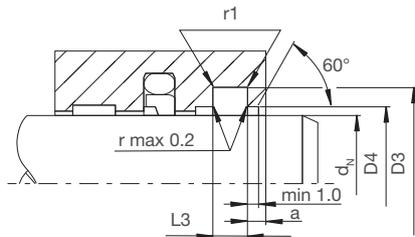


Mod. Series no.	Diametro stelo d <sub>N</sub> f8/h9 Rod Diameter d <sub>N</sub> f8/h9		Sede Groove	Larg. sede Groove width	Cilindro Bore	Larghezza gradino Step width
	Serie raccomandata Recommended range	Serie estesa Extended range	D3 H9 Ø	L3+0.2	D4 H11 Ø	a min
NRCC5	19 - 39.9	19 - 100	d <sub>N</sub> + 7.6	4.2	d <sub>N</sub> + 1.5	3
	40 - 69.9	30 - 200	d <sub>N</sub> + 8.8	6.3	d <sub>N</sub> + 1.5	3
	70 - 139.9	70 - 360	d <sub>N</sub> + 12.2	8.1	d <sub>N</sub> + 2	4
	140 - 399.9	100 - 650	d <sub>N</sub> + 16	9.5	d <sub>N</sub> + 2.5	5
	400 - 649.9	200 - 650	d <sub>N</sub> + 24	14	d <sub>N</sub> + 2.5	8
	650 - 999.9	400 - 999.9	d <sub>N</sub> + 27.3	16	d <sub>N</sub> + 2.5	10
	> 1000	a 1000	d <sub>N</sub> + 27.3	16	d <sub>N</sub> + 2.5	10

## NRT1

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 1.6 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

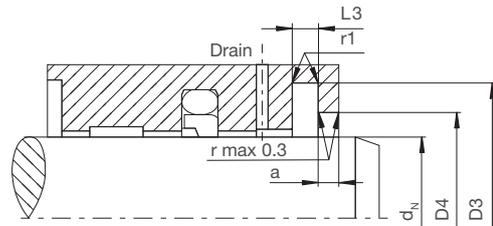


Mod. Series no.	Diametro stelo $d_N$ f8/h9 Rod Diameter $d_N$ f8/h9		Sede Groove	Larg. sede Groove width	Cilindro Bore	R	Larghezza gradino Step width
	Serie raccomandata Rec. range	Serie disp. Available range	D3 H9 $\varnothing$	L3+0.2	D4 H11 $\varnothing$	r1 max	a min
NRT01	19 - 39.9	19 - 130	$d_N + 7.6$	4.2	$d_N + 1$	0.4	3
	40 - 69.9	30 - 250	$d_N + 8.8$	6.3	$d_N + 1.5$	1	3
	70 - 139.9	50 - 450	$d_N + 12.2$	8.1	$d_N + 2$	1.2	4
	140 - 399.9	80 - 650	$d_N + 16$	11.5	$d_N + 2$	2	5
	400 - 649.9	180 - 650	$d_N + 24$	15.5	$d_N + 2.5$	2.5	8
	650 - 999.9	300 - 999.9	$d_N + 27.3$	18	$d_N + 2.5$	2.5	10

## NRT2

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 1.6 MPa
Velocità di scorrimento - Surface speed	≤ 15 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material



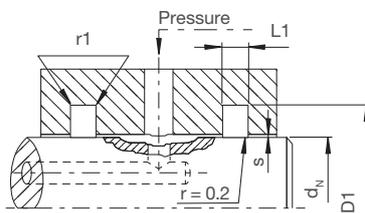
Mod. Series no.	Diametro stelo $d_N$ f8/h9 Rod Diameter $d_N$ f8/h9		Sede Groove	Larg. sede Groove width	Cilindro Bore	R	Larghezza gradino Step width
	Serie raccomandata Rec. range	Serie disp. Available range	D3 H8 $\varnothing$	L3+0.2	D4 H8 $\varnothing$	r1 max	a +0/-0.1
NRT02	140 - 229.9	100 - 450	$d_N + 22.2$	6.3	$d_N + 10.7$	1.2	4.2
	230 - 299.9	220 - 450	$d_N + 24.2$	6.3	$d_N + 10.7$	1.2	4.2
	300 - 629.9	250 - 650	$d_N + 33$	8.1	$d_N + 15.1$	1.2	6.3
	630 - 999.9	550 - 999.9	$d_N + 36.5$	9.5	$d_N + 15.1$	2	6.3

