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CUPLAJE ELASTICE HRC

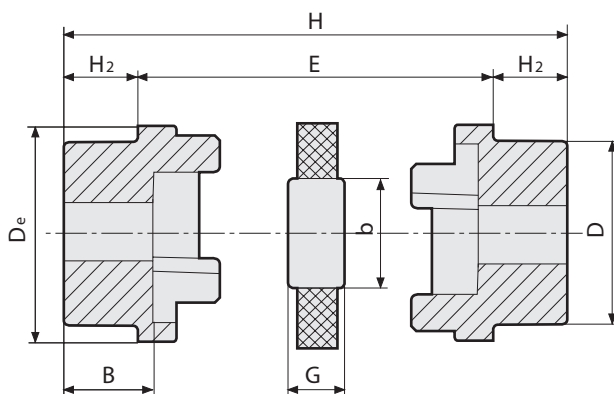
HRC elastic couplings

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Cuplaj elastic HRC P standard cu alezaj drept / neprelucrat HRC P standard elastic coupling with straight / unmachined bore

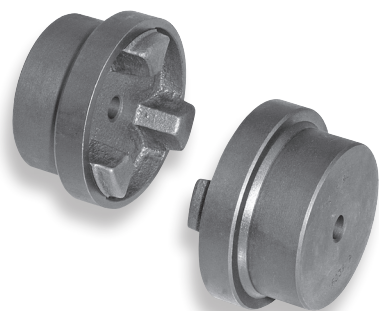
Material cuplaj: Fonta EN-
GJL-250 UNI EN 1561 Material
spider: Cauciuc

Coupling Material: Cast Iron
EN-GJL-250 UNI EN 1561
Spider Material: Rubber



Tip Type	Butucuri Alezaj maxim / Hubs Max. bore		Dimensiuni / Dimensions [mm]								
	MM	INS	De	D	b	E	G	H2	B	H	
70	32	1 1/4	69	60	31	25,0	18,0	20,0	23,5	65,0	1,20
90	42	1 5/8	85	70	32	30,5	22,5	26,0	30,0	82,5	2,15
110	55	2 1/8	112	100	45	45,0	29,0	37,0	45,0	119,0	6,10
130	60	2 3/8	130	105	50	53,0	36,0	47,0	55,5	147,0	8,90
150	70	2 3/4	150	115	62	60,0	40,0	50,0	60,0	160,0	12,20
180	80	3 1/8	180	125	77	73,0	49,0	58,0	70,0	189,0	18,40
230	100	4"	225	155	99	85,5	59,5	77,0	90,0	239,5	35,50
280	130	5"	275	206	119	105,5	74,5	90,0	105,5	285,5	71,50

Semicuplaj neprelucrat HRC P / Unmachined half coupling HRC P



Codul nostru Our code	HRCP070	HRC70	0,60
	HRCP090	HRC90	1,07
	HRCP110	HRC110	3,05
	HRCP130	HRC130	4,45
	HRCP150	HRC150	6,10
	HRCP180	HRC180	9,20
	HRCP230	HRC230	17,75
	HRCP280	HRC280	35,75

Element elastic negru / Black spider

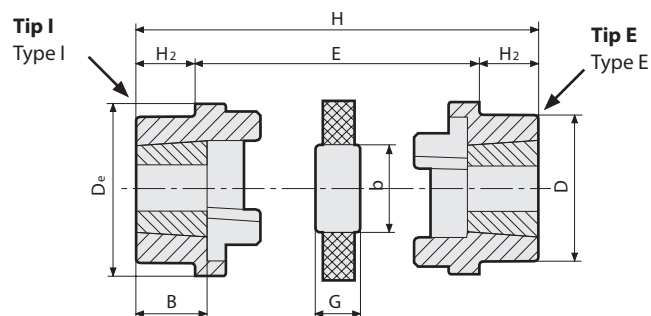


Codul nostru Our code	HRCN070	HRC70	0,016
	HRCN090	HRC90	0,05
	HRCN110	HRC110	0,08
	HRCN130	HRC130	0,15
	HRCN150	HRC150	0,22
	HRCN180	HRC180	0,38
	HRCN230	HRC230	0,80
	HRCN280	HRC280	1,53

