



# RALLE A SFERA

SLEWING RINGS

DIVISIONE RALLE E CUSCINETTI\_SLEWING RINGS DIVISION



MOTION,  
LIFTING  
AND BEYOND

## MONTAGGIO E MANUTENZIONE TIPO L - M - P - ZN - ZD

FITTING AND MAINTENANCE FOR TYPES L - M - P - ZN - ZD

- Il montaggio della ralla deve essere eseguito su superficie piana e rigida.
  - L'appoggio deve essere almeno il 50% della sua superficie.
  - Le forze portanti devono essere distribuite uniformemente.
  - Per il fissaggio usare bulloni con resistenza 8,8 e saldatura tasselli A - B - C - D al telaio per lo sgravio delle spinte sui bulloni.
  - Ingrassare prima del montaggio ruotando la ralla.
  - Non è ammesso il fissaggio della ralla mediante saldatura.
  - Non utilizzare per veicoli circolanti a velocità superiori a 40 km/h.
  - Per utilizzi con velocità superiori o altre esigenze, contattate il nostro ufficio tecnico.  
**slewingrings@rimaspa.it**
- *The fitting of the slewing must be made on a rigid and level surface.*
  - *A minimum of 50% of the slewing ring must sit flat on the surface.*
  - *The carrying forces must be uniformly distributed over the slewing rings.*
  - *For mounting, use bolts with resistance 8,8 and weld small blocks A - B - C - D on the loom to reduce the radial force on the bolts.*
  - *Grease the slewing ring before fitting, revolve the slewing ring at the same time apply grease through the nipple.*
  - *Do not weld the slewing ring directly to the mounting.*
  - *Do not use the slewing ring on a vehicle travelling at speeds greater than 40 Km/h.*
  - *For any further information concerning use and speeds in excess of 40 Km/h, please contact our technical office.*  
**slewingrings@rimaspa.it**

## MONTAGGIO E MANUTENZIONE TIPO I 80 - I 90 - VA/90

FITTING AND MAINTENANCE FOR TYPES I 80 - I 90 - VA/90

- Il montaggio della ralla deve essere eseguito su superficie piana e rigida.
  - L'appoggio deve essere almeno il 50% della sua superficie.
  - Le forze portanti devono essere distribuite uniformemente.
  - Per il fissaggio usare bulloni con resistenza 8,8 e saldatura tasselli A - B - C - D al telaio per lo sgravio delle spinte sui bulloni.
  - Evitare fori di fissaggio in prossimità del foro di caricamento delle sfere (vedi targhetta S)
  - Ingrassare prima del montaggio ruotando la ralla.
  - Non è ammesso il fissaggio della ralla mediante saldatura.
- *The fitting of the slewing must be made on a rigid and level surface.*
  - *A minimum of 50% of the slewing ring must sit flat on the surface.*
  - *The carrying forces must be uniformly distributed over the slewing rings.*
  - *For mounting, use bolts with resistance 8,8 and weld small blocks A - B - C - D on the loom to reduce the radial force on the bolts.*
  - *Do not place a bolt near the bore area where balls are fitted (see label S).*
  - *Grease the slewing ring before fitting, revolve the slewing ring at the same time apply grease through the nipple.*
  - *Do not weld the slewing ring directly to the mounting.*

La velocità massima concessa di 110 Km/h e i carichi assiali indicati si riferiscono all'uso su strade con pavimentazione standard Europea.  
*The maximum speed allowed of 110 Km/h and the axial loads indicated, refer to paved standard road conditions in central Europe.*

Ci riserviamo di apportare variazioni tecniche senza preavviso. Per eventuali errori o incompletezze qui contenute, non si assumono responsabilità.