## Tenute rotative - Rotary seals

### NCSR

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 30 MPa
Velocità di scorrimento - Surface speed	≤ 2 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

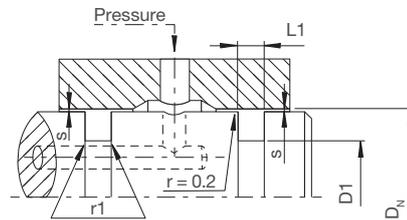


Mod. Series no.	Diametro stelo $d_N$ f8/h9 Rod Diameter $d_N$ f8/h9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*	
	Serie standard Standard range	Serie disponibile Available range	D1 H9 $\varnothing$	L1+0.2	r1	10 MPa	20 MPa
NCSR0	6 - 18.9	6 - 130	$d_N + 4.9$	2.20	0.40	0.15	0.10
NCSR1	19 - 37.9	10 - 245	$d_N + 7.5$	3.20	0.60	0.20	0.15
NCSR2	38 - 199.9	19 - 455	$d_N + 11$	4.20	1	0.25	0.20
NCSR3	200 - 255.9	38 - 655	$d_N + 15.5$	6.30	1.30	0.30	0.25
NCSR4	256 - 649.9	120 - 655	$d_N + 21$	8.10	1.80	0.30	0.25
NCSR5	650 - 999.9	650 - 999.9	$d_N + 28$	9.50	2.50	0.45	0.30

### NPSR

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 30 MPa
Velocità di scorrimento - Surface speed	≤ 2 m/s
Temperatura di lavoro* - Working temperature*	-30/+200 °C (*)

\*A seconda del materiale dell'O-ring - \*Depending on O-ring material

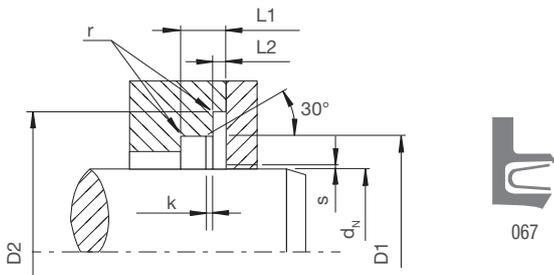


Mod. Series no.	Diametro stelo $D_N$ H9 Rod Diameter $D_N$ H9		Sede Groove	Larg. sede Groove width	R	Gioco radiale S max* Radial clearance S max*	
	Serie standard Standard range	Serie disponibile Available range	$d_1$ H9 $\varnothing$	L1+0.2	r1	10 MPa	20 MPa
NPSR0	8 - 39.9	8 - 135	$D_N + 4.9$	2.20	0.40	0.15	0.10
NPSR1	40 - 79.9	14 - 250	$D_N + 7.5$	3.20	0.60	0.20	0.15
NPSR2	80 - 132.9	22 - 460	$D_N + 11$	4.20	1	0.25	0.20
NPSR3	133 - 329.9	40 - 675	$D_N + 15.5$	6.30	1.30	0.30	0.25
NPSR4	330 - 669.9	133 - 690	$D_N + 21$	8.10	1.80	0.30	0.25
NPSR5	670 - 999.9	670 - 999.9	$D_N + 28$	9.50	2.50	0.45	0.30

## Springlip rotativa - Rotary springlip

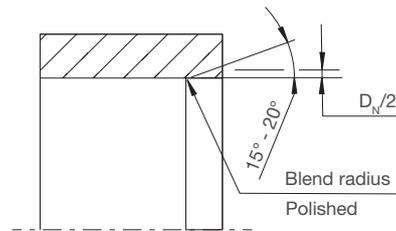
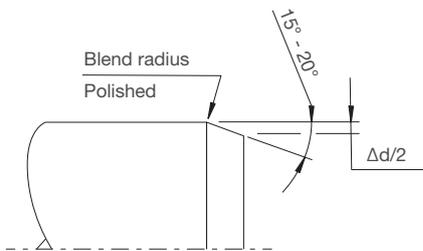
### 067

DATI TECNICI - TECHNICAL DATA	
Pressione di lavoro - Working pressure	≤ 15 MPa
Velocità di scorrimento - Surface speed	≤ 2 m/s
Temperatura di lavoro* - Working temperature*	-200/+260 °C