Cuplaj elastic HRC cu fixare pe bucsa conica (HRCI-HRCE) HRC elastic coupling with taper bush fixing (HRCI / HRCE)

Material cuplaj: Fonta EN-GJL-250 UNI EN 1561 Material spider: Cauciuc

Coupling Material: Cast Iron EN-GJL-250 UNI EN 1561 Spider Material: Rubber



Tip Type	Bucsa Bush	Butucuri Alezaj maxim Hubs Max. bore		Dimensiuni Dimensions [mm]									Dezaliniere maxima Maximum misalignment		Turatie maxima n(rpm) Maximum revolution n(rpm)	Moment de inertie Moment of inertia	👤	
		MM	INS	De	D	b	E	G	H2	B	J	H	Paralel Parallel	Axial Axial				
70	1008	25	1	69	60	31	25,0	18,0	20,0	23,5	29	65,0	0,3	+0,2	9100	8,5	0,88	
90	1108	20	1 1/8	85	70	32	30,5	22,5	19,5	23,5	29	69,5	0,3	+0,5	7400	11,5	1,45	
110	1610	42	1 5/8	112	100	45	45,0	29,0	18,5	26,5	38	82,0	0,3	+0,6	5630	40,0	3,20	
130	1610	42	1 5/8	130	105	50	53,0	36,0	18,0	26,5	38	89,0	0,4	+0,8	4850	78,0	4,54	
150	2012	50	2	150	115	62	60,0	40,0	23,5	33,5	42	107,0	0,4	+0,9	4200	181,0	6,60	
180	2517	60	2 1/2	180	125	77	73,0	49,0	34,5	46,5	48	142,0	0,4	+1,1	3500	434,0	10,75	
230	3020	75	3	225	155	99	85,5	59,5	39,5	52,5	55	165,0	0,5	+1,3	2800	1207,0	19,14	
280	3525	100	4	275	206	119	106,0	74,5	51,0	66,5	67	208,0	0,5	+1,7	2300	4465,0	41,00	

J = Spatiul necesar cheii pentru a strange si slabi butucul pe arbore.

J = The wrench clearance required for tightening and loosening the bush on the shaft.



Semicuplaj HRCI cu fixarea bucsii pe interior
HRCI half coupling with internal taper bush fixing



Semicuplaj HRCE cu fixarea bucsii pe exterior
HRCE half coupling with external taper bush fixing



Element elastic negru
Black spider

Codul nostru Our code	HRCI070	HRC70	1008	0,44	👤
	HRCI090	HRC90	1108	0,72	
	HRCI110	HRC110	1610	1,60	
	HRCI130	HRC130	1610	2,27	
	HRCI150	HRC150	2012	3,30	
	HRCI180	HRC180	2517	5,37	
	HRCI230	HRC230	3020	9,57	
	HRCI280	HRC280	3525	20,50	

Codul nostru Our code	HRCE070	HRC70	1008	0,44	👤
	HRCE090	HRC90	1108	0,72	
	HRCE110	HRC110	1610	1,60	
	HRCE130	HRC130	1610	2,27	
	HRCE150	HRC150	2012	3,30	
	HRCE180	HRC180	2517	5,37	
	HRCE230	HRC230	3020	9,53	
	HRCE280	HRC280	3525	20,50	

Codul nostru Our code	HRCN070	HRC70	0,016	👤
	HRCN090	HRC90	0,05	
	HRCN110	HRC110	0,08	
	HRCN130	HRC130	0,15	
	HRCN150	HRC150	0,22	
	HRCN180	HRC180	0,38	
	HRCN230	HRC230	0,80	
	HRCN280	HRC280	1,53	

Cuplaje elastice HRC cu orificiu pentru bucsa conica HRC flexible couplings with tapered bushing hole