*We reserve the right to make improvements and technical changes without prior warning.  
We do not assume the responsibility for possible mistakes or incompetence here with shown.*

**AZIENDA CON SISTEMA DI  
GESTIONE PER LA QUALITÀ  
CERTIFICATO DA DNV  
=UNI EN ISO 9001:2000=**



**SINCE 1972**



**Tipo\_Type ZN-ZD**



**Tipo\_Type L-M-P**



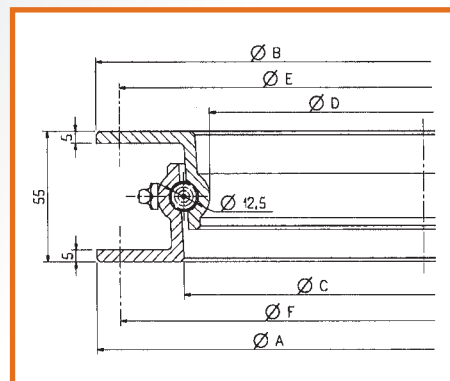
**Tipo\_Type I 80-I 90**

# RALLE A SFERA\_SLEWING RINGS

## RALLE A SFERA TIPO L

SLEWING RINGS L TYPE

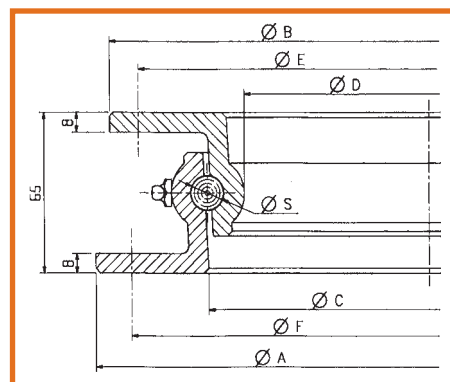
Art.	Dimensioni - Dimensions Ø mm						Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F		
20101	300	300	225	200	270	270	500	5
20102	400	400	321	300	375	375	750	7
20103	500	500	421	400	475	475	1000	9



## RALLE A SFERA TIPO M

SLEWING RINGS M TYPE

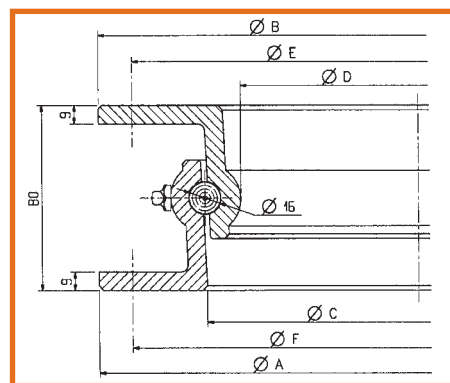
Art.	Dimensioni - Dimensions Ø mm							Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F	S		
20103A	500	500	410	388	475	475	12,5	1000	15
20104	600	600	510	486	575	575	12,5	1500	20
20105	650	650	560	536	625	625	12,5	1600	22
20106	700	700	610	587	675	675	14	2000	24
20107	750	750	660	636	725	725	14	2100	26
20108	800	800	710	688	775	775	14	2500	27
20109	850	850	760	728	825	825	14	3000	29
20110	900	900	810	786	875	875	14	3500	32
20111	950	950	860	837	925	925	14	3500	33
20112	1000	1000	910	888	975	975	14	4000	35
20113	1050	1050	960	938	1025	1025	14	4500	37
20114	1100	1100	1010	988	1075	1075	14	4500	40



## RALLE A SFERA TIPO P

SLEWING RINGS P TYPE

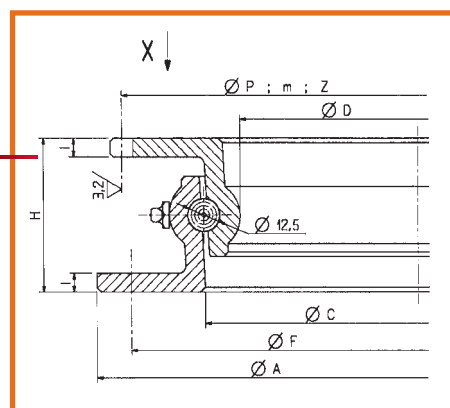
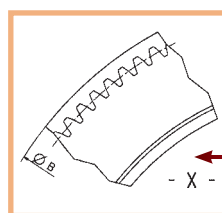
Art.	Dimensioni - Dimensions Ø mm						Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F		
20116	908	907	808	773	870	870	5000	39
20117	1008	1012	908	878	974	974	6000	43
20118	1108	1107	1008	973	1070	1070	6500	47