Mod. Series no.	Diametro stelo Rod Diameter		Sede Groove Ø		Larg. sede Groove width		Smusso d'imbocco Lead in chamfer	R	Gioco rad. S max Radial clearance S max
	Gamma standard Standard range d <sub>N</sub> f8/h9	Serie disponibile Available range d <sub>N</sub> f8/h9	D1 H9	D2 H10	L1 min	L2	k	r	< 10 Mpa
360	5 - 19.9	20 - 200	d <sub>N</sub> +5	d <sub>N</sub> +9	3.6	0.85 +0/-0.1	0.8	0.3	0.15
470	20 - 39.9	10 - 400	d <sub>N</sub> +7	d <sub>N</sub> +12.5	4.8	1.35 +0/-0.15	1.1	0.4	0.20
710	40 - 399.9	20 - 700	d <sub>N</sub> +10.5	d <sub>N</sub> +17.5	7.1	1.80 +0/-0.20	1.4	0.5	0.25
950	400 - 999.9	35 - 999.9	d <sub>N</sub> +14	d <sub>N</sub> +22	9.5	2.80 +0/-0.20	1.6	0.5	0.30

## Smussi di imbocco e rugosità superfici - Lead in chamfers and surface roughness



TENUTE SPRINGLIP 061 - 062 - 067 - SPRINGLIP SEALS 061 - 062 - 067	
Δd/2 e D <sub>N</sub> /2 minimo (mm) Δd/2 and D <sub>N</sub> /2 minimum (mm)	Serie n. Series no.
2.2	145
2.7	225
2.7	310
4.0	470
6.5	610
9.5	950

NPS - NPR - NPQ - NPQ5 - NPU - NPUK - NCR - NC5 - NCQ - NCQ5 - NRC NRC5 - NRT - NRT2 - NPSR - NCSR	
Δd/2 e D <sub>N</sub> /2 minimo (mm) Δd/2 and D <sub>N</sub> /2 minimum (mm)	Larg. sede (mm) Groove width (mm)
1.1	2.2
1.4	3.2
1.9	4.2
2.7	6.3
3.5	8.1
4.0	9.5
5.5	13.8

NDD - RC - LRC - NPD - RP - LRP		
Δd/2 e D <sub>N</sub> /2 minimo (mm) Δd/2 and D <sub>N</sub> /2 minimum (mm)	Sezione O-ring (mm) O-ring cross section (mm)	
1.1	1.78	-
1.4	2.40	2.62
1.9	3.00	3.53
2.7	5.33	5.70
3.5	7.00	8.40

RUGOSITÀ SUPERFICIALE - SURFACE ROUGHNESS			
Parametro Parameter	Superfici dinamiche - Dynamic surfaces		Superficie sede Groove surface
	Materiale PTFE - PTFE material	Materiale PUR-NBR - PUR-NBR material	
Rmax	0.63 - 2.50	1.00 - 4.00	< 16.0
Rz DIN	0.40 - 1.60	0.63 - 2.50	< 10.0
Ra	0.05 - 0.20	0.10 - 0.40	< 1.6

## Codici guarnizioni - Seals n°

Prefisso Technical data	Sigla guarnizione Seal type	Diametro alesaggio-stelo (mm) Bore-rod diameter (mm)	Materiale (vedere tabella materiali) Material (see materials chart)
070	NPS - NPR - NPQ - NPQ5 - NPU - NPUK NPD - NCR - NCS - NCQ - NCQ5 - NDD NRC - NRC5 - NRT1 - NRT2	3 cifre da 000 a 999 mm (es. "050" per d.50 mm), per diametri superiori contattateci 3 digits from 000 to 999 mm (i.e. "050" for d.50 mm), for bigger diameters please contact us	Nessuna sigla per BM (materiale standard) C755 - CRO - PT - VM - PE - PU Blank for BM (standard material) C755 - CRO - PT - VM - PE - PU
Esempi: 070NPSR3100BM (d.= 80 mm, mat. BM); 070NCSR2050C755 (d.= 50 mm, mat. C755) Examples: 070NPSR3100BM (d.= 80 mm, mat. BM); 070NCSR2050C755 (d.= 50 mm, mat. C755)			