**Tabelul 1
Dimensiuni**

**Table 1
Dimensions**

Tip Type	Putere Power 100 rpm (kW)	Bucsa Bush	Aleza j minim Min bore	Aleza j maxim Max. bore	H ₂	B	E	H	J*	Dezaliniere maxima Maximum misalignment		Turatie maxima n(rpm) Maximum revolution n(rpm)	Moment de inertie Moment of inertia (kg/cm ³)	De	D	b	G
										Paralel Parallel	Axial Axial						
70	0,33	1008	9	25	20	23,5	25	65	29	0,3	+0,2	9100	8,5	69	60	31	18
90	8,84	1108	9	28	19,5	23,5	30,5	69,5	29	0,3	+0,5	7400	11,5	85	70	32	22,5
110	1,68	1610	14	42	18,5	26,5	45	82	38	0,3	+0,6	5630	40	112	100	45	29
130	3,30	1610	14	42	18	26,5	53	89	38	0,4	+0,8	4850	78	130	105	50	36
150	6,28	2012	14	50	23,5	33,5	60	107	42	0,4	+0,9	4200	181	150	115	62	40
180	9,95	2517	16	60	34,5	46,5	73	142	48	0,4	+1,1	3500	434	180	125	77	49
230	20,90	3020	25	75	39,5	52,5	85,5	165	55	0,5	+1,3	2800	1207	225	155	99	59,5
280	33	3525	35	100	51	66,5	106	208	67	0,5	+1,7	2300	4465	275	206	119	74,5

J = Jocul cheii necesar pentru strangerea si slabirea bucsii de pe arbore.

J = The wrench clearance required for tightening and loosening the bush on the shaft.

Cuplaj elastic HRC P standard cu alezaj drept / neprelucrat HRC P standard elastic coupling with straight / unmachined bore

Tip Type	Putere Power 100 rpm (kW)	Aleza j minim Min bore	Aleza j maxim Max. bore	H ₂	B	E	H	De	D	b	G
70	0,33	10	32	20	23,5	25,0	65,0	69	60	31	18,0
90	8,84	10	42	26	30,0	30,5	82,5	85	70	32	22,5
110	1,68	10	55	37	45,0	45,0	119,0	112	100	45	29,0
130	3,30	14	60	47	55,5	53,0	147,0	130	105	50	36,0
150	6,28	19	70	50	60,0	60,0	160,0	150	115	62	40,0
180	9,95	35	80	58	70,0	73,0	189,0	180	125	77	49,0
230	20,90	38	100	77	90,0	85,5	239,5	225	155	99	59,5
280	33,00	48	130	90	105,5	105,5	285,5	275	206	119	74,5

Aceste **cuplaje elastice HRC** sunt, in esenta, cuplaje de uz general, cu un element flexibil care poate suporta un grad mai mare de dezaliniere. Dezaliniere paralela de pana la 0,5 mm

Dezaliniere axiala de pana la 1,7 mm

Datorita designului lor superior, **cuplajele elastice HRC** pot suporta arbori mai mari, ceea ce le face o propunere mai economica.

Caracteristici importante

Economie

Designul **cuplajului elastic HRC** a fost optimizat astfel incat capacitatile de putere sa fie echilibrate la diametrele corespunzatoare ale arborelui utilizand fixarea cu bucsa conica.

Rezilianta

Sarcinile maxime tranzitorii sunt reduse de o componenta flexibila, a carei deformare este o consideratie principala de proiectare.

Dezaliniere

Deplasarile paralele, unghiulare si axiale incidentale ale arborilor conectati pot fi preluate.

Instalare

Rapida si usoara, fara unelte speciale, este necesara doar o cheie imbus.

Intretinere

Practic eliminata si nu este necesar lubrifiant.

Mediu

Componenta elastomerică face ca cuplajul elastic HRC sa fie potrivit pentru utilizare in majoritatea conditiilor, intr-un interval de temperatura de la -40°C la +100°C.

Pozitiv

In cazul putin probabil al distrugerii componentei flexibile, actionarea va fi intretinuta prin interactiunea carligelor care sunt integrate in flanse.

