



**REGINA
EXTRA**

GENERAL INFORMATION

The most usual and well-known application of transmission chains is without any doubt on bicycles.

For more than half a century the technicians of S.I.C.C. Regina S.p.A. have given their valuable contribution to the continuing improvement in quality of bicycle chains of every kind, from the «touring» or «sporting» type, suitable for pleasure bicycles, to the «super racing» type, necessary on racing bicycles or on any bicycle provided with a multiple freewheel.

The extremely advanced technologies, the careful choice and heat-treatment of materials, the accurate processes of assembling and running-in, the strict final controls, have raised the «Regina Extra» bicycle chains to the highest international levels of quality.

Smoothness is the essential requisite for a bicycle chain. This result has been achieved by means of the accurate design and manufacturing of each chain component, and smooth finishing of the surfaces that must work in mutual contact.

Racing bicycle chain needs, moreover, a transversal flexibility, since it must be able to «jump» from one multiple freewheel sprocket to another. This flexibility has been reached by designing plates of a special shape.

Regina Extra production in the bicycle field is not limited to chains, but includes also freewheel manufacture to complement our chains and ensure first class transmission.

Obviously the chain, being a transmission part, must engage with one or more sprockets, and it is clear that the maximum efficiency is achieved when all the components are manufactured to a high standard of quality.

In a bicycle transmission, the chain must engage with two sprockets:

- a) the chain wheel, which is fixed to the pedals;
- b) the freewheel, which is attached to the rear hub of the bicycle.

Both the chain wheel and the freewheel, need, for satisfactory running:

- a) a properly designed tooth shape;
- b) a carefully finished tooth surface;
- c) minimal eccentricity;
- d) a limited amount of side-waving.

These features, thanks to the constant efforts of S.I.C.C. Regina S.p.A. technicians, are best presented in our freewheels; they have also been obtained by the main chain wheel manufacturers, through close cooperation with their technicians.

Moreover, besides the above mentioned characteristics, freewheels must also have:

- a) excellent concentricity between body and sprocket;
- b) perfect smoothness when free wheeling;
- c) prompt and firm locking when «engaged» in the drive position.

This has been achieved by adopting the most strict machining tolerances, finishing with maximum care the ball track, and designing special pawls that can give 42 engage positions every revolution.

It is useful to remember that, to obtain a good efficiency in a bicycle transmission, as in every chain transmission, great care must be taken while fitting or adjusting the chain onto the sprockets, in order to have the best alignment between the chain wheel and the single freewheel or the multiple freewheel central sprocket.

The public favour, the world-wide prestige of the name, the innumerable sporting victories, testify the first-rate results of the effort that S.I.C.C. Regina S.p.A. technicians have made to produce chains and freewheels at the top of the international market.

In addition to the mass-production, S.I.C.C. Regina S.p.A. makes multiple freewheels and «super racing» chains «oro quality», to meet the desires of true experts and keen cyclists.

The «oro quality» products have the same dimensions of the normal ones, but they have a very different appearance and a much more accurate construction.

For instance, all the chain components are severely selected and chosen among perfectly homogeneous lots, so as to ensure the absolute dimensional consistency of the chain itself.

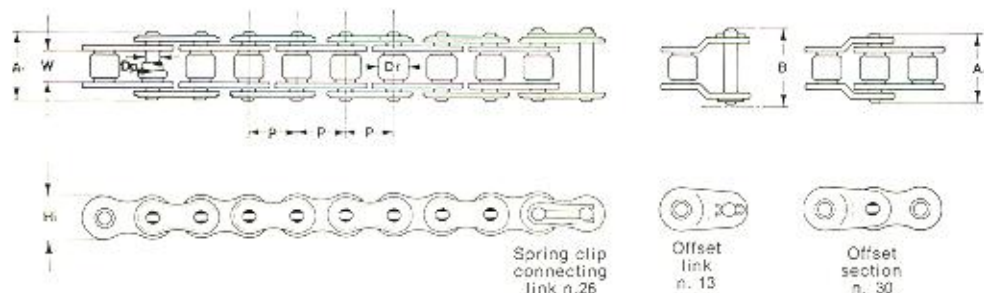
Additional operations, performed to obtain the maximum specularity of the working surface, minimize the friction, which is an inescapable characteristic of all articulated mechanisms, such as the chain.

Instead of statistical control, 100 % control is used to ensure the high performances obtained by the Regina Extra «oro quality» chains and freewheels.

With regard to freewheels, moreover, the ball track is ground to obtain the smoothness and silence required in a product of such a quality.

The sprockets of the freewheel, after assembling, are then rectified one by one, to minimize any possible side-waving.

In spite of the brilliant results already achieved, S.I.C.C. Regina S.p.A. technicians do not cease their continuous research to obtain chains and freewheels always at the top of international level.