Prefisso Technical data	Sigla guarnizione Seal type	Codice europeo O-ring corrispondente in 5 cifre Corresponding European O-ring N° in 5 digits	Materiale (vedere tabella materiali) Material (see materials chart)
070	NPSR0 - NPSR1 - NPSR2 - NPSR3 NPSR4 - NPSR5 - NCSR0 - NCSR1 NCSR2 - NCSR3 - NCSR4 - NCSR5	3 cifre da 000 a 999 mm (es. "050" per d.50 mm), per diametri superiori contattateci 3 digits from 000 to 999 mm (i.e. "050" for d.50 mm), for bigger diameters please contact us	BM - C755 - CRO - PT - VM - PE - PU
Esempi: 070NPSR3100BM (d.= 150 mm, mat. BM); 070NCSR2050C755 (d.= 50 mm, mat. C755) Examples: 070NPSR3100BM (d.= 150 mm, mat. BM); 070NCSR2050C755 (d.= 50 mm, mat. C755)			

Prefisso Technical data	Sigla guarnizione Seal type	Codice europeo O-ring corrispondente in 5 cifre Corresponding European O-ring N° in 5 digits	Materiale (vedere tabella materiali) Material (see materials chart)
030	LRP - LRC	da 00106 a 82600 from 00106 to 82600	Nessuna sigla per CG (materiale standard) BM - CRO - PT - VM - PE - PU Blank for CG (standard material) BM - CRO - PT - VM - PE - PU
Esempi: 030LRP06287 (O-ring 6287, d.85 mm); 030LRC04125 (O-ring 4125, d.30 mm) Examples: 030LRP06287 (O-ring 6287, d.85 mm); 030LRC04125 (O-ring 4125, d.30 mm)			

Prefisso Technical data	Sigla guarnizione Seal type	Codice europeo O-ring corrispondente in 5 cifre Corresponding European O-ring N° in 5 digits	Materiale (vedere tabella materiali) Material (see materials chart)
030	RP - RC	da 02007 a 82600 from 02007 to 82600	Nessuna sigla per PT (materiale standard) CG - BM - CRO - PT - VM - PE - PU Blank for PT (standard material) CG - BM - CRO - PT - VM - PE - PU
Esempi: 030LRP06450 (O-ring 6450, d.125 mm); 030RC04131 (O-ring 4131, d.33 mm) Examples: 030LRP06450 (O-ring 6450, d.125 mm); 030RC04131 (O-ring 4131, d.33 mm)			

Sigla guarnizione Seal type	Sezione Cross section	Diametro alesaggio-stelo (mm) X 10 Bore-rod diameter (mm) X 10	Materiale (vedere tabella materiali) Material (see materials chart)
062D - 061D - 067	145 - 225 - 310 - 470 - 610 - 950	4 cifre da 000.0 a 999.9 mm (es. "0507" per d.50.7 mm), per diametri superiori contattateci 4 digits from 000.0 to 999.9 mm (i.e. "0507" for d.50.7 mm), for bigger bigger diameters please contact us	00 - 13 - 25 - 66 - 32 - 28 - 90
Esempi: 062D310120025S (d.= 120 mm, mat.25 (VM)); 061D310020040S (d.= 20 mm, mat. 40) Examples: 062D310120025S (d.= 120 mm, mat.25 (VM)); 061D310020040S (d.= 20 mm, mat. 40)			

GUARNIZIONI SPECIALI (fornibili su richiesta) - NON STANDARD SEALS (upon request)			
Per altissime pressioni e temperature estreme For extreme pressure and high / low temperature			
Per prodotti chimici ed ambienti aggressivi For strong chemicals and aggressive environment			
Dimensioni speciali per sedi fuori standard Non standard grooves			
Certificate per applicazioni alimentari e farmaceutiche (FDA, EC 1935/2004, 3-A, USP, KTW, WRAS) Food & Pharmaceutical applications (FDA, EC 1935/2004, 3-A, USP, KTW, WRAS)			

# TABELLE TECNICHE | TECHNICAL TABLES

## Anelli e nastri guida - Wear rings and strips

DATI TECNICI - TECHNICAL DATA					
		BM	C755	MCF80	FEN
Velocità massima Maximum speed	m/s	15	15	1	1
Temp. operativa °C Operating temp °C	max	+250	+250	+130	+130
	min	-100	-100	60	40
Resistenza compressione Compressive strength N/mm²	Ortagonale alla stratificazione Orthogonal to laminate	15	15	345	270
	Parallela alla stratificazione Parallel to laminate			100	190