HRC elastic couplings are essentially general purpose couplings with a flexible element which can accommodate higher degree of misalignment. Parallel misalignment upto 0.5 mm

Axial misalignment up to 1.7 mm

Because of their superior design HRC elastic couplings can accommodate larger shafts which make them a more economical proposition.

Salient features

Economy

The design of the HRC coupling has been optimised so that power capacities are balanced to the appropriate shaft diameters utilising taper bush.

Resilience

Transient peak loads are reduced by a flexible component, deflection of which is a prime design consideration.

Misalignment

Incidental parallel, angular and axial displacement of the connected shafts can be accommodated.

Installation

Quick and easy without special tools, only an allen key is required.

Maintenance

Virtually eliminated and no lubricant is required.

Environment

The elastomeric component makes HRC coupling suitable for use in most conditions within a temperature range of -40°C to +100°C.

Positive

In the unlikely event of the flexible component being destroyed, the drive will be maintained by the interaction of dogs which are integral with the flanges.

Tabelul 2
Factori de serviciu

Table 2
Service Factors

Cazuri speciale / Special Cases	Tipuri de transmisie / Types Of Driving Unit					
<p>Pentru aplicatii in care apar socuri, vibratii si fluctuatii substantiale de cuplu si pentru masinile cu piston, de exemplu, motoare cu ardere interna, pompe cu piston si compresoare, consultati aLLindustrialL pentru detalii complete despre masini pentru analiza torsionala.</p> <p>For applications where substantial shock, vibration and torque fluctuation occur and for reciprocating machines, e.g. internal combustion engines, piston type pumps and compressors, refer to aLLindustrialL with full machine details for torsional analysis</p>	<p>Motoare electrice Turbine cu abur Electric Motors Steam Turbines</p>			<p>Motoare cu ardere interna Motoare cu abur Turbine cu apa Internal Combustion Engines Steam Engines Water Turbines</p>		
	Ore de functionare pe zi / Operational hours per day					
<p>Clasa masinilor actionate / Driven machine class</p>	<p>≥ 8 ani 8 and under</p>	<p>≥ 8 - 16 ani Over 8 to 16 inclusive</p>	<p>≥ 16 ani Over 16</p>	<p>≥ 8 ani 8 and under</p>	<p>≥ 8 - 16 ani Over 8 to 16 inclusive</p>	<p>≥ 16 ani Over 16</p>
<p>Uniforme Agitatoare, Masini de fabricat bere, Suflante si compresoare centrifuge, Benzi transportoare, Ventilatoare si pompe centrifuge, Cenzoare, Echipamente de eliminare a apelor uzate.</p> <p>Uniform Agitators, Brewing Machinery, Centrifugal Blower and Compressors, Conveyors, Centrifugal Fans and Pumps, Cenerators, Sewage Disposal Equipment.</p>	1,00	1,12	1,25	1,25	1,40	1,60
<p>Soc moderat* Masini pentru prelucrarea lutului, Macarale si palane, Masini pentru spalatorii, Masini pentru prelucrarea lemnului, Masini-unelte, Freze rotative, Masini pentru fabrici de hartie, Masini textile.</p> <p>Moderate shock* Clay working machinery, Cranes Hoist, Laundry machinery, Wood working machinery, Machinery Tools, Rotary Mills, Paper Mill machinery, Textile machinery.</p>	1,60	1,80	2,00	2,00	2,24	2,50
<p>Soc puternic* Transportoare cu piston, Concasoare, Vibratoare, Mori de metal, Masini pentru cauciuc (Malaxere si mori Banbury), Compressoare cu piston.</p> <p>Heavy shock* Reciprocating conveyors, Crushers, Shakers, Metal Mills, Rubber machinery, (Banbury Mixers and Mills), Reciprocating compressors.</p>	2,50	2,80	3,12	3,12	3,55	4,00

* Se recomanda montarea unor chei (cu joc superior daca sunt in bucle conice de blocare) pentru aplicatii in care se anticipeaza fluctuatii de sarcina

* It is recommended that keys (with top clearance if in taper bush are fitted for applications where load fluctuation is expected

Selectie motoare electrice standard

Cititi tabelul 2 de la dimensiunea corespunzatoare a cadrului motorului si gasiti coloana cu viteza nominala aplicabila a motorului.