ROLLER CHAINS

FOR BICYCLES AND MOPEDS

OUR NUMBER	ISO reference	Nominal dimensions			Other dimensions				Working surface	Average ultimate strength	Net weight per meter	Spares		TRADE MARK
		Pitch	roller diam.	inside width	max. pin diam.	max. link plate height	riveted pin width	max. overall width				con- necting link	offset link	
		P	Dr	W	Dp	Hi	Ai	B				n.	n.	
53	081	12,70	7,75	3,30	3,64	9,91	9,3	12,3	20	900	0,29	26	30	REGINA EXTRA
51	081	12,70	7,75	3,30	3,64	9,91	9,3	12,3	20	1.000	0,29	26	30	
50	082	12,70	7,75	2,38	3,64	9,91	8,1	10,6	16	1.000	0,26	▲	—	
50 oro	082	12,70	7,75	2,38	3,64	9,91	8,1	10,6	16	1.000	0,26	▲	—	
54 C	★	12,70	7,75	4,88	4,07	10,30	12,9	15,9	33	1.000	0,43	26	30	
54	083	12,70	7,75	4,88	4,07	10,30	12,9	15,9	33	1.200	0,43	26	30	
90 R	084	12,70	7,75	4,88	4,07	11,15	14,6	17,6	36	1.600	0,51	26	30	
ASA 41	085	12,70	7,77	6,38	3,58	9,91	13,7	17,7	32	1.200	0,47	26	13-30	
ASA 35	◇ 06 C-1	9,525	5,08	4,77	3,59	9,05	11,9	18,5	27	1.000	0,33	26	13-30	
120	→ ★	9,525	6,35	3,90	3,28	8,26	10,8	17,4	22	1.000	0,35	26	30	
121	→ 06 B-1	9,525	6,35	5,72	3,28	8,26	12,6	19,2	28	1.000	0,39	26	13-30	
122	◇ → ★	9,525	6,35	5,72	4,45	9,15	12,6	19,2	39	1.000	0,43	26	—	



block chain

BLOCK-CHAIN FOR BICYCLES

OUR NUMBER	ISO reference	Nominal dimensions			Other dimensions				Working surface	Average ultimate strength	Net weight per meter	std. strand length	Spares		TRADE MARK
		Pitch	roller diam.	inside width	max. pin diam.	max. link plate height	riveted pin width	max. overall width					con- necting link	offset link	
		P	Dr	W	Dp	Hi	Ai	B					n.	n.	
80	★	25,40	—	3,30	3,64	8,80	7,0	10,0	12	1.000	0,21	54	26	—	REGINA EXTRA
81	★	25,40	—	4,90	3,64	8,80	8,6	11,6	18	1.000	0,25	54	26	—	

★ Non standard ISO chain.
▲ Use outer link to be riveted n. 7, see page 8.

◇ Bushing chain.
→ Chain with straight sideplates.