Materiali per nastri Strip material	Descrizione Description	Superficie di contatto Mating surface
BM	PTFE + Bronzo e MoS2 PTFE + Bronze and MoS2	Acciaio temperato, acciaio cromato, ghisa Hardened steel, chrome plated steel, cast iron
C755	PTFE + Carbonegrafite PTFE + Carbon graphite	Acciaio dolce, acciaio temperato, acciaio cromato, acciaio INOX, alluminio Mild steel, hardened steel, chrome plated steel, stainless steel, aluminium
MCF80	Tessuto sintetico impregnato di poliestere termoindurente Fabric reinforced thermosetting polyester	Acciaio, acciaio temperato, acciaio cromato, acciaio INOX Steel, hardened steel, chrome plated steel, stainless steel
FEN	Tessuto di cotone impregnato di resina fenolica Cotton fabric phenolic resin	Acciaio, acciaio temperato, acciaio cromato, acciaio INOX, alluminio Steel, hardened steel, chrome plated steel, stainless steel, aluminium

NASTRI DI GUIDA - WEAR STRIP				
Sezioni standard Standard cross section (mm)		Superficie sede Standard materials		
L2	W	BM	C755	MCF80
3.10	1.50	◆	◆	
4.20	1.50	◆	◆	
5.60	1.50	◆	◆	
6.30	1.50	◆	◆	
8.10	1.50	◆	◆	
9.70	1.50	◆	◆	
15.00	1.50	◆		
25.00	1.50	◆	◆	
4.10	1.55	◆		

4.20	2.00	◆	◆	
5.60	2.00	◆		
6.30	2.00	◆	◆	
8.10	2.00	◆	◆	
9.70	2.00	◆	◆	◆
12.70	2.00	◆	◆	◆
15.00	2.00	◆	◆	
20.00	2.00	◆		
25.00	2.00	◆		
30.00	2.00	◆	◆	
40.00	2.00	◆		

4.20	2.50	◆	◆	
5.60	2.50	◆	◆	◆
6.30	2.50	◆	◆	◆
8.10	2.50	◆	◆	◆
9.70	2.50	◆	◆	◆
12.70	2.50	◆		◆
15.00	2.50	◆	◆	◆
20.00	2.50	◆	◆	◆
25.00	2.50	◆	◆	◆
30.00	2.50	◆	◆	◆
40.00	2.50	◆		◆
50.00	2.50	◆		

4.20	3.00	◆		
6.30	3.00	◆		
8.10	3.00	◆		
9.70	3.00	◆	◆	◆
12.70	3.00	◆		◆
15.00	3.00	◆		◆
20.00	3.00	◆	◆	◆
25.00	3.00	◆		◆
30.00	3.00	◆		◆
40.00	3.00	◆		
50.00	3.00			

8.10	4.00	◆		
9.70	4.00	◆		◆
15.00	4.00	◆		◆
20.00	4.00	◆		◆
25.00	4.00	◆		◆
30.00	4.00	◆		◆
40.00	4.00	◆		◆
50.00	4.00	◆		◆

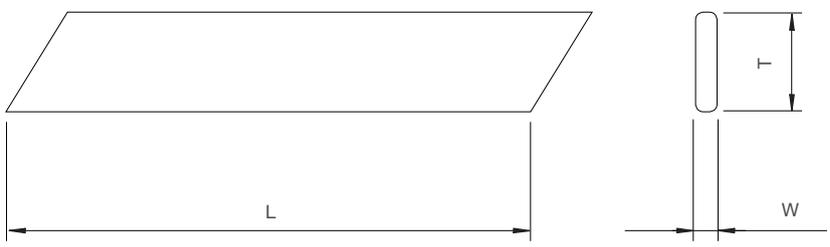
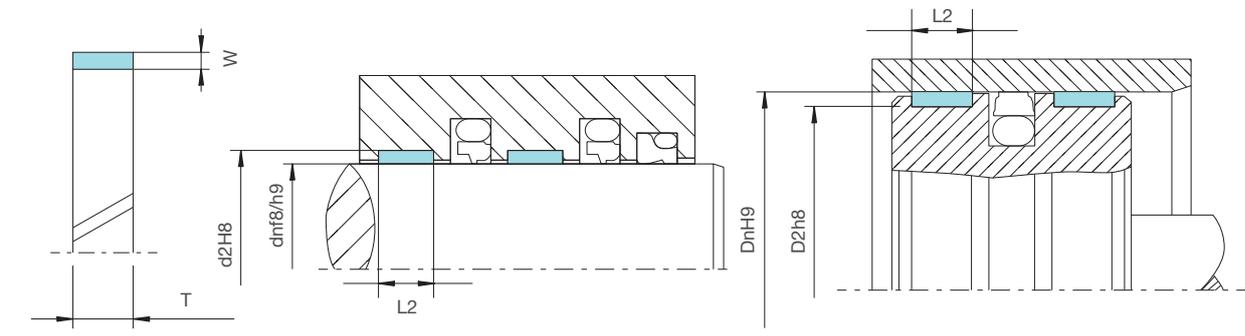
25.00	5.00			◆
30.00	5.00			◆
40.00	5.00			◆
50.00	5.00			◆