## RALLE A SFERA TIPO LM/D

SLEWING RINGS LM/D TYPE

Art.	Dimensioni - Dimensions Ø mm									Peso Weight Kg.
	A	B	C	D	H	I	P	m	Z	
20102D	407	400	324	301	55	5	392	4	98	7
20103D	503	496	424	404	55	5	488	4	122	9
20104D	606	592	516	493	65	8	584	4	146	20

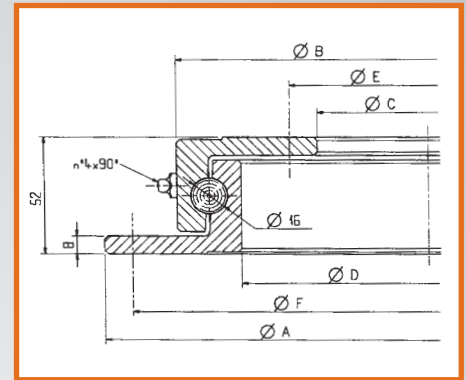


Dentatura a denti dritti - Su richiesta si eseguono dentature speciali  
Toothed vertically - On request we can apply special teeth

## RALLE A SFERA TIPO ZN

SLEWING RINGS ZN TYPE

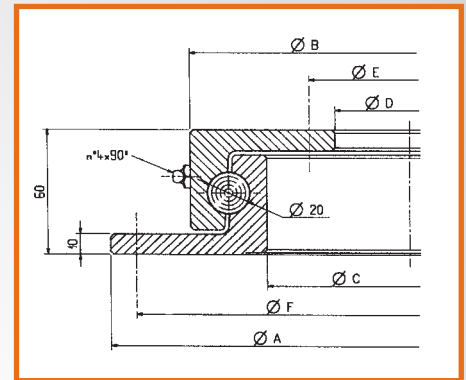
Art.	Dimensioni - Dimensions Ø mm						Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F		
20119	400	338	215	281	260	375	1400	15
20124	500	437	315	381	340	475	1800	19
20127	650	590	465	525	490	625	2500	25
20120	750	690	565	625	590	725	3000	30
20121	850	790	665	725	690	825	3500	35
20122	950	888	765	833	790	925	4000	41
20123	1050	987	865	932	890	1025	5000	46



## RALLE A SFERA TIPO ZD

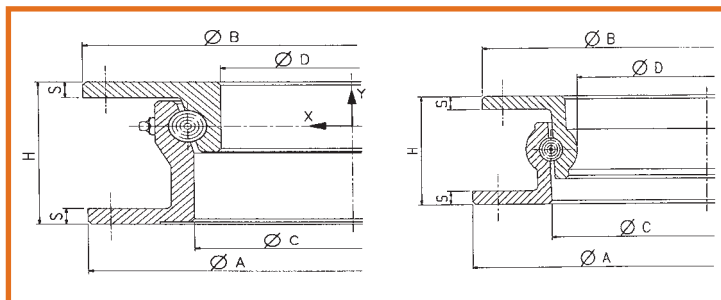
SLEWING RINGS ZD TYPE

Art.	Dimensioni - Dimensions Ø mm						Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F		
20128	952	885	821	750	920	780	5800	55
20129	1102	1027	963	890	1070	920	6800	64