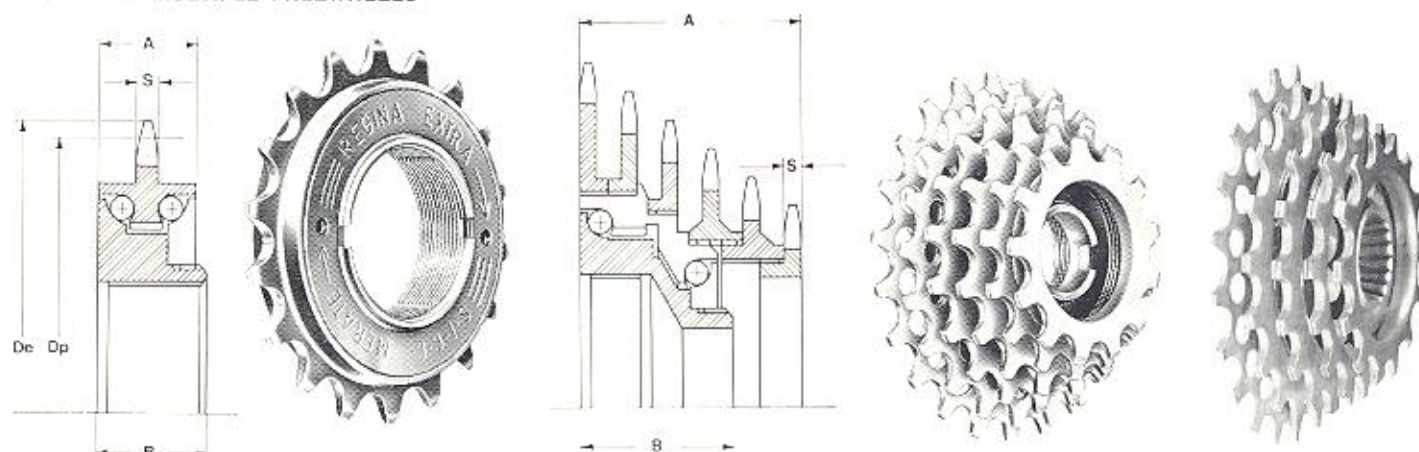
SINGLE AND MULTIPLE FREEWHEELS


Fig. 1

Fig. 2

FOR BICYCLES AND CYCLEVANS

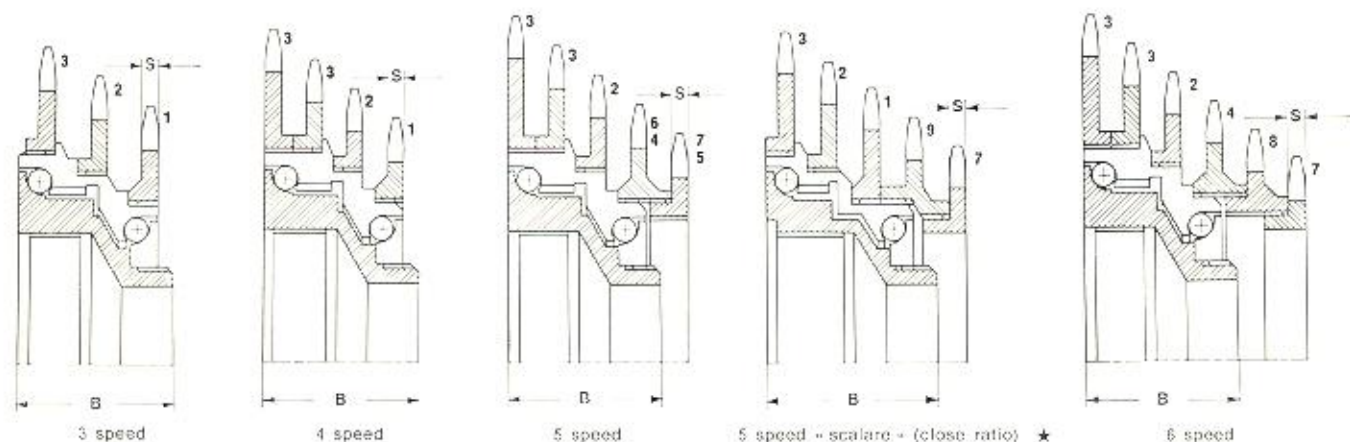
Type	OUR NUMBER	Chain type	Number of teeth n	Max. tooth thickn. S	Pitch dia- meter Dp	Outside dia- meter De	Overall sprocket diam. A	Body width B	Med. working capacity	Unitary weight Kg	TRADE MARK
Single	00902099-16	51-53	16	2,90	65,09	68,50	13,0	15,0	20	0,132	REGINA EXTRA
	00902099-17	51-53	17	2,90	69,11	72,50	13,0	15,0	20	0,146	
	00902099-18	51-53	18	2,90	73,13	76,50	13,0	15,0	20	0,189	
	00902099-19	51-53	19	2,90	77,15	80,50	13,0	15,0	20	0,200	
	00902099-20	51-53	20	2,90	81,18	84,55	13,0	15,0	20	0,216	
	00902099-21	51-53	21	2,90	85,21	88,55	13,0	15,0	20	0,235	
	00902099-22	51-53	22	2,90	89,23	92,55	13,0	15,0	20	0,246	
	00902099-23	51-53	23	2,90	93,26	96,65	13,0	15,0	20	0,265	
	00902099-24	51-53	24	2,90	97,29	100,65	13,0	15,0	20	0,271	
	00912099-16	54 C	16	4,40	65,09	69,60	13,0	15,0	20	0,141	
	00912099-17	54 C	17	4,40	69,11	73,60	13,0	15,0	20	0,160	
	00912099-18	54 C	18	4,40	73,13	77,60	13,0	15,0	20	0,199	
	00912099-19	54 C	19	4,40	77,15	81,60	13,0	15,0	20	0,220	
	00912099-20	54 C	20	4,40	81,18	85,60	13,0	15,0	20	0,239	
	00912099-21	54 C	21	4,40	85,21	89,65	13,0	15,0	20	0,260	
	00912099-22	54 C	22	4,40	89,23	93,70	13,0	15,0	20	0,278	
	00912099-23	54 C	23	4,40	93,26	97,70	13,0	15,0	20	0,300	
	00912099-24	54 C	24	4,40	97,29	101,75	13,0	15,0	20	0,315	
3 speed	009003468	50 - 50 oro	14 - 16 - 18	2,10	▲	▲	19,0	21,0	20	0,215	
	009003579	50 - 50 oro	15 - 17 - 19	2,10	▲	▲	19,0	21,0	20	0,240	
	009003680	50 - 50 oro	16 - 18 - 20	2,10	▲	▲	19,0	21,0	20	0,260	
	009003791	50 - 50 oro	17 - 19 - 21	2,10	▲	▲	19,0	21,0	20	0,270	
4 speed « oro quality » available	0090044680	50 - 50 oro	14 - 16 - 18 - 20	2,10	▲	▲	19,0	21,0	20	0,265	
	0090045791	50 - 50 oro	15 - 17 - 19 - 21	2,10	▲	▲	19,0	21,0	20	0,290	
	0090046802	50 - 50 oro	16 - 18 - 20 - 22	2,10	▲	▲	19,0	21,0	20	0,310	
	0090047913	50 - 50 oro	17 - 19 - 21 - 23	2,10	▲	▲	19,0	21,0	20	0,330	
5 speed « oro quality » available	00900535791	50 - 50 oro	13 - 15 - 17 - 19 - 21	2,10	▲	▲	24,0	21,0	20	0,316	
	00900546802	50 - 50 oro	14 - 16 - 18 - 20 - 22	2,10	▲	▲	24,0	21,0	20	0,338	
	00900557913	50 - 50 oro	15 - 17 - 19 - 21 - 23	2,10	▲	▲	24,0	21,0	20	0,366	
	00900568024	50 - 50 oro	16 - 18 - 20 - 22 - 24	2,10	▲	▲	24,0	21,0	20	0,400	
6 speed « oro quality » available	009006357913	50 - 50 oro	13 - 15 - 17 - 19 - 21 - 23	2,10	▲	▲	30,0	21,0	20	0,405	
	009006468024	50 - 50 oro	14 - 16 - 18 - 20 - 22 - 24	2,10	▲	▲	30,0	21,0	20	0,437	
	009006579135	50 - 50 oro	15 - 17 - 19 - 21 - 23 - 25	2,10	▲	▲	30,0	21,0	20	0,470	
	009006680246	50 - 50 oro	16 - 18 - 20 - 22 - 24 - 26	2,10	▲	▲	30,0	21,0	20	0,505	