## Codici nastri guida - Guide strips n°

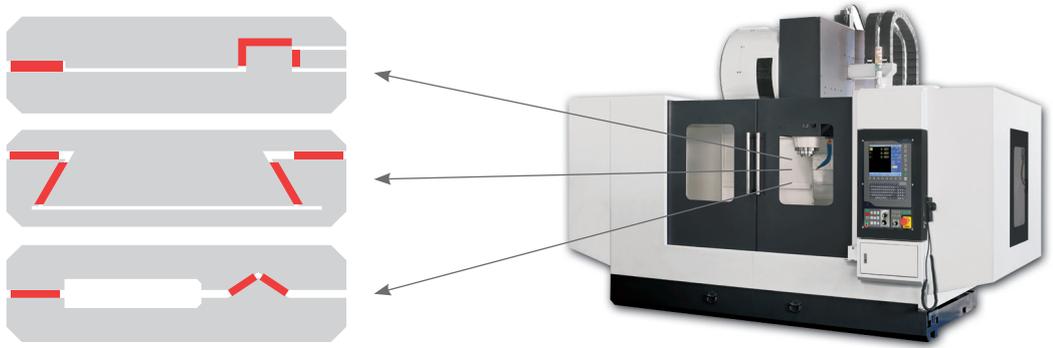
Prefisso Technical data	Materiale (vedere tabella materiali) Material (see materials chart)	Spessore nastro (mm) X 10 in 2 cifre Strip thickness (mm) X 10 in 2 digits	Larghezza nastro (mm) X 10 in 3 cifre Strip width (mm) X 10 in 3 digits
070	BM - C755 - CRO PT - VM - PE - PU	1.5 - 2.0 - 2.5 - 3.0 - 4.0	3.0 - 4.0 - 4.9 - 5.4 - 5.8 - 6.1 - 8.0 - 9.5 - 10.0 - 12.0 - 12.5 - 14.8 - 19.5 - 24.5 - 29.5 - 34.5 - 39.5 - 49.5
Esempi: 070BM25095 (2.5 X 9.5 mm); 070BM30295 (3.0 X 29.5 mm) Examples: 070BM25095 (2.5 X 9.5 mm); 070BM30295 (3.0 X 29.5 mm)			

Calcolo dello sviluppo lineare - Calculation of the linear length



Piston guide:  
 $L \text{ (mm)} = (Dn - W) \times 3,11 - 0,8$

Rod guide:  
 $L \text{ (mm)} = (dN + W) \times 3,11 - 0,8$



Larghezza (mm)* Width (mm)*	Spessore (mm)* Thickness (mm)*
15	1.5
20	1.5
25	1.5
30	1.5
35	1.5
40	1.5
50	1.5
60	1.5
70	1.5
80	1.5
90	1.5
100	1.5
110	1.5
120	1.5
150	1.5
200	1.5

Adesivo Adhesive	Rapporto in peso (g) Weight rate (g)	Durata utilizzo Handling time	Tempo polimerizzazione Polymerization time
AW106	100	2 ore a 25°C	15 ore a 20°C
HV953U	80	2 hours at 25°C	15 hours at 20°C
AW138M	100	30 min. a 23°C	12 ore a 20°C
HV998	40	30 min. at 23°C	12 hours at 20°C