## TABELLA DELLE TOLLERANZE

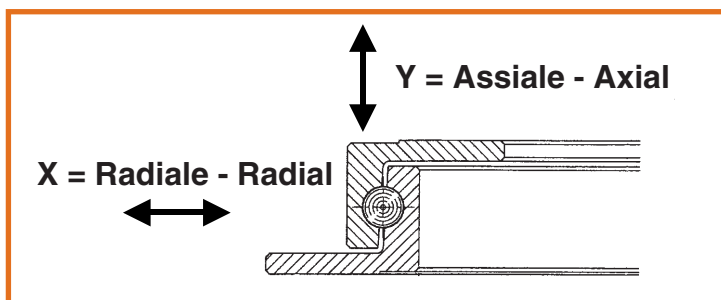
TOLERANCE CHART



Tipo/Type	mm					
	H	A	B	C	D	S
L	± 3	+5 -2	+5 -2	+5 -2	+5 -2	± 1
M	± 3	+9 +5	± 2	± 3	± 3	± 1
P	± 3	± 2	± 2	± 2	± 3	± 1
ZN-ZD	± 0,5	± 1	+1 -2	+2 -1	± 1	± 0,8
I 80	+3 -1	+2 -3	+2 -3	± 2	± 2	± 1
I 90-VA 90	+3 -1	+2 -3	+2 -3	± 2	± 2	± 1

## TABELLA DELLE TOLLERANZE ASSIALI E RADIALI

AXIAL AND RADIAL TOLERANCE CHART



Tipo Type	mm	
	X	Y
ZN	0,3 ÷ 0,7	0,3 ÷ 1
ZD	0,3 ÷ 0,7	0,3 ÷ 1
I 80	0,3 ÷ 0,7	0,3 ÷ 1
I 90	0,3 ÷ 0,7	0,3 ÷ 1

## RALLE A SFERA TIPO I 80 e I 80 G

SLEWING RINGS I 80 and I 80 G TYPE

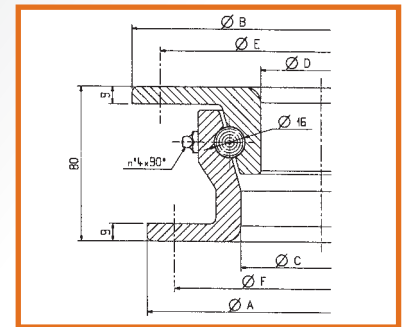
Art.	Dimensioni - Dimensions Ø mm						Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F		
20170	880	895	780	761	866	852	5000	43
20170F	880	895	780	761	866	852	5000	43
20172	1000	1015	900	881	984	970	6000	51
20174	1090	1105	990	971	1074	1060	6500	55
20174F	1090	1105	990	971	1074	1060	6500	55
20176	1200	1215	1100	1081	1174	1160	7000	60

F = foratura standard / F = standard drilling

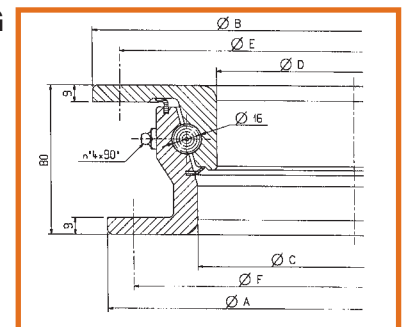
Art.	Dimensioni - Dimensions Ø mm					
	A	B	C	D	E	F
20170T	880	895	780	761	866	852
20170TF	880	895	780	761	866	852
20174T	1090	1105	990	971	1074	1060
20174TF	1090	1105	990	971	1074	1060