♦ Multiple freewheels with splined body are available on request.

We will supply standard freewheels, provided with 2 notches (figure 1) unless otherwise requested.

* Concerning other combinations besides the listed ones, see on following page « Possible combinations ».

▲ See table « Sprockets » on following page.

MULTIPLE FREEWHEELS

POSSIBLE COMBINATIONS

Type	Position						
3 speed	3	2	1				
▲ 4 speed	3	3	2	1			
▲ 5 speed	3	3	2	4-6*	5-7*		
▲ 5 speeds «scalare» *	3	2	1	9	7		
▲ 6 speed	3	3	2	4	8	7	

LIST OF AVAILABLE SIZES OF SPROCKETS

Position	1	2	3	4	5	6	7	8	9
Number of teeth	from 14 to 18	16 to 24	17 to 31	15 to 22	14 to 18	14 to 17	13 to 17	14 to 20	14 to —

SPROCKETS

Number of teeth	Tooth thickness S	Pitch diameter Dp	Outside diameter De	Unitary weight according to the position								
				1	2	3	4	5	6	7	8	9
n.	mm	mm	mm	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg
13	2,10	53,06	56,45	—	—	—	—	—	—	0,015	—	—
14	2,10	57,07	60,45	0,013	—	—	—	0,020	0,020	0,020	0,020	0,024
15	2,10	61,08	64,45	0,023	—	—	0,030	0,025	0,030	0,025	0,030	—
16	2,10	65,09	68,50	0,033	0,018	—	0,035	0,030	0,035	0,030	0,035	—
17	2,10	69,11	72,50	0,036	0,023	0,017	0,040	0,035	0,040	0,040	0,040	—
18	2,10	73,13	76,50	0,040	0,032	0,022	0,050	0,045	—	—	0,058	—
19	2,10	77,15	80,50	—	0,040	0,032	0,055	—	—	—	0,064	—
20	2,10	81,18	84,55	—	0,040	0,041	0,060	—	—	—	0,065	—
21	2,10	85,21	88,55	—	0,045	0,036	0,065	—	—	—	—	—
22	2,10	89,23	92,55	—	0,050	0,042	0,072	—	—	—	—	—
23	2,10	93,26	96,65	—	0,060	0,052	—	—	—	—	—	—
24	2,10	97,29	100,65	—	0,065	0,060	—	—	—	—	—	—
25	2,10	101,34	104,65	—	—	0,065	—	—	—	—	—	—
26	2,10	105,36	108,65	—	—	0,075	—	—	—	—	—	—
27	2,10	109,39	112,65	—	—	0,080	—	—	—	—	—	—
28	2,10	113,42	116,65	—	—	0,090	—	—	—	—	—	—
29	2,10	117,46	120,75	—	—	0,110	—	—	—	—	—	—
30	2,10	121,49	124,72	—	—	0,125	—	—	—	—	—	—
31	2,10	125,53	128,75	—	—	0,135	—	—	—	—	—	—