\* Dimensioni speciali su richiesta - \* Special sizes upon request

# TABELLE TECNICHE | TECHNICAL TABLES

## Tabella materiali - Material chart

Materiale, applicazioni, proprietà <i>Material, applications, properties</i>	Codice N°	Materiale O-ring <i>O-ring material</i>	Superficie di contatto <i>Mating surface</i>	Temperatura operativa (°C) <i>Operating temperature (°C)</i>	Velocità massima (m/s) <i>Maximum speed (m/s)</i>
<b>PTFE Vergine - Virgin PTFE</b>					
Per fluidi lubrificanti e non, servizio gas, bassissimo attrito, elevate proprietà di scorrimento e tenuta, limitata resistenza all'usura, FDA <i>For lubricating and non-lubricating fluids and gas service, very low friction, very good sliding and sealing properties, poor wear resistance, FDA</i>	PT (00)	NBR FPM SIL EPDM	Acciaio, acciaio indurito, acciaio cromato, ghisa, acciaio INOX, alluminio <i>Steel, hardened steel, chrome plated steel, cast iron, stainless steel, aluminium</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15
<b>PTFE + Bronzo + MoS2 - PTFE + Bronze + MoS2</b>					
Per idraulica lubrificata in moto lineare, elevata resistenza a compressione ed estrusione <i>For lubricated hydraulics in linear motion, high compressive strength and extrusion resistance</i>	BM (13)	NBR FPM SIL EPDM	Acciaio indurito, acciaio cromato, ghisa <i>Hardened steel, chrome plated steel, cast iron</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15
<b>PTFE + Carbonegrafite - PTFE + Carbon graphite</b>					
Per idraulica e pneumatica, fluidi lubrificanti e non, elevata resistenza all'estrusione e resistenza chimica <i>For hydraulics and pneumatics, high extrusion resistance and chemical strength</i>	CG (25)	NBR FPM SIL EPDM	Acciaio, acciaio indurito, acciaio cromato, ghisa <i>Steel, hardened steel, chrome plated steel, cast iron</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15
<b>PTFE + Vetro + MoS2 - PTFE + Glass + MoS2</b>					
Per fluidi lubrificanti, basso attrito ed eccezionale resistenza all'usura <i>For lubricating fluids, low friction and exceptional wear resistance</i>	VM (66)	NBR FPM SIL EPDM	Acciaio indurito, acciaio cromato <i>Hardened steel, chrome plated steel</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15
<b>PTFE + Ossidi Metallici - PTFE + Metal Oxides</b>					
Per fluidi lubrificanti e gas, bassissimo attrito, elevate proprietà di scorrimento e tenuta <i>For lubricating fluids and gas service, very low friction, very good sliding and sealing properties</i>	CR (32)	NBR FPM SIL EPDM	Acciaio indurito, acciaio cromato, ghisa <i>Hardened steel, chrome plated steel, cast iron</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15
<b>UHMWPE - UHMWPE</b>					
Per fluidi lubrificanti e non, fluidi a base acquosa, aria e gas, pneumatica, elevata resistenza ad usura ed estrusione, superfici abrasive e sospensioni solide, buona resistenza chimica, FDA <i>For lubricating and non-lubricating fluids, water based fluids, gases, pneumatics, high abrasion and extrusion resistance, service in abrasive conditions and media with particles, FDA</i>	PE (90)	NBR FPM SIL EPDM	Acciaio, acciaio indurito, acciaio cromato, ghisa, acciaio INOX, alluminio, riporti ceramici <i>Steel, hardened steel, chrome plated steel, cast iron, stainless steel, aluminium, ceramic coatings</i>	-30 / +80 -20 / +80 -60 / +80 -45 / +80	5
<b>Poliuretano - Polyurethane</b>					
Per fluidi lubrificanti, elevatissima resistenza all'usura, adatto a superfici con scarsa finitura <i>For lubricating fluids, very high abrasion resistance, for surfaces with rougher surface finish</i>	PU	NBR FPM SIL EPDM	Acciaio, acciaio indurito, acciaio cromato, ghisa, acciaio INOX, riporti ceramici <i>Steel, hardened steel, chrome plated steel, cast iron, stainless steel, ceramic coatings</i>	-30 / +110 -20 / +110 -35 / +110 -35 / +110	0,8
<b>PTFE + Fibre di Carbonio - PTFE + Carbon Fibre</b>					
Per fluidi lubrificanti e non, fluidi a base acquosa, alte frequenze e corse brevi, elevata resistenza all'usura e resistenza chimica, superficie con struttura fibrosa non adatta per tenuta gas <i>For lubricating and non-lubricating fluids, water based fluids, high frequency and short strokes, high abrasion and chemical resistance, surface texture is not suitable for gas sealing</i>	FC (28)	NBR FPM SIL EPDM	Acciaio, acciaio indurito, acciaio cromato, ghisa, acciaio INOX, alluminio <i>Steel, hardened steel, chrome plated steel, cast iron, stainless steel, aluminium</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15
<b>PTFE + Polimeri Aromatici - Aromatic Polymers</b>					
Per fluidi lubrificanti e non, fluidi a base acquosa, aria e gas, pneumatica, elevata resistenza all'usura, elevate proprietà di scorrimento anche con superfici morbide e con scarsa lubrificazione, elevata resistenza chimica, FDA <i>For lubricating and non-lubricating fluids, water based fluids, air and gases, pneumatics, high abrasion resistance, good running behavior with dry and soft surfaces, high chemical strength, FDA</i>	EK (40)	NBR FPM SIL EPDM	Acciaio, acciaio indurito, acciaio cromato, ghisa, acciaio INOX, alluminio <i>Steel, hardened steel, chrome plated steel, cast iron, stainless steel, aluminium</i>	-30 / +100 -20 / +200 -60 / +200 -45 / +140	15