Cititi selectia corespunzatoare a cuplajului pentru bucsa conica.

Tabelul 2
Factori de serviciu de cel putin 1.6

Selection standard electric motors

Read across the table 2 from the appropriate motor frame size and find the applicable nominal motor speed column. Read the appropriate coupling selection for either tapered bushing.

Table 2
Service factors not less than 1.6

Dimensiune cadru motor Motor Frame Size	Diametru arbore Shaft Dia. mm	3000 rot/min 3000 rev/min		1500 rot/min 1500 rev/min		1000 rot/min 1000 rev/min		750 rot/min 750 rev/min	
		Putere motor Motor Power KW	Diametru arbore Coupling Size	Putere motor Motor Power KW	Diametru arbore Coupling Size	Putere motor Motor Power KW	Diametru arbore Coupling Size	Putere motor Motor Power KW	Diametru arbore Coupling Size
90 S	24	1,5	70	1,1	70	0,75	70	-	-
90 L	24	2,2	70	1,5	70	1,1	70	-	-
112 M	28	4	90	4	90	2,2	90	1,5	90
132 S	38	5,5	110	5,5	110	3	110	2,2	110
		7,5	110						
132 M	38			7,5	110	4	110	3	110
						5,5	110		
160 M	42	11	110	11	110	7,5	110	4	110
		15	110					5,5	110
160 L	42	18,5	110	15	110	11	130	7,5	110
180 M	48	22	150	18,5	150				
180 L	48			22	150	15	150	11	150
200 L	55	30	180			18,5	180	15	180
		37	180	30	180	22	180		
225 S	60			37	180			18,5	180
225 M	55*	45	180	45	180	30	180	22	180
	60								
250 M	60*	55	180	55	230	37	230	30	230
	65								
280 S	75			75	230	45	230	37	230
280 M	75			90	230	55	230	37	230

*Numai 3000 rot/min.

* 3000 rev/mm only.

RO

a) **Factor de serviciu** Determinati factorul de serviciu necesar din Tabelul 2.

b) **Putere nominala**

Inmultiti puterea normala de functionare cu factorul de serviciu. Aceasta obtine puterea nominala care este utilizata ca baza pentru selectia cuplajului.

c) **Dimensiunea cuplajului** Consultati Tabelul 3 si, din viteza corespunzatoare din coloana de viteza, cititi pana cand se gaseste o putere egala sau mai mare decat puterea nominala necesara.

d) **Dimensiunea alezajului** Din tabelul de dimensiuni, verificati daca butucii alesi pot gazdui alezajele necesare. Marca inregistrata.

Exemplu: Este necesar un cuplaj de arbore pentru a transmite 70 kW intre un motor electric de 1440 rot/mm si un palan care functioneaza 16 ore pe zi. Arborele motorului are 70 mm, iar arborele palanului are 75 mm.

a. **Factor de serviciu** Din tabelul 2, factorul de serviciu este 2.

b. **Putere proiectata** Putere proiectata: $70 \times 2 = 140$ kW

c) **Dimensiunea cuplajului** Citind de la 1440 rot/mm in coloana de viteza din Tabelul 3 (Tabelul de putere nominala), 143 kW este prima putere care depaseste cei 140 kW necesari (putere nominala). Dimensiunea cuplajului din capul acestei coloane este 180.

d) **Dimensiunea alezajului** Consultand tabelul de dimensiuni, se poate observa ca pentru tipul HRC - 180B, ambele diametre ale arborelui se incadreaza in intervalul de alezaje disponibil. Cu toate acestea, in cazul in care selectarea cuplajului este necesara in alezaj conic, atunci selectati HRC-230.

EN

a) **Service Factor Determine** the required service factor from Table 2.

b) **Design Power** Multiply the normal running power by the service factor. This gives the Design Power which is used as a basis for coupling selection.

c) **Coupling Size** Refer to Table 3 and from the appropriate speed in the speed column, read across until a power equal to or greater than the design power required is found.

d) **Bore Size** From the dimension table check that the chosen hubs can accommodate the required bores. Registered Trade Mark.