FREEWHEEL BODIES

Type	Width B	Unitary weight
	mm	Kg
3 speed	21,00	0,157
▲ 4-5-6 sprockets	21,00	0,165
▲ 5 speeds «scalare» *	22,70	0,144

THREADS

Type	Bottom thread diameter	Threads per inch	Thread angle	Thread sense
	mm	n.	degrees	
Italian	35,000	24,00	55	right
British	34,798	24,00	60	right
French	34,700	25,40	60	right

★ Combination 13 - 14 - 15 - 16 - 17 teeth.

* On the five speed freewheel, pos. 4 can be matched with pos. 5 only, while pos. 6 with pos. 7.

▲ «pro quality» available on request.

● Italian standard thread freewheels will be supplied unless otherwise requested; see «Threads for freewheels» at page 10.

COMPLETE RACE SERVICE CASE

▲ Case content

6 chains « Supercorsa », type 50 x 116
12 bodies only for multiple freewheels

456 sprockets for multiple freewheels

1 rivet extractor, type 1

1 set freewheel remover, details C + D + E + F

LIST OF AVAILABLE SIZES OF SPROCKETS

Number of teeth	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Position	Number and type of sprockets contained in the case																		
2	—	—	—	10	10	10	10	10	10	6	6	6	—	—	—	—	—	—	—
3	—	—	—	—	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
4	—	—	7	8	8	8	8	6	5	5	—	—	—	—	—	—	—	—	—
5	—	10	10	10	10	10	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	6	6	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	10	10	10	10	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	7	7	7	7	7	7	7	—	—	—	—	—	—	—	—	—	—	—

▲ Chains, bodies and sprockets are available in « oro quality » on request.

SYNOPTIC TABLE

The following table shows, according to the teeth number (zM) of the bicycle chainwheel and to the teeth number (zm) of the single freewheel or of the multiple freewheel sprocket in action, the advancement in meters (1 meter = 3.28 feet) of a bicycle with 28" tyres which corresponds to a complete pedal revolution. The same figure signifies the speed of the bicycle in meters per second if a speed of one pedal revolution per second is considered.