## Tabella ISO - ISO chart

LAVORAZIONI ISO - ISO TOLERANCES																
Ø (mm)	Alberi (µm) Rod (µm)								Fori (µm) Bore (µm)							
	f7		f8		h8		h9		H8		H9		H10		H11	
1 ÷ 3	-6	-16	-6	-20	0	-14	0	-25	+14	0	+25	0	+40	0	+60	0
> 3 ÷ 6	-10	-22	-10	-28	0	-18	0	-30	+18	0	+30	0	+48	0	+75	0
> 6 ÷ 10	-13	-28	-13	-35	0	-22	0	-36	+22	0	+36	0	+58	0	+90	0
> 10 ÷ 18	-16	-34	-16	-43	0	-27	0	-43	+27	0	+43	0	+70	0	+110	0
> 18 ÷ 30	-20	-41	-20	-53	0	-33	0	-52	+33	0	+52	0	+84	0	+130	0
> 30 ÷ 50	-25	-50	-25	-64	0	-39	0	-62	+39	0	+62	0	+100	0	+160	0
> 50 ÷ 65	-30	-60	-30	-76	0	-46	0	-74	+46	0	+74	0	+120	0	+190	0
> 65 ÷ 80	-30	-60	-30	-76	0	-46	0	-74	+46	0	+74	0	+120	0	+190	0
> 80 ÷ 100	-36	-71	-36	-90	0	-54	0	-87	+54	0	+87	0	+140	0	+220	0
> 100 ÷ 120	-36	-71	-36	-90	0	-54	0	-87	+54	0	+87	0	+140	0	+220	0
> 120 ÷ 140	-43	-83	-43	-106	0	-63	0	-100	+63	0	+100	0	+160	0	+250	0
> 140 ÷ 160	-43	-83	-43	-106	0	-63	0	-100	+63	0	+100	0	+160	0	+250	0
> 160 ÷ 180	-43	-83	-43	-106	0	-63	0	-100	+63	0	+100	0	+160	0	+250	0
> 180 ÷ 200	-50	-96	-50	-122	0	-72	0	-115	+72	0	+115	0	+185	0	+290	0
> 200 ÷ 225	-50	-96	-50	-122	0	-72	0	-115	+72	0	+115	0	+185	0	+290	0
> 225 ÷ 250	-50	-96	-50	-122	0	-72	0	-115	+72	0	+115	0	+185	0	+290	0
> 250 ÷ 280	-56	-108	-56	-137	0	-81	0	-130	+81	0	+130	0	+210	0	+320	0
> 280 ÷ 315	-56	-108	-56	-137	0	-81	0	-130	+81	0	+130	0	+210	0	+320	0
> 315 ÷ 355	-62	-119	-62	-151	0	-89	0	-140	+89	0	+140	0	+230	0	+360	0
> 355 ÷ 400	-62	-119	-62	-151	0	-89	0	-140	+89	0	+140	0	+230	0	+360	0
> 400 ÷ 450	-68	-131	-68	-165	0	-97	0	-155	+97	0	+155	0	+250	0	+400	0
> 450 ÷ 500	-68	-131	-68	-165	0	-97	0	-155	+97	0	+155	0	+250	0	+400	0

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### HT

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T. +39 0445 540632 - info@ht-hydraulic.com  
[ht-hydraulic.com](http://ht-hydraulic.com)

### FRIDLE ACADEMY

Via G. Galilei, 53 - 36030 Costabissara (VI) - Italy  
T. +39 0444 971856  
Segreteria didattica - [frgacademy@fridle.com](mailto:frgacademy@fridle.com)





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