T = piste temprate / T = hardened raceway

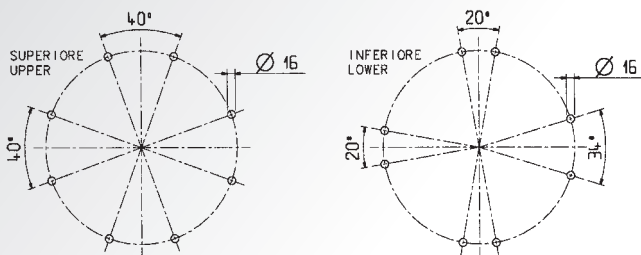
I 80



I 80 G



Schema di foratura standard / Diagram of standard drilling

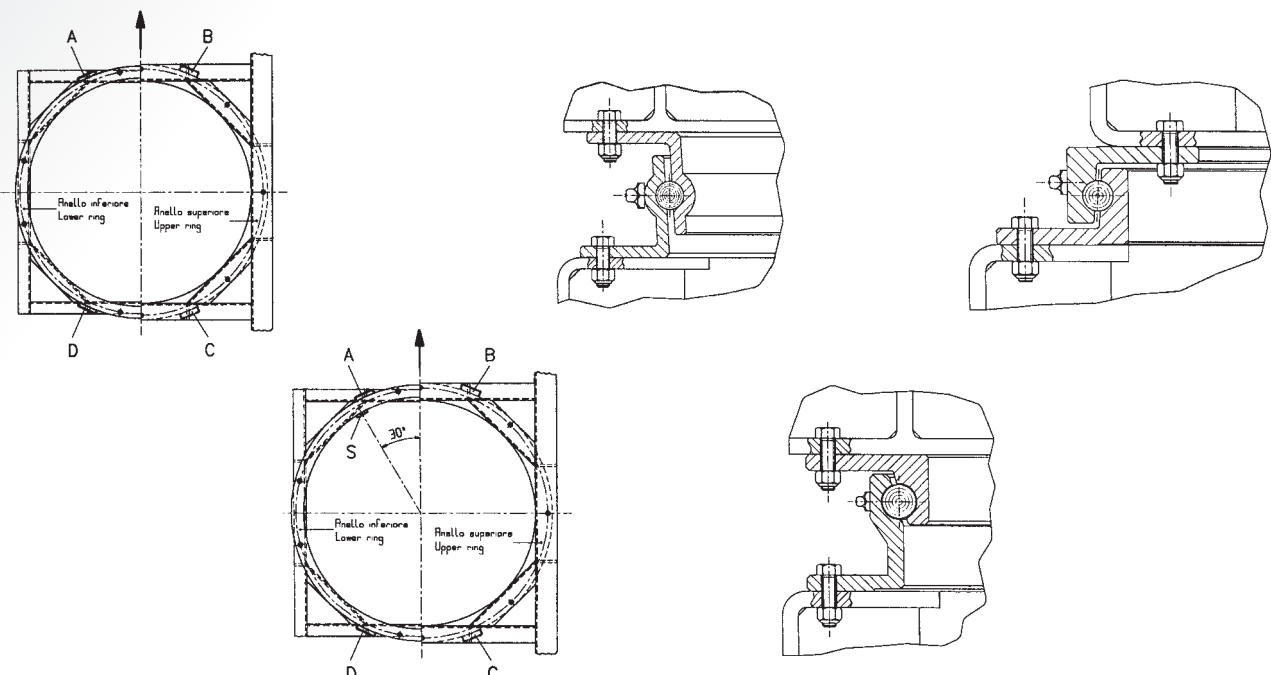


Foratura per: Drilling for:  
Art. 20170F - 20170TF

Si eseguono forature speciali  
We can supply special drilling

## ESEMPIO DI FISSAGGIO MEDIANTE BULLONE

FIXING EXAMPLE USING BOLTS



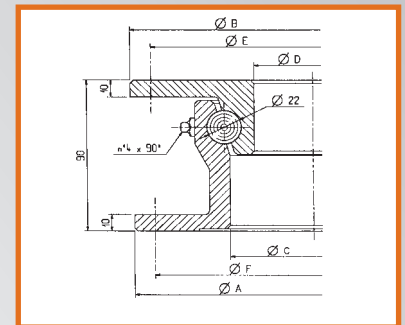
## RALLE A SFERA TIPO I 90 e I 90 G

SLEWING RINGS I 90 and I 90 G TYPE

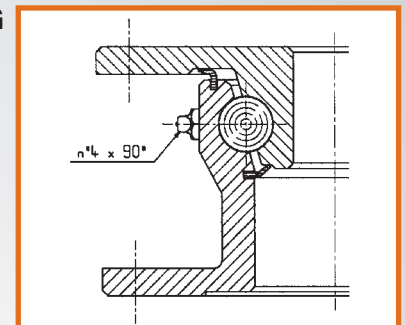
Art.	Dimensioni - Dimensions Ø mm						Carico assiale Axial load Kg.	Peso Weight Kg.
	A	B	C	D	E	F		
20125	998	1000	886	848	974	960	10000	74
20126	1098	1100	986	948	1074	1060	12000	79
20126F	1098	1100	986	948	1074	1060	12000	79
20178	1198	1200	1086	1048	1174	1160	14000	84
20178F	1198	1200	1086	1048	1174	1160	14000	84