SPEED RATIOS FOR BICYCLES WITH 28" TYRES

For bicycles with 27" tyres multiply figures shown in the table by 0.954

zM zm	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
13	5.14	5.31	5.48	5.65	5.83	6.00	6.17	6.34	6.51	6.69	6.85	7.03	7.20	7.37	7.54	7.71	7.88	8.06	8.23	8.40	8.57	8.74	8.92
14	4.78	4.94	5.10	5.26	5.42	5.58	5.74	5.90	6.06	6.22	6.38	6.53	6.69	6.85	7.01	7.17	7.33	7.49	7.65	7.81	7.97	8.13	8.29
15	4.46	4.61	4.76	4.91	5.06	5.21	5.36	5.51	5.66	5.81	5.96	6.10	6.25	6.40	6.55	6.70	6.85	7.00	7.15	7.30	7.45	7.61	7.77
16	4.19	4.33	4.47	4.61	4.75	4.89	5.03	5.17	5.31	5.44	5.58	5.72	5.86	6.00	6.14	6.28	6.42	6.56	6.70	6.84	6.97	7.11	7.25
17	3.95	4.08	4.21	4.34	4.47	4.60	4.73	4.86	4.99	5.12	5.25	5.39	5.52	5.65	5.78	5.92	6.05	6.18	6.31	6.44	6.57	6.70	6.83
18	3.73	3.85	3.97	4.10	4.22	4.34	4.47	4.59	4.72	4.84	4.96	5.09	5.21	5.33	5.46	5.58	5.70	5.83	5.95	6.08	6.20	6.32	6.45
19	3.53	3.65	3.76	3.88	4.00	4.11	4.23	4.35	4.47	4.58	4.70	4.82	4.93	5.05	5.17	5.29	5.40	5.52	5.64	5.76	5.87	5.99	6.11
20	3.34	3.46	3.57	3.68	3.79	3.90	4.01	4.13	4.24	4.35	4.46	4.57	4.68	4.80	4.91	5.02	5.13	5.24	5.35	5.47	5.58	5.69	5.80
21	3.17	3.28	3.39	3.49	3.60	3.71	3.81	3.92	4.03	4.14	4.24	4.35	4.46	4.56	4.67	4.78	4.88	4.99	5.10	5.20	5.31	5.42	5.52
22	3.04	3.14	3.24	3.34	3.45	3.55	3.65	3.75	3.85	3.95	4.06	4.16	4.26	4.36	4.46	4.56	4.66	4.77	4.87	4.97	5.07	5.17	5.27
23	2.91	3.00	3.10	3.20	3.30	3.39	3.49	3.59	3.68	3.78	3.88	3.98	4.07	4.17	4.27	4.36	4.46	4.56	4.66	4.75	4.85	4.95	5.04
24	2.79	2.88	2.97	3.07	3.16	3.25	3.34	3.44	3.53	3.62	3.72	3.81	3.90	4.00	4.09	4.18	4.27	4.37	4.46	4.55	4.65	4.74	4.83
25	2.67	2.76	2.85	2.94	3.03	3.12	3.21	3.30	3.38	3.47	3.56	3.65	3.74	3.83	3.92	4.01	4.10	4.19	4.28	4.37	4.46	4.54	4.63
26	2.57	2.65	2.74	2.82	2.91	3.00	3.08	3.17	3.25	3.34	3.42	3.51	3.60	3.68	3.77	3.85	3.94	4.02	4.11	4.20	4.28	4.37	4.46
27	2.47	2.56	2.64	2.72	2.80	2.89	2.97	3.06	3.13	3.22	3.30	3.38	3.46	3.55	3.63	3.71	3.79	3.88	3.96	4.04	4.12	4.21	4.29
28	2.38	2.46	2.54	2.62	2.70	2.78	2.86	2.94	3.02	3.10	3.18	3.26	3.34	3.42	3.50	3.58	3.66	3.74	3.82	3.90	3.98	4.06	4.14
29	2.30	2.38	2.45	2.53	2.61	2.68	2.76	2.84	2.92	2.99	3.07	3.15	3.22	3.30	3.38	3.45	3.53	3.61	3.69	3.76	3.84	3.92	3.99
30	2.23	2.30	2.37	2.45	2.52	2.60	2.67	2.74	2.82	2.89	2.97	3.04	3.12	3.19	3.26	3.34	3.41	3.49	3.56	3.64	3.71	3.79	3.86
31	2.15	2.23	2.30	2.37	2.44	2.51	2.58	2.66	2.73	2.80	2.87	2.94	3.01	3.09	3.16	3.23	3.30	3.38	3.45	3.52	3.59	3.66	3.73

zM = chainwheel number of teeth.

zm = number of teeth of the single freewheel or of the multiple freewheel sprocket in action.

Explanatory example

Chainwheel number of teeth zM = 46 teeth

Number of teeth of the single freewheel zm = 18 teeth

Pedal rotation speed: 1.1 revolutions per second.

The table shows that, according to one complete pedal revolution, the bicycle advances 5.70 m = 18.7 feet

The real speed of the bicycle is therefore:

$$1.1 \times 5.70 = 6.27 \text{ m/s} = 20.57 \text{ feet/s} \quad \text{or} \quad 1.1 \times 5.70 \times 3.6 = 22.57 \text{ km/h} = 14.03 \text{ miles/h}$$

SPARE PARTS FOR CHAINS

n. 4



Inner link

n. 7



Outer link

n. 26



Spring clip connecting link

n. 30



Offset section

n. 13



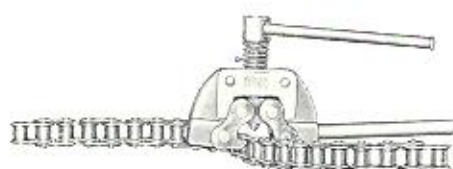
Cottered offset link

n. 27



Spring clip

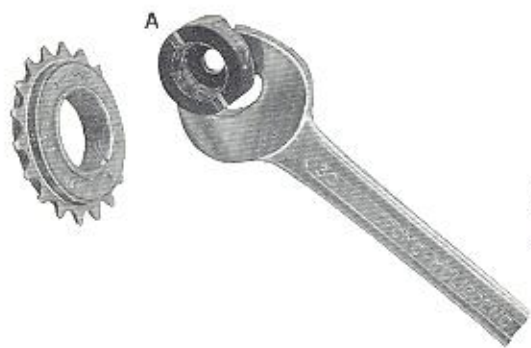
RIVET EXTRACTORS



General purpose rivet extractor, type 1



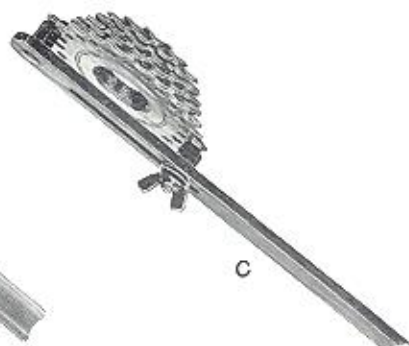
Bench type chain breaker, type 3

FREEWHEEL REMOVERS ▲

detail « A »

extracting insert to remove a single freewheel from the bicycle's hub; use an european standard n. 30 wrench


detail « B »

extracting insert to remove a multiple freewheel from the bicycle's hub; use an european standard n. 22 wrench


detail « C »

lever to lock a multiple freewheel's sprocket; by this locking it is possible to remove the remaining sprockets using detail « F »


detail « D »