Example: A shaft coupling is required to transmit 70kW between a 1440 rev/mm electric motor and a hoist running over 16 hours/day. The motor shaft is 70 mm. and the hoist shaft is 75 mm.

a. **Service Factor** From Table 2, the Service Factor is 2.

b. **Design Power** Design Power: $70 \times 2 = 140$ kW

c) **Coupling Size** By reading across from 1440 rev/mm in the speed column of Table 3 (Power Rating Table) 143 kW is the first power to exceed the required 140 kW (design power). The size of coupling at the head of this column is 180.

d) **Bore Size** By referring to the dimension table it can be seen that for HRC - 180B type both shaft diameters fall within the bore range available. However in case the coupling selection is required in taper bore then select HRC-230.

Tabelul 3
Putere nominala (kW)

Table 3
Power ratings (kW)

Viteza rot/min Speed rev/min	Dimensiunea cuplajului / Coupling size							
	70,00	90,00	110,00	130,00	150,00	180,00	230,00	280,00
100	0,33	0,84	1,68	3,30	6,28	9,95	20,90	33,00
200	0,66	1,68	3,35	6,60	12,60	19,90	41,90	66,00
400	1,32	3,35	6,70	13,20	25,10	39,80	83,80	132,00
600	1,98	5,03	10,10	19,80	37,70	59,70	126,00	198,00
720	2,37	6,03	12,10	23,80	45,20	71,60	151,00	238,00
800	2,64	6,70	13,40	26,40	50,30	79,60	168,00	264,00
960	3,17	8,40	16,10	31,70	60,30	95,50	210,00	317,00
1200	3,96	10,10	20,10	39,60	75,40	119,00	251,00	396,00
1440	4,75	12,10	24,10	47,50	90,50	143,00	302,00	475,00
1600	5,28	13,40	26,80	52,80	101,00	159,00	335,00	528,00
1800	5,94	15,10	30,20	59,40	113,00	179,00	377,00	594,00
2000	6,60	16,80	33,50	66,00	126,00	199,00	419,00	660,00
2200	7,26	18,40	36,90	72,60	138,00	219,00	461,00	726,00
2400	7,92	20,10	40,20	79,20	151,00	239,00	503,00	
2600	8,58	21,80	43,60	85,80	163,00	259,00	545,00	
2880	9,50	24,10	48,30	95,00	181,00	286,00		
3000	9,90	25,10	50,30	99,00	188,00	298,00		
3600	11,90	30,10	60,30	118,00	226,00			
Cuplu nominal (Nm) / Nominal Torque (Nm)	31,50	80	160	315	600	950	2000	3150
Cuplu maxim (Nm) / Max Torque (Nm)	72	180	360	720	1500	2350	5000	7200

Tabelul 4
Caracteristici fizice

Table 4
Physical characteristics

Caracteristica / Characteristic	Dimensiunea cuplajului / Coupling size							
	70	90	110	130	150	180	230	280
Viteza maxima* rot/min / Maximum Speed* rev	8300	6740	5110	4400	3800	3180	2540	2080
Cuplu nominal (Nm) / Nominal Torque (Nm)	31,5	80	160	315	600	950	2000	3150
Cuplu maxim (Nm) / Maximum Torque (Nm)	72	180	360	720	1500	2350	5000	7200
Dezaliniere paralela maxima (mm) / Maximum Parallel Misalignment (mm)	0,3	0,3	0,3	0,4	0,4	0,4	0,5	0,5
Dezaliniere axiala maxima (mm) / Maximum axial Misalignment (mm)	0,2	0,5	0,6	0,8	0,9	1,1	1,3	1,7

* Vitezele maxime de cuplare sunt calculate utilizand o viteza periferica admisa pentru materialul butucului. Pentru selectarea dimensiunilor mici, peste 3600 rot/mm, consultati aLLindustrialL.

* Maximum coupling speeds are calculated using an allowable peripheral speed for the hub material. For selection of small sizes above 3600 rev/mm - consult aLLindustrialL.