F = foratura standard / F = standard drilling

I 90



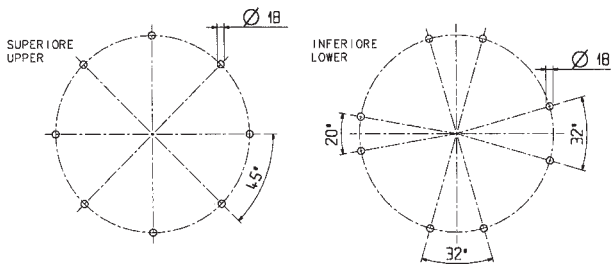
I 90 G



Art.	Dimensioni - Dimensions Ø mm					
	A	B	C	D	E	F
20125T	998	1000	886	848	974	960
20126T	1098	1100	986	948	1074	1060
20126TF	1098	1100	986	948	1074	1060
20178T	1198	1200	1086	1048	1174	1160
20178TF	1198	1200	1086	1048	1174	1160

T = piste temprate / T = hardened raceway

Schema di foratura standard / Diagram of standard drilling



Foratura per: Drilling for:

Art. 20126F - 20126TF

20174F - 20174TF

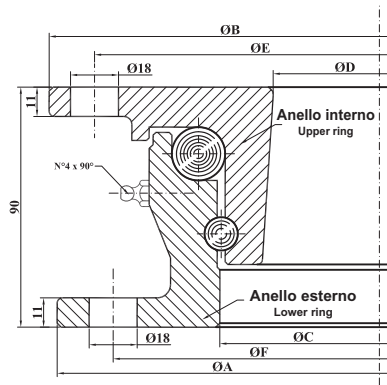
20178F - 20178TF

Si eseguono forature speciali

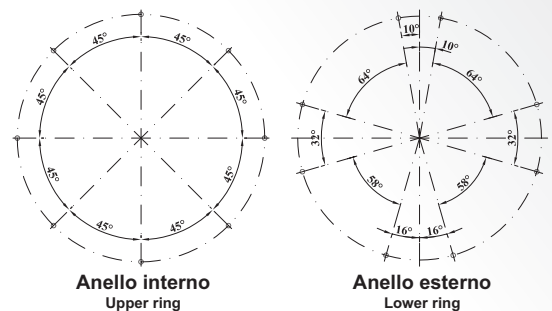
We can supply special drilling

## RALLE A SFERA TIPO VA/90-2

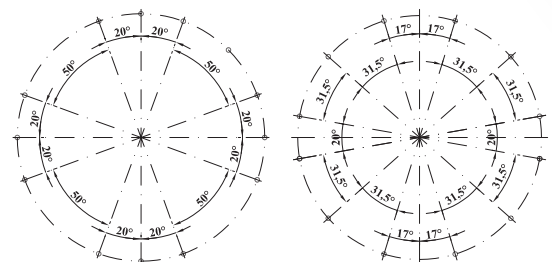
SLEWING RINGS VA/90-2 TYPE



Foratura standard VA/90-2-1000/1100  
Standard drilling VA/90-2-1000/1100



Foratura standard VA/90-2-1200  
Standard drilling VA/90-2-1200



Si eseguono forature speciali  
We can supply special drilling

Art.	Anello interno Upper ring			Anello esterno Lower ring			Fori Bore hole		Carico assiale Axial load [ kN ]	Peso Weight [ kg ]
	[ mm ]			[ mm ]			Ø [ mm ]	n°		
	B	D	E	A	C	F				
VA/90-2 - 1000	1000	832	966	994	872	952	18	8	16	72
VA/90-2 - 1100	1100	932	1074	1094	972	1060	18	8	16	82
VA/90-2 - 1200	1200	1032	1174	1194	1072	1160	18	12	20	95



**RIMA s.p.a.**

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