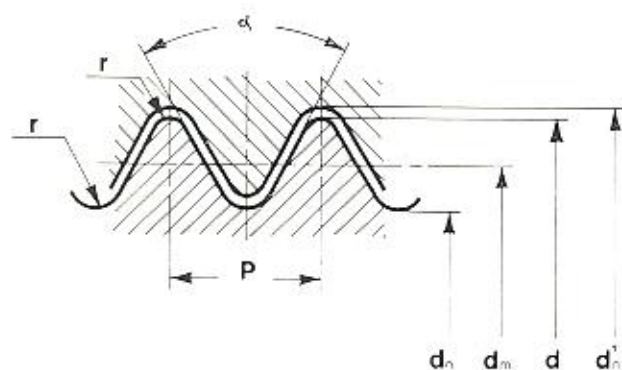
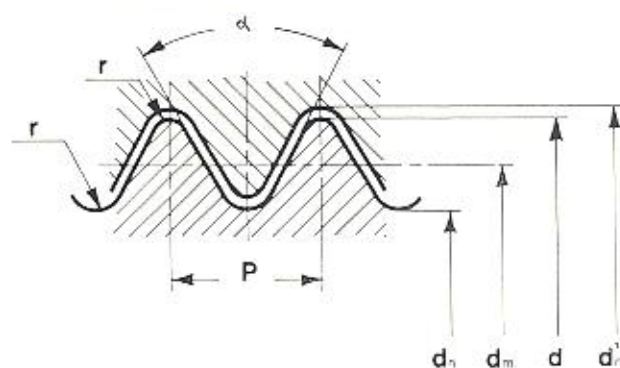
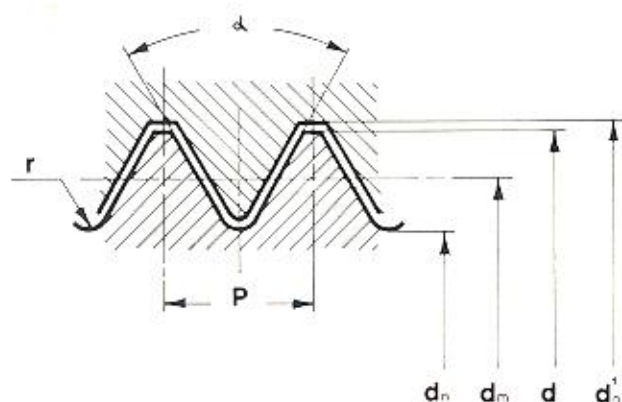
extracting insert to remove a single freewheel from bicycle's hub using lever « C »


detail « E »

adaptation insert to use with detail « D » in order to remove a multiple freewheel using lever « C »

detail « F »

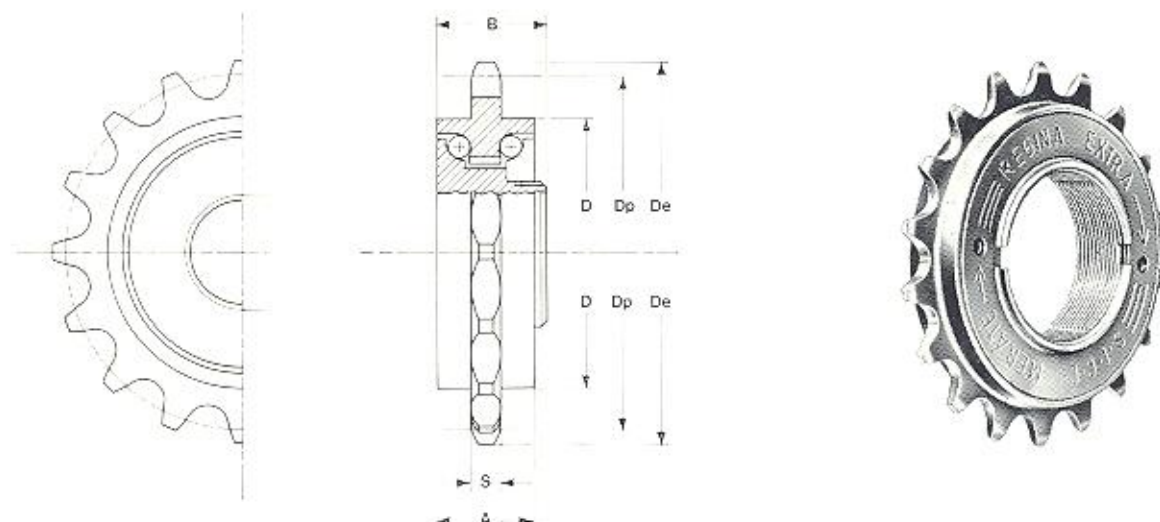
this lever locks the multiple freewheel's body while the sprockets are removed with the aid of detail « C »

FREEWHEELS THREADS
ITALIAN STANDARD THREAD

BRITISH STANDARD THREAD

FRENCH STANDARD THREAD


P = thread pitch
 n = number of threads per inch
 d_n = hub thread root diameter
 d_m = mean hub diameter
 d = outer hub diameter
 d'_n = freewheel thread root diameter
 α = thread angle
 r = fillet radius

Type	P		n	d_n ▲	d_m ▲	d ▲	d'_n ※	α	r
	mm	inches	n.	mm	mm	mm	mm	°	mm
Italian	1,058	1/24,0	24,0	33,646	34,323	35,000	35,000	55	0,14
British	1,058	1/24,0	24,0	33,670	34,234	34,798	34,798	60	0,17
French	1,000	1/25,4	25,4	33,400	34,050	34,700	34,700	60	0,11

▲ All tolerances are « minus ».
 ※ All tolerances are « plus ».

SINGLE FREEWHEELS FOR MOPEDS


OUR NUMBER ▲	Chain type	Number of teeth	Max. tooth thickness	Ring diameter	Pitch diameter	Outside diameter	Ring height	Max. overall width	Unitary weight	TRADE MARK
			S	D	Dp	De	A	B		
	n.	n.	mm	mm	mm	mm	mm	mm	Kg	
0090 X Y 99-16	51	16	2,90	55,00	65,09	68,50	14,00	15,00	0,143	REGINA EXTRA
0090 X Y 99-17	51	17	2,90	55,00	69,11	72,50	14,00	15,00	0,156	
0090 X Y 99-18	51	18	2,90	61,00	73,13	76,50	14,00	15,00	0,198	
0090 X Y 99-19	51	19	2,90	61,00	77,15	80,50	14,00	15,00	0,210	
0090 X Y 99-20	51	20	2,90	61,00	81,18	84,55	14,00	15,00	0,233	
0090 X Y 99-21	51	21	2,90	61,00	85,21	88,55	14,00	15,00	0,245	
0090 X Y 99-22	51	22	2,90	61,00	89,23	92,55	14,00	15,00	0,256	
0090 X Y 99-23	51	23	2,90	61,00	93,26	96,65	14,00	15,00	0,275	
0090 X Y 99-24	51	24	2,90	61,00	97,29	100,65	14,00	15,00	0,285	
0091 X Y 99-16	54 - 90 R	16	4,40	55,00	65,09	69,60	14,00	15,00	0,152	
0091 X Y 99-17	54 - 90 R	17	4,40	55,00	69,11	73,60	14,00	15,00	0,166	
0091 X Y 99-18	54 - 90 R	18	4,40	61,00	73,13	77,60	14,00	15,00	0,213	
0091 X Y 99-19	54 - 90 R	19	4,40	61,00	77,15	81,60	14,00	15,00	0,235	
0091 X Y 99-20	54 - 90 R	20	4,40	61,00	81,18	85,60	14,00	15,00	0,251	
0091 X Y 99-21	54 - 90 R	21	4,40	61,00	85,21	89,65	14,00	15,00	0,272	
0091 X Y 99-22	54 - 90 R	22	4,40	61,00	89,23	93,70	14,00	15,00	0,293	
0091 X Y 99-23	54 - 90 R	23	4,40	61,00	93,26	97,70	14,00	15,00	0,310	
0091 X Y 99-24	54 - 90 R	24	4,40	61,00	97,29	101,75	14,00	15,00	0,325	
0092 X Y 99-22 ■	120	22	3,50	55,00	66,92	69,00	14,00	15,00	0,161	

Table « X - Y »

Rack type →	X	Y	Inside surface type ®
21 notches - 2 light pawls	2	0	Right standard thread
21 notches - 2 heavy pawls	3	7	Left standard thread
16 notches - 2 heavy pawls	5		
22 notches - 3 heavy pawls	9		

▲ Replace X and Y with figure resulting from table « X - Y ».
 ■ If requested freewheels 0092 XY 99 series are supplied up to a max. of 32 teeth.
 → Freewheels with 16 notches - 2 heavy pawls (X = 5) will be supplied if not otherwise requested.

® Freewheels with Standard Italian thread (Y = 0) will be supplied if not otherwise requested. See also « Freewheels Threads » on page 10.

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